LAX MARCH 2016

PROJECT ID: 1070-00-71

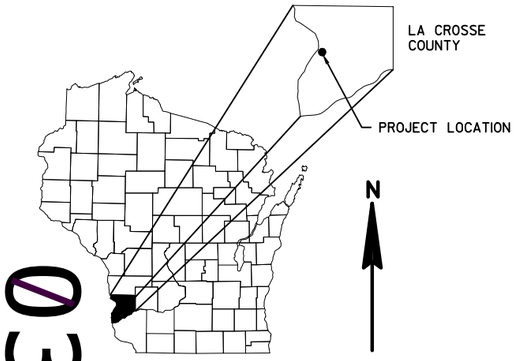
WITH:

COUNTY: LA CROSSE

ORDER OF SHEETS

Section No.	1	Title
Section No.	2	Typical Sections and Details
Section No.	3	Estimate of Quantities
Section No.	3	Miscellaneous Quantities
Section No.	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 = 276



STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

LA CROSSE - SPARTA

(SAFETY REST AREA No. 31)

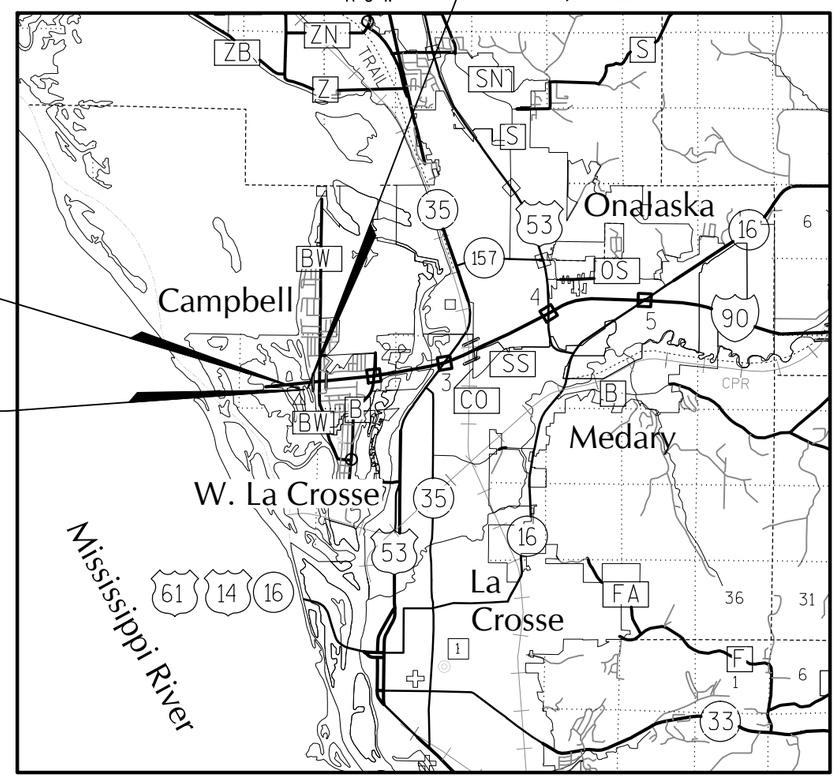
IH 90

LA CROSSE COUNTY

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1070-00-71	WISC 2016045	1

STATE PROJECT NUMBER
1070-00-71

END PROJECT 1070-00-71
STA 24+05.55
Y = 149,074.296
X = 440,304.553



LAYOUT
SCALE 0 2 MILE

TOTAL NET LENGTH OF CENTERLINE = 0.000 MI.

REST AREA No. 31
SOUTH OF IH 90 EASTBOUND R/W,
WEST OF BW/LAKESHORE DRIVE

BEGIN PROJECT 1070-00-71
STA 0+15.58
Y = 148,988.066
X = 439,699.188

DESIGN DESIGNATION

		IH 90	SAFETY REST AREA No. 31
A.A.D.T.	(2016) =	26,400	792
A.A.D.T.	(2036) =	34,600	1038
D.H.V.	=	---	
D.D.	=	60/40	
T.	=	16.6%	
DESIGN SPEED	=	70 MPH (75 MPH)	
ESALS	=	N/A	

CONVENTIONAL SYMBOLS

PLAN		PROFILE	
CORPORATE LIMITS		GRADE LINE	
PROPERTY LINE		ORIGINAL GROUND	
LOT LINE		MARSH OR ROCK PROFILE (To be noted as such)	ROCK
LIMITED HIGHWAY EASEMENT		SPECIAL DITCH	LABEL
EXISTING RIGHT OF WAY		GRADE ELEVATION	95.36
PROPOSED OR NEW R/W LINE		CULVERT (Profile View)	
SLOPE INTERCEPT		UTILITIES	
REFERENCE LINE	300'EB'	ELECTRIC	E
EXISTING CULVERT		FIBER OPTIC	FO
PROPOSED CULVERT (Box or Pipe)		GAS	G
COMBUSTIBLE FLUIDS	CAUTION	SANITARY SEWER	SAN
		STORM SEWER	SS
		TELEPHONE	T
MARSH AREA		WATER	W
		UTILITY PEDESTAL	
WOODED OR SHRUB AREA		POWER POLE	
		TELEPHONE POLE	

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATES, LA CROSSE COUNTY, NAD83 (2011), IN U.S. SURVEY FEET. VERTICAL POSITIONS ARE NAVD88.

ORIGINAL PLANS PREPARED BY

SEH

SHORT ELLIOTT HENDRICKSON INC.

WISCONSIN BENJAMIN A. WOLF 35248-006 ROCHESTER, MN PROFESSIONAL ENGINEER

11-2-2015
(Date)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	SEH Inc.
Designer	SEH Inc.
Project Manager	ROBERT SPOERL
Regional Examiner	
Regional Supervisor	DANIEL MULDER

APPROVED FOR THE DEPARTMENT

DATE: 11-3-15 (Signature)

E

STANDARD ABBREVIATIONS

ABUT	ABUTMENT	HYD	HYDRANT
AC	ACRE	ID	INSIDE DIAMETER
AGG	AGGREGATE	INV	INVERT
AECPRC	APRON ENDWALL FOR CULVERT PIPE REINFORCED CONCRETE	IP	IRON PIPE ON PIN
		LHF	LEFT-HAND FORWARD
ASPH	ASPHALTIC	L	LENGTH OF CURVE
AVG	AVERAGE	LF	LINEAR FOOT
ADT	AVERAGE DAILY TRAFFIC	LC	LONG CHORD OF CURVE
BF	BACK FACE	LS	LUMP SUM
BM	BENCH MARK	MH	MANHOLE
BR	BRIDGE	MOR	MID POINT OF RADIUS
CE	COMMERCIAL ENTRANCE	NC	NORMAL CROWN
CL OR C/L OR ℄	CENTER LINE	NO	NUMBER
△	CENTRAL ANGLE OR DELTA	OBLIT	OBLITERATE
CONC	CONCRETE	PAVT	PAVEMENT
CPRC	CULVERT PIPE REINFORCED CONCRETE	PE	PRIVATE ENTRANCE
CPRCHE	CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL	PVRC	POINT OF VERTICAL REVERSE CURVE
		QOR	QUARTER POINT OF RADIUS
CR	CREEK	R	RADIUS
CY	CUBIC YARD	REQ'D	REQUIRED
C & G	CURB AND GUTTER	RES	RESIDENCE OR RESIDENTIAL
D	DEGREE OF CURVE	RHF	RIGHT-HAND FORWARD
DHV	DESIGN HOUR VOLUME	R/W	RIGHT-OF-WAY
DISCH	DISCHARGE	R	RIVER
DG	DITCH GRADE	RDWY	ROADWAY
DWY	DRIVEWAY	R/L OR ℞	REFERENCE LINE
X	EAST GRID COORDINATE	SALV	SALVAGED
EAT	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL	SAN	SANITARY SEWER
		SF	SQUARE FEET
EOR	END POINT OF RADIUS	SY	SQUARE YARD
EL	ELEVATION	SDD	STANDARD DETAIL DRAWINGS
ENT	ENTRANCE	STA	STATION
ESALS	EQUIVALENT SINGLE AXLE LOADS	SS	STORM SEWER
EXC	EXCAVATION	SSPRC	STORM SEWER PIPE REINFORCED CONCRETE
EBS	EXCAVATION BELOW SUBGRADE	SE	SUPERELEVATION RATE
EXIST	EXISTING	TC	TOP OF CURB
FC	FACE OF CURB	T OR TN	TOWN
FF	FACE TO FACE	T	TRUCKS (PERCENT OF)
FERT	FERTILIZE	TYP	TYPICAL
FE	FIELD ENTRANCE	VAR	VARIABLE
FL	FLOW LINE	VC	VERTICAL CURVE
FO	FIBER OPTIC	Y	NORTH GRID COORDINATE
CWT	HUNDREDWEIGHT	YD	YARD

GENERAL NOTES

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

A VERTICAL SAWCUT SHALL BE MADE THROUGH EXISTING DRIVEWAYS AND PAVEMENTS AT REMOVAL LIMITS.

GRADING/EROSION CONTROL
FILL AS SHOWN ON THE PLANS PERTAINS TO EMBANKMENT CONSTRUCTED FROM BORROW EXCAVATION OR COMMON EXCAVATION. THE ALLOWANCE USED FOR EXPANDING THE FILLS TO COMPUTE THE VOLUME OF MATERIAL REQUIRED IS 1.2 FOR BORROW EXCAVATION.

WHEN THE QUANTITY OF BASE AGGREGATE IS MEASURED FOR PAYMENT BY THE TON, THE DEPTH OR THICKNESS OF THE LAYER SHOWN ON THE PLANS IS APPROXIMATE AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER.

ALL DISTURBED AREAS WITHIN THE RIGHT-OF-WAY, EXCEPT THE AREAS WITHIN THE SUBGRADE SHOULDER POINTS, SHALL BE SALVAGED TOPSOILED, FERTILIZED, SEEDED AND MULCHED OR SODDED.

EROSION CONTROL FEATURES AS SHOWN ON THE EROSION CONTROL PLAN ARE SUGGESTED LOCATIONS. THEIR EXACT LOCATION SHALL BE DETERMINED IN THE FIELD.

DRAINAGE
TOP CASTING ELEVATIONS SHOWN FOR INLETS REFER TO THE CASTING ELEVATION AT THE FLOWLINE.

EXISTING PIPE CULVERT SIZES SHOWN ARE APPROXIMATE AND THE CONTRACTOR SHALL BASE THEIR BID ON ACTUAL FIELD CONDITIONS.

PRIOR TO ORDERING DRAINAGE PIPES AND STRUCTURES, THE CONTRACTOR SHALL FIELD VERIFY RELATED DRAINAGE INFORMATION IN THE PLAN WITH THE ENGINEER.

INLET AND DISCHARGE ELEVATIONS FOR DRAINAGE STRUCTURES SHOWN ON THE PLAN MAY BE ADJUSTED BY THE ENGINEER TO FIT FIELD CONDITIONS.

MISCELLANEOUS
ELEVATIONS SHOWN ON THE PLAN ARE REFERENCED TO THE APPROXIMATE USGS DATUM.

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

BEARING ON THIS PLAN ARE TRUE BEARINGS TO THE NEAREST SECOND.

ALL DISTANCES ARE GROUND DISTANCES.

ALL COORDINATES ARE GROUND COORDINATES.

ALL TIES ON THIS PLAN ARE HORIZONTAL UNLESS DESCRIBED OTHERWISE.

CURVE DATA SHOWN ON THE PLAN IS "ARC" DEFINITION.

ALL CURB AND GUTTER RADII, PAVEMENT DIMENSIONS AND STATIONS ARE SHOWN TO THE EDGE OF PAVEMENT UNLESS NOTED OTHERWISE.

STATIONING, DISTANCES AND OFFSETS FOR PROPOSED SIGNS SHOWN ON THE PLAN ARE APPROXIMATE, ACTUAL LOCATIONS OF SIGNS ARE TO BE COORDINATED IN THE FIELD WITH THE ENGINEER.

DETAILS OF CONSTRUCTION NOT SHOWN SHALL BE IN ACCORDANCE WITH THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS.

ORDER OF SECTION 2 SHEETS

GENERAL NOTES
PROJECT OVERVIEW
TYPICAL SECTIONS
CONSTRUCTION DETAILS
GRUBBING
REMOVAL DETAILS
PAVEMENT GEOMETRICS
INTERSECTION LAYOUT DETAIL
PLAZA LAYOUT
MAINTENANCE BUILDING LAYOUT
PAVEMENT GRADE & JOINT LAYOUT
PLAZA GRADING PLAN
CROSS SECTION MATCHLINES
EROSION CONTROL
STORM SEWER
SANITARY SEWER
WATER SCHEMATIC
PLANTING PLAN
PLAZA ENLARGEMENT PLAN
SEEDING PLAN
TRASH AND RECYCLING RECEPTACLE LOCATIONS
LANDSCAPE DETAILS
PICNIC SHELTER
PAVEMENT MARKING AND PERMANENT SIGNING
COMMUNICATION CONDUIT
ELECTRICAL SITE PLAN
BUILDING PLAN
MAINTENANCE BUILDING
TRAFFIC CONTROL
ALIGNMENT DETAIL AND CONTROL POINT TIES
SUBSURFACE EXPLORATION

UTILITY CONTACTS

TOWN OF CAMPBELL UTILITIES - SEWER
2219 BAINBRIDGE STREET
LA CROSSE WI 54603
TELEPHONE: 608-790-8103
ATTENTION: STEVE PINTZ
EMAIL:MAINTENANCE@TOWNOFCAMPBELL.NET

CENTURYLINK - COMMUNICATION LINE
333 NORTH FRONT STREET
LA CROSSE, WI 54603
TELEPHONE: 608-796-5142
ATTENTION: BRIAN STELPHLUG

XCEL ENERGY - NATURAL GAS
1414 W HAMILTON AVENUE
P.O. BOX 8
EAU CLAIRE, WI 54702-0008
TELEPHONE: 608-789-3629
ATTENTION: DANIEL MARTI
EMAIL: DANIEL.MARTI@XCELENERGY.COM

XCEL ENERGY - ELECTRIC
1414 W HAMILTON AVENUE
P.O. BOX 8
EAU CLAIRE, WI 54702-0008
TELEPHONE: 715-737-2574
ATTENTION: NANCY DOTSON
EMAIL: NANCY.DOTSON@XCELENERGY.COM

DESIGN CONTACT
SEH INC.
717 3RD AVENUE SE
ROCHESTER MN 55904
TELEPHONE: 507-288-6464
ATTENTION: BEN WOLF
EMAIL: BWOLF@SEHINC.COM

DOT CONTACT
ANTHONY VANDER WIELEN, PE - PROJECT MANAGER
SOUTHWEST REGION LA CROSSE OFFICE
3550 MORMON COULEE ROAD
LA CROSSE, WI 54601
PHONE: 608-789-7878
EMAIL: ANTHONY.VANDERWIELEN@DOT.WI.GOV

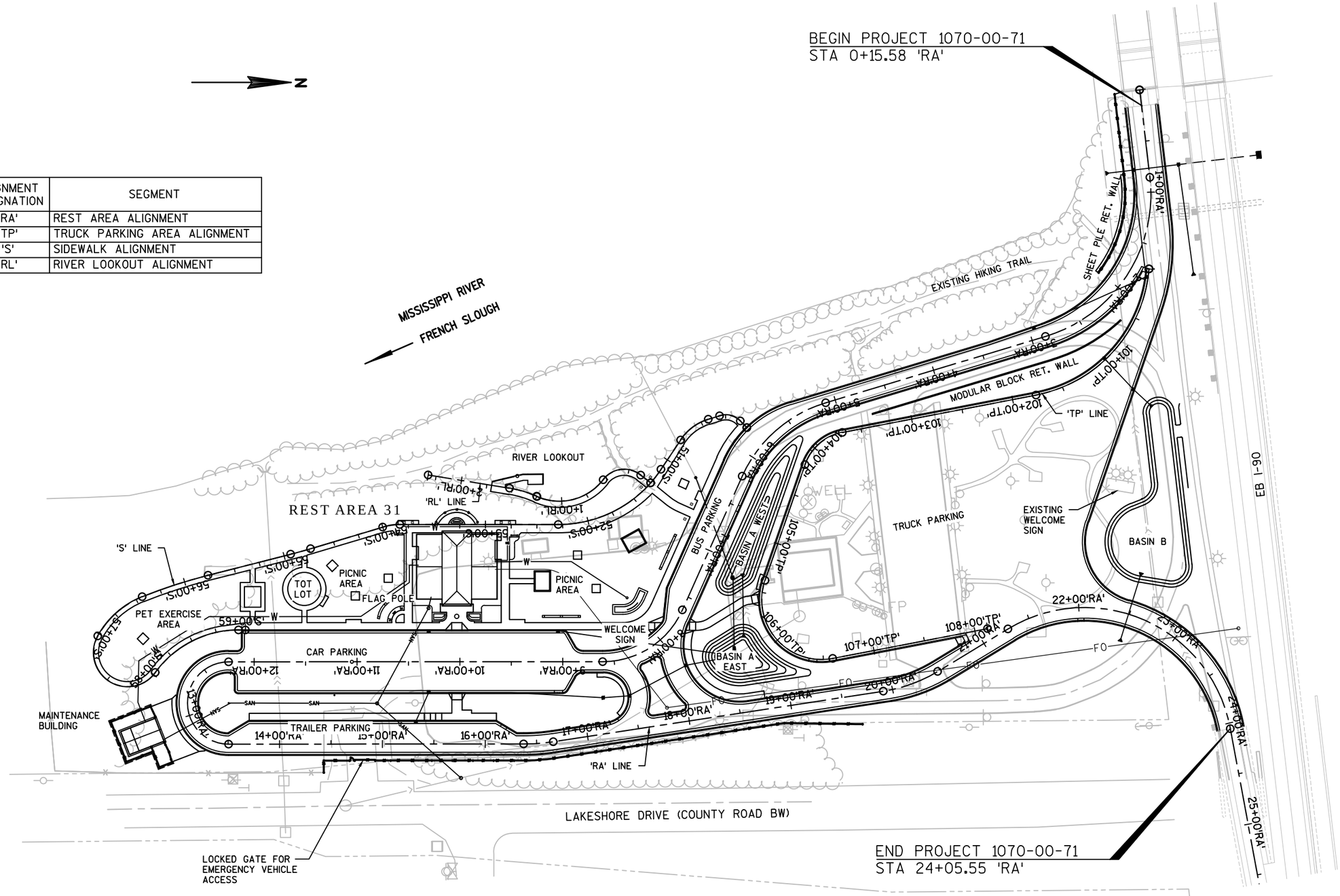
FACILITIES CONTACT
ROBERT SPOERL, PE - PROJECT MANAGER
WISDOT BUREAU OF HIGHWAY MAINTENANCE
4802 SHEBOYGAN AVENUE
ROOM 501 (PO BOX 7986)
MADISON, WI 53707
PHONE: 608-266-8665
EMAIL: ROBERT.SPOERL@DOT.WI.GOV

ENVIRONMENTAL COORDINATOR
WISCONSIN DNR
LA CROSSE SERVICE CENTER
3550 MORMON COULEE RD
LA CROSSE, WI 54601
ATTENTION: KAREN KALVELAGE
TELEPHONE 608-785-9115
EMAIL: KAREN.KALVELAGE@WISCONSIN.GOV

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

PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	GENERAL NOTES, ABBREVIATIONS AND CONTACTS	SHEET 2	E

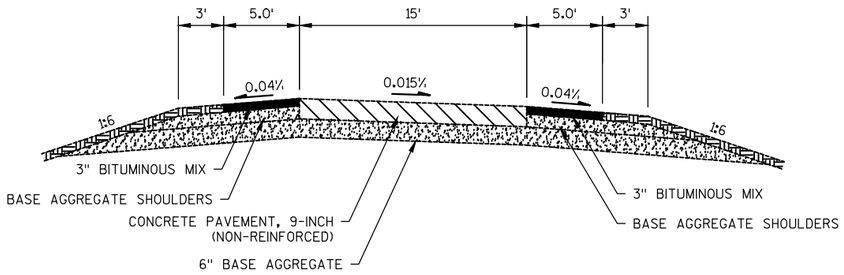
ALIGNMENT DESIGNATION	SEGMENT
'RA'	REST AREA ALIGNMENT
'TP'	TRUCK PARKING AREA ALIGNMENT
'S'	SIDEWALK ALIGNMENT
'RL'	RIVER LOOKOUT ALIGNMENT



PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	PROJECT OVERVIEW	SHEET	E

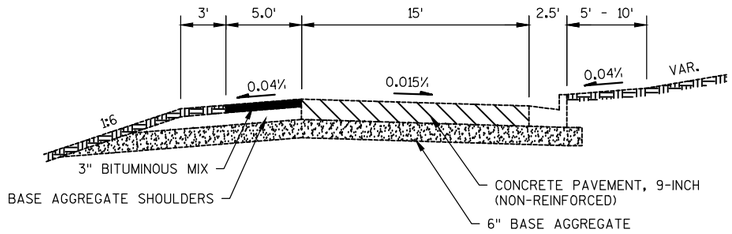
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LAYOUT NAME - PROJECT OVERVIEW

PLOT DATE : 12/17/2015 10:55 PM PLOT BY : NATE MCLAUGHLIN PLOT NAME : PLOT SCALE : 1 IN:100 FT



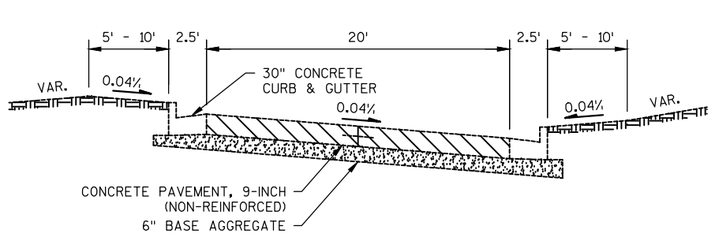
EXISTING TYPICAL SECTION

REST AREA NO. 31
ENTRANCE RAMP



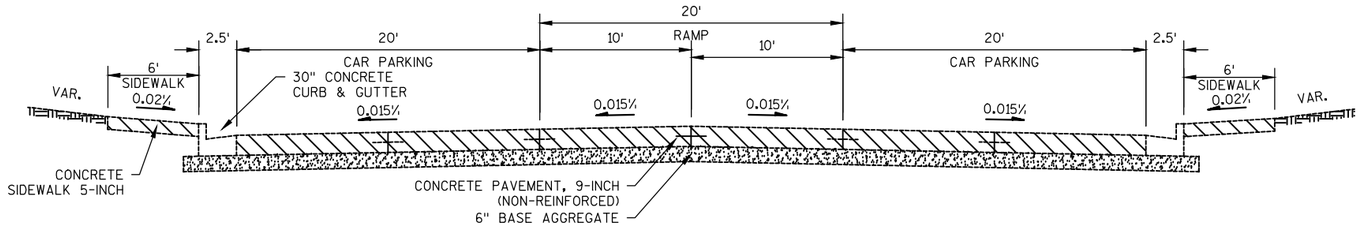
EXISTING TYPICAL SECTION

REST AREA NO. 31
EXIT RAMP



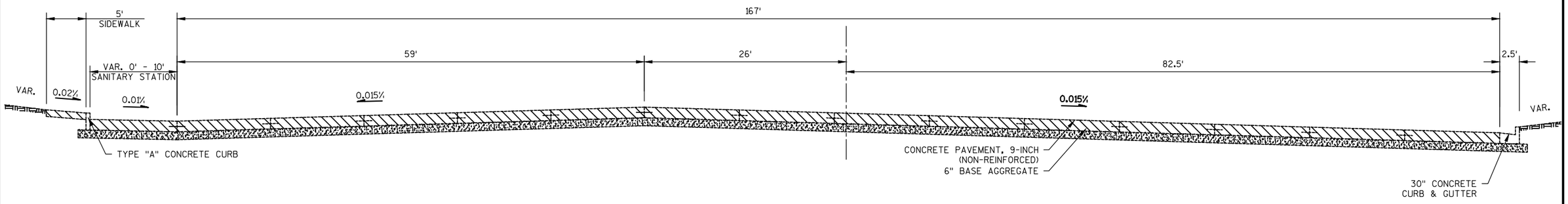
EXISTING TYPICAL SECTION

REST AREA NO. 31
SUPERELEVATED EXIT/ENTRANCE RAMP



EXISTING TYPICAL SECTION

REST AREA NO. 31
CAR PARKING AREA



EXISTING TYPICAL SECTION

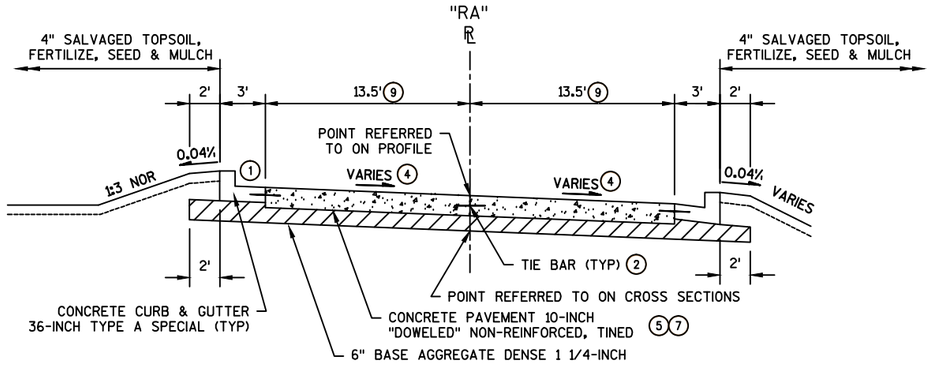
REST AREA NO. 31
TRUCK PARKING AREA

PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	TYPICAL SECTIONS - EXISTING	SHEET 4	E

FILE NAME : P:\UZ\W\WITCO\131411\5-FINAL-DSGN\51-CONST-DWGS-CAD\40-TRANSHWY\PLN SHTS\020103-TS.DWG
LAYOUT NAME - TYPICAL SECTIONS - EXISTING

PLOT DATE : 12/17/2015 10:55 PM PLOT BY : NATE MCLAUGHLIN PLOT NAME : PLOT SCALE : NTS

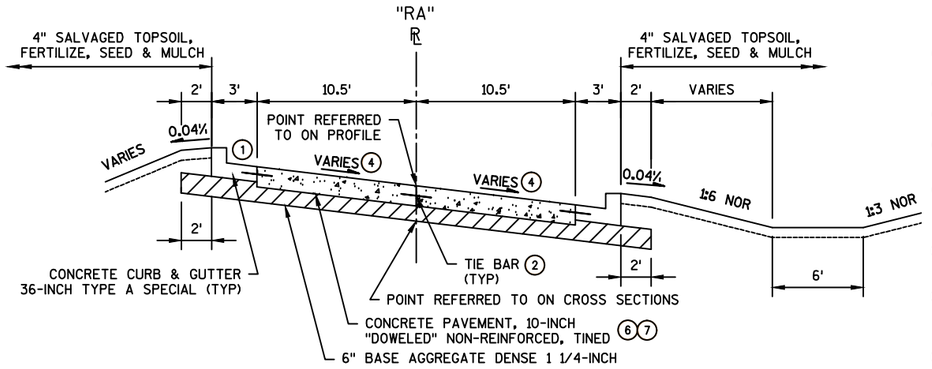
WISDOT/CADDS SHEET 42



TYPICAL SECTION

I-90 EXIT RAMP

STA 0+15.58'RA' TO STA 1+71.25'RA'

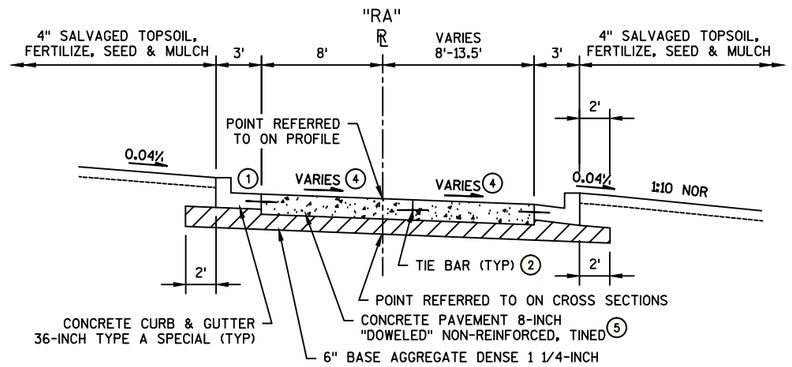


TYPICAL SECTION

I-90 ENTRANCE RAMP

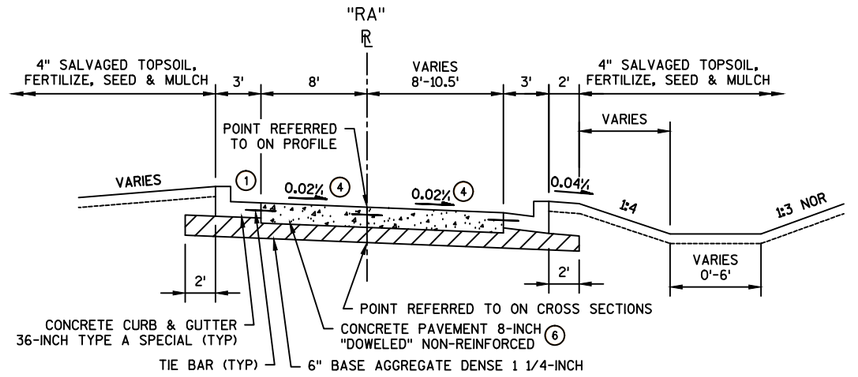
STA 22+46.12'RA' TO STA 24+05.55'RA'

1. MATCH LANE SLOPE ON GUTTER.
2. TIE BARS ARE INCIDENTAL TO CONCRETE PAVEMENT.
3. SEE SEEDING PLAN FOR AREAS OF SEEDING OR SODDING.
4. SEE PAVEMENT GEOMETRIC DETAILS FOR CROSS SLOPE TRANSITION AREAS.
5. 10-INCH CONCRETE PAVEMENT ENDS AT STA. 1+71.25'RA' BEGIN 15 FT TRANSITION TO 8-INCH CONCRETE. ACCESS TO TRUCK PARKING AREA REMAINS AT 10-INCH CONCRETE.
6. 8-INCH CONCRETE PAVEMENT ENDS AT STA. 20+74.85'RA' BEGIN 14.3 FT TRANSITION TO 10-INCH CONCRETE.
7. PROVIDE TINED CONCRETE SURFACE FROM STA. 0+15.58'RA' TO STA. 1+71.25'RA', AND FROM STA. 22+46.12'RA' TO STA. 24+05.55'RA'.
8. SEE PAVEMENT GEOMETRICS, GRADES AND JOINT LAYOUT SHEETS FOR TRANSITION AREAS BETWEEN TYPICAL SECTIONS.
9. WIDTH VARIES FROM STA. 0+85.58'RA' TO STA. 1+71.25'RA'



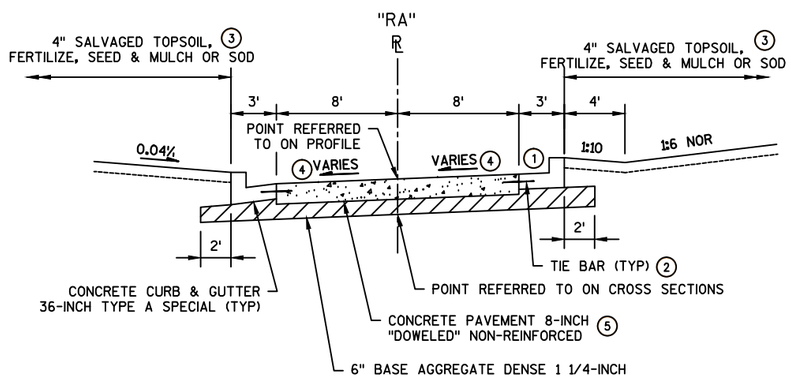
TYPICAL SECTION

STA 1+71.25'RA' TO STA 3+41.53'RA'



TYPICAL SECTION

STA 16+29.95'RA TO STA 20+74.85'RA'

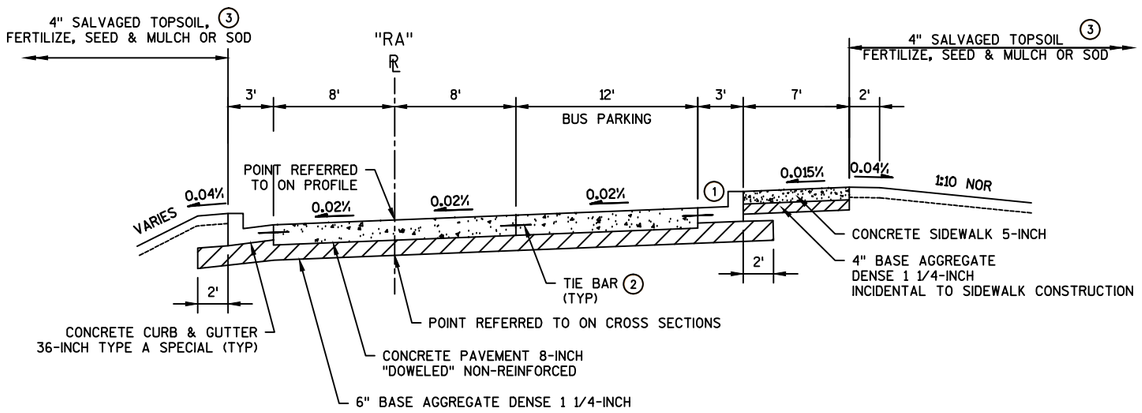


TYPICAL SECTION

RAMP TO CAR PARKING

STA 3+41.53'RA' TO STA 5+09.64'RA'

STA 12+24.84'RA' TO STA 13+50.50'RA' (8)



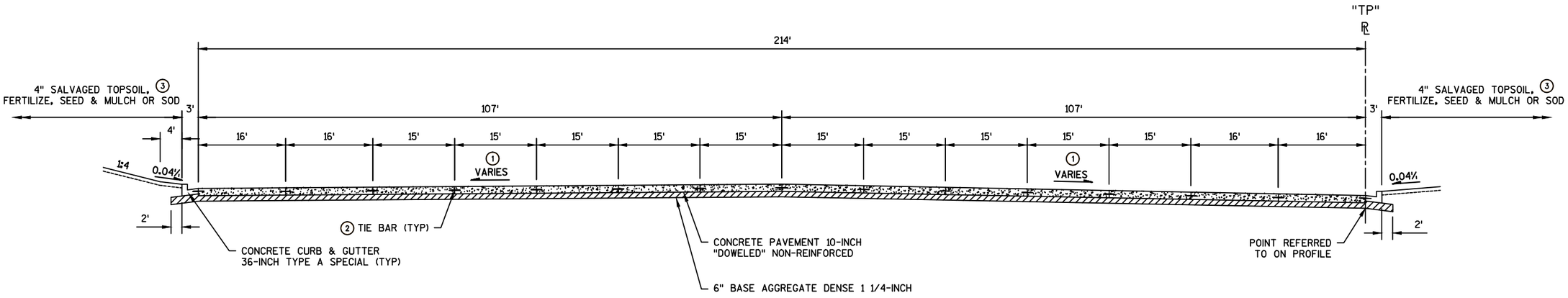
TYPICAL SECTION

BUS PARKING

STA 6+21.09'RA' TO STA 7+49.49'RA' (8)

PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	TYPICAL SECTIONS - PROPOSED	SHEET 5	E

2



TYPICAL SECTION

TRUCK PARKING AREA

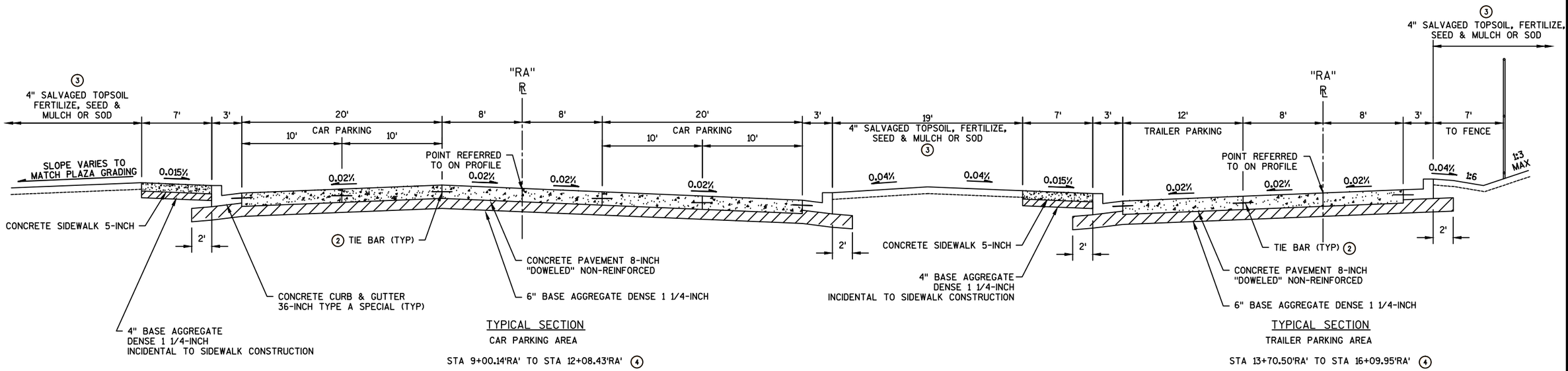
STA 102+88.03'TP' TO STA 103+68.55'TP'

① SLOPE VARIES THROUGHOUT PARKING AREA. SEE SPOT ELEVATIONS ON JOINTING LAYOUT.

② TIE BARS ARE INCIDENTAL TO CONCRETE PAVEMENT.

③ SEE SEEDING PLAN FOR AREAS OF SEEDING OR SODDING.

④ SEE PAVEMENT GEOMETRICS, GRADES, AND JOINT LAYOUT SHEETS FOR TRANSITION AREAS BETWEEN TYPICAL SECTIONS.



TYPICAL SECTION

CAR PARKING AREA

STA 9+00.14'RA' TO STA 12+08.43'RA' ④

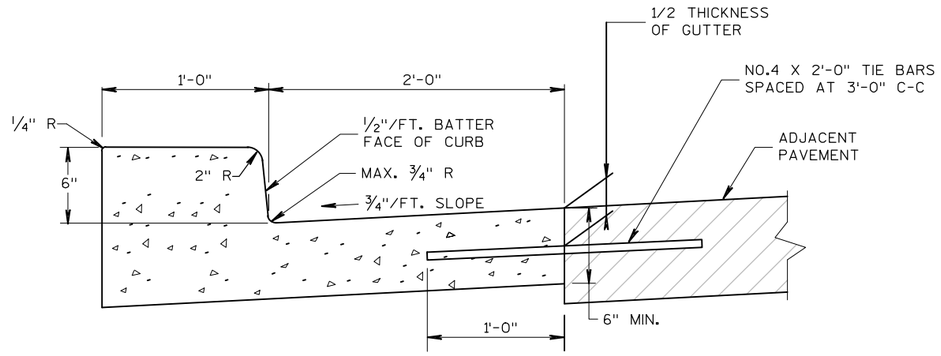
TYPICAL SECTION

TRAILER PARKING AREA

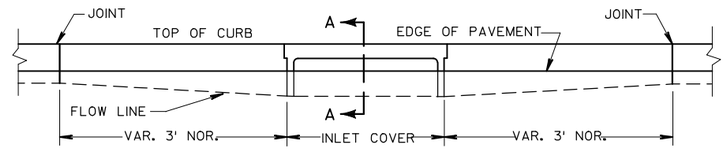
STA 13+70.50'RA' TO STA 16+09.95'RA' ④

PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	TYPICAL SECTIONS - PROPOSED	SHEET 6	E

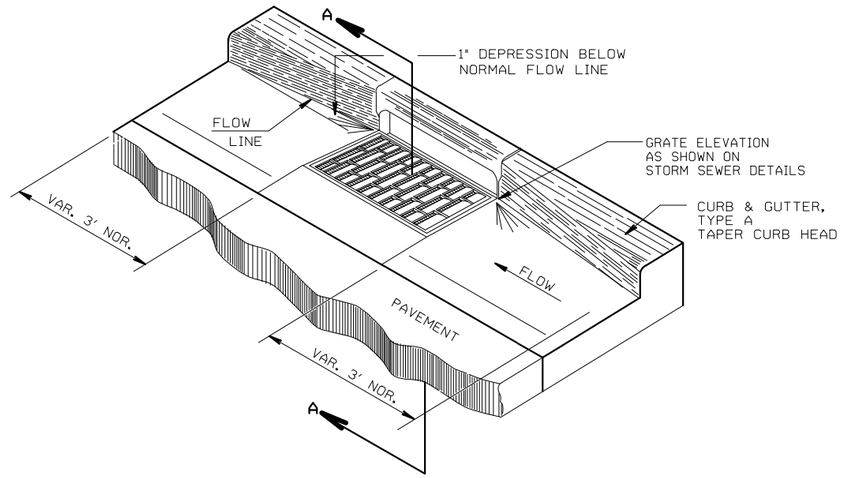
FILE NAME : P:\UZ\W\WITCO\131411\5-FINAL-DSGN\51-CONST-DWGS-CAD\40-TRANSHWY\PLN SHTS\020103-TS.DWG
LAYOUT NAME - TYPICAL SECTIONS - PROPOSED
PLOT DATE : 12/17/2015 10:56 PM PLOT BY : NATE MCLAUGHLIN PLOT NAME : PLOT SCALE : NTS
WISDOT/CADDS SHEET 42



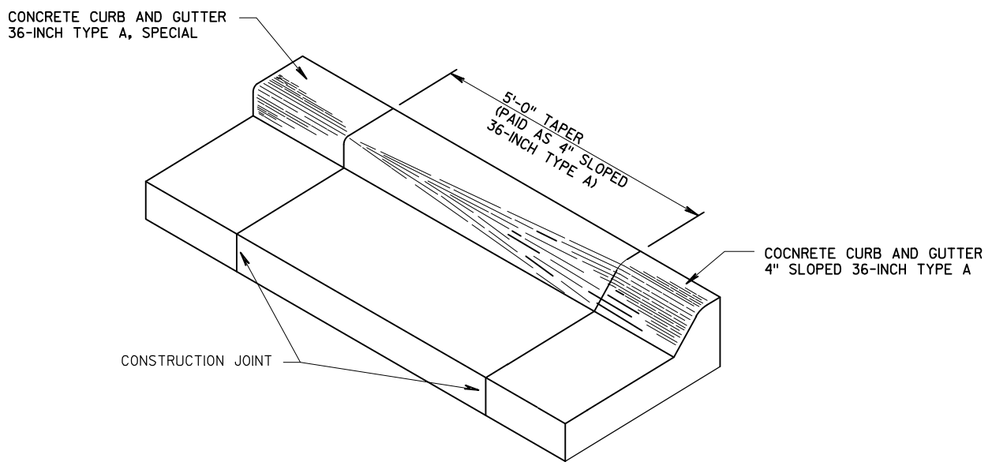
CONCRETE CURB AND GUTTER 36-INCH TYPE A SPECIAL
(VARIABLE GUTTER)



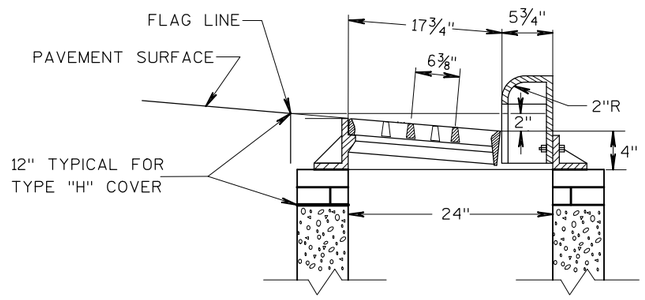
ELEVATION



DETAIL OF CURB & GUTTER AT INLETS
(36-INCH CURB & GUTTER SPECIAL SHOWN)
(TYPE H INLET SHOWN)



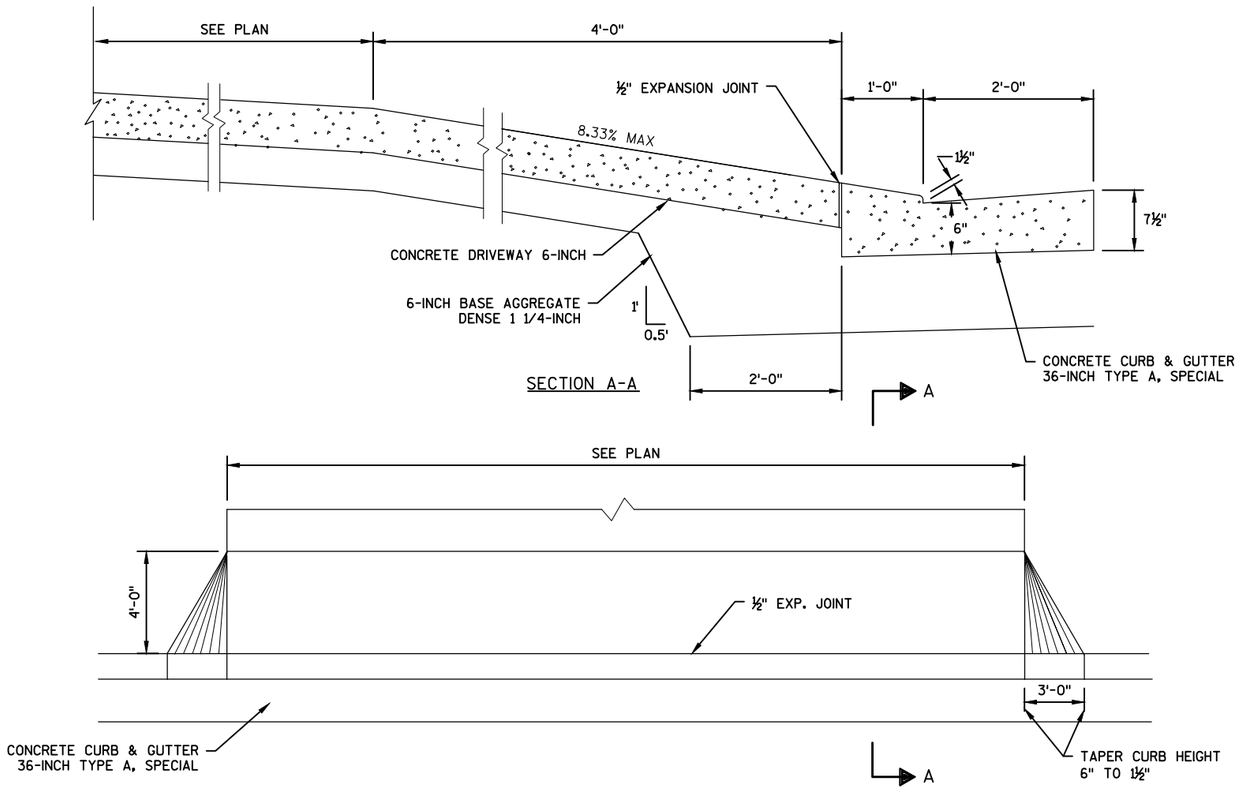
CURB & GUTTER TRANSITION DETAIL



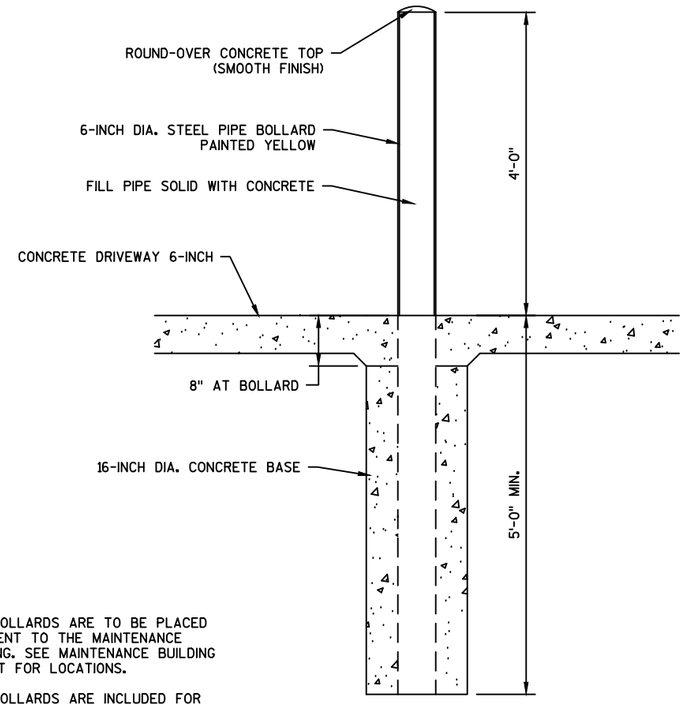
SECTION A-A

DETAIL OF CURB AND GUTTER AT INLETS

PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	CONSTRUCTION DETAILS	SHEET 7	E



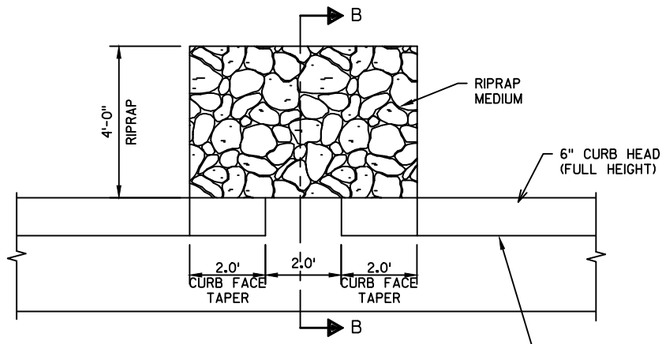
CONCRETE DRIVEWAY APRON DETAIL - MAINTENANCE BUILDING



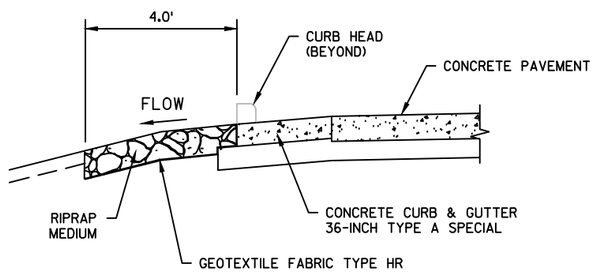
NOTE:
PIPE BOLLARDS ARE TO BE PLACED ADJACENT TO THE MAINTENANCE BUILDING. SEE MAINTENANCE BUILDING LAYOUT FOR LOCATIONS.

PIPE BOLLARDS ARE INCLUDED FOR PAYMENT UNDER THE LUMP SUM MAINTENANCE BUILDING PAY ITEM.

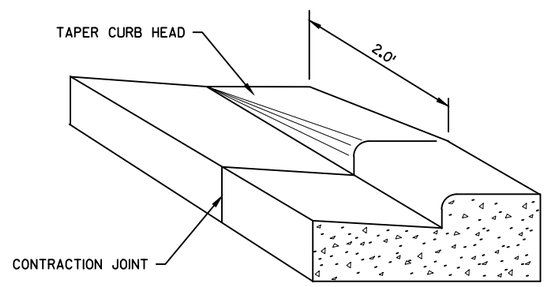
PIPE BOLLARD DETAIL



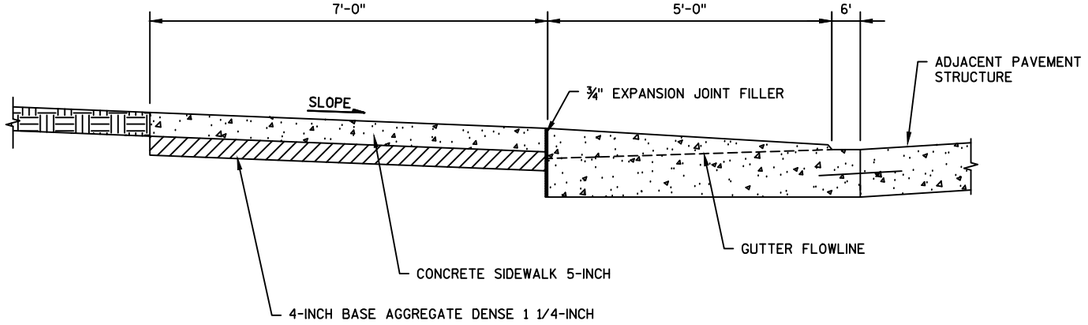
CURB DEPRESSION TO SWALE TRANSITION LAYOUT



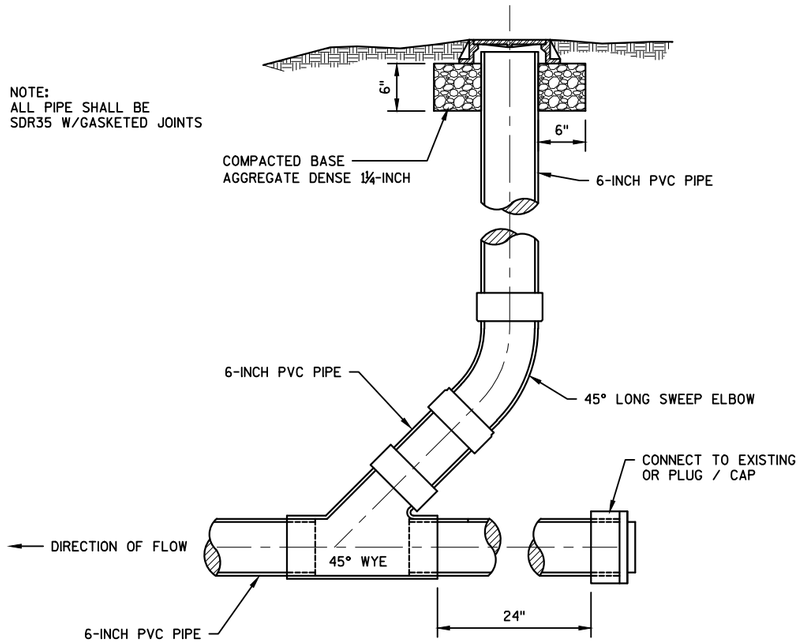
SECTION B-B



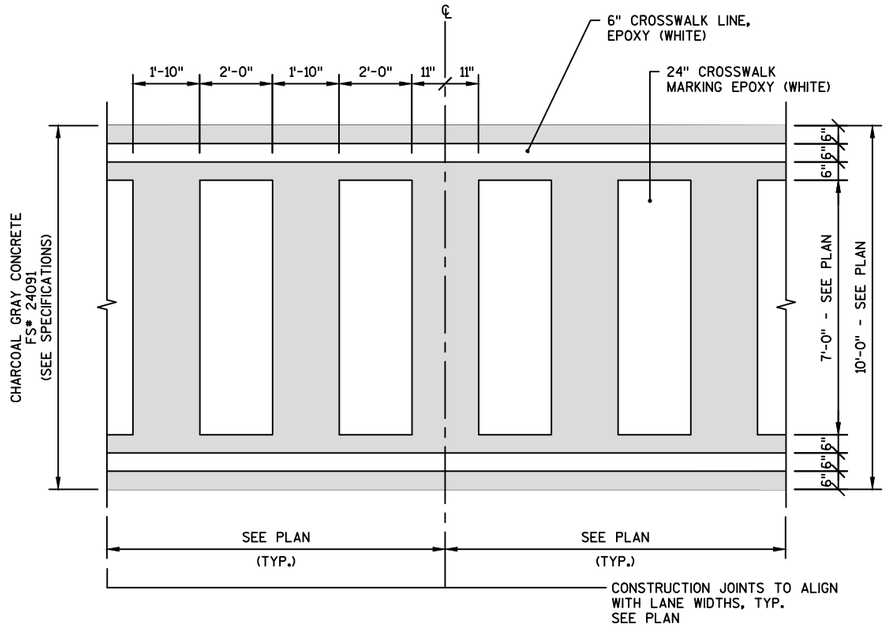
DETAIL OF CURB FACE TAPER



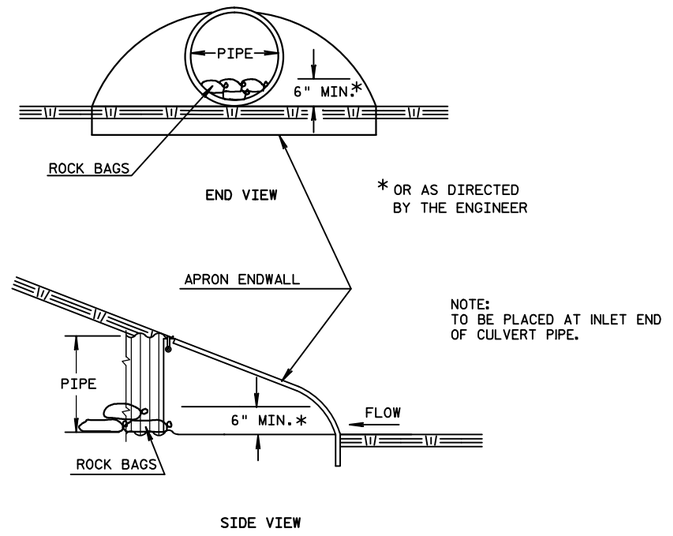
CONCRETE MEDIAN SLOPED NOSE TYPE 1



SANITARY IN-LINE CLEANOUT



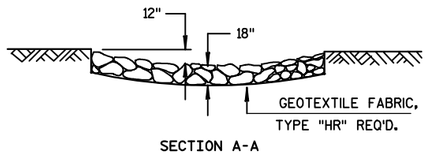
DECORATIVE CROSSWALK DETAIL

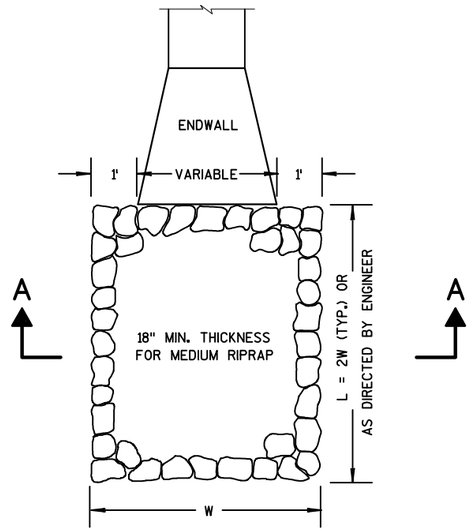


CULVERT PIPE CHECKS

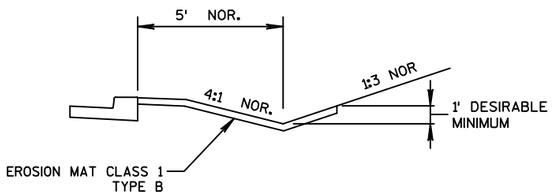
PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	CONSTRUCTION DETAILS	SHEET 9	E

FILE NAME : P:\UZ\W\WITCO\131411\5-FINAL-DSGN\51-CONST-DWGS-CAD\40-TRANSHWY\PLN SHTS\020106_CD.DWG
LAYOUT NAME - CONSTRUCTION DETAILS
PLOT DATE : 12/17/2015 10:56 PM PLOT BY : NATE MCLAUGHLIN PLOT NAME : PLOT SCALE : NTS
WISDOT/CADDS SHEET 42

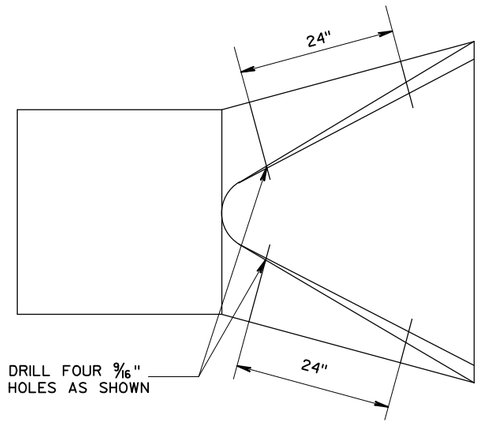


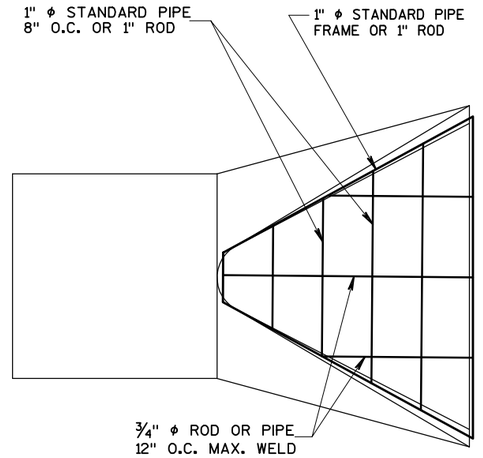


MEDIUM RIPRAP TREATMENT AT CULVERTS

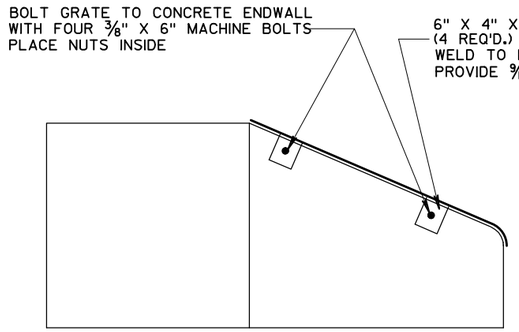


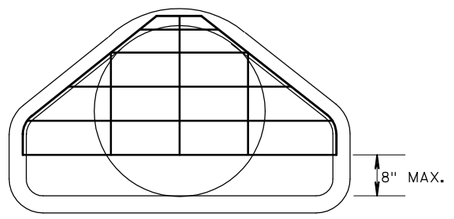
EROSION MAT DETAIL FOR DITCHES





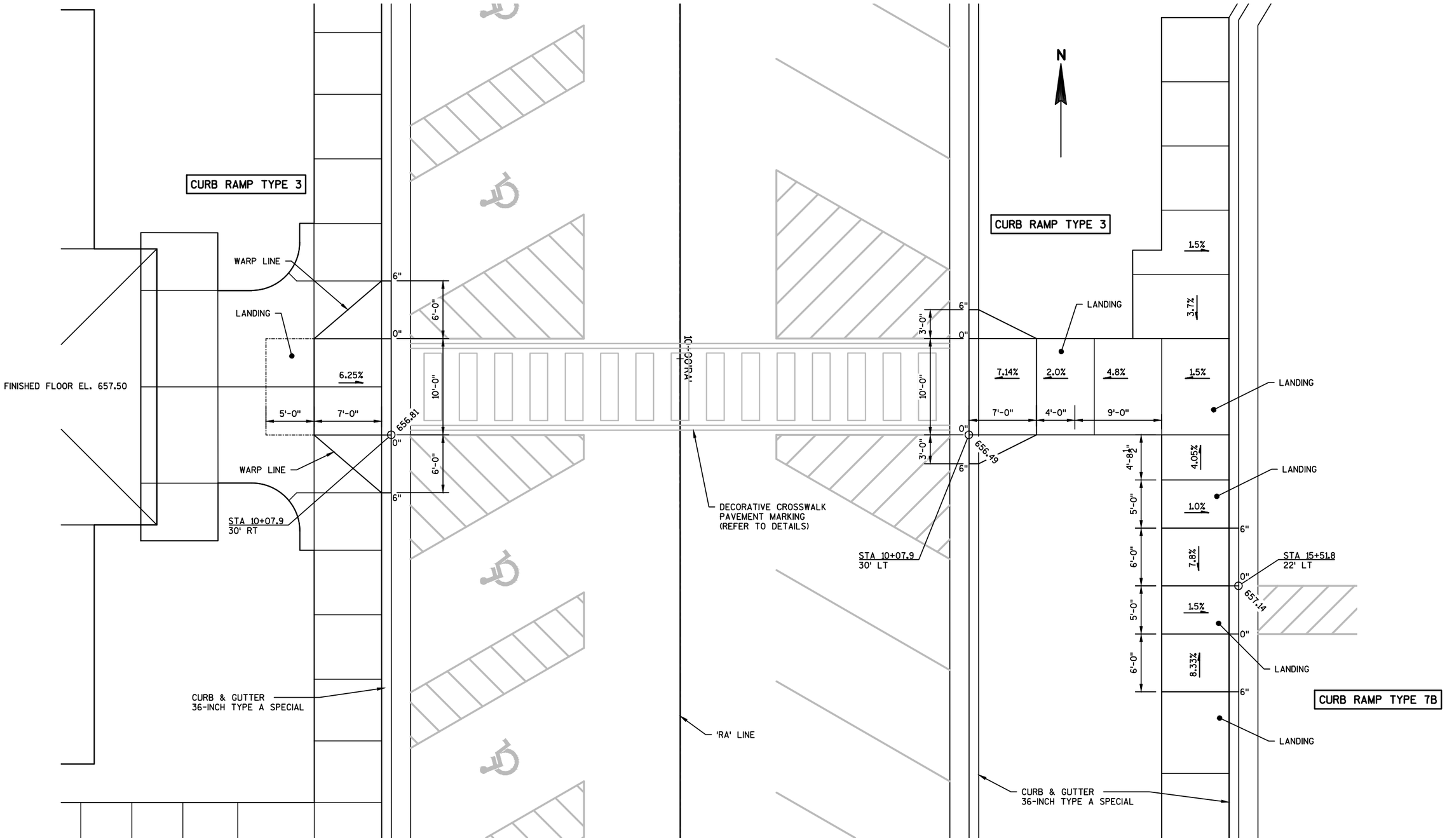
AT EACH PIPE





PIPE GRATE DETAIL

2

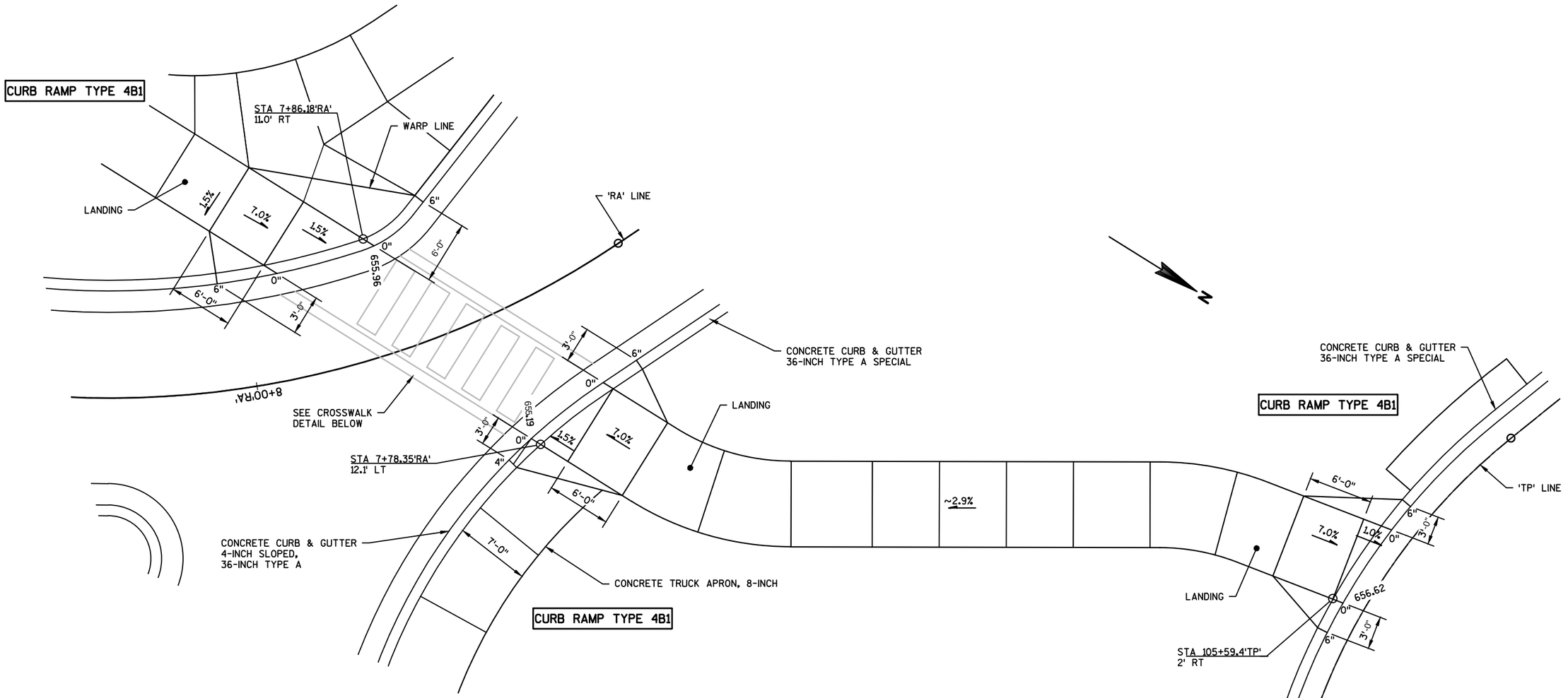


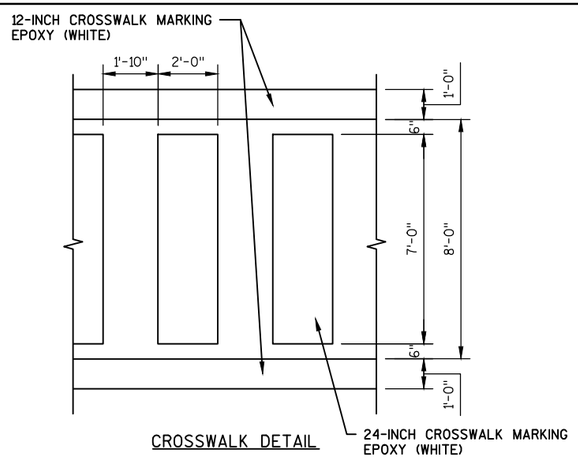
SIDEWALK PAVING & PEDESTRIAN RAMP LAYOUT

PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	CONSTRUCTION DETAILS - PEDESTRIAN RAMP LAYOUT	SHEET 11	E

FILE NAME : P:\UZ\W\WITCO\131411\5-FINAL-DSGN\51-CONST-DWGS-CAD\40-TRANSHWY\PLN SHTS\020110-CD.DWG
LAYOUT NAME - CONSTRUCTION DETAILS - PEDESTRIAN RAMP LAYOUT
PLOT DATE : 12/17/2015 10:57 PM PLOT BY : NATE MCLAUGHLIN PLOT NAME : PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 42

2



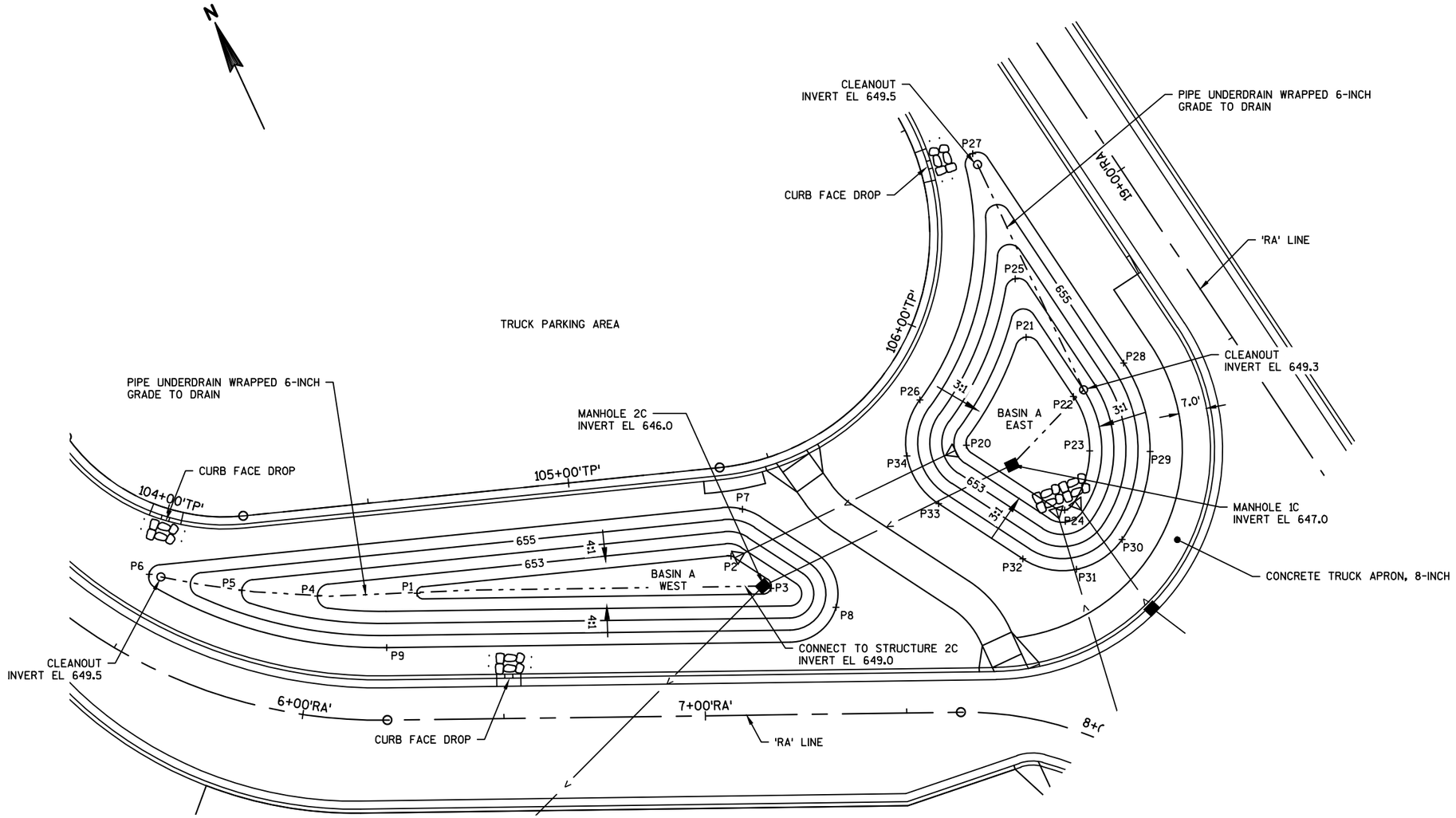


CROSSWALK DETAIL

SIDEWALK PAVING & PEDESTRIAN RAMP LAYOUT

PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	CONSTRUCTION DETAILS - PEDESTRIAN RAMP LAYOUT	SHEET 12	E

2



BASIN A GRADING LAYOUT

RIP RAP MEDIUM

BASIN A WEST DATA POINT TABLE				
POINT	NORTHING	EASTING	ELEVATION	REMARKS
P1	148,625.303	440,079.044	652.0	
P2	148,600.818	440,153.596	652.0	
P3	148,589.408	440,159.228	652.0	
P4	148,635.045	440,056.339	653.0	
P5	148,644.214	440,039.862	654.0	
P6	148,657.545	440,020.653	656.0	
P7	148,610.194	440,161.085	656.0	R15' MID PT
P8	148,578.337	440,171.912	656.0	R12' MID PT
P9	148,616.213	440,066.466	656.0	

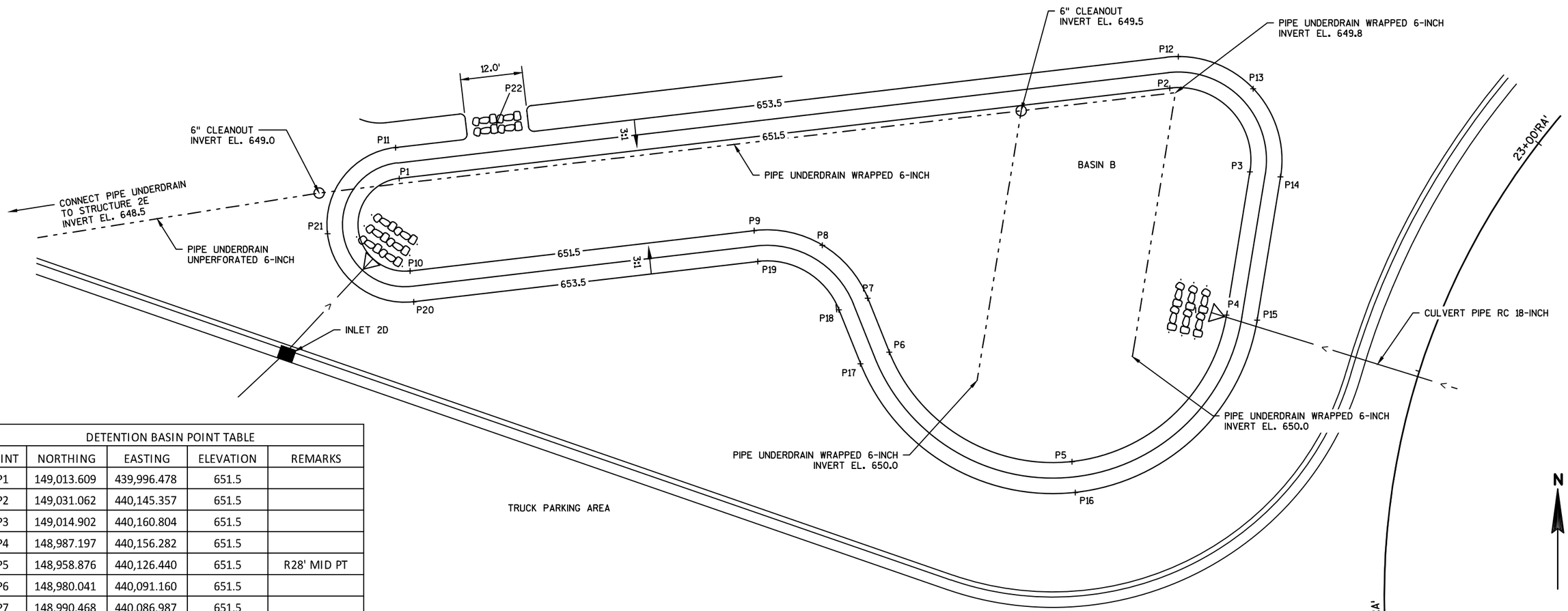
BASIN A EAST DATA POINT TABLE				
POINT	NORTHING	EASTING	ELEVATION	REMARKS
P20	148,601.223	440,218.240	651.0	
P21	148,619.300	440,242.932	651.0	
P22	148,600.984	440,247.423	651.0	
P23	148,587.046	440,245.372	651.0	R24' MID PT
P24	148,576.335	440,233.614	651.0	
P25	148,633.571	440,246.597	653.0	
P26	148,616.246	440,212.489	656.0	
P27	148,666.237	440,250.099	656.0	
P28	148,603.251	440,262.251	656.0	
P29	148,580.602	440,258.917	656.0	R39' MID PT
P30	148,563.726	440,243.447	656.0	
P31	148,561.771	440,230.023	656.0	R18' MID PT
P32	148,569.743	440,219.047	656.0	
P33	148,590.956	440,205.856	656.0	
P34	148,605.029	440,203.731	656.0	R18' MID PT

PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	CONSTRUCTION DETAILS - INFILTRATION BASIN LAYOUT	SHEET	E

FILE NAME : P:\UZ\W\WITCO\131411\5-FINAL-DSGN\51-CONST-DWGS-CAD\40-TRANSHWY\PLN SHTS\020110-IB.DWG
LAYOUT NAME - CONSTRUCTION DETAILS - INFILTRATION BASIN LAYOUT

PLOT DATE : 12/17/2015 10:58 PM PLOT BY : NATE MCLAUGHLIN PLOT NAME : PLOT SCALE : 1 IN:30 FT

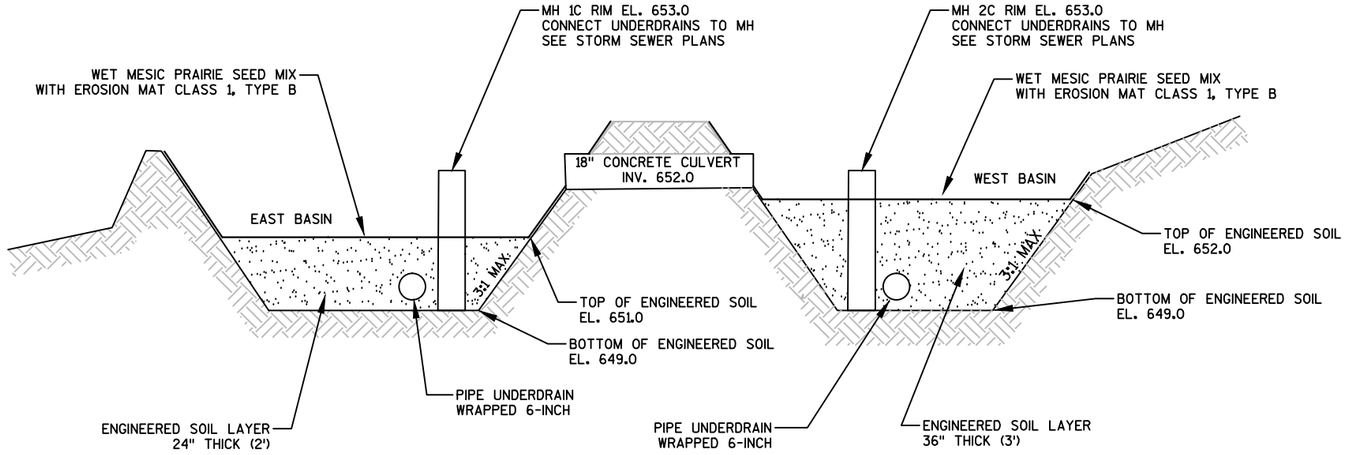
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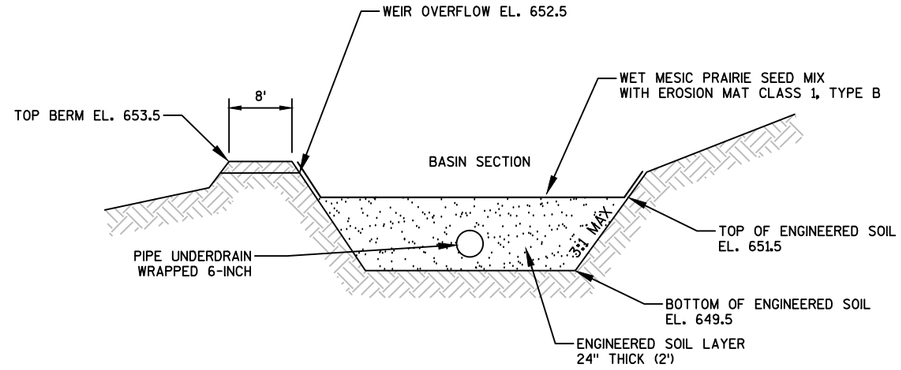
DETENTION BASIN POINT TABLE				
POINT	NORTHING	EASTING	ELEVATION	REMARKS
P1	149,013.609	439,996.478	651.5	
P2	149,031.062	440,145.357	651.5	
P3	149,014.902	440,160.804	651.5	
P4	148,987.197	440,156.282	651.5	
P5	148,958.876	440,126.440	651.5	R28' MID PT
P6	148,980.041	440,091.160	651.5	
P7	148,990.468	440,086.987	651.5	
P8	149,000.714	440,078.228	651.5	R27' MID PT
P9	149,003.524	440,065.045	651.5	
P10	148,995.732	439,998.574	651.5	
P11	149,019.568	439,995.780	653.5	
P12	149,037.021	440,144.658	653.5	
P13	149,030.977	440,161.444	653.5	R20' MID PT
P14	149,013.935	440,166.726	653.5	
P15	148,986.230	440,162.204	653.5	
P16	148,952.912	440,127.095	653.5	R40' MID PT
P17	148,977.812	440,085.589	653.5	
P18	148,988.239	440,081.417	653.5	
P19	148,997.565	440,065.744	653.5	
P20	148,989.772	439,999.273	653.5	
P21	149,002.924	439,982.628	653.5	R15' MID PT
P22	149,024.380	440,015.353	652.5	CNTR OF RIPRAP

BASIN B GRADING LAYOUT

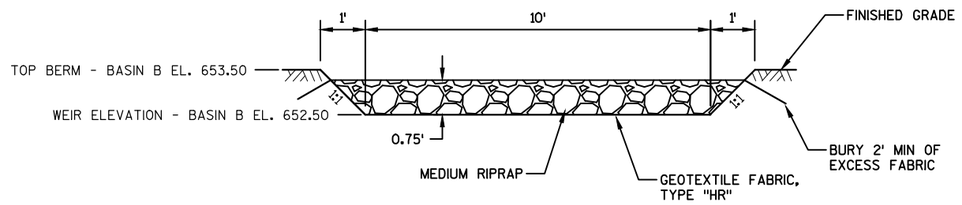
RIP RAP MEDIUM



BASIN A



BASIN B



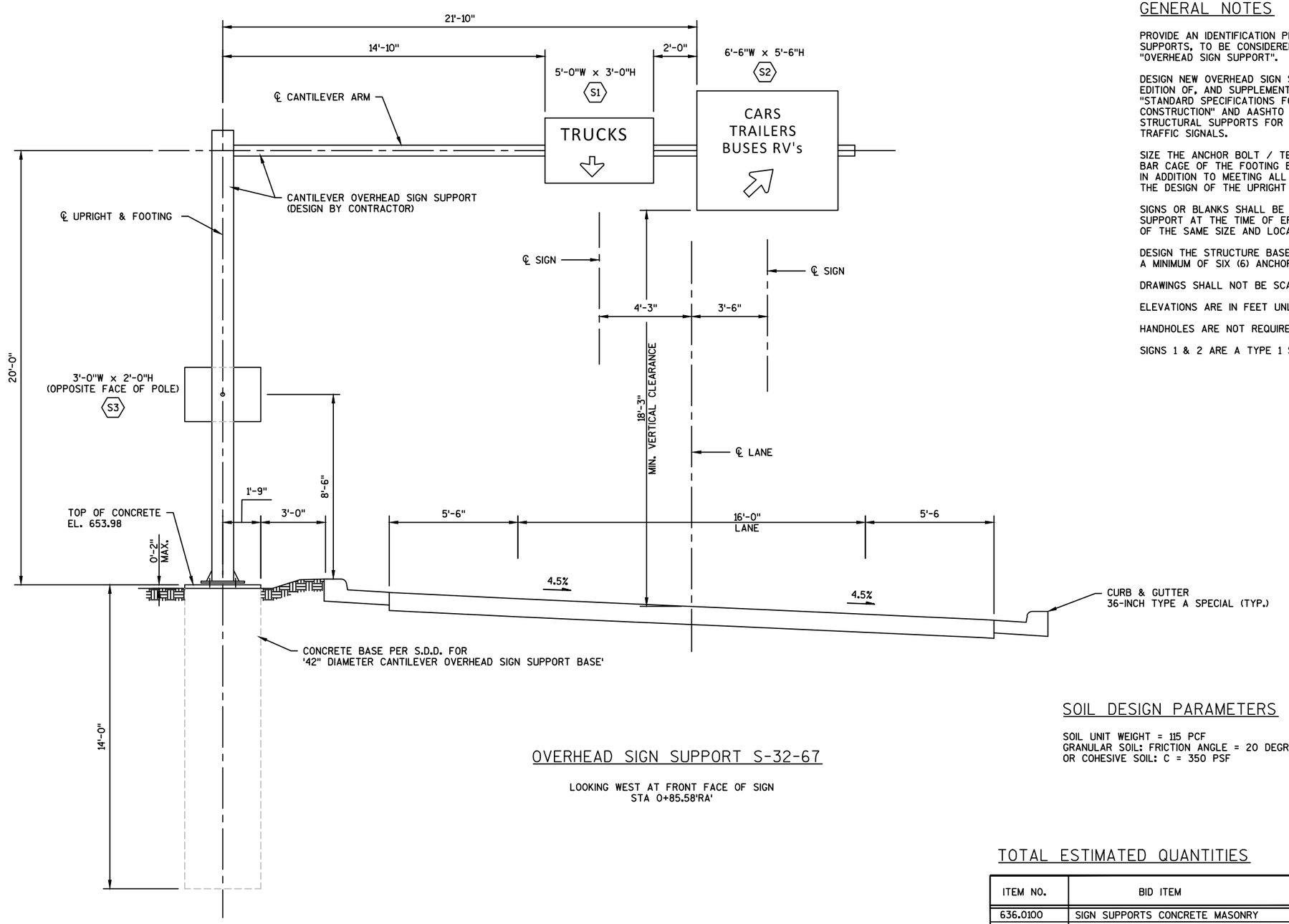
WEIR DETAIL

NOTES:

1. ENGINEERED SOIL TO BE 70% SAND AND 30% COMPOST. ENGINEERED SOIL TO BE MIXED OFFSITE. CONTRACTOR SHALL SUBMIT VERIFICATION OF MIX COMPONENTS. MIX COMPONENTS SHALL CONFORM TO REQUIREMENTS IN WDNR TECHNICAL STANDARD 1004. DO NOT COMPACT ENGINEERED SOIL. PLACE ACCORDING TO TECHNICAL STANDARD 1004.

2. EXCAVATE BOTTOM OF SEDIMENTATION BASIN. INSTALL UNDERDRAIN. INSTALL GRAVEL, ENGINEERED SOIL, AND EROSION MAT. AVOID COMPACTION OF ENGINEERED SOIL - NO HEAVY MACHINERY ALLOWED ON TOP OF ENGINEERED SOIL AFTER IT IS PLACED.

PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	CONSTRUCTION DETAILS - INFILTRATION BASIN DETAILS	SHEET 15	E



OVERHEAD SIGN SUPPORT S-32-67

LOOKING WEST AT FRONT FACE OF SIGN
STA 0+85.58'RA'

GENERAL NOTES

PROVIDE AN IDENTIFICATION PLAQUE FOR ALL OVERHEAD SIGN SUPPORTS, TO BE CONSIDERED INCIDENTAL TO THE BID ITEM "OVERHEAD SIGN SUPPORT".

DESIGN NEW OVERHEAD SIGN SUPPORTS ACCORDING TO THE LATEST EDITION OF, AND SUPPLEMENTAL TO THE STATE OF WISCONSIN "STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION" AND AASHTO "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS.

SIZE THE ANCHOR BOLT / TEMPLATE ASSEMBLY TO FIT WITHIN THE BAR CAGE OF THE FOOTING BASE SHOWN IN THE CONTRACT PLANS IN ADDITION TO MEETING ALL APPLICABLE DESIGN REQUIREMENTS FOR THE DESIGN OF THE UPRIGHT BASE CONNECTION.

SIGNS OR BLANKS SHALL BE INSTALLED ON THE OVERHEAD SIGN SUPPORT AT THE TIME OF ERECTION. BLANKS, IF USED, SHALL BE OF THE SAME SIZE AND LOCATION AS PERMANENT SIGNS.

DESIGN THE STRUCTURE BASE PLATE CONNECTION TO ACCOMODATE A MINIMUM OF SIX (6) ANCHOR BOLTS.

DRAWINGS SHALL NOT BE SCALED.

ELEVATIONS ARE IN FEET UNLESS OTHERWISE SHOWN OR NOTED.

HANDHOLES ARE NOT REQUIRED.

SIGNS 1 & 2 ARE A TYPE 1 SIGN, SIGN 3 IS A TYPE 2 SIGN.

SOIL DESIGN PARAMETERS

SOIL UNIT WEIGHT = 115 PCF
GRANULAR SOIL: FRICTION ANGLE = 20 DEGREES
OR COHESIVE SOIL: C = 350 PSF

TOTAL ESTIMATED QUANTITIES

ITEM NO.	BID ITEM	UNIT	TOTAL
636.0100	SIGN SUPPORTS CONCRETE MASONRY	CY	5.0
636.1000	SIGN SUPPORTS STEEL REINFORCEMENT HS	LB	350
641.8100	OVERHEAD SIGN SUPPORT (STRUCTURE)	LS	1

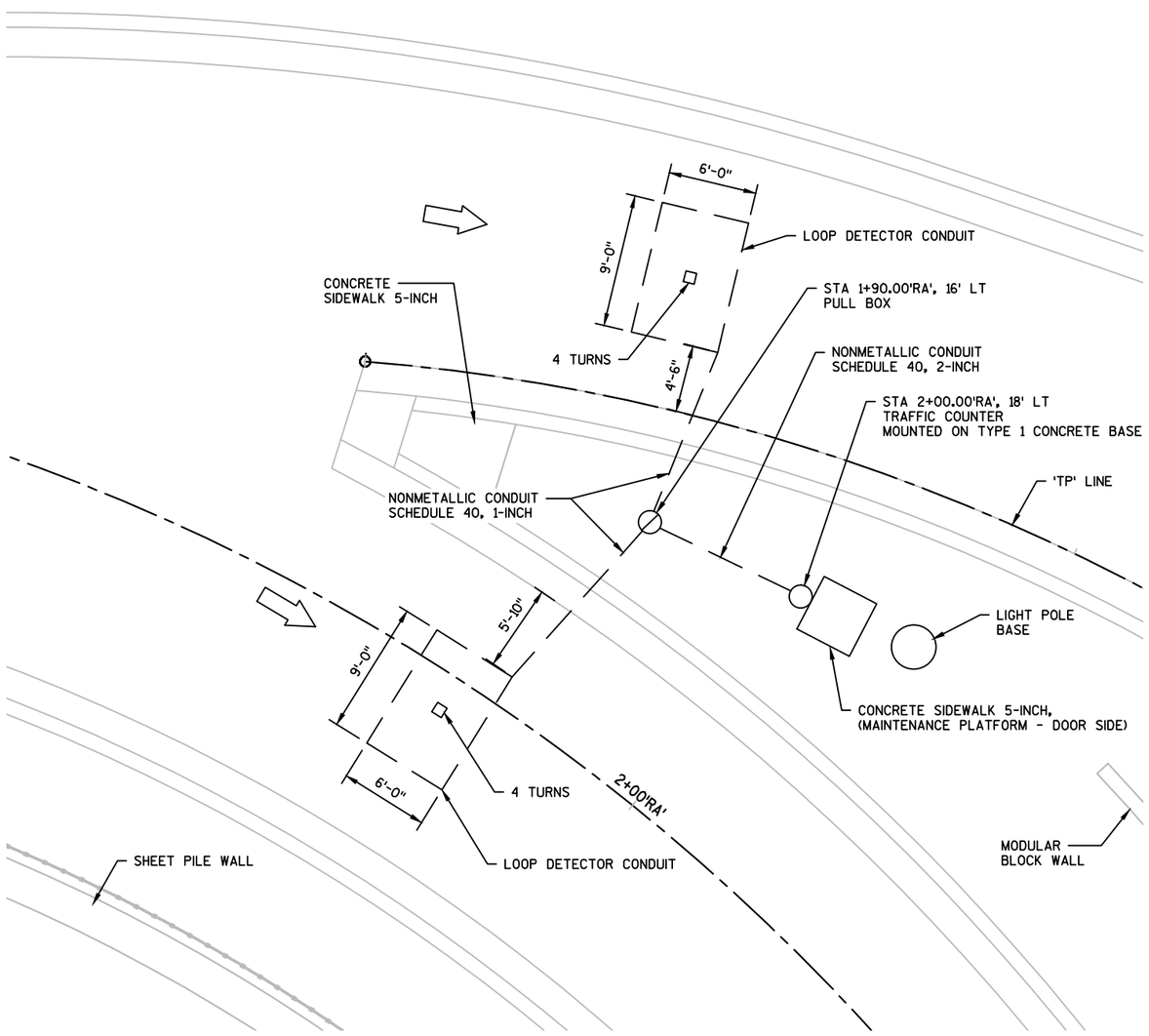
NOTES:

EXACT LOCATION OF PULL BOXES, LOOP DETECTORS AND TRAFFIC COUNTER EQUIPMENT/PLATFORM SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER.

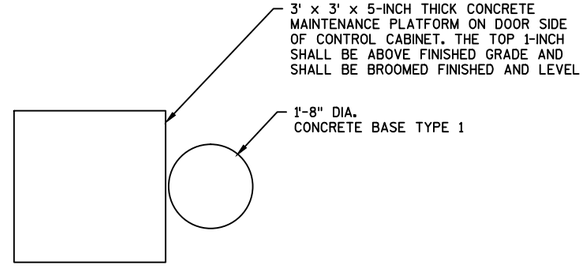
TRAFFIC COUNTER AND CABINET TO BE FURNISHED AND INSTALLED BY OTHERS

LEGEND

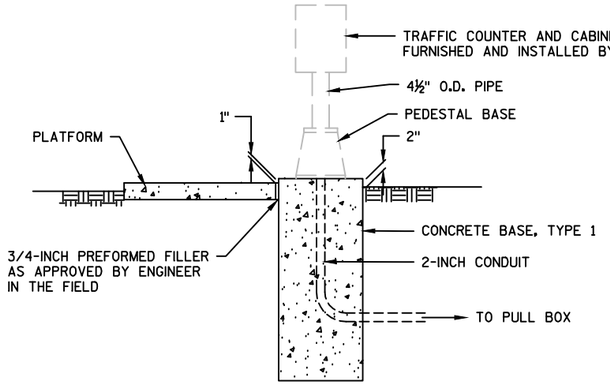
- NONMETALLIC CONDUIT (SIZE AS NOTED)
- TRAFFIC COUNTER
- PULL BOX (12" X 36")
- DIRECTION OF TRAFFIC FLOW



TRAFFIC LOOP COUNTERS LAYOUT



PLAN VIEW



TRAFFIC COUNTER DETAIL

PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	CONSTRUCTION DETAILS - TRAFFIC COUNTER & LOOP DETECTOR	SHEET	E

FILE NAME : P:\UZ\W\WITCO\131411\5-FINAL-DSGN\51-CONST-DWGS-CAD\40-TRANSHWY\PLN SHTS\020112_CD.DWG
LAYOUT NAME - CONSTRUCTION DETAILS - TRAFFIC COUNTER & LOOP DETECTOR

PLOT DATE : 12/17/2015 11:00 PM PLOT BY : NATE MCLAUGHLIN PLOT NAME : PLOT SCALE : 1 IN:10 FT

2

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

THE PLAN QUANTITY FOR THE BID ITEM WALL MODULAR BLOCK GRAVITY LRFD IS BASED ON A WALL HEIGHT MEASURED FROM THE TOP OF WALL TO A CONSTANT DEPTH OF 1.5' BELOW FINISHED GRADE.

DESIGN DATA

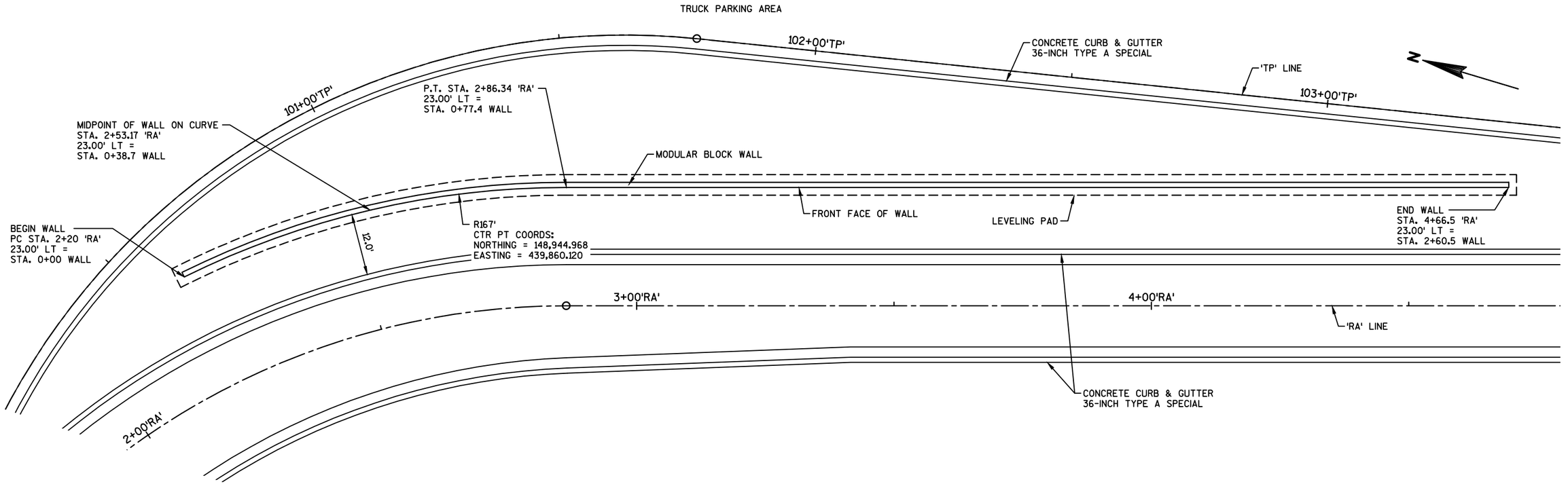
THE CONTRACTOR SHALL PROVIDE COMPLETE DESIGN, PLANS, DETAILS, SPECIFICATIONS, AND SHOP DRAWINGS FOR THE RETAINING WALLS IN ACCORDANCE WITH THE SPECIAL PROVISIONS. THE RETAINING WALL MANUFACTURER SHALL PROVIDE TECHNICAL ASSISTANCE TO THE CONTRACTOR DURING CONSTRUCTION. THE COST OF FURNISHING THESE ITEMS SHALL BE INCLUDED IN THE BID ITEM "WALL MODULAR BLOCK GRAVITY LRFD".

PLANS, ELEVATIONS, AND DETAILS SHOWN ON THESE DRAWINGS ARE INTENDED TO INDICATE WALL LOCATIONS, LENGTHS, HEIGHTS, AND DETAILS COMMON TO THE WALL SYSTEM SELECTED. THE CONTRACTOR SHALL VERIFY THAT THE WALL SYSTEM SELECTED WILL CONFORM TO THE REQUIRED ALIGNMENTS AND DETAILS.

THE RETAINING WALL IS TO BE DESIGNED USING THE ELEVATIONS GIVEN ON THIS SHEET.

DESIGN FOR RETAINING WALL TO PROVIDE FOR FINISHED GRADE SLOPED BEHIND WALL AS SHOWN.

DESIGN RETAINING WALL FOR A LIVE LOAD SURCHARGE OF 100 psf.

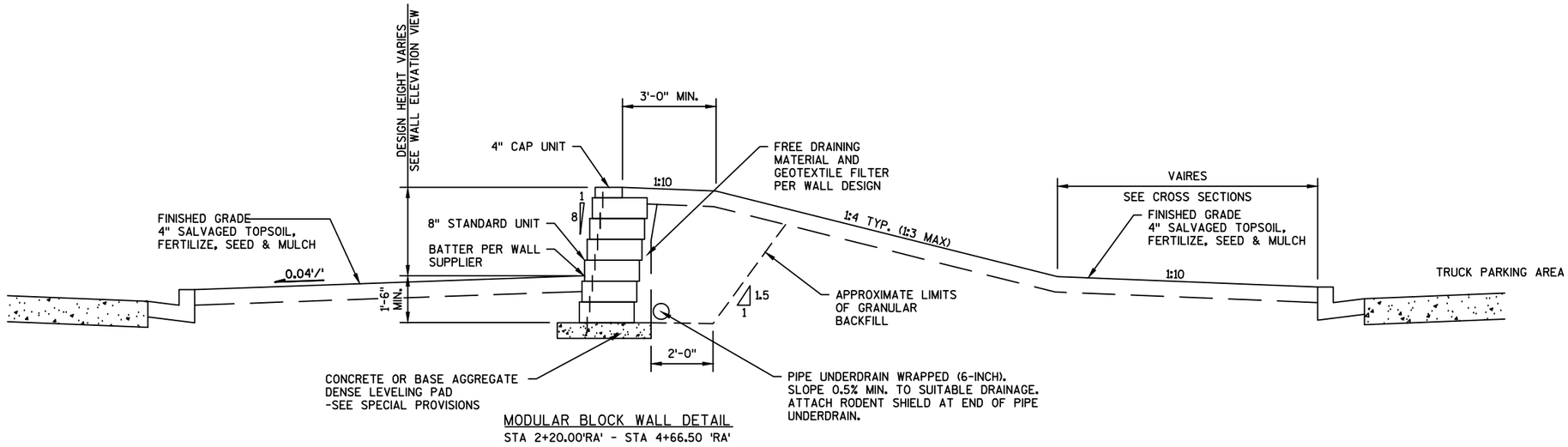


PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	CONSTRUCTION DETAILS - MODULAR BLOCK WALL	SHEET 18	E

NOTES:

RETAINING WALL SHALL BE CONSTRUCTED OF MODULAR BLOCK STANDARD UNITS.

CONTRACTOR/SUPPLIER/MANUFACTURER IS RESPONSIBLE FOR THE DESIGN AND CONSTRUCTION OF THE RETAINING WALL SYSTEM.



MODULAR BLOCK WALL DETAIL
STA 2+20.00'RA' - STA 4+66.50 'RA'

PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	CONSTRUCTION DETAILS - MODULAR BLOCK WALL	SHEET 19	E

LEGEND

1. 4" DIA. RED OAK TREE TO BE PROTECTED.
2. 8" DIA. RED OAK TREE TO BE PROTECTED.
3. 12" DIA. RED OAK TREE TO BE PROTECTED.
4. 30" DIA. RED OAK TREE TO BE PROTECTED.
5. 4" DIA. RED PINE TREE TO BE PROTECTED.
6. 12" DIA. RED PINE TREE TO BE PROTECTED.
7. 15" DIA. RED PINE TREE TO BE PROTECTED.
8. 27" DIA. RED PINE TREE TO BE PROTECTED.
9. 4" DIA. SUGAR MAPLE TREE TO BE PROTECTED.
10. 14" DIA. SUGAR MAPLE TREE TO BE PROTECTED.
11. 36" DIA. SUGAR MAPLE TREE TO BE PROTECTED.
12. 4" DIA. HACKBERRY TREE TO BE PROTECTED.
13. 16" DIA. RIVER BIRCH TREE TO BE PROTECTED.
14. 18" DIA. RIVER BIRCH TREE TO BE PROTECTED.
15. 21" DIA. RIVER BIRCH TREE TO BE PROTECTED.
16. 18" DIA. COTTONWOOD TREE TO BE PROTECTED.

GRUBBING AREA

TREE TRIMMING AREA

NOTE:

FOR EXISTING TREES BEING KEPT IN AND AROUND PET EXERCISE AREA SIDEWALK, CLEAR LOW HANGING BRANCHES UP TO AN ELEVATION +/- 12 FEET ABOVE PROPOSED SIDEWALK GRADE. THIS WORK SHALL BE INCIDENTAL TO TREE TRIMMING BID ITEM.

*SIGHT LINES SHOWN ARE APPROXIMATE. ACTUAL LIMIT SHALL BE DETERMINED IN THE FIELD AND AS DIRECTED BY THE ENGINEER.

N

FRENCH SLOUGH

TRIM BRUSH AND LOW HANGING BRANCHES UP TO AN APPROX. ELEV. OF ±25 ABOVE EXISTING GRADE, ALL WORK IN THIS AREA WILL TAKE CARE NOT TO HARM THE EXISTING TREES THIS WORK SHALL BE PAID FOR UNDER THE TREE TRIMMING BID ITEM

PROPOSED SIGHTLINE*

SLOPE INTERCEPT

SLOPE INTERCEPT

PROPOSED SIGHTLINE*

117°

117°

SLOPE INTERCEPT

MATCHLINE STA 5+25 'RA'

MATCHLINE

6+00'RA'

7+00'RA'

8+00'RA'

9+00'RA'

10+00'RA'

11+00'RA'

12+00'RA'

13+00'RA'

14+00'RA'

15+00'RA'

16+00'RA'

17+00'RA'

18+00'RA'

'RA' LINE

MATCHLINE STA 18+60 'RA'

SLOPE INTERCEPT

LAKESHORE DRIVE

TREE TRIMMING AREA

AREA (3)	=	6,024 SQ FT
TOTAL	=	6,024 SQ FT
	=	0.15 ACRES

GRUBBING AREAS

AREA (1)	=	22,553 SQ FT
AREA (2)	=	4,982 SQ FT
AREA (3)	=	0 SQ FT
AREA (4)	=	1,896 SQ FT
AREA (5)	=	11,213 SQ FT
AREA (6)	=	3,917 SQ FT
AREA (7)	=	545 SQ FT
AREA (8)	=	11,170 SQ FT
AREA (9)	=	11,358 SQ FT
AREA (10)	=	3,533 SQ FT
AREA (11)	=	50,321 SQ FT
AREA (12)	=	1,096 SQ FT
TOTAL	=	122,584 SQ FT
	=	2.82 ACRES

PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	GRUBBING	SHEET	E

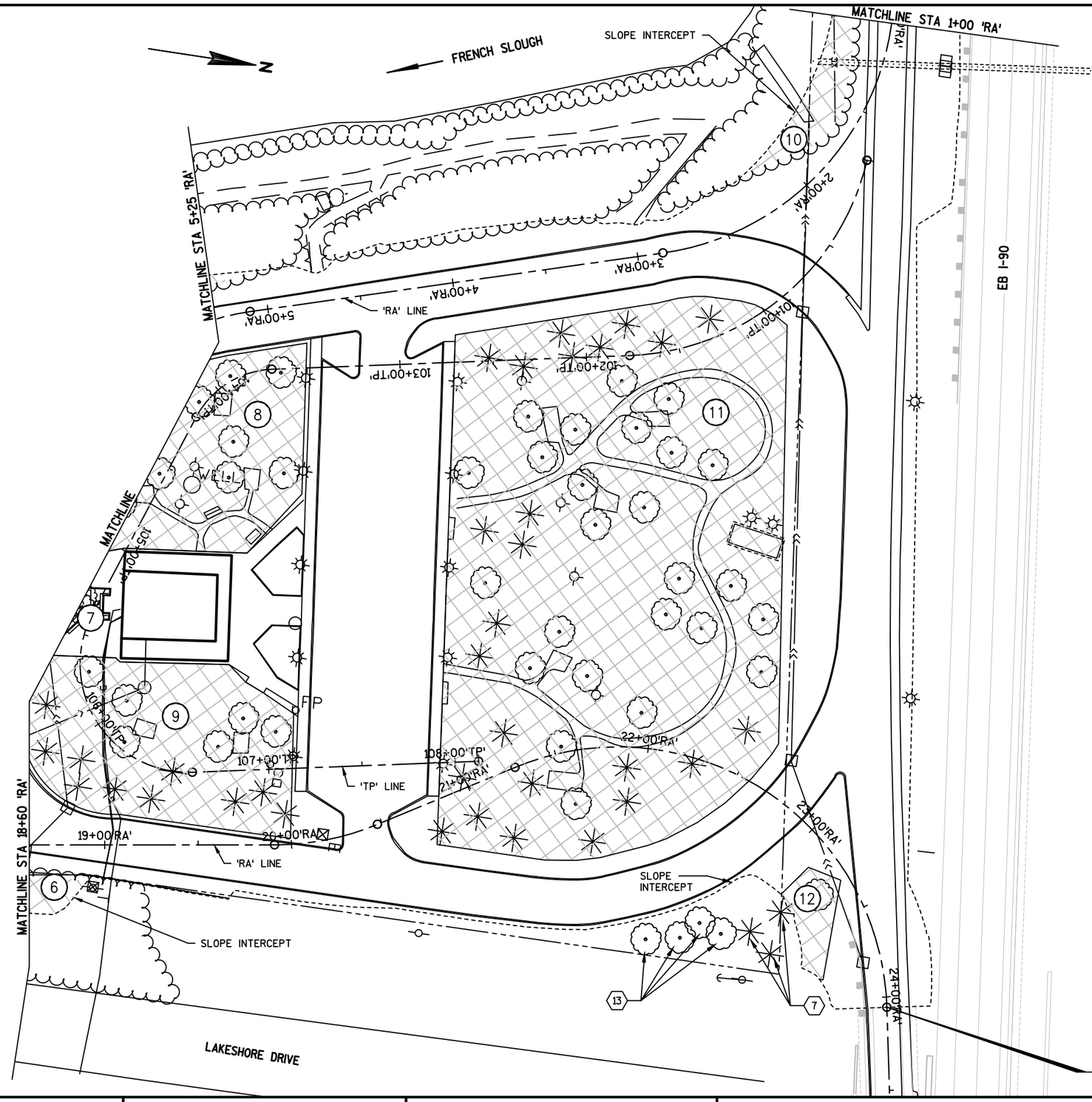
FILE NAME : P:\UZ\W\WITCO\131411\5-FINAL-DSGN\51-CONST-DWGS-CAD\40-TRANSHWY\PLN SHTS\020118-CG.DWG
LAYOUT NAME - GRUBBING

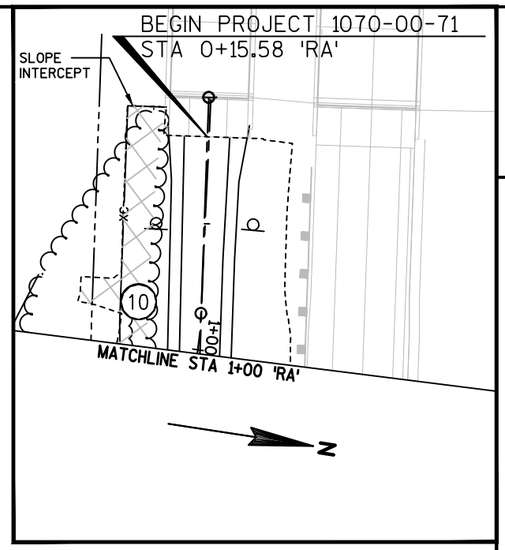
PLOT DATE : 12/17/2015 11:01 PM PLOT BY : NATE MCLAUGHLIN PLOT NAME : PLOT SCALE : 1 IN:60 FT

GRUBBING AREAS

AREA (1) = 22,553 SQ FT
AREA (2) = 4,982 SQ FT
AREA (3) = 0 SQ FT
AREA (4) = 1,896 SQ FT
AREA (5) = 11,213 SQ FT
AREA (6) = 3,917 SQ FT
AREA (7) = 545 SQ FT
AREA (8) = 11,170 SQ FT
AREA (9) = 11,358 SQ FT
AREA (10) = 3,533 SQ FT
AREA (11) = 50,321 SQ FT
AREA (12) = 1,096 SQ FT

TOTAL = 122,584 SQ FT
= 2.82 ACRES





LEGEND

1. 4" DIA. RED OAK TREE TO BE PROTECTED.
2. 8" DIA. RED OAK TREE TO BE PROTECTED.
3. 12" DIA. RED OAK TREE TO BE PROTECTED.
4. 30" DIA. RED OAK TREE TO BE PROTECTED.
5. 4" DIA. RED PINE TREE TO BE PROTECTED.
6. 12" DIA. RED PINE TREE TO BE PROTECTED.
7. 15" DIA. RED PINE TREE TO BE PROTECTED.
8. 27" DIA. RED PINE TREE TO BE PROTECTED.
9. 4" DIA. SUGAR MAPLE TREE TO BE PROTECTED.
10. 14" DIA. SUGAR MAPLE TREE TO BE PROTECTED.
11. 36" DIA. SUGAR MAPLE TREE TO BE PROTECTED.
12. 4" DIA. HACKBERRY TREE TO BE PROTECTED.
13. 16" DIA. RIVER BIRCH TREE TO BE PROTECTED.
14. 18" DIA. RIVER BIRCH TREE TO BE PROTECTED.
15. 21" DIA. RIVER BIRCH TREE TO BE PROTECTED.
16. 18" DIA. COTTONWOOD TREE TO BE PROTECTED.

GRUBBING AREA

END PROJECT 1070-00-71
STA 24+05.55 'RA'

2

PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	GRUBBING	SHEET	E

FILE NAME : P:\UZ\W\WITCO\131411\5-FINAL-DSGN\51-CONST-DWGS-CAD\40-TRANSHWY\PLN SHTS\020119-CG.DWG
LAYOUT NAME - GRUBBING

PLOT DATE : 12/17/2015 11:02 PM PLOT BY : NATE MCLAUGHLIN PLOT NAME : PLOT SCALE : 1 IN:60 FT

2

LEGEND

AW	-	ABANDONING WELL
MHS	-	MOVING HISTORICAL SIGN
MVS	-	MOVING VETERANS SIGN
RAP	-	REMOVING ASPHALT PAVEMENT (1)
RB	-	REMOVING BENCHES*
RBB	-	REMOVING BOLLARD*
RBS	-	REMOVING BUILDING*
RC	-	REMOVING CURB
RCB	-	REMOVING CONCRETE BASE
RCG	-	REMOVING CURB & GUTTER (2)
RCP	-	REMOVING CONCRETE PAVEMENT (2)
RCS	-	REMOVING CONCRETE SIDEWALK
RCT	-	REMOVING COMPOST TIMBERS*
RF	-	REMOVING FENCE
RFL	-	REMOVING FLOOD LIGHT*
RFP	-	REMOVING FLAG POLE
RGR	-	REMOVING GUARDRAIL
RI	-	REMOVING INLETS
RMH	-	REMOVING MANHOLES
RMS	-	REMOVING MISCELLANEOUS STRUCTURE*
RP	-	REMOVING PLANTER
RPB	-	REMOVING PULL BOX
RPC	-	REMOVING SMALL PIPE CULVERTS
RS	-	REMOVING SIGNS TYPE II (6)
RSP	-	REMOVING SANITARY PIPE
RSS	-	REMOVING SIGN SUPPORTS
RST	-	REMOVING STORM SEWER
RUP	-	REMOVING UTILITY POLE
RYH	-	REMOVING YARD HYDRANT & SUPPLY PIPING

NOTE: RXX-xx" (DENOTES SIZE OF PIPE)
RXX(x) (DENOTES QUANTITY ON SAME POST)

*PAID AS SITE CLEARANCE
(PLAN MAY NOT SHOW ALL ITEMS)

NOTES

(1) PAID FOR AS PART OF EXCAVATION COMMON.

(2) PAID FOR AS REMOVING PAVEMENT.

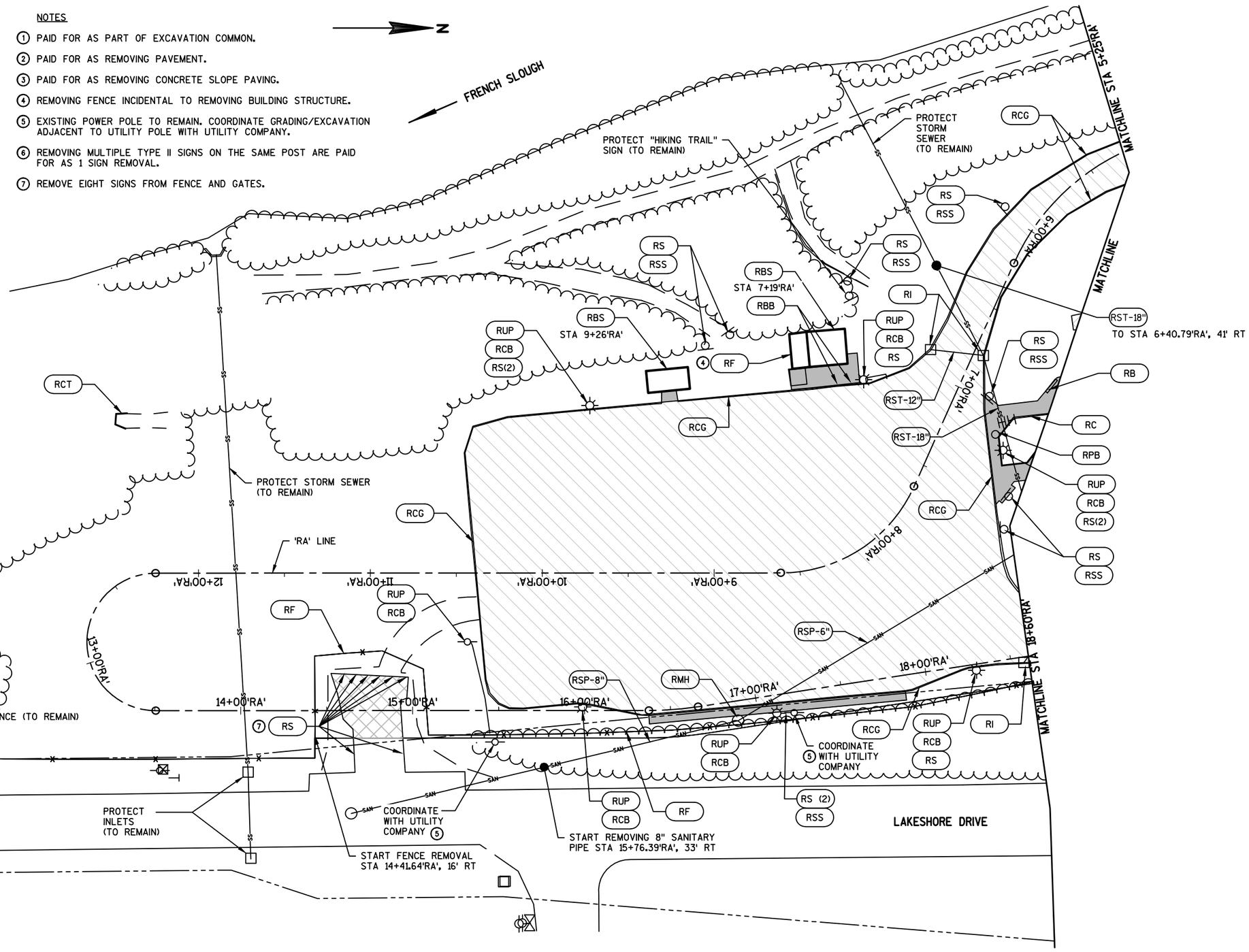
(3) PAID FOR AS REMOVING CONCRETE SLOPE PAVING.

(4) REMOVING FENCE INCIDENTAL TO REMOVING BUILDING STRUCTURE.

(5) EXISTING POWER POLE TO REMAIN. COORDINATE GRADING/EXCAVATION ADJACENT TO UTILITY POLE WITH UTILITY COMPANY.

(6) REMOVING MULTIPLE TYPE II SIGNS ON THE SAME POST ARE PAID FOR AS 1 SIGN REMOVAL.

(7) REMOVE EIGHT SIGNS FROM FENCE AND GATES.

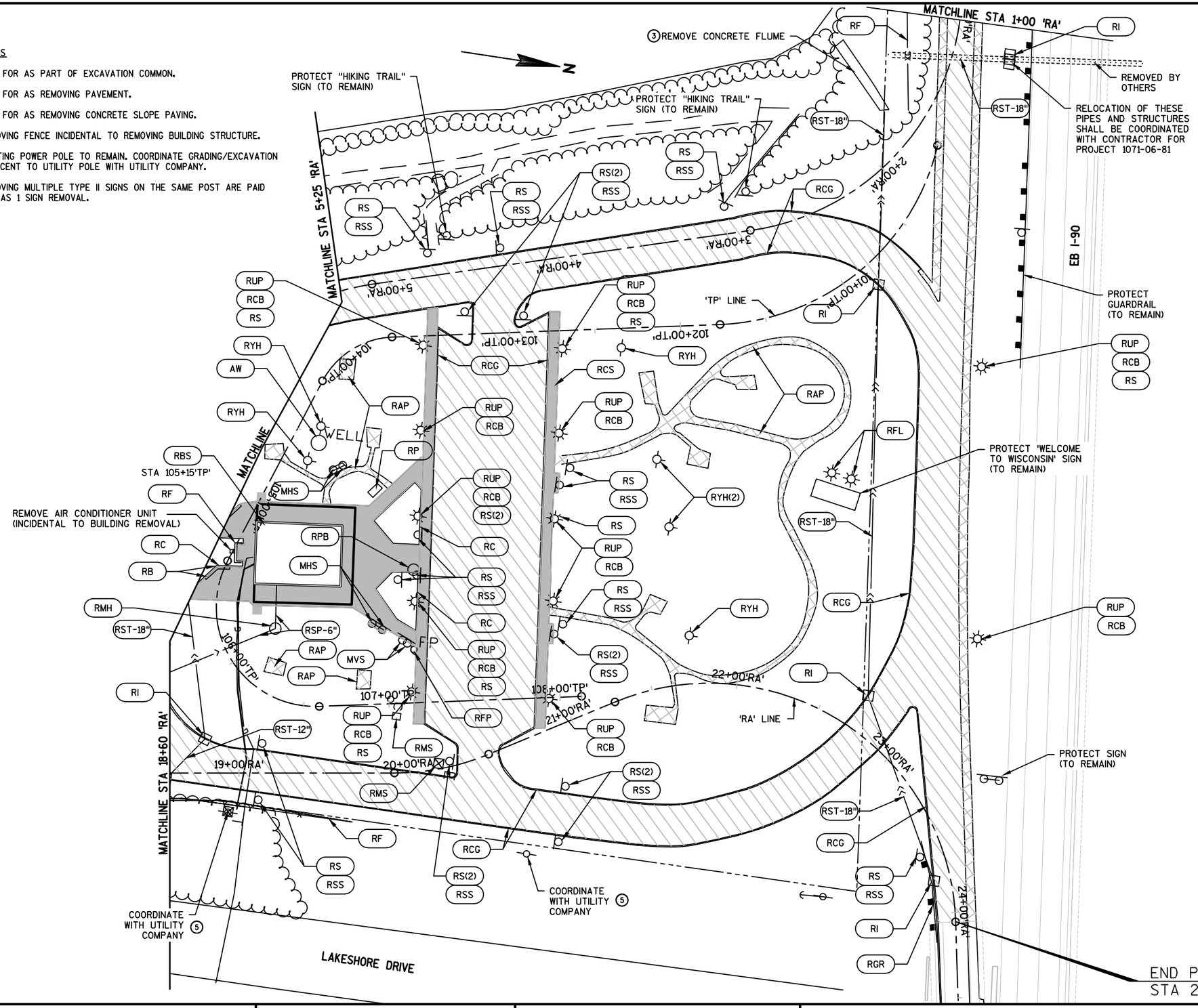


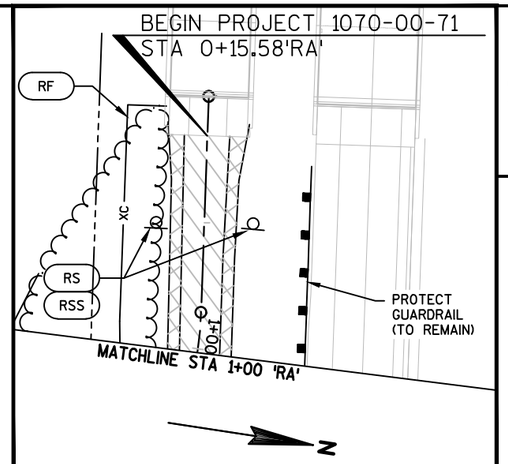
PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	REMOVAL DETAILS	SHEET	E

FILE NAME : P:\UZ\W\WITCO\131411\5-FINAL-DSGN\51-CONST-DWGS-CAD\40-TRANSHWY\PLN SHTS\020116-RD.DWG
LAYOUT NAME - REMOVAL DETAILS
PLOT DATE : 12/17/2015 11:03 PM PLOT BY : NATE MCLAUGHLIN PLOT NAME : PLOT SCALE : 1 IN:60 FT

NOTES

1. PAID FOR AS PART OF EXCAVATION COMMON.
2. PAID FOR AS REMOVING PAVEMENT.
3. PAID FOR AS REMOVING CONCRETE SLOPE PAVING.
4. REMOVING FENCE INCIDENTAL TO REMOVING BUILDING STRUCTURE.
5. EXISTING POWER POLE TO REMAIN. COORDINATE GRADING/EXCAVATION ADJACENT TO UTILITY POLE WITH UTILITY COMPANY.
6. REMOVING MULTIPLE TYPE II SIGNS ON THE SAME POST ARE PAID FOR AS 1 SIGN REMOVAL.





LEGEND

AW	-	ABANDONING WELL
MHS	-	MOVING HISTORICAL SIGN
MVS	-	MOVING VETERANS SIGN
RAP	-	REMOVING ASPHALT PAVEMENT (1)
RB	-	REMOVING BENCHES*
RBB	-	REMOVING BOLLARD*
RBS	-	REMOVING BUILDING*
RC	-	REMOVING CURB
RCB	-	REMOVING CONCRETE BASE
RCG	-	REMOVING CURB & GUTTER (2)
RCP	-	REMOVING CONCRETE PAVEMENT (2)
RCS	-	REMOVING CONCRETE SIDEWALK
RCT	-	REMOVING COMPOST TIMBERS*
RF	-	REMOVING FENCE
RFL	-	REMOVING FLOOD LIGHT*
RFP	-	REMOVING FLAG POLE
RGR	-	REMOVING GUARDRAIL
RI	-	REMOVING INLETS
RMH	-	REMOVING MANHOLES
RMS	-	REMOVING MISCELLANEOUS STRUCTURE*
RP	-	REMOVING PLANTER
RPB	-	REMOVING PULL BOX
RPC	-	REMOVING SMALL PIPE CULVERTS
RS	-	REMOVING SIGNS TYPE II (6)
RSP	-	REMOVING SANITARY PIPE
RSS	-	REMOVING SIGN SUPPORTS
RST	-	REMOVING STORM SEWER
RUP	-	REMOVING UTILITY POLE
RYH	-	REMOVING YARD HYDRANT & SUPPLY PIPING

NOTE: RXX-xx" (DENOTES SIZE OF PIPE)
RXX(x) (DENOTES QUANTITY ON SAME POST)

*PAID AS SITE CLEARANCE
(PLAN MAY NOT SHOW ALL ITEMS)

PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	REMOVAL DETAILS	SHEET	E

FILE NAME : P:\UZ\W\WITCO\131411\5-FINAL-DSGN\51-CONST-DWGS-CAD\40-TRANSHWY\PLN SHTS\020117-RD.DWG
LAYOUT NAME - REMOVAL DETAILS
PLOT DATE : 12/17/2015 11:03 PM PLOT BY : NATE MCLAUGHLIN PLOT NAME : PLOT SCALE : 1 IN:60 FT
WISDOT/CADDS SHEET 42

2

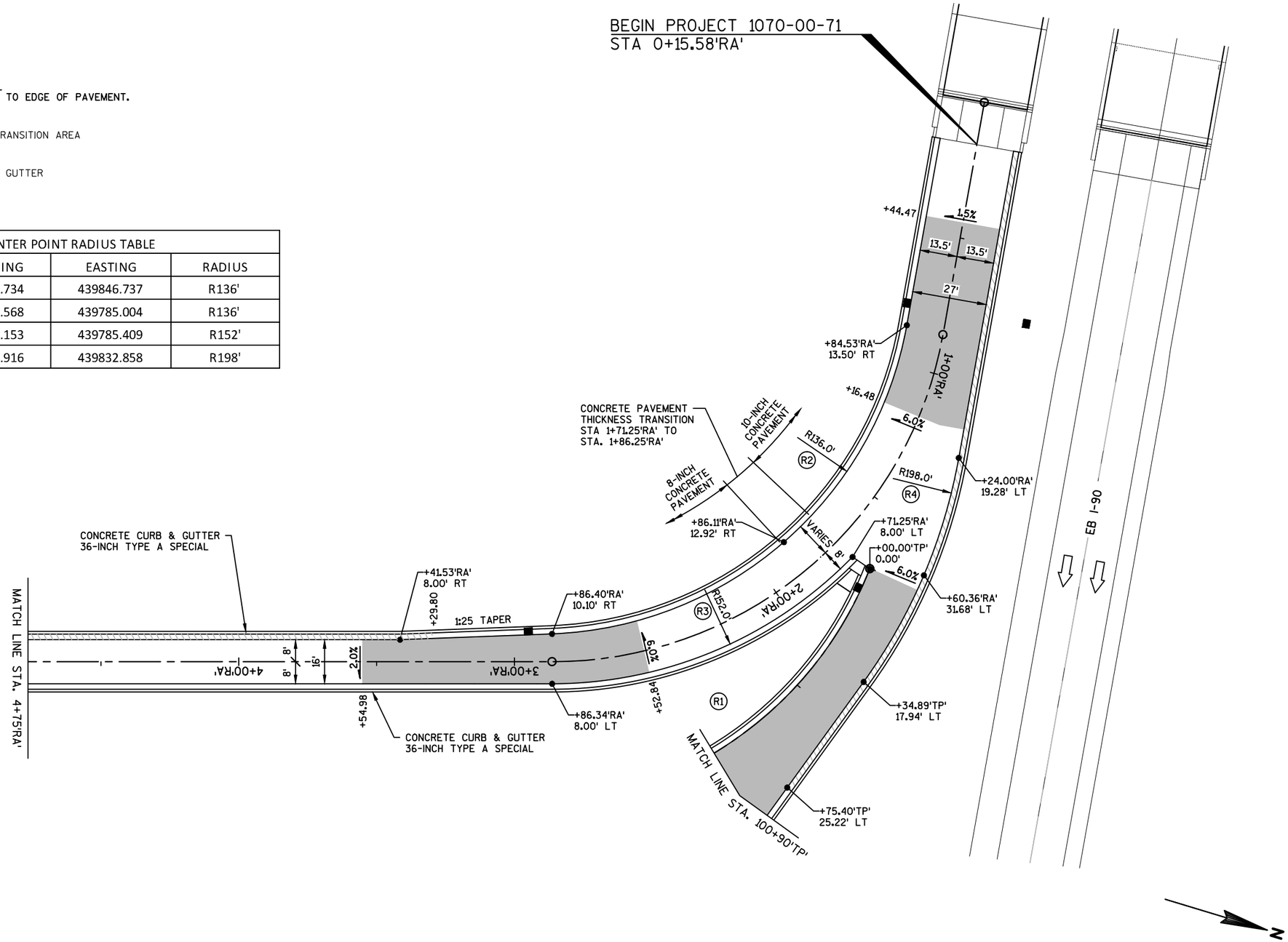
GENERAL NOTES

ALL RADIUS LENGTHS ARE TO EDGE OF PAVEMENT.

PAVEMENT SLOPE TRANSITION AREA

REVERSE CURB AND GUTTER

CENTER POINT RADIUS TABLE			
POINT	NORTHING	EASTING	RADIUS
R1	148859.734	439846.737	R136'
R2	148847.568	439785.004	R136'
R3	148853.153	439785.409	R152'
R4	148817.916	439832.858	R198'



2

MATCH LINE STA. 100+90'TP'

+05.08'TP'
0.00' LT

R136.0'

101+00'TP'

2.0%

+05.08'TP'
18.00' LT

2.0%

+97.10'TP'
35.89' LT

+00.00'TP'
37.56' LT

102+00'TP'

103+00'TP'

CONCRETE CURB & GUTTER
36-INCH TYPE A SPECIAL

CURB DEPRESSION
STA 104+00.00'TP'

104+00'TP'

R48.0'

214.0'

N

+38.98'TP'
78.11' LT

CONCRETE CURB & GUTTER
36-INCH TYPE A SPECIAL

CENTER POINT RADIUS TABLE			
POINT	NORTHING	EASTING	RADIUS
R11	148,992.673	440,122.726	R62'

+62.12'TP'
124.74' LT

+06.58'RA'
84.32' LT

+69.94'TP'
157.77' LT

R62.0'

R11

+09.66'RA'
35.56' LT

GENERAL NOTES

ALL RADIUS LENGTHS ARE TO EDGE OF PAVEMENT.

PAVEMENT SLOPE TRANSITION AREA

REVERSE CURB AND GUTTER

105+00'TP'

+33.42'TP'
6.0' RT

15.0'

CONCRETE
SIDEWALK

+46.12'RA'
10.50' LT

22+00'RA'

6.0%

24.0'

10.5'

10.5'

23+00'RA'

+90.56'TP'
0.00'

CONCRETE
SIDEWALK

108+00'TP'

106+00'TP'

R58.0'

107+00'TP'

21+00'RA'

9.0'

10.5'

18.5'

2.0%

+91.29

CURB DEPRESSION
STA 22+01.64'RA'

R133.5'

R154.5'

MATCH LINE
STA. 20+50'RA'

+89.15'RA'
8.00' LT

+63.29

+53.50'RA'
10.50' RT

10-INCH
CONCRETE
PAVEMENT

8-INCH
CONCRETE
PAVEMENT

CONCRETE PAVEMENT
THICKNESS TRANSITION
STA 20+74.85'RA' TO
STA 20+89.15'RA'

CURB DEPRESSION
STA 106+40'TP'
SEE CONSTRUCTION DETAILS

+41.05

CONCRETE CURB & GUTTER
36-INCH TYPE A SPECIAL

END PROJECT 1070-00-71
STA 24+05.55'RA'

24+00'RA'

3.98%

EB I-90

PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	PAVEMENT GEOMETRICS	SHEET	E

FILE NAME : P:\UZ\W\WITCO\131411\5-FINAL-DSGN\51-CONST-DWGS-CAD\40-TRANSHWY\PLN SHTS\020161-PG.DWG
LAYOUT NAME - PAVEMENT GEOMETRICS

PLOT DATE : 12/17/2015 11:05 PM PLOT BY : NATE MCLAUGHLIN PLOT NAME : PLOT SCALE : 1 IN:40 FT

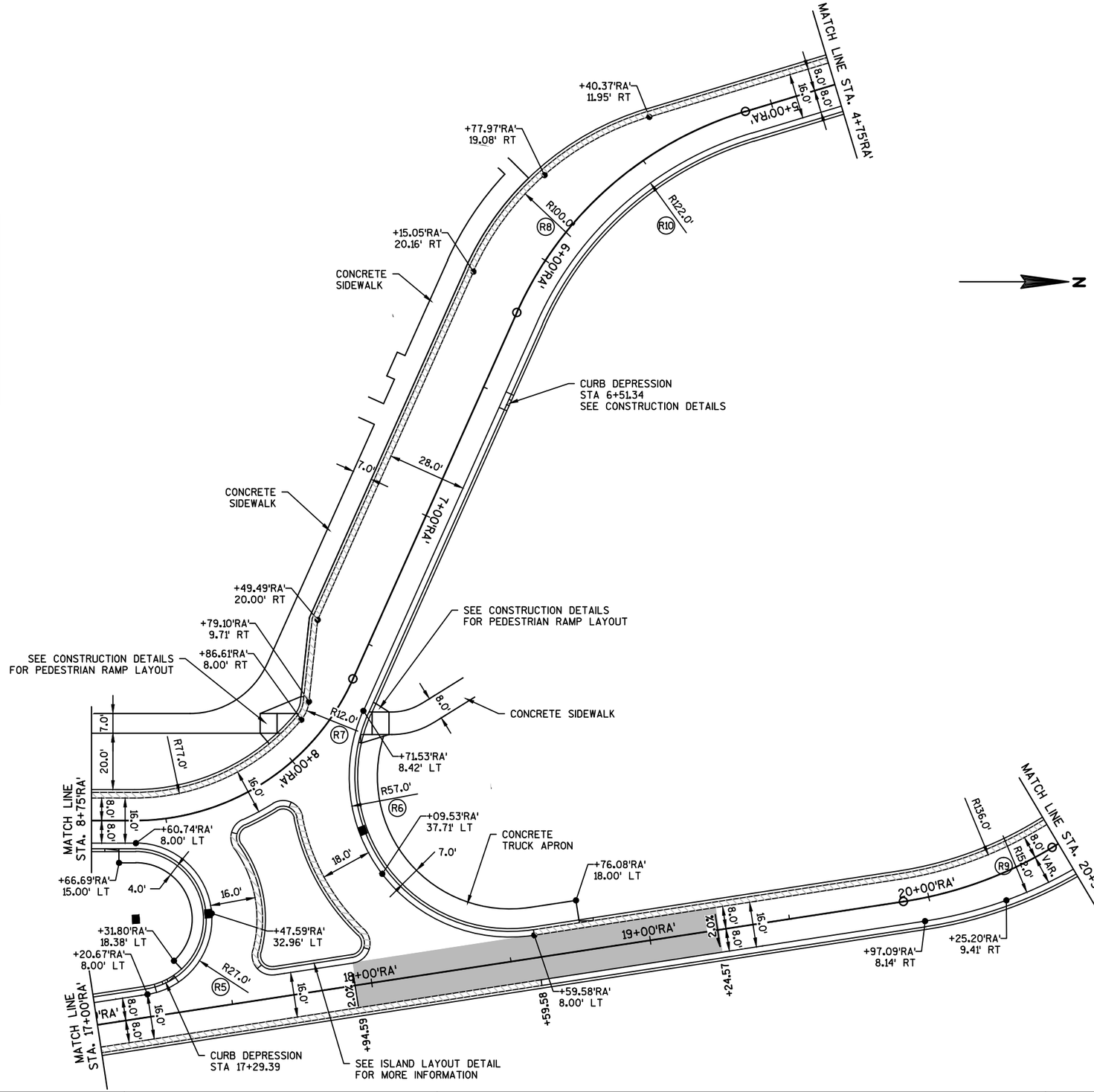
GENERAL NOTES

ALL RADIUS LENGTHS ARE TO EDGE OF PAVEMENT.

PAVEMENT SLOPE TRANSITION AREA

REVERSE CURB AND GUTTER

CENTER POINT RADIUS TABLE			
POINT	NORTHING	EASTING	RADIUS
R5	148464.577	440274.352	R27'
R6	148597.356	440223.699	R57'
R7	148675.656	440085.417	R12'
R8	148514.054	440195.886	R100'
R9	148715.235	440125.756	R152'
R10	148718.447	440112.205	R122'



PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	PAVEMENT GEOMETRICS	SHEET 26	E

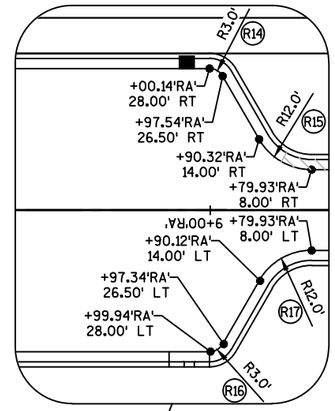
GENERAL NOTES

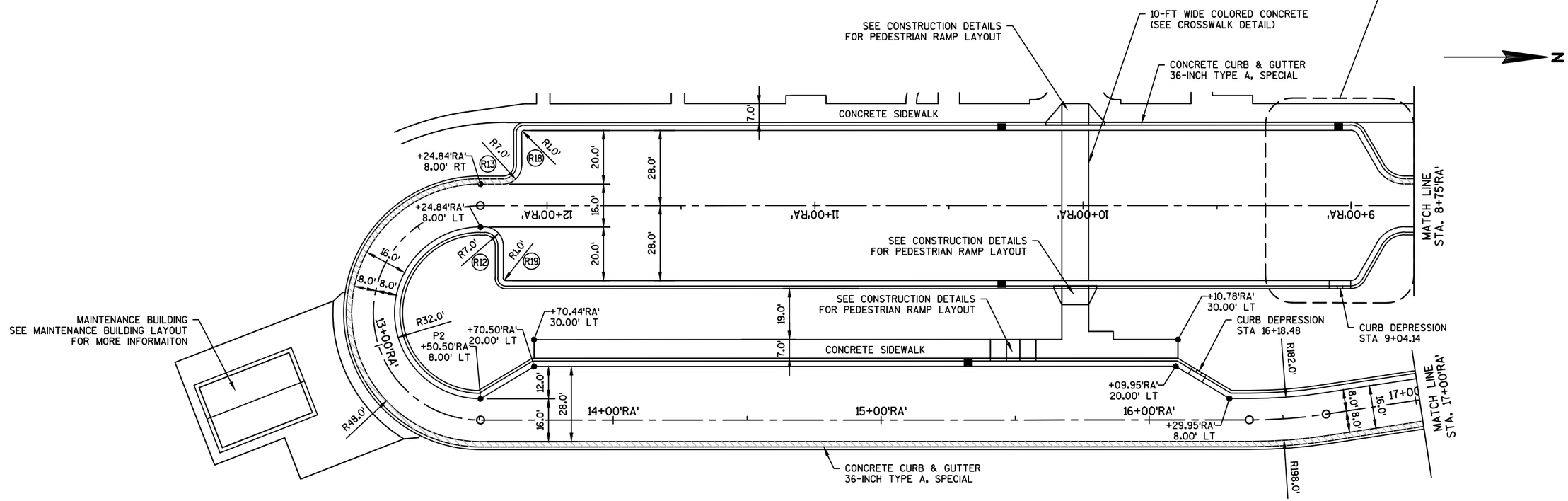
ALL RADIUS LENGTHS ARE TO EDGE OF PAVEMENT.

PAVEMENT SLOPE TRANSITION AREA

REVERSE CURB AND GUTTER

CENTER POINT RADIUS TABLE			
POINT	NORTHING	EASTING	RADIUS
R12	148101.907	440254.411	R7'
R13	148108.830	440224.410	R7'
R14	148425.122	440214.358	R3'
R15	148445.330	440219.355	R12'
R16	148425.131	440264.358	R3'
R17	148445.337	440259.355	R12'
R18	148116.828	440212.409	R1'
R19	148109.909	440266.410	R1'



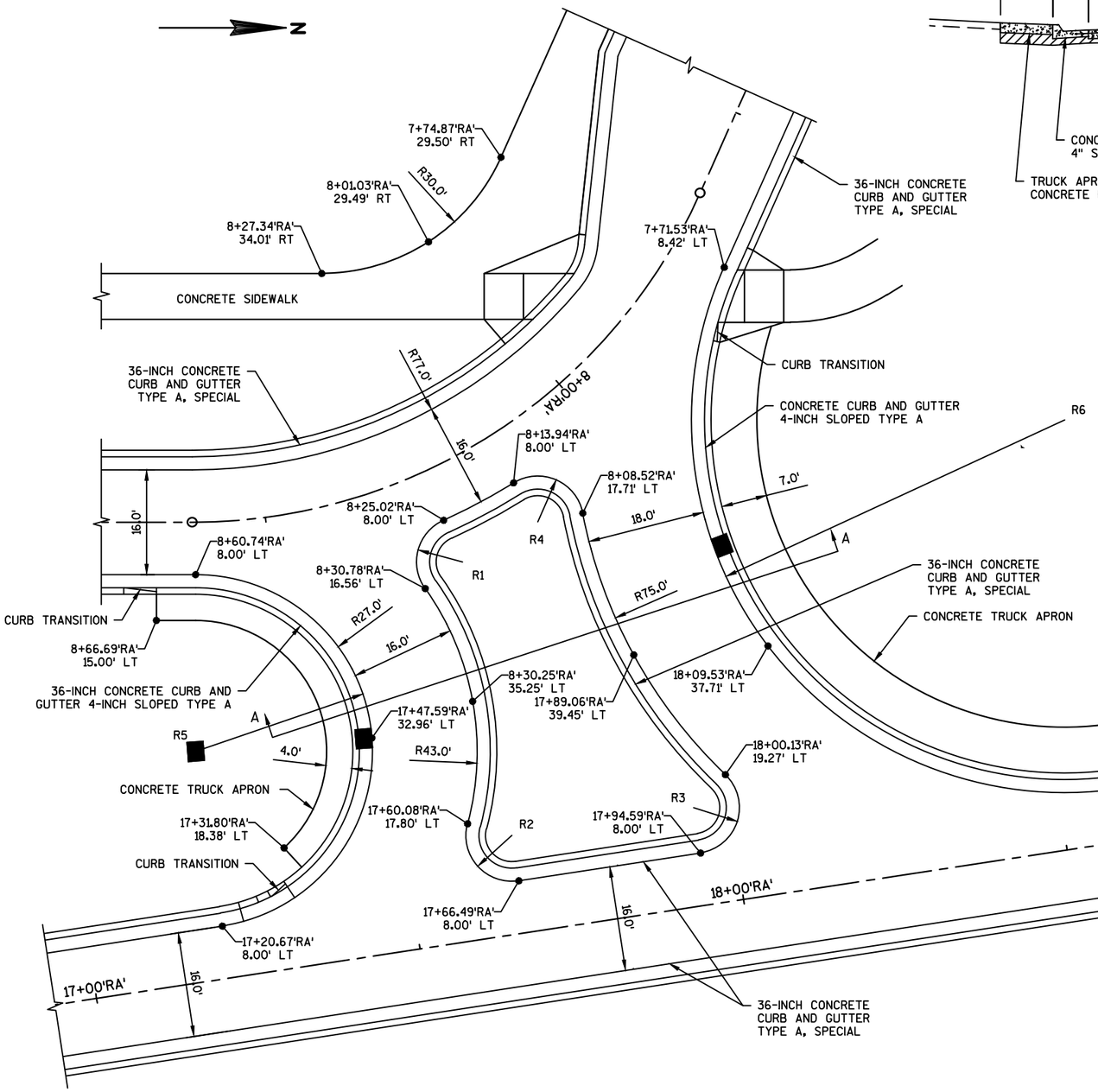


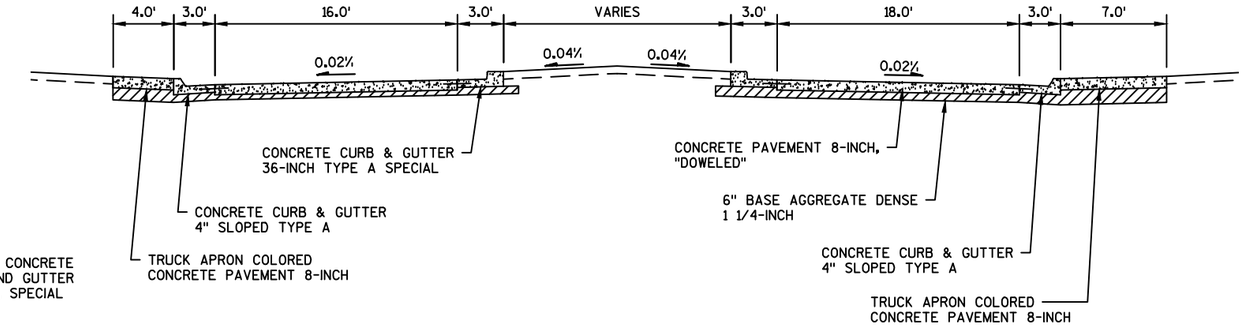
PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	PAVEMENT GEOMETRICS	SHEET	E

FILE NAME : P:\UZ\W\WITCO\131411\5-FINAL-DSGN\51-CONST-DWGS-CAD\40-TRANSHWY\PLN SHTS\020161-PG.DWG
LAYOUT NAME - PAVEMENT GEOMETRICS

PLOT DATE : 12/17/2015 11:05 PM PLOT BY : NATE MCLAUGHLIN PLOT NAME : PLOT SCALE : 1 IN:40 FT

2





SECTION A-A AT ROADWAY LOOP

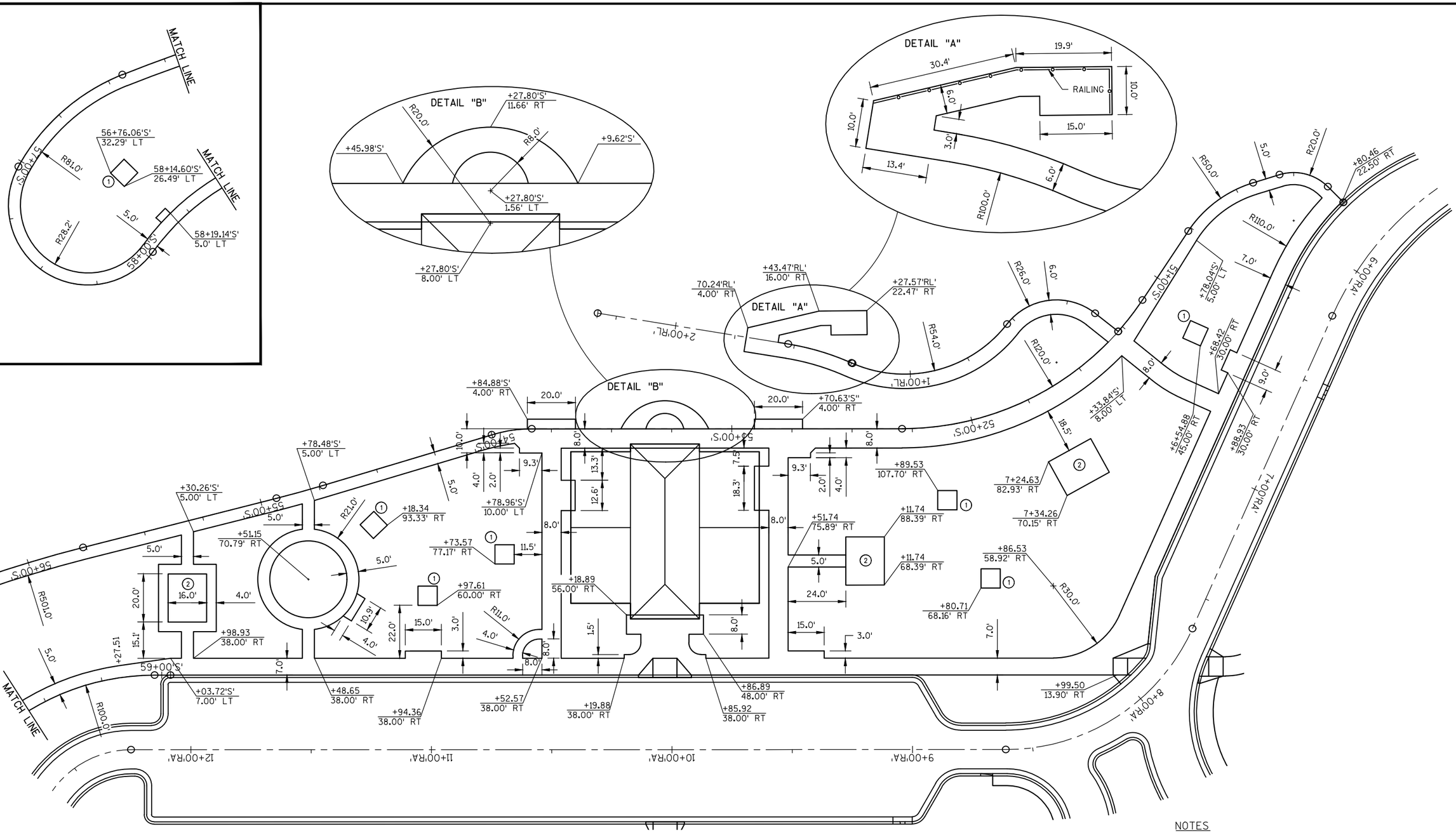
RADIUS POINT TABLE					
POINT	STATION	OFFSET	RADIUS	NORTHING	EASTING
R1	8+23.52	15.0' LT	7.0'	148505.358	440245.423
R2	17+65.00	15.0' LT	7.0'	148512.899	440287.195
R3	17+93.09	15.0' LT	7.0'	148540.669	440282.947
R4	8+12.44	15.0' LT	7.0'	148516.850	440239.279
R5	17+19.17	35.0' LT	27.0'	148464.577	440274.352
R6	18+58.08	65.0' LT	57.0'	148597.356	440223.699

PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	INTERSECTION LAYOUT DETAIL	SHEET	E

FILE NAME : P:\UZ\W\WITCO\131411\5-FINAL-DSGN\51-CONST-DWGS-CAD\40-TRANSHWY\PLN SHTS\020121-ID.DWG
LAYOUT NAME - INTERSECTION LAYOUT DETAIL

PLOT DATE : 12/17/2015 11:06 PM PLOT BY : NATE MCLAUGHLIN PLOT NAME : PLOT SCALE : 1 IN:20 FT

2



NOTES

(1) CONCRETE SIDEWALK 6-INCH PICNIC TABLE PAD (8'x8')

(2) CONCRETE SIDEWALK 6-INCH PICNIC SHELTER PAD (20'x16')

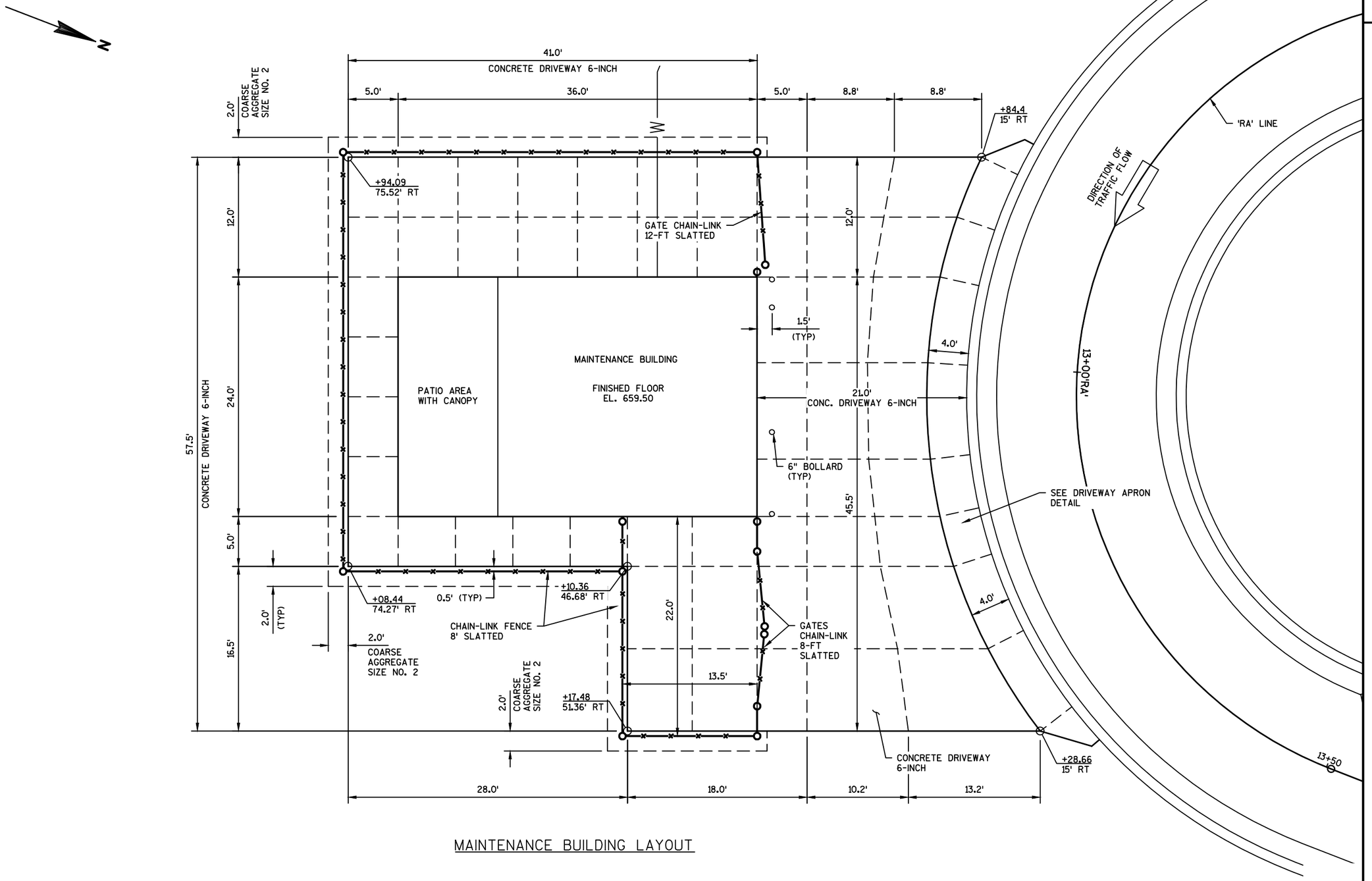
ALL STATION/OFFSETS ARE BASED ON 'RA' LINE UNLESS NOTED OTHERWISE.

PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	PLAZA LAYOUT	SHEET 29	E

FILE NAME : P:\UZ\W\WITCO\131411\5-FINAL-DSGN\51-CONST-DWGS-CAD\40-TRANSHWY\PLN SHTS\020122-JD.DWG
LAYOUT NAME - PLAZA LAYOUT

PLOT DATE : 12/17/2015 11:07 PM PLOT BY : NATE MCLAUGHLIN PLOT NAME : PLOT SCALE : 1 IN:40 FT

NOTE:
FOUR (4) BOLLARDS PLACED ADJACENT TO THE BUILDING ARE INCLUDED FOR PAYMENT IN THE MAINTENANCE BUILDING PAY ITEM.



MAINTENANCE BUILDING LAYOUT

PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	MAINTENANCE BUILDING - LAYOUT	SHEET	E

FILE NAME : P:\UZ\W\WITCO\131411\5-FINAL-DSGN\51-CONST-DWGS-CAD\40-TRANSHWY\PLN SHTS\020131_MB.DWG
LAYOUT NAME - MAINTENANCE BUILDING - LAYOUT
PLOT DATE : 12/18/2015 11:05 AM PLOT BY : NATE MCLAUGHLIN PLOT NAME : PLOT SCALE : 1 IN:10 FT

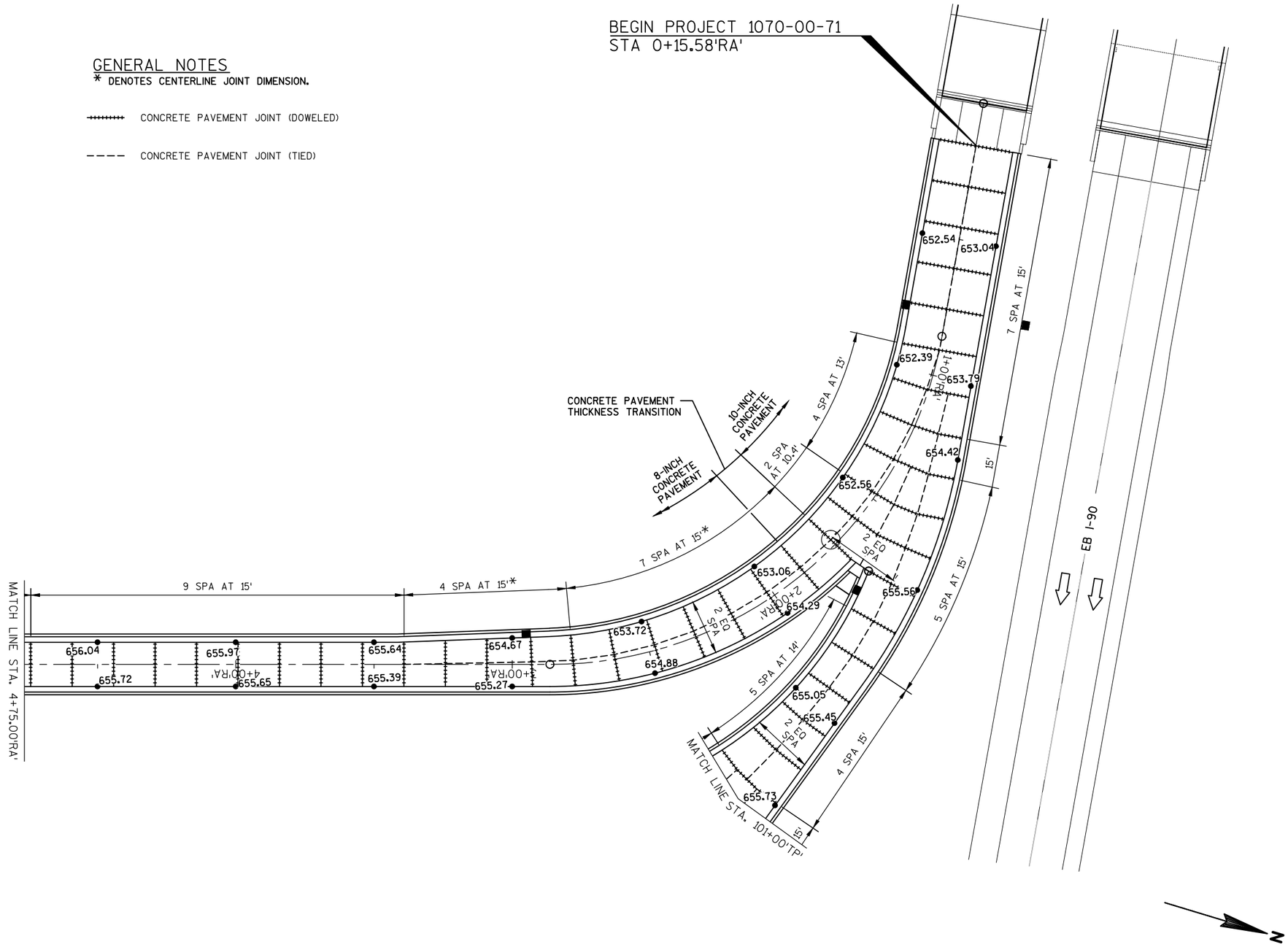
2

GENERAL NOTES

* DENOTES CENTERLINE JOINT DIMENSION.

CONCRETE PAVEMENT JOINT (DOWELED)

CONCRETE PAVEMENT JOINT (TIED)

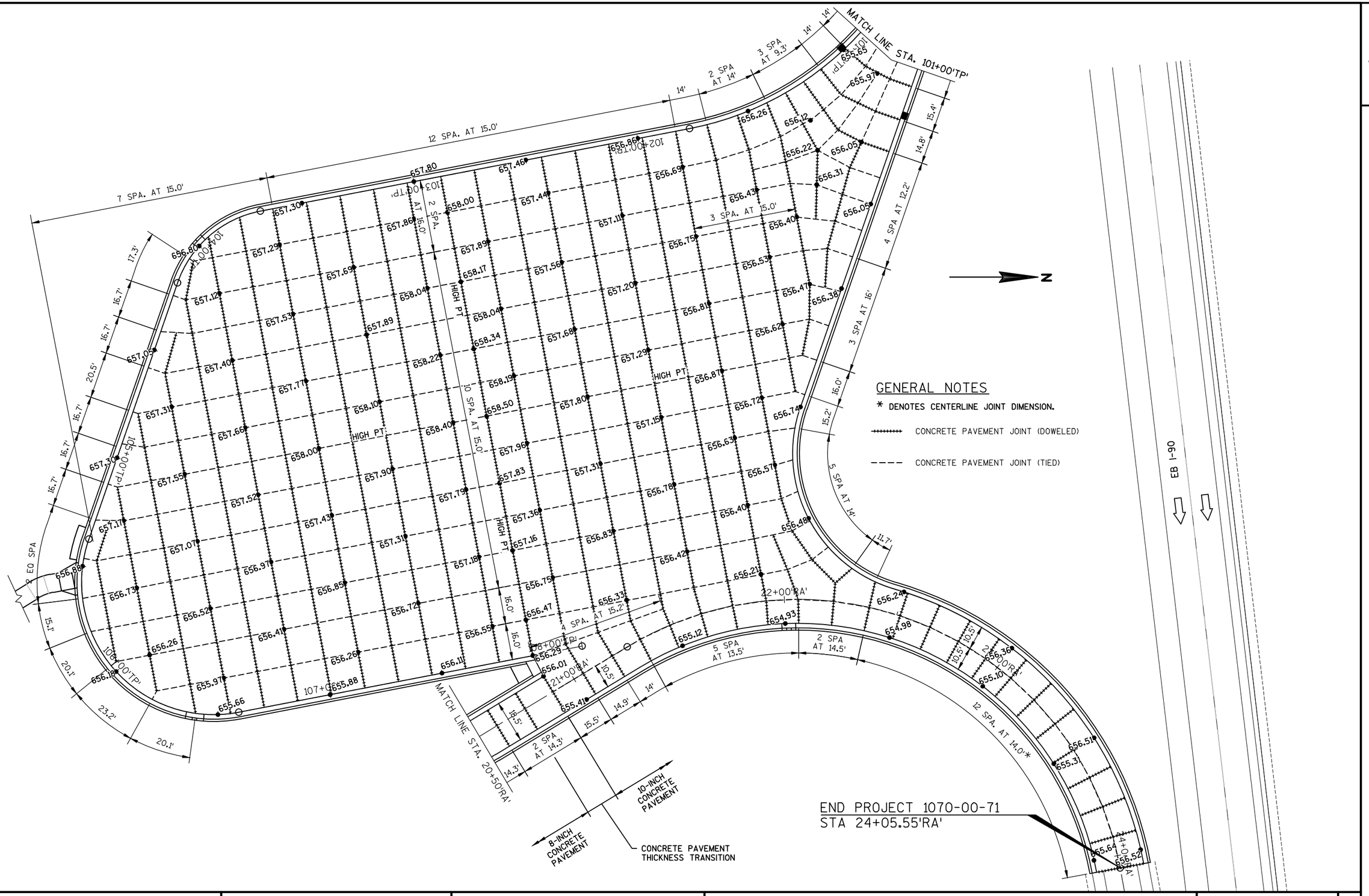


PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	PAVEMENT GRADE AND JOINT LAYOUT	SHEET	E

FILE NAME : P:\UZ\W\WITCO\131411\5-FINAL-DSGN\51-CONST-DWGS-CAD\40-TRANSHWY\PLN SHTS\020122-JD.DWG
LAYOUT NAME - PAVEMENT GRADE AND JOINT LAYOUT

PLOT DATE : 12/17/2015 11:08 PM PLOT BY : NATE MCLAUGHLIN PLOT NAME : PLOT SCALE : 1 IN:40 FT

2



PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	PAVEMENT GRADE AND JOINT LAYOUT	SHEET	E

FILE NAME : P:\UZ\W\WITCO\131411\5-FINAL-DSGN\51-CONST-DWGS-CAD\40-TRANSHWY\PLN SHTS\020122-JD.DWG
LAYOUT NAME - PAVEMENT GRADE AND JOINT LAYOUT

PLOT DATE : 12/17/2015 11:08 PM PLOT BY : NATE MCLAUGHLIN PLOT NAME : PLOT SCALE : 1 IN:40 FT

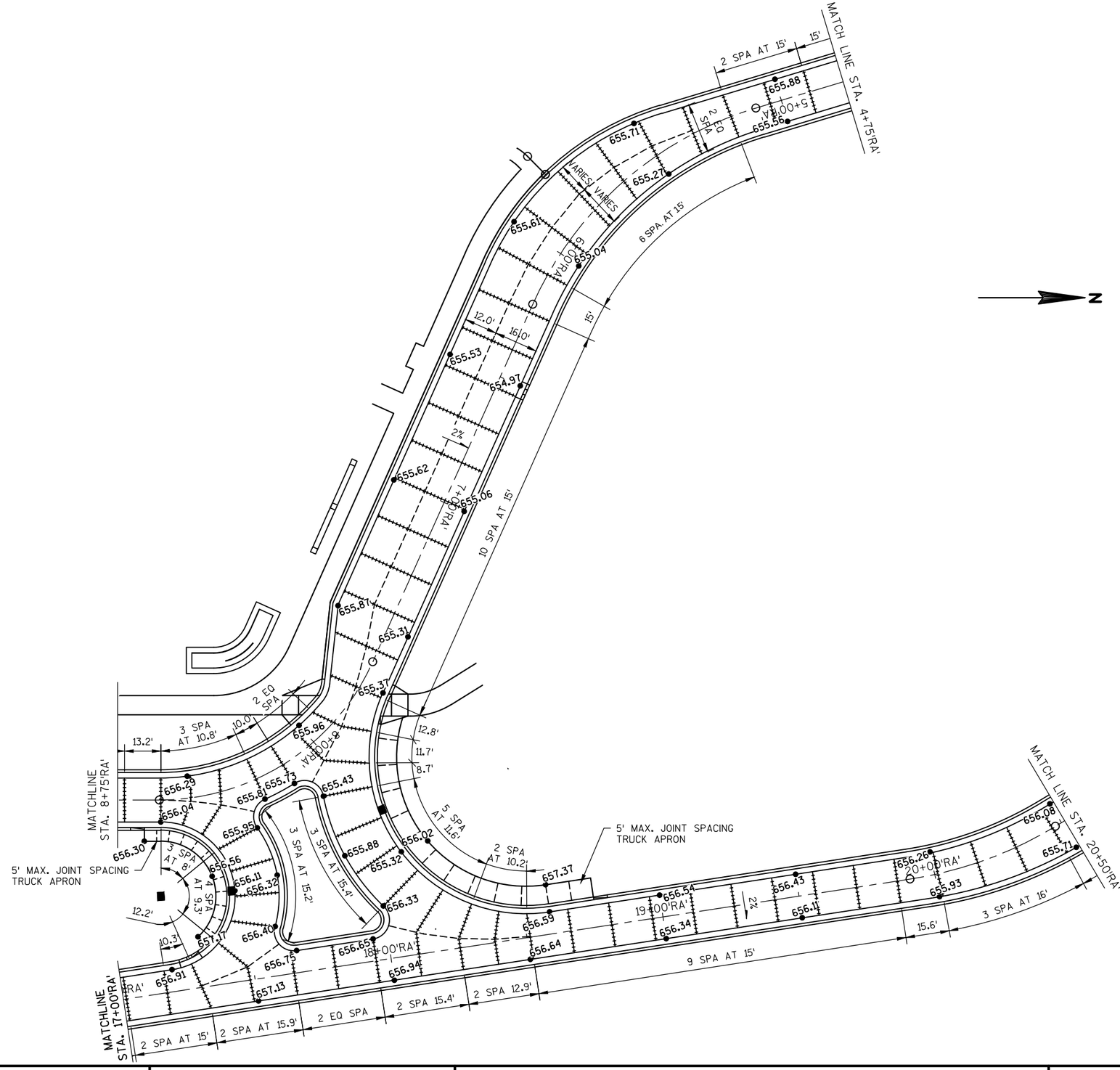
WISDOT/CADDS SHEET 42

GENERAL NOTES

* DENOTES CENTERLINE JOINT DIMENSION.

CONCRETE PAVEMENT JOINT (DOWELED)

CONCRETE PAVEMENT JOINT (TIED)



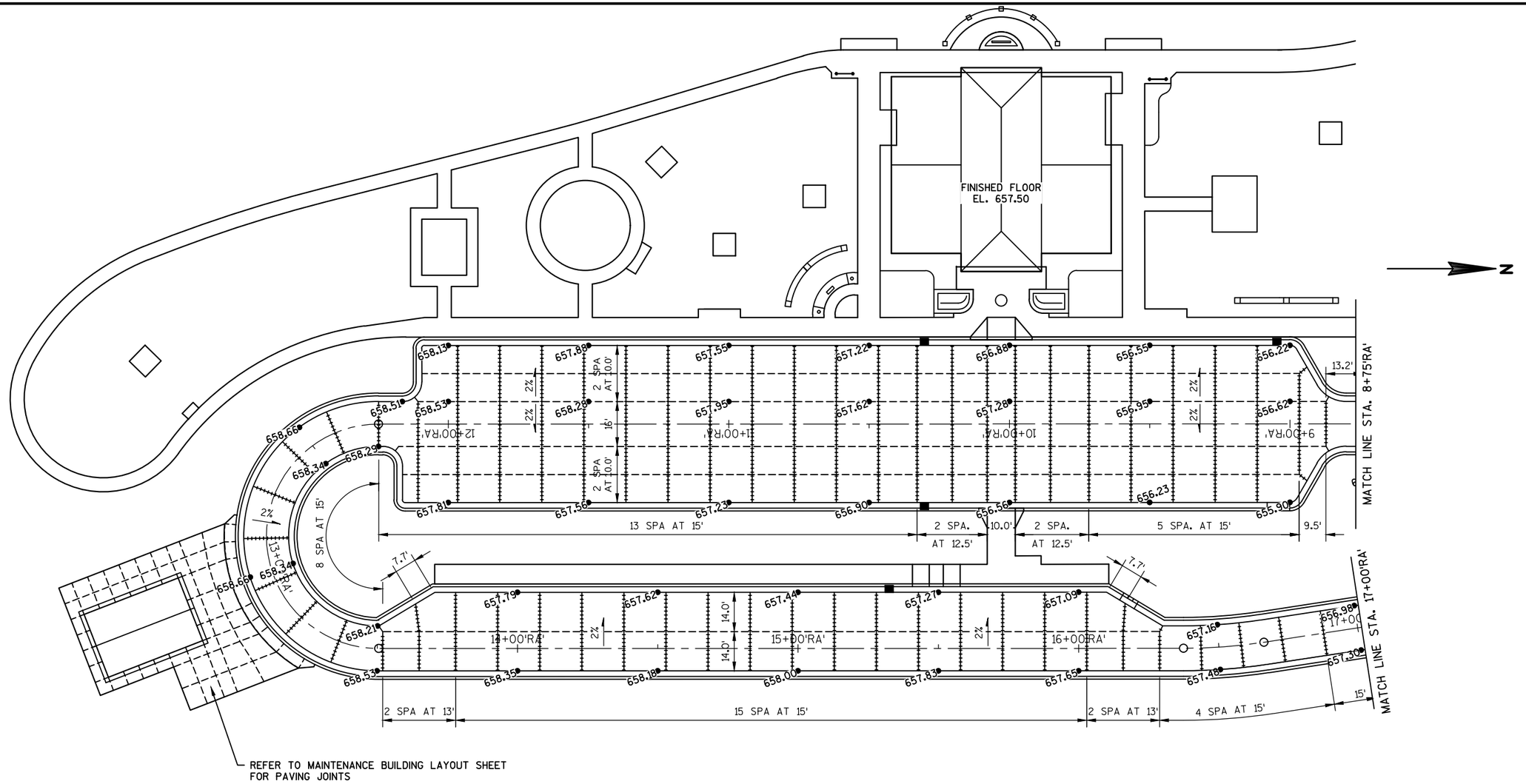
PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	PAVEMENT GRADE AND JOINT LAYOUT	SHEET	E

FILE NAME : P:\UZ\W\WITCO\131411\5-FINAL-DSGN\51-CONST-DWGS-CAD\40-TRANSHWY\PLN SHTS\020122-JD.DWG
LAYOUT NAME - PAVEMENT GRADE AND JOINT LAYOUT

PLOT DATE : 12/17/2015 11:08 PM PLOT BY : NATE MCLAUGHLIN PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2



GENERAL NOTES

* DENOTES CENTERLINE JOINT DIMENSION.

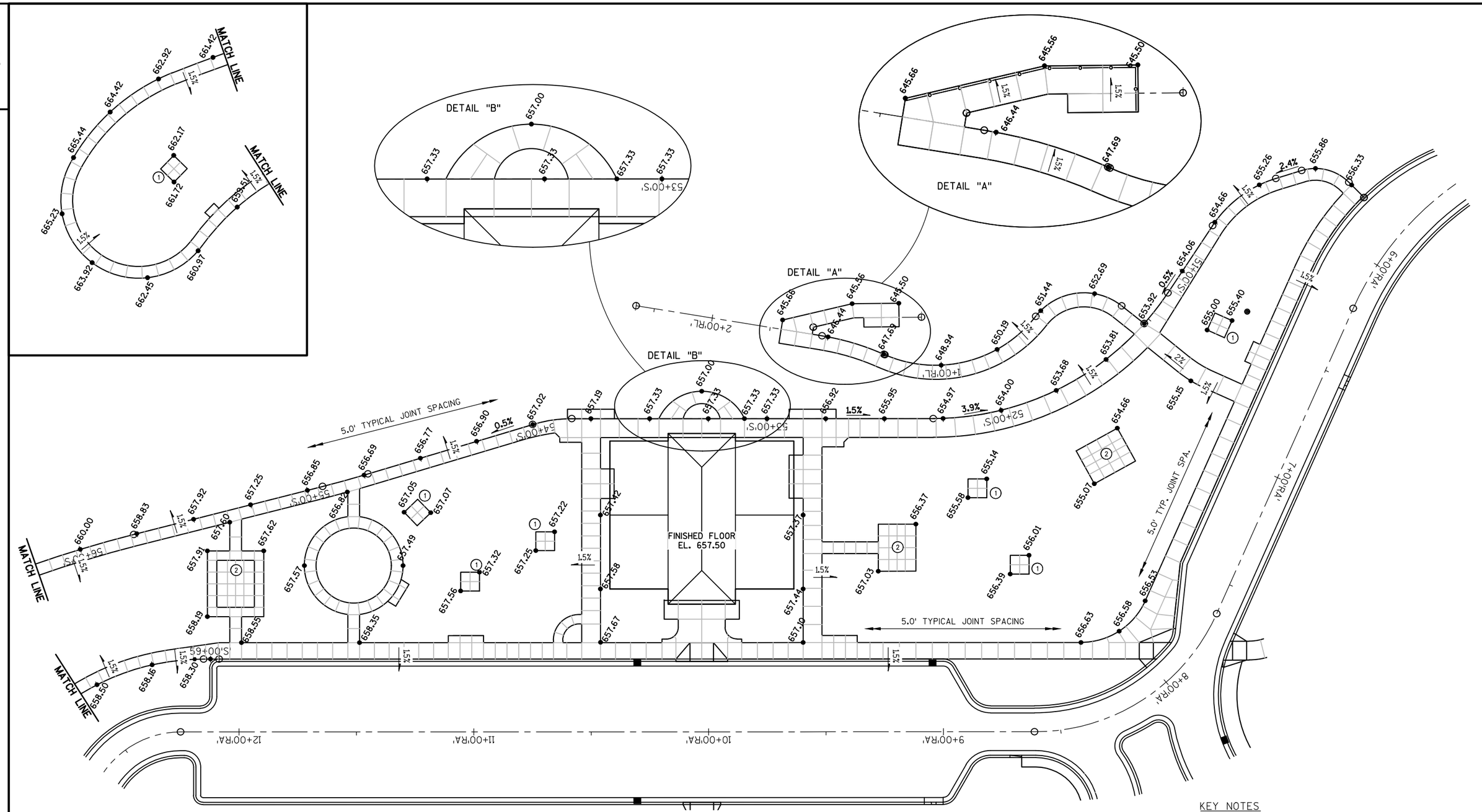
CONCRETE PAVEMENT JOINT (DOWELED)

CONCRETE PAVEMENT JOINT (TIED)

PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	PAVEMENT GRADE AND JOINT LAYOUT	SHEET 34	E

FILE NAME : P:\UZ\W\WITCO\131411\5-FINAL-DSGN\51-CONST-DWGS-CAD\40-TRANSHWY\PLN SHTS\020122-JD.DWG
LAYOUT NAME - PAVEMENT GRADE AND JOINT LAYOUT
PLOT DATE : 12/17/2015 11:08 PM PLOT BY : NATE MCLAUGHLIN PLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

2



KEY NOTES

(1) CONCRETE PICNIC TABLE PAD. PAID FOR AS CONCRETE SIDEWALK 6-INCH.

(2) CONCRETE PICNIC SHELTER PAD. PAID FOR AS CONCRETE SIDEWALK 6-INCH.

PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	PLAZA GRADING PLAN	SHEET 35	E

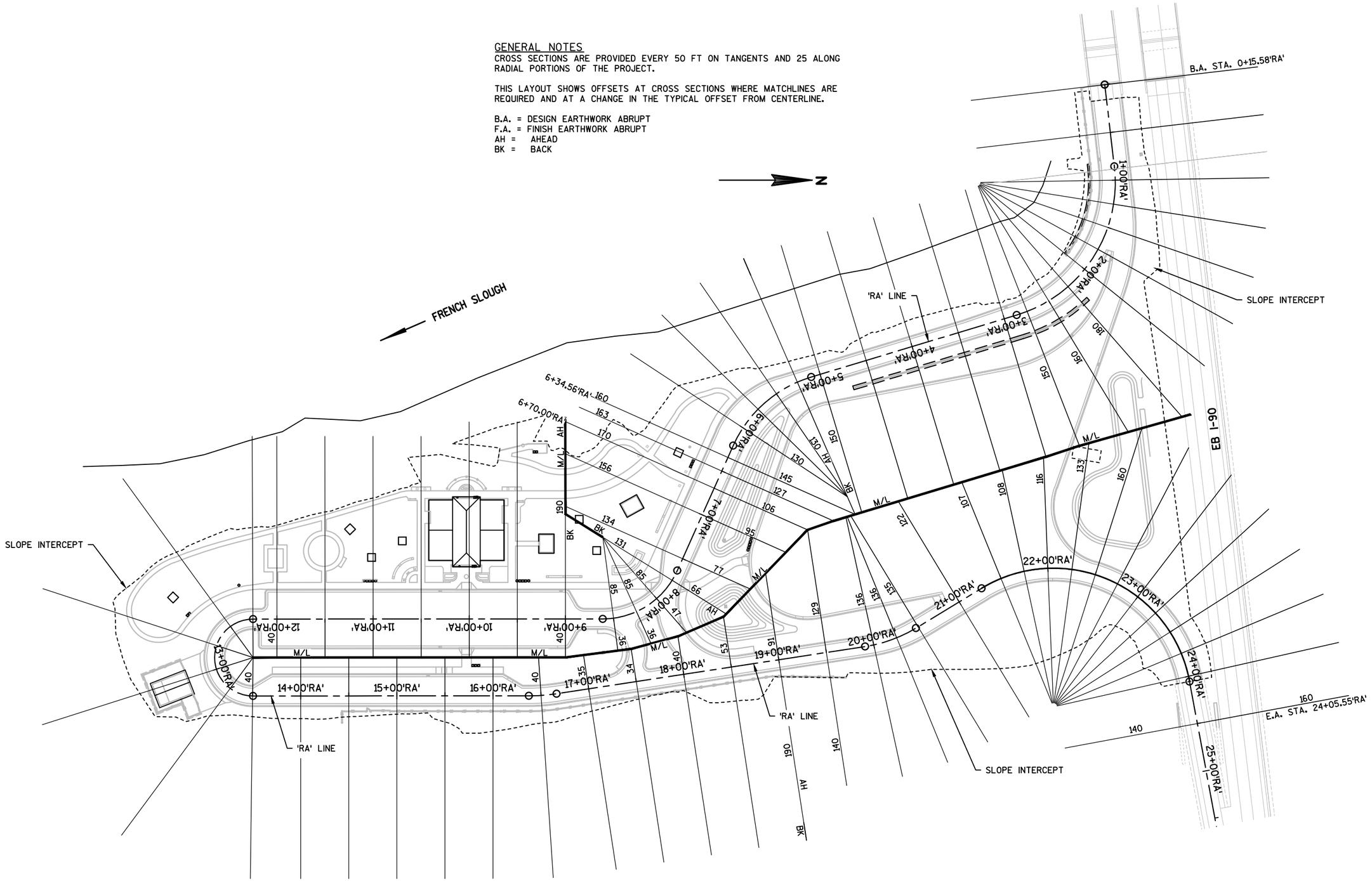
2

GENERAL NOTES

CROSS SECTIONS ARE PROVIDED EVERY 50 FT ON TANGENTS AND 25 ALONG RADIAL PORTIONS OF THE PROJECT.

THIS LAYOUT SHOWS OFFSETS AT CROSS SECTIONS WHERE MATCHLINES ARE REQUIRED AND AT A CHANGE IN THE TYPICAL OFFSET FROM CENTERLINE.

B.A. = DESIGN EARTHWORK ABRUPT
F.A. = FINISH EARTHWORK ABRUPT
AH = AHEAD
BK = BACK



PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	CROSS SECTION MATCHLINES	SHEET	E

FILE NAME : P:\UZ\W\WITCO\131411\5-FINAL-DSGN\51-CONST-DWGS-CAD\40-TRANSHWY\PLN SHTS\020128-CS.DWG
LAYOUT NAME - CROSS SECTION MATCHLINES

PLOT DATE : 12/17/2015 11:10 PM PLOT BY : NATE MCLAUGHLIN PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

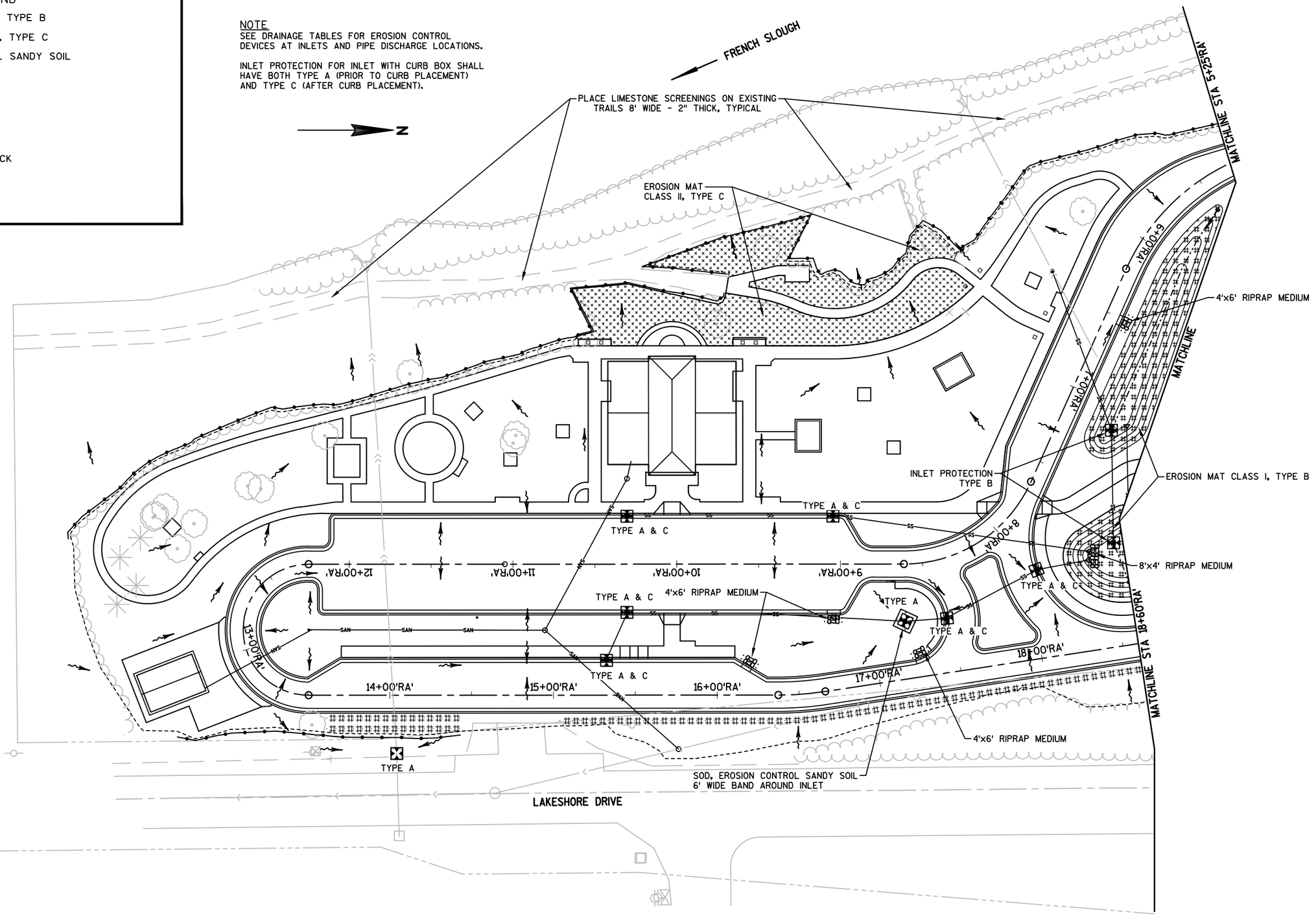
2

LEGEND

- EROSION MAT CLASS I, TYPE B
- EROSION MAT CLASS II, TYPE C
- SOD, EROSION CONTROL SANDY SOIL
- SILT FENCE
- RIP RAP MEDIUM
- SLOPE INTERCEPT
- INLET PROTECTION
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW

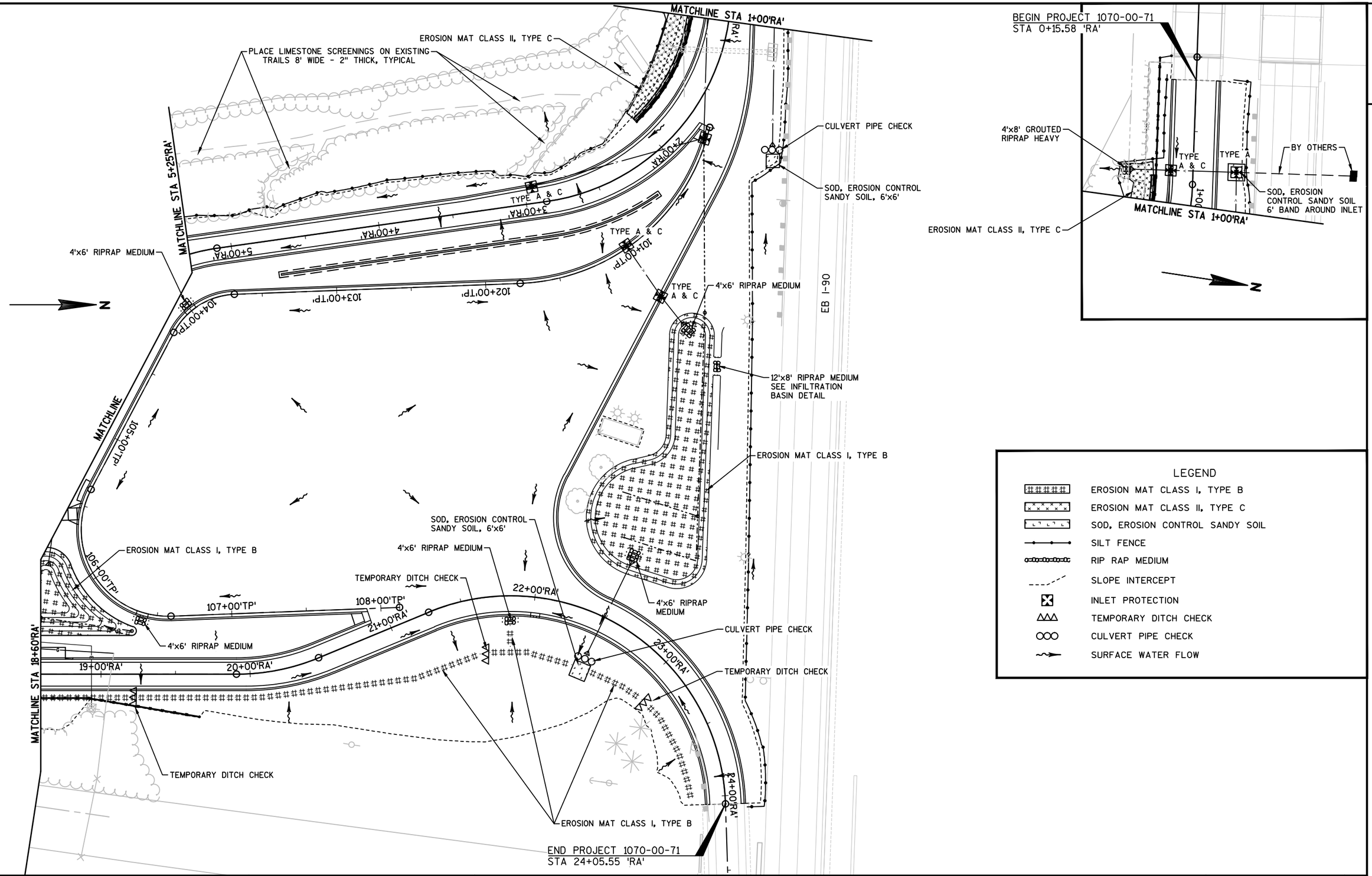
NOTE
SEE DRAINAGE TABLES FOR EROSION CONTROL DEVICES AT INLETS AND PIPE DISCHARGE LOCATIONS.

INLET PROTECTION FOR INLET WITH CURB BOX SHALL HAVE BOTH TYPE A (PRIOR TO CURB PLACEMENT) AND TYPE C (AFTER CURB PLACEMENT).



PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	EROSION CONTROL	SHEET	E

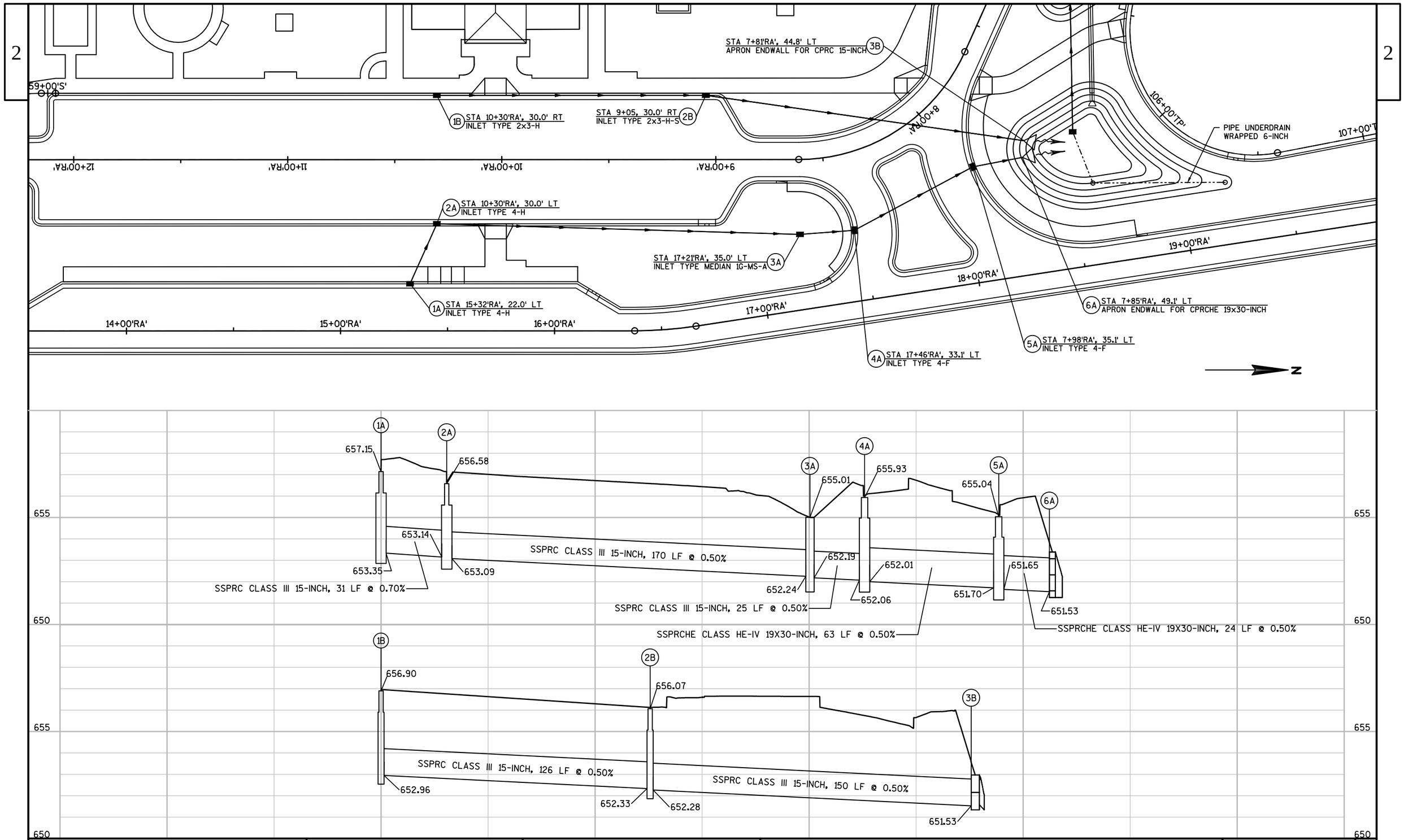
2



PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	EROSION CONTROL	SHEET	E

FILE NAME : P:\UZ\W\WITCO\131411\5-FINAL-DSGN\51-CONST-DWGS-CAD\40-TRANSHWY\PLN SHTS\020130-EC.DWG
LAYOUT NAME - EROSION CONTROL

PLOT DATE : 12/17/2015 11:12 PM PLOT BY : NATE MCLAUGHLIN PLOT NAME : PLOT SCALE : 1 IN:60 FT



PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	STORM SEWER	SHEET	E

FILE NAME : P:\UZ\W\WITCO\131411\5-FINAL-DSGN\51-CONST-DWGS-CAD\40-TRANSHWY\PLN SHTS\020108-SS.DWG
LAYOUT NAME - STORM SEWER
PLOT DATE : 12/17/2015 11:12 PM PLOT BY : NATE MCLAUGHLIN PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

PIPE UNDERDRAIN
WRAPPED 6-INCH

105+00'TP'

6+00'RA'

4G STA 7+14'RA', 42.1' LT
APRON ENDWALL FOR CPRC 18-INCH

106+00'TP'

3G STA 7+57'RA', 62.1' LT
APRON ENDWALL FOR CPRC 18-INCH

19+00'RA'

PIPE UNDERDRAIN
WRAPPED 6-INCH

7+00'RA'

EXISTING 18-INCH SS

51+00'S'

STA 6+41'RA', 40.6' RT
MANHOLE TYPE 4-J
MATCH INTO EXISTING PIPE 3C

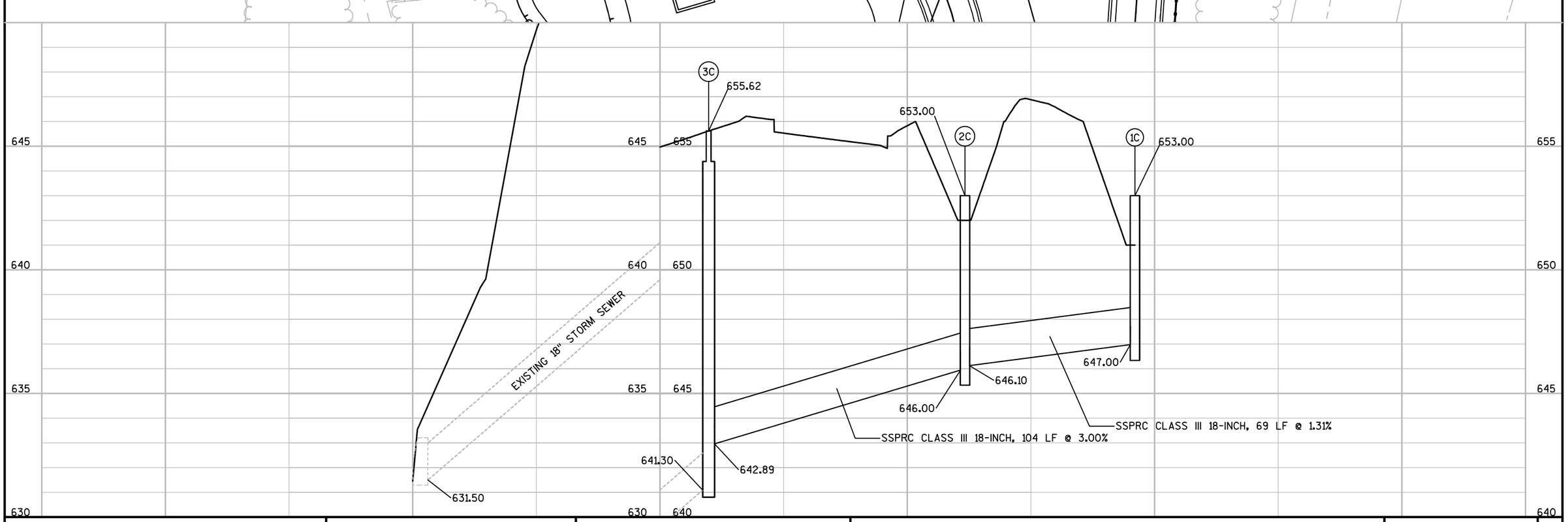
STA 7+15'RA', 32.0' LT
INLET TYPE MEDIAN 1G-MS 2C

1C STA 7+71'RA', 61.8' LT
INLET TYPE MEDIAN 1G-MS

8+00'RA'

18+00'RA'

N



PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	STORM SEWER	SHEET 40	E

FILE NAME : P:\UZ\W\WITCO\131411\5-FINAL-DSGN\51-CONST-DWGS-CAD\40-TRANSHWY\PLN SHTS\020108-SS.DWG
LAYOUT NAME - STORM SEWER

PLOT DATE : 12/18/2015 11:15 AM PLOT BY : NATE MCLAUGHLIN PLOT NAME : PLOT SCALE : 1 IN:40 FT

STORM SEWER CONSTRUCTED AS PART OF PROJECT 1071-06-81 COORDINATE STAGING WITH CONTRACTOR FOR THAT PROJECT

STA 0+76'RA', 29.1' LT
INLET TYPE MEDIAN 2G-MS (2F)

(1F) STA 1+62'RA', 57.9' LT
APRON ENDWALL FOR CPRC 18-INCH

(2E) STA 100+08'TP', 2.0' RT
INLET TYPE 4-H

1+00'RA'

STA 101+00'TP', 40.0' LT
INLET TYPE 2x3-H (2D)

PIPE UNDERDRAIN WRAPPED 6-INCH

PIPE UNDERDRAIN WRAPPED 6-INCH

(2G) STA 22+49'RA', 30.9' LT
APRON ENDWALL FOR CPRC 18-INCH

23+00'RA'

STA 0+77'RA', 15.5' RT
INLET TYPE 4-H (3F)

SHEET PILE WALL

2+00'RA'

(3D) STA 100+99'TP', 58.3' LT
APRON ENDWALL FOR CPRC 15-INCH

STA 0+77'RA', 35.3' RT
APRON ENDWALLS FOR CPRC 24-INCH (4F)

MODULAR BLOCK WALL

101+00'TP'

N

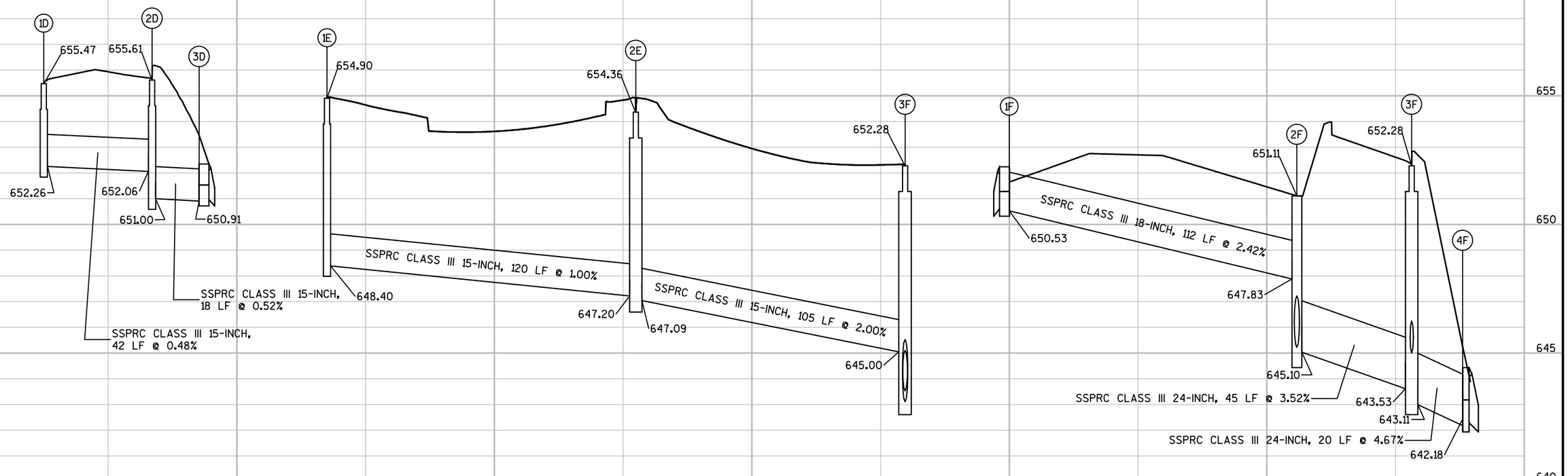
(1D) STA 101+00'TP', 2.0' RT
INLET TYPE 2x3-H

STA 2+95'RA', 11.8' RT
INLET TYPE 2x3-H (1E)

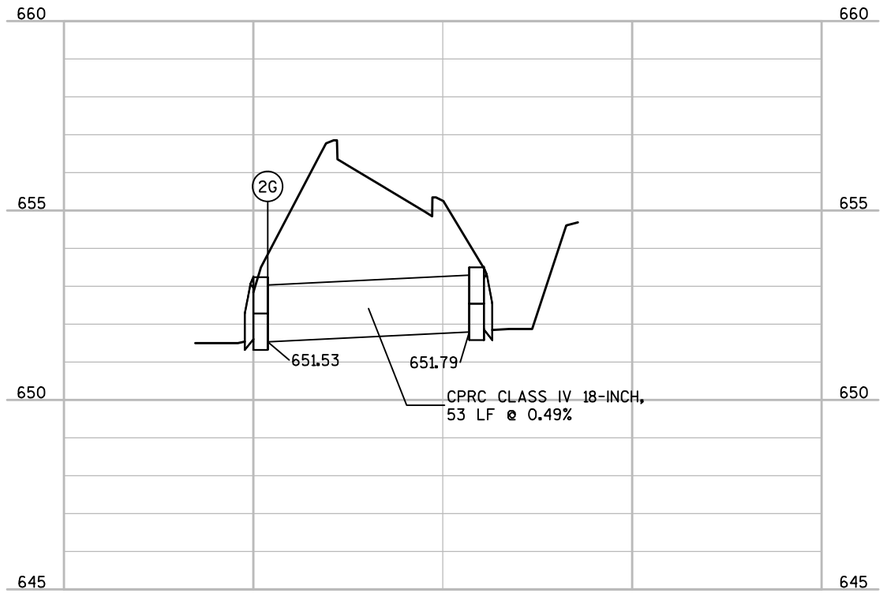
3+00

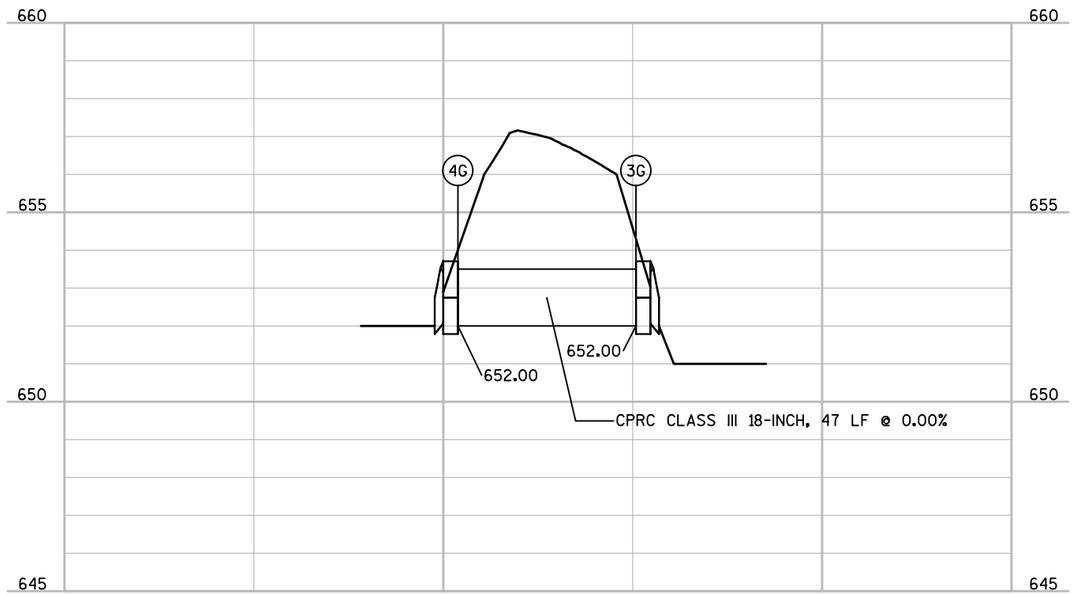
STA 22+49'RA', 22.3' RT
APRON ENDWALL FOR CPRC 18-INCH (1G)

22+00'RA'



PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	STORM SEWER	SHEET 41	E


660
655
650
645
2G
651.53
651.79
CPRC CLASS IV 18-INCH,
53 LF @ 0.49%


660
655
650
645
4G
3G
652.00
652.00
CPRC CLASS III 18-INCH, 47 LF @ 0.00%

N

10+00'RA'

11+00'RA'

15+00'RA'

16+00'RA'

STA 10+30, 52.2' RT
MANHOLE 4-J-S
1S

STA 14+95'RA', 39.6' LT
MANHOLE 4-J-S
2S

EXISTING 8" SANITARY SEWER LINE (REMOVED FROM EXISTING BUILDING - STRUCTURE 3S) -SEE REMOVAL PLAN

3S STA 15+76'RA', 33.0' RT
MANHOLE 4-J-S

PROTECT (TO REMAIN)

PROVIDE TEMPORARY SHORING PRIOR TO BEGINNING EXCAVATION FOR MH 3S

CONSTRUCT MANHOLE AROUND EXISTING SANITARY PIPE CONTRACTOR TO VERIFY INVERT ELEVATION AND NOTIFY THE ENGINEER OF ANY ELEVATION DEVIATION TO THE ASSUMED PIPE ELEVATION

ES1 STA 14+64'RA', 59.8' RT
MANHOLE 4-J-S
EXISTING MH

N

57+00'S'

58+00'S'

59+00'S'

MANHOLE 4-J-S

11+00'RA'

12+00'RA'

4S STA 13+51'RA', 40.0' LT
6" CLEANOUT

STA 14+95'RA', 39.6' LT
MANHOLE 4-J-S
2S

13+00'RA'

14+00'RA'

15+00'RA'

2

660
655
650
640

1S
657.70

2S
657.70

3S
659.19

ES1
659.74

SSPC 8-INCH, 105 LF @ 0.40%
653.35
653.24
653.31

SSPC 8-INCH, 109 LF @ 0.40%
652.82
652.74

EXISTING 8-INCH, @ 0.49%
652.30
652.22
651.66

SSPC 8-INCH, 11 LF @ 0.40%
CONNECT TO BUILDING

BUILD MANHOLE AROUND EXISTING PIPE

660
655
650
640

4S
658.70

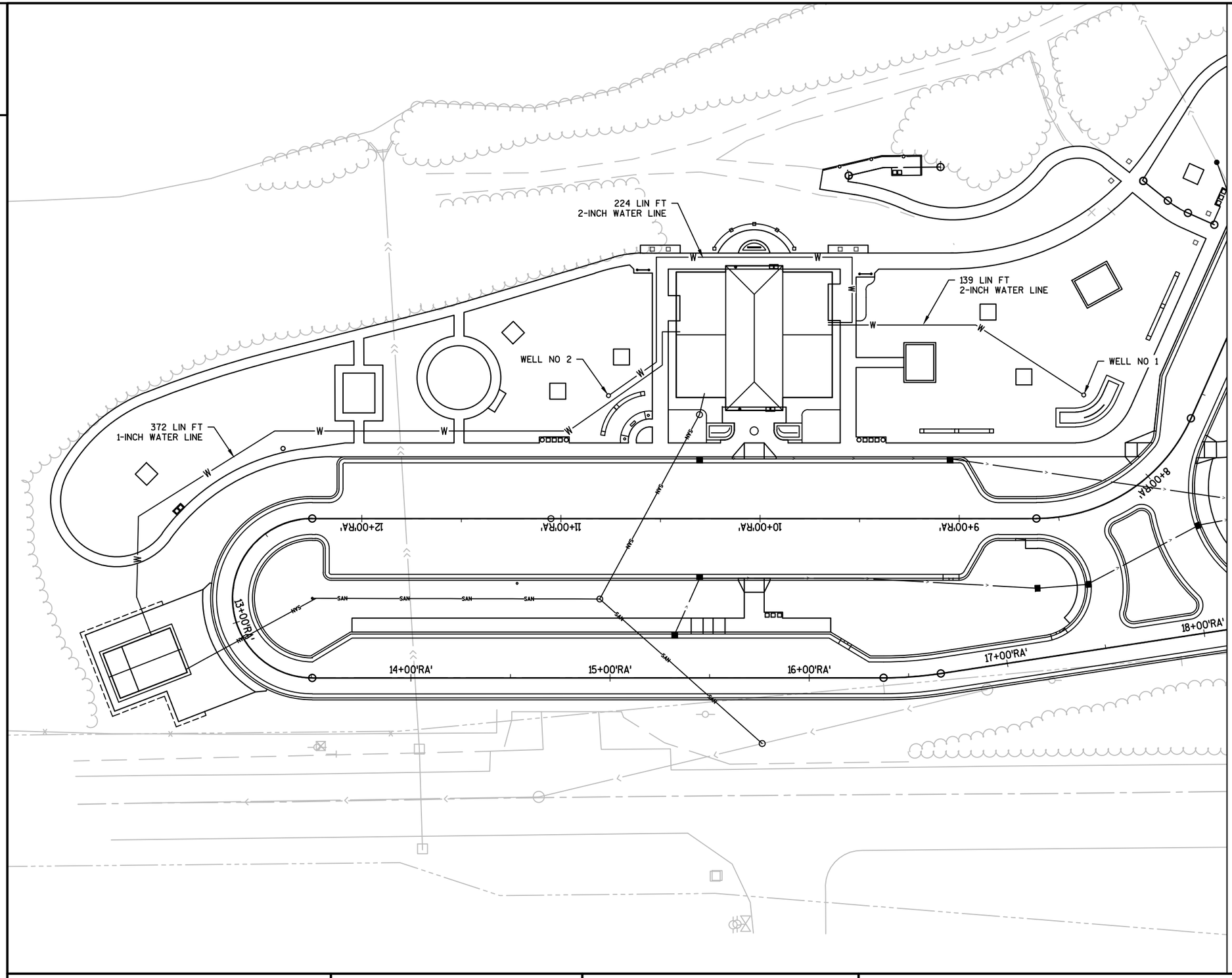
2S
657.70

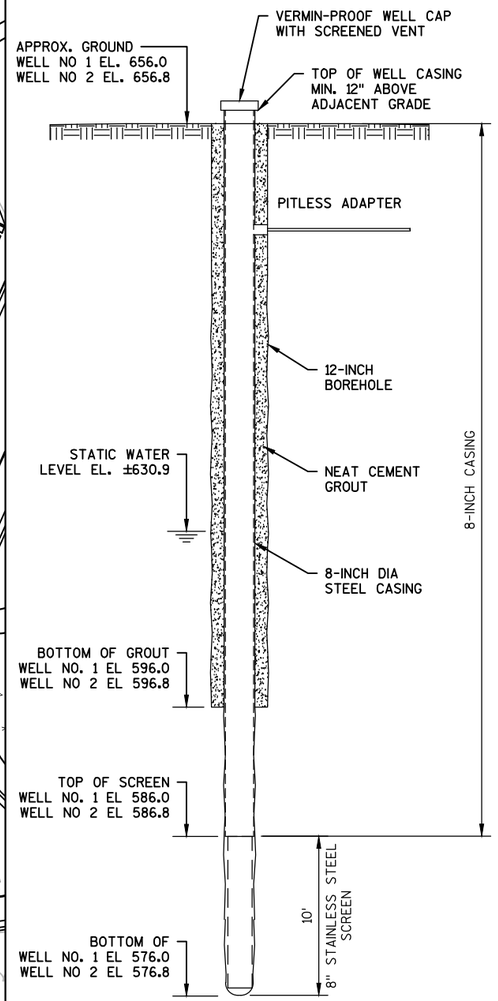
SSPC 6-INCH, 73 LF @ 1.08%
655.05
CONNECT TO BUILDING

SSPC 6-INCH, 144 LF @ 1.00%
654.26
652.82

PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	SANITARY SEWER	SHEET 43	E

FILE NAME : P:\UZ\W\WITCO\131411\5-FINAL-DSGN\51-CONST-DWGS-CAD\40-TRANSHWY\PLN SHTS\020108-SS.DWG
LAYOUT NAME - SANITARY SEWER
PLOT DATE : 12/17/2015 11:13 PM PLOT BY : NATE MCLAUGHLIN PLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 41





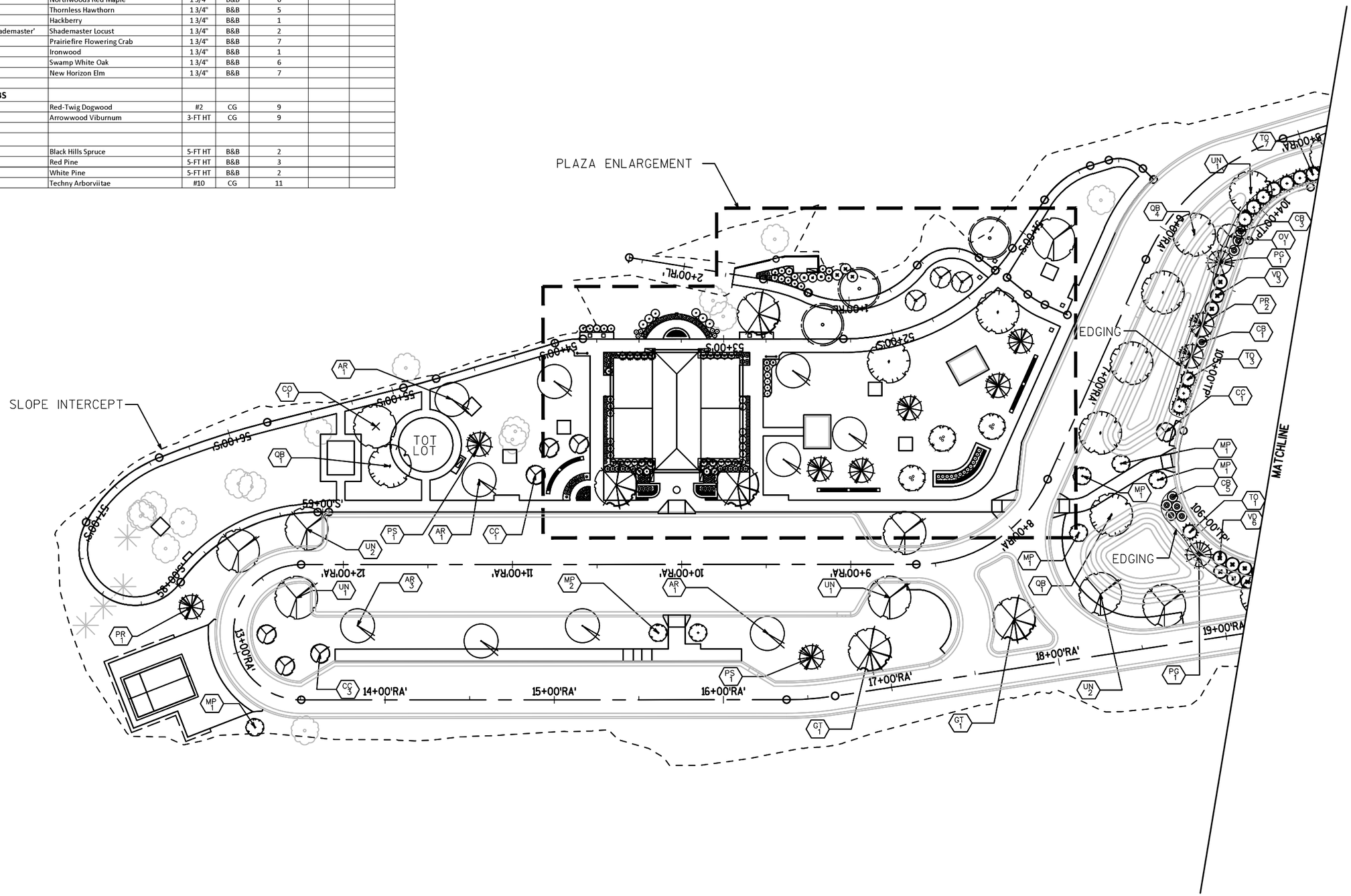
WELL SCHEMATIC
NOT TO SCALE

PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	WATER SCHEMATIC	SHEET 44	E

FILE NAME : P:\UZ\W\WITCO\131411\5-FINAL-DSGN\51-CONST-DWGS-CAD\40-TRANSHWY\PLN SHTS\020108-WT.DWG
LAYOUT NAME - WATER SCHEMATIC

PLOT DATE : 12/17/2015 11:14 PM PLOT BY : NATE MCLAUGHLIN PLOT NAME : PLOT SCALE : 1 IN:50 FT

KEY	SCIENTIFIC NAME	COMMON NAME	SIZE	ROOT	QUANTITY	SPACING	REMARKS
	DECIDUOUS TREES						
AR	Acer rubrum 'Northwood'	Northwoods Red Maple	1 3/4"	B&B	6		
CC	Crataegus crus-galli 'Inermis'	Thornless Hawthorn	1 3/4"	B&B	5		
CO	Celtis occidentalis	Hackberry	1 3/4"	B&B	1		
GT	Gleditsia triacanthos var. inermis 'Shademaster'	Shademaster Locust	1 3/4"	B&B	2		
MP	Malus 'Prairiefire'	Prairiefire Flowering Crab	1 3/4"	B&B	7		
OV	Ostrya virginiana	Ironwood	1 3/4"	B&B	1		
QB	Quercus bicolor	Swamp White Oak	1 3/4"	B&B	6		
UN	Ulmus 'New Horizon'	New Horizon Elm	1 3/4"	B&B	7		
	DECIDUOUS SHRUBS						
CB	Cornus baileyi	Red-Twig Dogwood	#2	CG	9		
VD	Viburnum dentatum	Arrowwood Viburnum	3-FT HT	CG	9		
	EVERGREENS						
PG	Picea glauca 'Densata'	Black Hills Spruce	5-FT HT	B&B	2		
PR	Pinus resinosa	Red Pine	5-FT HT	B&B	3		
PS	Pinus strobus	White Pine	5-FT HT	B&B	2		
TO	Thuja occidentalis 'Techny'	Techny Arborviitae	#10	CG	11		

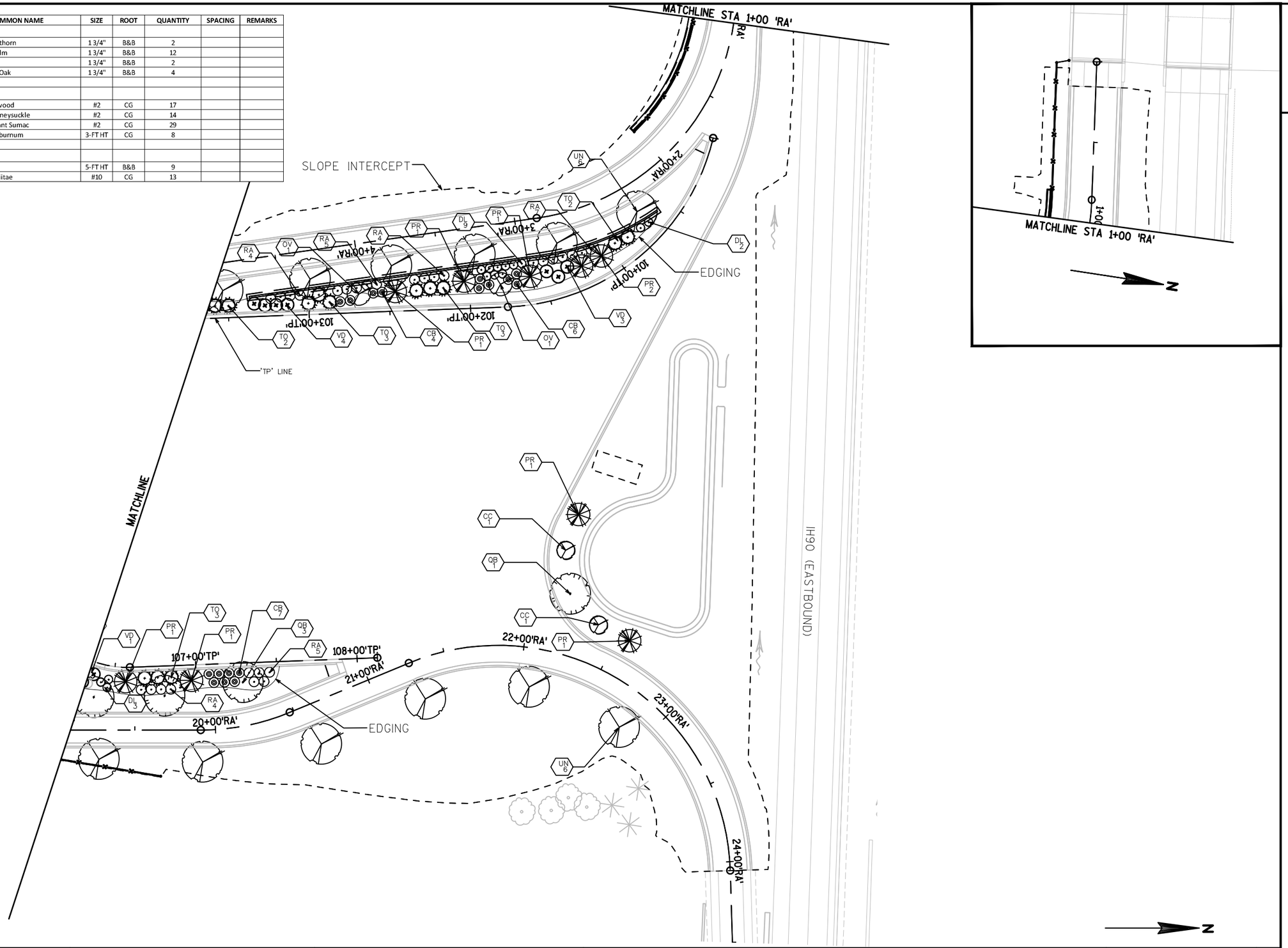


PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	PLANTING PLAN	SHEET	E

FILE NAME : P:\UZ\W\WITCO\131411\5-FINAL-DSGN\51-CONST-DWGS-CAD\40-TRANSHWY\PLN SHTS\020131-PL.DWG
LAYOUT NAME - PLANTING PLAN

PLOT DATE : 12/17/2015 11:15 PM PLOT BY : NATE MCLAUGHLIN PLOT NAME : PLOT SCALE : 1 IN:60 FT

KEY	SCIENTIFIC NAME	COMMON NAME	SIZE	ROOT	QUANTITY	SPACING	REMARKS
	DECIDUOUS TREES						
CC	Crataegus crus-galli 'inermis'	Thornless Hawthorn	1 3/4"	B&B	2		
UN	Ulmus 'New Horizon'	New Horizon Elm	1 3/4"	B&B	12		
OV	Ostrya virginiana	Ironwood	1 3/4"	B&B	2		
QB	Quercus bicolor	Swamp White Oak	1 3/4"	B&B	4		
	DECIDUOUS SHRUBS						
CB	Cornus baileyi	Red-Twig Dogwood	#2	CG	17		
DL	Diervilla lonicera	Dwarf Bush Honeysuckle	#2	CG	14		
RA	Rhus aromatica 'Gro-Low'	Gro-Low Fragrant Sumac	#2	CG	29		
VD	Viburnum dentatum	Arrowwood Viburnum	3-FT HT	CG	8		
	EVERGREENS						
PR	Pinus resinosa	Red Pine	5-FT HT	B&B	9		
TO	Thuja occidentalis 'Techny'	Techny Arborviitae	#10	CG	13		



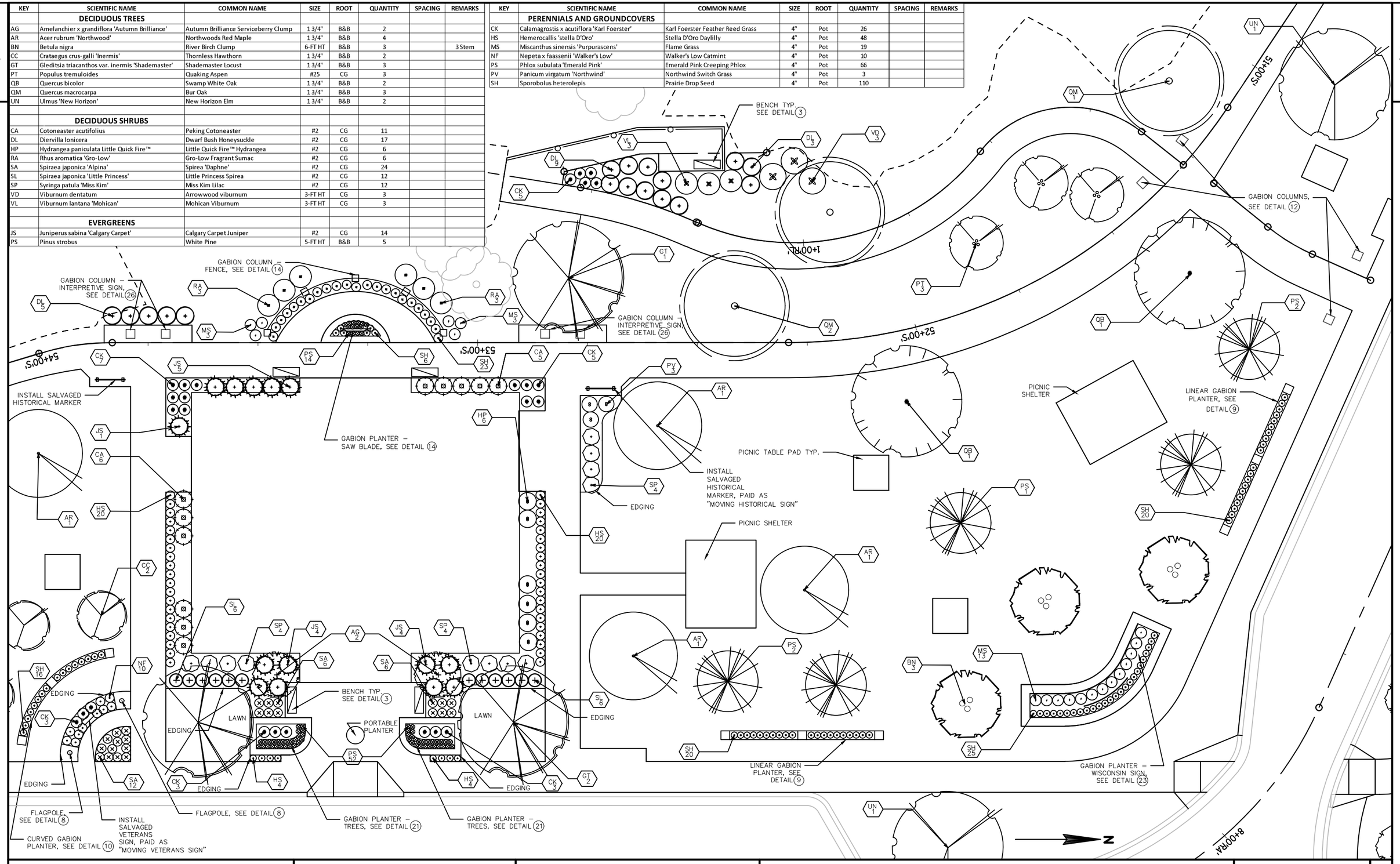
PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	PLANTING PLAN	SHEET	E

FILE NAME : P:\UZ\W\WITCO\131411\5-FINAL-DSGN\51-CONST-DWGS-CAD\40-TRANSHWY\PLN SHTS\020132-PL.DWG
LAYOUT NAME - PLANTING PLAN

PLOT DATE : 12/17/2015 11:16 PM PLOT BY : NATE MCLAUGHLIN PLOT NAME : PLOT SCALE : 1 IN:60 FT

KEY	SCIENTIFIC NAME	COMMON NAME	SIZE	ROOT	QUANTITY	SPACING	REMARKS
	DECIDUOUS TREES						
AG	Amelanchier x grandiflora 'Autumn Brilliance'	Autumn Brilliance Serviceberry Clump	1 3/4"	B&B	2		
AR	Acer rubrum 'Northwood'	Northwoods Red Maple	1 3/4"	B&B	4		
BN	Betula nigra	River Birch Clump	6-FT HT	B&B	3		3 Stem
CC	Crataegus crus-galli 'Inermis'	Thornless Hawthorn	1 3/4"	B&B	2		
GT	Gleditsia triacanthos var. inermis 'Shademaster'	Shademaster Locust	1 3/4"	B&B	3		
PT	Populus tremuloides	Quaking Aspen	#25	CG	3		
QB	Quercus bicolor	Swamp White Oak	1 3/4"	B&B	2		
QM	Quercus macrocarpa	Bur Oak	1 3/4"	B&B	3		
UN	Ulmus 'New Horizon'	New Horizon Elm	1 3/4"	B&B	2		
	DECIDUOUS SHRUBS						
CA	Cotoneaster acutifolius	Peking Cotoneaster	#2	CG	11		
DL	Diervilla lonicera	Dwarf Bush Honeysuckle	#2	CG	17		
HP	Hydrangea paniculata Little Quick Fire™	Little Quick Fire™ Hydrangea	#2	CG	6		
RA	Rhus aromatica 'Gro-Low'	Gro-Low Fragrant Sumac	#2	CG	6		
SA	Spiraea japonica 'Alpina'	Spirea 'Daphne'	#2	CG	24		
SL	Spiraea japonica 'Little Princess'	Little Princess Spirea	#2	CG	12		
SP	Syringa patula 'Miss Kim'	Miss Kim Lilac	#2	CG	12		
VD	Viburnum dentatum	Arrowwood viburnum	3-FT HT	CG	3		
VL	Viburnum lantana 'Mohican'	Mohican Viburnum	3-FT HT	CG	3		
	EVERGREENS						
JS	Juniperus sabina 'Calgary Carpet'	Calgary Carpet Juniper	#2	CG	14		
PS	Pinus strobus	White Pine	5-FT HT	B&B	5		

KEY	SCIENTIFIC NAME	COMMON NAME	SIZE	ROOT	QUANTITY	SPACING	REMARKS
	PERENNIALS AND GROUNDCOVERS						
CK	Calamagrostis x acutiflora 'Karl Foerster'	Karl Foerster Feather Reed Grass	4"	Pot	26		
HS	Hemerocallis 'stella D'Oro'	Stella D'Oro Daylilly	4"	Pot	48		
MS	Miscanthus sinensis 'Purpurascens'	Flame Grass	4"	Pot	19		
NF	Nepeta x faassenii 'Walker's Low'	Walker's Low Catmint	4"	Pot	10		
PS	Phlox subulata 'Emerald Pink'	Emerald Pink Creeping Phlox	4"	Pot	66		
PV	Panicum virgatum 'Northwind'	Northwind Switch Grass	4"	Pot	3		
SH	Sporobolus heterolepis	Prairie Drop Seed	4"	Pot	110		



PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	PLAZA ENLARGEMENT PLAN	SHEET	E

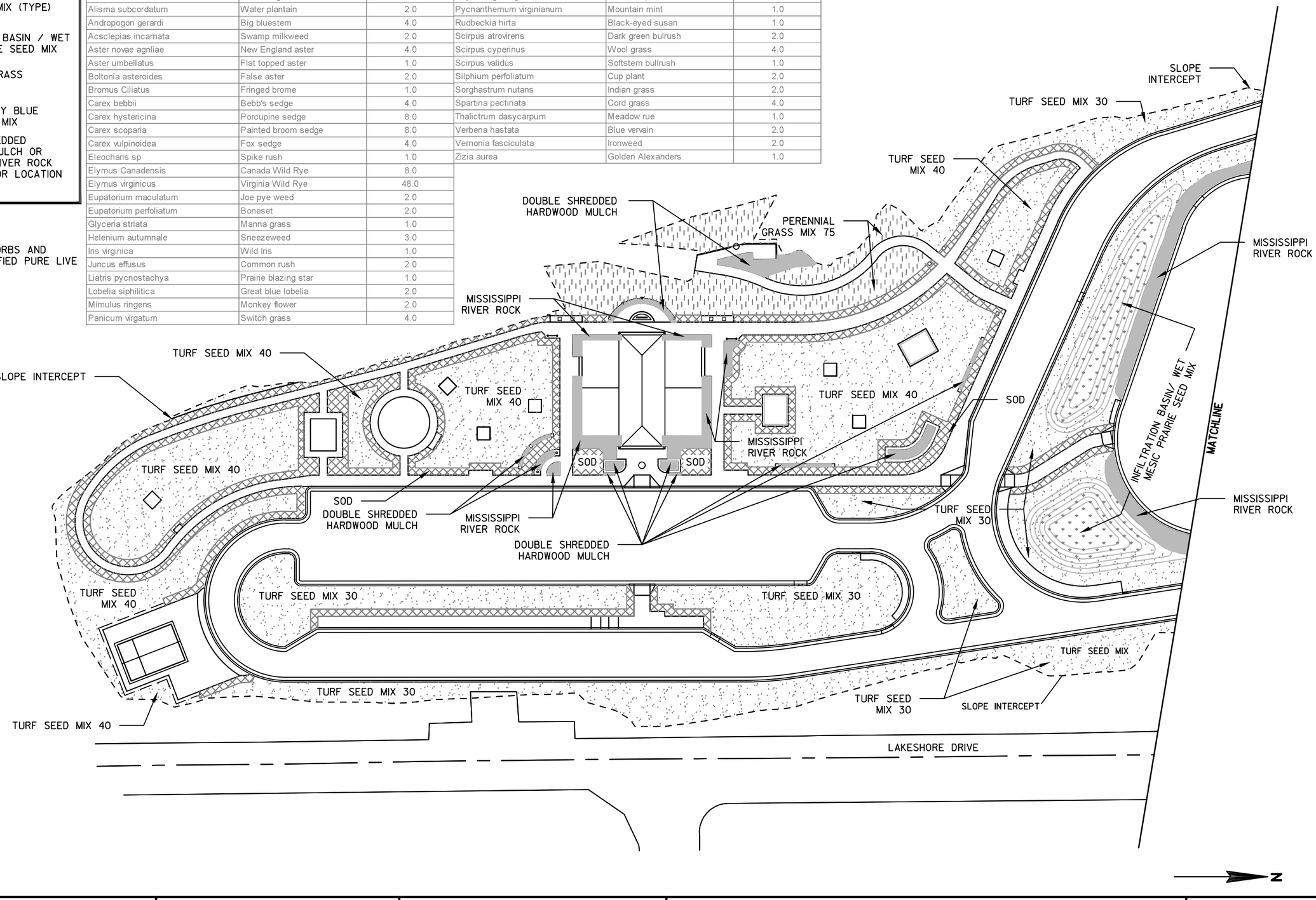
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LEGEND

- TURF SEED MIX (TYPE)
- INFILTRATION BASIN / WET MESIC PRAIRIE SEED MIX
- PERENNIAL GRASS MIX (TYPE)
- SOD-KENTUCKY BLUE AND FESCUE MIX
- DOUBLE SHREDDED HARDWOOD MULCH OR MISSISSIPPI RIVER ROCK SEE PLAN FOR LOCATION OF EACH

NOTE
ALL NATIVE GRASSES, FORBS AND SEDGES SHALL BE CERTIFIED PURE LIVE SEED (PLS).

Infiltration Basin/Mesic Prairie					
Scientific Name	**Common Name**	**Seed (oz)/Acre**			
Acorus calamus	Sweet flag	1.0	Physostegia virginiana	Obedient plant	1.0
Alisma subcordatum	Water plantain	2.0	Pycnanthemum virginianum	Mountain mint	1.0
Andropogon gerardi	Big bluestem	4.0	Rudbeckia hirta	Black-eyed susan	1.0
Acsclepias incarnata	Swamp milkweed	2.0	Scirpus atrovirens	Dark green bulrush	2.0
Aster novae agnliae	New England aster	4.0	Scirpus cyperinus	Wool grass	4.0
Aster umbellatus	Flat topped aster	1.0	Scirpus validus	Softstem bullrush	1.0
Boltonia asteroides	False aster	2.0	Silphium perfoliatum	Cup plant	2.0
Bromus Ciliatus	Fringed brome	1.0	Sorghastrum nutans	Indian grass	2.0
Carex bebbii	Bebb's sedge	4.0	Spartina pectinata	Cord grass	4.0
Carex hystericina	Porcupine sedge	8.0	Thalictrum dasycarpum	Meadow rue	1.0
Carex scoparia	Painted broom sedge	8.0	Verbena hastata	Blue vervain	2.0
Carex vulpinoidea	Fox sedge	4.0	Vernonia fasciculata	Ironweed	2.0
Eleocharis sp	Spike rush	1.0	Zizia aurea	Golden Alexanders	1.0
Elymus Canadensis	Canada Wild Rye	8.0			
Elymus virginicus	Virginia Wild Rye	48.0			
Eupatorium maculatum	Joe pye weed	2.0			
Eupatorium perfoliatum	Boneset	2.0			
Glyceria striata	Manna grass	1.0			
Helenium autumnale	Sneezeweed	3.0			
Iris virginica	Wild Iris	1.0			
Juncus effusus	Common rush	2.0			
Liatris pycnostachya	Prairie blazing star	1.0			
Lobelia siphilitica	Great blue lobelia	2.0			
Mimulus ringens	Monkey flower	2.0			
Panicum virgatum	Switch grass	4.0			



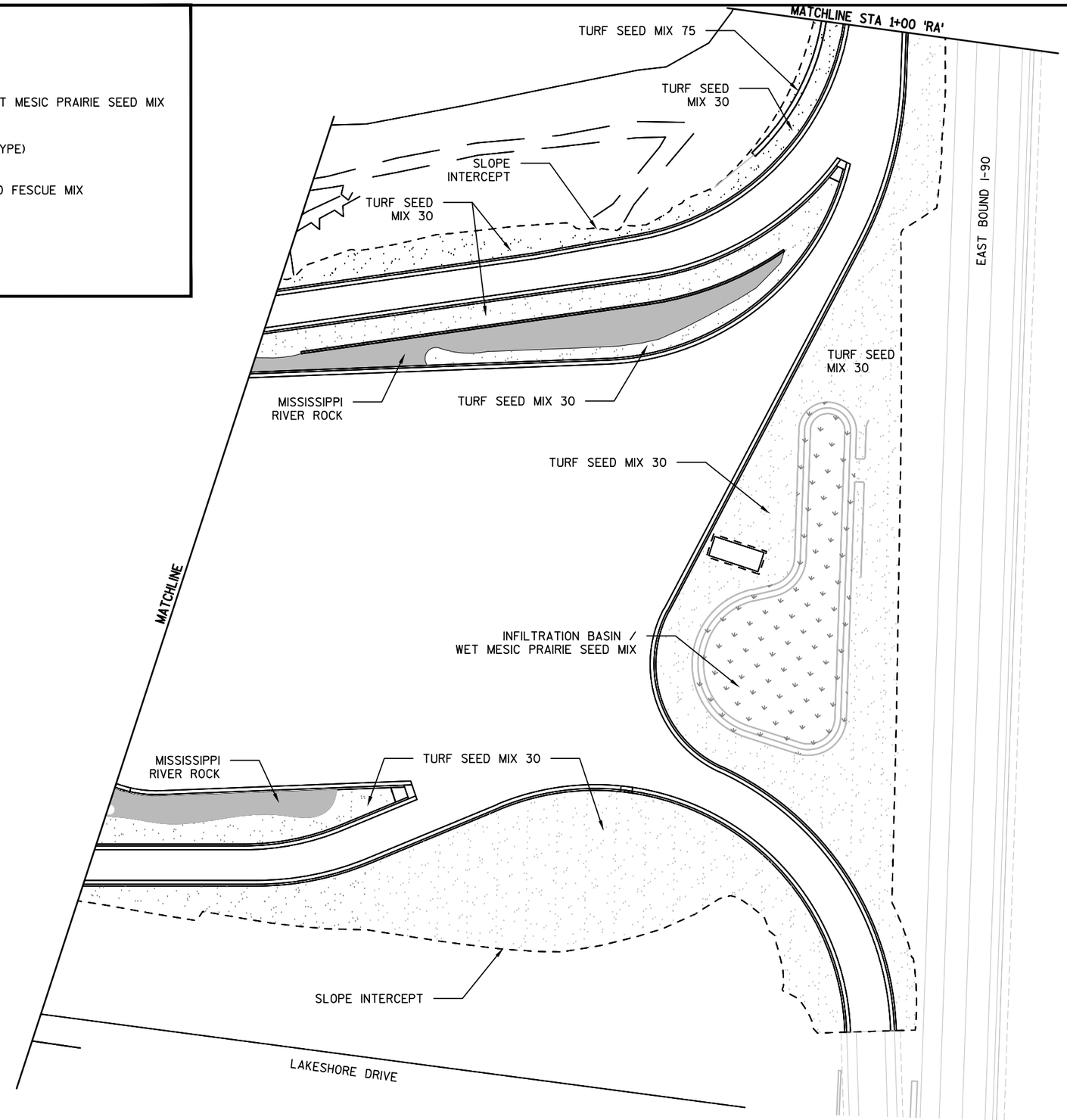
PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	SEEDING PLAN	SHEET	E

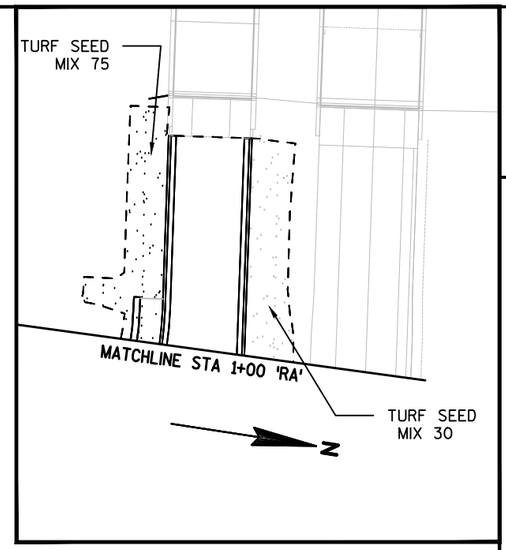
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LAYOUT NAME - SEEDING PLAN
PLOT DATE : 12/17/2015 11:21 PM PLOT BY : NATE MCLAUGHLIN PLOT NAME : PLOT SCALE : 1 IN:60 FT

2

LEGEND

- TURF SEED MIX (TYPE)
- INFILTRATION BASIN / WET MESIC PRAIRIE SEED MIX
- PERENNIAL GRASS MIX (TYPE)
- SOD-KENTUCKY BLUE AND FESCUE MIX
- DOUBLE SHREDDED HARDWOOD MULCH OR MISSISSIPPI RIVER ROCK SEE PLAN FOR LOCATION OF EACH

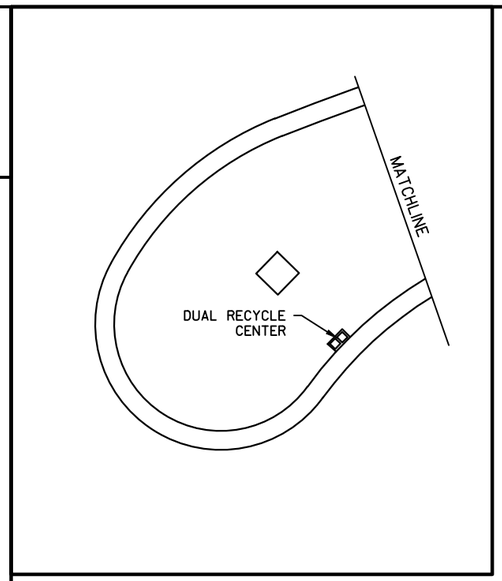


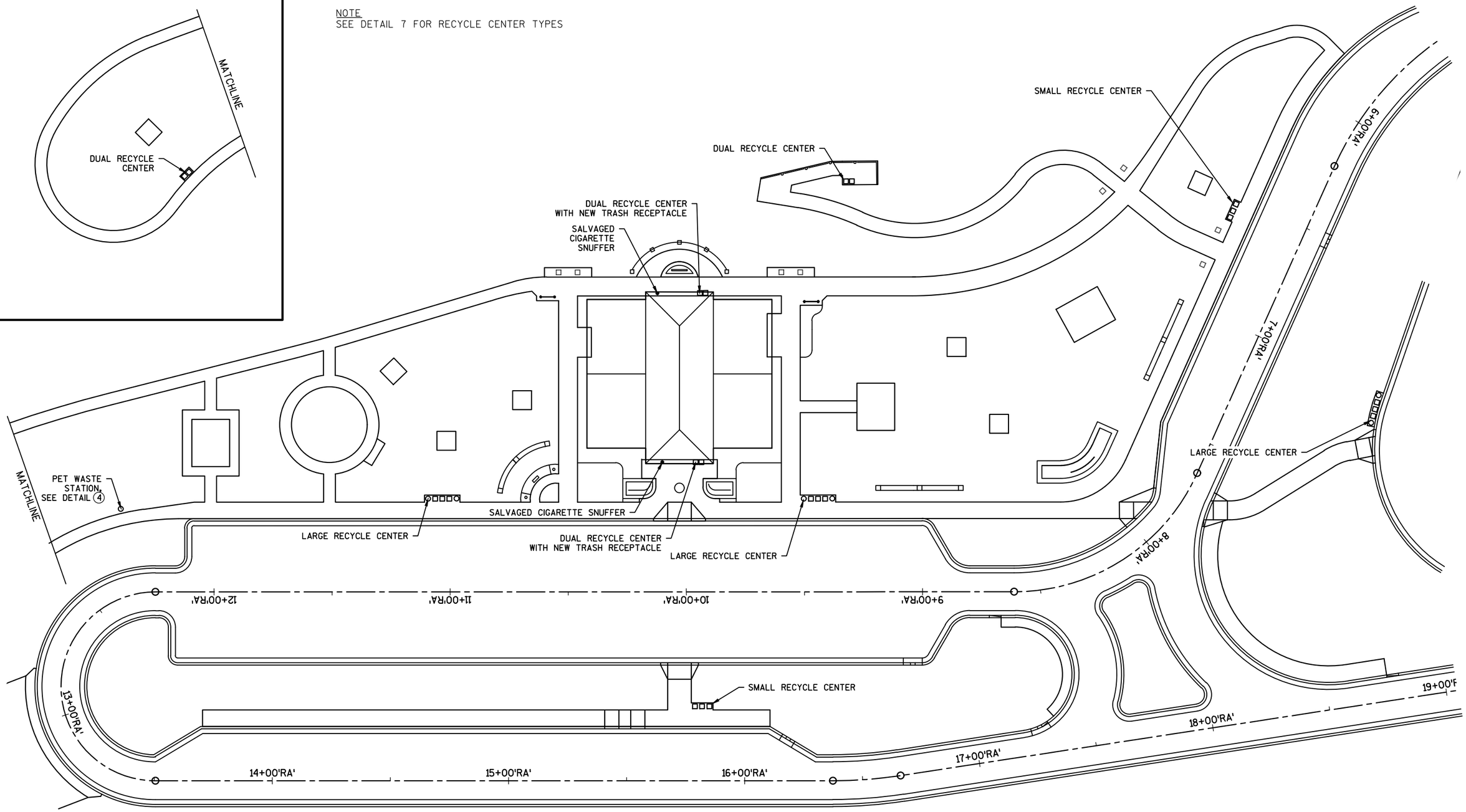


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PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	SEEDING PLAN	SHEET	E

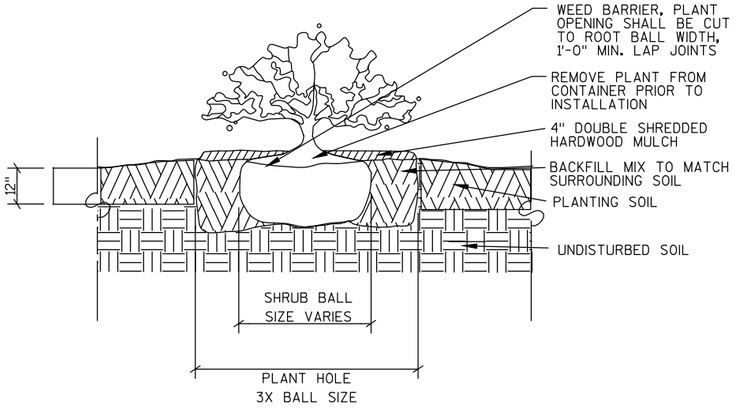
NOTE
SEE DETAIL 7 FOR RECYCLE CENTER TYPES





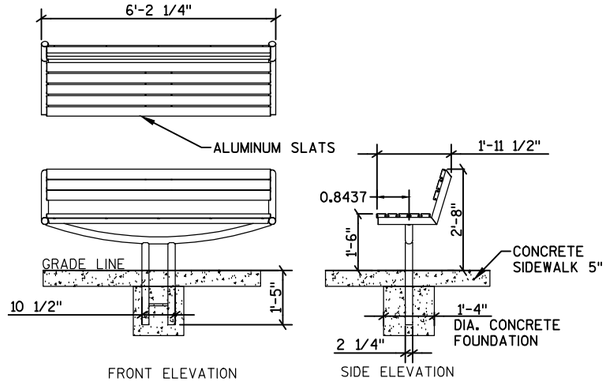
PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	TRASH AND RECYCLING RECEPTACLE LOCATIONS	SHEET	E

FILE NAME : P:\UZ\W\WITCO\131411\5-FINAL-DSGN\51-CONST-DWGS-CAD\40-TRANSHWY\PLN SHTS\020135-TR.DWG
LAYOUT NAME - TRASH AND RECYCLING RECEPTACLE LOCATIONS
PLOT DATE : 12/17/2015 11:24 PM PLOT BY : NATE MCLAUGHLIN PLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42



1 SHRUB PLANTING DETAIL

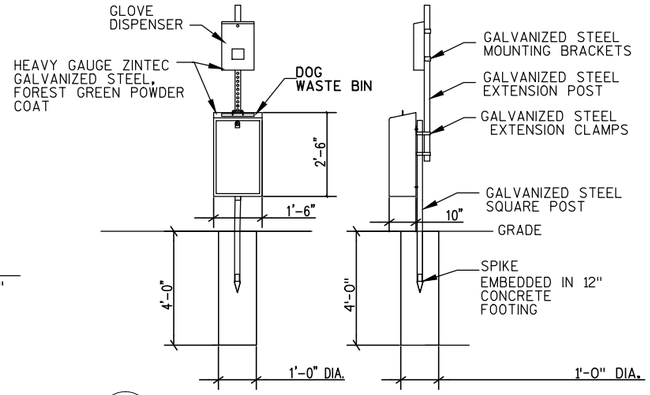
1/4"=1'-0"



2 BENCH DETAIL

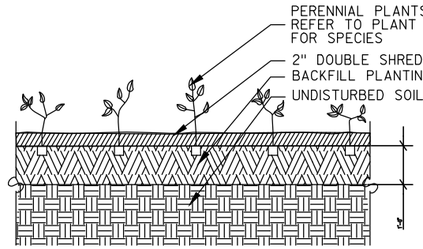
1/4"=1'-0"

PET WASTE STATION BY:1. STINKIES (WWW.STINKIES.NET)
2. BAGGIT OUTHOUSE PET STATION(WWW.BAGGITRWE.COM)
3. DOODYCALLS (WWW.DOODYCALLS.COM) OR EQUAL
MOUNT PER MFG. SPECS.



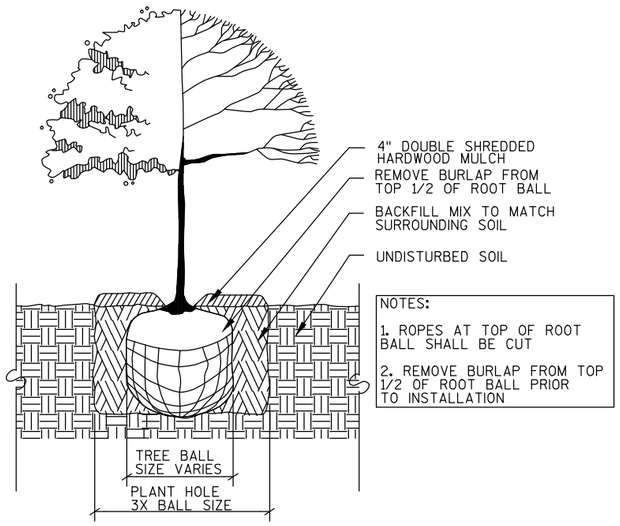
4 PET WASTE STATION

1/4"=1'-0"



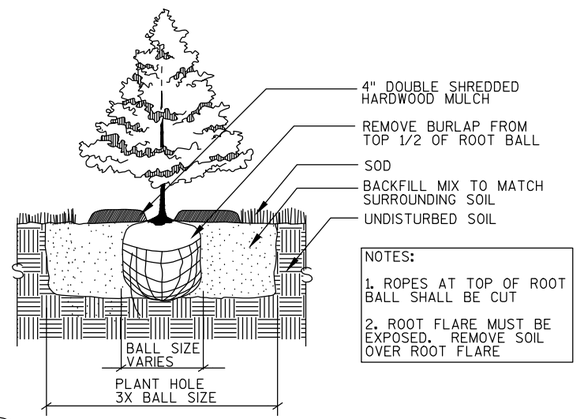
3 GROUNDCOVER/PERENNIAL DETAIL

1/4"=1'-0"



5 TREE PLANTING DETAIL

1/4"=1'-0"



6 EVERGREEN PLANTING DETAIL

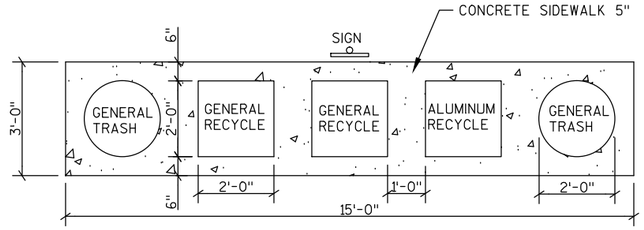
1/4"=1'-0"

SIGN

RECYCLE AREA

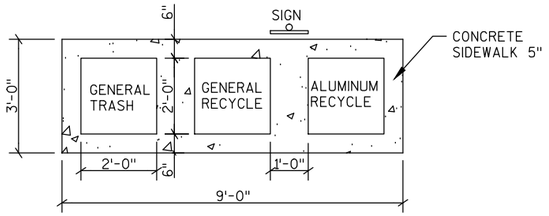
PLEASE DEPOSIT RECYCLABLES ONLY

24"X30"
SIGN AND POST SUPPLIED BY THE WIS. DOT OR SALVAGED FROM EXISTING SITE



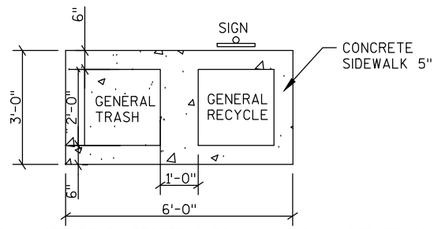
ALL SALVAGED RECEPTACLES

LARGE RECYCLE CENTER



ALL SALVAGED RECEPTACLES

SMALL RECYCLE CENTER

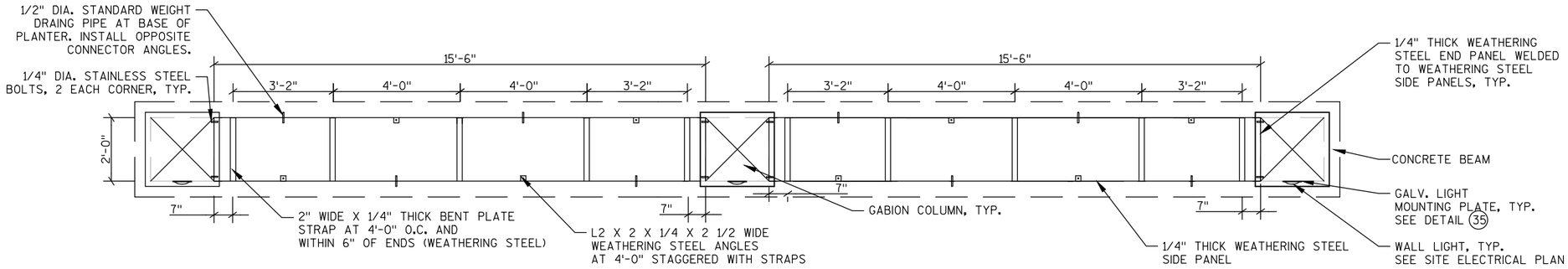


NEW OR SALVAGED TRASH RECEPTACLES - ALL SALVAGED RECYCLE RECEPTACLES

DUAL RECYCLE CENTER

7 RECYCLE CENTER TYPES

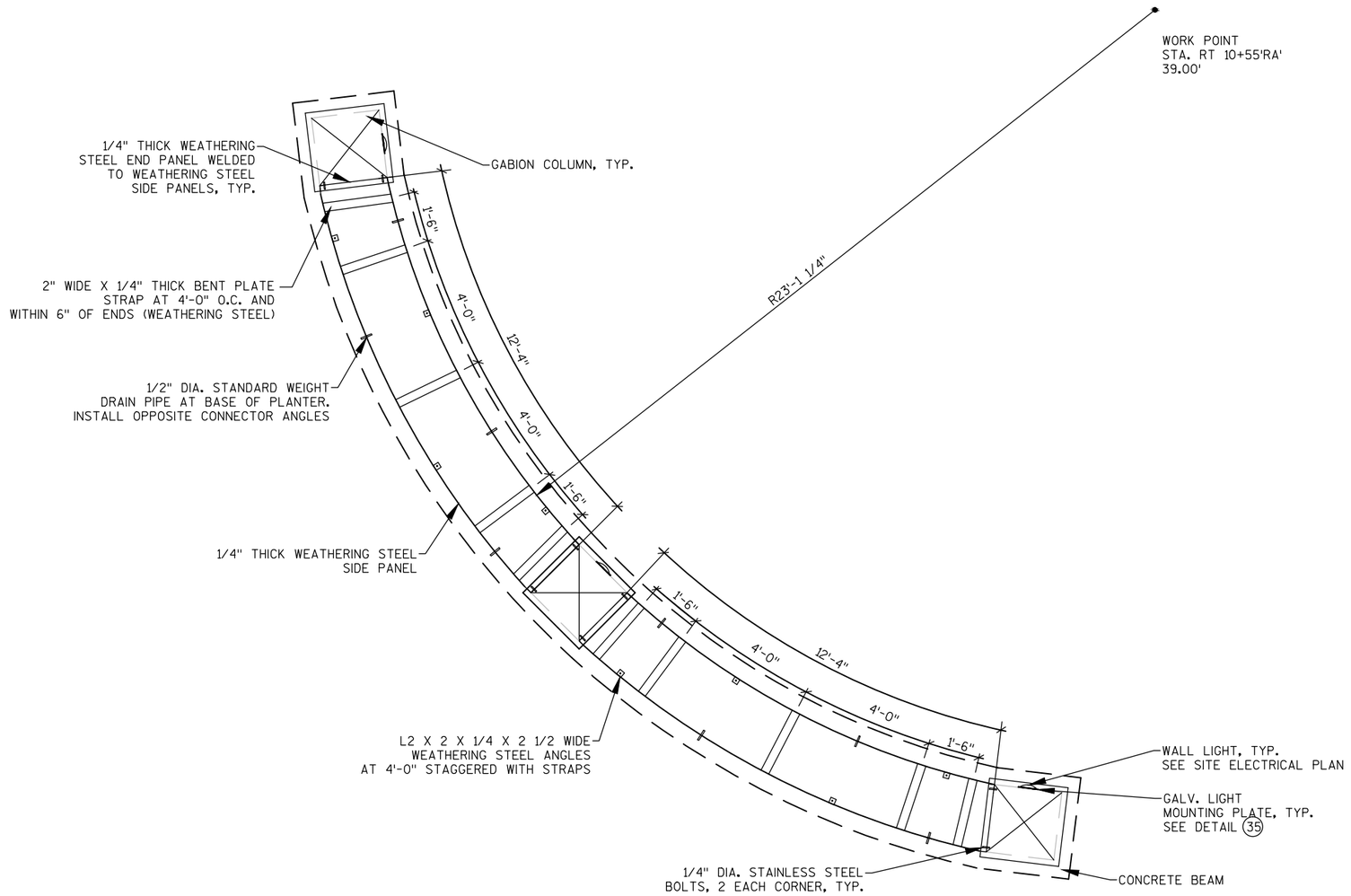
1/4"=1'-0"



NOTE:
COAT ALL INSIDE FACES OF PLANTER PANELS WITH FLUID APPLIED MEMBRANE WATERPROOFING (INCLUDING STRAPS AND ANGLE BRACKETS)

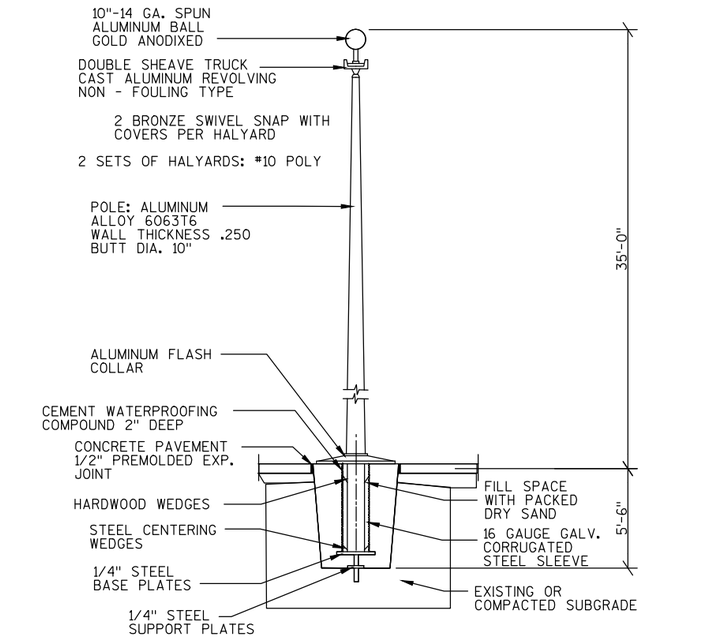
9 LINEAR GABION PLANTER - PLAN

1/8"=1'-0"



10 CURVED GABION PLANTER - PLAN

1/8"=1'-0"

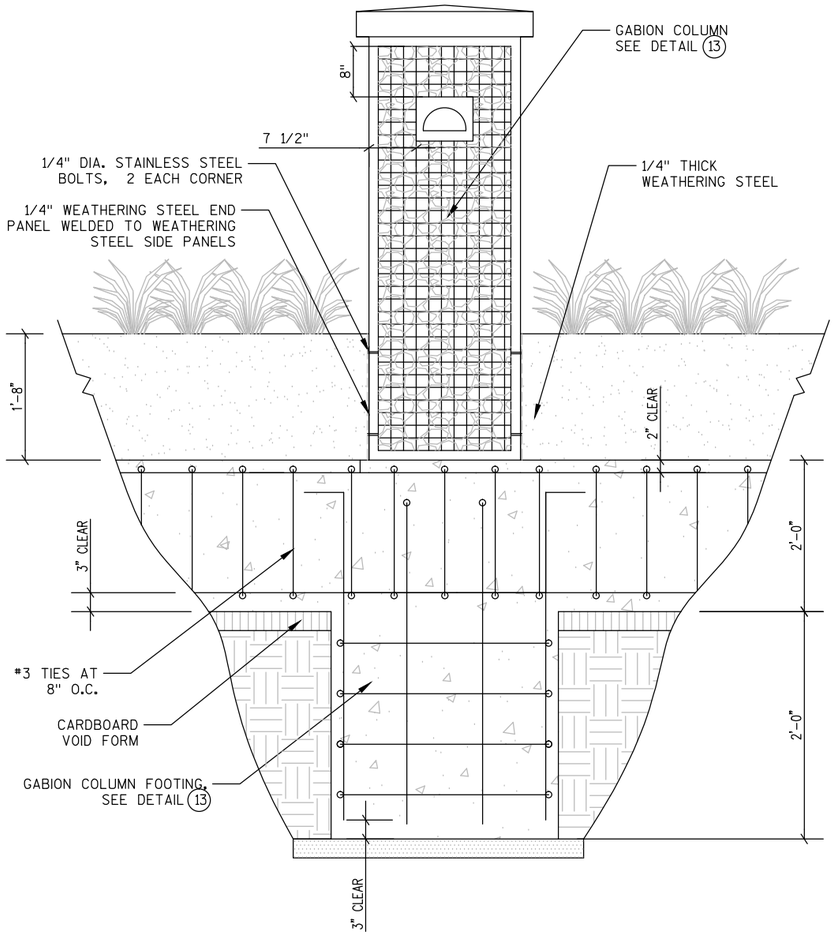


8 FLAGPOLE DETAIL

1/8"=1'-0"

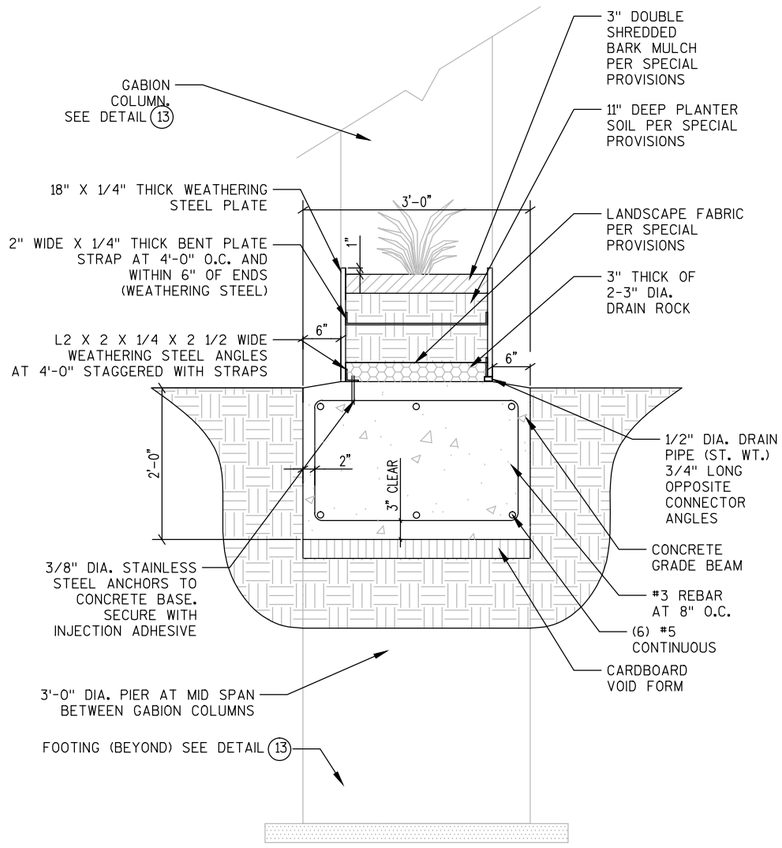
PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	LANDSCAPE DETAILS	SHEET	E

FILE NAME : P:\UZ\W\WITCO\131411\5-FINAL-DSGN\51-CONST-DWGS-CAD\40-TRANSHWY\PLN SHTS\020137-LS.DWG
LAYOUT NAME - LANDSCAPE DETAILS
PLOT DATE : 12/17/2015 11:25 PM PLOT BY : NATE MCLAUGHLIN PLOT NAME : PLOT SCALE : 1/8 IN:1 FT
WISDOT/CADDS SHEET 42



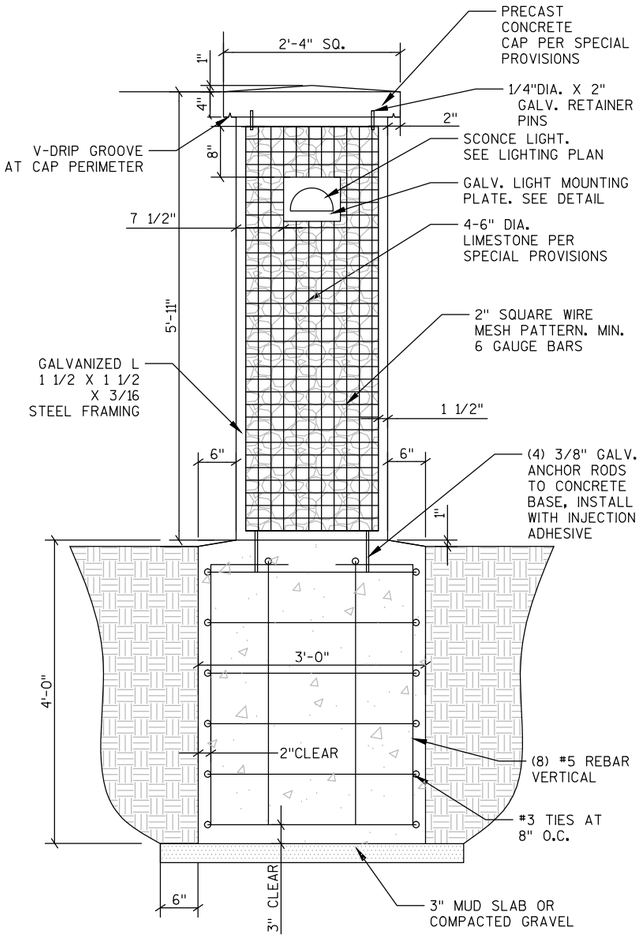
11 LINEAR GABION STEEL PLANTER - ELEVATION / SECTION

1/2"=1'-0"



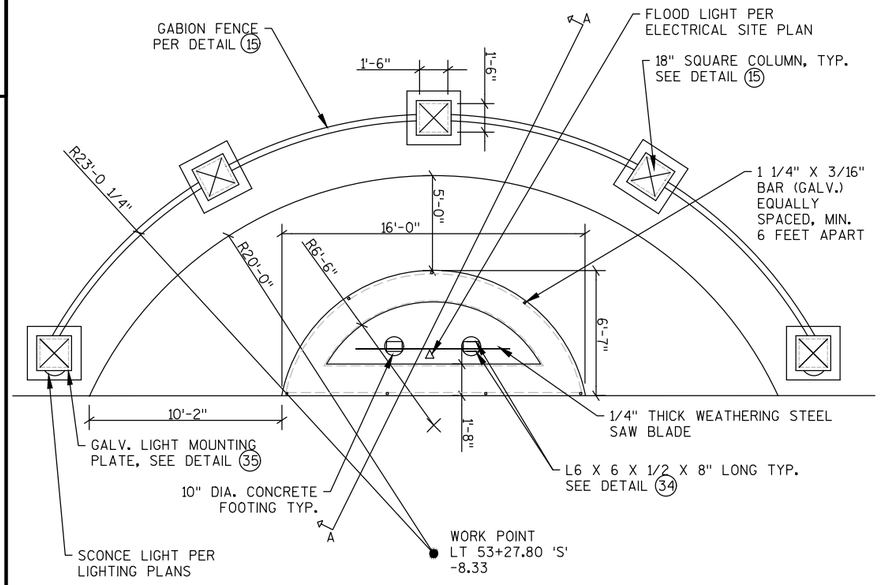
12 LINEAR GABION PLANTER - SECTION

1/2"=1'-0"



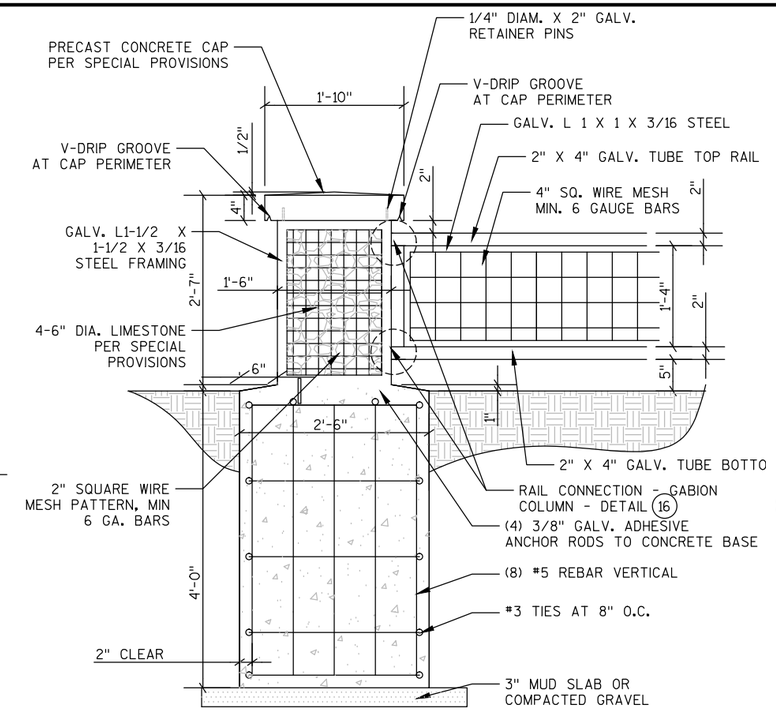
13 GABION COLUMN - ELEVATION

1/2"=1'-0"



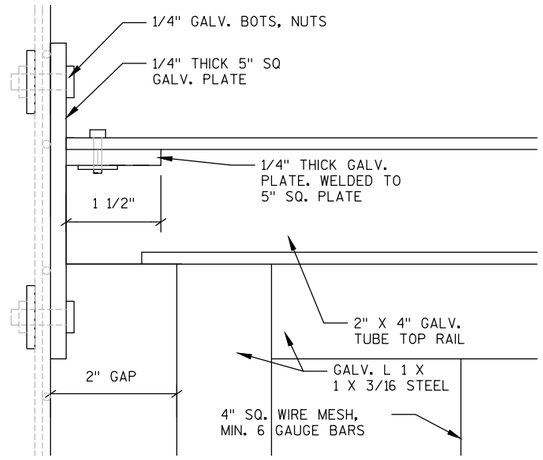
14 GABION PLANTER - SAW BLADE AND GABION COLUMN AND FENCE- PLAN

1/8"=1'-0"



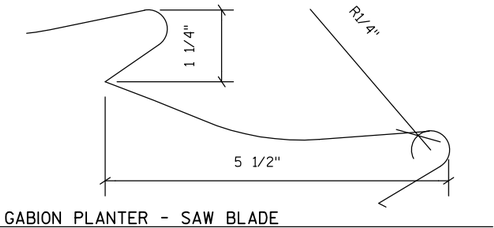
15 GABION COLUMN AND FENCE - ELEVATION

1/2"=1'-0"



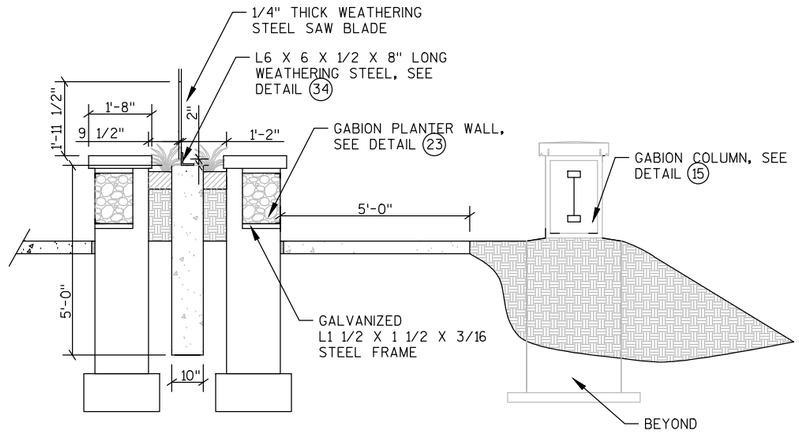
16 RAIL CONNECTION - GABION COLUMN

NTS



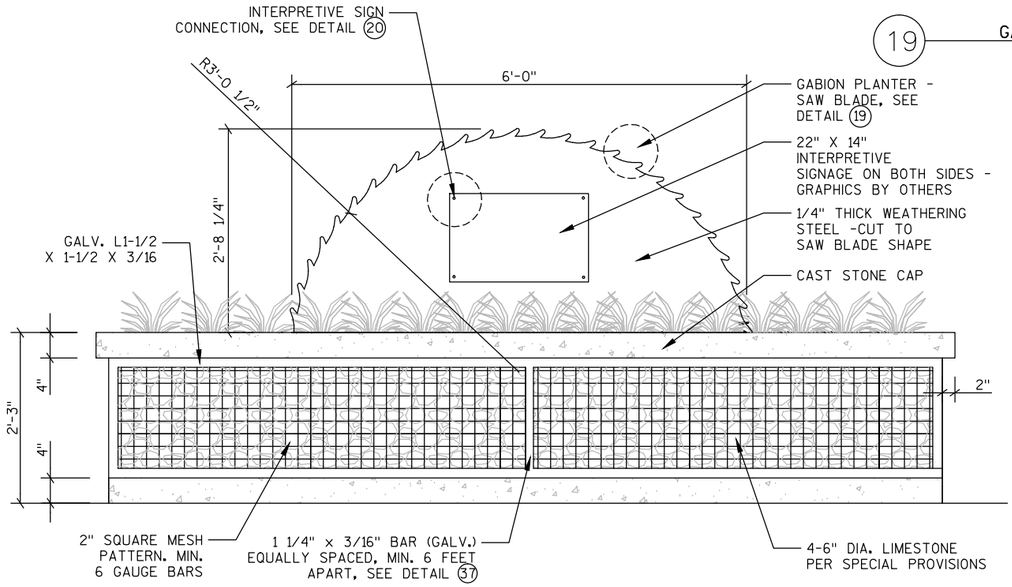
19 GABION PLANTER - SAW BLADE

NTS



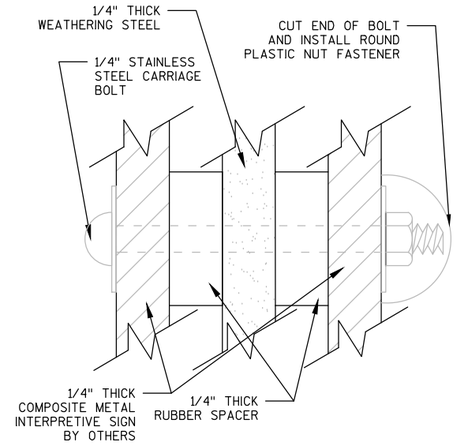
17 GABION PLANTER - SAW BLADE - SECTION "A-A"

1/4"=1'-0"



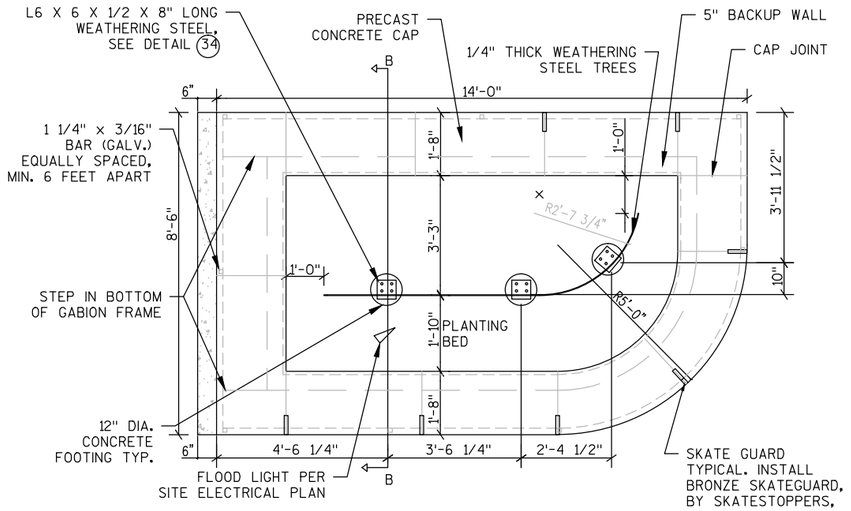
18 GABION PLANTER - SAW BLADE - ELEVATION

1/2"=1'-0"



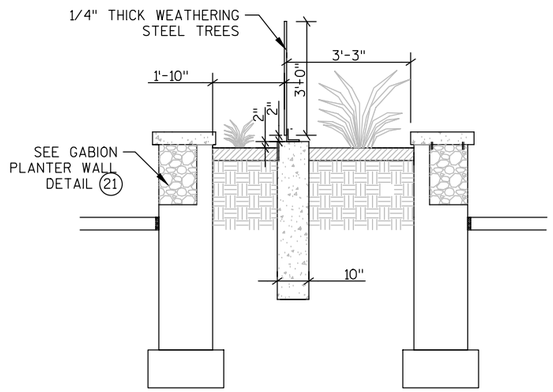
20 INTERPRETIVE SIGN CONNECTION - SECTION

NTS



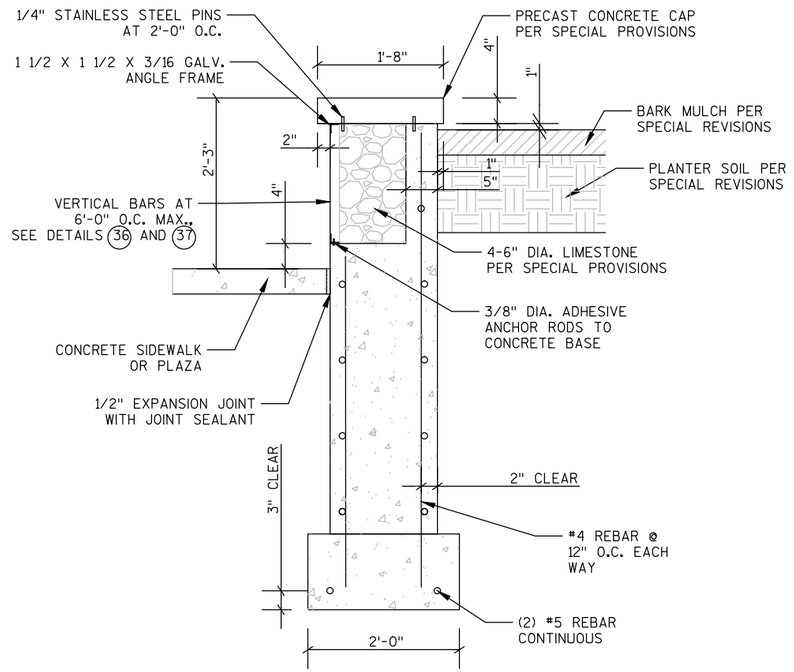
21 GABION PLANTER TREES - PLAN

1/4"=1'-0"



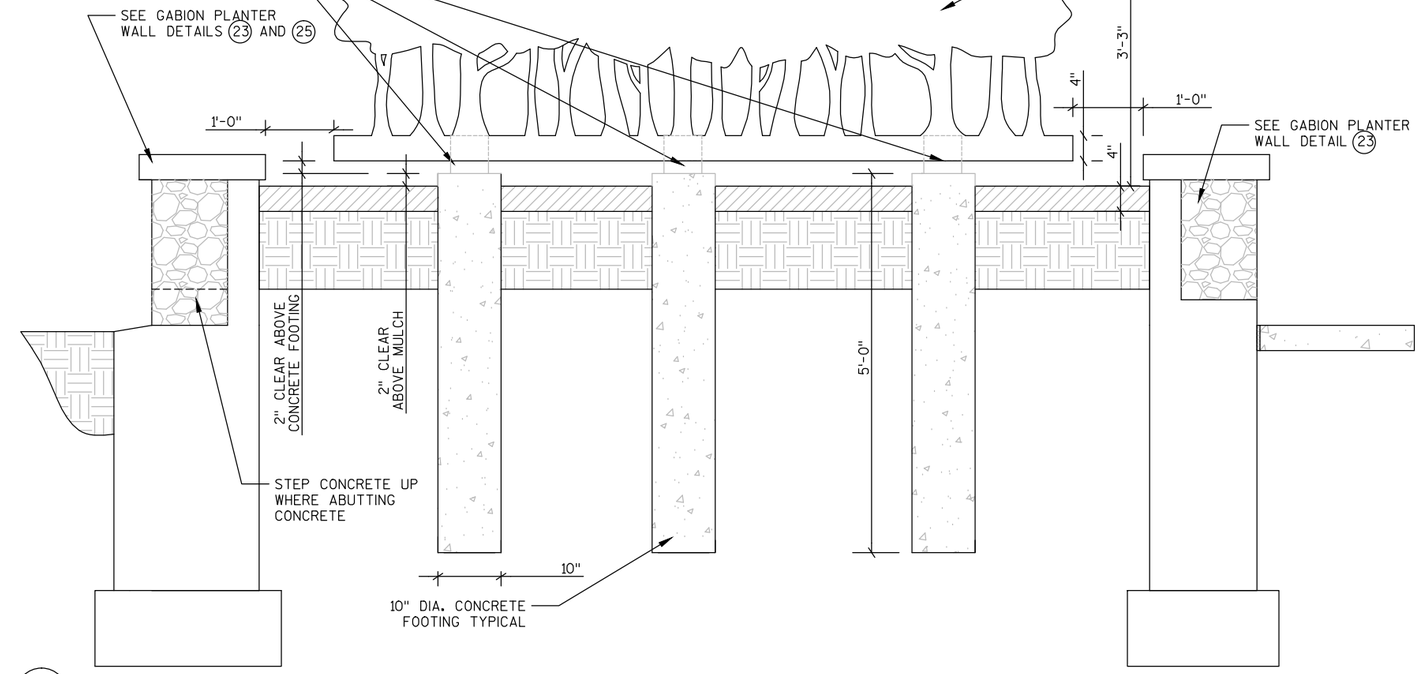
22 GABION PLANTER - TREES - SECTION "B-B"

1/4"=1'-0"



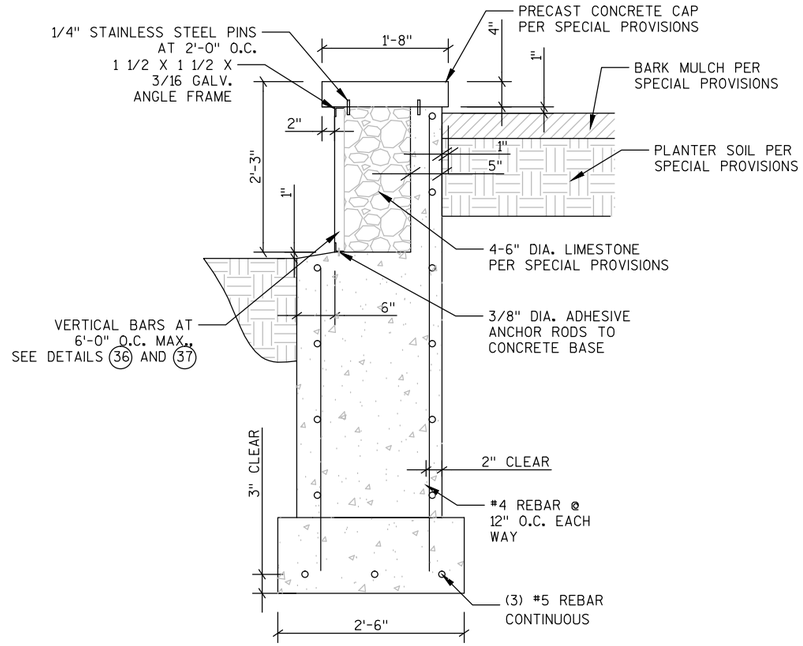
23 GABION PLANTER WALL DETAIL - ABUTTING CONCRETE

1/2"=1'-0"



24 GABION PLANTER TREES - ELEVATION

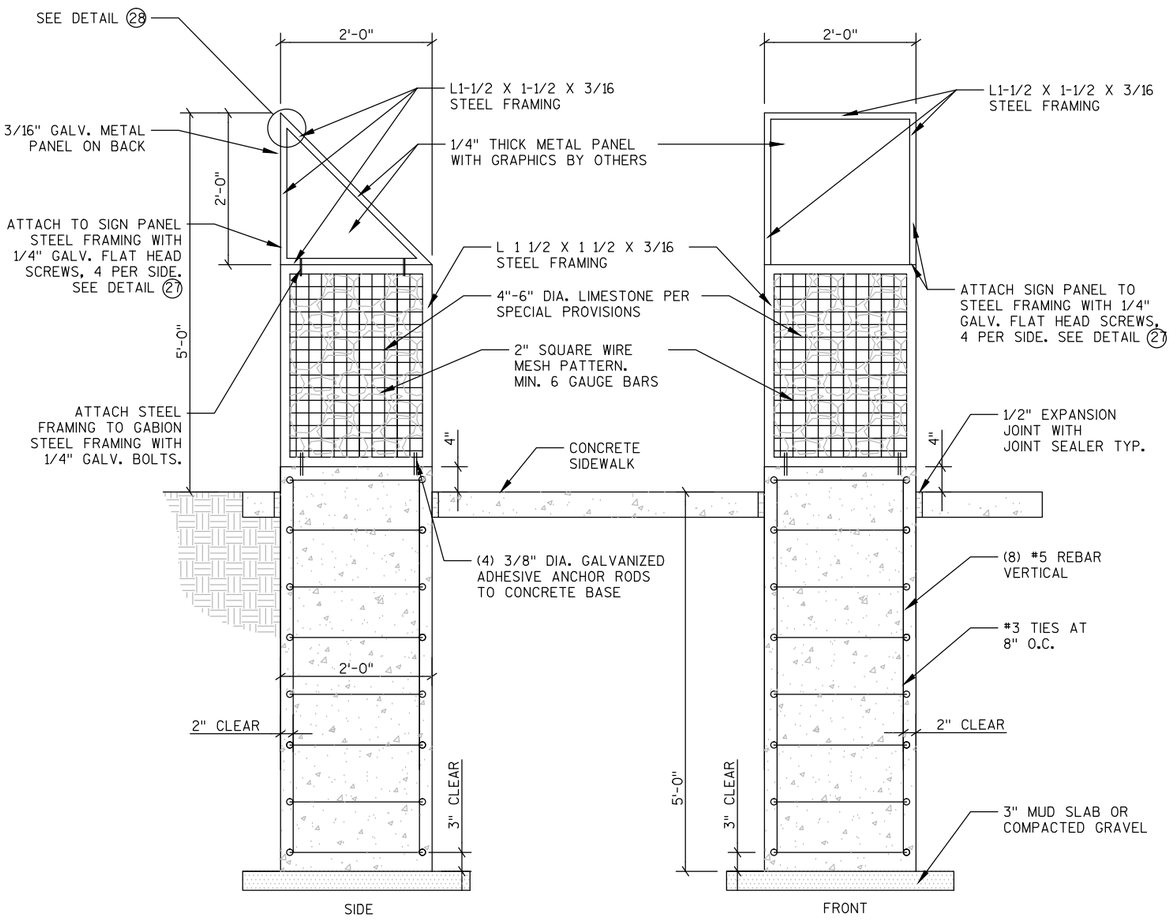
1/2"=1'-0"



25 GABION PLANTER WALL DETAIL - ABUTTING TURF

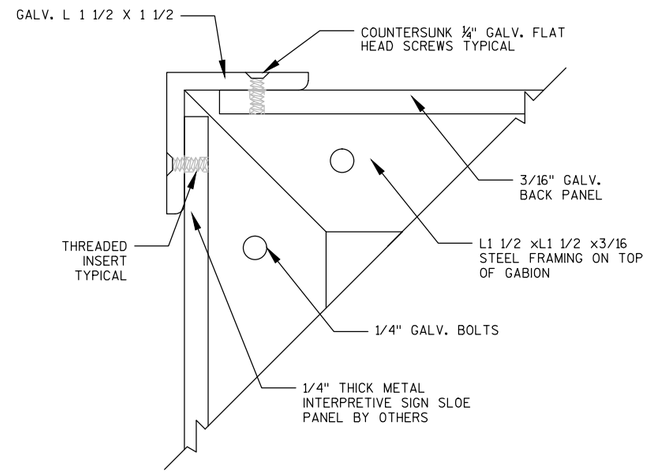
1/2"=1'-0"

PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	LANDSCAPE DETAILS	SHEET 55	E



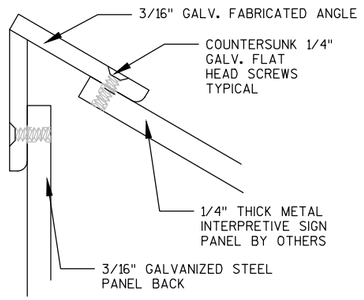
26 GABION COLUMN - INTERPRETIVE SIGN - ELEVATIONS

1/2"=1'-0"



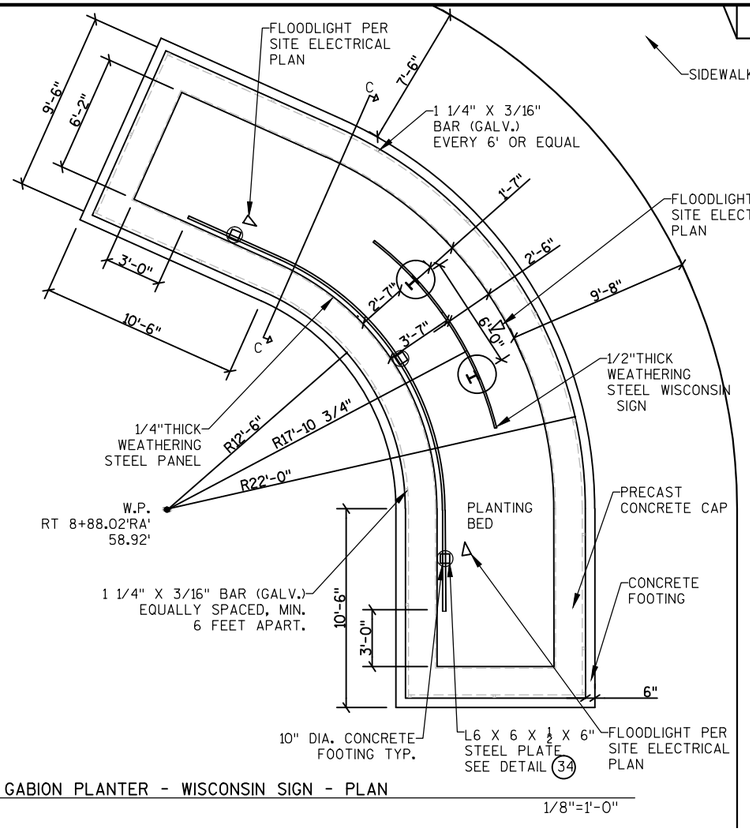
27 GABION COLUMN - INTERPRETIVE SIGN - PLAN

NTS



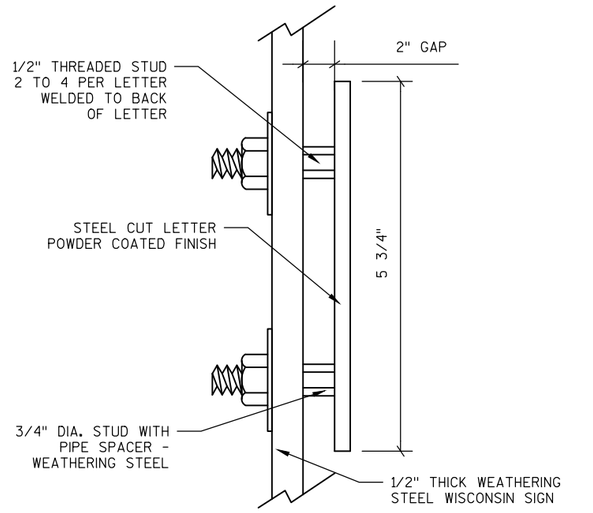
28 GABION COLUMN - INTERPRETIVE SIGN - DETAIL

NTS



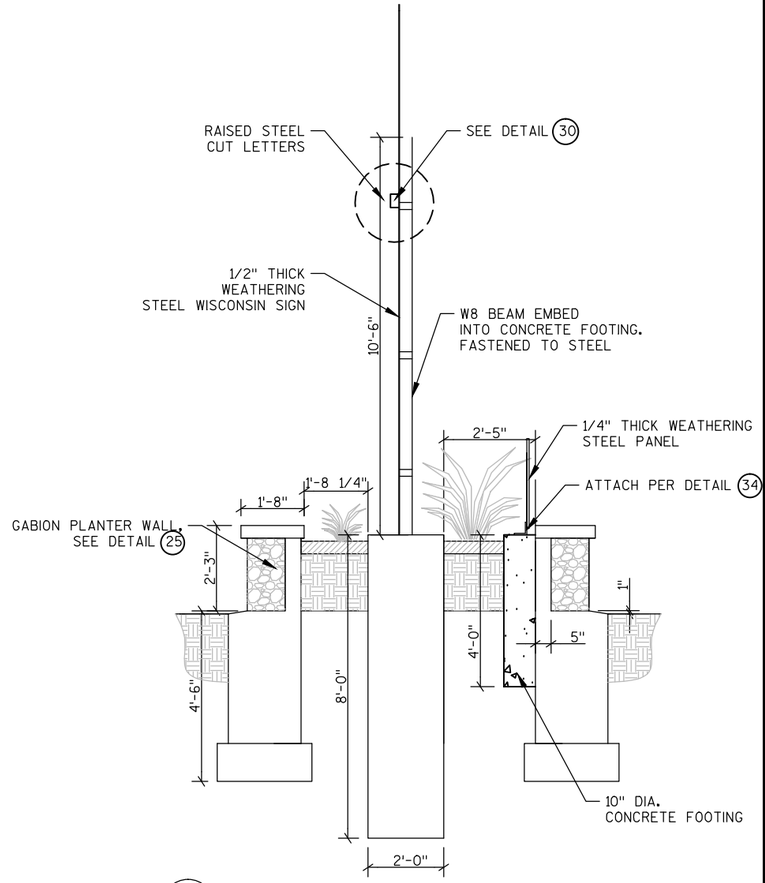
29 GABION PLANTER - WISCONSIN SIGN - PLAN

1/8"=1'-0"



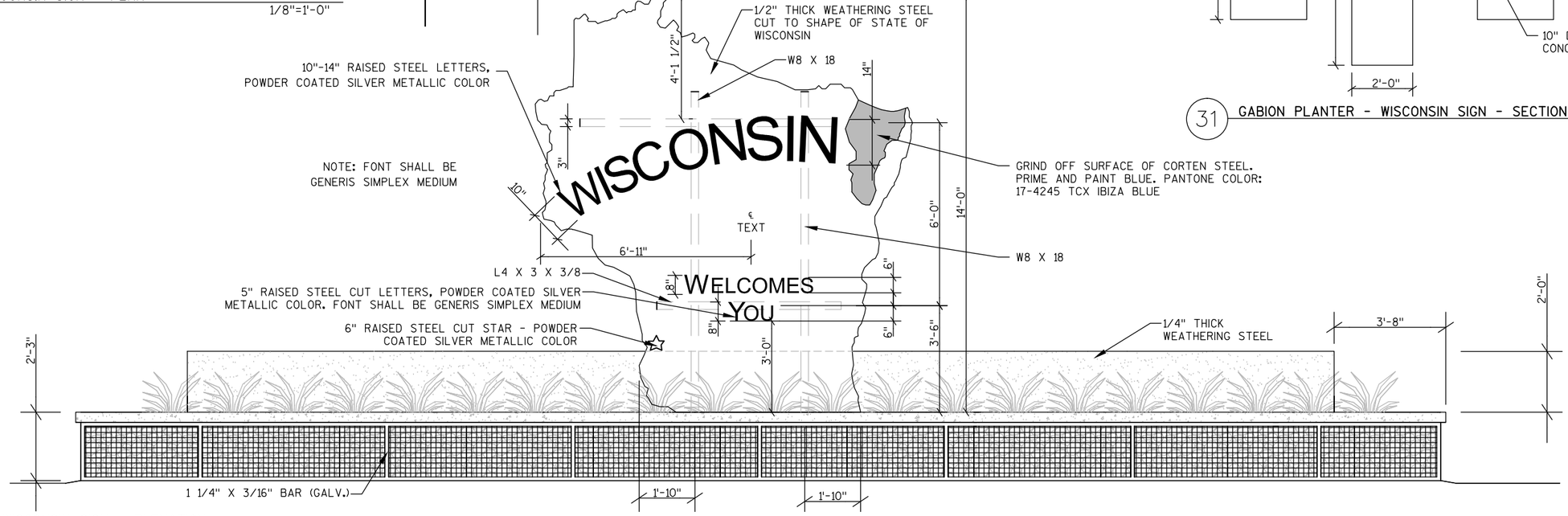
30 LETTER INSTALLATION SECTION

NTS



31 GABION PLANTER - WISCONSIN SIGN - SECTION C-C

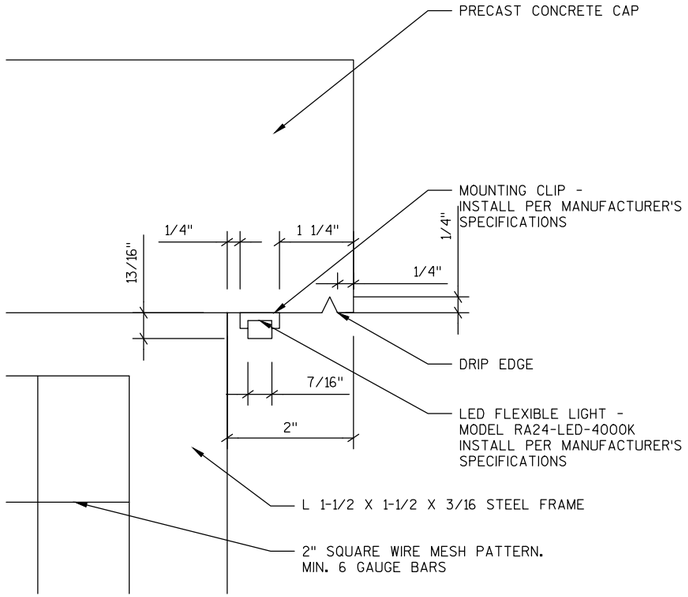
1/4"=1'-0"



32 GABION PLANTER - WISCONSIN SIGN - ELEVATION

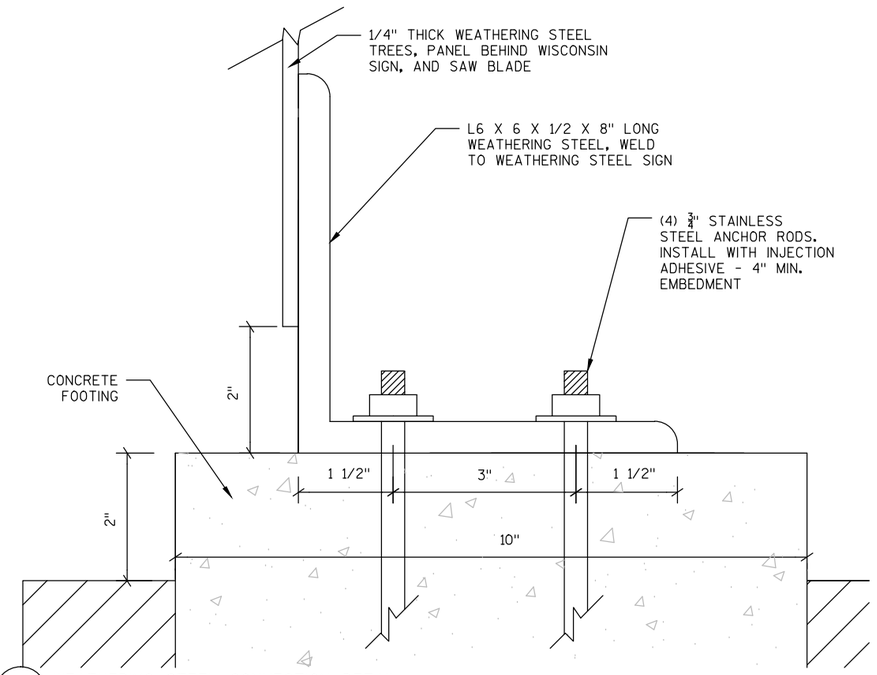
1/8"=1'-0"

PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	LANDSCAPE DETAILS	SHEET 57	E



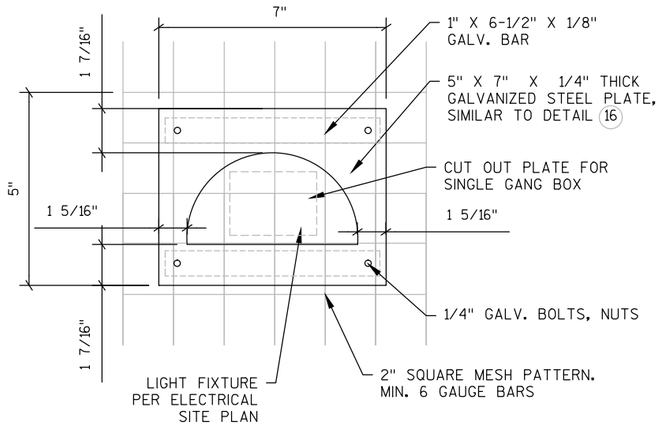
33 PRECAST CONCRETE CAP DETAIL

NTS



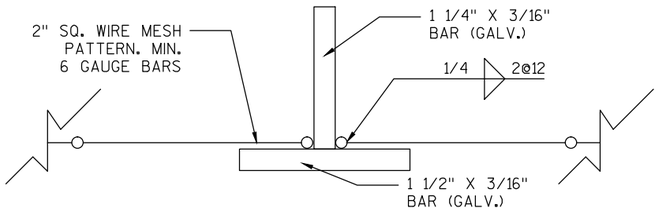
34 WEATHERING STEEL CONNECTION DETAIL

NTS



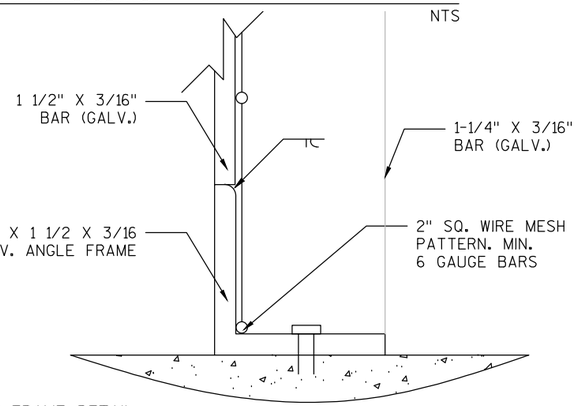
35 LIGHT FIXTURE DETAIL

NTS



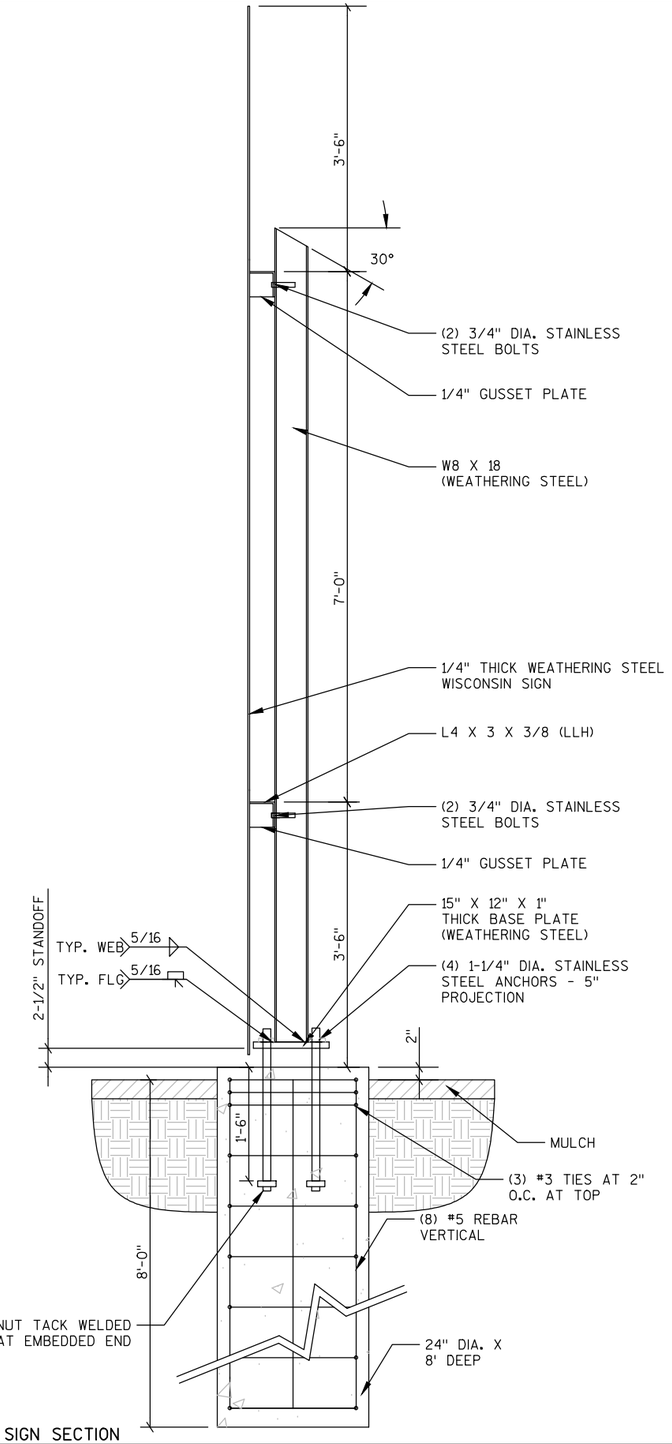
36 GABION FRAME DETAIL

NTS



37 GABION FRAME DETAIL

NTS



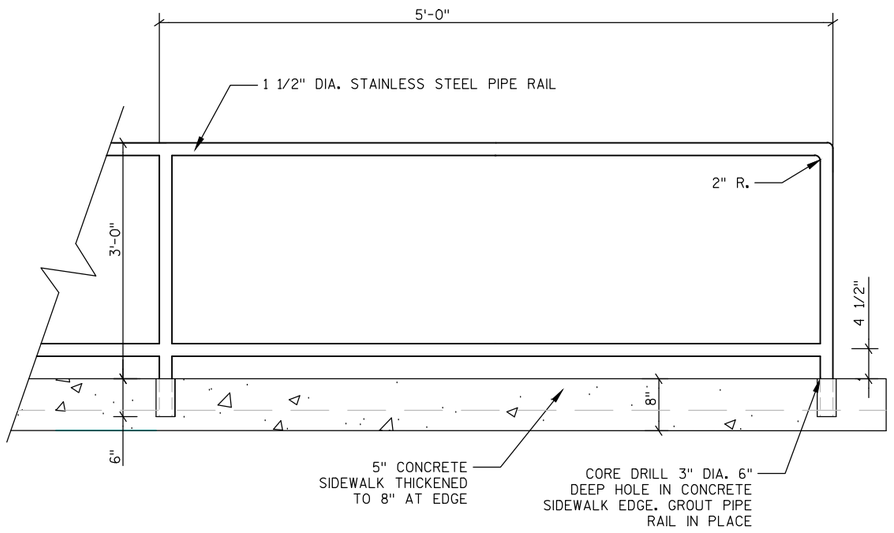
38 WISCONSIN SIGN SECTION

1/2"=1'-0"

PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	LANDSCAPE DETAILS	SHEET 58	E

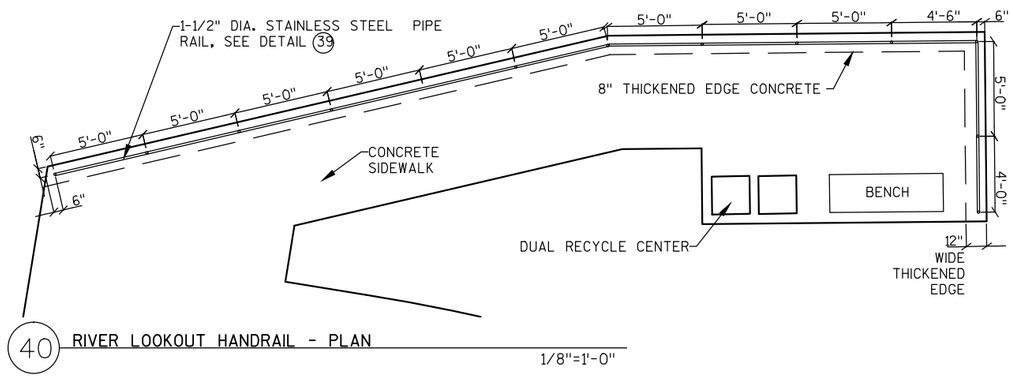
FILE NAME : P:\UZ\W\WITCO\131411\5-FINAL-DSGN\51-CONST-DWGS-CAD\40-TRANSHWY\PLN SHTS\020162_LD.DWG
LAYOUT NAME - LANDSCAPE DETAILS
PLOT DATE : 12/17/2015 11:28 PM PLOT BY : NATE MCLAUGHLIN PLOT NAME : PLOT SCALE : VARIES
WISDOT/CADDS SHEET 42

2



39 HAND RAIL DETAIL

1/2"=1'-0"



40 RIVER LOOKOUT HANDRAIL - PLAN

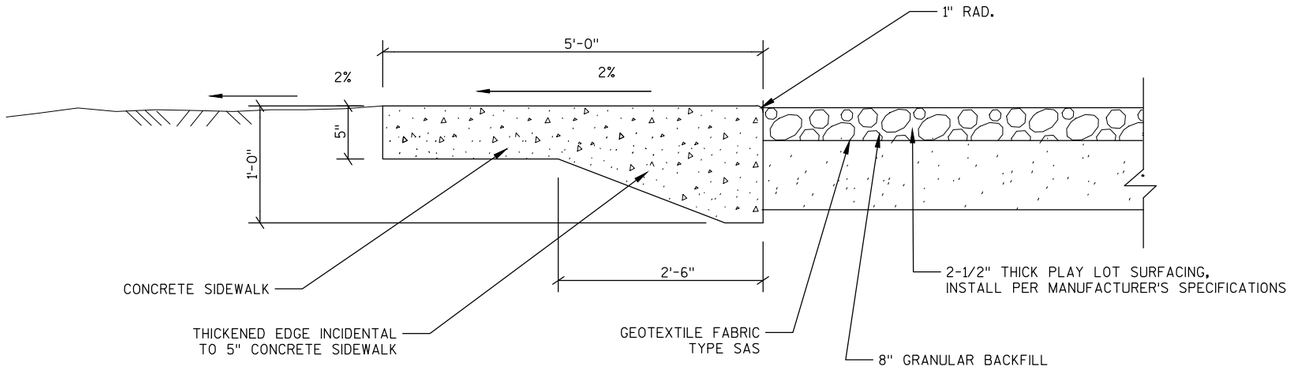
1/8"=1'-0"

PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	LANDSCAPE DETAILS	SHEET	E

FILE NAME : P:\UZ\W\WITCO\131411\5-FINAL-DSGN\51-CONST-DWGS-CAD\40-TRANSHWY\PLN SHTS\020159_LD.DWG
LAYOUT NAME - LANDSCAPE DETAILS

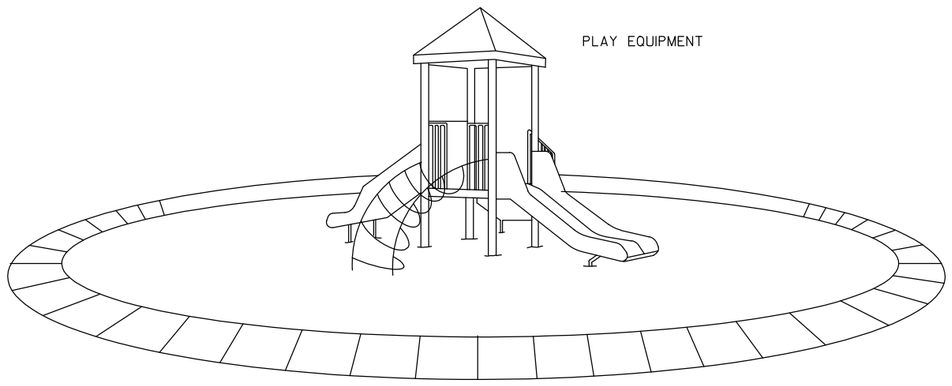
PLOT DATE : 12/17/2015 11:29 PM PLOT BY : NATE MCLAUGHLIN PLOT NAME : PLOT SCALE : VARIES

2

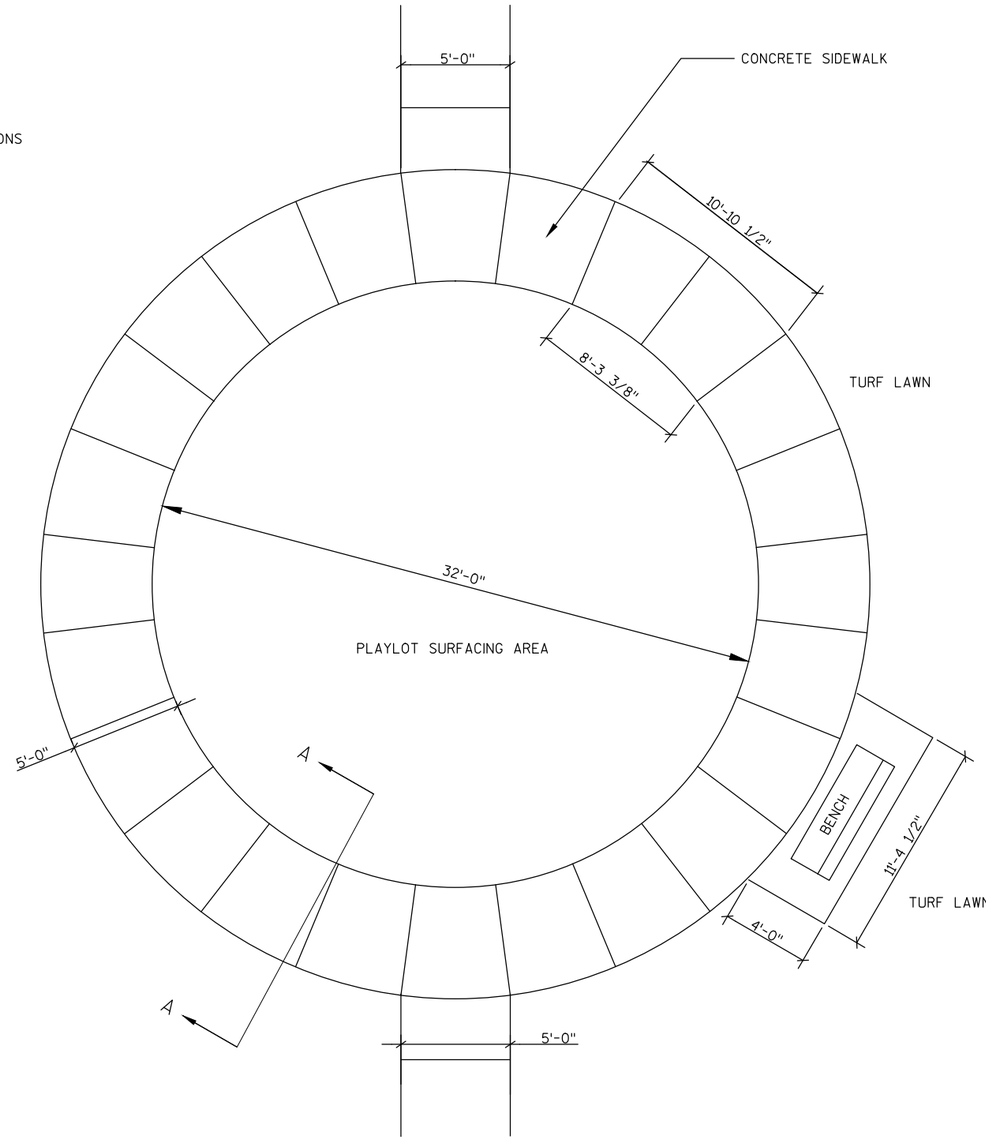


41 SIDEWALK SECTION A-A

1/2"=1'-0"



FRONTAL VIEW



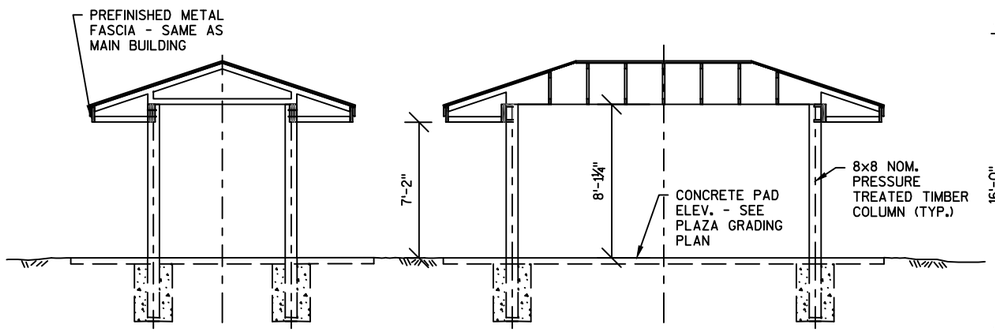
42 PLAY AREA PLAN VIEW

1/8"=1'-0"

PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	LANDSCAPE DETAILS - TOT LOT	SHEET	E

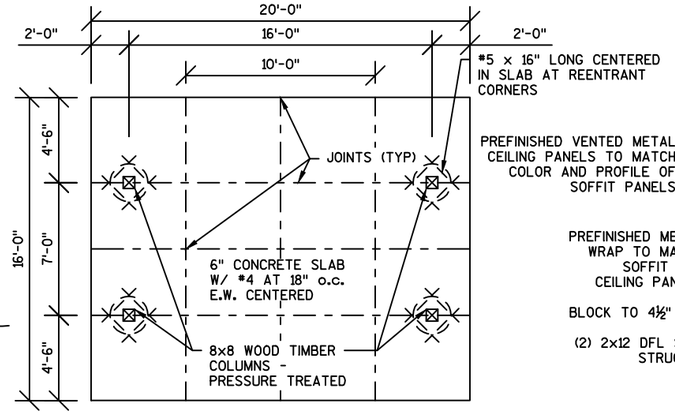
FILE NAME : P:\UZ\W\WITCO\131411\5-FINAL-DSGN\51-CONST-DWGS-CAD\40-TRANSHWY\PLN SHTS\020156-LD.DWG
LAYOUT NAME - LANDSCAPE DETAILS - TOT LOT

PLOT DATE : 12/17/2015 11:29 PM PLOT BY : NATE MCLAUGHLIN PLOT NAME : PLOT SCALE : VARIES

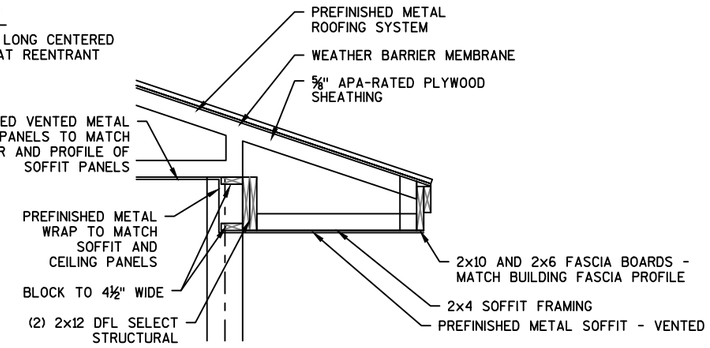


SECTION 1

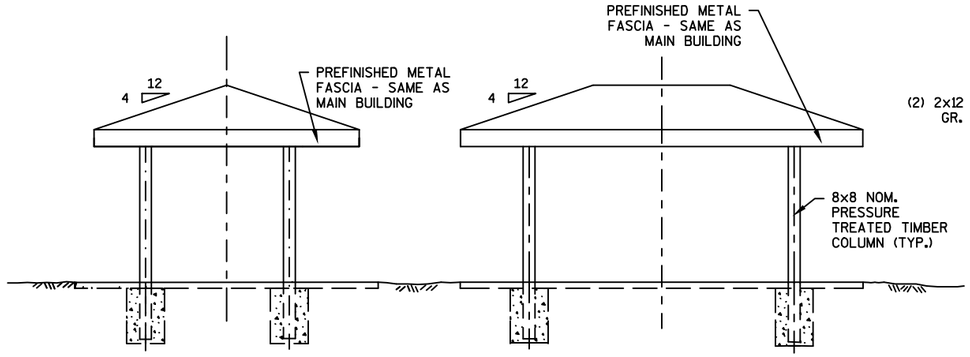
SECTION 2



FOUNDATION PLAN

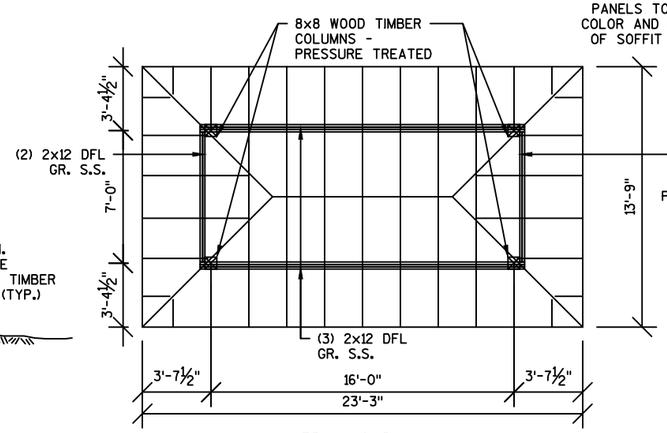


END EAVE DETAIL

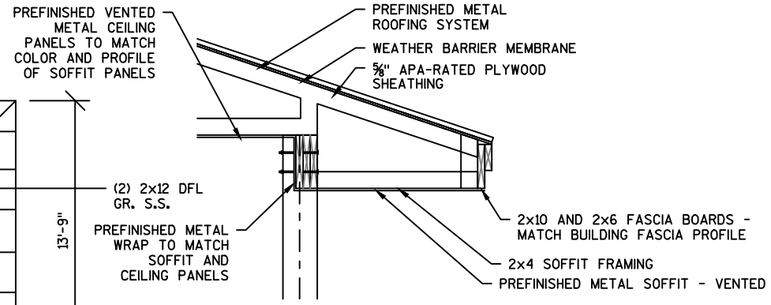


END ELEVATION

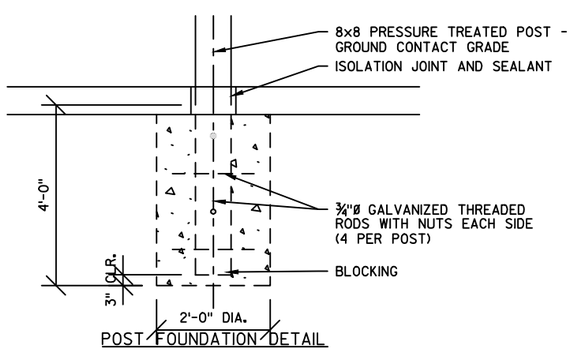
SIDE ELEVATION



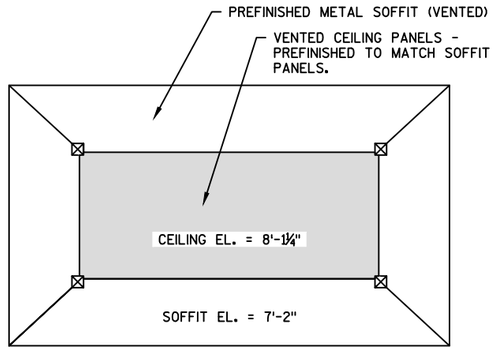
FRAMING PLAN



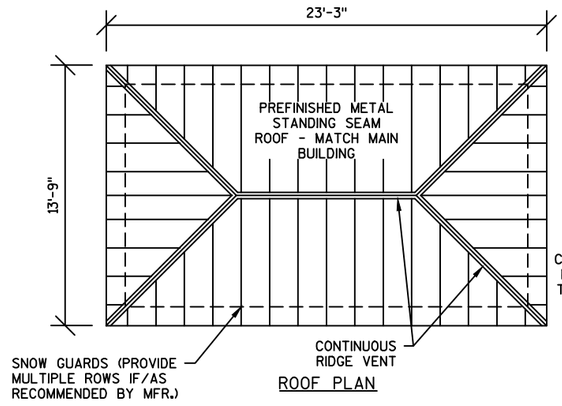
SIDE EAVE DETAIL



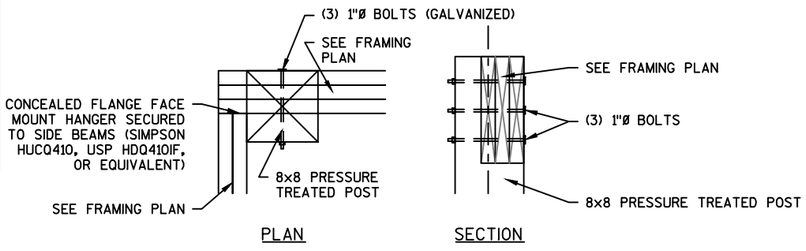
POST FOUNDATION DETAIL



REFLECTED CEILING PLAN



ROOF PLAN



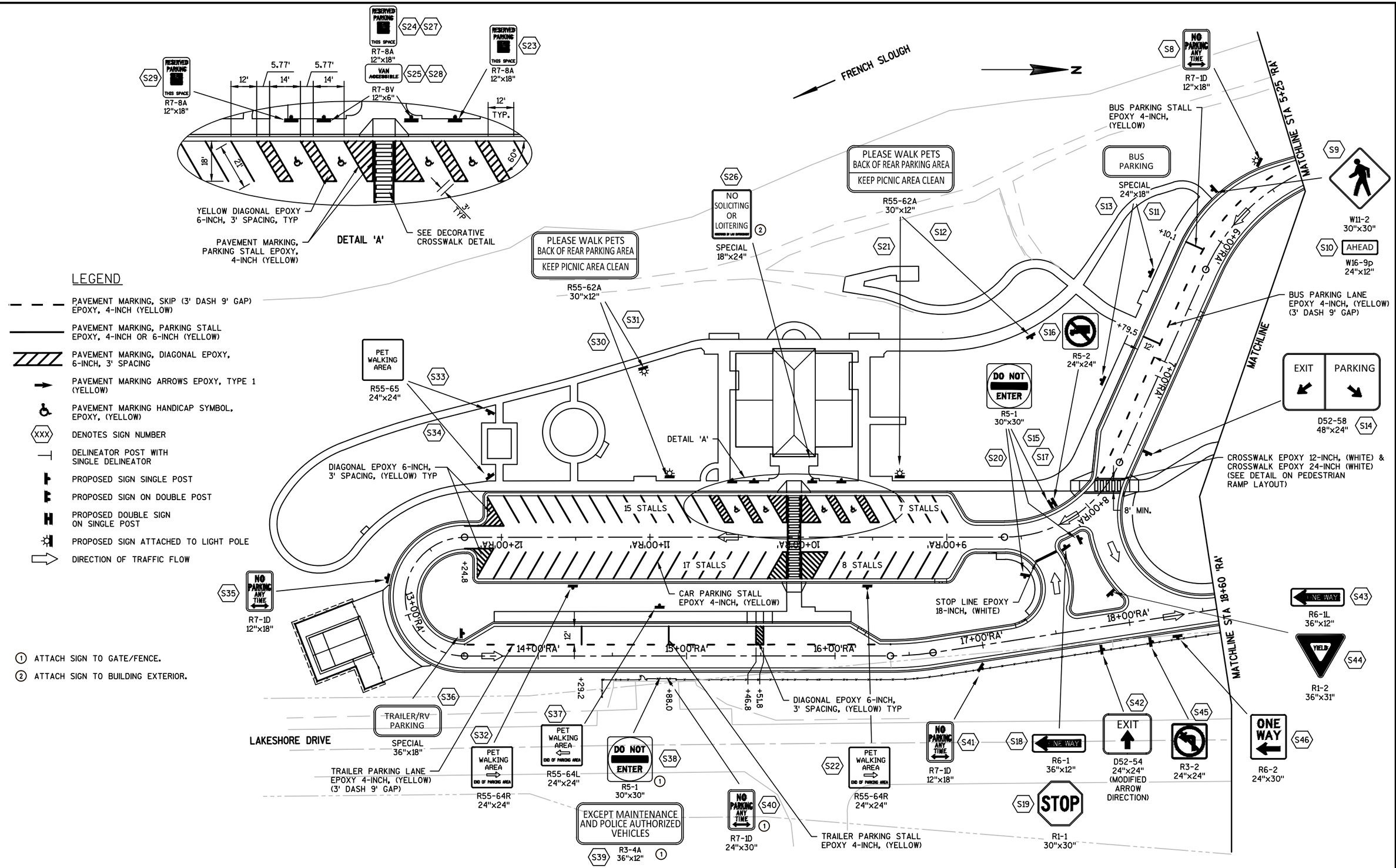
PLAN

SECTION

PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	PICNIC SHELTER	SHEET	E

FILE NAME : P:\UZ\W\WITCO\131411\5-FINAL-DSGN\51-CONST-DWGS-CAD\40-TRANSHWY\PLN SHTS\020160_LD.DWG
LAYOUT NAME - LANDSCAPE DETAILS - PICNIC SHELTER
PLOT DATE : 12/17/2015 11:29 PM PLOT BY : NATE MCLAUGHLIN PLOT NAME : PLOT SCALE : ******
WISDOT/CADDS SHEET 42

2



PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	PAVEMENT MARKING AND PERMANENT SIGNING	SHEET	E

FILE NAME : P:\UZ\W\WITCO\131411\5-FINAL-DSGN\51-CONST-DWGS-CAD\40-TRANSHWY\PLN SHTS\020139-PM.DWG
LAYOUT NAME - PAVEMENT MARKING AND PERMANENT SIGNING

PLOT DATE : 12/17/2015 11:30 PM PLOT BY : NATE MCLAUGHLIN PLOT NAME : PLOT SCALE : 1 IN:60 FT

LEGEND

- PAVEMENT MARKING, SKIP (3' DASH 9' GAP) EPOXY, 4-INCH (YELLOW)
- PAVEMENT MARKING, PARKING STALL EPOXY, 4-INCH OR 6-INCH (YELLOW)
- PAVEMENT MARKING, DIAGONAL EPOXY, 6-INCH, 3' SPACING
- PAVEMENT MARKING ARROWS EPOXY, TYPE 1 (YELLOW)
- PAVEMENT MARKING HANDICAP SYMBOL, EPOXY, (YELLOW)
- XXX DENOTES SIGN NUMBER
- DELINEATOR POST WITH SINGLE DELINEATOR
- PROPOSED SIGN SINGLE POST
- PROPOSED SIGN ON DOUBLE POST
- PROPOSED DOUBLE SIGN ON SINGLE POST
- PROPOSED SIGN ATTACHED TO LIGHT POLE
- DIRECTION OF TRAFFIC FLOW
- (1) PAVEMENT MARKING, CURB EPOXY (YELLOW)

N

FRENCH SLOUGH

MATCHLINE STA 1+00 'RA'

ISLAND NOSE EPOXY 8-INCH, (WHITE)

MATCHLINE STA 5+25 'RA'

100' SPACING, TYP

5+00'RA'

4+00'RA'

3+00'RA'

2+00'RA'

+51.9

+71.3

TRUCKS

CARS TRAILERS BUSES RV's

R8-74(MOD) 54"x42" S5

NO OVERNIGHT CAMPING

R55-51 18"x18" S6

NO PARKING ANY TIME R7-1D 12"x18" S61

S62

104+00'TP'

103+00'TP'

102+00'TP'

101+00'TP'

S7

S60

TRUCK PARKING STALL EPOXY 4-INCH DOUBLE (YELLOW)

17.3'

57.7'

TRUCK PARKING STALL EPOXY 4-INCH DOUBLE (YELLOW)

S57 S58

DO NOT ENTER R5-1 30"x30"

EB I-90

S59

NO PARKING ANY TIME R7-1D 12"x18" S54

MATCHLINE

TRUCK PARKING STALL EPOXY 6-INCH (YELLOW) TYP

18' MIN

95.8' TYP

15'

18' MIN

PROTECT IN-PLACE SIGN

NO PARKING ANY TIME R7-1D 12"x18" S63 S65

ONE WAY R6-1R 54"x18" S55

LANE LINE EPOXY 4-INCH, (YELLOW) (3' DASH 9' GAP)

YIELD R1-2 36"x31" S50 S51

DO NOT ENTER R5-1 30"x30" S53

72.7'

106+00'TP'

107+00'TP'

108+00'TP'

S52

22+00'RA'

21+00'RA'

+46.1

+89.1

100' SPACING, TYP

PLEASE WALK PETS BACK OF REAR PARKING AREA KEEP PICNIC AREA CLEAN R55-62A 30"x12" S64

MATCHLINE STA 18+60 'RA'

19+00'RA'

20+00'RA'

23+00'RA'

PROTECT IN-PLACE SIGN

S47

S48

WRONG WAY R5-1A 36"x24"

S49

NO PARKING ANY TIME R7-1D 12"x18"

S56

RAMP 25 M.P.H. W13-3 24"x30"

LAKESHORE DRIVE

24+00'RA'

END PROJECT 1070-00-71
STA 24+05.55 'RA'

N

I-90 EB

BEGIN PROJECT 1070-00-71
STA 0+15.58 'RA'

OVERHEAD SIGN

TRUCKS

CARS TRAILERS BUSES RV's

SPECIAL 60"x36" S1

SPECIAL 78"x66" S2

1+00

MATCHLINE STA 1+00 'RA'

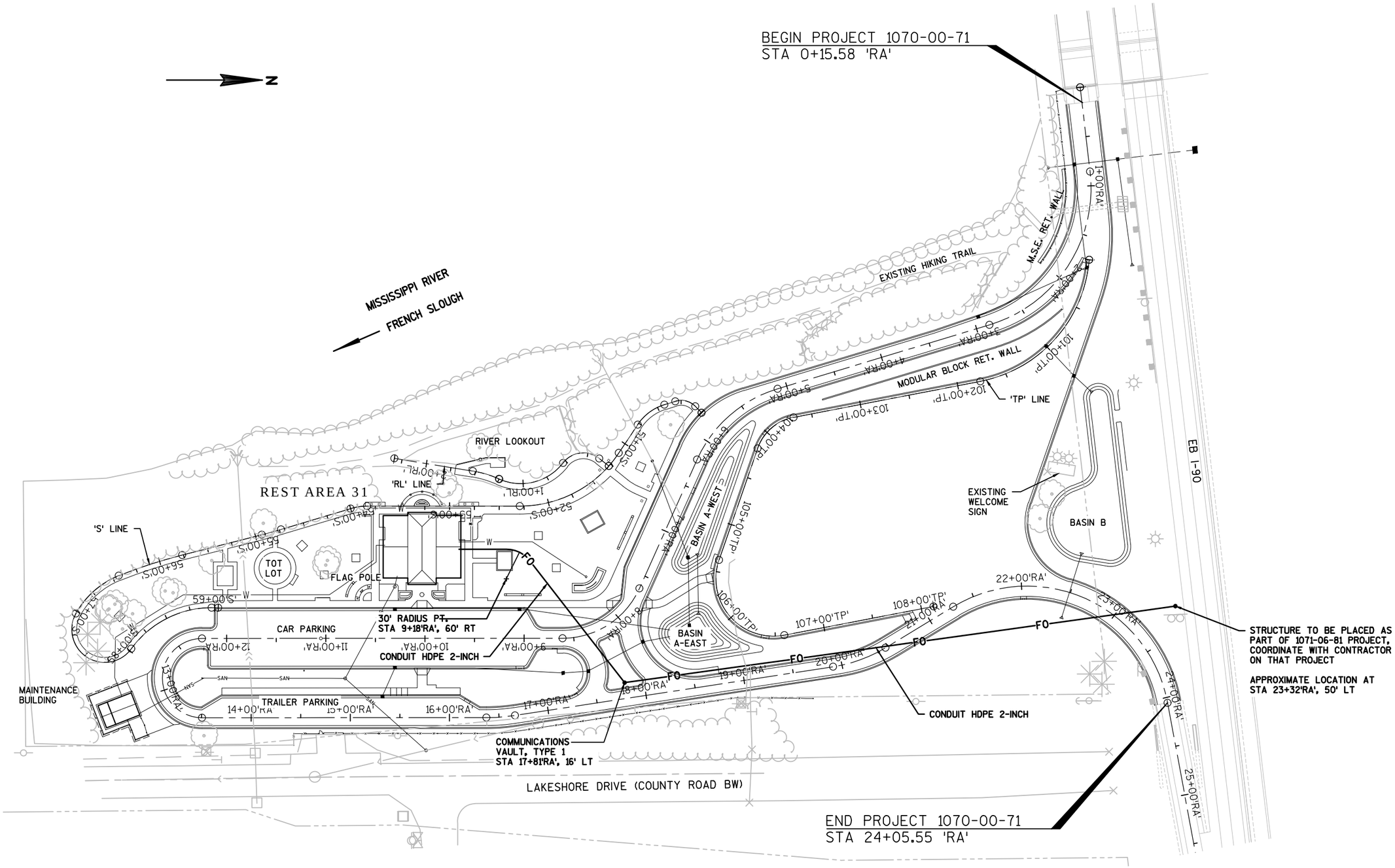
WRONG WAY R5-1A 36"x24" S4

WRONG WAY R5-1A 36"x24" S3

PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	PAVEMENT MARKING AND PERMANENT SIGNING	SHEET	E

FILE NAME : P:\UZ\W\WITCO\131411\5-FINAL-DSGN\51-CONST-DWGS-CAD\40-TRANSHWY\PLN SHTS\020140-PM.DWG
LAYOUT NAME - PAVEMENT MARKING AND PERMANENT SIGNING
PLOT DATE : 12/17/2015 11:31 PM PLOT BY : NATE MCLAUGHLIN PLOT NAME : PLOT SCALE : 1 IN:60 FT
WISDOT/CADDS SHEET 42

2



PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	COMMUNICATION CONDUIT	SHEET	E

FILE NAME : P:\UZ\W\WITCO\131411\5-FINAL-DSGN\51-CONST-DWGS-CAD\40-TRANSHWY\PLN SHTS\020165-CC.DWG
LAYOUT NAME - COMMUNICATION CONDUIT

PLOT DATE : 12/17/2015 11:32 PM PLOT BY : NATE MCLAUGHLIN PLOT NAME : PLOT SCALE : 1 IN:100 FT

SITE LIGHTING FIXTURE SCHEDULE

FIXTURE	MANUFACTURER	PART NUMBER	DESCRIPTION
LED-A	-	-	DOT STANDARD UTILITY LED A FIXTURE, 4000K LED, DISTRIBUTION TYPE II, 35' POLE. MOUNTED 1 OR 2 TO A POLE (SEE PLANS FOR HEAD QUANTITIES AND MOUNTING ARM LENGTHS).
LED-D	-	-	DOT STANDARD UTILITY LED D FIXTURE, 4000K LED, DISTRIBUTION TYPE III, 35' POLE, 15' MOUNTING ARM
LED-E	AMERICAN ELECTRIC LIGHTING DECO LIGHTING RAYON LIGHTING	245L-10LED53-MVOLT-4K-R2-RNA-BK-P7-SH EQUAL EQUAL	DECORATIVE LED PATHWAY LIGHT, 4000K LED, DISTRIBUTION TYPE II, RAIN PATTERN ACRYLIC OPTICS, WITH DOT PEDESTAL BASE-STANDARD
LED-F	HOLOPHANE GARDCO HUBBELL	PMLED-2-4K-07A-AS-44-1-K-BP-P7-DM-SH-PMLED UBV-BP EQUAL EQUAL	LED FLOODLIGHT WITH UPPER VISOR AND HTNM TENON MOUNT MANUFACTURER ACCESSORY, 4,971 LUMENS, 4000K LED, 52W UNV DIMMING DRIVER
LED-H	BEGA PHILIPS	2880LEDBRZ-K4 EQUAL EQUAL	SMALL LED WALL SCONCE, 198 LUMENS, 4000K LED, UNV DRIVER
LED-J	ROBERTS STEP LIGHTING FLEXARAY MODA LIGHT	RA24-LED-4000K EQUAL EQUAL	LED FLEXIBLE LOW VOLTAGE FIXTURE WITH MOUNTING CLIPS AND WET-LISTED POWER SUPPLY, 4000K LED. SEE PLANS FOR LENGTHS.
LED-K	HYDREL WINSCAPE HADCO KIM LIGHTING	4640-18LED-WHT30K-MVOLT-MFL-KM-BL EQUAL EQUAL	LED MEDIUM FLOOD FLOODLIGHT WITH GLARE SHIELD, PROVIDE TENON MOUNT ACCESSORY TO MOUNT TO JUNCTION BOX , 1000 LUMENS, 3000K LED, UNV DRIVER

PULL BOX SCHEDULE

NUMBER	STATION	OFFSET	SIZE
PB1	9+72.47'RA'	RT 51.184'	24"x48"
PB2	9+72.49'RA'	LT 34.316'	18"x36"
PB3	10+92.74'RA'	LT 34.296'	12"x36"
PB4	12+49.90'RA'	LT 32.931'	12"x36"
PB5	17+29.06'RA'	RT 13.500'	12"x36"
PB6	8+69.75'RA'	RT 42.949	24"x48"
PB7	7+73.87'RA'	RT 29.000'	24"x48"
PB8	105+65.25'TP'	RT 6.924'	24"x48"
PB9	103+82.67'TP'	RT 11.199'	18"x36"
PB10	2+15.79'RA'	RT 20.816'	12"x36"
PB11	52+57.72'S'	LT 13.584'	24"x36"
PB12	3+52.44'RA'	LT 36.731'	12"x36"
PB13	2+53.28'RA'	LT 108.913'	12"x36"

ELECTRICAL SITE NOTES

1. ALL WORK SHALL COMPLY WITH APPLICABLE NATIONAL, STATE, LOCAL CODES, FEDERAL AND STATE REGULATIONS, AND ALL REQUIREMENTS OF THE LOCAL AUTHORITIES HAVING JURISDICTION.
2. THE CONTRACTOR SHALL VISIT THE SITE TO DETERMINE THE FULL EXTENT OF WORK, AND PROJECT CONDITIONS, AND SHALL BE FAMILIAR WITH THE LOCAL CONDITIONS AND CODES RELATING TO THE WORK. FAILURE TO DO SO WILL NOT RELIEVE THE CONTRACTOR OF THE OBLIGATIONS OF THE CONTRACT.
3. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT, CIVIL ENGINEER AND ENGINEER IN WRITING OF ANY EQUIPMENT, MATERIALS, INSTALLATIONS, ETC., THAT ARE DEFICIENT OR IN VIOLATION OF LOCAL CODES AND REGULATIONS.
4. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL MATERIAL, LABOR, EQUIPMENT, DEVICES, FIXTURES, SERVICE REQUIREMENTS, ETC., NECESSARY FOR A COMPLETE AND FULLY OPERATIONAL ELECTRICAL SYSTEM/INSTALLATION.
5. THE CONTRACTOR SHALL PERFORM WORK IN ACCORDANCE WITH THESE DRAWINGS. WHERE MORE STRINGENT REQUIREMENTS ARE SET FORTH BY THE ARCHITECTURAL DRAWINGS, CIVIL DRAWINGS, OR LOCAL CODES AND REGULATIONS, THE GREATER REQUIREMENTS SHALL GOVERN. ANY DEVIATIONS FROM THESE DRAWINGS SHALL BE RECORDED AND PROVIDED IN WRITING TO THE ARCHITECT, CIVIL ENGINEER, AND ENGINEER.
6. THE ELECTRICAL DRAWINGS ARE DIAGRAMMATIC AND THE CONTRACTOR SHALL INSTALL EQUIPMENT TO MEET THE FIELD CONDITIONS WITH COORDINATION FROM APPROVED SHOP DRAWINGS.
7. THE CONTRACTOR SHALL COORDINATE ALL WORK WITH THE RESPECTIVE TRADES AND VERIFY LOCATIONS AND REQUIREMENTS FROM THE ARCHITECTURAL DRAWINGS, FIELD MEASUREMENTS AND SUPPLIER SHOP DRAWINGS.
8. THE CONTRACTOR SHALL CHECK ALL DRAWINGS AND SPECIFICATIONS OF OTHER TRADES AND INCLUDE IN THEIR BID ANY ADDITIONAL WORK REQUIRED BY THIS TRADE.
9. ALL CONDUITS SHOULD BE SUPPORTED IN COMPLIANCE WITH CODE REQUIREMENTS AND INSTALLED IN A MANNER AS TO AFFORD MINIMUM INTERFERENCE WITH OTHER TRADES.
10. CONDUCTOR SIZES INDICATED ARE MINIMUM SIZES BASED ON 75°C COPPER CONDUCTOR. AMPACITIES OF CONDUCTORS DO NOT TAKE VOLTAGE DROP INTO CONSIDERATION. CONTRACTOR SHALL SIZE CONDUCTORS FOR FEEDERS AND BRANCH CIRCUITS TO PREVENT A VOLTAGE DROP EXCEEDING 3.5 PERCENT AT THE FARTHEST OUTLET OF POWER, HEATING, AND LIGHTING LOADS, OR COMBINATION OF SUCH LOADS, AND WHERE THE MAXIMUM TOTAL VOLTAGE DROP ON BOTH FEEDERS AND BRANCH CIRCUITS TO THE FARTHEST OUTLET DOES NOT EXCEED 5 PERCENT, TO PROVIDE REASONABLE EFFICIENCY OF OPERATION.

LEGEND

X-XX — LIGHTING UNIT NUMBER
XXXX+XX.XX'XX' X' XX — LOCATION
(X)XXX-XXX-XX-XX-XX-X-XX
- CIRCUIT
- PANEL
- MAST ARM LENGTH IN FEET
- POLE SHAFT LENGTH IN FEET
- FIXTURE VERTICAL TILT ANGLE
- LAMP WATTAGE
- FIXTURE IES DISTRIBUTION TYPE
- FIXTURE COUNT IF APPLICABLE

XX — CIRCUIT
(X) X-INCH CONDUIT
- CONDUIT QUANTITY
- CONDUIT SIZE

- WALL MOUNTED FIXTURE
- FLOODLIGHT FIXTURE
- PATHWAY FIXTURE
- SINGLE HEAD POLEMOUNT LUMINAIRE
- TWO HEAD POLEMOUNT LUMINAIRE
- PULLBOX
- MOTOR

SHEET NOTES

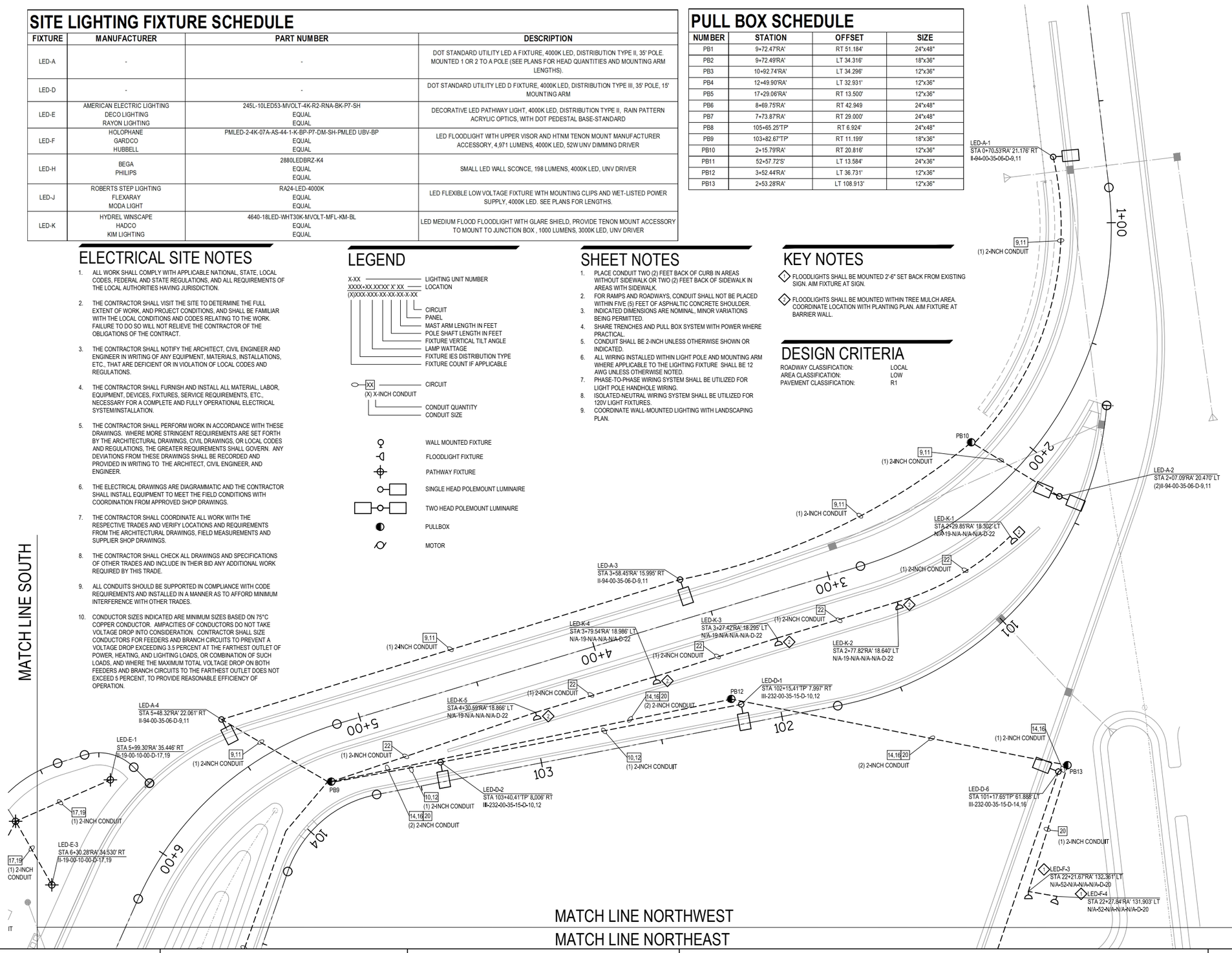
1. PLACE CONDUIT TWO (2) FEET BACK OF CURB IN AREAS WITHOUT SIDEWALK OR TWO (2) FEET BACK OF SIDEWALK IN AREAS WITH SIDEWALK.
2. FOR RAMPS AND ROADWAYS, CONDUIT SHALL NOT BE PLACED WITHIN FIVE (5) FEET OF ASPHALTIC CONCRETE SHOULDER.
3. INDICATED DIMENSIONS ARE NOMINAL, MINOR VARIATIONS BEING PERMITTED.
4. SHARE TRENCHES AND PULL BOX SYSTEM WITH POWER WHERE PRACTICAL.
5. CONDUIT SHALL BE 2-INCH UNLESS OTHERWISE SHOWN OR INDICATED.
6. ALL WIRING INSTALLED WITHIN LIGHT POLE AND MOUNTING ARM WHERE APPLICABLE TO THE LIGHTING FIXTURE SHALL BE 12 AWG UNLESS OTHERWISE NOTED.
7. PHASE-TO-PHASE WIRING SYSTEM SHALL BE UTILIZED FOR LIGHT POLE HANDHOLE WIRING.
8. ISOLATED-NEUTRAL WIRING SYSTEM SHALL BE UTILIZED FOR 120V LIGHT FIXTURES.
9. COORDINATE WALL-MOUNTED LIGHTING WITH LANDSCAPING PLAN.

KEY NOTES

1. FLOODLIGHTS SHALL BE MOUNTED 2'-6" SET BACK FROM EXISTING SIGN. AIM FIXTURE AT SIGN.
2. FLOODLIGHTS SHALL BE MOUNTED WITHIN TREE MULCH AREA. COORDINATE LOCATION WITH PLANTING PLAN. AIM FIXTURE AT BARRIER WALL.

DESIGN CRITERIA

ROADWAY CLASSIFICATION: LOCAL
AREA CLASSIFICATION: LOW
PAVEMENT CLASSIFICATION: R1



PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	ELECTRICAL SITE PLAN	SHEET 65 E

FILE NAME: PLOT DATE: 10/30/2015 PLOT BY: PLOT NAME: PLOT SCALE: 1" = 20'

WISDOT/CADDS SHEET 42

LEGEND

X-XX — LIGHTING UNIT NUMBER
XXXX+XX.XX'XX' X' XX — LOCATION
(X)XXX-XXX-XX-XX-XX-X-XX
- CIRCUIT
- PANEL
- MAST ARM LENGTH IN FEET
- POLE SHAFT LENGTH IN FEET
- FIXTURE VERTICAL TILT ANGLE
- LAMP WATTAGE
- FIXTURE IES DISTRIBUTION TYPE
- FIXTURE COUNT IF APPLICABLE

XX — CIRCUIT
(X) X-INCH CONDUIT
- CONDUIT QUANTITY
- CONDUIT SIZE

KEY NOTES

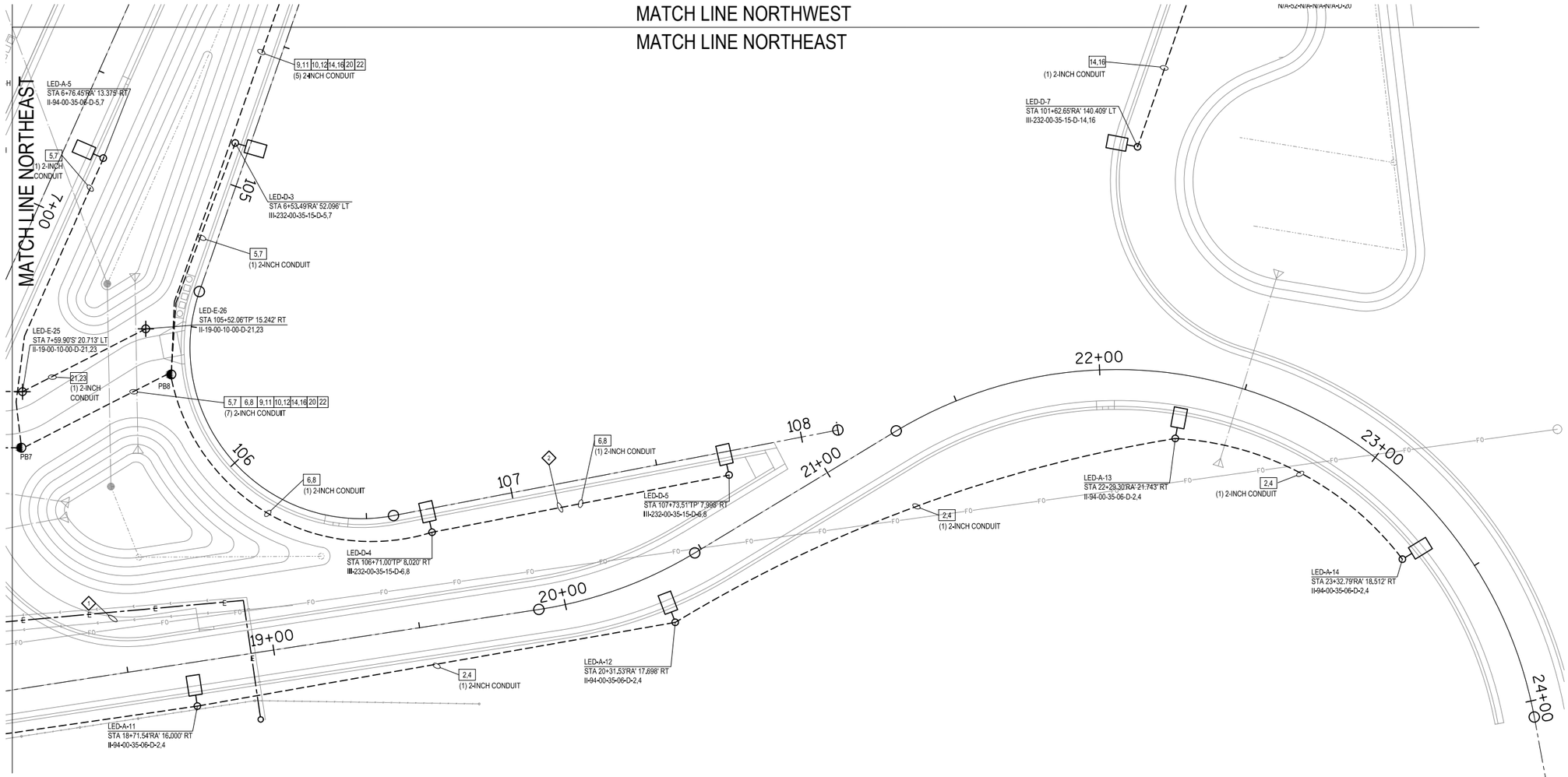
1. UNDERGROUND PRIMARY SERVICE BY EXCEL ENERGY.
2. COORDINATE CONDUIT ROUTING WITH LANDSCAPING.

SHEET NOTES

1. PLACE CONDUIT TWO (2) FEET BACK OF CURB IN AREAS WITHOUT SIDEWALK OR TWO (2) FEET BACK OF SIDEWALK IN AREAS WITH SIDEWALK.
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6. ALL WIRING INSTALLED WITHIN LIGHT POLE AND MOUNTING ARM WHERE APPLICABLE TO THE LIGHTING FIXTURE SHALL BE 12 AWG UNLESS OTHERWISE NOTED.
7. PHASE-TO-PHASE WIRING SYSTEM SHALL BE UTILIZED FOR LIGHT POLE HANDHOLE WIRING.

MATCH LINE NORTHWEST

MATCH LINE NORTHEAST



PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	ELECTRICAL SITE PLAN	SHEET 66 E

FILE NAME: PLOT DATE: 10/30/2015 PLOT BY: PLOT NAME: PLOT SCALE: 1" = 20'

WISDOT/CADDS SHEET 42

GABION LIGHTING FIXTURE SCHEDULE

GABION NO.	FIXTURE	NO. OF FIXTURES	PANEL	CIRCUIT
1	LED-H	3	D	26
2	LED-J FIXTURE	3*	D	26
	LED-J 96W POWER SUPPLY	2*		
	LED-K	2	D	26
3	LED-J FIXTURE	3*	D	26
	LED-J 96W POWER SUPPLY	2*		
	LED-K	2	D	26
4	LED-H	2	D	24
5	LED-J FIXTURE	2*	D	24
	LED-J 96W POWER SUPPLY	2*		
	LED-K	2	D	24
6	LED-H	3	D	18
7	LED-J FIXTURE	3*	D	18
	LED-J 288W POWER SUPPLY	1*		
	LED-K	2	D	18
8	LED-H	3	D	18
9	LED-H	1	D	18
10	LED-H	1	D	18
11	LED-H	1	D	18
12	LED-H	1	D	18

* VERIFY RUN LENGTHS WITH LANDSCAPING PLANS AND MANUFACTURER RECOMMENDED MAXIMUM RUN LENGTHS AND BENDING RADIUS.
VERIFY QUANTITY AND RATING OF POWER SUPPLIES WITH MANUFACTURER. POWER SUPPLIES HAVE BEEN SIZED FOR MAXIMUM RUN LENGTH OF ENTIRE PLANTER.

LEGEND

X-XX — LIGHTING UNIT NUMBER
XXXX+XX.XX'XX' X' XX — LOCATION
(X)XXX-XXX-XX-XX-XX-X-XX
- CIRCUIT
- PANEL
- MAST ARM LENGTH IN FEET
- POLE SHAFT LENGTH IN FEET
- FIXTURE VERTICAL TILT ANGLE
- LAMP WATTAGE
- FIXTURE IES DISTRIBUTION TYPE
- FIXTURE COUNT IF APPLICABLE

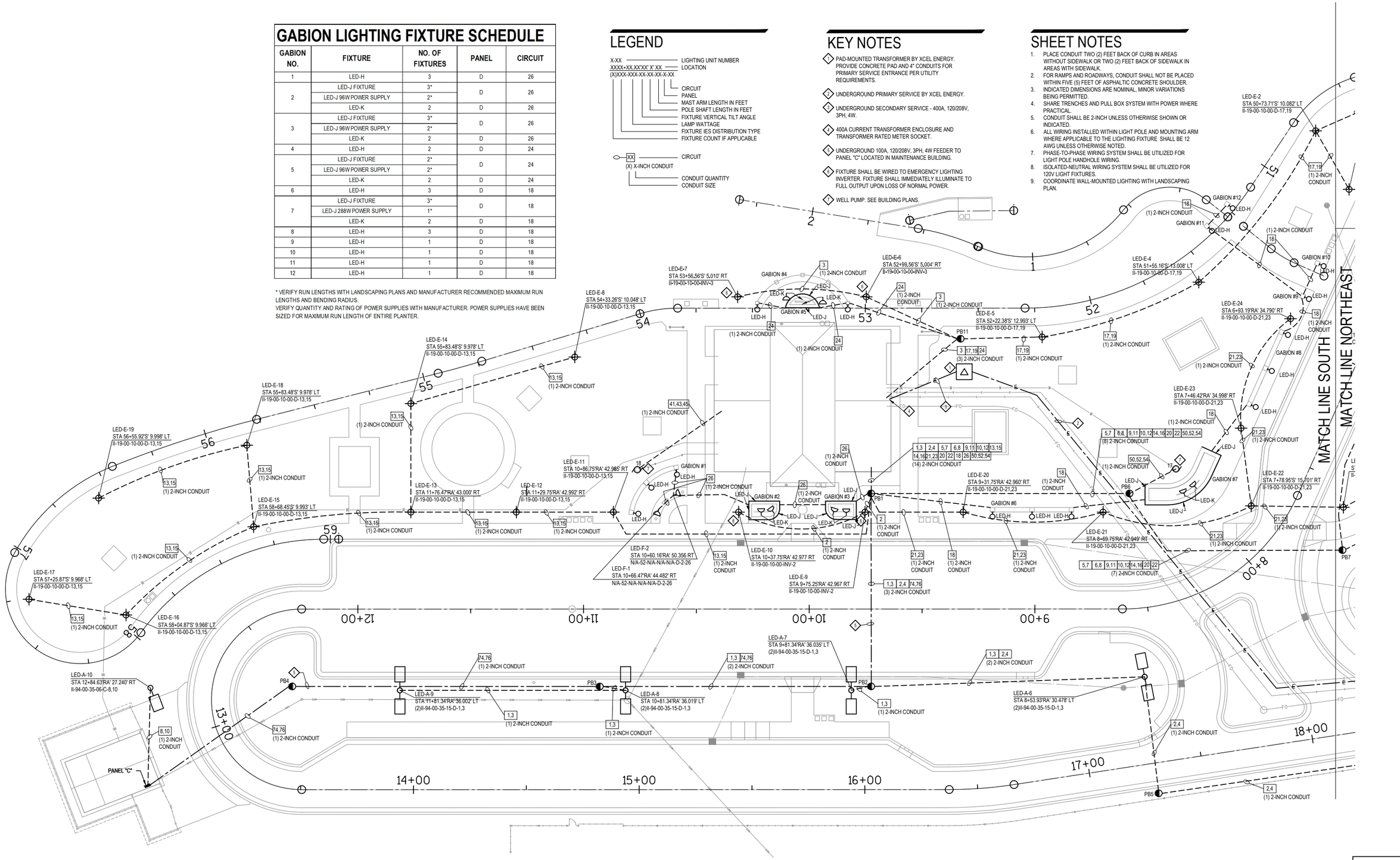
XX — CIRCUIT
(X) X-INCH CONDUIT
- CONDUIT QUANTITY
- CONDUIT SIZE

KEY NOTES

1. PAD-MOUNTED TRANSFORMER BY XCEL ENERGY. PROVIDE CONCRETE PAD AND 4" CONDUITS FOR PRIMARY SERVICE ENTRANCE PER UTILITY REQUIREMENTS.
2. UNDERGROUND PRIMARY SERVICE BY XCEL ENERGY.
3. UNDERGROUND SECONDARY SERVICE - 400A, 120/208V, 3PH, 4W.
4. 400A CURRENT TRANSFORMER ENCLOSURE AND TRANSFORMER RATED METER SOCKET.
5. UNDERGROUND 100A, 120/208V, 3PH, 4W FEEDER TO PANEL "C" LOCATED IN MAINTENANCE BUILDING.
6. FIXTURE SHALL BE WIRED TO EMERGENCY LIGHTING INVERTER. FIXTURE SHALL IMMEDIATELY ILLUMINATE TO FULL OUTPUT UPON LOSS OF NORMAL POWER.
7. WELL PUMP. SEE BUILDING PLANS.

SHEET NOTES

1. PLACE CONDUIT TWO (2) FEET BACK OF CURB IN AREAS WITHOUT SIDEWALK OR TWO (2) FEET BACK OF SIDEWALK IN AREAS WITH SIDEWALK.
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9. COORDINATE WALL-MOUNTED LIGHTING WITH LANDSCAPING PLAN.



PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	ELECTRICAL SITE PLAN	SHEET 67 E

FILE NAME: PLOT DATE: 10/30/2015 PLOT BY: PLOT NAME: PLOT SCALE: 1" = 20'

WISDOT/CADDS SHEET 42

2

WISCONSIN DEPARTMENT OF TRANSPORTATION

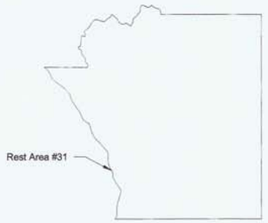
LA CROSSE REST AREA #31 - BUILDING

FRENCH ISLAND, LA CROSSE, WISCONSIN

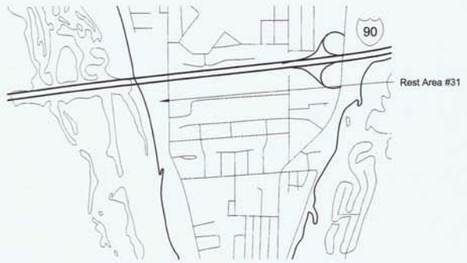
Project Location



STATE OF WISCONSIN



LA CROSSE COUNTY



LA CROSSE COUNTY
FRENCH ISLAND

LA CROSSE
REST AREA #31
IH 90 (EASTBOUND)
LA CROSSE COUNTY

STATE PROJECT NUMBER
1070-00-71

WISCONSIN
BRIAN M. BERGSTROM
A-11414-5
FARMINGTON MN
ARCHITECT
11-2-2015

WISCONSIN
BENJAMIN A. WOLF
35241-006
ROCHESTER, MN
PROFESSIONAL ENGINEER
11-2-15

WISCONSIN
LEV H. ZVENYACH
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WAUKESHA
PROFESSIONAL ENGINEER
11-2-15

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11-2-15

WISCONSIN
DOUGLAS M. SAUER
E-25945
MILWAUKEE, WI
PROFESSIONAL ENGINEER
11-2-2015

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G002	CODE PLAN

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A110	REFLECTED CEILING PLAN & ROOF PLAN
A200	BUILDING ELEVATIONS
A300	BUILDING SECTIONS
A310	WALL SECTIONS
A311	WALL SECTIONS
A400	ENLARGED FLOOR PLANS & INTERIOR ELEVATIONS
A401	INTERIOR ELEVATIONS & CASEWORK DETAILS
A500	DETAILS
A501	DETAILS
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A503	DETAILS
A600	SCHEDULES & TYPES

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P201	PLUMBING SUPPLY ISOMETRICS
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ELECTRICAL:

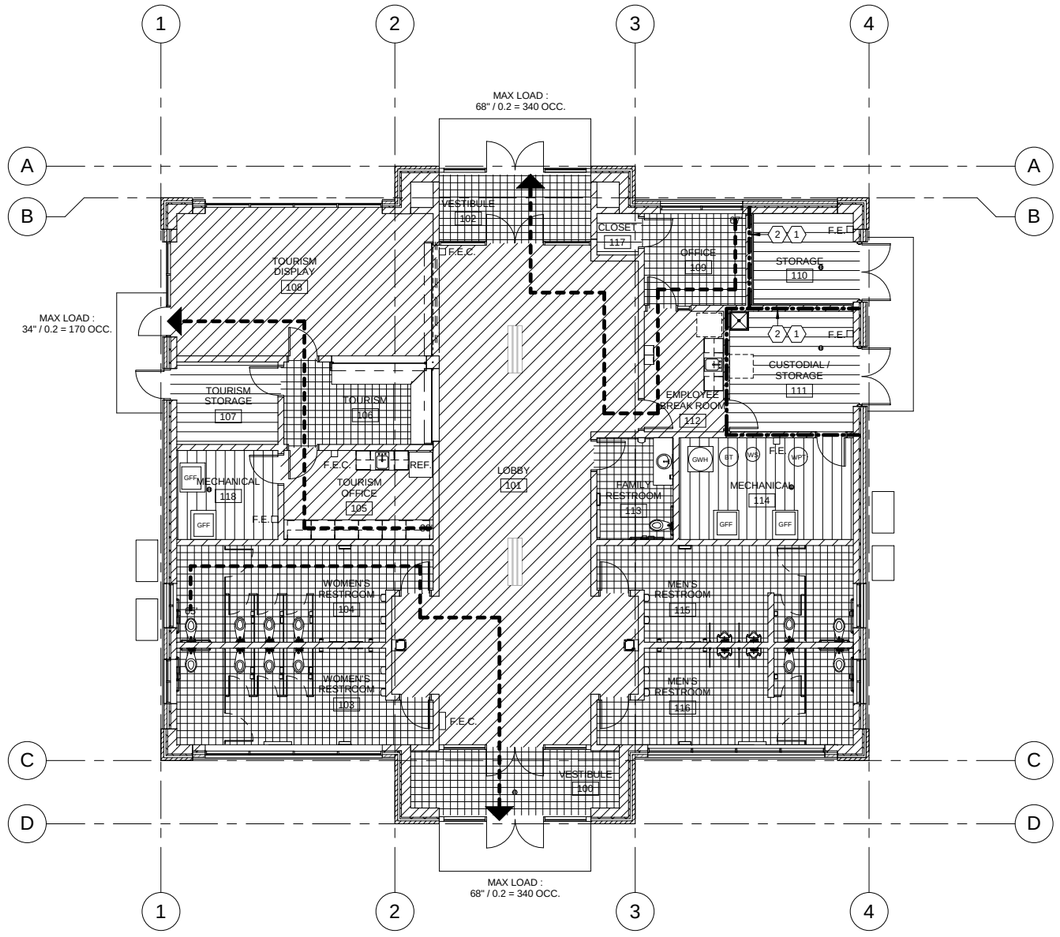
E001	ELECTRICAL LEGEND, ABBREVIATIONS AND NOTES
E101	LIGHTING PLAN
E102	POWER & SYSTEMS PLAN
E103	MAINTENANCE BULIDING - ELECTRICAL PLAN
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2

G001

PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	COVER SHEET	SHEET E

FILE NAME: S:\UZ\W\WITCO\131411\5-final-dsgn\51-const-dwgs-CAD\15-Arch\00_Revit File PLOT DATE: 10/30/2015 1:41:47 PM PLOT BY: PLOT NAME: PLOT SCALE: WISDOT/CADDS



NORTH

E1 FIRST FLOOR BUILDING CODE PLAN
G002

1/8" = 1'-0"

OCCUPANCY TYPES

A3-15 B-300 B-100 S1-300

CODE LEGEND

1-HOUR FIRE RATED SEPARATION

TRAVEL DISTANCE / EGRESS PATH / EXIT ACCESS

CODE PLAN KEYNOTES

1. FIRE RATED CEILING CONSTRUCTION
2. BOLD LINE INDICATES EXTENT OF FIRE RATED WALL CONSTRUCTION

BUILDING CODE SUMMARY

Referenced Codes

WI Commercial Building Code

- SPS 362 Buildings and Structures, (2009 IBC as amended)
- SPS 321 Construction Standards
- SPS 363 Energy Conservation, (2009 IECC as amended)
- SPS 364 Mechanical, (2009 IMC as amended)
- SPS 316 Electrical, (2008 NEC as amended)
- SPS 381-385 Plumbing
- SPS 362 Accessibility (2003 ICC/ANSI 117.1 as amended)
- SPS 314 / 330 Fire / Life Safety (2009 NFPA-1 as amended)

I. IBC Chapter 3 - Occupancy Types: (Reference IBC 303)

A. A3-Assembly Occupancy
B. B-Business Occupancy
C. S1-Moderate-hazard Storage Occupancy

II. IBC Chapter 5 – Building Area:

A. Construction Type: ***Type VB, NONSprinkled***
1. Non-Separated Use: (Reference IBC Table 508.3)
a) No separations required (A3 - most restrictive)
b) 1 hour separation for laundry rooms over 100sf (Reference IBC Table 508.2.5)
2. A3-Assembly Occupancy:
a) Area/Floor Permitted by IBC: 6,000 SF / 1 Level (Reference IBC Table 503)
b) Building Height: 40-Feet
c) Allowable Area Increases:
(1) Frontage Increase:
(a) Not Required
3. Total Actual Building Area:
a) Total Building = **4,605 SF** (1-Level)
b) Actual Height: **30'** < 40'-0"

III. IBC Chapter 6 & 7 – Occupancy Type and Fire Resistive Requirements:

A.) Reference IBC Table 601, Table 602, Table 705.8

Exterior Bearing Walls	0 Hours X ≥ 30 feet (see note #1 below)
Interior Bearing Walls	0 Hours
Exterior Non-Bearing Walls	0 Hours X ≥ 30 feet (see note #1 below)
Structural Frame	0 Hours
Interior Non-Bearing Walls	0 Hours X
Shaft Enclosures	No Shafts
Floors - Ceilings / Floors	0 Hours X
Roofs - Ceilings / Roofs	0 Hours X
Exterior Openings (unprotected)	No Limit ≥30 feet (see note #1 below)

Note: Fire separation distance (X) measured in accordance with IBC 702.. Measurement taken from the exterior face of the building to the interior lot line or centerline of street or public way or to imaginary property line per IBC 705.3.

B.) Draftstopping:
1. Not required (attic areas are less than 3000 SF) (Reference IBC 717.4.3)

IV. IBC Chapter 8 - Interior Finishes:

A.) Interior Finishes:
1. Wall and Ceiling Finishes (Reference IBC Table 803.9)
a) A3-Occupancy:
1.) Exit passageways – Class A
2.) Corridors – Class A
3.) Enclosed Rooms or Spaces – Class C
b) B-Occupancy:
1.) Exit passageways – Class A
2.) Corridors – Class B
3.) Enclosed Rooms or Spaces – Class C
c) S1-Occupancy:
1.) Exit passageways – Class B
2.) Corridors – Class B
3.) Enclosed Rooms or Spaces – Class C
2. Floor Finishes (Reference IBC 804.4.1)
a) Interior floor finishes must be minimum Class II per NFPA 253.

V. IBC Chapter 9 - Fire Protection Systems:

A.) Sprinklers:
1. A3-Occupancy buildings: Not required. (Reference IBC 903.2.1.3)
a) Fire area less than 12,000sf
b) Fire Area occupant load less than 300
c) Fire area located on level of exit discharge

B.) Fire Alarm and Detection:
1. A3-Occupancy building shall be provided with manual fire alarm systems if the occupant load is 300 or more. (Reference IBC 907.2.1)

VI. IBC Chapter 10 - Egress:

A. Occupant Loads (Reference IBC Tables 1004.1.1 Max Floor Area Allowances per Occupant
1.) See Code Plans and Occupancy Schedule for load distribution throughout building.

B. Egress Distance/Width Required:
1. Travel Distance: (Reference IBC Table 1016.1)
a) A, B, & S-1 - Occupancies: 200-feet (non sprinkled)
b) Travel distance measured from most remote location on a level to exit discharge on grade or to vertical exit enclosure.
2. Egress Width: (non sprinkled building) (Reference IBC Section 1005.1)
a) Egress Components Width (excluding stairs): Occupant load x 0.2-inches.

C. Doors:
1. Panic Exit Hardware:
a) Exit doors in a group A Occupancy with an occupant load of 50 or more shall be provided with panic hardware. (Reference IBC 1008.1.10)
2. Door width may not be less than 32" between the stop and the face of the door at 90 degrees. (Reference IBC 1008.1.1)

D. Egress Through Intervening Spaces: Egress from a room or space shall not pass through adjoining or intervening rooms or areas, except where such adjoining rooms or areas are accessory to one or the other…and provide a discernible path of egress travel to an exit. (Reference IBC 1014.2)

G. Common Path of Egress Travel: (Reference IBC 1014.3)
1. A Occupancy: 30-feet (75-feet when occupant load is less than 50)
1. B & S Occupancies: 75-feet.

H. Number of Exits and Continuity:
1. A & B-Occupancies with an occupant load of 49 or less, S-Occupancy with an occupant load of 29 or less only required to have one (1) exit. (Reference IBC Table 1015.1).

VIII. IBC Chapter 12 - : Interior Environment

A. Ventilation:
1. Enclosed attic spaces shall have a net free ventilation area of 1/300 of the area ventilated provided a vapor retarder having a transmission rate not exceeding 1-perm is installed on the warm side of the attic insulation. (Reference IBC 1203.2, exception)

B. Attic Spaces:
1. Provide an opening to attic spaces with 30-inches of clear height with a minimum 20-inch by 30-inch opening. (Reference IBC 1209.2)

C. Surrounding Materials:
1. Walls within 2-feet of urinals and water closets shall have a smooth non-absorbent finish to a minimum of 4-feet above the floor. (Reference IBC 1210.2)

IX. IBC Chapter 29 - Sanitation Fixtures:

1. 1 Service Sinks shall be provided per IBC Table 2902.1:
2. Fixture Required (Reference IBC Table 2902.1 Min. Number of Required Plumbing Fixtures):

		Water Closets / Urinals			Lavatories			Drinking Fountain		
Use	No. Occ.	Ratio	Number Required	Number Provided	Ratio	Number Required	Number Provided	Ratio	Number Required	Number Provided
A3 occupancy	114	1 per 125 male	0.46 male	See Total	1 per 200	0.29 male	See Total	1 per 500	0.23	See Total
		1 per 65 female	0.88 female			0.29 female				
B occupancy	17	1 per 25 for first 50, 1 per 50 over 50	0.34 male	See Total	1 per 40 for first 80, 1 per 80 over 80	0.21 male	See Total	1 per 100	0.17	See Total
			0.34 female			0.21 female				
S1 occupancy	2	1 per 100	0.01 male	See Total	1 per 100	0.01 male	See Total	1 per 1000	0.002	See Total
			0.01 female			0.01 female				
Total	**133**		**0.81 male**	**8.5 male**		**0.51 male**	**4.5 male**		**0.40**	**2**
			1.23 female	**8.5 female**		**0.51 female**	**4.5 female**			

OCCUPANCY SCHEDULE (BASED ON IBC TABLE 1004.1.1)

NO.	ROOM NAME	AREA	OCC.	GROSS FACTOR	OCC. LOAD	NOTES
101	LOBBY	1043.4 SF	A3-15	15.0 SF	69.6	
105	TOURISM OFFICE	147.8 SF	A3-15	15.0 SF	9.9	
108	TOURISM DISPLAY	412.1 SF	A3-15	15.0 SF	27.5	
112	EMPLOYEE BREAK ROOM	106.1 SF	A3-15	15.0 SF	7.1	
		1709.3 SF			114.0	
100	VESTIBULE	133.0 SF	B-100	100.0 SF	1.3	
102	VESTIBULE	100.5 SF	B-100	100.0 SF	1.0	
103	WOMEN'S RESTROOM	247.7 SF	B-100	100.0 SF	2.5	
104	WOMEN'S RESTROOM	247.8 SF	B-100	100.0 SF	2.5	
106	TOURISM	147.6 SF	B-100	100.0 SF	1.5	
109	OFFICE	103.4 SF	B-100	100.0 SF	1.0	
113	FAMILY RESTROOM	86.2 SF	B-100	100.0 SF	0.9	
115	MEN'S RESTROOM	244.5 SF	B-100	100.0 SF	2.4	
116	MEN'S RESTROOM	244.7 SF	B-100	100.0 SF	2.4	
		1555.5 SF			15.6	
114	MECHANICAL	197.0 SF	B-300	300.0 SF	0.7	
118	MECHANICAL	100.2 SF	B-300	300.0 SF	0.3	
		297.2 SF			1.0	
107	TOURISM STORAGE	92.8 SF	S1-300	300.0 SF	0.3	
110	STORAGE	99.8 SF	S1-300	300.0 SF	0.3	
111	CUSTODIAL / STORAGE	165.7 SF	S1-300	300.0 SF	0.6	INCIDENTAL USE
117	CLOSET	19.0 SF	S1-300	300.0 SF	0.1	
		377.3 SF			1.3	
Grand total		3939.3 SF			131.8	

G002

PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	CODE PLAN	SHEET 69	E

FILE NAME: S:\UZ\W\WITCO\131411\5-final-dsgn\51-const-dwgs-CAD\15-Arch\00_Revit File PLOT DATE: 11/1/2015 12:44:56 PM PLOT BY: PLOT NAME: PLOT SCALE:

WISDOT/CADDS SHEET 42

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GENERAL NOTES

1. THESE DRAWINGS ARE LEGAL INSTRUMENTS OF SERVICE FOR THE USE OF THE OWNER AND ITS AUTHORIZED AGENTS AND VENDORS ON THE DESIGNATED PROJECT ONLY.
2. BE RESPONSIBLE FOR KNOWLEDGE OF RELATIVE INFORMATION CONTAINED IN THESE DOCUMENTS AND THE CONDITIONS UNDER WHICH THE WORK WILL BE PERFORMED.
3. CAREFULLY AND THOROUGHLY EXAMINE THE PROJECT SITE, FIELD VERIFY ALL CONDITIONS, GRADES, ELEVATIONS AND DIMENSIONS OF THE VARIOUS FEATURES OF THE SITE AND COMPARE DRAWINGS WITH THE EXISTING CONDITIONS. ANY DISCREPANCIES AND/OR CONDITIONS NEEDING CLARIFICATION SHALL BE REPORTED IN WRITING TO THE ARCHITECT BEFORE STARTING WORK.
4. ALL CONSTRUCTION, FABRICATION AND INSTALLATION SHALL CONFORM TO THE LATEST LOCALLY ADOPTED EDITIONS OF THE UBC, UPC, UMC, NEC, NFPA, OSHA AND ANY FEDERAL, STATE AND LOCAL CODES, REGULATIONS, STANDARDS AND ORDINANCES OF GOVERNING AGENCIES HAVING JURISDICTION. SUCH APPLICABLE CODES, ETC. ARE THOSE WHICH ARE IN EFFECT AT THE TIME THE PROJECT PERMIT APPLICATION IS RECORDED.
5. ALL TRADES ARE CONSIDERED SPECIALISTS IN THEIR RESPECTIVE FIELD/TRADE AND SHALL, BEFORE SUBMISSION OF BID OR PERFORMANCE OF WORK, NOTIFY THE CONTRACTOR IN WRITING OF ANY WORK ON THE DRAWINGS OR IN THE SPECIFICATIONS WHICH CANNOT BE FULLY WARRANTED OR CONSTRUCTED AS DETAILED OR SPECIFIED. THE CONTRACTOR WILL NOTIFY THE ARCHITECT OF SUCH CONDITIONS IN WRITING
6. DUE TO REPRODUCTIVE PROCESSES, DRAWINGS MAY NOT BE ACCURATE TO SCALE. ALL DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALE SHOWN AND IN NO CASE SHALL WORKING DIMENSIONS BE SCALED FROM PLANS, SECTIONS, ELEVATIONS OR DETAILS.
7. THE STRUCTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS ARE SUPPLEMENTARY TO THE ARCHITECTURAL DRAWINGS. DISCREPANCIES BETWEEN THE VARIOUS DRAWINGS SHALL BE REPORTED BY THE CONTRACTOR TO THE ARCHITECT IN WRITING.
8. BEFORE STARTING WORK, COORDINATE WITH THE OWNER'S REPRESENTATIVE FOR INSTALLATION OF EQUIPMENT INDICATED N.I.C. ON DRAWINGS. VERIFY EQUIPMENT LOCATIONS WITH THE OWNER'S PRESENTATIVE. VERIFY DIMENSIONS, UTILITIES, ETC, WITH EQUIPMENT MANUFACTURERS ROUGH -- IN DATA PRIOR TO FORMING THE SLAB.
9. PRODUCTS AND MANUFACTURED ITEMS SHALL BE PROVIDED AS SPECIFIED. NO SUBSTITUTIONS WILL BE PERMITTED.
10. WHERE DETAILS ARE NOT SHOWN OR NOTED, DETAILS SHALL BE THE SAME AS FOR OTHER SIMILAR FIRST CLASS WORK.
11. ALL INDICATED EXISTING UTILITIES OR STRUCTURES ARE BASED ON INFORMATION OF RECORD. TAKE PRECAUTIONARY MEASURES TO PROTECT THE UTILITY LINES NOT OF RECORD OR NOT SHOWN. BE RESPONSIBLE FOR ANY AND ALL DAMAGE WHICH MAY OCCUR DUE TO FAILURE TO LOCATE AND PROTECT ALL CONCEALED UTILITIES.
12. COMPLY WITH ALL JURISDICTIONAL AGENCY REQUIREMENTS AND REGULATIONS. PERFORM ALL WORK ON THIS PROJECT IN COMPLIANCE WITH THE STATE OF CALIFORNIA DEPARTMENT OF BUSINESS AND INDUSTRY OCCUPATIONAL SAFETY AND HEALTH STANDARDS, 29 CFR 1910 AND 1926 OF THE U.S. DEPARTMENT OF LABOR AND THE AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES.
13. FINAL CONNECTIONS TO EQUIPMENT SHALL BE AS PER MANUFACTURER'S WIRING DIAGRAMS, DETAILS AND INSTRUCTIONS. BE RESPONSIBLE TO PROVIDE MATERIALS AND EQUIPMENT COMPATIBLE WITH EQUIPMENT ACTUALLY SUPPLIED.
14. PROVIDE PERMITS AND INSPECTIONS REQUIRED BY JURISDICTIONAL AGENCIES.
15. PROVIDE SET OF RECORD DRAWINGS TO ARCHITECT. DRAWINGS SHALL INCLUDE ALL ADDENDUM ITEMS, CHANGE ORDERS, ALTERATIONS, REROUTINGS, ETC.
16. SERVICE SHALL BE MAINTAINED TO EXISTING AREAS DURING CONSTRUCTION. PROVIDE PORTABLE GENERATORS, CABLES, OUTLETS ETC., TO MAINTAIN CONTINUITY OF SERVICE PLACEMENT OF SUCH PORTABLE EQUIPMENT SHALL BE SUBJECT TO OWNER APPROVAL.
17. COORDINATE CONSTRUCTION PHASING WITH THE OWNER, TEMPORARY PARTITIONS, LOCATIONS & CONSTRUCTION DETAILS IN PUBLIC SPACES SHALL BE SUBMITTED TO THE OWNER FOR APPROVAL PRIOR TO START OF CONSTRUCTION.
18. PATCH AND MATCH ALL NEW WORK W/ EXISTING WHERE NEW TO EXISTING INTERFACE OCCURS.
19. RESTORE ALL REMOVED OR DAMAGED STRUCTURAL STEEL CEMENTITIOUS FIRE PROOFING TO REQUIRED FIRE RESISTIVE STANDARD.
20. SUBMIT SAMPLES OF ALL EXPOSED PRODUCTS, MATERIALS, PAINTING SYSTEMS, ETC. FOR ARCHITECT'S REVIEW, COLOR SELECTION OR COLOR VERIFICATION PRIOR TO ORDERING ITEMS.
21. SEAL ALL DUCTS, LOUVERS, VENTS, OPENINGS AND CEILING SPACES BETWEEN CONSTRUCTION AREA AND REMAINDER OF SHELLED SPACES TO PREVENT DUST, DIRT, CONTAMINATION OR DEBRIS FROM ENTERING.
22. SUPPRESS ALL DUST AND DIRT.
23. DO NOT ALLOW DIRT, DEBRIS OR DISCARDED MATERIALS TO ACCUMULATE ON SITE. REMOVE PROMPTLY EACH DAY.
24. VERIFY SERVICES TO BE ABANDONED, REMOVED OR CUT HAVE BEEN PROPERLY AND SAFELY SHUT OFF, CAPPED OR SEALED.
25. A. ASSIGN THE WORK OF MOVING, REMOVAL, CUTTING, PATCHING AND REPAIR TO TRADES UNDER CONTRACTOR SUPERVISION TO CAUSE THE LEAST DAMAGE TO EACH TYPE OF WORK ENCOUNTERED.

    B. PATCHING OF FINISH MATLS. TO MECHANICS SKILLED IN THE WORK OF THE FINISH TRADE INVOLVED.

    C. PROTECT REMAINING FINISHES, EQUIPMENT AND ADJACENT WORK FROM DAMAGE CAUSED BY CUTTING, MOVING AND REMOVAL AND PATCHING OPERATIONS. PROTECT SURFACES WHICH WILL REMAIN A PART OF THE FINISHED WORK.

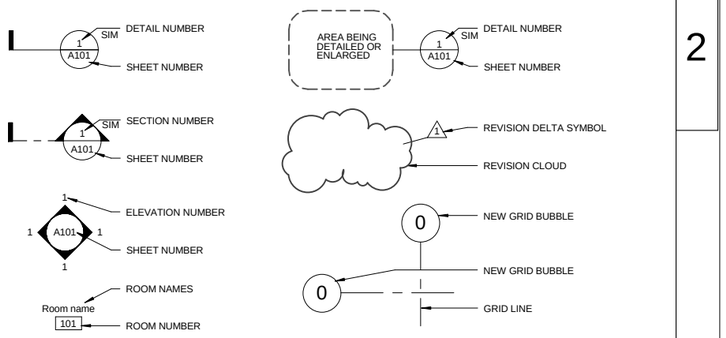
    D. PROTECT EXISTING AND NEW WORK FROM WEATHER DURING CUTTING, MOVING, REMOVAL AND CONSTR. PROVIDE WEATHER PROTECTION AND OTHER FACILITIES AND PROTECTION AS NEEDED TO PREVENT DAMAGE TO NEW WORK AND TO REMAINING OLD WORK.

    E. PROVIDE ADEQUATE SUPPORT OR SUBSTRATE FOR PATCHING FINISHES.
26. USE OF HAZARDOUS MATERIALS SHALL CONFORM WITH 29 CFR 1910.120 AND 1926.65 OF THE OSHA CODE.
27. REMOVAL OF HAZARDOUS WASTE SHALL COMPLY WITH CURRENT FEDERAL, STATE AND LOCAL REGULATIONS, STANDARDS, LAWS AND REQUIREMENTS.

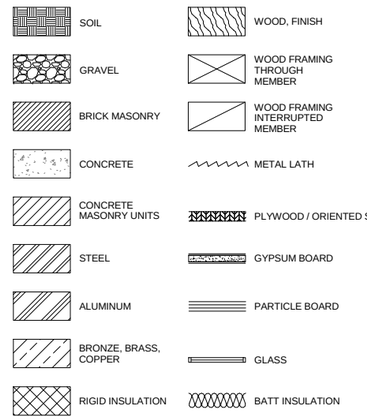
ABBREVIATIONS

&	AND
L	ANGLE
@	AT
℄	CENTERLINE
⌀	DIAMETER/ROUND
(E)	EXISTING
#	POUND/NUMBER
+/-	PLUS OR MINUS
℔	PROPERTY LINE
SQ	SQUARE
A/C	AIR CONDITIONING
A.B.	ANCHOR BOLT
ABV.	ABOVE
A.C.	ASPHALTIC CONCRETE
ACC.	ACCESSIBLE
ACOUS.	ACOUSTICAL
A.D.	AREA DRAIN
	ACCESS DOOR
ADD.	ADDENDUM
ADJ.	ADJUSTABLE
ADJA.	ADJACENT
A.F.	ACCESS FLOOR
A.F.F.	ABOVE FINISH FLOOR
AGGR.	AGGREGATE
A.H.U.	AIR HANDLING UNIT
ALUM.	ALUMINUM
ALT.	ALTER OR ALTERNATE
ANG.	ANGLE
ANOD.	ANODIZED
A.P.	ACCESS PANEL
APPROX.	APPROXIMATE
ARCH.	ARCHITECTURAL
ASPH.	ASPHALT (PAVING)
A.T.	ACOUSTIC TILE
A.W.	ARCHITECTURAL WOODWORK
BD.	BOARD
BITUM.	BITUMINOUS
BLDG.	BUILDING
BLK.	BLOCK
BLKG.	BLOCKING
BM.	BEAM
BN	BURNISHED
BOT.	BOTTOM
BR.	BEDROOM
BRG.	BEARING
BRKT.	BRACKET
B.S.	BOTH SIDES
BSMT.	BASEMENT
BTWN.	BETWEEN
B.U.R.	BUILT-UP ROOFING
C	CHORD/COMPACT
CAB.	CABINET
C.B.	CATCH BASIN
C.B.B.	CEMENTITIOUS BACKER BOARD
C.C.T.V.	CLOSED CIRCUIT TELEVISION
C.D.	CEILING DIFFUSER
CEM.	CEMENT
CER.	CERAMIC
C.F./C.I.	CONTRACTOR FURNISHED CONTRACTOR INSTALLED
C.F.M.	CUBIC FEET PER MINUTE
C.G.	CORNER GUARD
CHAN.	CHANNEL
CH.W.R.	CHILLED WATER RETURN
CH.W.S.	CHILLED WATER SUPPLY
C.I.	CAST IRON
C.I.P.	CAST-IN-PLACE
CIRC.	CIRCULATING
C.J.	CONTROL JOINT
CLNG.	CEILING
CLO.	CLOSET
CLR.	CLEAR
CM.	CENTIMETER
C.M.U.	CONCRETE MASONRY UNIT
CNTR.	COUNTER
C.O.	CLEANOUT/CASED OPENING /CONCRETE OPENING
COL.	COLUMN
COMM.	COMMUNICTATION
COMP.	COMPARTMENT
CONC.	CONCRETE
COND.	CONDITION
CONN.	CONNECTION
CONSTR.	CONSTRUCTION
CONT.	CONTINUOUS
CONTR.	CONTRACTOR
COOR.	COORDINATE
CORR.	CORRIDOR
C.O.T.G.	CLEAN OUT TO GRADE
CPT	CARPET
C.R.	CLOSET ROD
C.R.M.	CONCRETE RUBBLE MASONRY
C.T.	CERAMIC TILE
CTR.	CENTER
CTSK.	COUNTERSUNK
CUST.	CUSTOM
C.W.	COLD WATER
C.W.R.	COLD WATER RETURN
d	PENNY (NAILS)
D.	DEEP/DEPTH/DRYER
D.A.	DOUBLE ACTING
DBL.	DOUBLE
D.D.	DECK DRAIN
DEPT.	DEPARTMENT
DET.	DETAIL
D.F.	DRINKING FOUNTAIN
DIA.	DIAMETER
DIAG.	DIAGONAL
DIM.	DIMENSION
DISP.	DISPENSER
DN.	DOWN
D.O.	DOOR OPENING
E.	EAST
EA.	EACH
E.A.R.	EXHAUST AIR REGISTER
E.C.	ELASTOMERIC COATING/ EXPOSED CONSTRUCTION
E.F.	EXHAUST FAN
E.F.S.	EXTERIOR FINISH SYSTEM
E.G.C.B.	EXTERIOR GYPSUM CEILING BOARD
E.G.S.B.	EXTERIOR GYPSUM SHEATHING BOARD
E.I.F.S.	EXTERIOR INSULATION & FINISH SYSTEM
E.J.	EXPANSION JOINT
EL.	ELEVATION
ELAS.	ELASTOMERIC
ELEC.	ELECTRICAL
ELEV.	ELEVATOR
EMER.	EMERGENCY
ENCL.	ENCLOSURE
E.O.S.	EDGE OF SLAB
E.P.	ELECTRIC PANEL
EQ.	EQUAL
EQPT.	EQUIPMENT
E.W.	EACH WAY
E.W.C.	ELECTRIC WATER COOLER
EXH.	EXHAUST
EXP.	EXPANSION
EXPO.	EXPOSED
EXIST.	EXISTING
EXT.	EXTERIOR
F.	FEMALE
F.A.	FIRE ALARM
FAB.	FABRICATE
F.A.M.	FLUID APPLIED MEMBRANE
F.B.	FLAT BAR
F.C.O.	FLOOR CLEAN OUT
F.C.U.	FAN COIL UNIT
F.D.	FLOOR DRAIN/ FIRE DAMPER
F.E.	FIRE EXTINGUISHER
F.E.C.	FIRE EXTINGUISHER CABINET
F.F.&E.	FURNITURE, FIXTURE & EQUIPMENT
F.F.S.	FINISH FLOOR SEPARATION
F.H.	FLAT HEAD
F.H.C.	FIRE HOSE CABINET
FIN.	FINISH
FIXT.	FIXTURE
FLASH.	FLASHING
FLDG.	FOLDING
FLG.	FLOORING
FLR.	FLOOR
FLUOR.	FLUORESCENT
F.N.D.	FEMININE NAPKIN DISPOSAL
F.N.V.	FEMININE NAPKIN VENDOR
FND.	FOUNDATION
F.O.	FACE OF ...
F.O.C.	FACE OF CONCRETE
F.O.F.	FACE OF FINISH
F.O.M.	FACE OF MASONRY
F.O.S.	FACE OF SLAB/ FACE OF STUD
F.O.W.	FACE OF WALL
FR.	FRAME
F.R.G.	FIBER REINFORCED GYPSUM
F.R.P.	FIBERGLASS REINFORCED POLYESTER
F.R.T.	FIRE RETARDANT TREATED WOOD
FRZ.	FREEZER
F.S.	FLOOR SINK/FULL SIZE
FT.	FOOT/FEET
F.T.D.	FACIAL TISSUE DISPENSER
FTG.	FOOTING
FURR.	FURRING/FURRED
FUT.	FUTURE
G.	GAS (PIPE)
GA.	GAGE
GAL.	GALLON
GALV.	GALVANIZED
G.B.	GRAB BAR
GEN.	GENERATOR
G.F.I.	GROUND FAULT INTERCEPTOR
G.F.R.C.	GLASS FIBER REINFORCED CONCRETE
GL.	GLASS
GLU-LAM	GLUED LAMINATED WOOD
GND.	GROUND
G.P.H.	GALLONS PER HOUR
G.S.B.	GYPSUM SHEATHING BOARD
GYP.	GYPSUM
H.	HEIGHT/HIGH
H.B.	HOSE BIB
H.C.	HOLLOW CORE
HCP.	HANDICAPPED
HD.	HEAD
HDWD.	HARDWOOD
HDWE.	HARDWARE
H.M.	HOLLOW METAL
HORIZ.	HORIZONTAL
HR.	HOUR
H.S.	HAND SINK
HT.	HEIGHT
HTR.	HEATER
H.V.A.C.	HEATING, VENTILATION AND AIR CONDITIONING
H.W.	HOT WATER
H.W.R.	HOT WATER RETURN
JAL.	JALOUSIE
JAN.	JANITOR
J.B.	JUNCTION BOX
JST.	JOIST
JT.	JOINT
K.D.	KNOCK DOWN
KG.	KILOGRAM
KIT.	KITCHEN
KM.	KILOMETER
K.O.	KNOCK-OUT
KW.	KILOWATT
L.	LENGTH/LONG
LAB.	LABORATORY
LAM.	LAMINATE/LAMINATED
LAV.	LAVATORY
LB.	POUND
L.F.	LINEAL FOOT
LIQ.	LIQUOR
LKR.	LOCKER
LOC.	LOCATION
L.P.	LAMINATED PLASTIC
LTG.	LIGHTING
LVR.	LOUVER
M.	MALE
MAT'L.	MATERIAL
MAX.	MAXIMUM
M.B.	MACHINE BOLT
M.C.	MEDICINE CABINET
MECH.	MECHANICAL
MEMB.	MEMBRANE
MET.	METAL
MFR.	MANUFACTURER
MH.	MANHOLE
MIN.	MINIMUM
MIR.	MIRROR
MISC.	MISCELLANEOUS
MLDG.	MOULDING
MM.	MILLIMETER
M.O.	MASONRY OPENING
MOD.	MODULAR
M.R.	MOISTURE RESISTANT
MTD.	MOUNTED
MTG.	MOUNTING
N.	NORTH
N.I.C.	NOT IN CONTRACT
N.L.	NIGHT LIGHT
NO.	NUMBER
NOM.	NOMINAL
N.S.	NO SCALE
N.T.S.	NOT TO SCALE
O.	OVER
O.C.	ON CENTER
OA.	OVERALL
O.A.G.	OUTSIDE AIR GRILLE
OBS.	OBSCURE
O.D.	OUTSIDE DIAMETER (DIMENSION)
O.F./C.I.	OWNER FURNISHED/ CONTRACTOR INSTALLED
OFD.	OVERFLOW DRAIN
OFF.	OFFICE
O.F./O.I.	OWNER FURNISHED/ OWNER INSTALLED
OPNG.	OPENING
OPP.	OPPOSITE
OPQ.	OPAQUE
OPR.	OPERABLE
OVHD.	OVERHEAD
PASS.	PASSAGE
P.C.	POST CONTRACT
P.C.A.	POST CONTRACT ARCHITECTURAL / POLISHED CONCRETE
PC	PLANTER DRAIN
P.D.	PERIMETER
PERIM.	PERPENDICULAR
PERP.	PENTHOUSE
PH.	POURED-IN-PLACE
P.I.P.	PLATE
PL.	PLASTIC LAMINATE
PLAM.	PLASTER
PLAS.	PLUMBING
PLBG.	PLYWOOD
PLYWD.	PANEL
PNL.	PAIR
PR.	PRESSURE REDUCING
P.R.B.P.	BACK FLOW PREVENTER
PRCST.	PRECAST
PREFAB.	PREFABRICATED
PREP.	PREPARATION
PROP.	PROPERTY
P.R.V.	PRESSURE RELIEF VALVE
P.S.F.	POUNDS PER SQUARE FOOT
PT.	PAINT/POINT
P.T.D.	PAPER TOWEL DISPENSER
P.T.D.R.	PAPER TOWEL DISPENSER & RECEPTACLE
PTN.	PARTITION
P.T.R.	PAPER TOWEL RECEPTACLE
PVC	POLY VINYL CHLORIDE
Q.T.	QUARRY TILE
R.	RISER
RAD.	RADIUS
R.B.	RESILIENT BASE
RB.HK.	ROBE HOOK
R.C.P.	REFLECTED CEILING PLAN
R.D.	ROOF DRAIN
REBAR	REINFORCING BAR
R.F.	ROCK FACE
RFG.	ROOFING
RGTR.	REGISTER
R.H.	ROUND HEAD
RLG.	RAILING
RM.	ROOM
R.O.	ROUGH OPENING
R.W.R.	RECESSED WASTE RECEPTACLE
RWD.	REDWOOD
R.W.L.	RAIN WATER LEADER
S.	SOUTH
S.A.	SINGLE ACTING
S.C.	SOLID CORE
SC	SEALED CONCRETE
SCHED.	SCHEDULE
SCP.	SCUPPER
S.C.R.	SHOWER CURTAIN ROD
S.D.	SMOKE DETECTOR
SECT.	SECTION
S.F.	SQUARE FEET
SH.	SHELF
SHR.	SHOWER
SHT.	SHEET
SHTG.	SHEATHING
SIM.	SIMILAR
SL.	SLOPE
SLDG.	SLIDING
SLNT.	SEALANT
S.M.	SQUARE METER
S.MH.	SEWER MANHOLE
S.N.D.	SANITARY NAPKIN DISPENSER
S.N.R.	SANITARY NAPKIN RECEPTACLE
S.P.	SOLID PLASTIC
SPEC.	SPECIFICATIONS
SPKR.	SPEAKER
SPRK.	SPRINKLER
SQ.	SQUARE
S.SK.	SERVICE SINK
S.STL.	STAINLESS STEEL
ST.	STONE
STA.	STATION
STD.	STANDARD
STL.	STEEL
STOR.	STORAGE
STRUCT.	STRUCTURE/STRUCTURAL
SURR.	SURROUND
SUSP.	SUSPEND/SUSPENDED
SVC.	SERVICE
SW.	SWITCH
SYM.	SYMETRICAL
SYS.	SYSTEM
T	TILE
T&G	TONGUE AND GROOVE
T./S.	TUB/SHOWER
TACKBD.	TACKBOARD
T.B.	TOWEL BAR
T.D.	TRENCH DRAIN
TEL.	TELEPHONE
TEMP.	TEMPERED/TEMPORARY
TER.	TERRAZZO
TFMR.	TRANSFORMER
THK.	THICK/THICKNESS
THR.	THRESHOLD
TLT.	TOILET
T.O.	TOP OF ...
T.O.C.	TOP OF CURB
T.O.F.	TOP OF FLOOR
T.O.P.	TOP OF PARAPET/ TOP OF PAVEMENT
T.O.S.	TOP OF STEEL/ TOP OF SLAB
T.O.W.	TOP OF WALL
T.P.B.	TELEPHONE POWER BOARD
T.P.D.	TOILET PAPER DISPENSER
T.P.H.	TOILET PAPER HOLDER
TRAN.	TRANSITION
TRANS.	TRANSPARENT
T.S.	TUBE STEEL
T.S.C.D.	TOILET SEAT COVER DISPENSER
T.SH.	TOWEL SHELF
TV.	TELEVISION
TYP.	TYPICAL
UC.	UNDERCUT
U.L.	UNDERWRITERS LABORATORIES, INC.
UNF.	UNFINISHED
U.N.O.	UNLESS NOTED OTHERWISE
U.P.	UPHOLSTERED PANELS
UR.	URINAL
VAL.	VALANCE
VAR.	VARIES
VB	VINYL BASE
VCT	VINYL COMPOSITION TILE
VERT.	VERTICAL
VEST.	VESTIBULE
VLV.	VALVE
VOL.	VOLUME
V.P.	VENEER PLASTER
V.T.R.	VENT THROUGH ROOF
W.	WEST/WIDTH/WIDE/WASHER
W/	WITH
W/O	WITHOUT
W.C.	WATER CLOSET
WC.	WALLCOVERING
WD.	WOOD
WD.P.	WOOD PANELING
WDW.	WINDOW
W.GL.	WIRE GLASS
W.H.	WATER HEATER
W.O.	WARNOCK HERSEY WHERE OCCURS/ WINDOW OPENING
D.PTN.	DEMOUNTABLE PARTITION
DR.	DOOR
DS.	DOWNSPOUT
D.SP.	DRY STANDPIPE
DW.	DISHWASHER
DWG.	DRAWING
DWR.	DRAWER
I.D.	INSIDE DIAMETER (DIMENSION)
IN.	INCH
INCL.	INCLUDED/INCLUSIVE/ INCLUDING
INSUL.	INSULATION
INT.	INTERIOR
INV.	INVERT
REC	RECESSED FLOOR GRATE
REF.	REFERENCE/REFER
REFL.	REFLECTOR
REFR.	REFRIGERATOR
REINF.	REINFORCED/REINFORCING
REQ.	REQUIRED
RESIL.	RESILIENT
REST.	RESTROOM
REV.	REVISED/REVISION
WP.	WATERPROOF
WP.M.	WATERPROOF MEMBRANE
W.S.	WOOD SCREWS
W.R.	WATER RESISTANT
WRB.	WARDROBE
WSCT.	WAINSCOT
W.S.P.	WET STAND PIPE
WT.	WEIGHT
W.W.F.	WELDED WIRE FABRIC

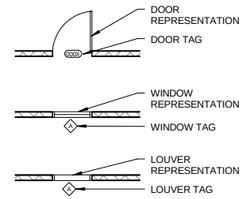
REFERENCE INDICATORS



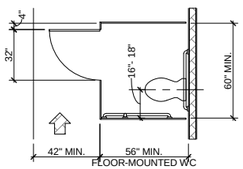
MATERIAL INDICATORS



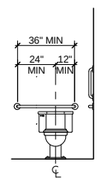
OPENING INDICATORS



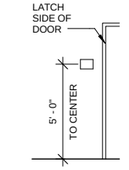
ACCESSIBILITY STANDARDS



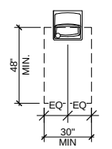
WHEELCHAIR ACCESSIBLE TOILET COMPARTMENT AND DOOR



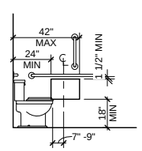
REAR WALL GRAB BAR FOR WATER CLOSET



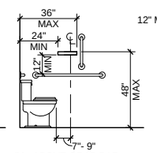
TYPICAL ROOM SIGNAGE



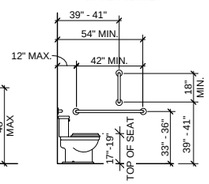
NOTE: REFER TO MECH DRAWINGS FOR FIXTURE TYPE



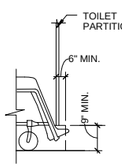
(a) BELOW GRAB BAR



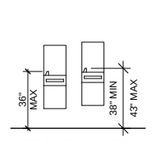
(b) ABOVE GRAB BAR



SIDE WALL GRABS BAR FOR WATER CLOSET

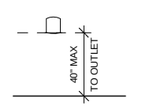


TOILET COMPARTMENT TOE CLEARANCE

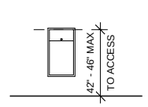


(a)WHEELCHAIR ACCESIBLE (b) STANDING PERSONS

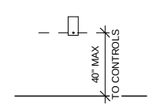
DISPENSER LOCATION



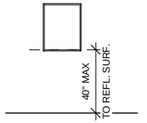
ELECTRIC HAND DRYER



RECESSED WASTE RECEPTACLE

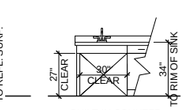


SOAP DISPENSER (SD)



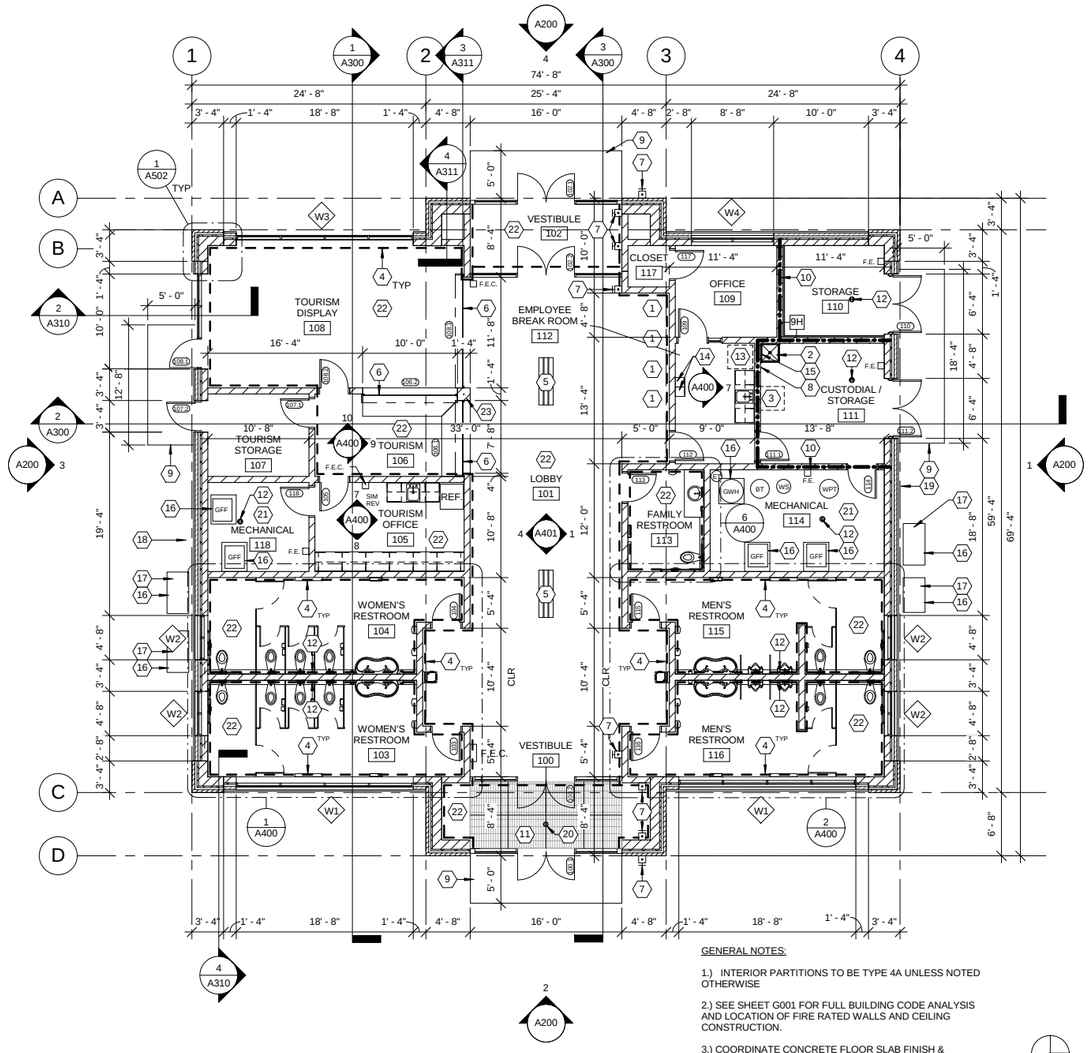
MIRROR

DRINKING FOUNTAINS



BUILT-IN COUNTER SINK ACCESS (WHERE OCCURS)

PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	GENERAL INFORMATION & ACCESSIBILITY STANDARDS	SHEET 70	A001 E



GENERAL NOTES:

1.) INTERIOR PARTITIONS TO BE TYPE 4A UNLESS NOTED OTHERWISE

2.) SEE SHEET G001 FOR FULL BUILDING CODE ANALYSIS AND LOCATION OF FIRE RATED WALLS AND CEILING CONSTRUCTION.

3.) COORDINATE CONCRETE FLOOR SLAB FINISH & INTEGRAL COLOR LOCATIONS W/ ROOM FINISH SCHEDULE

4.) PREPARE BUILDING PAD PER GEOTECHNICAL REPORT

1 A100 BUILDING FLOOR PLAN

1/8" = 1'-0"

FEE = 657.50 = 100' - 0"

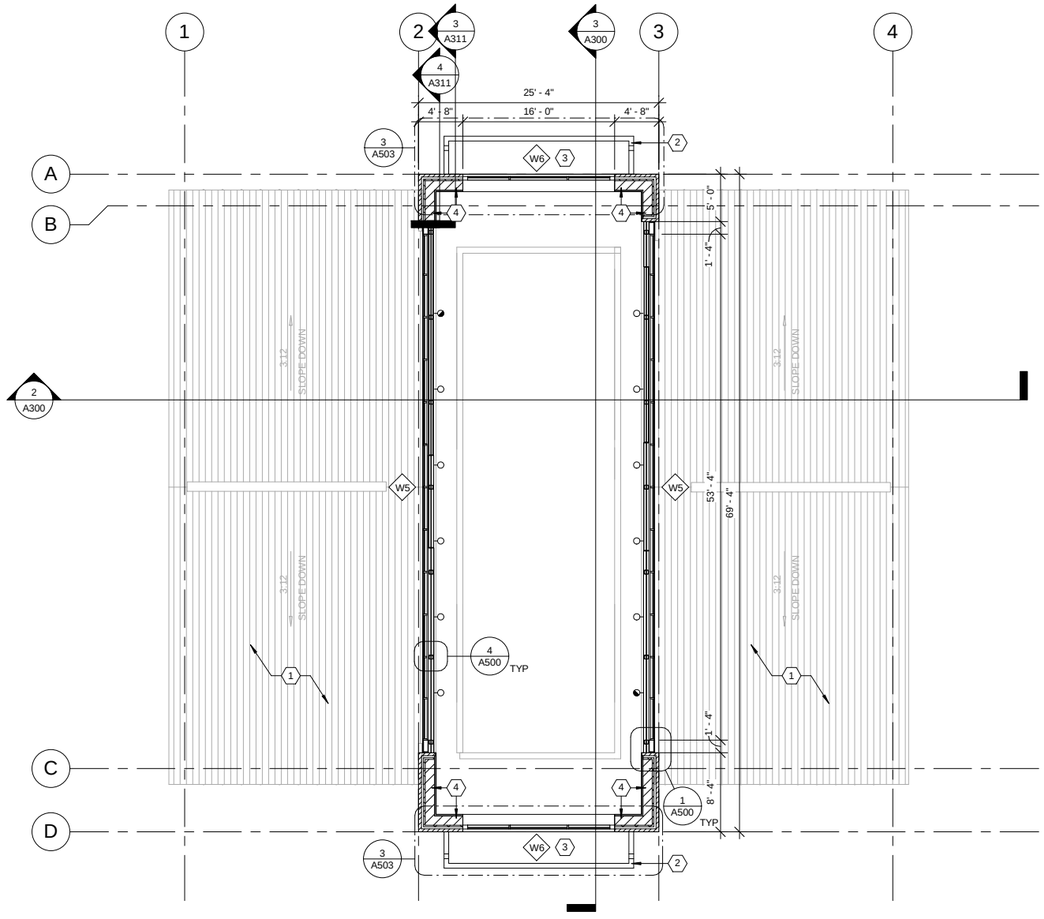
NORTH

BUILDING FLOOR PLAN KEYNOTES

1. VENDING MACHINE - N.I.C.
2. MOP BASIN - SEE PLUMBING
3. STACKED WASHER & DRYER - N.I.C.
4. DASHED LINE INDICATES EXTENT OF BURNISHED BLOCK CMU-2 FINISH - COORDINATE W/ INTERIOR ELEVATIONS & ENLARGED PLANS AT RESTROOMS, PROVIDE CMU-1 AT LOCATIONS TO RECEIVE WALL TILE
5. BENCH - VERIFY LOCATION WITH OWNER
6. COILING GRILLE
7. HANDICAP DOOR OPERATOR PUSH PLATE - COORDINATE W/ ELECTRICAL & DOOR HARDWARE SUPPLIER
8. MOP CLIP STRIP
9. CONCRETE STOOP - SEE STRUCTURAL
10. BOLD LINE INDICATES EXTENT OF FIRE RATED WALL CONSTRUCTION - SEE CODE PLAN
11. RECESSED FLOOR GRILLE (7' - 0" DEEP X 16' - 0" WIDE) - SEE DETAIL 8/A502
12. FLOOR DRAIN - SEE PLUMBING
13. REFRIDGERATOR - N.I.C.
14. METAL LOCKERS
15. PROVIDE 4'-0" HIGH GFRP WAINSCOT AT MOP BASIN - EXTEND 4'-0" HORIZTONALLY FROM CORNER OR WALL
16. CONCRETE PAD - SEE MECHANICAL FOR SIZE & LOCATION
17. AIR CONDITIONER CONDENSING UNIT - SEE MECHANICAL
18. GAS METER - SEE MECHANICAL
19. ELECTRICAL METER - SEE ELECTRICAL
20. FLOOR DRAIN BELOW RECESSED FLOOR GRILLE - SEE PLUMBING
21. LAYOUT OF MECHANICAL ROOM EQUIPMENT IS FOR REFERENCE ONLY - SEE MECHANICAL FOR LAYOUT
22. PROVIDE INTEGRALLY COLORED CONCRETE FLOOR SLAB - SEE FINISH SCHEDULE FOR FINAL FLOOR FINISH
23. CMU-2 PILASTER

PLAN LEGEND

- 1-HOUR FIRE RATED SEPARATION
- EXTENT OF CMU-2 FINISH



GENERAL NOTES:

1.) INTERIOR PARTITIONS TO BE TYPE 4A UNLESS NOTED OTHERWISE

2.) SEE SHEET G001 FOR FULL BUILDING CODE ANALYSIS AND LOCATION OF FIRE RATED WALLS AND CEILING CONSTRUCTION.

2 A100 CLERESTORY PLAN

1/8" = 1'-0"

NORTH

CLERESTORY PLAN KEYNOTES

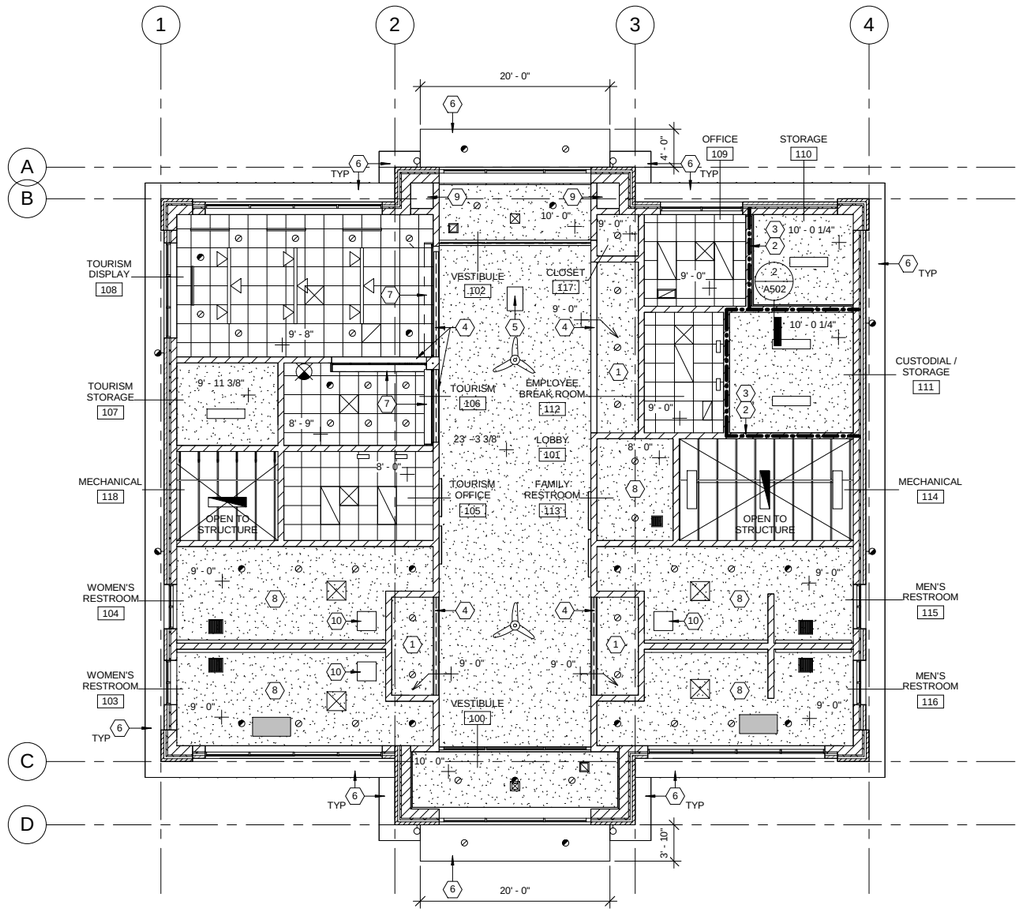
1. PRE-FINISHED STANDING SEAM METAL ROOF BELOW
2. PRE-FINISHED METAL CANOPY BELOW
3. EPDM MEMBRANE CANOPY ROOF BELOW
4. 2X2 WOOD FURRING W/ 5/8" GYPSUM FINISH

REFLECTED CEILING SYMBOLS

- RECESSED FIXTURE
- RECESSED FIXTURE - EMERGENCY
- WALL MOUNTED FIXTURE
- WALL MOUNTED FIXTURE - EMERGENCY
- CEILING MOUNTED FIXTURE
- 2X4 RECESSED FIXTURE
- SURFACE MOUNT FIXTURE
- SURFACE MOUNT FIXTURE - EMERGENCY
- SUPPLY REGISTERS
- RETURN REGISTERS
- EXHAUST GRILLE
- TRACK LIGHT OR MONOPOINT
- RADIANT CEILING PANEL
- FAN

PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	BUILDING FLOOR PLAN & CLERESTORY PLAN	SHEET	A100

FILE NAME: S:\UZ\W\WITCO\131411\5-final-dsgn\51-const-dwgs-CAD\15-Arch\00_Revit File
PLOT DATE: 11/1/2015 12:44:25 PM
PLOT BY:
PLOT NAME:
PLOT SCALE:
WISDOT/CADDS SHEET 42



REFLECTED CEILING LEGEND

- 5/8" GYPSUM BOARD CEILING
- ACOUSTICAL CEILING PANELS

GENERAL NOTES:

1.) SEE SHEET G001 FOR FULL BUILDING CODE ANALYSIS AND LOCATION OF FIRE RATED WALLS AND CEILING CONSTRUCTION.

2.) LIGHTS & HVAC DIFFUSERS SHOWN FOR REFERENCE ONLY - SEE MECHANICAL & ELECTRICAL FOR LOCATIONS

NORTH

1 A110 REFLECTED CEILING PLAN

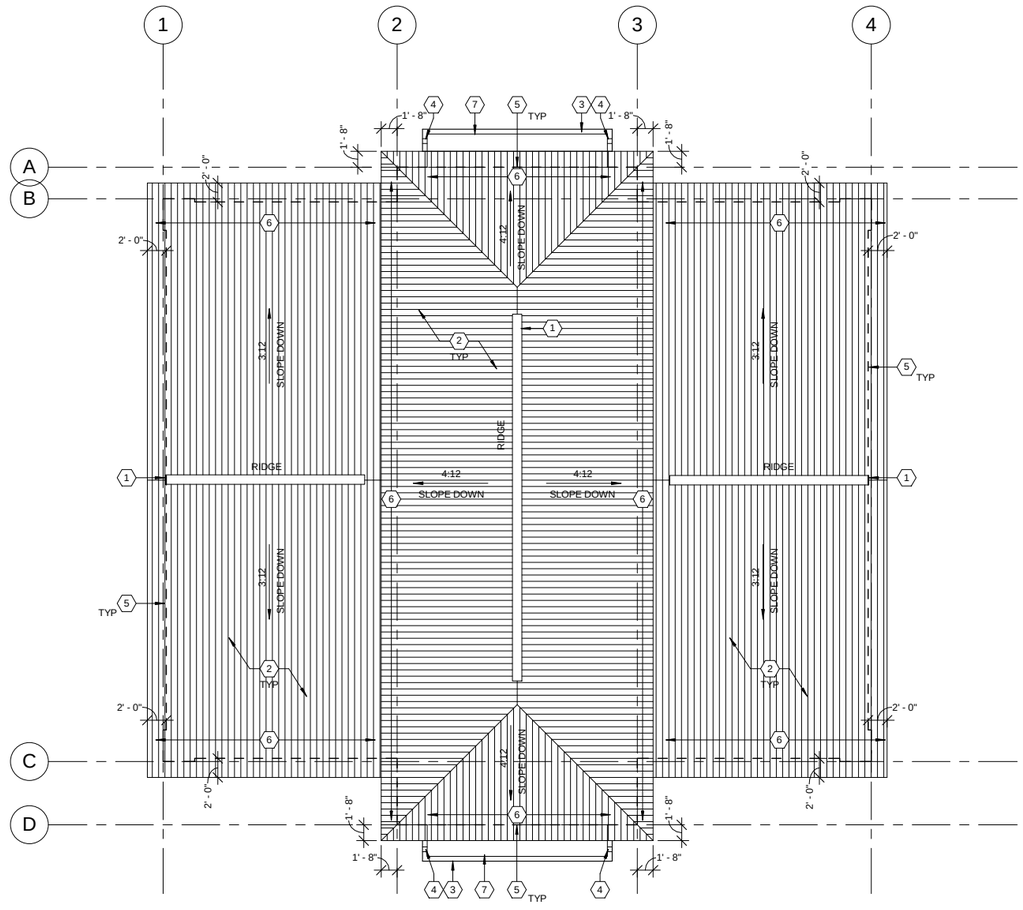
1/8" = 1'-0"

REFLECTED CEILING PLAN KEYNOTES

1. 5/8" GYPSUM BOARD SOFFIT
2. BOLD LINE INDICATES EXTENT OF FIRE RATED WALL CONSTRUCTION - SEE CODE PLAN
3. 1-HOUR FIRE RATED CEILING CONSTRUCTION - PROVIDE (2) LAYERS 5/8" TYPE 'X' GYPSUM BOARD
4. EXPOSED BEAMS & LINTELS TO BE PAINTED PT-1
5. INSULATED FLUSH MOUNTED ATTIC SCUTTLE, PAINT TO MATCH CEILING & COORDINATE LOCATION W/ TRUSS FRAMING
6. PRE-FINISHED VENTED METAL SOFFIT
7. COILING GRILLES
8. 5/8" MOISTURE RESISTANT GYPSUM BOARD CEILING
9. INFILL VOID AT ELEVATION 112' - 8" W/ 2X6 FRAMING AT 12" OC AND 3/4" PLYWOOD
10. 2'x2' ACCESS PANELS - SEE MECHANICAL FOR LOCATION

REFLECTED CEILING SYMBOLS

- RECESSED FIXTURE
- RECESSED FIXTURE - EMERGENCY
- WALL MOUNTED FIXTURE
- WALL MOUNTED FIXTURE - EMERGENCY
- CEILING MOUNTED FIXTURE
- 2X4 RECESSED FIXTURE
- SURFACE MOUNT FIXTURE
- SURFACE MOUNT FIXTURE - EMERGENCY
- SUPPLY REGISTERS
- RETURN REGISTERS
- EXHAUST GRILLE
- TRACK LIGHT OR MONOPOINT
- RADIANT CEILING PANEL
- FAN



GENERAL NOTES:

1.) SEE SHEET G001 FOR FULL BUILDING CODE ANALYSIS AND LOCATION OF FIRE RATED WALLS AND CEILING CONSTRUCTION.

NORTH

2 A110 ROOF PLAN

1/8" = 1'-0"

ROOF PLAN KEYNOTES

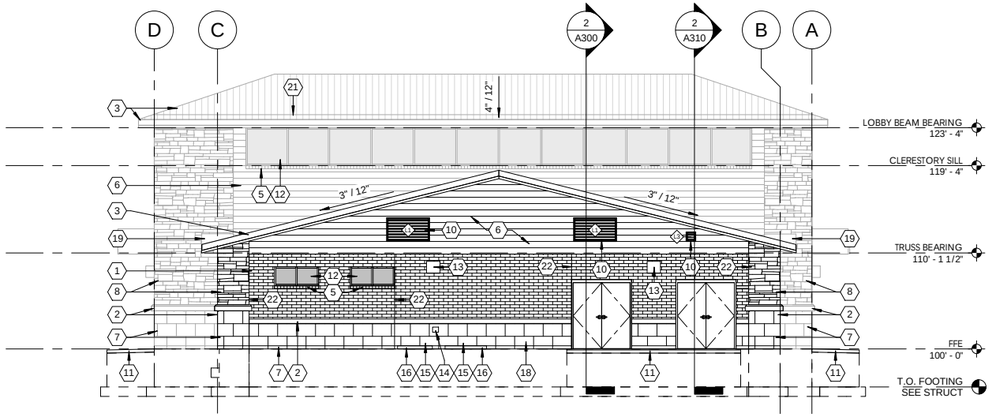
1. PRE-FINISHED RIDGE VENT
2. PRE-FINISHED STANDING SEAM METAL ROOF
3. PRE-FINISHED METAL CANOPY BELOW
4. SCUPPER AT CANOPY ROOF
5. FACE OF EXTERIOR WALL BELOW
6. SNOW GUARDS - INSTALL PER MANUFACTURER'S INSTRUCTIONS
7. EPDM MEMBRANE CANOPY ROOF BELOW

A110

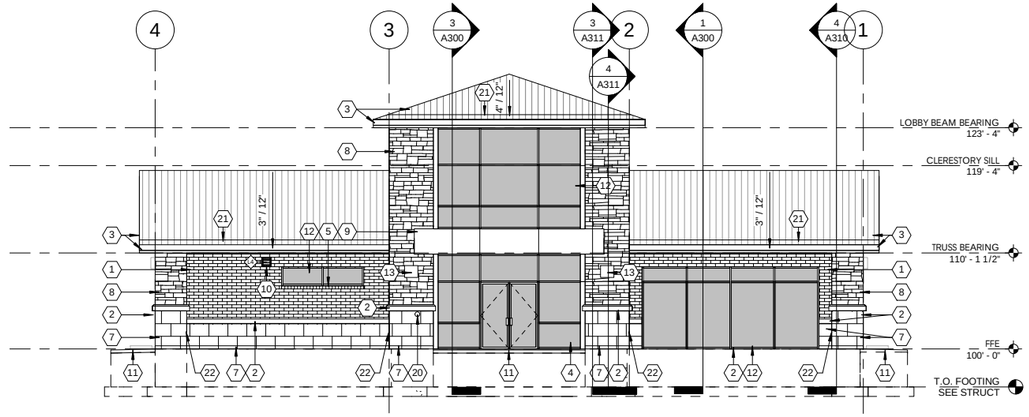
PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	REFLECTED CEILING PLAN & ROOF PLAN	SHEET 72 E

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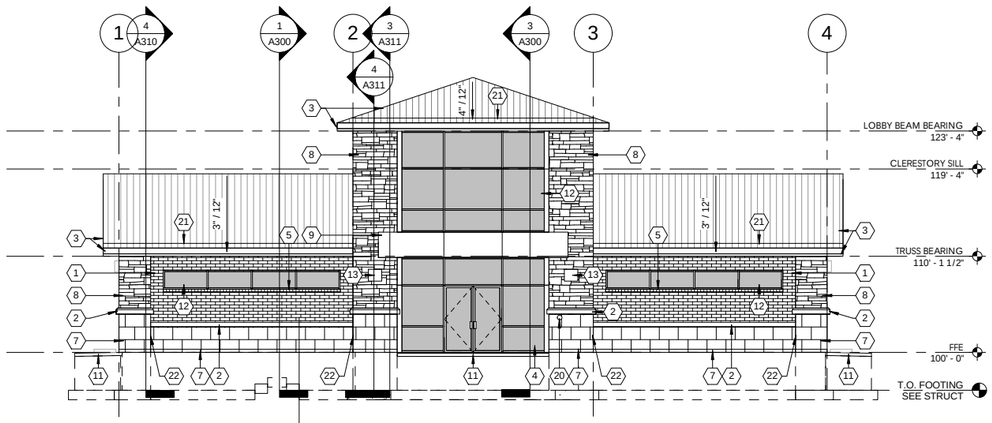
WISDOT/CADDS SHEET 42



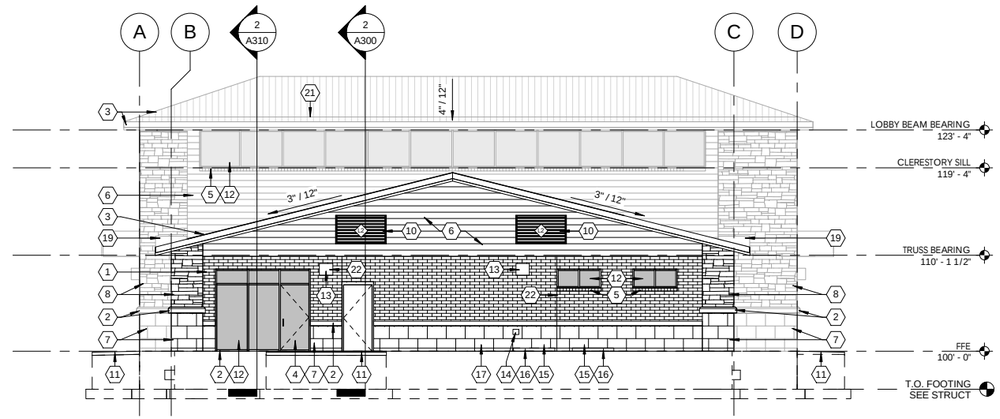
1 A200 NORTH BUILDING ELEVATION
1/8" = 1'-0"



4 A200 WEST BUILDING ELEVATION
1/8" = 1'-0"



2 A200 EAST BUILDING ELEVATION
1/8" = 1'-0"



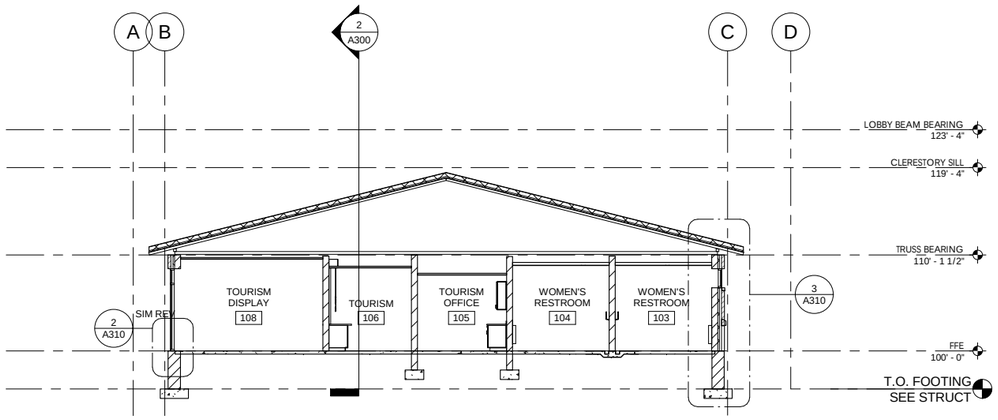
3 A200 SOUTH BUILDING ELEVATION
1/8" = 1'-0"

BUILDING ELEVATION KEYNOTES

1. BRICK-1
2. ARCHITECTURAL PRECAST CONCRETE SILL
3. PRE-FINISHED STANDING SEAM METAL ROOF W/ MATCHING FASCIA
4. PRE-FINISHED ALUMINUM STOREFRONT ENTRY
5. BRICK-1 ROWLOCK COURSE
6. PRE-FINISHED FIBER CEMENT BOARD LAP SIDING & TRIM
7. CMU-3 VENEER
8. STONE-1 VENEER
9. PRE-FINISHED METAL CANOPY
10. PRE-FINISHED ALUMINUM LOUVER - SEE MECHANICAL
11. CONCRETE STOOP - SEE STRUCTURAL
12. PRE-FINISHED ALUMINUM STOREFRONT
13. LIGHT FIXTURE - SEE ELECTRICAL
14. WALL HYDRANT - SEE PLUMBING
15. AIR CONDITIONER CONDENSING UNIT - SEE MECHANICAL
16. CONCRETE PAD - SEE MECHANICAL
17. GAS METER - SEE MECHANICAL
18. ELECTRIC METER - SEE ELECTRICAL
19. METAL FLASHING
20. HANDICAP DOOR OPERATOR PUSH PLATE - COORDINATE W/ ELECTRICAL & DOOR HARDWARE SUPPLIER
21. SNOW GUARDS - SEE ROOF PLAN FOR LOCATIONS
22. CONTROL JOINT

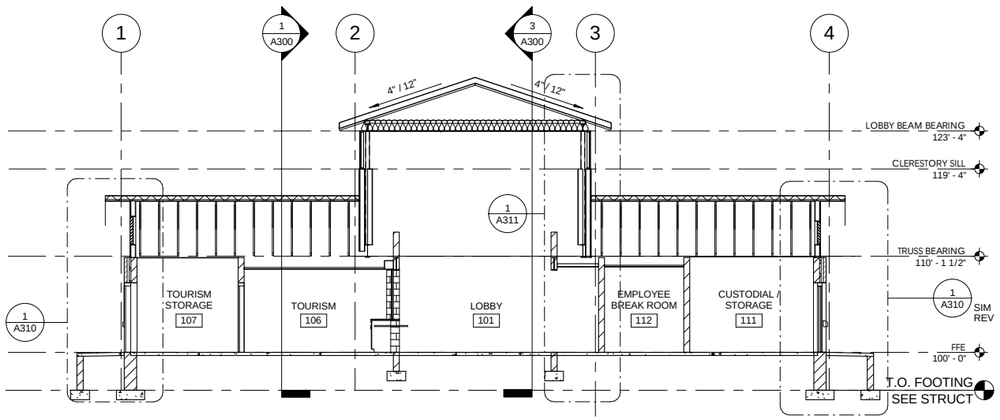
GENERAL NOTES:

1.) FOOTINGS AND FOUNDATIONS SHOWN FOR REFERENCE ONLY - SEE STRUCTURAL FOR LAYOUT AND CONFIGURATION OF FOOTINGS AND FOUNDATIONS - TYPICAL



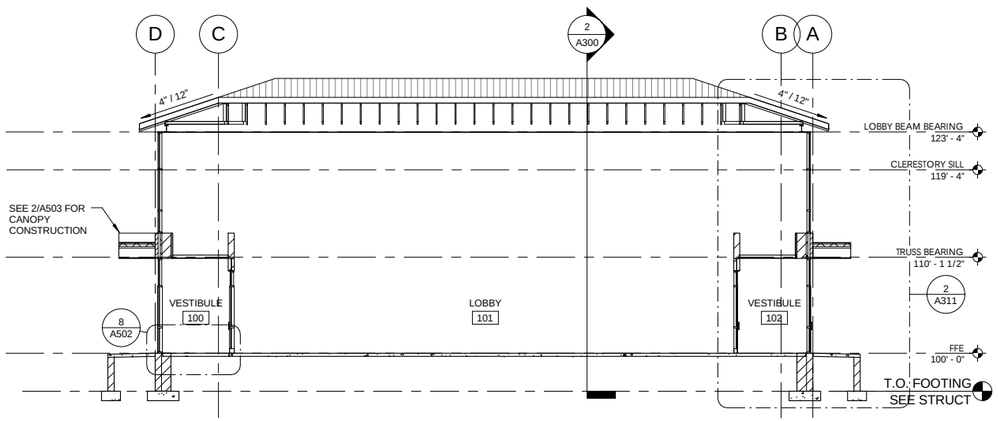
1 A300 E / W BUILDING SECTION

1/8" = 1'-0"



2 A300 N / S BUILDING SECTION

1/8" = 1'-0"

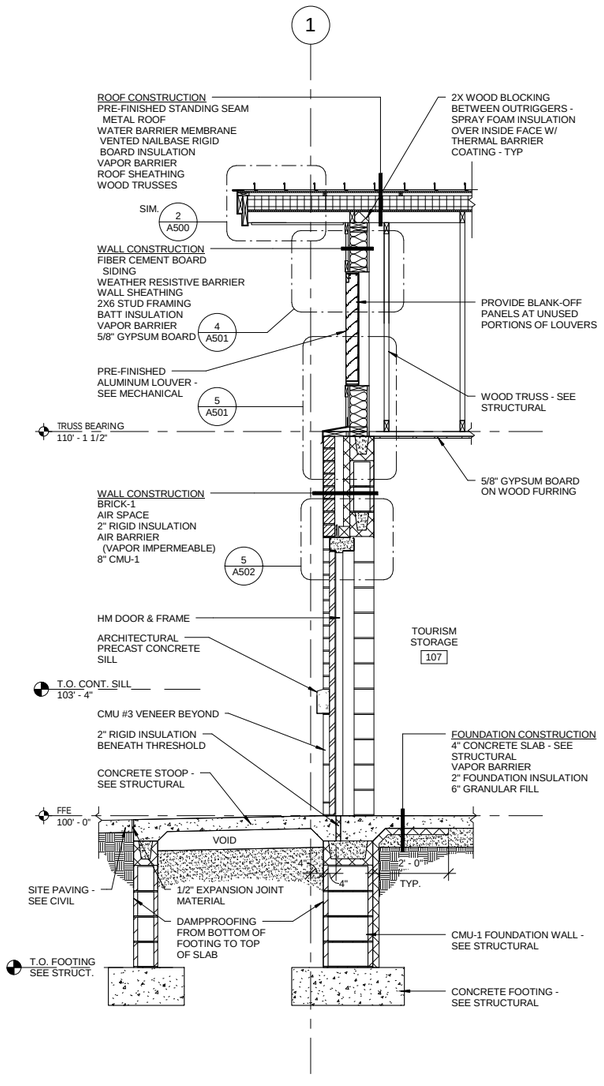


3 A300 E / W LOBBY BUILDING SECTION

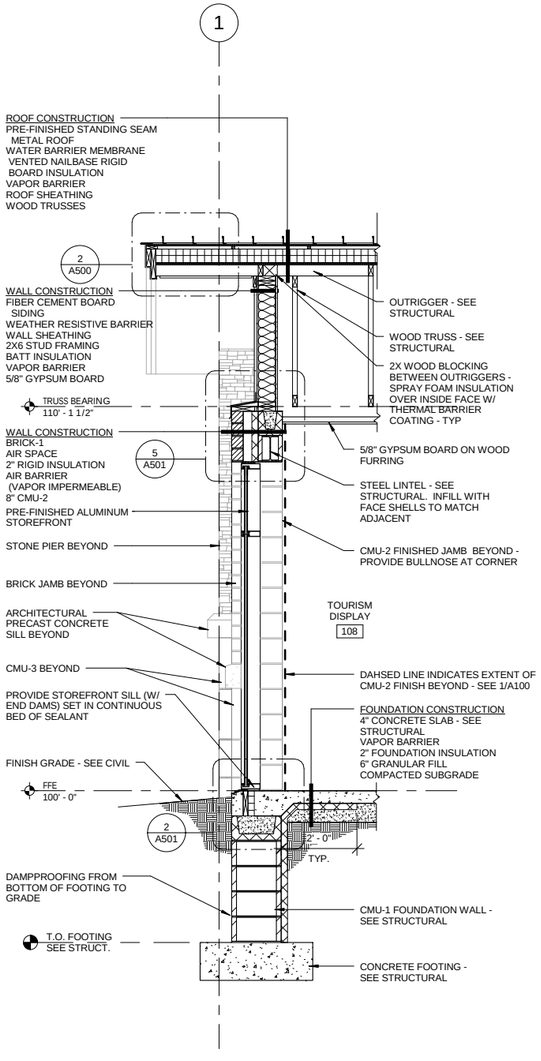
1/8" = 1'-0"

A300

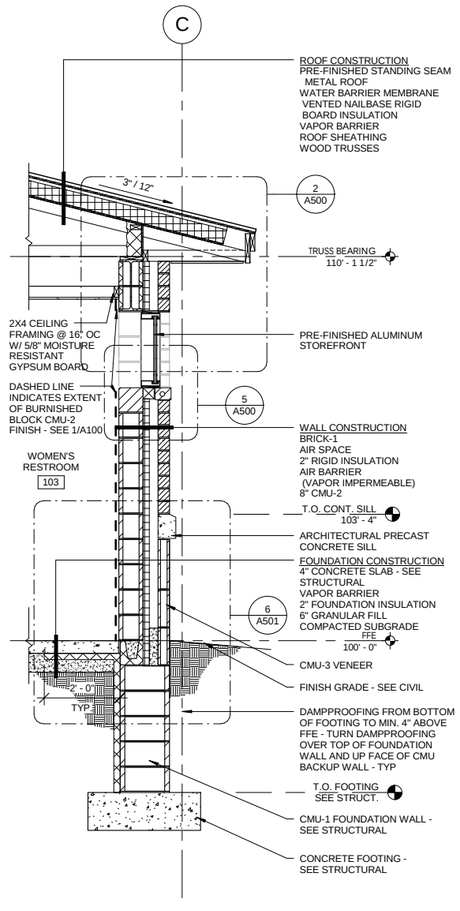
PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	BUILDING SECTIONS	SHEET 74	E



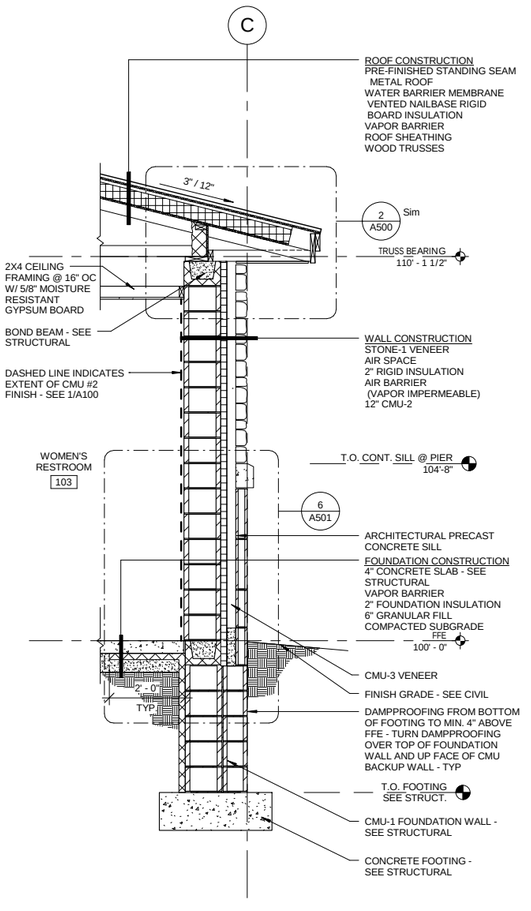
1 A310 WALL SECTION - TYPICAL W/ LOUVER
1/2" = 1'-0"



2 A310 WALL SECTION - STOREFRONT
1/2" = 1'-0"



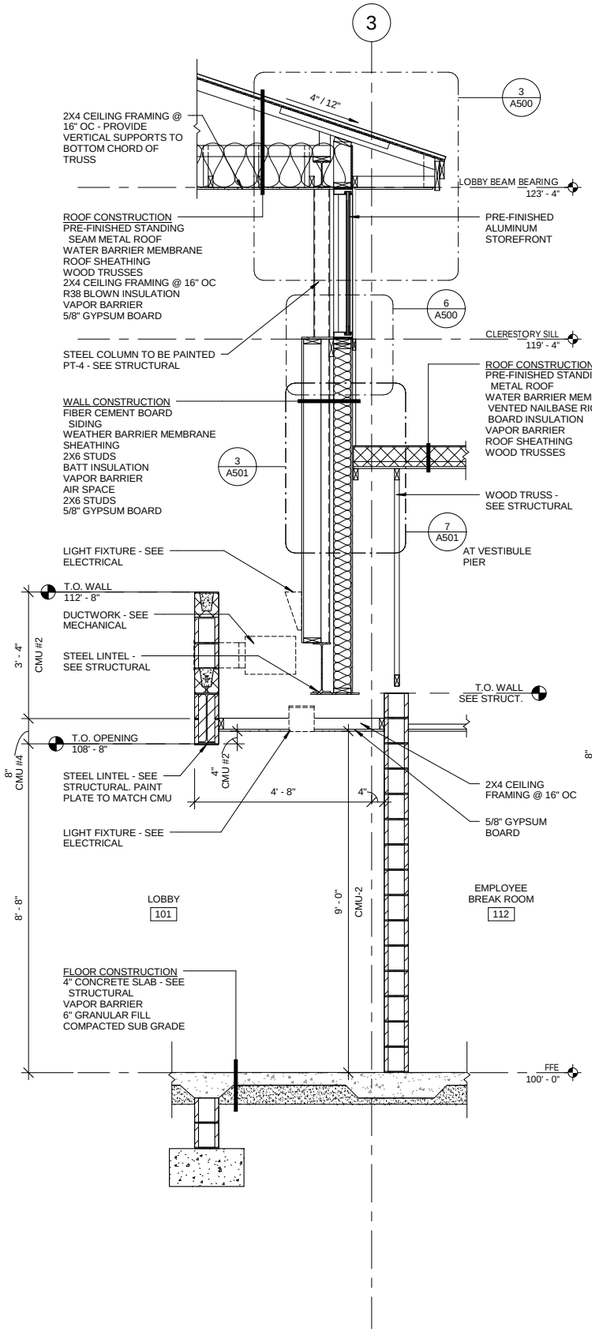
3 A310 WALL SECTION - HIGH WINDOW
1/2" = 1'-0"



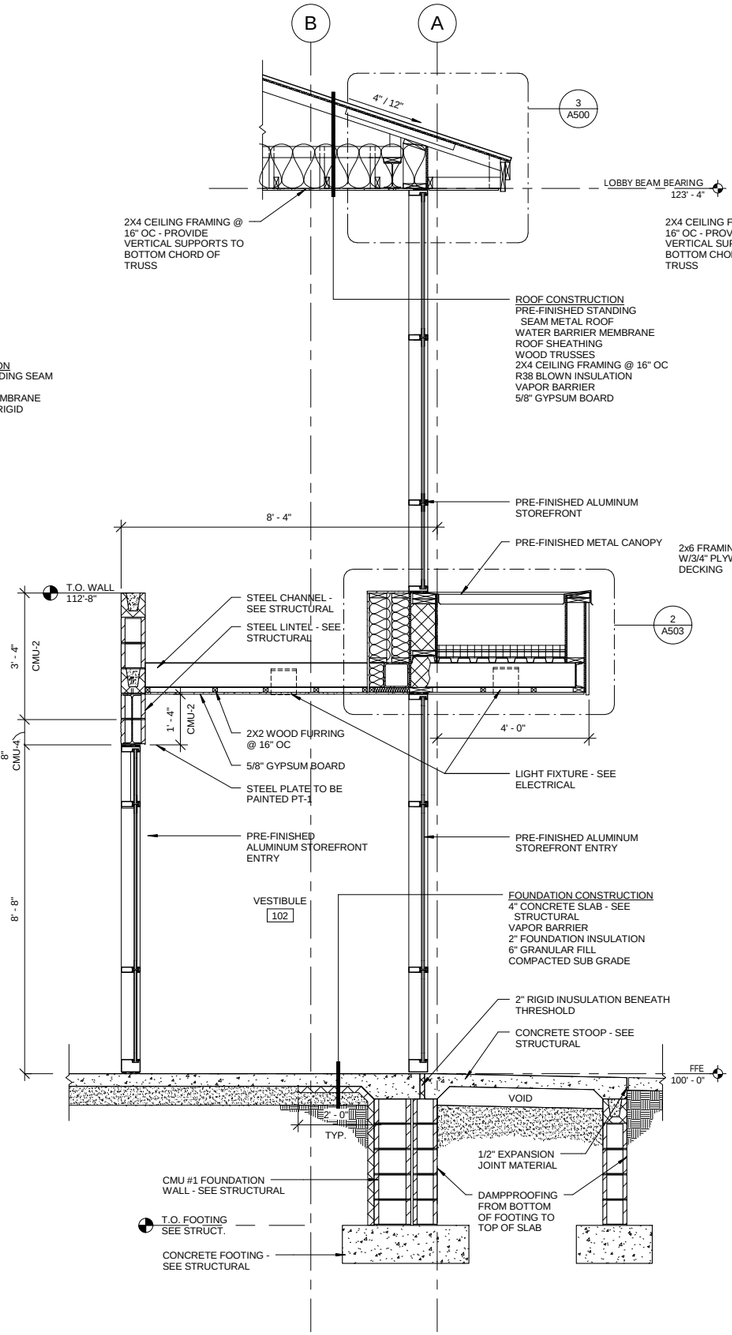
4 A310 WALL SECTION - LOW PIER
1/2" = 1'-0"

A310

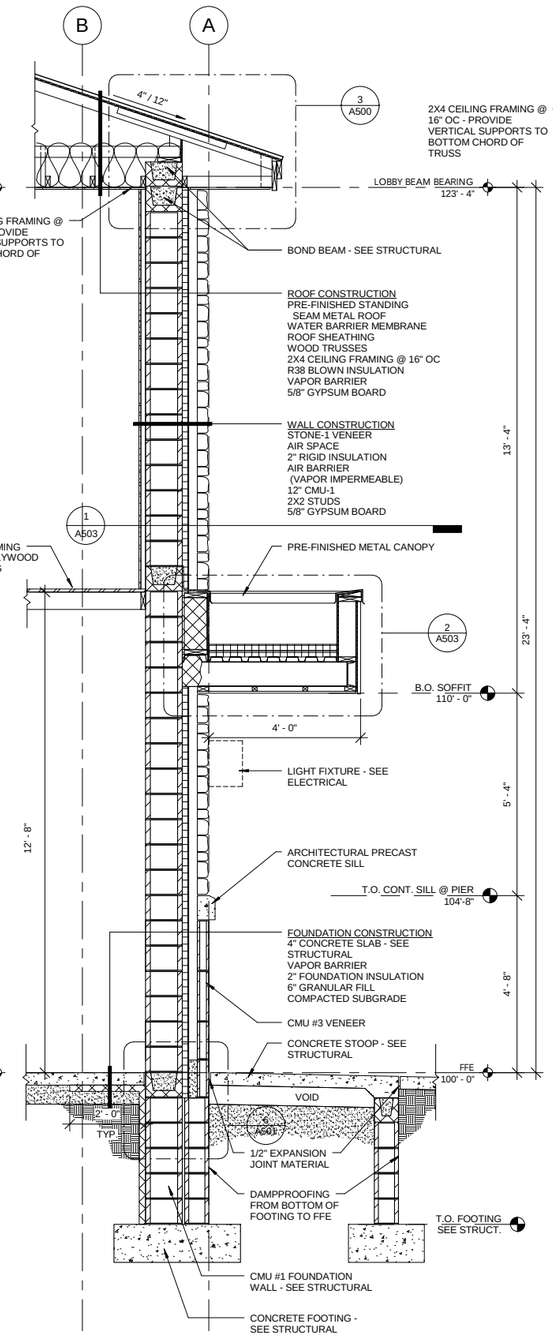
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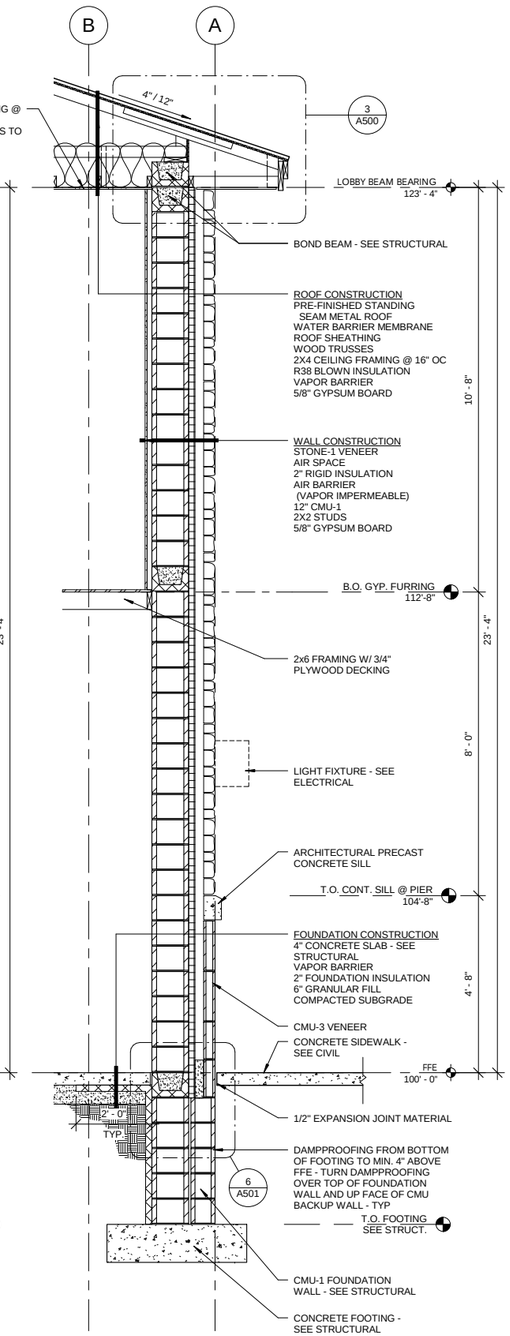
1 A311 WALL SECTION - LOBBY CLERESTORY
1/2" = 1'-0"



2 A311 WALL SECTION - VESTIBULE
1/2" = 1'-0"



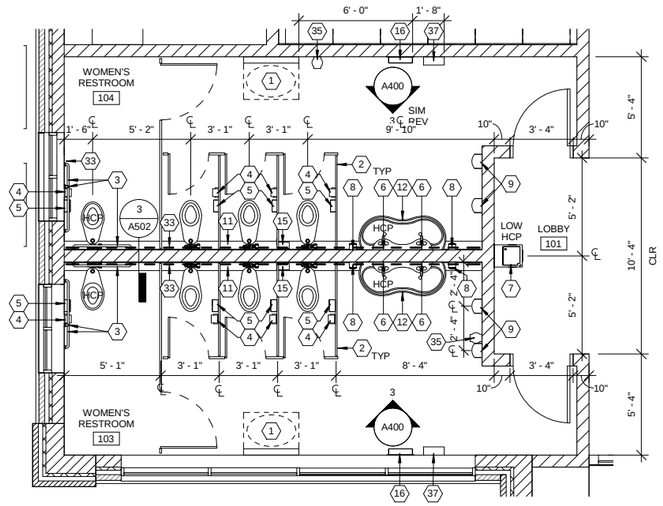
3 A311 WALL SECTION - VESTIBULE PIER @ CANOPY
1/2" = 1'-0"



4 A311 WALL SECTION - VESTIBULE PIER
1/2" = 1'-0"

A311

PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	WALL SECTIONS	SHEET 76	E

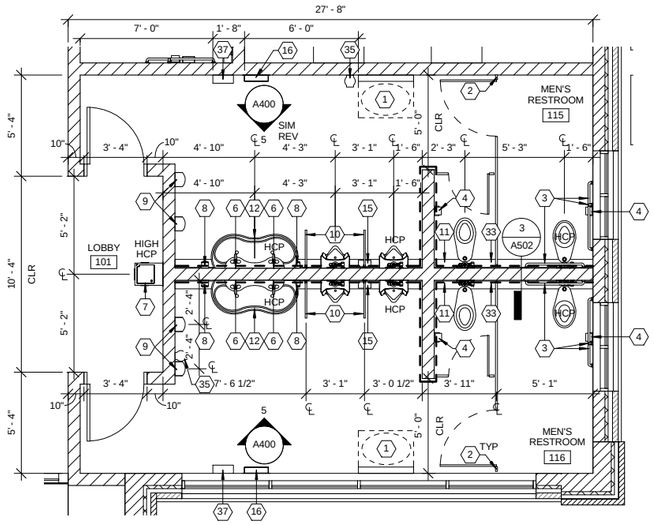


NOTE:

SEE BUILDING FLOOR PLAN ON SHEET A100 FOR EXTENTS OF BURNISHED BLOCK CMU-2

NORTH

1 A400 ENLARGED FLOOR PLAN - RM 103 & 104
1/4" = 1'-0"



NOTE:

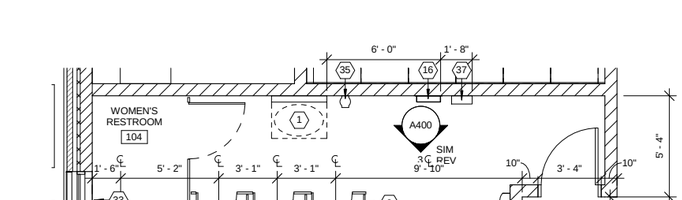
SEE BUILDING FLOOR PLAN ON SHEET A100 FOR EXTENTS OF BURNISHED BLOCK CMU-2

NORTH

2 A400 ENLARGED FLOOR PLAN - RM 115 & 116
1/4" = 1'-0"

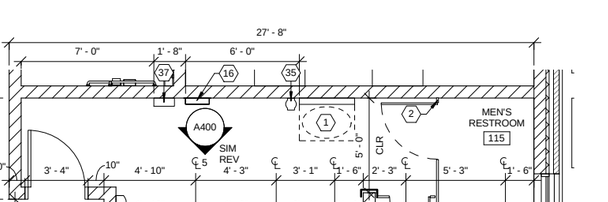
INTERIOR ELEVATION & ENLARGED FLOOR PLAN KEYNOTES

1. WALL MOUNTED INFANT CHANGING STATION
2. TOILET PARTITIONS - TYPICAL
3. GRAB BARS
4. TOILET PAPER DISPENSER
5. SANITARY NAPKIN DISPOSAL UNIT
6. CHANNEL FRAME MIRROR - 18" X 36"
7. WATER COOLER W/ BOTTLE FILLER- SEE PLUMBING
8. SOAP DISPENSER
9. ELECTRIC HAND DRYER - SEE 4/A400 TYPICAL
10. URINAL SCREEN
11. DRAIN TROUGH, SLOPE TO DRAIN 3/16" PER FOOT - COORDINATE W/ PLUMBING & FINISH TROUGH W/ WATERPROOF EPOXY PLUMBING COATING
12. LAVATORY - SEE PLUMBING
13. SOLID SURFACE COUNTERTOP W/ BACKSPLASH & SIDESPLASH
14. PLASTIC LAMINATE UPPER CABINETS (PL-1)
15. FLOOR DRAIN - SEE PLUMBING
16. RECESSED WASTE RECEPTACLE
17. BASE AS SCHEDULED
18. BULLNOSE EDGE
19. REFRIGERATOR - N.I.C.
20. COILING GRILLE
21. FINISHED PLASTIC LAMINATE END PANEL
22. PLASTIC LAMINATE BASE CABINETS (PL-1)
23. PLASTIC LAMINATE COUNTERTOP W/ BACKSPLASH (PL-2)
24. SINK - SEE MECHANICAL
25. INSULATE EXPOSED PIPING - TYPICAL
26. PLASTIC LAMINATE BACKSPLASH & SIDESPLASH - TYP
27. VENDING MACHINES - N.I.C.
28. MONITORS - N.I.C. - SEE ELECTRICAL
29. CMU-4 FINISH
30. PAINTED STEEL COLUMN (PT-4) - SEE STRUCTURAL
31. 18"x 24" SOLID SURFACE PANEL
32. DUCTWORK GRILLE - SEE MECHANICAL
33. DASHED LINE INDICATES EXTENT OF TILE WAINSCOT FINISH - PROVIDE FLUSH CUT CMU JOINTS @ WALLS TO RECEIVE TILE FINISH
34. CMU-2 FINISH
35. HOSE BIB - SEE PLUMBING
36. SUPPORT BRACKET @ 3'-6" OC MAX
37. WALL-MOUNTED SHARPS DISPOSAL RECEPTACLE
38. HANDICAP DOOR OPERATOR PUSH PLATE - SEE ELECTRICAL
39. LIGHT FIXTURE - SEE ELECTRICAL
40. SOLID SURFACE COUNTERTOP
41. GYPSUM BOARD WALL TO BE PAINTED PT-2
42. PROVIDE (2) GROMMETS - LOCATE AS DIRECTED BY OWNER
43. HARDWOOD VENEER PLYWOOD CASEWORK VENEER WITH 1x4 HARDWOOD TRIM

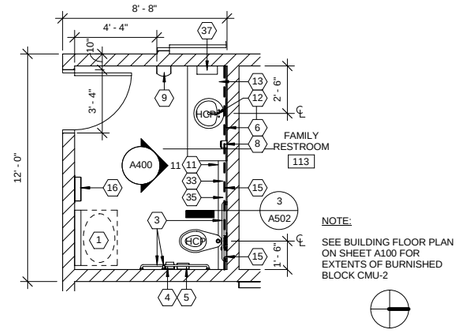


3 A400 RM 103 - FIXTURE WALL
1/4" = 1'-0"

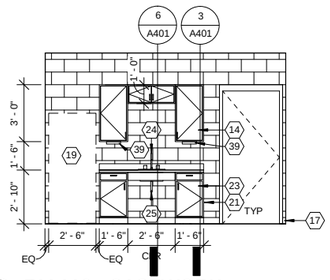
4 A400 FIXTURE WALL - TYPICAL
1/4" = 1'-0"



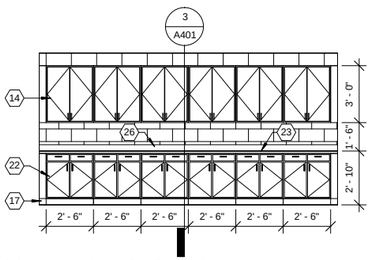
5 A400 RM 116 - FIXTURE WALL
1/4" = 1'-0"



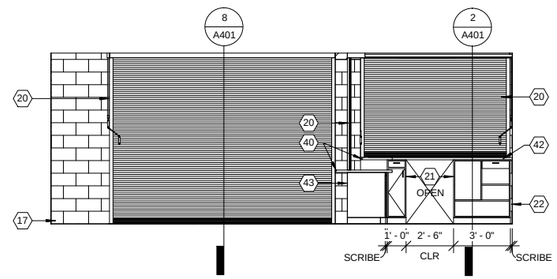
6 A400 ENLARGED FLOOR PLAN - RM 113
1/4" = 1'-0"



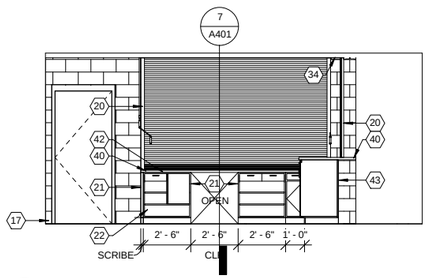
7 A400 RM 112 - CASEWORK
1/4" = 1'-0"



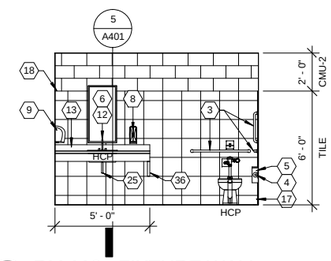
8 A400 RM 105 - CASEWORK
1/4" = 1'-0"



9 A400 RM 106 NORTH - CASEWORK
1/4" = 1'-0"



10 A400 RM 106 WEST - CASEWORK
1/4" = 1'-0"

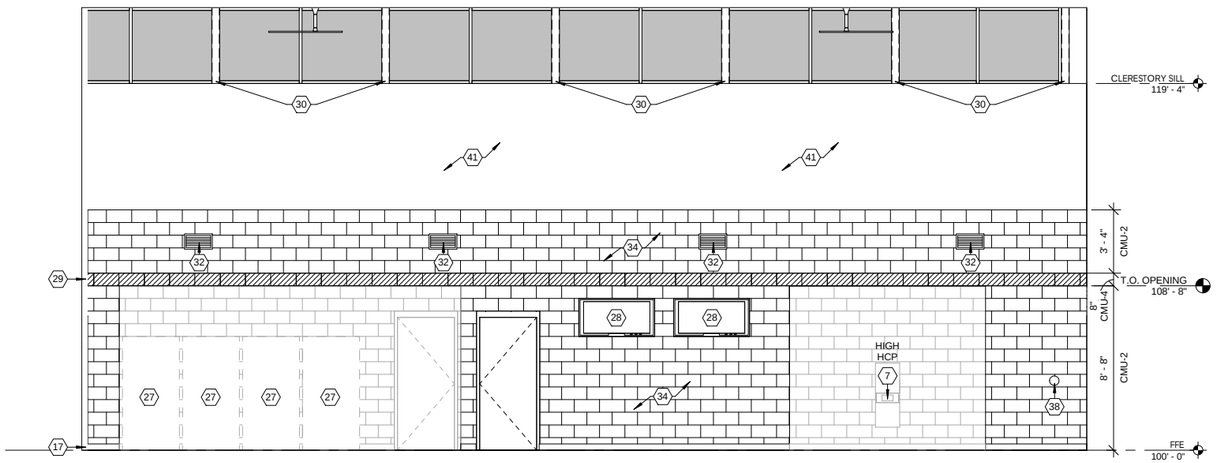


11 A400 RM 113 - FIXTURE WALL
1/4" = 1'-0"

A400

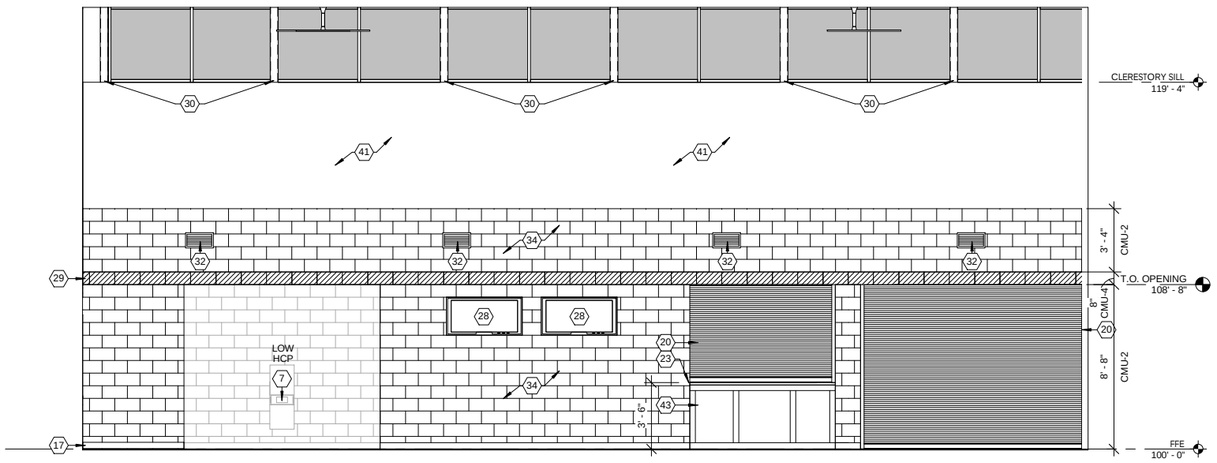
PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	ENLARGED FLOOR PLANS & INTERIOR ELEVATIONS	SHEET 77	E

FILE NAME: S:\UZ\W\WITCO\131411\5-final-dsgn\51-const-dwgs-CAD\15-Arch\00_Revit File
PLOT DATE: 11/1/2015 12:44:40 PM
PLOT BY:
PLOT NAME:
PLOT SCALE:



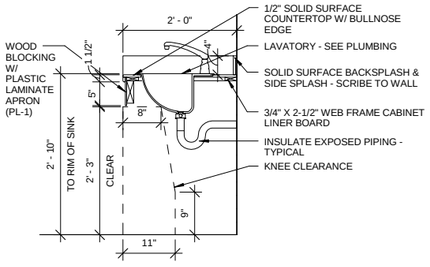
1 A401 RM 101 - NORTH WALL
1/4" = 1'-0"

NOTE:
SEE KEYNOTES ON SHEET A400

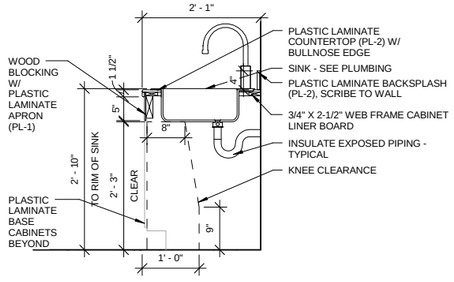


4 A401 RM 101 - SOUTH WALL
1/4" = 1'-0"

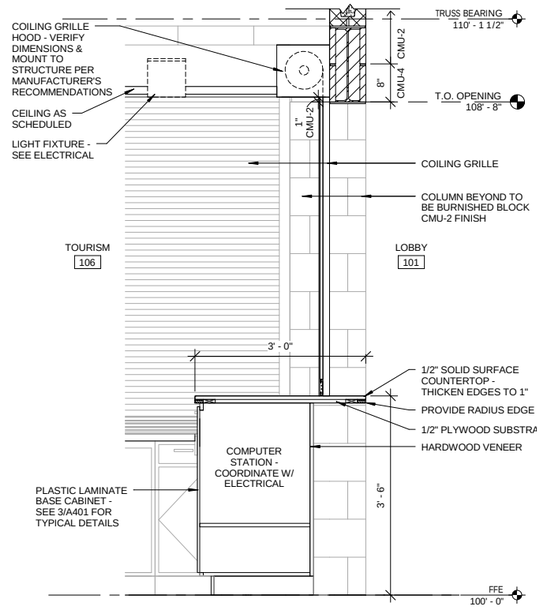
NOTE:
SEE KEYNOTES ON SHEET A400



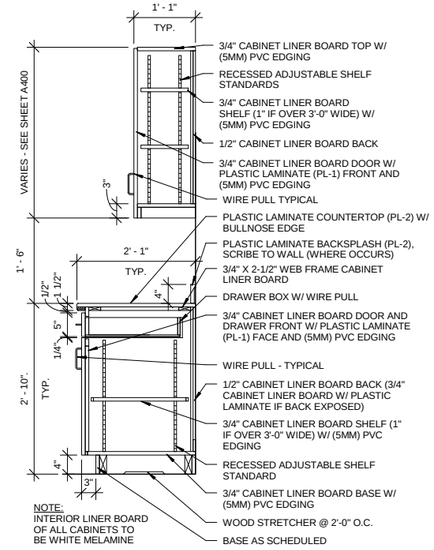
5 A401 LAVATORY @ RM 113
3/4" = 1'-0"



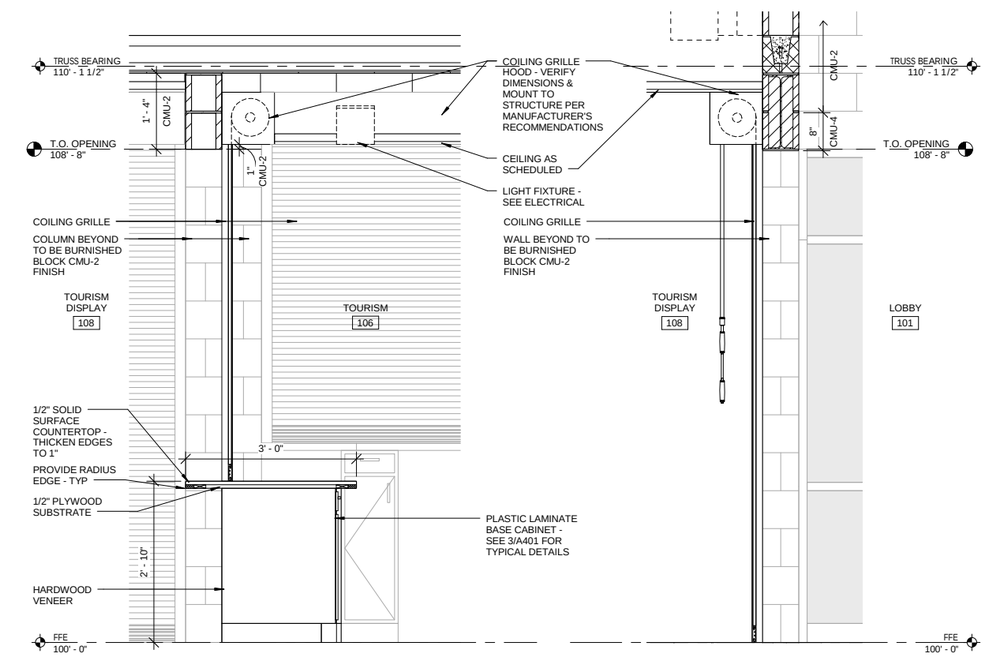
6 A401 SINK @ RM 112 & 105
3/4" = 1'-0"



2 A401 CASEWORK @ TOURISM HIGH COUNTER
3/4" = 1'-0"



3 A401 TYPICAL BASE & UPPER CABINET
3/4" = 1'-0"

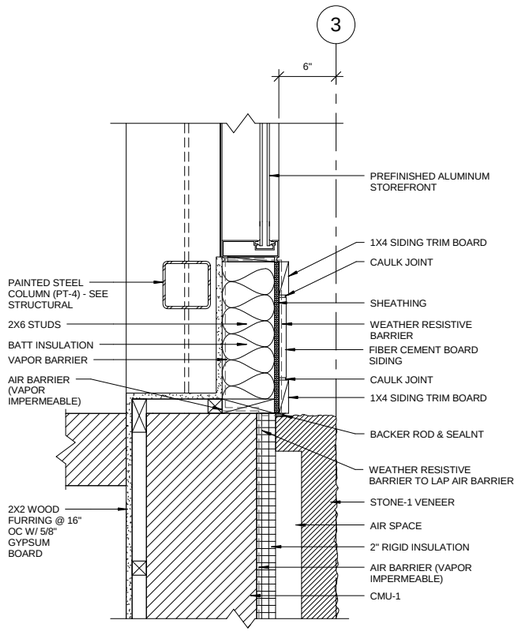


7 A401 CASEWORK @ TOURISM LOW COUNTER
3/4" = 1'-0"

8 A401 COILING GRILLE @ TOURISM DISPLAY
3/4" = 1'-0"

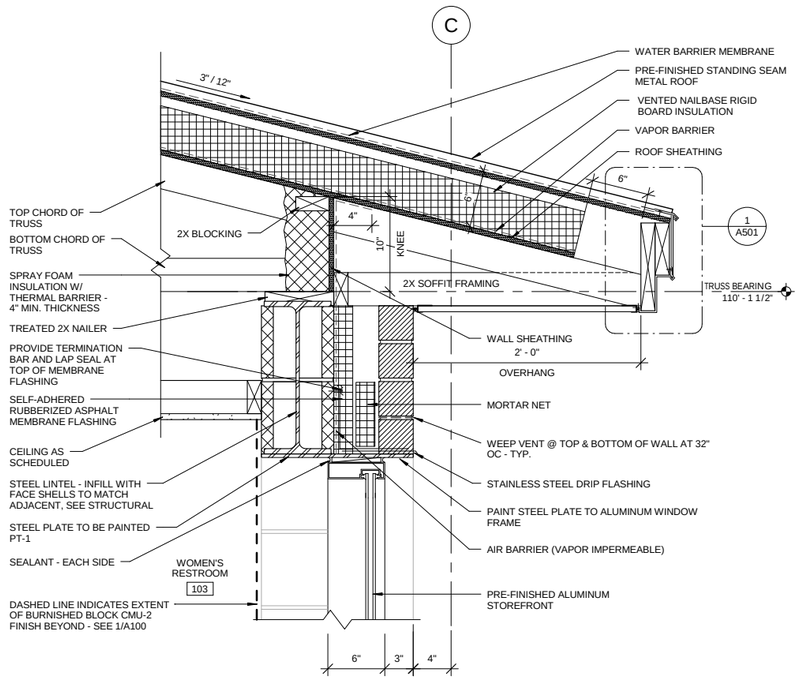
A401

PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	INTERIOR ELEVATIONS & CASEWORK DETAILS	SHEET 78	E



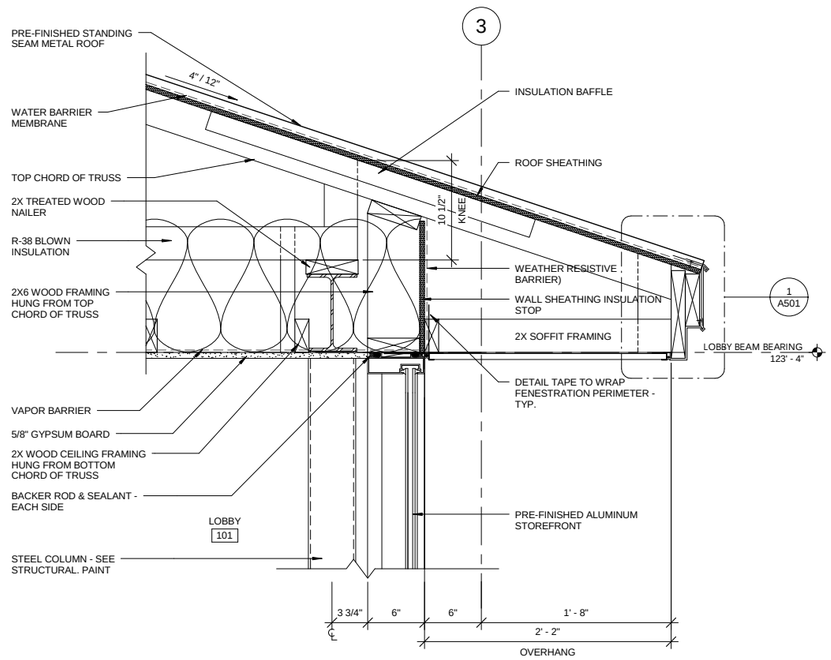
1 A500 PLAN @ CLERESTORY CORNER

1 1/2" = 1'-0"



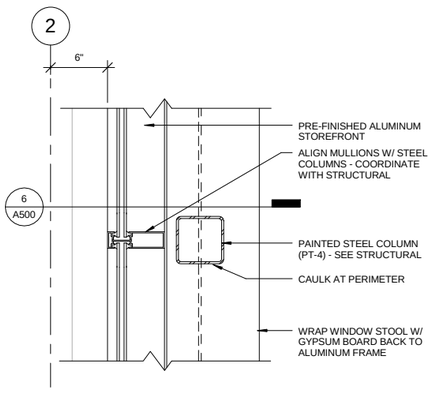
2 A500 SOFFIT @ LOWER ROOF - TYP

1 1/2" = 1'-0"



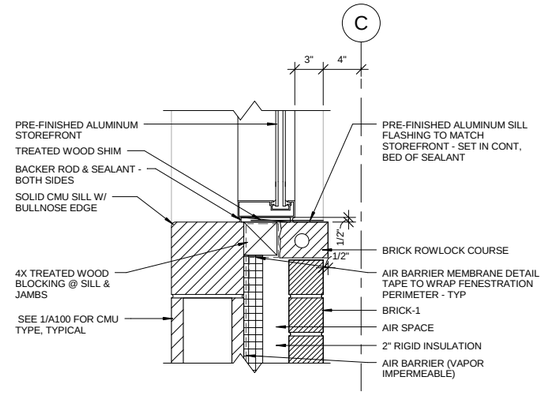
3 A500 SOFFIT @ CLERESTORY - TYP

1 1/2" = 1'-0"



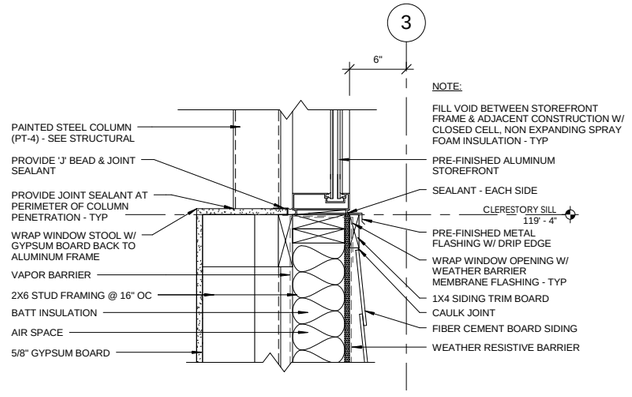
4 A500 PLAN @ CLERESTORY MULLION

1 1/2" = 1'-0"



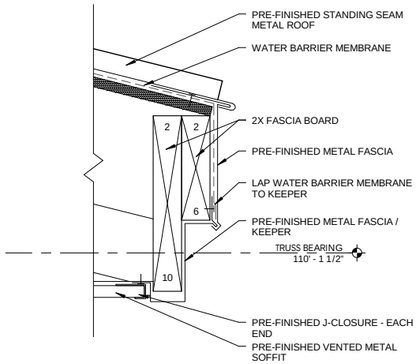
5 A500 SILL @ LOWER ROOF - TYP

1 1/2" = 1'-0"

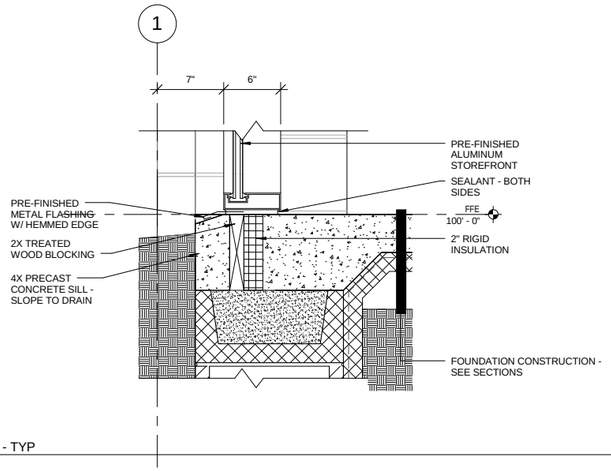


6 A500 SILL @ CLERESOTRY - TYP

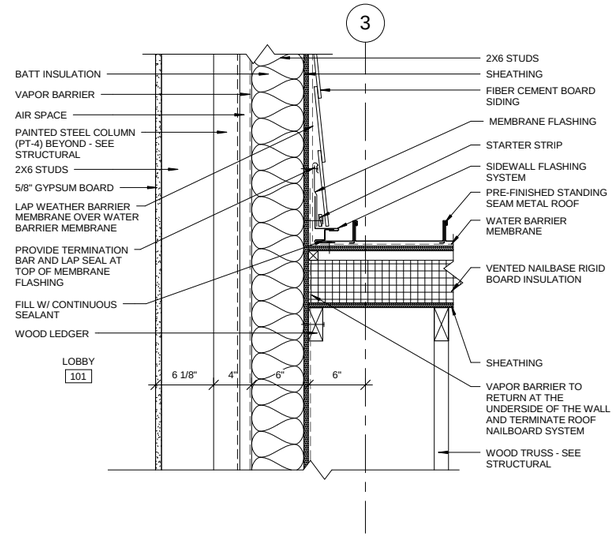
1 1/2" = 1'-0"



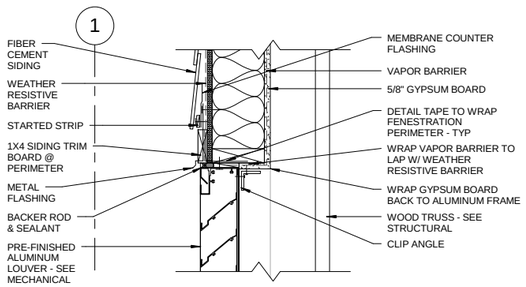
1 A501 ROOF FASCIA - TYP
3" = 1'-0"



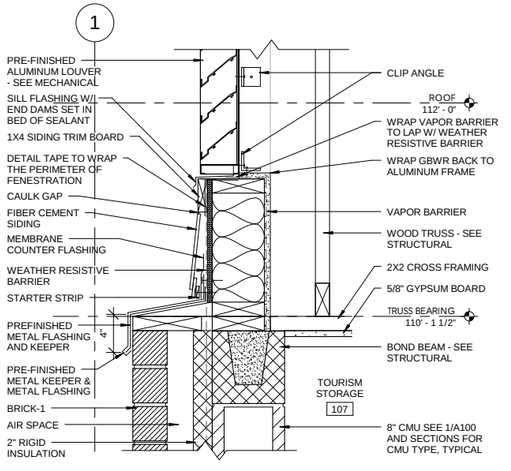
2 A501 STOREFRONT SILL - TYP
1 1/2" = 1'-0"



3 A501 ROOF CONNECTION @ CLERESTORY SIDING
1 1/2" = 1'-0"

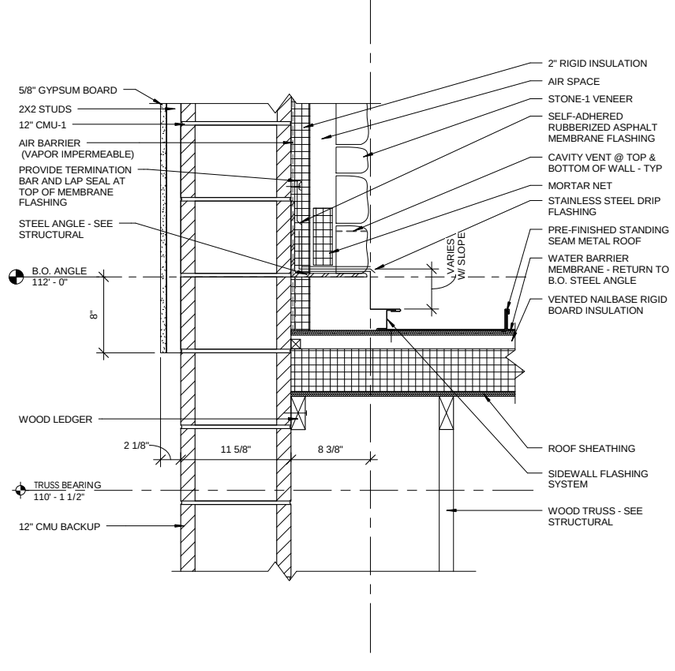


4 A501 LOUVER HEAD - TYP
1 1/2" = 1'-0"

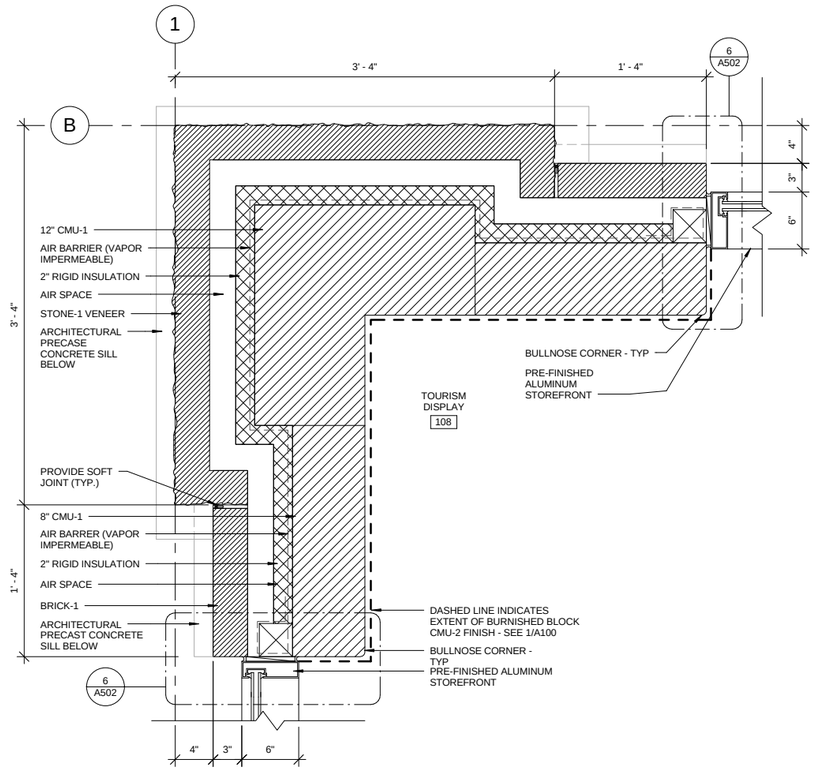


5 A501 LOUVER SILL - TYP
1 1/2" = 1'-0"

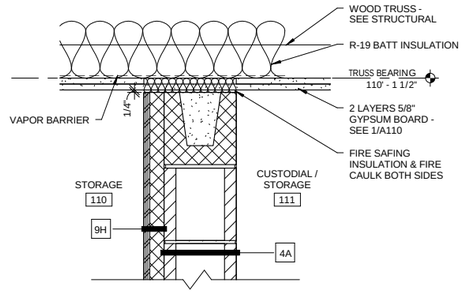
6 A501 FOUNDATION - TYP
1 1/2" = 1'-0"



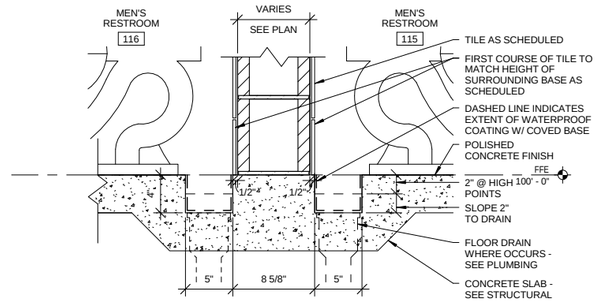
7 A501 ROOF CONNECTION @ VESTIBULE PIER
1 1/2" = 1'-0"



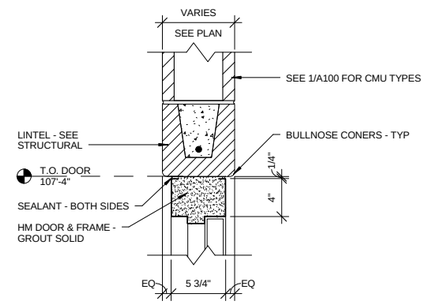
1 A502 PLAN @ MASONRY CORNER
1 1/2" = 1'-0"



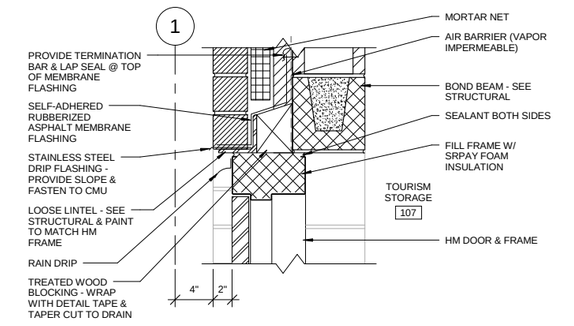
2 A502 FIRE RATED CEILING CONNECTION
1 1/2" = 1'-0"



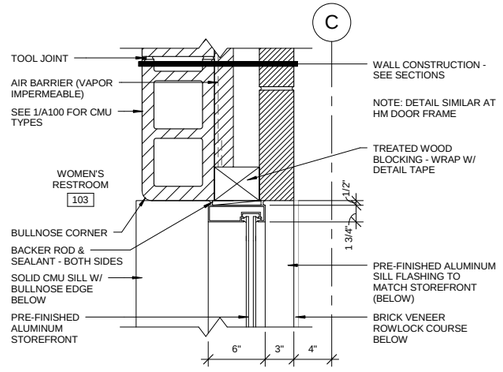
3 A502 DRAIN TROUGH
1 1/2" = 1'-0"



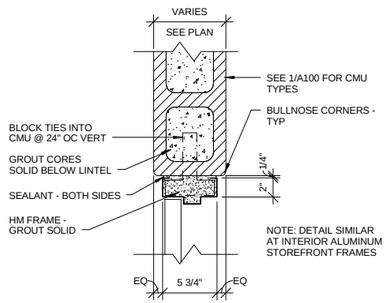
4 A502 INTERIOR HM FRAME HEAD - TYP
1 1/2" = 1'-0"



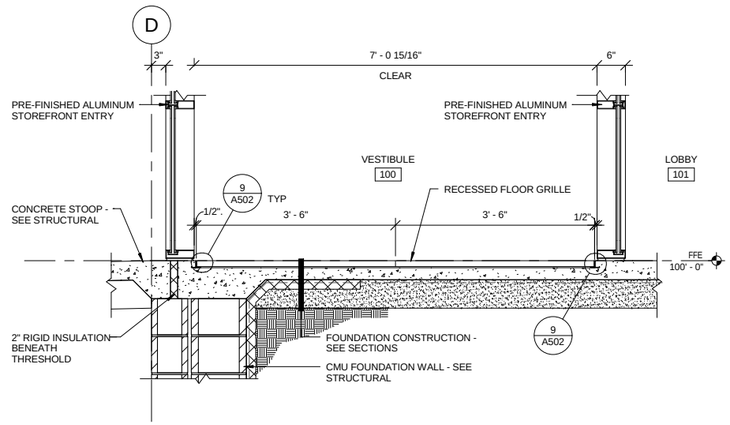
5 A502 EXTERIOR HM FRAME HEAD - TYP
1 1/2" = 1'-0"



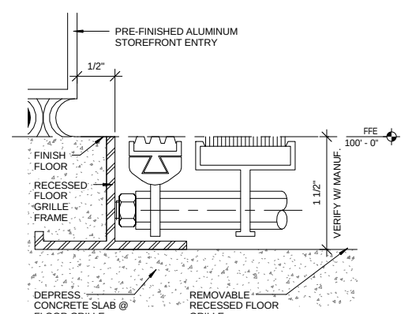
6 A502 ALUMINUM STOREFRONT JAMB - TYP
1 1/2" = 1'-0"



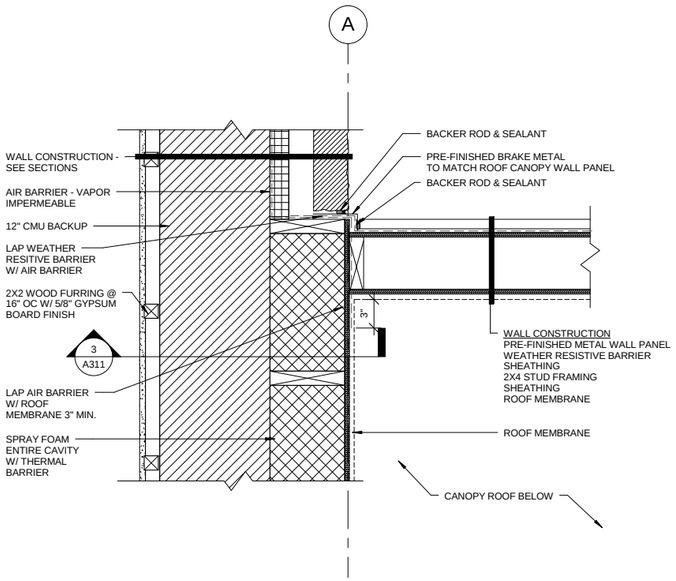
7 A502 INTERIOR HM FRAME JAMB - TYP
1 1/2" = 1'-0"



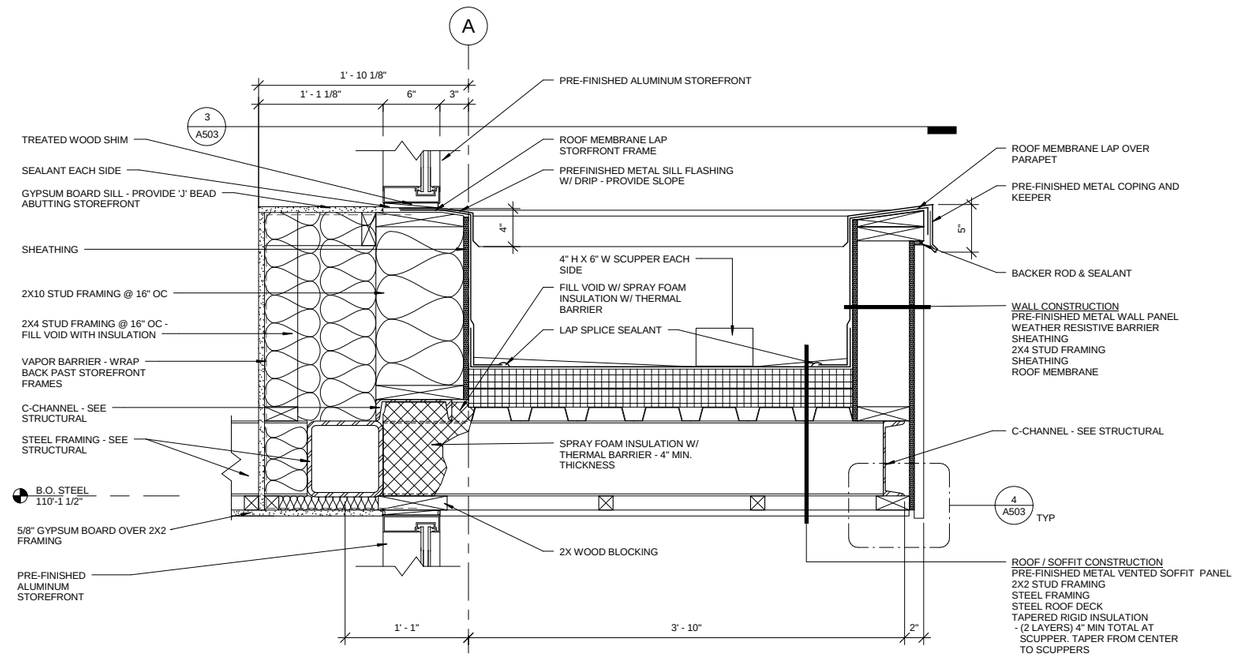
8 A502 RECESSED FLOOR GRILLE
3/4" = 1'-0"



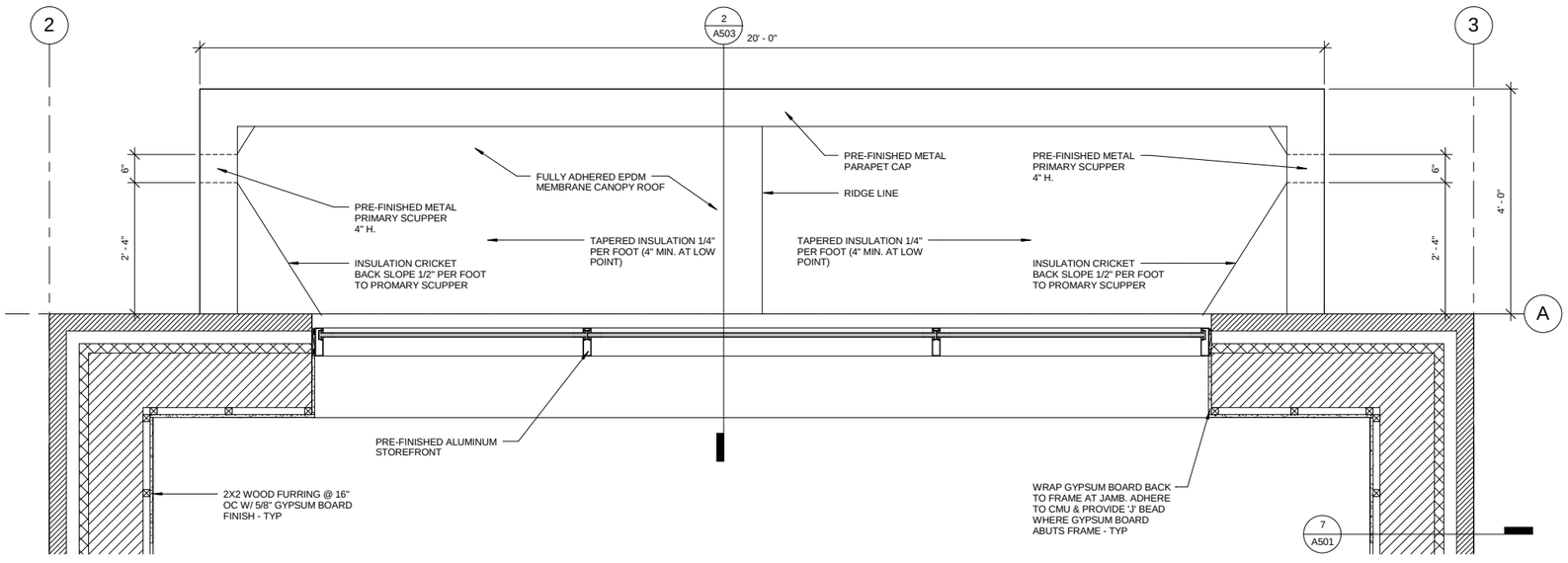
9 A502 RECESSED FLOOR GRILLE CONNECTION
12" = 1'-0"



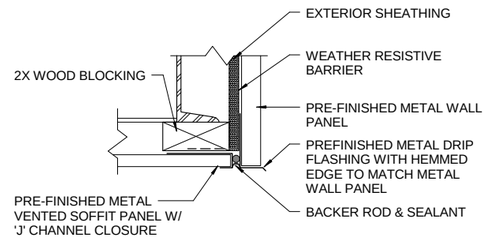
1 A503 PLAN @ CANOPY PIER CONNECTION
1 1/2" = 1'-0"



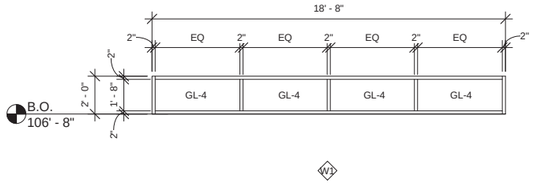
2 A503 CANOPY DETAIL @ ALUMINUM STOREFRONT
1 1/2" = 1'-0"

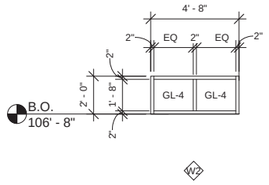


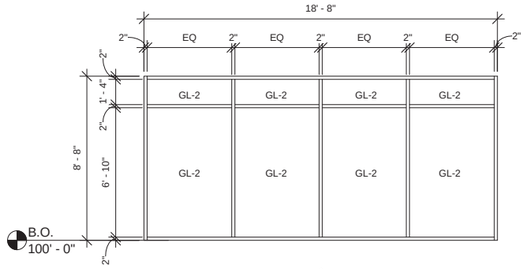
3 A503 ENLARGED CANOPY PLAN
3/4" = 1'-0"

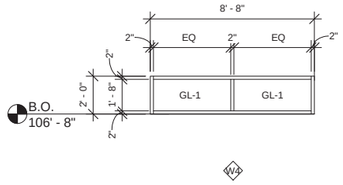


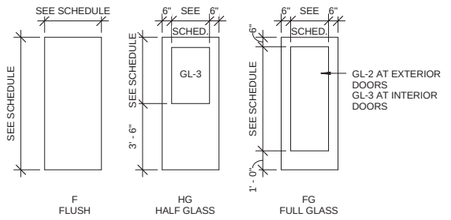
4 A503 SOFFIT DETAIL
3" = 1'-0"



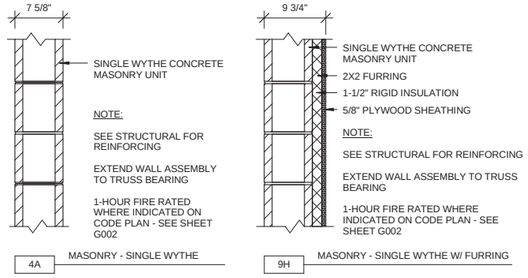


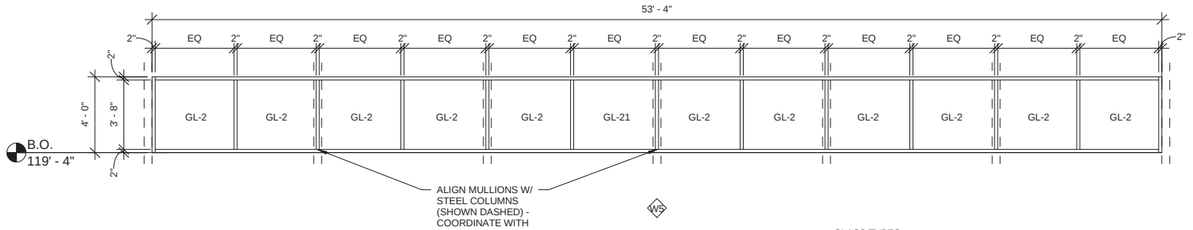






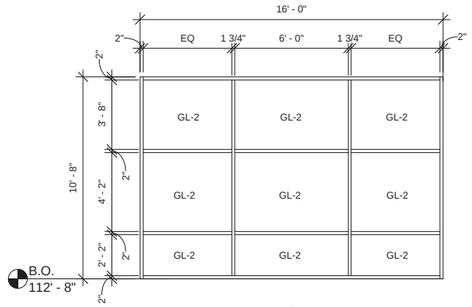
DOOR TYPES



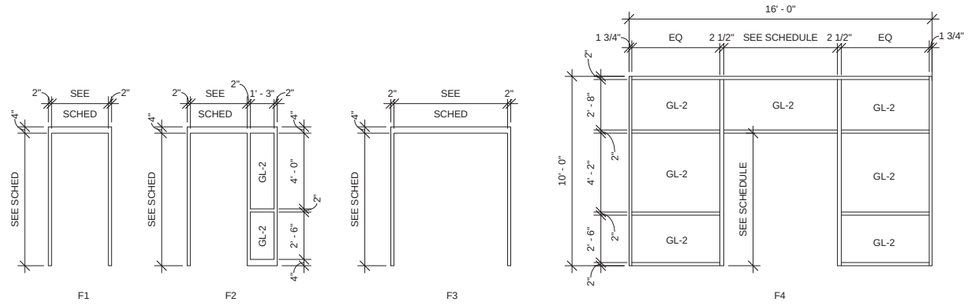


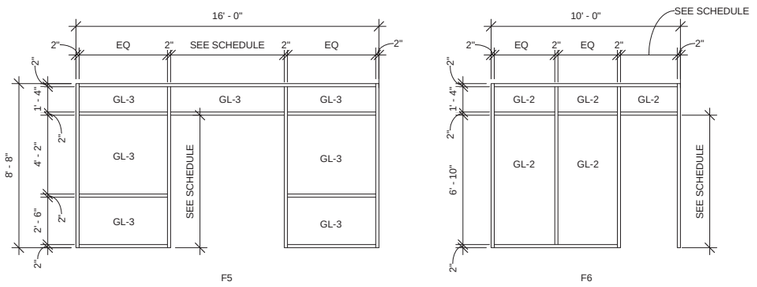
GLASS TYPES

GL-1 1" THICK INSULATED GLASS
GL-2 1" THICK INSULATED TEMPERED GLASS
GL-3 1/4" CLEAR, TEMPERED GLASS
GL-4 1" THICK INSULATED OBSCURE GLASS

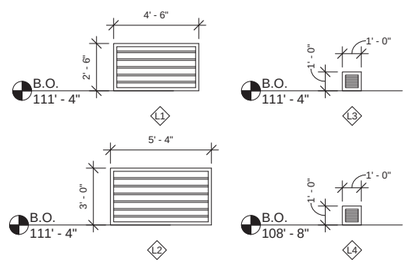


WINDOW TYPES





FRAME TYPES



LOUVER TYPES

OPENING SCHEDULE

OPENING NUMBER	DOOR SIZE WIDTH	HEIGHT	THICKNESS	TYPE	MATL	FIRE RATING	FRAME TYPE	FRAME MATL	FRAME DETAIL JAMB	HEAD	SILL	HDWR GROUP	REMARKS
100.1	6' - 0"	7' - 0"	1 3/4"	FG	AL	-	F4	AL	6/A502	2/A503	8/A502	2	
100.2	6' - 0"	7' - 0"	1 3/4"	FG	AL	-	F5	AL	7/A502 SIM	2/A311	8/A502	4	
102.1	6' - 0"	7' - 0 3/8"	1 3/4"	FG	AL	-	F4	AL	6/A502	2/A503	2/A311	2	
102.2	6' - 0"	7' - 0"	1 3/4"	FG	AL	-	F5	AL	7/A502 SIM	2/A311	2/A311	4	
103	3' - 0"	7' - 0"	1 3/4"	F	HM	-	F1	HM	7/A502	4/A502	-	8	#1
104	3' - 0"	7' - 0"	1 3/4"	F	HM	-	F1	HM	7/A502	4/A502	-	8	#1
105	3' - 0"	7' - 0"	1 3/4"	F	HM	-	F1	HM	7/A502	4/A502	-	15	#1
106.1	7' - 5"	5' - 2"	-	-	AL	-	-	-	-	2/S401	2/S401	1	
106.2	9' - 6 1/2"	5' - 10"	-	-	AL	-	-	-	-	7/A401	7/A401	1	
107.1	3' - 0"	7' - 0"	1 3/4"	F	HM	-	F1	HM	7/A502	4/A502	-	15	#1
107.2	3' - 0"	7' - 0"	1 3/4"	F	HM	-	F1	HM	5/A502	6/A502 SIM	1/A301 SIM	7	#1
108.1	3' - 0"	6' - 10 1/4"	1 3/4"	F	AL	-	F6	AL	6/A502	5/A501 SIM	2/A501	6	
108.2	3' - 0"	7' - 0"	1 3/4"	F	HM	-	F1	HM	7/A502	4/A502	-	14	#1
108.3	11' - 5 3/8"	8' - 8"	-	-	AL	-	-	-	-	8/A401	8/A401	1	
109	3' - 0"	7' - 0"	1 3/4"	HG	HM	-	F2	HM	7/A502	4/A502	-	10	#1
110	6' - 0"	7' - 0"	1 3/4"	F	HM	-	F3	HM	5/A502	6/A502 SIM	1/A310 SIM	3	#1
111.1	3' - 0"	7' - 0"	1 3/4"	F	HM	45 MIN	F1	HM	7/A502	4/A502	-	13	#1
111.2	6' - 0"	7' - 0"	1 3/4"	F	HM	-	F3	HM	5/A502	6/A502 SIM	1/A301 SIM	5	#1
112	3' - 0"	7' - 0"	1 3/4"	F	HM	-	F1	HM	7/A502	4/A502	-	12	#1
113	3' - 0"	7' - 0"	1 3/4"	F	HM	-	F1	HM	7/A502	4/A502	-	9	#1
114	3' - 0"	7' - 0"	1 3/4"	F	HM	45 MIN	F1	HM	7/A502	4/A502	-	13	#1
115	3' - 0"	7' - 0"	1 3/4"	F	HM	-	F1	HM	7/A502	4/A502	-	8	#1
116	3' - 0"	7' - 0"	1 3/4"	F	HM	-	F1	HM	7/A502	4/A502	-	8	#1
117	3' - 0"	7' - 0"	1 3/4"	F	HM	-	F1	HM	7/A502	4/A502	-	11	#1
118	3' - 0"	7' - 0"	1 3/4"	F	HM	-	F1	HM	7/A502	4/A502	-	15	#1

ROOM FINISH SCHEDULE

ROOM NUNBER	ROOM NAME	FLOOR	BASE	WALL FINISH NORTH	SOUTH	EAST	WEST	CEILINGS FINISH	MATERIAL	REMARKS
100	VESTIBULE	RFG / PC	VB	CMU-2	CMU-2	CMU-2	CMU-2	PT-2	GYP	
101	LOBBY	PC	VB	CMU #2 / CMU #4 / PT-2	CMU-2 / CMU-4 / PT-2	CMU-2 / CMU-4 / PT-2	CMU-2 / CMU-4 / PT-2	PT-2	GYP	#2, #3
102	VESTIBULE	PC	VB	CMU-2	CMU-2	CMU-2	CMU-2	PT-2	GYP	
103	WOMEN'S RESTROOM	PC	T	CMU-2	CMU-2	CMU-2	T / CMU-2	PT-2	GBWR	#1, #5
104	WOMEN'S RESTROOM	PC	T	CMU-2	CMU-2	T / CMU-2	CMU-2	PT-2	GBWR	#1, #5
105	TOURISM OFFICE	VCT	VB	PT-3	PT-3	PT-3	PT-3	-	ACT	
106	TOURISM	PC	VB	CMU-2	CMU-2	CMU-2	CMU-2	-	ACT	
107	TOURISM STORAGE	SC	VB	PT-3	PT-3	PT-3	PT-3	PT-2	GYP	
108	TOURISM DISPLAY	PC	VB	CMU-2	CMU-2	CMU-2	CMU-2	-	ACT	
109	OFFICE	VCT	VB	PT-3	PT-3	PT-3	PT-3	-	ACT	
110	STORAGE	SC	VB	PT-3	PT-3	PT-3	PT-3	PT-2	GYP	
111	CUSTODIAL / STORAGE	SC	VB	PT-3	PT-3 / GFRP	PT-3	PT-3 / GFRP	PT-2	GYP	#4
112	EMPLOYEE BREAK ROOM	VCT	VB	PT-3	PT-3	PT-3	PT-3	-	ACT	
113	FAMILY RESTROOM	PC	T	T / CMU -2	CMU-2	CMU-2	CMU-2	PT-2	GBWR	#1, #5
114	MECHANICAL	SC	VB	PT-3	PT-3	PT-3	PT-3	-	OPEN	
115	MEN'S RESTROOM	PC	T	CMU-2	CMU-2	T / CMU-2	CMU-2	PT-2	GBWR	#1, #5
116	MEN'S RESTROOM	PC	T	CMU-2	CMU-2	CMU-2 / CMU-4 / PT-2	T / CMU-2	PT-2	GBWR	#1, #5
117	CLOSET	SC	VB	PT-3	PT-3	PT-3	PT-3	PT-2	GYP	
118	MECHANICAL	SC	VB	PT-3	PT-3	PT-3	PT-3	-	OPEN	

ABBREVIATIONS:

ACP	ACOUSTICAL CEILING PANELS
AL	ALUMINUM
CMU	CONCRETE MASONRY UNIT
F	FLUSH
FG	FULL GLASS
GBWR	GYPSUM BOARD WATER RESISTANT
GFRP	GLASS FIBER REINFORCED PLASTIC PANELS
GL	GLASS
GYP	GYPSUM BOARD
HG	HALF GLASS
HM	HOLLOW METAL
PC	POLISHED CONCRETE
PLAM	PLASTIC LAMINATE
PT	PAINT
RFG	RECESSED FLOOR GRILLE
SC	SEALED CONCRETE
T	TILE
VB	VINYL BASE
VCT	VINYL COMPOSITION TILE

OPENING NOTES:

1.) EXTERIOR & INTERIOR HM DOOR, FRAMES & SIDE LITES (WHERE OCCUR) TO BE PAINTED PT-1

FINISH NOTES:

1.) SEE SHEET A400 FOR LOCATION & EXTENT OF WALL TILE

2.) STEEL COLUMNS TO BE PAINTED PT-4

3.) EXPOSED BEAMS & LINTELS TO BE PAINTED PT-1

4.) PROVIDE 4'-0" HIGH GFRP WAINSCOT AT MOP BASIN

5.) PROVIDE WATERPROOF MEMBRANE COATING WITH COVED BASE AT TRENCH DRAINS.

PARTITION TYPES

A600

PROJECT NO: 1070-00-71 | HWY: REST AREA NO. 31 | COUNTY: LA CROSSE | SCHEDULES & TYPES | SHEET E

FILE NAME: S:\UZ\W\WITCO\131411\5-final-dsgn\51-const-dwgs-CAD\15-Arch\00_Revit File PLOT DATE: 12/17/2015 3:38:55 PM PLOT BY: PLOT NAME: PLOT SCALE:

WISDOT/CADDS SHEET 42

2

GENERAL STRUCTURAL NOTES

THESE NOTES DO NOT REPLACE THE SPECIFICATIONS BUT ARE TO BE READ IN CONJUNCTION WITH THEM. ANY DISCREPANCIES OR CONFLICTS BETWEEN THE TWO SHALL BE BROUGHT TO THE ATTENTION OF THE SER FOR RESOLUTION.

THESE DRAWINGS ARE FOR LA CROSSE REST AREA #31 BUILDING AND NO OTHER USE IS AUTHORIZED. CONTACT SER, BEN WOLF OF SEH AT 507-316-6648.

GOVERNING BUILDING CODE

1. 2011 WISCONSIN COMMERCIAL BUILDING CODE.
2. 2009 INTERNATIONAL BUILDING CODE AS ADOPTED AND AMENDED BY THE STATE BUILDING CODE
3. ACI - 318
4. AISC - 360, 303

DESIGN LOADS

1. LIVE LOAD:
   FLOOR SLAB 100 PSF
2. SNOW LOAD:

GROUND SNOW LOAD	40 PSF
ROOF SNOW LOAD	31 PSF + DRIFTING & UNBALANCED PER IBC
SNOW EXPOSURE FACTOR	1.0
IMPORTANCE FACTOR	1.00 (BASED ON OCC CAT II)
THERMAL FACTOR	1.10 (UNHEATED ROOF)
RAIN LOADS	N/A

3. WIND LOADS (ASCE 7-05):

WIND SPEED (3 SEC GUST)	90.00 MPH
WIND IMPORTANCE FACTOR	1.00 (BASED ON OCC CAT II)
WIND EXPOSURE	C
INTERNAL PRESS COEF	+/- 0.55

4. SEISMIC LOADS: NOT APPLICABLE

5. SOIL CRITERIA:

ALLOWABLE SOIL BEARING PRESSURE	2,500 PSF
Q100 WATER ELEVATION	N/A
PERCHED GROUNDWATER ELEVATION	N/A
DEWATER AS REQUIRED TO KEEP EXCAVATIONS DRY	
FROST DEPTH	42 INCHES
ANTICIPATED MAX DIFFERENTIAL SETTLEMENT	1/2 INCH
ANTICIPATED MAX TOTAL SETTLEMENT	1 INCH

SAND BACKFILL

WET UNIT WEIGHT	115 PCF
FRICTION ANGLE	35 DEGREES
AT-REST PRESSURE	50 PCF

DESIGN / CONSTRUCTION CRITERIA

1. THE CONTRACTOR SHALL VERIFY DIMENSIONS AND CONDITIONS BEFORE CONSTRUCTION AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES, INCONSISTENCIES, OR DIFFICULTIES AFFECTING THE WORK BEFORE PROCEEDING.
2. ALL MATERIAL, WORKMANSHIP, AND DETAILS SHALL BE IN ACCORDANCE WITH TYPICAL COMPETENT CONSTRUCTION PRACTICES, CURRENT MANUFACTURERS RECOMMENDATIONS, AND ALL APPLICABLE CODES AND GOVERNMENT REGULATIONS. SPECIAL STRUCTURAL INSPECTION IS REQUIRED AS SCHEDULED AND PER IBC CHAPTER 17. CONTRACTOR SHALL COORDINATE WITH OWNER'S/CONTRACTOR'S TESTING AGENCY.
3. THE CONTRACTOR SHALL COORDINATE ALL DISCIPLINES, VERIFYING SIZE AND LOCATION OF ALL OPENINGS, WHETHER SHOWN ON STRUCTURAL DRAWINGS OR NOT, AS CALLED FOR ON ARCHITECTURAL, MECHANICAL, OR ELECTRICAL DRAWINGS. ALL CONFLICTS, INCONSISTENCIES, OR OTHER DIFFICULTIES AFFECTING STRUCTURAL WORK SHALL BE CALLED TO THE ARCHITECT AND ENGINEER'S ATTENTION FOR DIRECTION BEFORE PROCEEDING.
4. THE CONTRACTOR SHALL SUPPLY ALL NECESSARY TEMPORARY BRACING, SHORING, GUYING, OR OTHER MEANS TO AVOID EXCESSIVE STRESSES AND TO HOLD STRUCTURAL ELEMENTS IN PLACE DURING CONSTRUCTION.
5. JOB SITE SAFETY IS THE SOLE RESPONSIBILITY OF THE GENERAL CONTRACTOR & THEIR SUBCONTRACTORS.
6. THE ENGINEER IS NOT RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES OR PRACTICES. WHERE DRAWINGS AND DETAILS IMPLY THIS, THEY ARE PROVIDED TO SHOW FINAL CONSTRUCTION. IF CONTRACTOR DESIRES TO USE DIFFERENT MEANS AND METHODS THAN IMPLIED BY THESE DRAWINGS, SUBMIT SIMILAR DETAILS FOR REVIEW.
7. STANDARD OR TYPICAL STRUCTURAL DETAILS ARE INTENDED TO ILLUSTRATE DESIGN CONCEPTS AND TO SPECIFY MATERIAL AND REQUIRED PHYSICAL DIMENSIONS MATCHING OR SIMILAR TO THE REFERENCED LOCATIONS IN THE DRAWING SET.
8. THERE IS NO PROVISION FOR FUTURE VERTICAL EXPANSION IN THE DESIGN.

FOUNDATIONS

1. CAUTION: EXISTING UNDERGROUND UTILITIES MAY EXIST ANYWHERE ON THE SITE. NOTIFY DIGGER'S HOTLINE (800) 242-8511 PRIOR TO DISTURBING ANY GRADE OR EXCAVATION.
2. STRUCTURAL FOUNDATIONS CONSIST OF WALL AND SPREAD FOOTINGS ESTABLISHED ON MATERIAL CAPABLE OF SAFELY SUPPORTING 2.5 KSF (SEE SOILS AND ENGINEERING SERVICES PROJECT 13102 R01 REPORT). THE STRUCTURAL ENGINEER IS NOT RESPONSIBLE FOR THE ACCURACY OR CONTENT OF THE SUBSURFACE SOIL CONDITIONS DESCRIBED IN THE SPECIFICATIONS, TEST BORINGS, OR GEOTECHNICAL REPORT. THE CONTRACTOR/OWNER SHALL EMPLOY A CERTIFIED GEOTECHNICAL ENGINEER DURING CONSTRUCTION TO TEST, INSPECT AND VERIFY ALL ASSUMED SOIL CONDITIONS.
3. FOUNDATION WALLS SHALL BE ADEQUATELY BRACED DURING BACKFILLING AND COMPACTION TO PREVENT MOVEMENT OR STRUCTURAL DAMAGE. BRACING SHALL REMAIN IN PLACE UNTIL PERMANENT BRACING IS IN PLACE AND UNTIL CONCRETE ACHIEVES SUFFICIENT STRENGTH TO RESIST IMPOSED LOADS.
4. WHEN PLACING COMPACTED FILL ADJACENT TO FOUNDATION WALLS AND PIERS, PLACE BACKFILL AT EQUAL RATES ON BOTH SIDES TO PREVENT OVERTURNING OR STRUCTURAL DAMAGE.
5. CONTRACTOR SHALL PROVIDE FOR DEWATERING AT EXCAVATIONS FROM EITHER SURFACE WATER OR SEEPAGE.
6. MOISTURE CONTENT IN SOILS BENEATH BUILDING LOCATIONS SHOULD NOT BE ALLOWED TO CHANGE AFTER FOOTING EXCAVATIONS AND AFTER GRADING FOR SLABS ON GRADE ARE COMPLETED. IF SUBGRADE MATERIALS BECOME DESICCATED OR SOFTENED BY WATER OR OTHER CONDITIONS, REMOVE AND REPLACE WITH ENGINEERED FILL AS RECOMMENDED BY THE GEOTECHNICAL ENGINEER. DO NOT PLACE CONCRETE ON FROZEN GROUND, NOR ALLOW GROUND BENEATH FOUNDATIONS TO FREEZE. ALL FOUNDATION WORK SHALL BE PLACED ON SUBSTRATE APPROVED AND TESTED BY GEOTECHNICAL ENGINEER OF RECORD.
7. DO NOT PLACE BACKFILL ON FROZEN SUBGRADE. DO NOT PLACE FROZEN BACKFILL.
8. SLABS ON GRADE SHALL BE CONSTRUCTED ON A SUBGRADE OF ENGINEERED CLAY FILL COMPACTED TO AT LEAST 96 PERCENT OF ITS MAXIMUM DRY DENSITY (STANDARD PROCTOR) AND 6 INCHES OF AGGREGATE BASE BELOW THE SLAB.
9. GRADING: WHERE NOT SPECIFICALLY SHOWN ON THE PLANS, IT IS INTENDED THAT ALL EXCAVATED AND BACKFILLED AREAS SHALL BE GRADED TO SLOPE AWAY FROM BUILDINGS AND OTHER STRUCTURES.

CONCRETE

1. CONCRETE AND ITS PLACEMENT SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE FOLLOWING:
   ACI 318 BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE
   ACI 301 SPECIFICATIONS FOR STRUCTURAL CONCRETE
   ACI MCP MANUAL OF CONCRETE PRACTICE
2. AN INDEPENDENT TESTING AGENCY SHALL CAST 4 TEST CYLINDERS OR AN EQUIVALENT NUMBER OF FOUR INCH CYLINDERS FOR EACH 75 CUBIC YARDS OF EACH CONCRETE MIX PLACED OR FOR EACH DAY'S OPERATION, WHICH EVER IS THE LESSER AMOUNT. THE TESTING AGENCY SHALL CAST, CURE, AND TEST THE SPECIMENS IN ACCORDANCE WITH ASTM C31 AND ASTM C39. AIR AND SLUMP SHALL BE TESTED FOR EACH TRUCKLOAD AT THE FINAL LOCATION (TEST AFTER PUMP, NOT AT TRUCK).
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN OF FORM WORK TO COMPLY WITH THE DIMENSIONS INDICATED ON THE PLANS, MAINTAINING PROPER ALIGNMENT DURING CONCRETE POURING OPERATIONS. SPECIAL CARE SHALL BE TAKEN WITH FORMWORK FOR SELF-CONSOLIDATING CONCRETE.
4. ALL CONCRETE EXCEPT EXTERIOR FLAT WORK SHALL DEVELOP MINIMUM ULTIMATE COMPRESSIVE DESIGN STRENGTH OF 4000 PSI IN 28 DAYS. CONCRETE USED IN WALLS AND FOOTINGS SHALL HAVE A MAXIMUM W/C (WATER/ CEMENT+ POZZOLAN) RATIO OF 0.45, AND A MAXIMUM OF 4 INCHES OF SLUMP BEFORE ADDITION OF ADMIXTURES. CONCRETE USED IN SLAB ON GRADE STRUCTURAL SLABS SHALL HAVE A MAXIMUM W/C RATIO OF 0.45, AND A MAXIMUM OF 4 INCHES OF SLUMP BEFORE ADDITION OF ADMIXTURES.
5. CONCRETE FOR EXTERIOR STOOP SLABS SHALL HAVE A MINIMUM DESIGN COMPRESSIVE STRENGTH OF 4500 PSI IN 28 DAYS, A MINIMUM OF 450 POUNDS OF PORTLAND CEMENT PER CUBIC YARD, A MAXIMUM W/C (WATER/ CEMENT + POZZOLAN) RATIO OF .45, WITH 6% +/- 1% AIR ENTRAINMENT, AND A MAXIMUM OF 4 INCHES OF SLUMP BEFORE ADDITION OF WATER REDUCING ADMIXTURE.
6. THE PRECEEDING MINIMUM MIX REQUIREMENTS MAY HAVE WATER-REDUCING ADMIXTURES CONFORMING TO ASTM C494 ADDED TO THE MIX AT MANUFACTURER'S DOSAGE RATES FOR IMPROVED WORKABILITY. NO CHLORIDE CONTAINING ADMIXTURES WILL BE ALLOWED. DO NOT ADD WATER TO CONCRETE AT THE JOBSITE WITHOUT WRITTEN APPROVAL OF THE S.E.R.
7. ALL CONCRETE IS NORMAL WEIGHT UNLESS SPECIFICALLY NOTED OTHERWISE. CEMENT SHALL BE PORTLAND CEMENT TYPE 1 CONFORMING TO ASTM C150. UP TO 25% CEMENT CAN BE REPLACED WITH CLASS "C" FLYASH. AND UP TO 40% WITH GGBFS (50% COMBINED MAX.). AGGREGATE FOR NORMAL WEIGHT CONCRETE SHALL CONFORM TO ASTM C33. WATER IS TO BE POTABLE.
8. PROTECT CONCRETE IN ACCORDANCE WITH ACI 305 AND ACI 306 FOR HOT WEATHER CONCRETING AND COLD WEATHER CONCRETING RESPECTIVELY. WHEN HEAT IS REQUIRED, CONCRETE SHALL NOT BE EXPOSED TO COMBUSTION PRODUCTS (USE DUCTED HEATER OR GROUND THAW). KEEP PROTECTION IN PLACE MINIMUM 24 HOURS AFTER CESSATION OF HEATING TO PROVIDE GRADUAL COOL-DOWN. CONCRETE BEING PLACED SHALL BE PROTECTED FROM RAIN. IF RAIN FALLS ON CONCRETE BEFORE IT HAS SET, OR WITHIN 3 HOURS OF PLACEMENT IN ANY EVENT, CONTRACTOR SHALL BEAR COST OF TESTING TO PROVE CONCRETE IS UNAFFECTED, AND SHALL REMOVE AND REPLACE AFFECTED CONCRETE TO THE SATISFACTION OF THE ENGINEER.
9. CEMENTITIOUS GROUT SHALL BE NON-SHRINK AND NON-METALLIC GROUT. PLACE ACCORDING TO MANUFACTURER'S RECOMMENDATIONS AND TRIM NEATLY WHERE VISIBLE.
10. COORDINATE WITH OTHER TRADES FOR SLEEVES, CONDUIT, ELECTRICAL GROUNDING WIRES, INSERTS, UNDERGROUND UTILITIES, AND OTHER ITEMS TO BE EMBEDDED INTO CONCRETE AND VERIFY THAT THEY ARE PROPERLY INSTALLED AND SUPPORTED BEFORE CASTING CONCRETE. DIAMETER OF CONDUIT AND PIPE RUNNING WITHIN SLAB OR WALL SHALL NOT EXCEED 1/6 THE SLAB OR WALL THICKNESS AND SHALL BE PLACED IN THE CENTER OF THE MEMBER. PLACEMENT OF SUCH ITEMS SHALL BE COORDINATED WITH REINFORCING PLACEMENT WHERE THEY WOULD OTHERWISE DISPLACE EACH OTHER. FOR INSTANCE, IN AREAS WITH A SINGLE MAT OF REINFORCING, EAST-WEST CONDUIT SHOULD BE PLACED WITH EAST-WEST REINFORCING, THEN NORTH-SOUTH CONDUIT IS PLACED WITH NORTH-SOUTH REINFORCING.
11. NO UNCOATED ALUMINUM ITEMS SHALL BE EMBEDDED IN ANY CONCRETE. ALL ALUMINUM SURFACES IN DIRECT CONTACT WITH CONCRETE SHALL RECEIVE ONE 8-12 MIL DRY FILM THICKNESS BITUMASTIC.
12. UNLESS SHOWN ON DRAWINGS, CONCRETE SHALL BE PLACED WITHOUT CONSTRUCTION JOINTS EXCEPT WHERE SPECIFICALLY SHOWN ON SHOP DRAWINGS APPROVED BY THE ENGINEER. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS SHOWING ADDITIONAL OR ALTERNATE CONSTRUCTION JOINT LOCATIONS TO THE ENGINEER FOR APPROVAL.
13. BEVEL ALL EXPOSED CORNERS OF CONCRETE 3/4"X3/4".
14. VERIFY SIZE AND LOCATION OF ALL EQUIPMENT BASES / HOUSEKEEPING PADS
15. CONCRETE FLOORS: ALL INTERIOR SLABS ON GRADE SHALL BE PLACED OVER 15 MIL VAPOR BARRIER WITH JOINTS WELDED OR LAPPED AND SEALED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS. ALL DAMAGE AND PENETRATIONS SHALL BE SEALED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS. IF CONCRETE CONTAINS MORE THAN 2 PERCENT ENTRAINED AIR, DELAY START OF FINISHING TO PRECLUDE WEAKENED AIR-RICH PLANE JUST BELOW SURFACE.

REINFORCING STEEL

1. ALL REINFORCING STEEL SHALL BE DETAILED, FABRICATED, AND INSTALLED IN ACCORDANCE WITH THE FOLLOWING STANDARDS AND CODES: ACI 315 "DETAILS AND DETAILING OF CONCRETE REINFORCING" ACI 318 "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" MSP2 "CRSI MANUAL OF STANDARD PRACTICE" AWS D1.4 "STRUCTURAL WELDING CODE- REINFORCING STEEL" WRI "WELDED WIRE FABRIC MANUAL OF STANDARD PRACTICE"
2. ALL CONCRETE IS REINFORCED CONCRETE UNLESS SPECIFICALLY CALLED OUT AS UNREINFORCED. REINFORCE ALL CONCRETE NOT OTHERWISE SHOWN WITH SAME STEEL AS IN SIMILAR SECTIONS OR AREAS. ANY DETAILS NOT SHOWN SHALL BE DETAILED PER ACI 315 AND MEET REQUIREMENTS OF ACI 318, CURRENT EDITIONS.
3. ALL REINFORCING STEEL SHALL CONFORM TO THE REQUIREMENTS OF ASTM A615 OR A706 GRADE 60 STEEL. REINFORCING TO BE WELDED SHALL ONLY BE WELDED TO STRUCTURAL STEEL, NOT OTHER REINFORCING, UNLESS SPECIFICALLY NOTED ON THE DRAWINGS, AND SHALL BE A706. WELDED PLAIN WIRE FABRIC SHALL BE SUPPLIED IN SHEETS, NOT ROLLS, AND CONFORM TO THE REQUIREMENTS OF ASTM A185.
4. CLEAR MINIMUM COVER OF CONCRETE OVER REINFORCING STEEL SHALL BE AS FOLLOWS UNLESS SPECIFICALLY NOTED OTHERWISE:
   CONCRETE PLACED AGAINST EARTH 3"
   ALL OTHER CONCRETE 2"
5. ALL FOOTING DOWELS SHALL BE ACCURATELY POSITIONED AND WIRED IN PLACE BEFORE CASTING FOOTING CONCRETE. WHERE NOT NOTED, PROVIDE AND INSTALL DOWELS OF SAME SIZE AND SPACING AS VERTICAL REINFORCEMENT IN ALL COLUMNS AND WALLS. POSITION ALL ANCHOR BOLTS WITH TEMPLATES.
6. BAR LAP LENGTHS IN CONCRETE AND 90 DEGREE END HOOKS SHALL BE IN ACCORDANCE WITH THE TABLE BELOW UNLESS NOTED OTHERWISE. THIS TABLE LISTS CLASS 'B' LAPS. FOR EPOXY COATED REINFORCING STEEL, INCREASE LAP LENGTH BY 50% WITH C-C BAR SPACING < 6Db AND COVER TO CENTER OF BAR <3Db, OTHERWISE INCREASE BY 20%. FOR MASONRY REINFORCING, USE "WALL TOP BAR" VALUES.

REINF. BAR SIZE	SLAB, WALL, COLUMN		BEAMS		90 DEGREE END HOOK
	BAR LAP	TOP BAR *	BAR LAP	TOP BAR *	
#3	19 IN.	24 IN.	28 IN.	36 IN.	6 IN.
#4	25 IN.	32 IN.	37 IN.	48 IN.	8 IN.
#5	31 IN.	40 IN.	46 IN.	60 IN.	10 IN.
#6	37 IN.	48 IN.	56 IN.	72 IN.	12 IN.
#7	54 IN.	70 IN.	81 IN.	105 IN.	14 IN.
#8	62 IN.	80 IN.	93 IN.	120 IN.	16 IN.
#9	70 IN.	90 IN.	104 IN.	135 IN.	18 IN.
#10	78 IN.	102 IN.	117 IN.	152 IN.	20 IN.
#11	87 IN.	113 IN.	130 IN.	169 IN.	22 IN.

* TOP BAR LAP SPLICES ARE HORIZONTAL REINFORCEMENT PLACED SUCH THAT MORE THAN 12 IN. OF CONCRETE IS CAST IN THE MEMBER BELOW THE SPLICE.

7. BARS MARKED CONTINUOUS, CORNER BARS, AND ALL VERTICAL STEEL SHALL BE LAPPED IN ACCORDANCE WITH TABLE ABOVE AT SPLICES AND EMBEDMENTS, UNLESS SHOWN OTHERWISE. SPLICE TOP BARS NEAR MIDSPAN AND SPLICE BOTTOM BARS OVER SUPPORTS, UNLESS NOTED OTHERWISE.
8. BAR SUPPORT ACCESSORIES SHALL BE AS SPECIFIED IN LATEST EDITION OF THE ACI DETAILING HANDBOOK AND THE CONCRETE REINFORCING STEEL INSTITUTE DESIGN HANDBOOK. MAXIMUM ACCESSORY SPACING SHALL BE 4'-0" ON CENTER, AND ALL ACCESSORIES ON EXPOSED SURFACES SHALL HAVE PLASTIC COATED ENDS.
9. ALL SLABS AND STAIRS NOT SHOWN OTHERWISE SHALL BE 6" THICK WITH #4 BARS AT 12" ON CENTER EACH WAY. ALL EXTERIOR STOOPS NOT OTHERWISE DETAILED MAY BE CONSTRUCTED IN ANY STANDARD MANNER, SOLID OR HOLLOW, BUT MUST BE REINFORCED WITH EPOXY COATED #4 BARS AT 12" ON CENTER EACH WAY MINIMUM. PORCHES AND STOOPS SHALL BE DOWELED TO ADJACENT WALLS OR GRADE BEAMS WITH #4 BARS AT 12" ON CENTER, HOOKED OR EMBEDDED 40 DIAMETERS INTO BOTH MEMBERS. SLOPE STOOPS 1/8" PER FOOT FOR DRAINAGE UNLESS NOTED OTHERWISE.

CONCRETE BLOCK MASONRY

1. REINFORCED CONCRETE MASONRY MATERIALS AND CONSTRUCTION SHALL COMPLY WITH THE FOLLOWING CODES AND SPECIFICATIONS: ACI 530.1- LATEST EDITION, TMS 602- "SPECIFICATIONS FOR MASONRY STRUCTURES"- LATEST EDITION, ACI 530/ASCE 5/ TMS 402- "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES"- LATEST EDITION.
2. CONCRETE BLOCK USED IN EXTERIOR WALLS OR LOAD BEARING WALLS SHALL MEET THE FOLLOWING MINIMUM REQUIREMENTS:
   MASONRY ASSEMBLY f'm' = 1500 PSI
   CONCRETE MASONRY UNITS: ASTM C90-11a 1900 PSI
   MORTAR, ASTM C-270-10 TYPE M BELOW GRADE
   TYPE S ABOVE GRADE
   GROUT, ASTM C-476-10 F'c = 3,000 PSI
3. THE CONTRACTOR SHALL PROVIDE ADEQUATE TEMPORARY BRACING FOR ALL MASONRY WALLS DURING CONSTRUCTION.
4. CONCRETE BLOCK SHALL BE LAID IN RUNNING BOND PATTERN TYPICAL UNLESS NOTED OTHERWISE. NO VERTICAL (HEAD) JOINT SHALL BE CONTINUOUS FOR MORE THAN ONE BLOCK HEIGHT. LAY HOLLOW CONCRETE MASONRY UNITS WITH FULL MORTAR COVERAGE ON HORIZONTAL AND VERTICAL FACE SHELLS. BED WEBS IN MORTAR IN STARTING COURSE ON FOOTINGS AND FOUNDATION WALLS AND IN ALL COURSES OF PIERS, COLUMNS AND PILASTERS, AND WHERE ADJACENT TO CELLS OR CAVITIES WHICH ARE TO BE REINFORCED OR TO BE FILLED WITH CONCRETE OR GROUT.
5. ALL JOINTS SHALL BE CONCAVE TOOLED JOINTS ABOVE AND BELOW GRADE.
6. MASONRY WALLS SHALL BE REINFORCED WITH HOT DIPPED GALVANIZED TRUSS HORIZONTAL REINFORCING (PER ASTM A153) WITH 9 GAGE SIDE AND CROSS RODS. REINFORCING SHALL BE CONTINUOUS IN HORIZONTAL JOINTS EVERY OTHER BLOCK COURSE (16" O.C.) IN WALLS, EVERY COURSE (8" O.C.) IN PARAPETS, WITH PREFABRICATED CORNER AND TEE SECTIONS.
7. UNLESS NOTED OTHERWISE, CONCRETE BLOCK SHALL BE REINFORCED AS FOLLOWS IN 6", 8", 10", AND 12" WALLS:
   - VERTICAL REINFORCING SHALL BE A MINIMUM OF 1 - #5 BAR IN 6" AND 8" WALLS AND 2 - #4 BARS IN 10" AND 12" WALLS AT 4'-0" ON CENTER, AT EACH CORNER, AT EACH DOOR AND WINDOW JAMB, EACH SIDE OF CONTROL JOINTS, AND IN THE END VOID OF EACH LENGTH OF WALL. LAP SPLICES FOR MASONRY VERTICAL REINFORCING SHALL BE ACCORDING TO THE TABLE ABOVE, FOR "WALL TOP BAR."
   - STACK BOND CMU SHALL HAVE CONTINUOUS HORIZONTAL BOND BEAMS AT 48" O.C. REINFORCED WITH 2 - #4's CONTINUOUS.
   - CONTINUOUS HORIZONTAL BARS SHALL BE INCLUDED PER SECTION OR DETAIL IN BOND BEAM OR OPTIONAL RUNNING BOND BEAM WHERE NOTED. WHERE NOT DETAILED, USE 2 - #5's CONTINUOUS. WHERE BOND BEAMS ARE CONTINUOUS AT CORNERS OF WALLS, SUPPLY CORNER BARS MATCHING SIZE OF HORIZONTAL BARS. ALL BOND BEAM REINFORCING SHALL HAVE STANDARD LAPS OR HOOKED DEVELOPMENT REINFORCING BARS AT WALL CORNERS AND INTERSECTIONS.
8. GROUTING AND REINFORCING: ALL MASONRY, GROUTING, AND REINFORCING WORK SHALL BE PERFORMED BY MASON CRAFTWORKERS WHO HAVE SUCCESSFULLY COMPLETED THE INTERNATIONAL MASONRY INSTITUTE (1-800-IMI -0988) TRAINING COURSE FOR GROUTING AND REINFORCED MASONRY CONSTRUCTION, OR EQUAL.
9. MASONRY BLOCK CELLS WITH VERTICAL REINFORCING AND BOND BEAMS WITH HORIZONTAL REINFORCING SHALL BE GROUTED SOLID WITH A CEMENT GROUT MIX, Fg' = 3000 PSI. MORTAR IS NOT ACCEPTABLE. PROVIDE A CLEANOUT HOLE AT THE BASE OF ALL GROUTED CELLS. ACCOUNT FOR FLY ASH IN GROUT DURING WINTER CONSTRUCTION BY PROTECTING AND HEATING AS REQUIRED TO ASSURE SET AND STRENGTH GAIN.
10. NON-LOAD BEARING CONCRETE BLOCK WALLS SHALL BE ISOLATED FROM ADJACENT STRUCTURAL ELEMENTS WITH VERTICAL 1/2 INCH CONTROL JOINTS AND AT THE TOP OF THE WALL WITH MINIMUM 1/2 INCH AIR SPACE OR COMPRESSIBLE MATERIAL AND SUPPORT PER DETAILS ON THE DRAWINGS.
11. UNLESS OTHERWISE COVERED ON ARCHITECTURAL PLANS OR SPECIFICATIONS, VERTICAL CONTROL JOINTS IN MASONRY CONSTRUCTION SHALL BE 3/8" WIDE, FULL HEIGHT OF WALL. JOINTS SHALL BE SPACED AT A MAXIMUM OF 16' -0" ON CENTER AND COORDINATED WITH THE ARCHITECT/ENGINEER. INSTALL CONTROL JOINTS IN LOCATIONS AS REQUIRED AND AS DIRECTED BY ENGINEER/ARCHITECT.
12. ALL HORIZONTAL JOINT REINFORCING SHALL BE DISCONTINUOUS AT CONTROL JOINTS IN MASONRY. ALL BOND BEAM HORIZONTAL REINFORCING SHALL BE CONTINUOUS THROUGH CONTROL JOINTS.
13. LINTELS OVER ALL OPENINGS IN WALLS NOT OTHERWISE NOTED, SHALL BE ONE 6" X 3-1/2" X 5/16" ANGLE FOR EACH 4" OF MASONRY (2 ANGLES FOR 12" CMU). ALL EXTERIOR LINTELS TO BE HOT-DIP GALVANIZED.
14. PROVIDE ADDITIONAL VERTICAL REINFORCEMENT AT ENDS OF WALLS, CORNERS, AND OPENINGS. REINFORCING SIZE TO MATCH WALL REINFORCING. WALLS SHALL BE ANCHORED AT BOTTOM BY DOWELS MATCHING WALL VERTICAL REINFORCING (UNLESS NOTED OTHERWISE) FROM FLOOR SLAB BOTTOM. WALLS SHOULD BE ANCHORED AT TOP BY BRACING ANGLES PER DETAILS ON DRAWINGS.
15. BOND BEAM LINTELS SHALL BE STANDARD HORSECOLLAR TYPE (U SHAPED) BLOCK. CONTINUITY BONDBEAMS MAY BE FLOWTHROUGH BLOCK.

POST INSTALLED ANCHOR RODS AND DOWELS

1. UNLESS NOTED OTHERWISE, ANCHORS AND REINFORCING DOWELS INSTALLED IN CONCRETE OR CONCRETE MASONRY SHALL BE AS NOTED BELOW. ANCHORS NOT SHOWN OR NOTED ON THE DRAWINGS, THOSE REQUIRED BY THE CONTRACTOR SOLELY FOR HIS MEANS AND METHODS, OR THOSE REQUIRED BY MECHANICAL/ELECTRICAL AND CARRYING LESS THAN 100 POUNDS, DO NOT REQUIRE SPECIAL INSPECTION.
2. APPROVED MANUFACTURERS ARE: HILTI, ITW/REDHEAD, SIMPSON, AND POWERS/RAWL. SUBMIT PRODUCT DATA AND CURRENT ICC ES REPORT OR IAPMO REPORT SHOWING PRODUCT IS COMPLIANT WITH PROJECT CODE REQUIREMENTS FOR REVIEW. CONTRACTOR SHALL ARRANGE FOR MANUFACTURER'S REP TO TRAIN ALL INSTALLERS ON THE COMPLETE INSTALLATION PROCESS. A LETTER OF PROCEDURE STATING METHOD OF DRILLING, THE PRODUCT FOR USE, THE COMPLETE INSTALLATION PROCEDURE, MANUFACTURER TRAINING DATE AND A LIST OF THE PERSONNEL TRAINED ON ANCHOR INSTALLATION SHALL BE SUBMITTED TO THE ENGINEER.
3. PERMANENT ANCHORS EXPOSED TO EARTH, WEATHER, OR CORROSIVE ENVIRONMENTS SHALL BE STAINLESS STEEL TYPE 304 OR 316. OTHERWISE, ANCHORS SHALL BE ZINC PLATED, MINIMUM ASTM A36 MATERIAL UNLESS ASTM A193 GRADE B7 IS NOTED IN THE DRAWINGS, AND SHALL BE ACCORDING TO ASTM F1554. REINFORCING DOWELS SHALL BE OF THE SAME MATERIAL AND COATING (IF ANY) AS THE CONTINUING REINFORCING.
4. WHERE EXPANSION ANCHORS ARE CALLED FOR, CONTRACTOR MAY SUBSTITUTE SCREW TYPE ANCHORS WITH SELF-TAPPING THREADS OR ADHESIVE ANCHORS OF THE SAME SIZE AND EMBEDMENT, SUBJECT TO REVIEW OF CAPACITY BY THE ENGINEER FOR THE PRODUCT SUBSTITUTED. WHERE ADHESIVE ANCHORS ARE CALLED FOR, OTHER TYPES SHALL NOT BE SUBSTITUTED.
5. ADHESIVE SHALL HAVE A CURRENT ICC ES REPORT. USE HIGH VISCOSITY ADHESIVE AND PLACEMENT DEVICES IN CONSULTATION WITH THE MANUFACTURER FOR OVERHEAD WORK. OVERHEAD INSTALLATION SHALL BE SUBJECT TO CONTINUOUS SPECIAL INSPECTION DURING INSTALLATION AND SHALL ONLY BE DONE BY CERTIFIED ADHESIVE ANCHOR INSTALLERS. USE LOW TEMPERATURE FORMULATIONS FOR COLD WEATHER WORK. DO NOT APPLY SIGNIFICANT LOAD TO ANCHORS IN COLD WEATHER UNTIL THEIR CAPACITY HAS BEEN ASSURED.
6. ANCHORS INSTALLED IN CONCRETE MASONRY AND PRECAST HOLLOWCORE CONCRETE SHALL BE INSTALLED IN CORES GROUTED SOLID. MINIMUM GROUT STRENGTH Fg' = 3000 PSI. MINIMUM 6 INCHES OF GROUT EACH WAY ALONG HORIZONTAL CORES FROM ANCHOR. VERTICAL CORES SHALL BE GROUTED FULL HEIGHT. ANCHORS INSTALLED IN MASONRY SHALL NOT BE INSTALLED WITHIN 1 1/2 INCHES OF ANY HEAD JOINT UNLESS BLOCK ARE SQUARE END AND MORTARED ACROSS FULL WIDTH OF HEAD JOINT, OR FILLED BOND BEAM.
7. HOLES SHALL BE DRILLED, CLEANED, AND MAINTAINED UNTIL INSTALLATION IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS USING STANDARD ROTARY-IMPACT BITS AND OIL-FREE COMPRESSED AIR; DIAMOND CORE BITS SHALL NOT BE USED UNLESS SPECIFICALLY APPROVED BY THE MANUFACTURER. LOCATE AND AVOID REINFORCING BARS AND PT TENDONS. MAINTAIN SPACING (MINIMUM 8 INCHES) AND EDGE/CORNER DISTANCES (MINIMUM 4 INCHES) AS RECOMMENDED BY MANUFACTURER UNLESS SPECIFICALLY NOTED OTHERWISE IN THE DRAWINGS.
8. UNLESS NOTED OTHERWISE, ANCHORS SHALL BE INSTALLED TO THE FOLLOWING EMBEDMENTS:

	DIAMETER	CIP CONCRETE	GROUTED CMU
EXPANSION / SCREW:	1/2 INCH	3-1/2 INCHES	4-1/2 INCHES
	5/8 INCH	4 INCHES	5 INCHES
	3/4 INCH	5 INCHES	6 INCHES
ADHESIVE:	1/2 INCH	4-1/2 INCHES	5-1/2 INCHES
	5/8 INCH	5 INCHES	6 INCHES
	3/4 INCH	6 INCHES	7 INCHES (6" IN 8" CMU)

9. EXCEPT AS NOTED, ALL ANCHORS SHALL HAVE INTERMITTENT SPECIAL STRUCTURAL INSPECTION BY ONE OF THE FOLLOWING. LOAD TESTS SHALL BE TO 150 PERCENT OF SERVICE CAPACITY OR 50 PERCENT OF ULTIMATE STRENGTH, WITH NO APPRECIABLE SLIP OR PERMANENT DEFORMATION. ANCHORS WHICH FAIL THIS TEST SHALL BE REPLACED AT NO COST TO THE PROJECT. TWO FAILURES IN A GIVEN INSTALLATION SHALL RESULT IN MANDATORY LOAD TESTING AT DOUBLE THE RATE NOTED BELOW.

   EXPANSION AND SCREW ANCHORS:

   - WITNESS INSTALLATION WITH TORQUE WRENCH ACCORDING TO MANUFACTURER'S RECOMMENDATIONS AND REQUIREMENTS OF ICC REPORT
   - TEST ALL ANCHORS WITH TORQUE WRENCH AFTER INSTALLATION (INCLUDING LOAD TEST OF 5 PERCENT OF INSTALLED ANCHORS)
   - LOAD TEST OF 10 PERCENT OF INSTALLED ANCHORS BY SUPPLIER OR THIRD PARTY INSPECTOR

   ALL ADHESIVE ANCHOR RODS AND DOWELS SHALL HAVE SPECIAL STRUCTURAL INSPECTION (INTERMITTENT EXCEPT AS NOTED FOR OVERHEAD INSTALLATION) BY ONE OF THE FOLLOWING:

   - WITNESS INSTALLATION ACCORDING TO MANUFACTURER'S RECOMMENDATIONS AND REQUIREMENTS OF ICC REPORT
   - LOAD TEST OF 10 PERCENT OF INSTALLED ANCHORS BY SUPPLIER OR THIRD PARTY INSPECTOR

STRUCTURAL METALS

1. ALL STRUCTURAL STEEL WIDEFLANGE BEAMS AND COLUMNS SHALL BE ASTM A992, GRADE 50 STEEL AND ALL MISCELLANEOUS STEEL SHALL BE ASTM A992 OR A36 STEEL (MIN. Fy = 36

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TIMBER AND WOOD FRAMING

1. QUALITY AND CONSTRUCTION OF WOOD FRAMING MEMBERS AND THEIR FASTENERS FOR LOAD SUPPORTING PURPOSES NOT OTHERWISE INDICATED ON THE DRAWINGS SHALL BE IN ACCORDANCE WITH THE 2006 INTERNATIONAL BUILDING CODE.
2. LUMBER BENDING MEMBERS (JOIST, BEAMS & HEADERS) SHALL BE NO. 2 AND BETTER HEM-FIR VISUALLY GRADED LUMBER OR EQUAL (ALLOWABLE BENDING STRESS 525 PSI, ALLOWABLE SHEAR STRESS OF 135 PSI AND AN ELASTIC MODULUS OF 1,300,000 PSI). TIMBER AXIALLY LOADED MEMBERS (STUDS, POSTS AND COLUMNS) SHALL BE STUD GRADE HEM-FIR VISUALLY GRADED LUMBER OR EQUAL (ALLOWABLE COMPRESSION OF 800 PSI AND AN ELASTIC MODULUS OF 1,200,000 PSI) UNLESS NOTED OTHERWISE PER PLAN.
3. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATIONS OF FIRE RATED WALLS. PROVIDE SHEATHING AND STUDS IN ACCORDANCE WITH WALL ASSEMBLIES IN SHEAR WALL SCHEDULE.
4. BRIDGING OF STUD BEARING WALLS AND SHEAR WALLS SHALL BE SOLID MATCHING SHEATHING JOINTS.
5. JOIST BLOCKING AND BRIDGING SHALL BE SOLID WOOD OR CROSS BRIDGING OF EITHER WOOD OR METAL STRAPS. SPACING IN ANY CASE SHALL NOT EXCEED 8'-0" OR HALF OF SPAN.
6. WOOD MEMBERS AND SHEATHING SHALL BE FASTENED WITH NUMBER AND SIZE OF FASTENERS NOT LESS THAN THAT SET FORTH IN TABLE 2304.91 OF THE 2006 INTERNATIONAL B UILDING CODE. FLOOR SHEATHING SHALL BE APA RATED TONGUE AND GROOVE STURD-I-FLOOR, EXPOSURE 1, GLUED AND NAILED WITH 8d RING SHANK NAILS OR #10 SCREWS AT 12" ON CENTER AT ALL SUPPORTS. SHEATHING OF SHEAR WALLS OR ROOF DIAPHRAGMS SHALL BE EDGE NAILED WITH 8d COMMON NAILS AT 6" ON CENTER AND NAILED TO INTERMEDIATE FRAMING AND/OR BLOCKING MEMBERS WITH 8d COMMON NAILS AT 12"ON CENTER UNLESS OTHERWISE NOTED ON THE DRAWINGS.
7. SILL PLATES SHALL BE BOLTED TO CONCRETE WALLS OR STEEL BEAMS WITH ½" DIAMETER BOLTS AT 32" ON CENTER. PLATES IN DIRECT CONTACT WITH CONCRETE OR MASONRY SHALL BE TREATED LUMBER.
8. JOIST HANGERS SHALL BE SIMPSON STRONG-TIE, USP, OR EQUIVALENT.
9. SERVICE CONDITION- DRY WITH MOISTURE CONTENT AT OR BELOW 19% IN SERVICE.
10. PARALLEL STRAND LUMBER (PSL) SHALL HAVE AN ALLOWABLE FLEXURAL STRESS (Fb) OF 2,900 PSI (REDUCED BY SIZE FACTOR) AND AN ELASTIC MODULUS (E) OF 2,000,000 PSI.
11. LAMINATED VENEER LUMBER (LVL) SHALL HAVE AN ALLOWABLE FLEXURAL STRESS (Fb) OF 2,600 PSI (REDUCED BY SIZE FACTOR) AND AN ELASTIC MODULUS (E) OF 1,800,000 PSI.

WOOD TRUSSES

1. PRE-ENGINEERED WOOD TRUSSES SHALL BE DESIGNED IN ACCORDANCE WITH THE TRUSS PLATE INSTITUTE'S NATIONAL DESIGN STANDARD FOR METAL-PLATE CONNECTED WOOD TRUSS CONSTRUCTION (ANSI/TP-1 LATEST EDITION). TRUSSES SHALL BE DESIGNED BY AN AUTHORIZED MEMBER OF THE WOOD TRUSS COUNCIL OF AMERICA (WTCA). TRUSS DESIGN SHALL CONFORM TO SPECIFIED CODES, ALLOWABLE STRESS INCREASES, DEFLECTION LIMITATIONS, AND OTHER APPLICABLE CRITERIA OF THE GOVERNING CODE, INCLUDING EAVE LOADING PER SECTION 7.4.5 OF ASCE 7 ASSUMING POORLY INSULATED WARM ROOF.
2. ROOF TRUSSES SHALL BE DESIGNED FOR A TOP CHORD SNOW LOAD AS NOTED UNDER DESIGN LOADS PLUS SNOW DRIFT IN ACCORDANCE WITH APPLICABLE BUILDING CODES
   - MINIMUM TOP CHORD DEAD LOAD SHALL BE 10 psf
   - MINIMUM BOTTOM CHORD DEAD LOAD SHALL BE 10 psf
3. DEFLECTION LIMITATION FOR ROOF TRUSSES:
   - SNOW LOAD DEFLECTION LIMIT = L/360
   - TOTAL LOAD DEFLECTION LIMIT = L/240
4. PRIOR TO INSTALLATION, THE TRUSS MANUFACTURER SHALL SUBMIT STRUCTURAL CALCULATIONS AND PLANS TO THE ARCHITECT/ENGINEER FOR REVIEW. THE STRUCTURAL CALCULATIONS SHALL CONTAIN AN ORIGINAL PROFESSIONAL ENGINEER'S SEAL AND SIGNATURE BY THE DESIGN ENGINEER REGISTERED IN THE STATE WHERE THE PROJECT IS LOCATED.
5. ALL TRUSSES SHALL BE SECURELY BRACED BOTH DURING ERECTION AND PERMANENTLY, AS INDICATED ON THE APPROVED TRUSS DESIGN DRAWINGS ALL IN ACCORDANCE WITH TPI'S COMMENTARY AND RECOMMENDATIONS FOR HANDLING, INSTALLING AND BRACING METAL-PLATE CONNECTED WOOD TRUSSES (HIB-91, BOOKLET) AND THE LATEST EDITION OF ANSI/TP-1.
6. THE TRUSS MANUFACTURER SHALL SUPPLY ALL HARDWARE AND FASTENERS FOR JOINING TRUSS MEMBERS TOGETHER AND FASTENING TRUSS MEMBERS TO THEIR SUPPORTS. METAL CONNECTOR PLATES SHALL BE MANUFACTURED BY A MEMBER OF THE WOOD TRUSS COUNCIL OF AMERICA (WTCA) AND SHALL BE 20 GAUGE MINIMUM. CONNECTOR PLATES SHALL MEET OR EXCEED ASTM A653, GRADE 33, WITH ASTM A924 GALVANIZED COATING DESIGNATION G60.
7. SHIPMENT, HANDLING, AND ERECTION OF TRUSSES SHALL BE BY EXPERIENCED, QUALIFIED PERSONS AND SHALL BE PERFORMED IN A MANNER SO AS NOT TO ENDANGER LIFE OR PROPERTY. APPARENT TRUSS DAMAGE SHALL BE REPORTED TO THE TRUSS MANUFACTURER FOR EVALUATION PRIOR TO ERECTION. CUTTING OR ALTERATION OF TRUSSES IS NOT PERMITEED.
8. ALL ROOF OPENING DIMENSIONS AND LOCATIONS SHOWN ON THE PLANS SHALL BE VERIFIED BY THE CONTRACTOR AND ROOF MANUFACTURER.

SHOP DRAWING REVIEW

1. SHORT ELLIOTT HENDRICKSON INC. (SEH) WILL REVIEW THE GENERAL CONTRACTOR'S (GC) SHOP DRAWINGS AND RELATED SUBMITTALS (AS INDICATED BELOW) WITH RESPECT TO THE ABILITY OF THE DETAILED WORK, WHEN COMPLETE, TO BE A PROPERLY FUNCTIONING INTEGRAL ELEMENT OF THE OVERALL STRUCTURAL SYSTEM DESIGNED BY SEH. IN GENERAL, SUBMITTALS WILL NOT BE REVIEWED FOR CORRECT QUANTITIES OR CONSTRUCTION CONSIDERATIONS.
2. PRIOR TO SUBMITTAL OF A SHOP DRAWING OR ANY RELATED MATERIAL TO SEH, THE GC SHALL:
   - REVIEW EACH SUBMISSION FOR CONFORMANCE WITH THE MEANS, METHODS, TECHNIQUES, SEQUENCES AND OPERATIONS OF CONSTRUCTION AND SAFETY PRECAUTIONS AND PROGRAMS INCIDENTAL THERETO, ALL OF WHICH ARE THE SOLE RESPONSIBILITY OF THE GC.
   - REVIEW AND APPROVE EACH SUBMISSION.
   - STAMP EACH SUBMISSION AS APPROVED.
3. SEH SHALL ASSUME THAT NO SUBMISSION COMPRISES A VARIATION FROM THE CONTRACT DOCUMENTS UNLESS THE GC ADVISES SEH WITH WRITTEN DOCUMENTATION. SHOP DRAWINGS AND RELATED MATERIAL (IF ANY) REQUIRED ARE INDICATED BELOW. SHOULD SEH REQUIRE MORE THAN TEN (10) WORKING DAYS TO PERFORM THE REVIEW, SEH SHALL SO NOTIFY THE GC. SUBMITTALS SHALL INCLUDE:
   - CONCRETE MIX DESIGNS AND MATERIAL CERTIFICATES INCLUDING ADMIXTURES AND COMPOUNDS APPLIED TO THE CONCRETE AFTER PLACEMENT.
   - AGGREGATE TESTS AND CONCRETE TEST HISTORY FOR EACH MIX DESIGN, WITH THE SUBMISSION OF CONCRETE MIX DESIGNS.
   - REINFORCING STEEL SHOP DRAWINGS INCLUDING ERECTION DRAWINGS AND BENDING DETAILS. BAR LIST WILL NOT BE REVIEWED FOR CORRECT QUANTITIES.
   - ELEVATIONS OF ALL REINFORCED CONCRETE MASONRY WALLS AND ALL CONCRETE WALLS WITH FOOTING STEPS OR OTHER ELEVATION CHANGES, AT A SCALE NO SMALLER THAN 1/8" = 1'-0" SHOWING ALL REQUIRED REINFORCING.
   - GROUT MIX DESIGNS (FOR CMU).
   - STRUCTURAL STEEL SHOP DRAWINGS INCLUDING ERECTION DRAWINGS AND PIECE DETAILS. INCLUDE JOIST, DECKING AND CONNECTOR SUBMITTALS. INCLUDE MISCELLANEOUS FRAMING SPECIFIED ON DRAWINGS. JOIST SHOP DRAWINGS FOR JOISTS CARRYING NON-UNIFORM LOADS SHALL INCLUDE DESIGN CALCULATIONS SIGNED AND SEALED BY AN ENGINEER REGISTERED IN THE STATE OF THE PROJECT.
   - STRUCTURAL STEEL CONNECTION DESIGN CALCULATIONS, WHERE REQUIRED (SIGNED AND SEALED BY ENGINEER REGISTERED IN STATE OF THE PROJECT).
   - INFORMATION FOR LIGHT GAGE METAL FRAMING. ERECTION PLANS AND DETAILS FOR LIGHT GAGE METAL JOISTS AND LINTELS SPANNING MORE THAT 6'-0" SHALL BE SUBMITTED. STANDARD INTERIOR NON-LOADBEARING WALL FRAMING NEED NOT BE SUBMITTED.
   - PRE-MANUFACTURED WOOD TRUSS SHOP DRAWINGS
   - PRE-MANUFACTURED WOOD TRUSS DESIGN CALCULATIONS SIGNED AND SEALED BY ENGINEER REGISTERED IN STATE OF PROJECT
   - SEH SHALL REVIEW SHOP DRAWINGS AND RELATED MATERIALS WITH COMMENTS PROVIDED THAT EACH SUBMISSION HAS MET THE ABOVE REQUIREMENTS. SEH SHALL RETURN WITHOUT COMMENT UNREQUIRED MATERIAL OR SUBMISSIONS WITHOUT GC APPROVAL STAMP.

REQUIRED INSPECTIONS

1. BUILDING CONCSTRUCTION WORK IS TO BE INSPECTED DURING CONSTRUCTION BY THE OWNER OR AN INDEPENDENT TESTING AGENCY OR CONSULTANT REVIEWED BY THE OWNER AS INDICATED IN "REQUIRED INSPECTIONS" TABLE BELOW. CONTRACTOR SHALL PROVIDE MINIMUM ADVANCE NOTICE OF 48 HOURS TO THE OWNER OR OWNER'S AGENT PRIOR TO PERFORMING THESE WORK TYPES

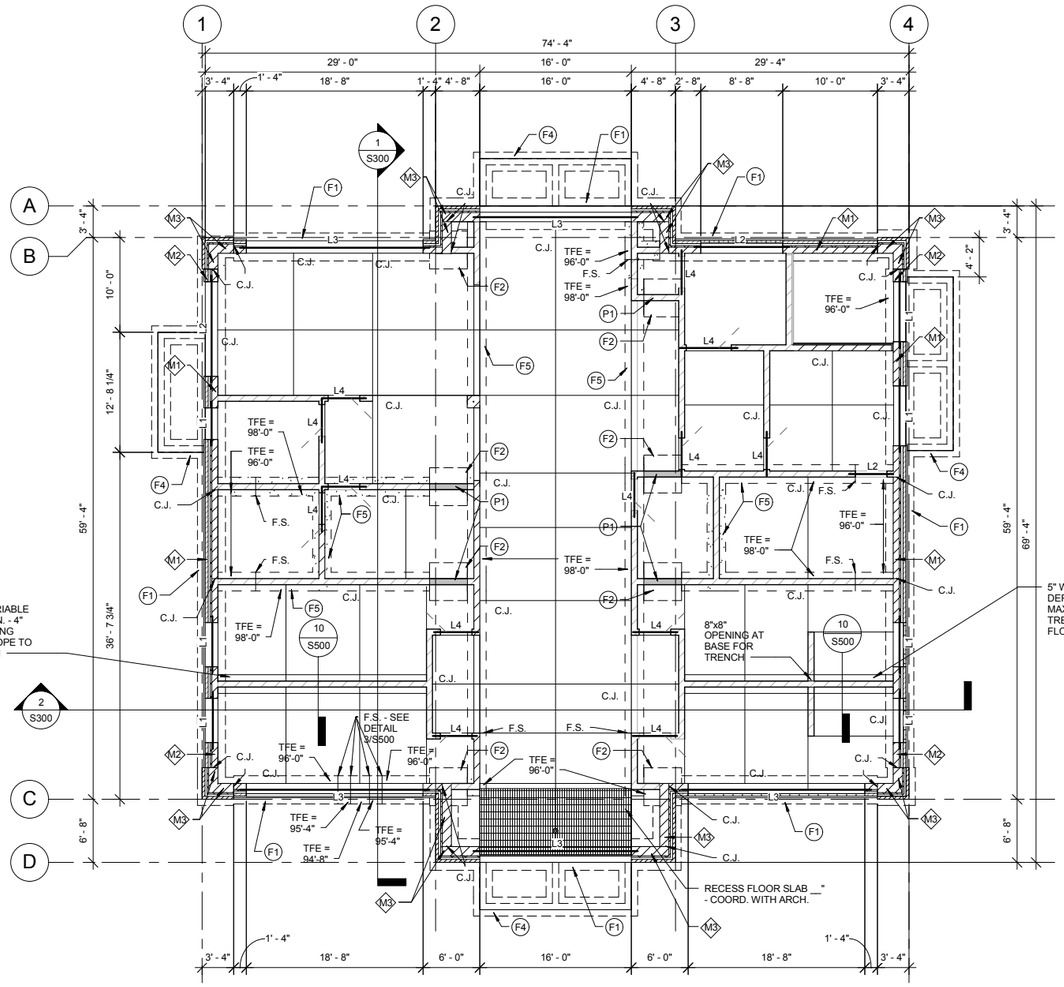
REQUIRED INSPECTIONS

DESCRIPTION OF WORK IBC SECTION 1704	INSPECTION		TESTING		N/A
	YES	NO	YES	NO	
1. METAL CONSTRUCTION					
WELDING	●			●	
DETAILS: BRACING, LOCATIONS, ETC.	●			●	
BOLTING	●			●	
2. CONCRETE CONSTRUCTION					
CONCRETE	●		●		
PRECAST/PRESTRESSED CONCRETE					●
REINFORCEMENT: SIZE AND SPACING	●			●	
BOLTS INSTALLED IN CONCRETE	●			●	
3. MASONRY CONSTRUCTION					
REINFORCEMENT: SIZE AND SPACING	●			●	
PRISMS		●		●	
DETAILS: GROUTING, LINTELS, ETC.	●			●	
4. WOOD CONSTRUCTION	●			●	
5. GRADING, EXCAVATION, AND FILLING	●		●		
6. PILING, PIERS, AND CAISSONS					●
7. SPRAY-APPLIED FIREPROOFING					●
8. EXTERIOR INSULATION AND FINISHES					●
9. SPECIAL CASES					●

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S002

PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	GENERAL STRUCTURAL NOTES (CONTINUED)	SHEET 85	E



1 S100 FOUNDATION / FLOOR PLAN
1/8" = 1'-0"

FOUNDATION NOTES:

1. FINISH LOWER LEVEL ELEVATION = 100' - 0" (U.N.O.)
2. FORM CONTRACTION JOINTS (C.J.) OR SAWCUT WITHIN 18 HOURS OF CONCRETE PLACEMENT - SEE 2/S500.
3. MAXIMUM SPACING OF CONTRACTION JOINTS TO BE 15' - 0"
4. VERIFY ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS
5. VERIFY ALL SIZES AND LOCATIONS OF OPENINGS WITH ARCHITECTURAL DRAWINGS
6. TOP OF FOOTING ELEVATION (TFE) = INTERIOR: 98'-0" U.N.O. EXTERIOR: 96' - 0" U.N.O.
7. DESIGN ALLOWABLE SOIL BEARING CAPACITY: (REF. GEOTECHNICAL REPORT) MAIN BUILDING ELEMENTS: 2,500 PSF
8. STEPPED FOOTING DETAIL - SEE 4/S500 USE WHERE NEEDED TO MAINTAIN BOTTOM OF FOOTING DEPTH OF 4' - 0" MIN. BELOW GRADE
9. CONTRACTOR OPTIONS AT MECHANICAL AND ELECTRICAL LINES THROUGH FOUNDATION - SEE 3/S500 AND 8/S500.
10. TFE = TOP OF FOOTING ELEVATION
    TSE = TOP OF SLAB ELEVATION
    F.S.= FOOTING STEP
    C.J. = CONTROL JOINT
11. 'Fx' DENOTES FOOTING TYPE
    'Mx' DENOTES MASONRY REINFORCING TYPE
    REF. SCHEDULE ON THIS SHEET AND DETAILS
    REF. MASONRY REINFORCING SCHEDULE AND NOTES ON THIS SHEET
12. CONTRACTOR TO IMMEDIATELY CONTACT STRUCTURAL ENGINEER FOR FIELD VERIFICATION IF EXISTING CONDITIONS VARY FROM THOSE STATED IN THESE DOCUMENTS. ASSUMPTIONS MADE HERE WITHIN HAVE BEEN BASED UPON LIMITED EXISTING DOCUMENTATION.
13. SEE DETAIL 1/S500 FOR TYPICAL STOOP DETAIL.
14. SEE ARCHITECTURAL PLANS FOR LOCATION SOF INTEGRALLY COLORED CONCRETE FLOOR SLAB.

FOOTING SCHEDULE

F1	3'-0" W X 1'-0" DP CONT. FOOTING	(4) #5 BOT REBAR	TYP. EXT. U.N.O.
F2	4'-0" X 4'-0" X 1'-0" DP	(5) #5 REBAR EA. WAY BOT	-
F3	4'-0" X 4'-0" X 1'-0" DP	(5) #5 REBAR EA. WAY BOT	CHANGE SHAPE AS NEEDED TO FIT W/ STRIP FOOTINGS FOR WALLS
F4	1'-4" W X 1'-0" DP	(2) #5 REBAR BOTTOM	STOOP
F5	2'-0" X 1'-0" DP	(2) #5 REBAR CONT. BOT	-
F6	1'-4" X 8" DP THICKENED SLAB	(2) #4 REBAR CONT. BOT	TYP. INT. U.N.O. SEE DET. 9/S500

LINTEL SCHEDULE

L1	W8 X 10	6"x6"x3/8" BEARING PLATE, SEE DET. 10/S501
L2	W8 X 18	7"x7"x3/8" BEARING PLATE, SEE DET. 10/S501
L3	W16X45	10"x7"x1/2" BEARING PLATE, SEE DET. 11/S501
L4	(1) COURSE 8" BOND BEAM W/ (1) #5 REBAR BOTTOM - TYP. FOR INTERIOR PARTITION WALLS	

1. EACH MASONRY LINTEL SHALL BEAR 8" MIN. ON CMU WALL - CONTINUE HORIZ. REINF. TO END OF BEARING.
2. GROUT AND REINFORCE (2) VERTICAL CORES EACH SIDE OF ALL MASONRY AND STEEL LINTELS U.N.O.
3. BOTTOM REBAR TO BE MAINTAINED 2" MIN. CLEAR FROM BOTTOM OF BOND BEAM LINTEL OR GREAT IF REQ. FOR FIRE RESISTIVE CONSTRUCTION. SHORE CMU LINTELS FOR ENTIRE LENGTH UNTIL BOND BEAMS ARE IN PLACE AND GROUT IS CURED. ALL BOND BEAM LINTELS SHALL BE CONSTRUCTED OF 8" HIGH BLOCK IN RUNNING BOND. USE POUR-THRU BOND BEAM BLOCK FOR UPPER COURSE(S) IF LINTEL HEIGHT EXCEEDING 8" IS INDICATED.
4. PROVIDE CAST-IN EMBEDMENT PLATE WITH MIN. (2) 1/2" DIA. x 6" LONG HEADED STUDS AT ALL STEEL LINTEL BEARING LOCATIONS.

MASONRY WALL TYPES

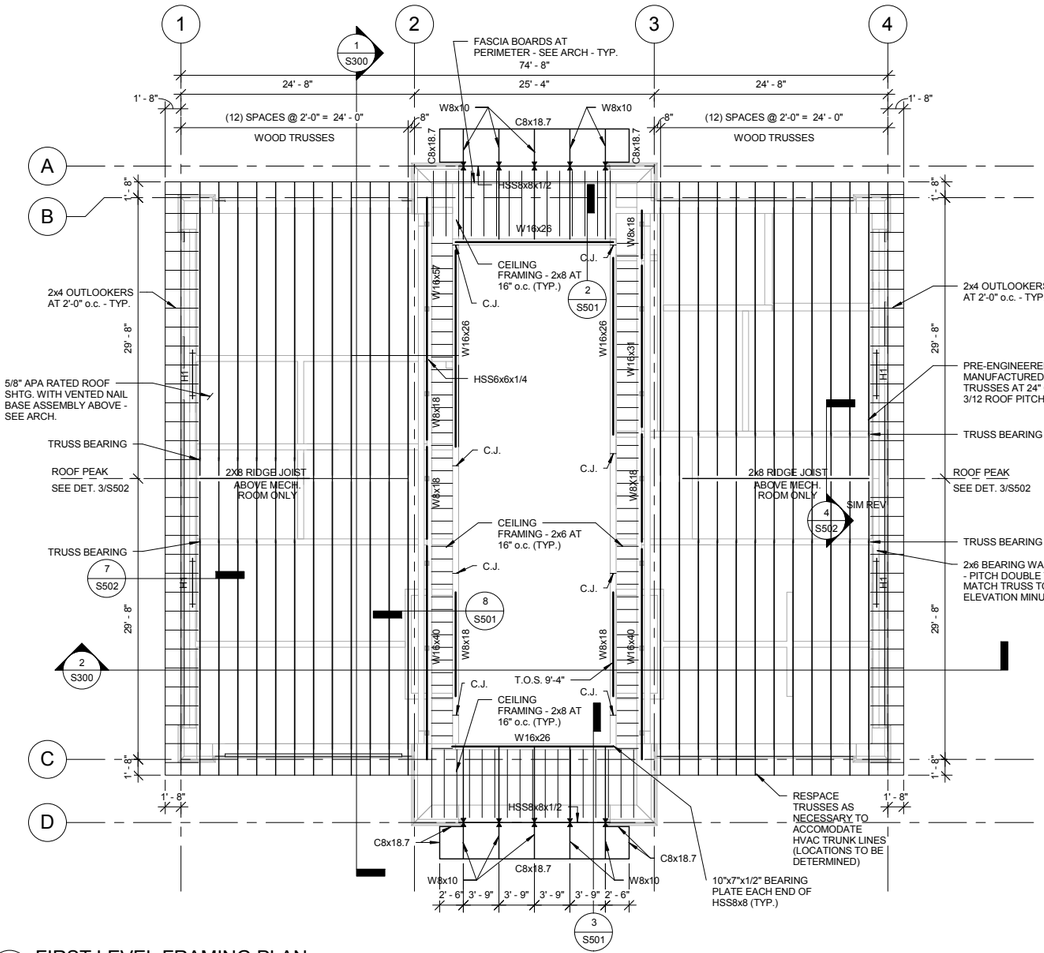
M1	8" CMU REINF. W/ (1) #5 @ 48" O.C.
M2	8" CMU REINF. W/ (1) #5 @ 8" O.C. GROUTED SOLID
M3	12" CMU REINF. W/ (2) #5 @ 8" O.C. GROUTED SOLID

1. PROVIDE #5 AT 48" o.c. AT TYPICAL 8" CMU WALL REINFORCEMENT U.N.O. PROVIDE (2) #5 AT 48" o.c. AT TYPICAL 12" CMU WALL REINFORCEMENT U.N.O. GROUT CORES SOLID AT REBAR LOCATIONS.
2. SEE PLAN FOR LOCATIONS OF ADDITIONAL MASONRY SHEARWALL REINFORCEMENT.
3. DOWEL VERTS. TO FOUNDATION/FOUNDATION WALLS.
4. PROVIDE GROUTED JAMBS AT ALL LINTEL BEARING. GROUT FULL DEPTH OF WALL BELOW BEARING ELEVATION U.N.O.
5. EXTEND VERTS TO STEEL BEAM BEARING OR CONT. BOND BEAM TO TOP OF WALL. DOWEL VERTS CONT. BOND BEAM BELOW. SEE NOTE 3.

MASONRY PIER - BELOW BEAM BEARING

P1	4'-0" LONG X 8" WIDE PIER CORES GROUTED SOLID REINFORCED W/ (1) #5 @ 8" O.C.

NOTE: GROUT CORES SOLID AT ENDS OF ALL MASONRY WALLS AND AT MASONRY CORNERS. PROVIDE MIN. (1) #5 VERT. AT LOCATIONS DOWEL TO FOUNDATION WALL.



1 S101 FIRST LEVEL FRAMING PLAN
1/8" = 1'-0"

ROOF FRAMING NOTES:

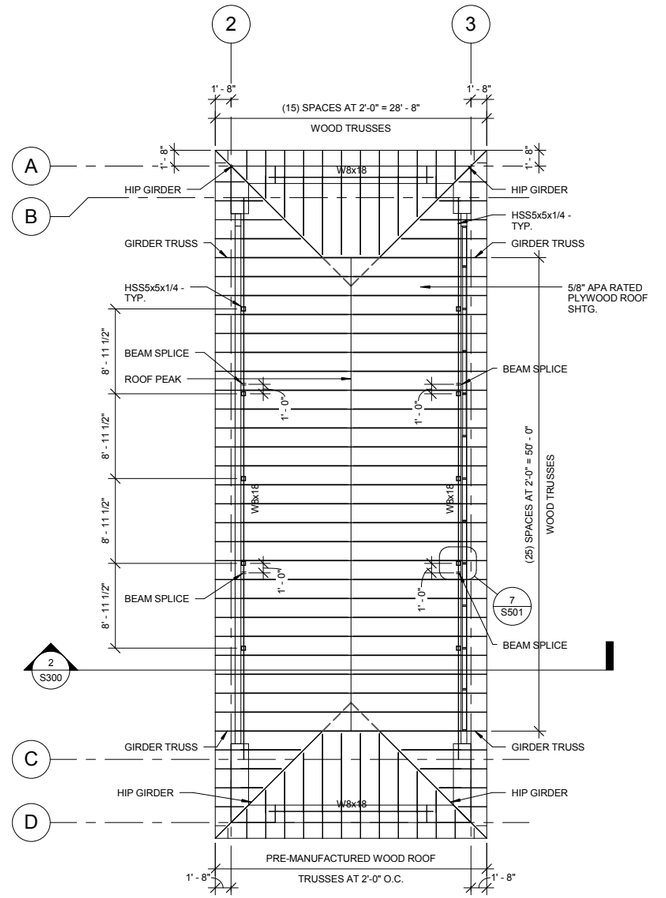
(TYPICAL UNLESS NOTED OTHERWISE)

1. LOWER ROOF TRUSS BEARING ON CMU WALL ELEV. = 110' - 1-1/2"
   UPPER ROOF TRUSS BEARING ON BEAMS ELEV. = 124' - 1-1/2"
2. TRUSS BOTTOM-CHORD LATERAL BRACING WILL BE PROVIDED BY GYPSUM BOARD.
3. CONTRACTOR TO FURNISH AND INSTALL PERMANENT WEB BRACING AS SPECIFIED BY THE TRUSS SUPPLIER. PROVIDE END ANCHORAGE AS APPLICABLE TO RESTRAIN PERMANENT WEB BRACING SPECIFIED BY THE TRUSS DESIGNER. SEE 6/S502, 9/S502.
4. ROOF TRUSSES:
   - SPACE TRUSSES AT 2' - 0" O.C. MAX.
   - TRUSS SPACING SHOWN ON PLAN IS MAXIMUM SPACING. TRUSS MANUFACTURER MAY DECREASE SPACING OR ADJUST CHORD SIZES AS REQUIRED TO ACCOMMODATE SNOW DRIFT LOADS
5. TRUSS LOADING / SPACING:
   - REF. THIS SHEET FOR DESIGN TOP CHORD AND BOTTOM CHORD DEAD LOADS AND SNOW LOAD / SNOW DRIFT.
   DEAD LOAD:
   20psf - TYPICAL U.N.O.
   SNOW LOADS:
   BALANCED SNOW LOAD: 31psf
   SNOW DRIFT LOAD: 42psf MAX. ADDL. ADJACENT TO CLERESTORY (8'-9" WIDE)
6. ROOF SHEATHING:
   - USE 5/8" APA RATED SHEATHING. MINIMUM 40/20 APA RATING
7. DIAPHRAGM NAILING:
   - UNBLOCKED DIAPHRAGM, W/ 10d NAILS AT 6" O.C. AT PANEL EDGES, 12" O.C. IN FIELD
8. SEE ARCHITECTURAL DRAWINGS FOR DIMENSIONS TO WALL AND STAIR OPENINGS AND FOR LOCATIONS OF PARTITION WALLS NOT NOTED
9. COORDINATE ROOF TRUSSES TO AVOID INTERFERENCE WITH VERTICAL MECHANICAL VENTILATION CHASES. REFER TO ARCHITECTURAL AND MECHANICAL PLANS FOR CHASE LOCATIONS.
10. TRUSS SUPPLIER SHALL VERIFY ALL TRUSS END TO END LENGTHS AND BEARING CONDITIONS. ADJUST TRUSS PROFILES AS NECESSARY.
11. FOR TYPICAL BEAM SPLICE SEE DETAIL 5/S502.

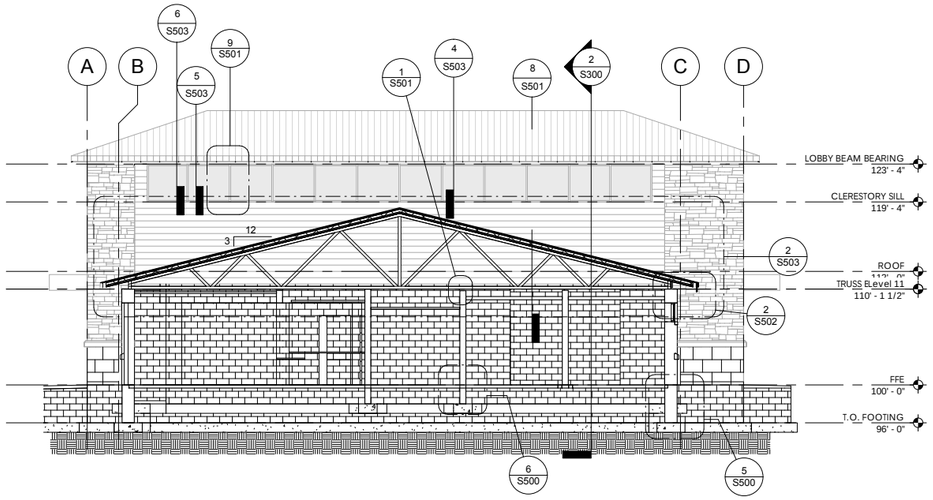
HEADER SCHEDULE

H1	(2) PLY 2x8 WITH (1) 2x TO BEARING AND (1) 2x FULL HEIGHT JAMB

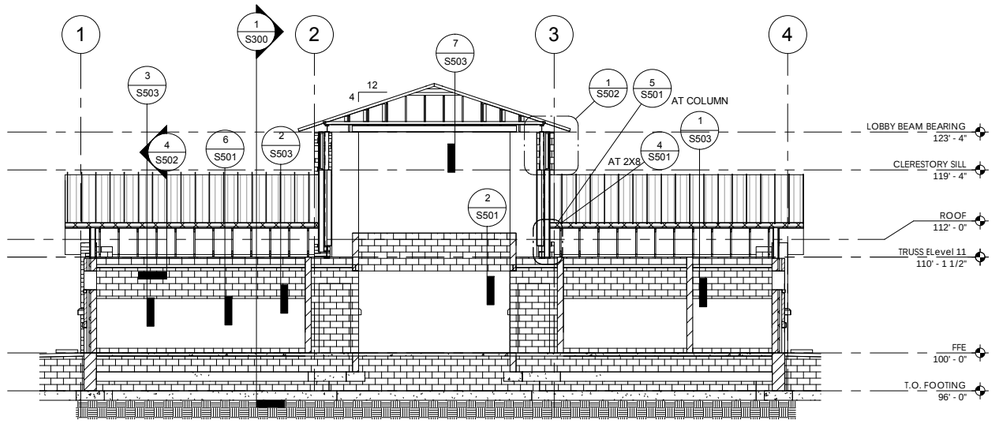
1. CONTINUOUS 2x TOP AND BOTTOM PLATE AT HEADERS TYPICAL. SEE DETAIL 8/S502.



2 S101 CLERESTORY FRAMING PLAN
1/8" = 1'-0"



1 S300 BUILDING SECTION 1
1/8" = 1'-0"

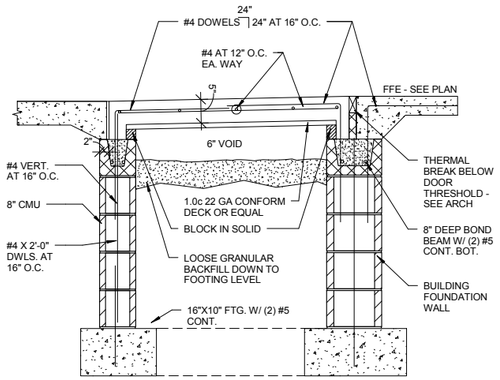


2 S300 BUILDING SECTION 2
1/8" = 1'-0"

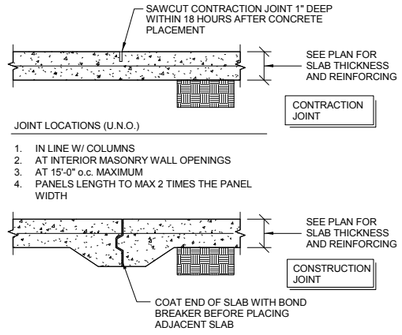
2

S300

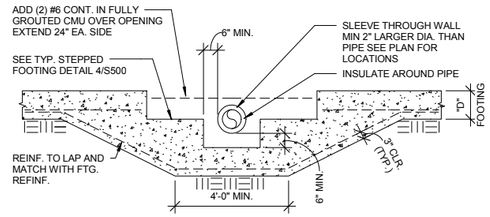
PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	BUILDING SECTION	SHEET 88	E



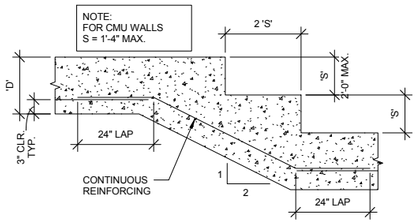
1 S500 TYPICAL CMU STOOP DETAIL
3/4" = 1'-0"



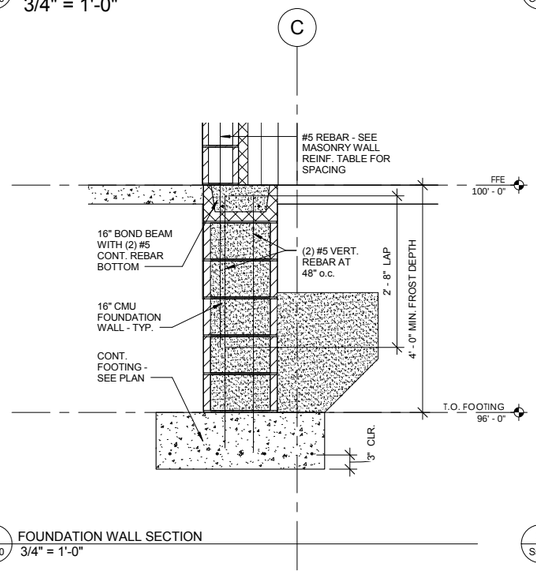
2 S500 CONSTRUCTION/CONTRACTION JOINT DETAIL
3/4" = 1'-0"



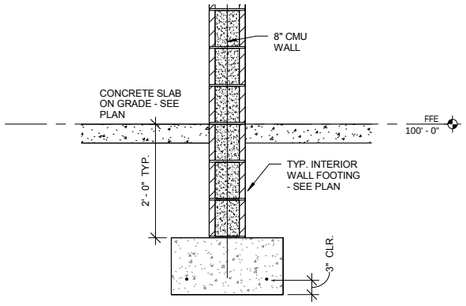
3 S500 UTILITY OPENING DETAIL
3/4" = 1'-0"



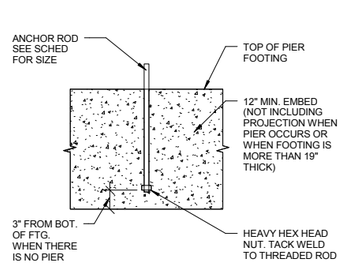
4 S500 STEPPED FOOTING DETAIL
3/4" = 1'-0"



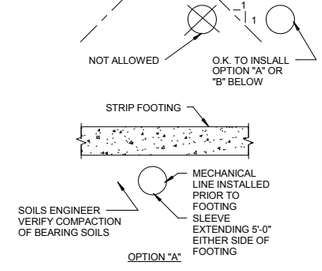
5 S500 FOUNDATION WALL SECTION
3/4" = 1'-0"

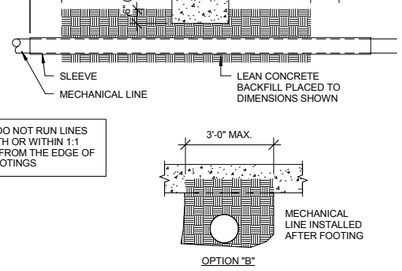


6 S500 INTERIOR WALL FOOTING SECTION
3/4" = 1'-0"

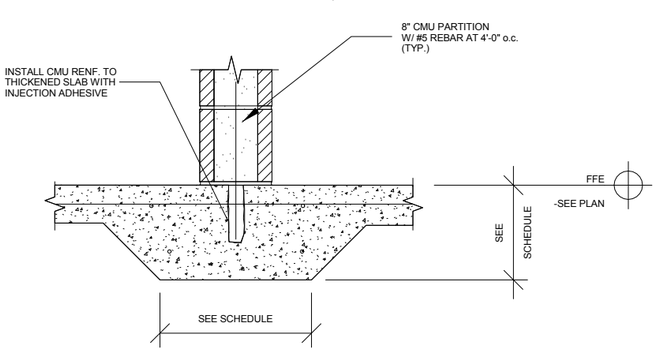


7 S500 TYPICAL ANCHOR ROD DETAIL
1 1/2" = 1'-0"

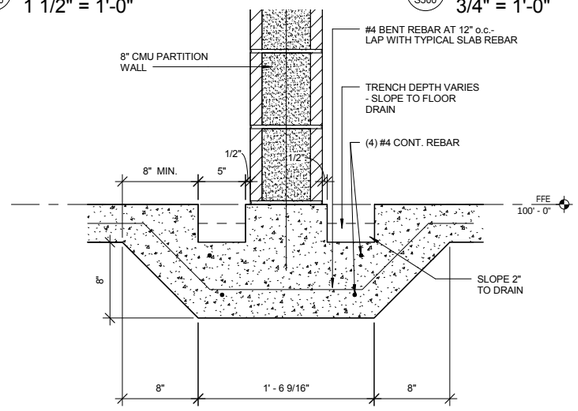




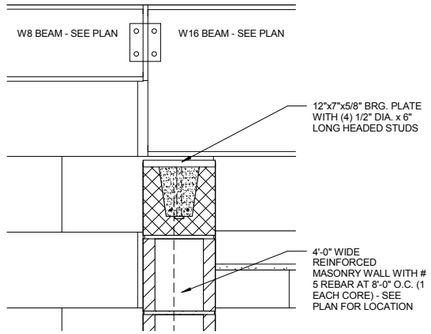
8 S500 CONTRACTOR OPTIONS
3/4" = 1'-0"



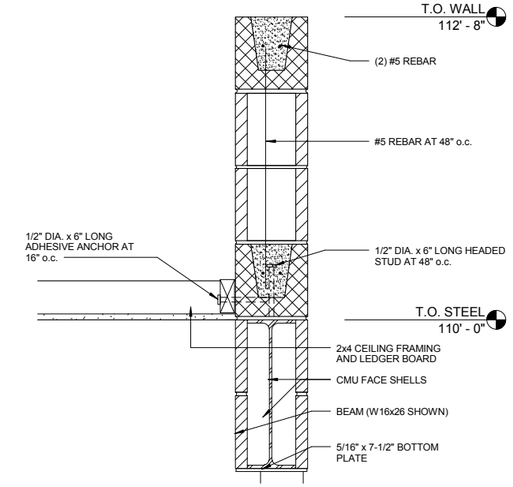
9 S500 THICKENED SLAB DETAIL
1 1/2" = 1'-0"



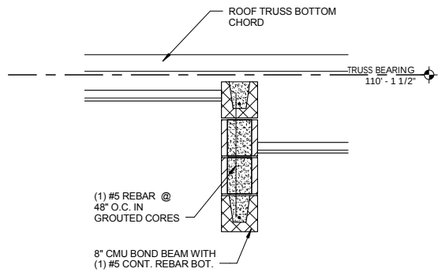
10 S500 TRENCH DETAIL
1 1/2" = 1'-0"



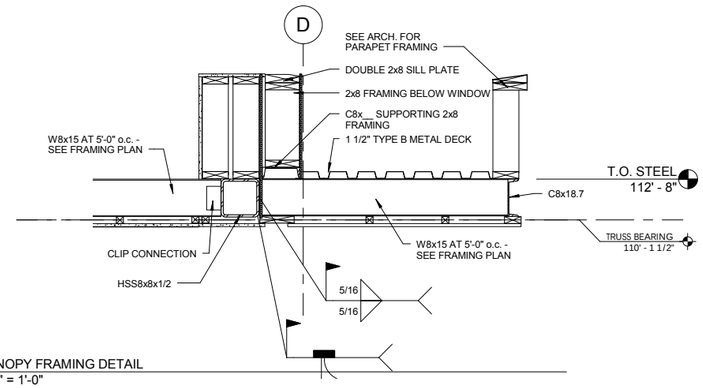
1 S501 BEAM BEARING ON CMU
1 1/2" = 1'-0"



2 S501 EDGE OF PLATE AROUND LOBBY
1 1/2" = 1'-0"



6 S501 TYPICAL CMU LINTEL DETAIL
3/4" = 1'-0"



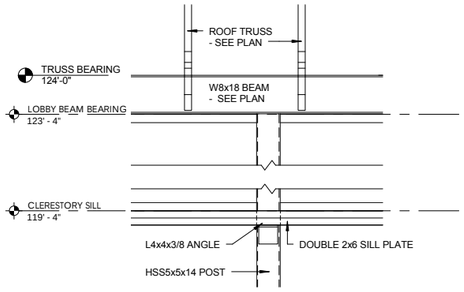
3 S501 CANOPY FRAMING DETAIL
3/4" = 1'-0"

4 S501 CLERESTORY WALL SECTION
3/4" = 1'-0"

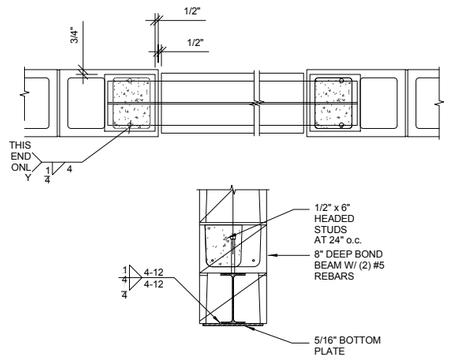
5 S501 CLERESTORY WALL SECTION AT COLUMN
3/4" = 1'-0"

7 S501 CLERESTORY WALL FRAMING PLAN VIEW
1 1/2" = 1'-0"

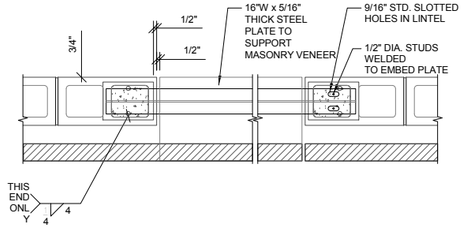
8 S501 STRUCTURAL LOBBY BULKHEAD DETAIL
1 1/2" = 1'-0"



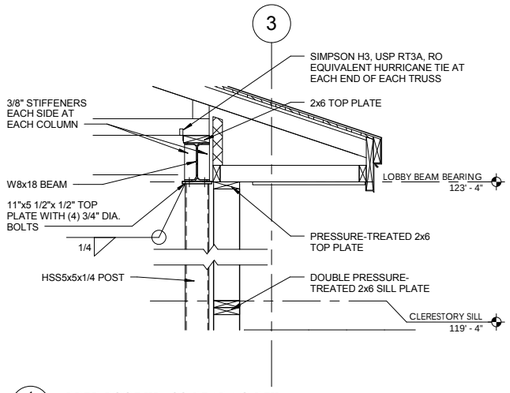
9 S501 CLERESTORY WALL FRAMING ELEVATION
3/4" = 1'-0"



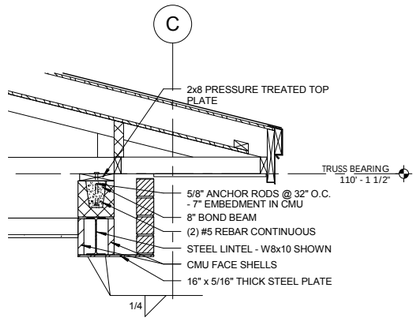
10 S501 TYPICAL LINTEL BEARING DETAIL
3/4" = 1'-0"



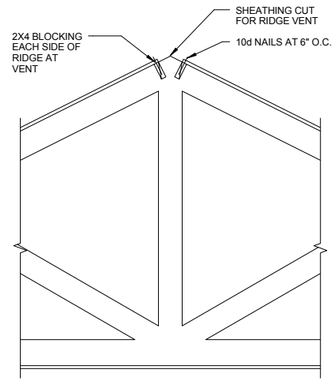
11 S501 LINTEL BEARING PLAN VIEW
3/4" = 1'-0"



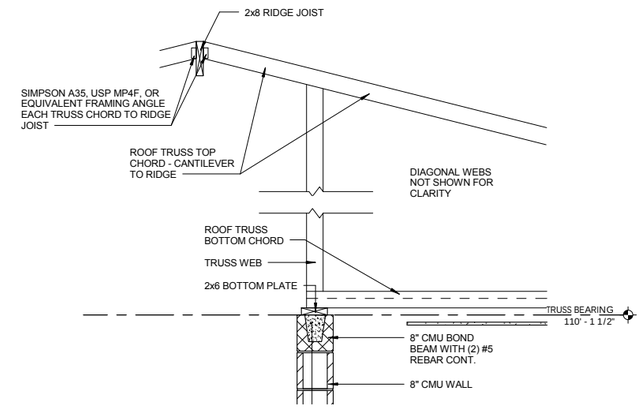
1 S502 UPPER ROOF TRUSS BEARING DETAIL
3/4" = 1'-0"



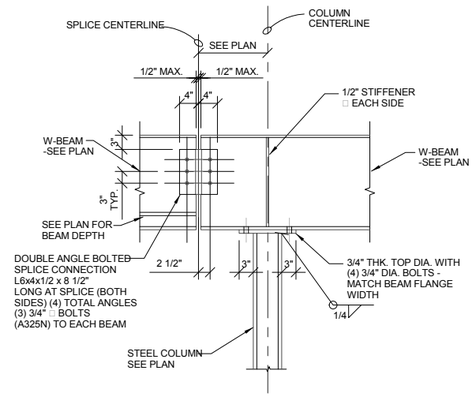
2 S502 TRUSS BEARING ON CMU WALL
3/4" = 1'-0"



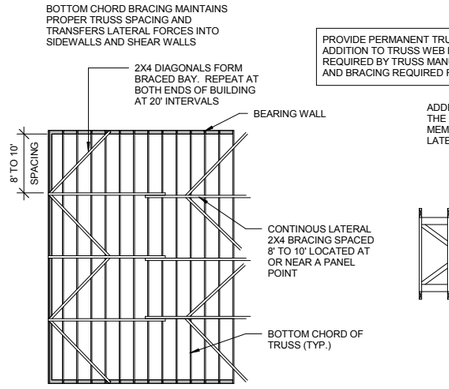
3 S502 ROOF PEAK DETAIL
3/4" = 1'-0"



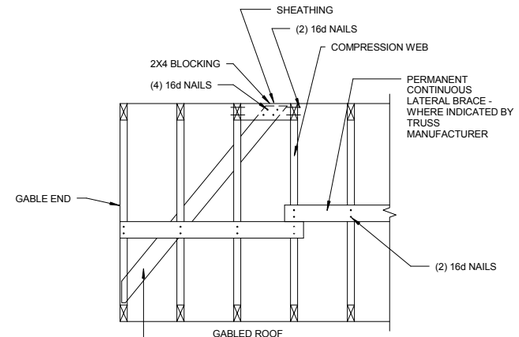
4 S502 INTERIOR ROOF TRUSS BEARING
3/4" = 1'-0"

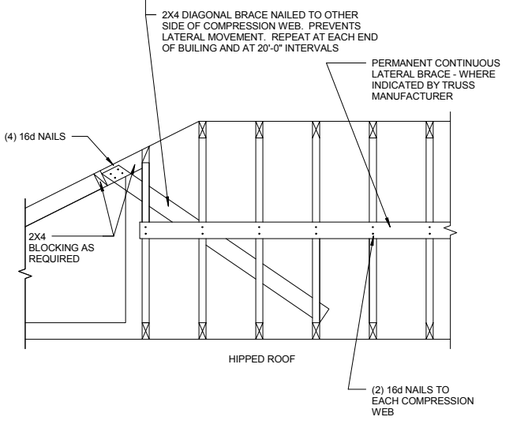


5 S502 TYPICAL BEAM SPLICE
3/4" = 1'-0"

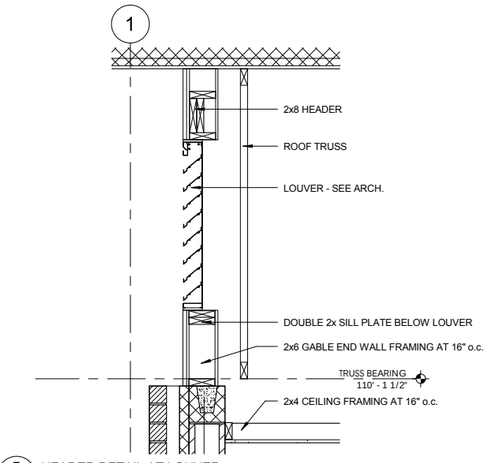


6 S502 TRUSS BRACING DETAILS
3/4" = 1'-0"

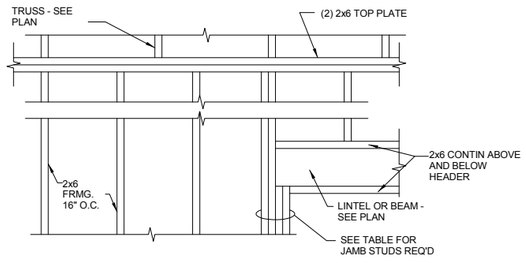




9 S502 LATERAL WEB BRACING DETAILS
3/4" = 1'-0"



7 S502 HEADER DETAIL AT LOUVER
3/4" = 1'-0"

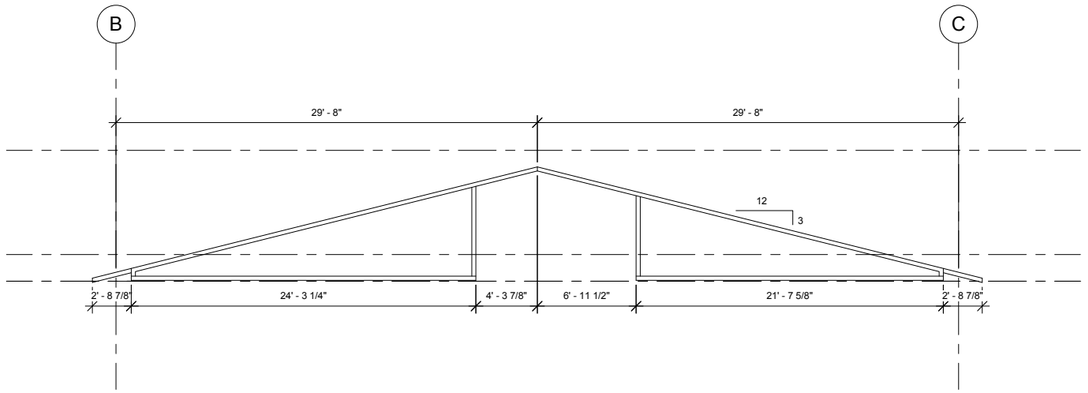


8 S502 TYPICAL FRAMING ELEVATION
3/4" = 1'-0"

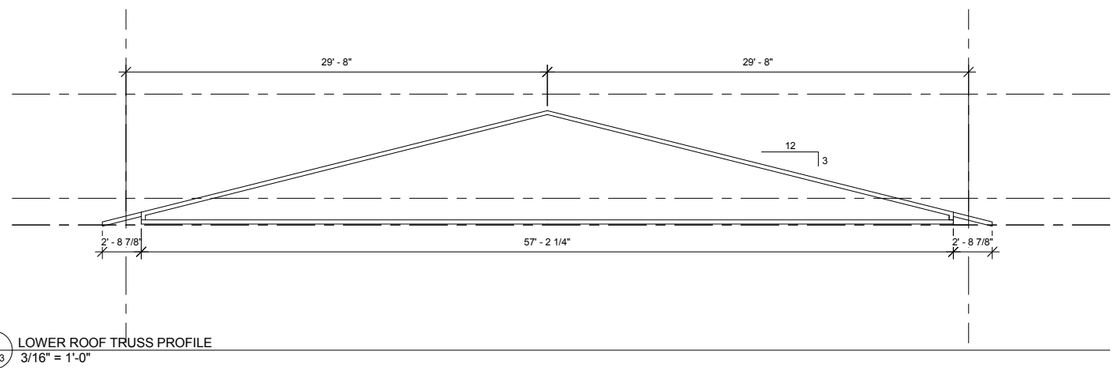
S502

PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	ROOF FRAMING DETAILS	SHEET	E

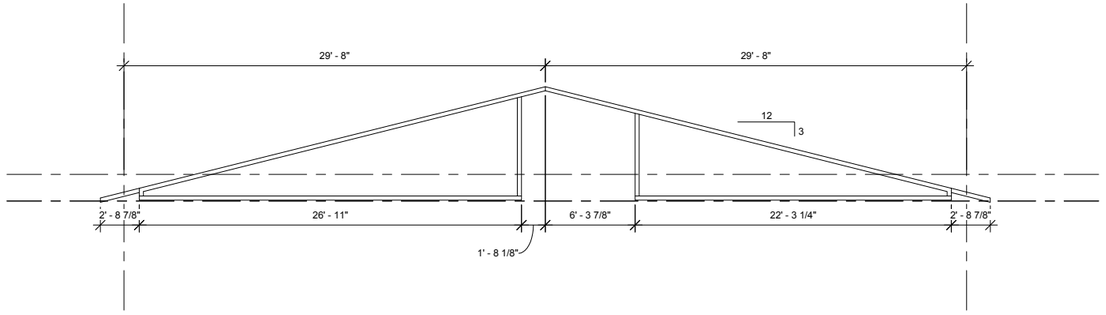
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PLOT BY:
PLOT NAME:
PLOT SCALE:
WISDOT/CADDS SHEET 42



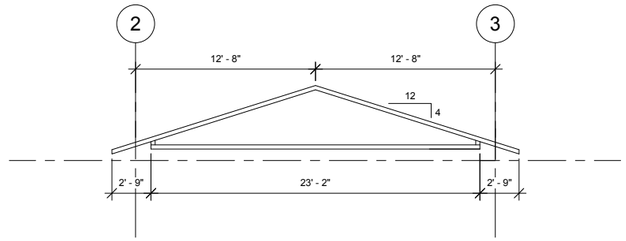
1 S503 LOWER ROOF HALF TRUSS PROFILE - NORTH
3/16" = 1'-0"



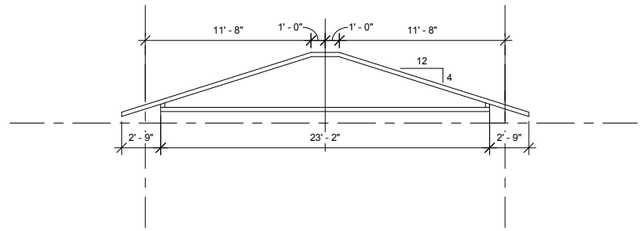
2 S503 LOWER ROOF TRUSS PROFILE
3/16" = 1'-0"



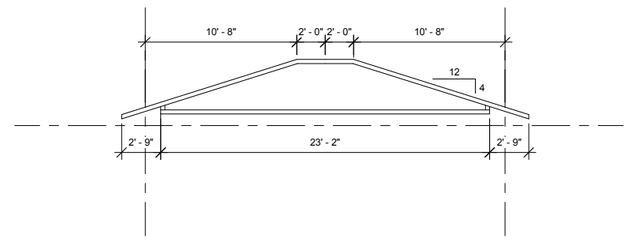
3 S503 LOWER ROOF HALF TRUSS PROFILE - SOUTH
3/16" = 1'-0"



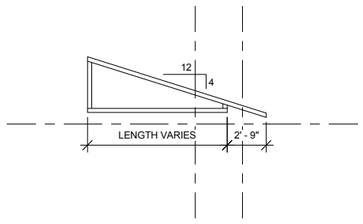
4 S503 CLERESTORY ROOF TRUSS PROFILE
3/16" = 1'-0"



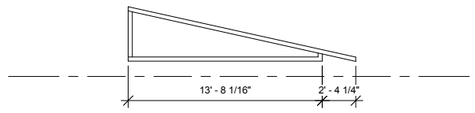
5 S503 CLERESTORY ROOF TRUSS PROFILE - FLAT TOP CHORD
3/16" = 1'-0"



6 S503 CLERESTORY GIRDER TRUSS PROFILE
3/16" = 1'-0"



7 S503 CLERESTORY HIP ROOF TRUSS PROFILE
3/16" = 1'-0"



8 S503 CLERESTORY HIP GIRDER TRUSS PROFILE
3/16" = 1'-0"

VENTILATION SCHEDULE

ROOM NUMBER	ROOM NAME	AREA (SQ FT)	OCCUPANCY CLASSIFICATION	WISCONSIN REQUIRED VENTILATION MECHANICAL VENTILATION (CFM)			PROVIDED AIRFLOW	
				OCCUPANTS (PEOPLE)	OCCUPANT OUTSIDE AIR (CFM)	EXHAUST AIR (CFM)	OUTSIDE AIR (CFM)	EXHAUST AIR (CFM)
100	VESTIBULE	132	PUBLIC	0	0	0	20	0
101	LOBBY	1055	PUBLIC	70	350	0	775	0
102	VESTIBULE	108	PUBLIC	0	0	0	20	0
103	WOMEN'S RESTROOM	248	RESTROOM	0	0	300	65	300
104	WOMEN'S RESTROOM	248	RESTROOM	0	0	300	65	300
105	TOURISM OFFICE	148	OFFICE	2	10	0	35	0
106	TOURISM	137	OFFICE	2	10	0	25	0
107	TOURISM STORAGE	106	STORAGE	0	0	0	20	0
108	TOURISM DISPLAY	405	PUBLIC	27	205	0	205	0
109	OFFICE	104	OFFICE	1	5	0	25	0
110	STORAGE	103	STORAGE	0	0	0	20	0
111	CUSTODIAL/STORAGE	165	STORAGE	0	0	50	45	75
112	EMPLOYEE BREAKROOM	105	OFFICE	1	5	0	20	0
113	FAMILY RESTROOM	86	RESTROOM	0	0	75	20	75
114	MECHANICAL	197	N/A	0	0	0	30	0
115	MEN'S RESTROOM	244	RESTROOM	0	0	300	65	300
116	MEN'S RESTROOM	244	RESTROOM	0	0	300	65	300
117	CLOSET	19	STORAGE	0	0	0	10	0
119	MECHANICAL	86	N/A	0	0	0	20	0
				0	0	0	0	0
				0	0	0	0	0
TOTALS		3940		103	585	1325	1550	1350

ENERGY RECOVERY UNIT

PLAN DESIGNATION		ERU-1	ERU-2
MANUFACTURER		RENEWAIRE	RENEWAIRE
MODEL		HE10XNH	HE10XNH
SERVICE		EAST SIDE	WEST SIDE
LOCATION		MECH 114	MECH 118
TYPE		STATIC PLATE	STATIC PLATE
EFFECTIVENESS	TOTAL SUMMER/WINTER	55 / 69	59/70
EXHAUST AIR	AIRFLOW - CFM	750	600
	MAX PRESSURE DROP - IN WC	0.75	0.75
	SUMMER DB TEMP - °F	75.00	75.00
	WINTER DB TEMP - °F	70.00	70.00
EXHAUST FAN	HP	0.75	0.75
	VOLTS/PHASE	208/3Ø	208/3Ø
SUPPLY AIR	AIRFLOW - CFM	850	700
	MAX PRESSURE DROP - IN WC	0.75	0.75
	SUMMER DB TEMP - °F	80.7	80.4
	SUMMER WB TEMP - °F	68.8	68.4
	WINTER DB TEMP - °F	39.8	41.4
	WINTER WB TEMP - °F	33.8	35.4
SUPPLY FAN	HP	0.75	0.75
	VOLTS/PHASE	208/3Ø	208/3Ø
OUTSIDE AIR	SUMMER DB TEMP - °F	91	91
	SUMMER WB TEMP - °F	74	74
	WINTER DB TEMP - °F	-15	-15
REMARKS		1, 2, 3	1, 2, 3

1. PROVIDE WITH MOTORIZED DAMPERS.
2. PROVIDE WITH SC-ECM ACCESSORY CONTROL.
3. UNIT SHALL HAVE SINGLE POINT WIRING

FANS

PLAN DESIGNATION		EF-1	RF-1	RF-2	DF-1	DF-1
MANUFACTURER		GREENHECK	GREENHECK	GREENHECK	BIG ASS	BIG ASS
MODEL		CSP-B150	SQ-140-VG	SQ-160-VG	HAIKU 60	HAIKU 60
SERVICE		STORAGE 110	RELIEF AIR	RELIEF AIR	LOBBY 101	LOBBY 101
LOCATION		STORAGE 110	MECH 114	TOURISM OFFICE 105	LOBBY 101	LOBBY 101
CONSTRUCTION	TYPE	CABINET	INLINE	INLINE	DESTRAT	DESTRAT
	CASING MATERIAL	STEEL	STEEL	STEEL	STEEL	STEEL
	FAN MATERIAL	POLY	STEEL	STEEL	BAMBOO	BAMBOO
	DRIVE	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT
AIR	CFM	100	2,750	3,875	-	-
	EXT STATIC PRESS - IN WC	0.25	0.50	0.50	-	-
	FAN RPM	724	1,225	1,260	33/180	33/180
ELECTRICAL	FAN MOTOR AMPS	1.7	6.6	12	0.05/0.636	0.05/0.636
	FAN MOTOR HP	-	3/4	1	-	-
	VOLTS/PHASE	115/1Ø	208/1Ø	208/1Ø	115/1Ø	115/1Ø
REMARKS			1	1	2	2

1. PROVIDE MOTOR COVER, BACKDRAFT DAMPER AND SPRING ISOLATORS.
2. PROVIDE EXTENSION KIT AND WALL MOUNTED CONTROLLER WITH TAMPERPROOF COVER

DIFFUSERS & GRILLES

PLAN DESIGNATION		SG-1	SG-2	SG-3	SD-1	TG-1	RG-1	EG-1
MANUFACTURER		TITUS	TITUS	TITUS	TITUS	TITUS	TITUS	TITUS
MODEL		OMNI	300RL	TDC	TBDI-80	350RL	350RL	350RL
SERVICE		SUPPLY	SUPPLY	SUPPLY	SUPPLY	RETURN	RETURN	EXHAUST
CONSTRUCTION	FACE SIZE	24" x 24"	18" x 10"	SEE BELOW	48" x 6"	12" x 12"	SEE BELOW	SEE BELOW
	TYPE	PLAQUE	LOUVERED	LOUVERED	PLENUM SLOT	LOUVERED	LOUVERED	LOUVERED
	BLADE SPACING - INCHES	--	3/4"	-	-	3/4"	3/4"	3/4
	SLOT SIZE - INCHES	--	--	--	1"	--	--	--
	NUMBER OF SLOTS	--	--	--	3	--	--	--
	MOUNTING	LAY-IN	SURFACE MOUNT	SURFACE MOUNT	LAY-IN	SURFACE MOUNT	LAY-IN	SURFACE MOUNT
	MATERIAL	STEEL	STEEL	STEEL	STEEL	STEEL	STEEL	STEEL
NECK / DUCT SIZE		0 - 100 6" Ø	0 - 100 16" x 8"	0 - 100 6" x 6" x 6" Ø	0 - 300 8"	0 - 300 10" x 10"	0 - 600 22" x 10"	0 - 100 6" x 6"
		101 - 250 8" Ø	101 - 450 16" x 8"	101 - 250 9" X 9" X 8"Ø			601 - 2000 22" x 22"	101 - 299 10" x 10"
		251 - 400 10" Ø						300 - 600 22" x 22"
		401 - 600 12" Ø						
MAX NC		30	30	30	30	30	30	30
ACCESSORIES	OPPOSED BLADE DAMPERS	--	--	--	--	--	--	--
	FILTERS	--	--	--	--	--	--	--
REMARKS		1, 2	--	1, 2	3	1	--	1, 2

1. PROVIDE PLASTER FRAME FOR DIFFUSERS/GRILLES LOCATED IN GWB CEILINGS. REFER TO REFLECTED CEILING PLAN.
2. PROVIDE DAMPER AT DIFFUSER/GRILLE IN GWB CEILINGS.
2. PROVIDE CROSS-NOTCH AND CENTER TEES.

AIR COOLED CONDENSERS

PLAN DESIGNATION		ACCU-1	ACCU-2	ACCU-3	ACCU-4
MANUFACTURER		CARRIER	CARRIER	CARRIER	CARRIER
MODEL		24AHA460	24AHA436	24AHA460	24AHA460
CAPACITY	TONS OF REFRIGERATION	5	3	5	5
	SEER[1]	14	14	14	14
CONDENSER	QUANTITY	1	1	1	1
	HORSEPOWER EACH	1/4	1/4	1/4	1/4
	AIRFLOW - CFM	2785	2615	2785	2785
REFRIGERANT		R-410A	R-410A	R-410A	R-410A
ELECTRICAL	FULL LOAD AMPS	1.4	1.2	1.4	1.4
	LOCKED ROTOR AMPS	110	71	110	110
	VOLTS / PHASE	208/3Ø	208/3Ø	208/3Ø	208/3Ø
DIMENSIONS	LENGTH - INCHES	44.5	36	44.5	44.5
	WIDTH - INCHES	19.5	19.5	19.5	19.5
	HEIGHT - INCHES	44.5	44.5	44.5	44.5
WEIGHT	SHIPPING	275	214	275	275
	OPERATING	245	184	245	245

1 SEER ARE SPECIFIED AT ARI CONDITIONS
PROVIDE LOW AMBIENT KIT FOR ACCU-2.

GAS FIRED FURNACE

PLAN DESIGNATION		GFF-1	GFF-2	GFF-3	GFF-4
MANUFACTURER		CARRIER	CARRIER	CARRIER	CARRIER
MODEL		59TP5A100-20	59TP5A060-14	59TP5A100-20	59TP5A100-20
SERVICE		LOBBY 101	OFFICE SIDE	LOBBY 101	TOURISM SIDE
LOCATION		MECH 114	MECH 114	MECH 118	MECH 118
TYPE VENTING		CONCENTRIC	CONCENTRIC	CONCENTRIC	CONCENTRIC
AIRFLOW CONFIGURATION		VERTICAL	VERTCAL	VERTICAL	VERTICAL
AIRFLOW - CFM		1,850	900	1,850	1,825
EXTERNAL STATIC PRESSURE - IN WC		0.77	0.70	0.78	0.77
INPUT HIGH/LOW - MBH		100 / 65	60 / 39	100 / 65	100 / 65
OUTPUT HI/LOW - MBH		97 / 63	58 / 38	97 / 63	97 / 63
EFFICIENCY		96.00	96.00	96.00	96.00
SUPPLY FAN	HP	1.00	0.75	1.00	1.00
	RPM	600 - 1200	600 - 1200	600 - 1200	600 - 1200
	VOLTS/PHASE	115/1	115/1	115/1	115/1
ELECTRICAL	MCA	20	15	20	20
CONNECTIONS	VOLTS/PHASE	115/1Ø	115/1Ø	115/1Ø	115/1Ø
COOLING COIL		CNPVP60	CNPVP36	CNPVP60	CNPVP60
REMARKS		1, 2, 3, 4	2, 4	1, 2, 3, 4	1, 2, 3, 4

1. PROVIDE WITH COMMERCIAL PROGRAMMABLE COMMUNICATING THERMOSTAT EQUAL TO HONEYWELL T7350H. PROVIDE REMOTE SENSOR FOR SPACE. MOUNT THERMOSTATS IN OFFICE. VERIFY LOCATIONS WITH OWNER.
2. PROVIDE WEB-BASED BUILDING CONTROL FOR THERMOSTATS EQUAL TO HONEYWELL "WEBSTAT" (W7350A1000).
3. PROVIDE ECONOMIZER MODULE CONTROL EQUAL TO HONEYWELL "JADE: (W7220). PROVIDE WITH "SYLK" BUS SENSOR AND PC MOD TOOL OPTION.
4.PROVIDE WITH ACID NEUTRALIZING KIT FOR FURNACE CONDENSATE. DRAIN FURNACE CONDENSATE AND COOLING COIL CONDENSATE TO HUB DRAIN.

ELECTRIC HEATERS

PLAN DESIGNATION		RCP-1, 2	EWH-1, 2, 3, 4
MANUFACTURER		MARKEL	MARKEL
MODEL		RCP-125	J3424T
DESCRIPTION		RADIANT CEILING PANEL	WALL HEATER
LOCATION		RESTROOMS	VETIBULES
MOUNTING		RECESS	RECESS
CFM		-	245
BTUH		1,707	13,652
ELECTRICAL	KW	0.5	4.0
	VOLT/PHASE	115/1Ø	208/3Ø
	AMPS	4.2	11.1
REMARKS		1, 2	

1. PROVIDE RECESS MOUNTING FOR GWB CEILING
2. PROVIDE WALL MOUNTED THERMOSTAT WITH LOCKABLE METAL GUARD

GAS FIRED UNIT HEATERS

PLAN DESIGNATION		GUH-1	
MANUFACTURER		MODINE	
MODEL		HDS	
NATURAL GAS INPUT - MBH		45	
MIN EFFICIENCY		80	
CFM		720	
MOTOR	HP	1/15	
	AMPS	3.7	
	RPM	1550	
	VOLTS/PHASE	115 / 1Ø	
OPERATING WEIGHT		60	

PROVIDE STARTER AND CONCENTRIC VENTING KIT

GENERAL NOTES

1. THESE DRAWINGS ARE A DIAGRAMMATIC REPRESENTATION OF WORK TO BE ACCOMPLISHED AND AS SUCH DO NOT SHOW ALL REQUIRED OFFSETS OF PIPING. MECHANICAL CONTRACTOR SHALL INSTALL MATERIAL AND EQUIPMENT AS TO CONFORM TO THE STRUCTURE, EQUIPMENT CONNECTIONS AND MAINTAIN HEADROOM AND PASSAGEWAY.
2. COORDINATE EXACT LOCATION OF CEILING DIFFUSERS AND GRILLES WITH REFLECTED CEILING PLAN.
3. KEYNOTES PERTAIN ONLY TO THE DRAWING THEY ARE LOCATED ON.
4. DUCT SIZES ARE CLEAR INSIDE DIMENSIONS.
5. ALL BRANCH DUCTS SHALL MATCH DIFFUSER NECK SIZES UNLESS OTHERWISE NOTED.
6. ALL CONTROL WIRING SHALL BE RUN IN CONDUIT.
7. MAINTAIN 10' MINIMUM DISTANCE FROM OUTSIDE AIR INTAKE TO ANY EXHAUST OR TOILET VENTS.
8. FLEXIBLE DUCTWORK SHALL NOT EXCEED 5'-0" IN LENGTH.
9. ROOF STRUCTURE IS WOOD TRUSS. MECHANICAL CONTRACTOR SHALL COORDINATE FINAL DUCT ROUTING/SIZING WITH TRUSS MANUFACTURER PRIOR TO INSTALLATION AND MAKE NECESSARY ADJUSTMENTS WITH NO ADDITIONAL COST TO OWNER.

LEGEND

- NEW HVAC EQUIPMENT
- NEW DUCTWORK
- S-* NEW SUPPLY DIFFUSER
- R-*/E-* NEW RETURN/EXHAUST GRILLE
- R-*/E-* NEW RETURN/EXHAUST GRILLE WITH DAMPER
- T-* NEW TRANSFER GRILLE
- T THERMOSTAT
- T TEMPERATURE SENSOR
- CD NEW CONDENSATE DRAIN PIPING
- NG NEW NATURAL GAS PIPING
- RL NEW REFRIGERANT LIQUID PIPING
- RS NEW REFRIGERANT SUCTION PIPING
- DUCT UP
- DUCT DOWN
- FLEX DUCT
- MOTORIZED DAMPER
- BALANCING DAMPER
- TRANSFER/DOOR GRILLE
- ELBOW WITH TURNING VANES
- AIR FLOW INDICATOR
- UC DOOR UNDER CUT
- KEY NOTE

MECH. ABBREVIATIONS

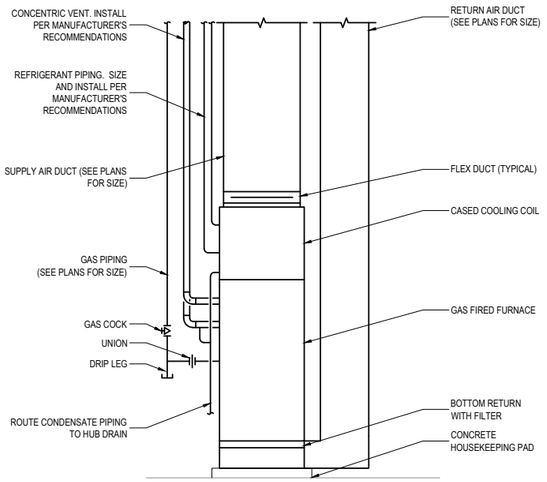
AFF	ABOVE FINISHED FLOOR
AP	ACCESS PANEL
BOD	BOTTOM OF DUCT
BOP	BOTTOM OF PIPE
DN	DOWN
EC	ELECTRICAL CONTRACTOR
GWB	GYPSUM WALL BOARD
MOD	MOTOR OPERATED DAMPER
PC	PLUMBING CONTRACTOR
CA	COMBUSTION AIR
EA	EXHAUST AIR
OA	OUTSIDE AIR
RA	RETURN AIR
RELF	RELIEF AIR
SA	SUPPLY AIR
TA	TRANSFER AIR
NG	NATURAL GAS
RS	REFRIGERATION SUCTION
RL	REFRIGERATION LIQUID
ACCU-*	AIR COOLED CONDENSING UNIT
EF-*	EXHUAST FAN
ERU-*	ENERGY RECOVERY UNIT
EWH-*	ELECTRIC WALL HEATER
EUH-*	ELECTRIC UNIT HEATER
GFF-*	GAS FIRED FURNACE
GUH-*	GAS UNIT HEATER
RCP-*	RADIANT CEILING PANEL

PIPING LEGEND

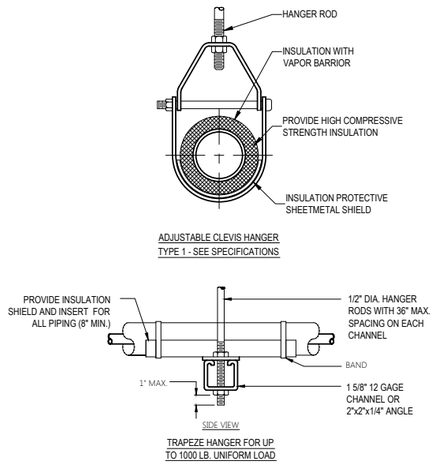
- NEW SUPPLY PIPING (ALL SYSTEM TYPES)
- NEW RETURN PIPING (ALL SYSTEM TYPES)
- BALL VALVE
- FLEX PIPE
- PIPE BREAK
- PIPE CAPPED END
- PIPE CLEANOUT
- PIPE ELBOW/TEE DOWN
- PIPE ELBOW/TEE UP
- REDUCER
- UNION
- PRESSURE GAUGE

2

M001



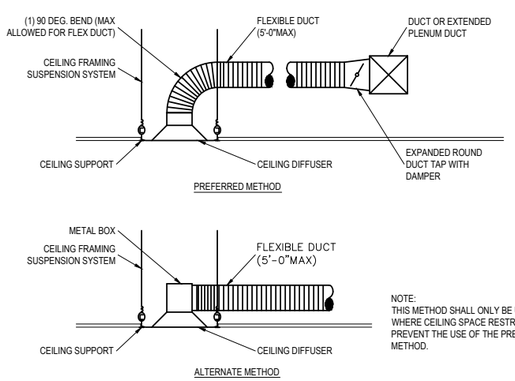
9 M002 GAS FIRED FURNACE DETAIL
NTS



TRAPEZE HANGER FOR UP TO 1000 LB. UNIFORM LOAD

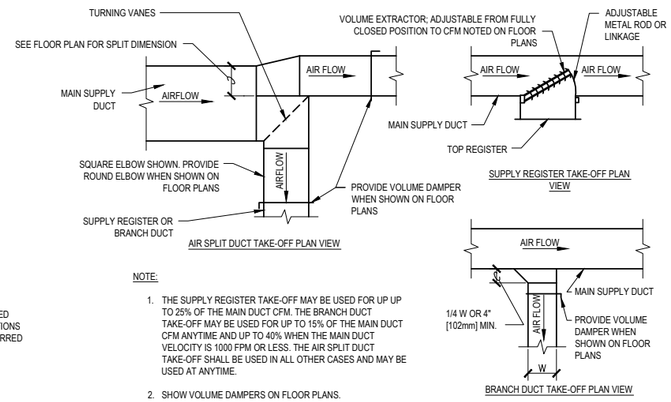
MAXIMUM PIPE/TUBING SUPPORT SPACING							
NOM. SIZE	IN.	THRU 3/4	1	1 1/4	1 1/2	2	2 1/2
PIPE	FT.	7	7	7	9	10	11
TUBING	FT.	5	6	7	8	8	9
NOTE: FOR TRAPEZE HANGER TAKE SPACING OF SMALLEST SIZE ON TRAPEZE.							

7 M002 TYPICAL PIPE HANGER DETAIL
NTS



NOTE:
THIS METHOD SHALL ONLY BE USED WHERE CEILING SPACE RESTRICTIONS PREVENT THE USE OF THE PREFERRED METHOD.

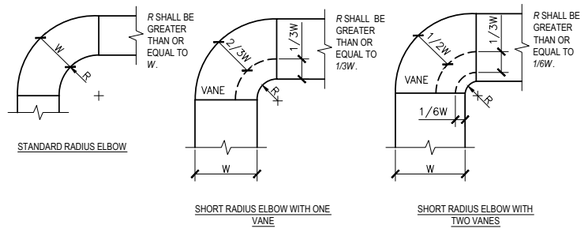
4 M002 CEILING DIFFUSER DETAIL
NTS



NOTE:

1. THE SUPPLY REGISTER TAKE-OFF MAY BE USED FOR UP UP TO 25% OF THE MAIN DUCT CFM. THE BRANCH DUCT TAKE-OFF MAY BE USED FOR UP TO 15% OF THE MAIN DUCT CFM ANYTIME AND UP TO 40% WHEN THE MAIN DUCT VELOCITY IS 1000 FPM OR LESS. THE AIR SPLIT DUCT TAKE-OFF SHALL BE USED IN ALL OTHER CASES AND MAY BE USED AT ANYTIME.
2. SHOW VOLUME DAMPERS ON FLOOR PLANS.

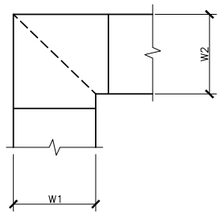
1 M002 SUPPLY DUCTWORK TAKE-OFF DETAIL
NTS



NOTE:

1. THE INTERIOR SURFACE OF ALL RADIUS ELBOWS SHALL BE MADE ROUND.
2. ALL STANDARD RADIUS ELBOWS SHOWN ON FLOOR PLANS MAY BE MADE SHORT RADIUS ELBOWS. ALL SHORT RADIUS ELBOWS SHALL HAVE VANES. VANES SHALL BE CONSTRUCTED, SUPPORTED AND FASTENED AS RECOMMENDED BY SMACNA.

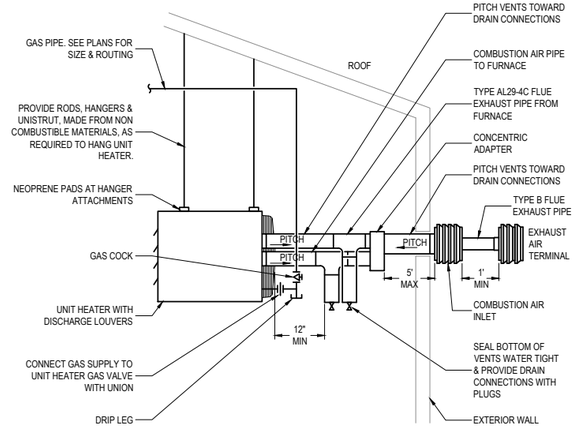
5 M002 DUCTWORK RADIUS ELBOW DETAIL
NTS



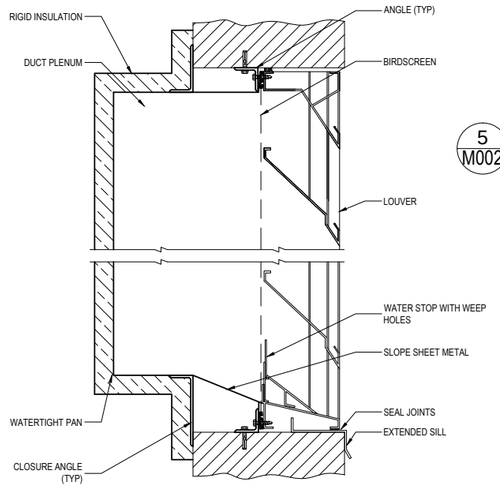
NOTE:

1. ALL VANED ELBOWS SHALL BE CONSTRUCTED AND INSTALLED AS DETAILED BY SMACNA.
2. WHEN *W1* DOES NOT EQUAL *W2*, VANE SHALL BE SINGLE VANE TYPE REGARDLESS OF *W* DIMENSION.
3. ALL SINGLE VANES SHALL HAVE A 2" RADIUS, 1 1/2" MAXIMUM SPACE BETWEEN VANES AND A 3/4" TRAILING EDGE.
4. WHEN *W* EQUALS *W2* AND *W1* IS GREATER THAN 20" VANES SHALL BE DOUBLE VANE TYPE.

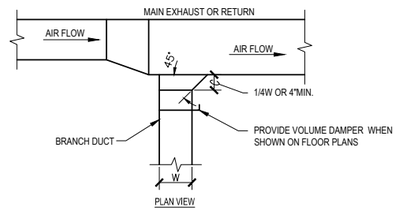
2 M002 DUCTWORK SQUARE VANED DETAIL
NTS



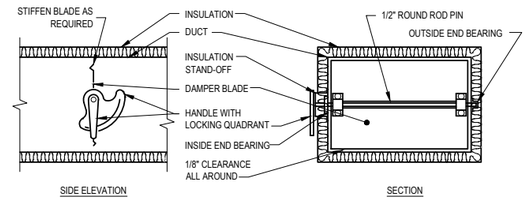
10 M002 GAS FIRED UNIT HEATER DETAIL VENT THRU WALL
NTS



8 M002 LOUVER WITH DUCT PLENUM DETAIL
NTS



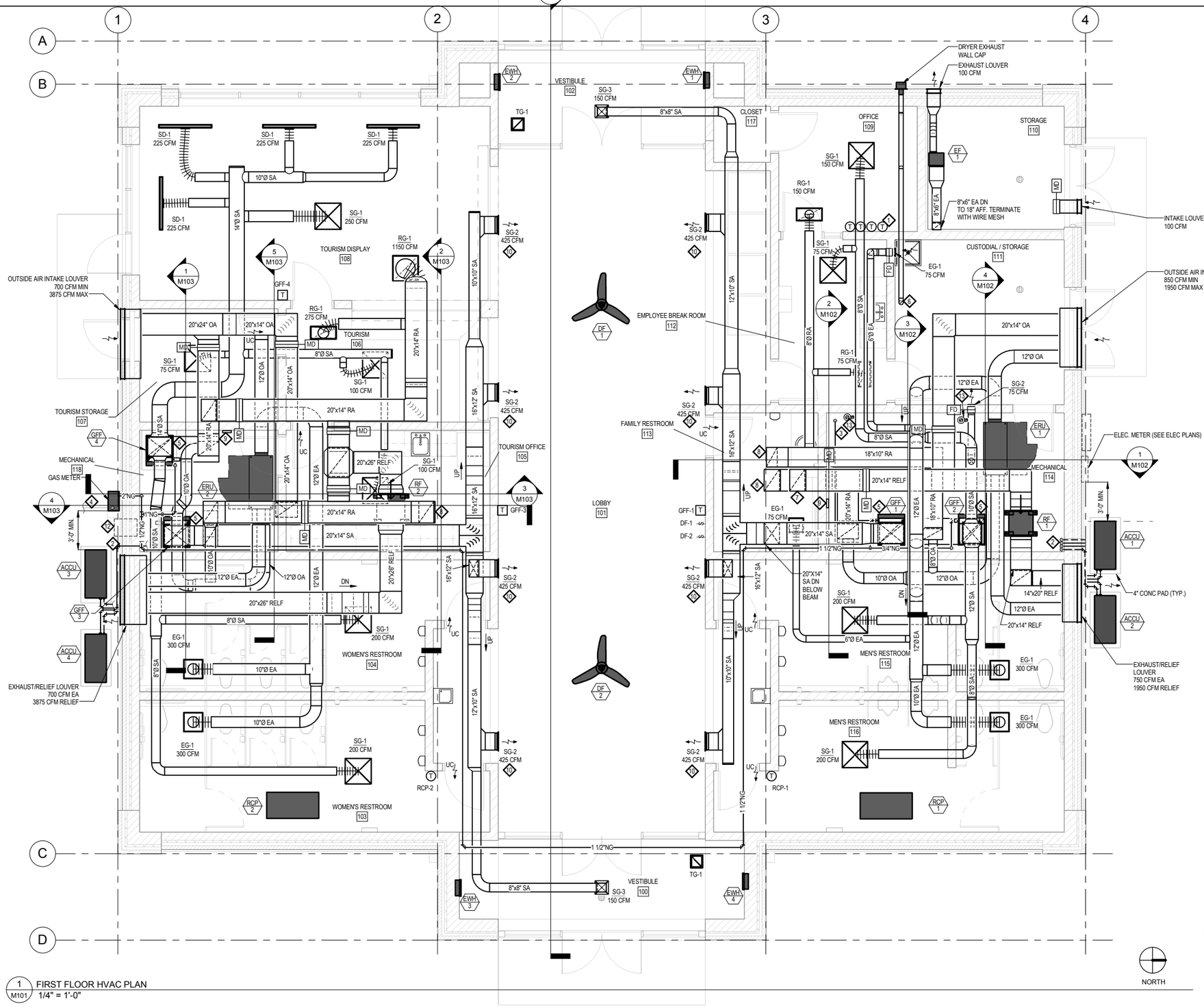
6 M002 EXHAUST OR RETURN BRANCH DUCTWORK DETAIL
NTS



NOTE:

1. DELETE INSULATION STAND-OFF ON DUCTWORK WITHOUT EXTERIOR INSULATION.
2. DETAIL SHOWS SINGLE BLADE DAMPER. DAMPER INSTALLATION SHALL BE SIMILAR FOR MULTI-BLADE DAMPERS & ROUND DAMPERS.

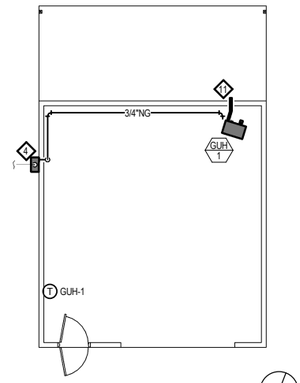
3 M002 VOLUME DAMPER DETAIL
NTS



1 M101 FIRST FLOOR HVAC PLAN
1/4" = 1'-0"

KEY NOTES

1. LOCATE ALL THERMOSTATS IN OFFICE. REFER TO SCHEDULE FOR TYPE. COORDINATE LOCATION WITH OWNER PRIOR TO INSTALLATION.
2. REFERIGERANT PIPING TO DROP DOWN IN MECH ROOM. ROUTE OUTDOOR PIPING 18" ABOVE GRADE TO ACCU. COORDINATE EXACT LOCATION WITH OTHER TRADES.
3. 3/4" GAS CONNECTION FOR WATER HEATER. COORDINATE EXACT LOCATION WITH PC PRIOR TO INSTALLATION.
4. NATURAL GAS FROM UTILITY. COORDINATE LOCATION OF METER WITH UTILITY.
5. ROUTE CONDENSATE DRAINS TO HUB DRAIN.
6. 4" DRYER EXHAUST DUCT. COORDINATE EXACT LOCATION WITH OWNER PRIOR TO INSTALLATION.
7. 20"x14" RELIEF DUCT DN. CONNECT TO RA DUCT.
8. RETURN AIR DUCT DOWN. OPEN ENDED DUCT TO TERMINATE BELOW STEEL BEAM. PROVIDE WELDED WIRE MESH AT OPENING. SEE SECTION 1/M102.
9. WEB BASED BUILDING CONTROLLER. COORDINATE EXACT LOCATION WITH OWNER PRIOR TO INSTALLATION.
10. MOUNT SUPPLY GRILLES IN BLOCK COURSE APPROX. 11'-0" AFF.
11. PROVIDE HORIZONTAL CONCENTRIC VENTING KIT.
12. SIDEWALL VENT FURNACES TO THIS LOCATION. MAINTAIN 10'-0" FROM AIR INTAKE.
13. ROUTE FURNACE VENTS TO WEST SIDE OF ROOF RIDGE. FIELD COORDINATE EXACT LOCATION.

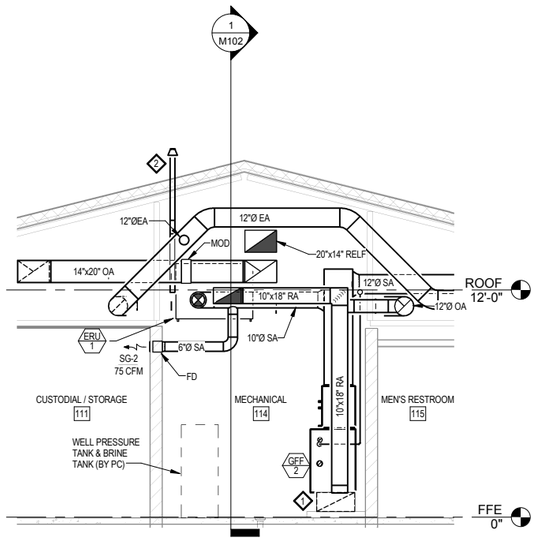


2 M101 MAINTENANCE BUILDING - HVAC PLAN
1/8" = 1'-0"

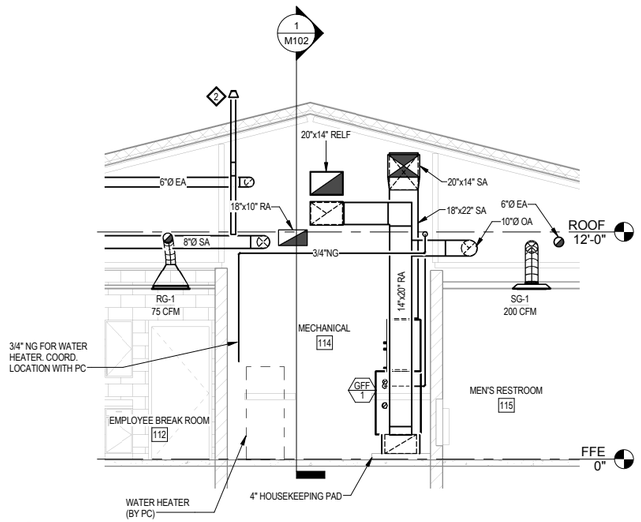
M101

PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	MECHANICAL PLAN	SHEET

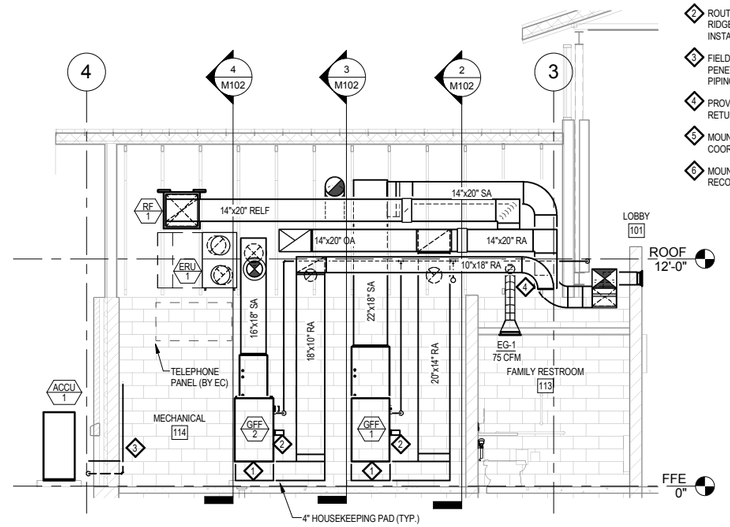
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PLOT DATE: 10/30/2015 11:59:38 AM
PLOT BY:
PLOT NAME:
PLOT SCALE:
WISDOT/CADDS SHEET 42



3 M102 MECH RM 114 SECTION C
1/4" = 1'-0"



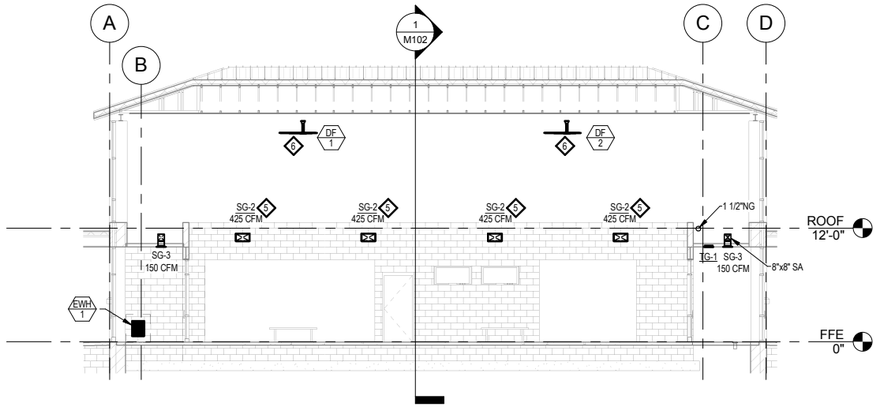
2 M102 MECH RM 114 SECTION B
1/4" = 1'-0"



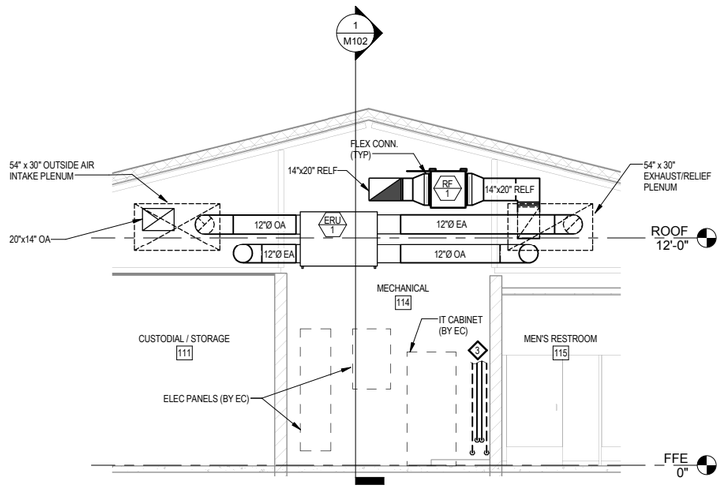
1 M102 MECH RM 114 SECTION A
1/4" = 1'-0"

KEY NOTES

1. REINFORCE BOTTOM DUCTWORK FOR FURNACE SUPPORT. DUCT SHALL CONNECT ON BOTTOM PER MANUFACTURERS RECOMMENDATION.
2. ROUTE FURNACE VENTING TO WEST SIDE OF ROOF RIDGE. PROVIDE CONCENTRIC VENT ASSEMBLY. INSTALL PER MANUFACTURERS RECOMMENDATION.
3. FIELD COORDINATE REFRIGERANT PIPING PENETRATION LOCATION WITH EC. ROUTE OUTDOOR PIPING 18" ABOVE GRADE TO ACCU.
4. PROVIDE 1/2"x1/2"x1/2" WELDED WIRE MESH ON RETURN DUCT OPENING.
5. MOUNT SUPPLY GRILLES IN FULL BLOCK SPACE. FIELD COORDINATE EXACT LOCATION WITH GC.
6. MOUNTING HEIGHT PER MANUFACTURER'S RECOMMENDATION.



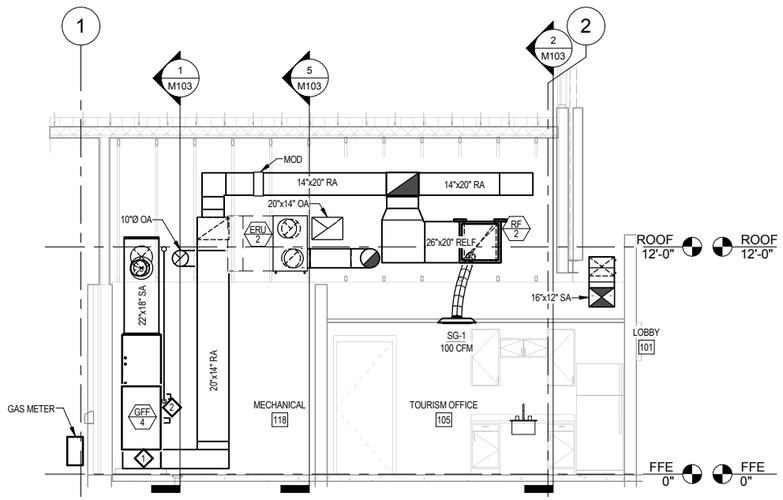
5 M102 LOBBY 101 SECTION
1/8" = 1'-0"



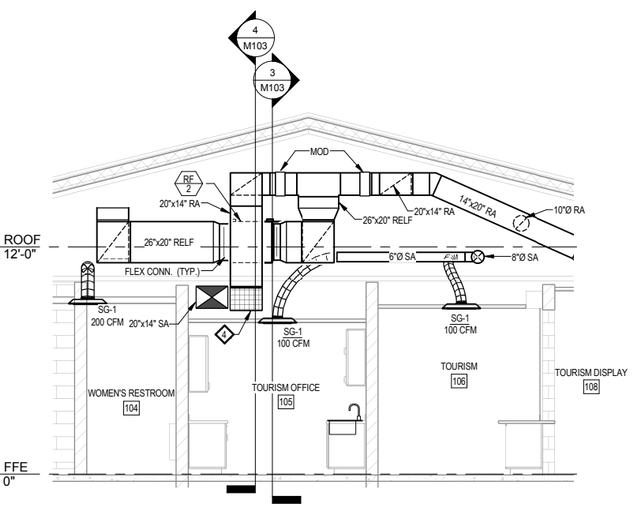
4 M102 MECH RM 114 SECTION D
1/4" = 1'-0"

KEY NOTES

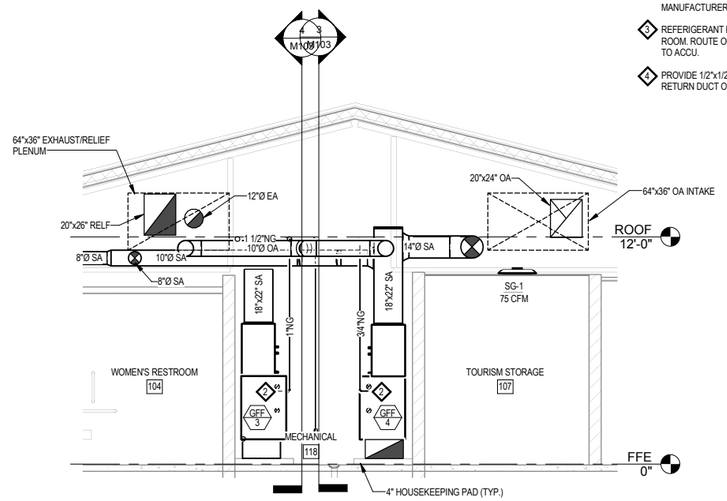
1. REINFORCE BOTTOM DUCTWORK FOR FURNACE SUPPORT. DUCT SHALL CONNECT ON BOTTOM PER MANUFACTURERS RECOMMENDATION.
2. ROUTE FURNACE VENTS TO SOUTH WALL. PROVIDE HORIZONTAL VENTING KIT AND INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
3. REFERIGERANT PIPING TO DROP DOWN IN MECH ROOM. ROUTE OUTDOOR PIPING 18" ABOVE GRADE TO ACCU.
4. PROVIDE 1/2"x1/2"x1/2" WELDED WIRE MESH ON RETURN DUCT OPENING.



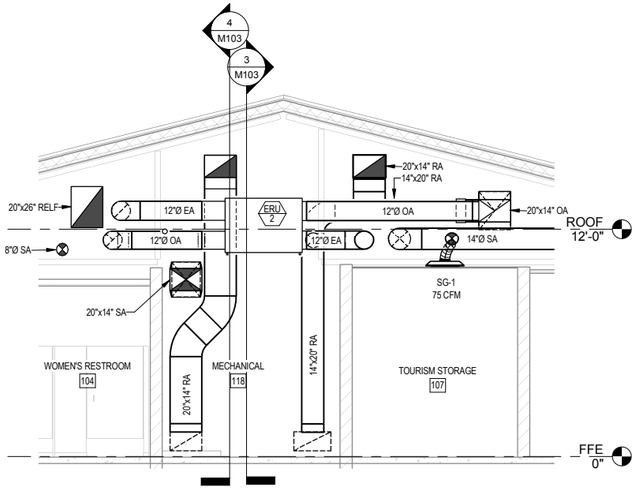
3 M103 MECH RM 118 SECTION C
1/4" = 1'-0"



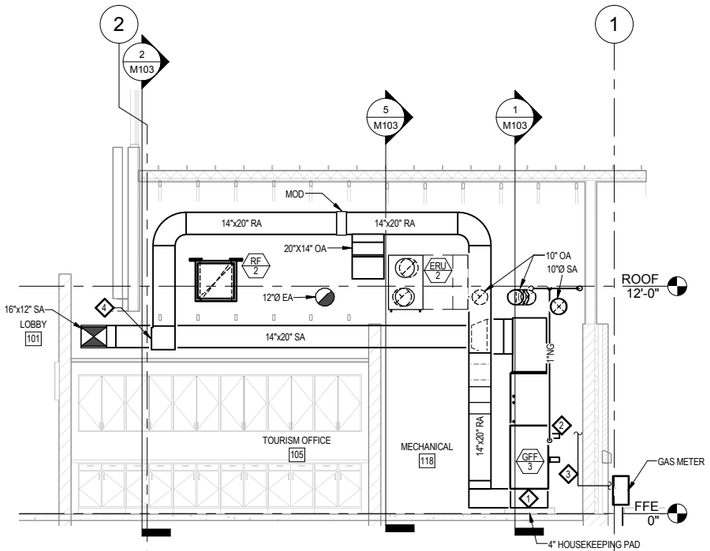
2 M103 MECH RM 118 SECTION B
1/4" = 1'-0"



1 M103 MECH RM 118 SECTION A
1/4" = 1'-0"



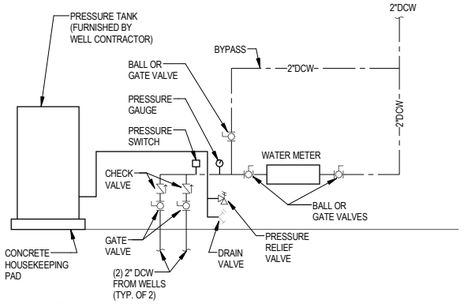
5 M103 MECH RM 118 SECTION E
1/4" = 1'-0"



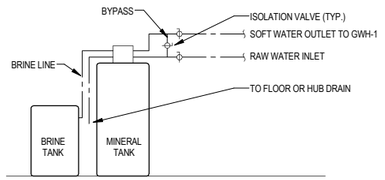
4 M103 MECH RM 118 SECTION D
1/4" = 1'-0"

M103

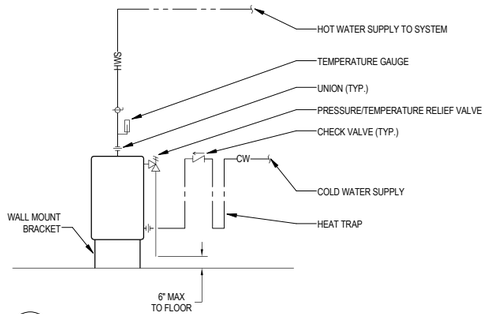
PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	MECHANICAL SECTIONS	SHEET 97 E



3 P001 PRESSURE TANK AND WATER METER DETAIL
NTS



4 P001 WATER SOFTENER DETAIL
NTS



5 P001 ELECTRIC WATER HEATER DETAIL
NTS

ELECTRIC WATER HEATER

MARK		MANUF.	MODEL	STORAGE CAPACITY (GAL).	DATA WATT	DATA VOLT	DATA PHASE	HEIGHT	DIA	REMARKS
EWH	1	AO SMITH	DEL-6	6	1500	208	1	15 1/2"	14 1/4"	

EXPANSION TANK

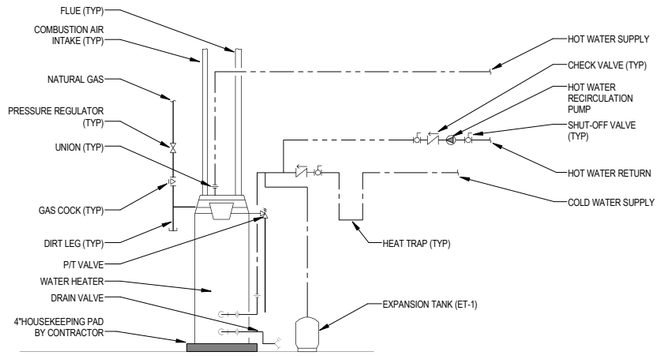
MARK		MANUFACTURER	MODEL	GALLONS	ACCEPT.	SYSTEM CONN. (IN)	MAX. OPER. PRESS. (PSI)	DIA. (IN.)	HEIGHT (IN.)	REMARKS
ET	1	AMTROL	ST-12C	6.4	3.2	3/4	150	12	13 3/8	

GAS WATER HEATER

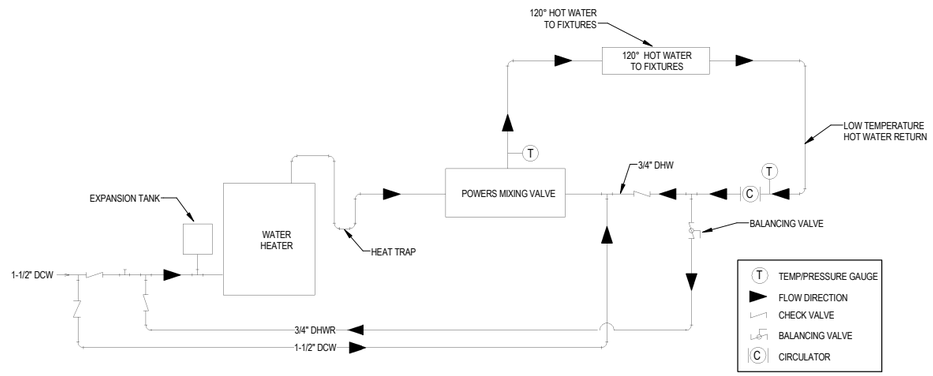
MARK		MANUF.	MODEL	STORAGE CAPACITY (GAL).	BTUH (INPUT)	BTUH (OUTPUT)	GPH RECOVERY @ 100 F (GAL.)	HEIGHT	DIA	REMARKS
GWH	1	AO SMITH	BTH-120	60	120,000	114,000	138	55.5"	27.75"	PROVIDE WITH CONCENTRIC VENT KIT AND ACID NEUTRALIZING KIT

PUMPS

MARK		MANUFACTURER	MODEL	TYPE	MATERIAL	GPM MIN	HEAD FT WC	MOTOR HP	MOTOR RPM	MOTOR VOLTS	MOTOR PHASE	REMARKS
HWRP	1	Bell & Gossett	PL-30	INLINE	BRONZE	6.5	5	1/12	2650	115	1	



1 P001 GAS WATER HEATER DETAIL
NTS



2 P001 THERMOSTATIC MIXING VALVE DETAIL - BASED ON POWERS MIXING VALVE
NTS

PLUMBING FIXTURE SCHEDULE

MARK		MANUFACTURER	MODEL	DESCRIPTION	WSFU HW	WSFU CW	TOTAL	TOTAL DFU
EWC	1	ELKAY	LZSG8WS	WATER COOLER AND BOTTLE FILLING STATION TO DELIVER 8GPH OF 50° DRINKING WATER 90° AMBIENT AND 80° INLET WATER, LOWER UNIT PUSH BAR ACTIVATED, BOTTLE FILLER TOUCHLESS, 3000 GALLON CAPACITY FILTER, STAINLESS STEEL BASIN, GALVANIZED STRUCTURAL CHASSIS	0	0.25	.25	.5
FD	1	JOSAM	3000-A	TWO-PIECE CAST IRON FLOOR DRAIN WITH DOUBLE DRAINAGE FLANGE, ½" PRIMER TAP, NIKALOY ADJUSTABLE ROUND SUPER-FLO STRAINER	0	0	0	3
FD	2	JOSAM	49703-NB	RECTANGULAR CAST IRON 3 1/2" DEEP "SUPER-FLO-SEPTOR" 4"x8" FLOOR SINK WITH ACID-RESISTING INTERIOR, DOUBLE DRAINAGE FLANGE WITH WEEPHOLES, BOTTOM OUTLET, ALUMINUM INTERNAL DOME STRAINER AND CAST IRON, NON-TRAFFIC, ACID-RESISTING GRATE. INSTALL FLUSH WITH FLOOR.	0	0	0	3
FD	3	JOSAM	49360A-NB	SQUARE CAST IRON 9 7/8" DEEP "SUPER-FLO- SEPTOR" FLOOR SINK WITH ACID-RESISTING INTERIOR, DOUBLE DRAINAGE FLANGE WITH WEEPHOLES, BOTTOM OUTLET, ALUMINUM INTERNAL DOME STRAINER, SEDIMENT BUCKET, AND NICKEL BRONZE GRATE. INSTALL FLUSH WITH FINISH FLOOR	0	0	0	3
FD	4	JOSAM	32330-SD	COATED CAST IRON FLOOR DRAIN WITH DOUBLE DRAINAGE FLANGE, WEJLOC NON-PUNCTURING CLAMP COLLAR, WEEPHOLES, BOTTOM OUTLET, 12 5/8" ROUND TOP, REMOVABLE SEDIMENT BUCKET, AND SPECIAL-DUTY LOOSE-SET GRATE.	0	0	0	4
FWH	1	WOODFORD	B65	FREEZELESS WALL HYDRANT - ASSE STANDARD 1019-B APPROVED, IAPMO LISTED; WITH HOSE CONNECTION ANTI SIPHON VACUUM BREAKERS - 3/4" MALE HOSE THREAD, ASSE STANDARD 1011 APPROVED, IAPMO LISTED.	4	4	4	0
HB	1	WOODFORD	HCB67	FREEZELESS HOT AND COLD MIXER WALL HYDRANT ENCLOSED IN FLUSH MOUNTED WALL BOX WITH AUTOMATIC DRAINING AND HOSE CONNECTION BACKFLOW PREVENTION. ASSE STANDARD 1052 APPROVED.	4	4	4	0
HB	2	WOODFORD	24	ANTI-SIPHON, VACUUM BREAKER PROTECTED WALL FAUCET, MAX PRESSURE 125PSI, MAX TEMPERATURE 120°F, ASSE STANDARD 1011 APPROVED	0	4	4	0
IB	1	OATEY	38688	20GA GALVANIZED STEEL BOX CONSTRUCTION WITH WHITE POWDER COAT FINISH. VALVE MEETS ASME A112.118.1. HAMMER ARRESTOR COMPLIES WITH ASSE STANDARD 1010	0	0.5	.5	0
L	1	KOHLER	K-2905-1	SINK: 16 1/4"x19 1/4" TOP MOUNT SINGLE BOWL, (1) 1-3/8" FAUCET HOLE, (1) 1-11/16" DRAIN HOLE, BOWL SHALL MEASURE 16"x11". FAUCET: SLOAN ETF-610 - CHROME, WITH TRANSFORMER MOUNTED ABOVE CEILING. DRAIN: KOHLER K-8801 TRAP: 1-1/2" x 1-1/2" 17 GA. CAST BRASS TRAP AND TUBULAR WALL BEND. STOPS: 1/2", 3 PIECE BALL VALVE - NIBCO S-595-Y.	0.5	0.5	1	1
L	2	SLOAN	ELS-42600	SINK: DOUBLE STATION LAVATORY SYSTEM. SINGLE CONTINOUS BASIN CONSTRUCTED OF NON-POROUS SLOAN-STONE, SUPPORTED BY 14 GA, TYPE 304 STAINLESS STEEL, SATIN FINISH, PEDESTAL WITH 14 GA GALAVANIZED STEEL MOUNTING PLATE. 1-1/2" STAINLESS STEEL DRAINS FAUCET: SLOAN OPTIMA ETF-600 WITH EL-248-40 DRAIN: KOHLER K-8801 TRAP: 1-1/2" x 1-1/2" 17 GA. CAST BRASS TRAP AND TUBULAR WALL BEND. STOPS: 1/2", 3 PIECE BALL VALVE - NIBCO S-595-Y	0.5	0.5	1	1
MB	1	STERN-WILLIAMS	SB-850	MOP BASIN: 24"x24"x12" MOP BASIN, STAINLESS STEEL CAP ON ALL THRESHOLD, STAINLESS STEEL CAST-IN DRAIN BODY FOR 3" PIPE. PROVIDE HOSE & STAINLESS STEEL HOSE BRACKET, STAINLESS STEEL STRAINER, STAINLESS STEEL MOP HANGER WITH (3) RUBBER TOOL GRIPS, STAINLESS STEEL CORNER GUARD (BP) FAUCET: CHICAGO FAUCET 897-CP VACUUM BREAKER SPOUT, 3/4" HOSE THREAD, WALL BRACE, PAIL HOOK & 3 FOOT HOSE. INCLUDE VACUUM BREAKER ON FAUCET (WATTS 8B).	2	2	3	3
MV	1	POWERS	LFLM490ADMS	ROUGH BRONZE MASTER MIXING VALVE, 1/2" INLET AND OUTLET, 150PSI MAX. OPERATING PRESSURE, 90-160°F TEMPERATURE ADJUSTMENT RANGE. 15GPM @ 20PSI PRESSURE DROP.	0	0	0	0
S	1	ELKAY	PSR1722	SINK: SELF RIMMING 17" x 22" TOP MOUNT 20 GA TYPE 304 STAINLESS STEEL SINK WITH 3 - 1 1/2" FAUCET OPENINGS 4" ON CENTER AND ONE 3 3/8" DRAIN OPENING. SINK BOWL SHALL MEASURE 13 1/2" x 16" x 7 1/8" DEEP. FAUCET: KOHLER K15171-F DRAIN: KOHLER K-8801 TRAP: 1-1/2" x 1-1/2" 17 GA. CAST BRASS TRAP AND TUBULAR WALL BEND. STOPS: 1/2", 3 PIECE BALL VALVE - NIBCO S-595-Y LOCATED IN CABINET WORK.	0.5	0.5	1	1
UR	1	KOHLER	K-4904-ET	WALL HUNG, VITREOUS CHINA WASHOUT, 0.125 GPF URINAL WITH 3/4" TOP SPUD. FLUSH VALVE: SLOAN OPTIMA 186-0.13 ES-S HEU, 0.13 GPF DIRECT WIRED INFRARED SENSOR (24V AC TRANSFORMER REQUIRED), CHROME PLATED VALVE. CARRIER: JR SMITH COMMERCIAL GRADE, ADJUSTED FOR STANDARD HEIGHT OR ADA HEIGHT AS REQUIRED.	0	4	4	2
WB	1	OATEY	38981	20GA STEEL BOX, 18GA STEEL FACEPLATE. 2" DRAIN OPENING. 1/4 TURN BRASS HAMMER BALL VALVES	2	2	3	0
WC	1	KOHLER	K-4406	VITREOUS CHINA SIPHON JET 1.28 GPF WATER CLOSET WITH ELONGATED BOWL, 1 1/2" TOP SPUD. FLUSH VALVE: SLOAN OPTIMA 111-1.28, 1.28 GPF, DIRECT WIRED INFRARED SENSOR (24V AC TRANSFORMER REQUIRED), CHROME PLATED VALVE. SEAT: BEMIS 1955SSFR, FIRE RETARDANT, SOLID PLASTIC OPEN FRONT WITH STAINLESS STEEL SELF-SUSTAINING CHECK HINGE AND ANTI-MICROBIAL AGENT.	0	6.5	6.5	6
WC	2	KOHLER	K-4405	VITREOUS CHINA SIPHON JET ADA 1.28 GPF WATER CLOSET WITH ELONGATED BOWL, 1 1/2" TOP SPUD. FLUSH VALVE: SLOAN OPTIMA 111-1.28, 1.28 GPF, DIRECT WIRED INFRARED SENSOR (24V AC TRANSFORMER REQUIRED), CHROME PLATED VALVE. SEAT: BEMIS 1955SSFR, FIRE RETARDANT, SOLID PLASTIC OPEN FRONT WITH STAINLESS STEEL SELF-SUSTAINING CHECK HINGE AND ANTI-MICROBIAL AGENT.	0	6.5	6.5	6

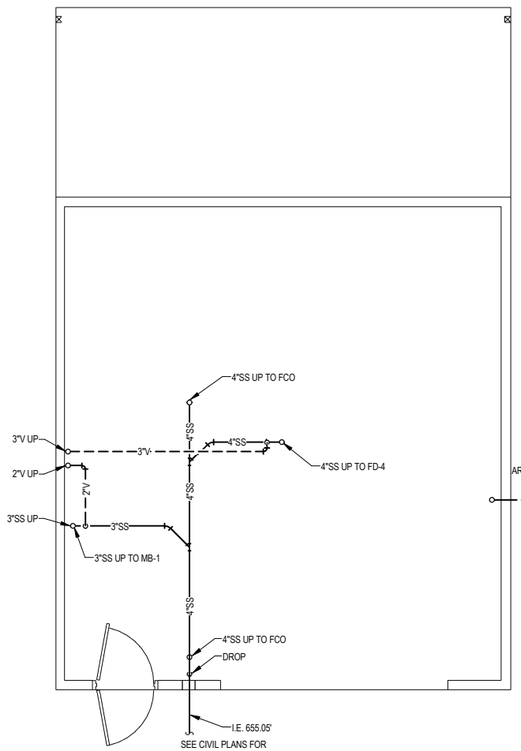
PLUMBING LEGEND

- NEW PLUMBING EQUIPMENT
- DCW — NEW DOMESTIC COLD WATER
- DCW (NS) — NEW DOMESTIC COLD WATER (NOT SOFTENED)
- DHW — NEW DOMESTIC HOT WATER
- DHWR — NEW DOMESTIC HOT WATER RETURN
- DTW — NEW DOMESTIC TEMPERED WATER
- SS — NEW SANITARY SEWER
- V — NEW SANITARY VENT
- 1 — KEY NOTE
- BALL VALVE
- CHECK VALVE
- CIRCUIT SETTER
- HOSEBIBB/DRAIN VALVE
- FLOOR DRAIN/ROOF DRAIN
- PIPE BREAK
- PIPE CLEANOUT
- PIPE ELBOW/TEE DOWN
- PIPE ELBOW/TEE UP
- PUMP
- REDUCER
- STRAINER
- UNION

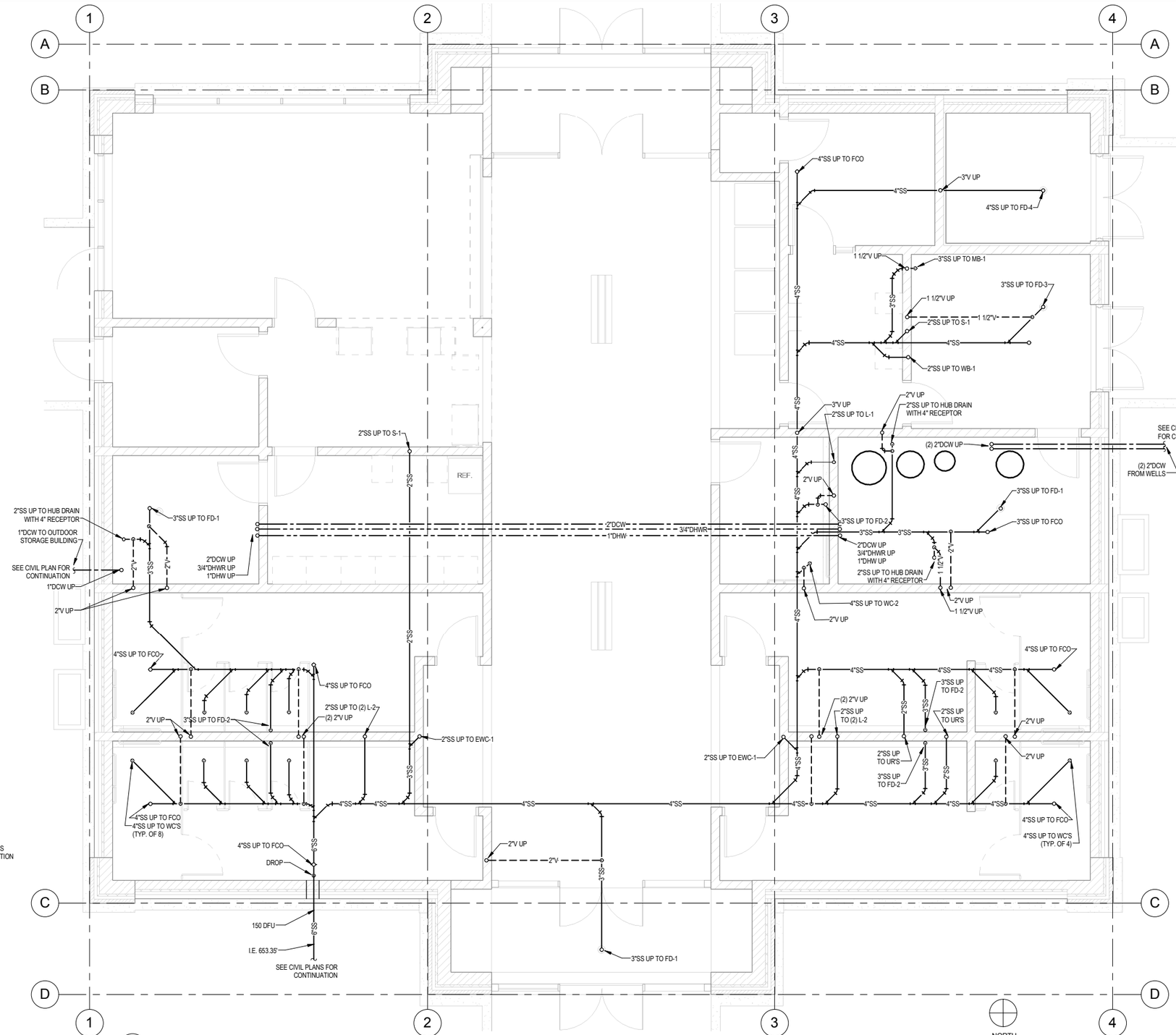
PLUMBING ABBREVIATIONS

- AFF — ABOVE FINISH FLOOR
- DFU — DRAINAGE FIXTURE UNITS
- DN — DOWN
- GPM — GALLONS PER MINUTE
- I.E. — INVERT ELEVATION
- FCO — FLOOR CLEANOUT
- P/T — PRESSURE/TEMPERATURE
- SFU — SUPPLY FIXTURE UNITS
- TYP — TYPICAL
- EWC-* — ELECTRIC WATER COOLER
- EWH-* — ELECTRIC WATER HEATER
- ET-* — EXPANSION TANK
- FD-* — FLOOR DRAIN
- FWH-* — FREEZELESS WALL HYDRANT
- GWH-* — GAS WATER HEATER
- HB-* — HOSE BIBB
- HWRP-* — HOT WATER RECIRCULATION PUMP
- IB-* — ICE MAKER BOX
- L-* — LAVATORY
- MB-* — MOP BASIN
- MV-* — MIXING VALVE
- S-* — SINK
- UR-* — URINAL
- WB-* — WASHER BOX
- WC-* — WATER CLOSET

2



2 P101 MAINTENANCE BUILDING - UNDERGROUND PLUMBING FLOOR PLAN
1/4" = 1'-0"

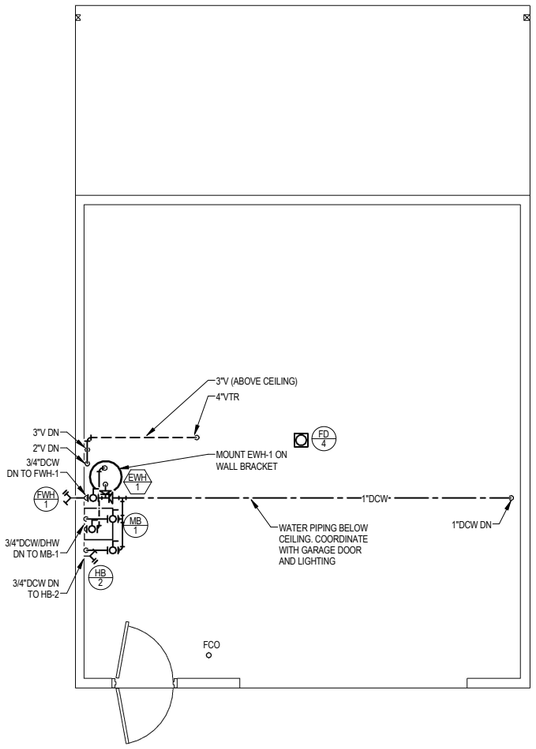


1 P101 UNDERGROUND PLUMBING PLAN
1/4" = 1'-0"

2

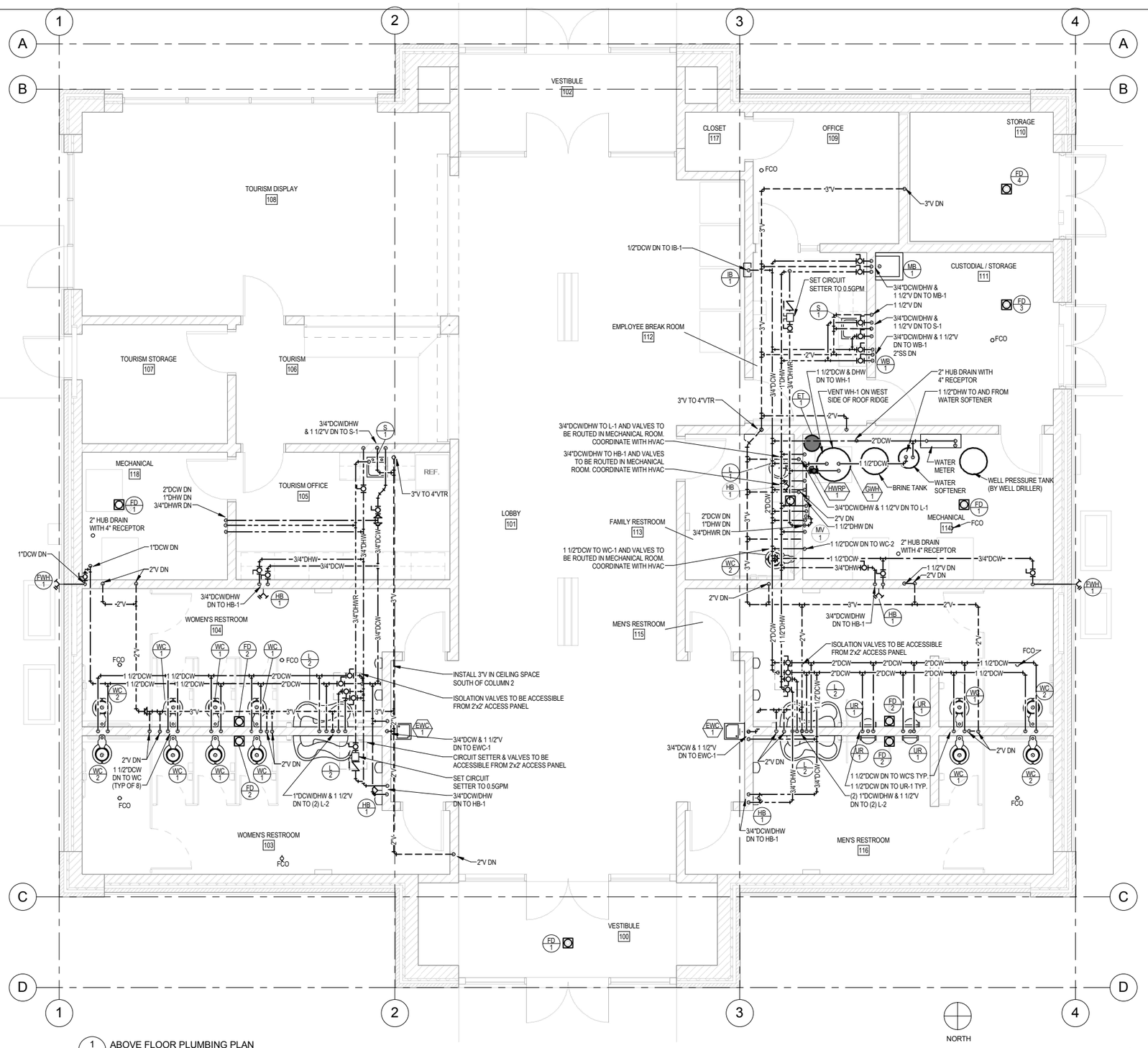
P101

PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	BELOW GROUND PLUMBING PLANS	SHEET 99 E



2 P102 MAINTENANCE BUILDING - ABOVE FLOOR PLUMBING FLOOR PLAN
1/4" = 1'-0"

NORTH



1 P102 ABOVE FLOOR PLUMBING PLAN
1/4" = 1'-0"

NORTH

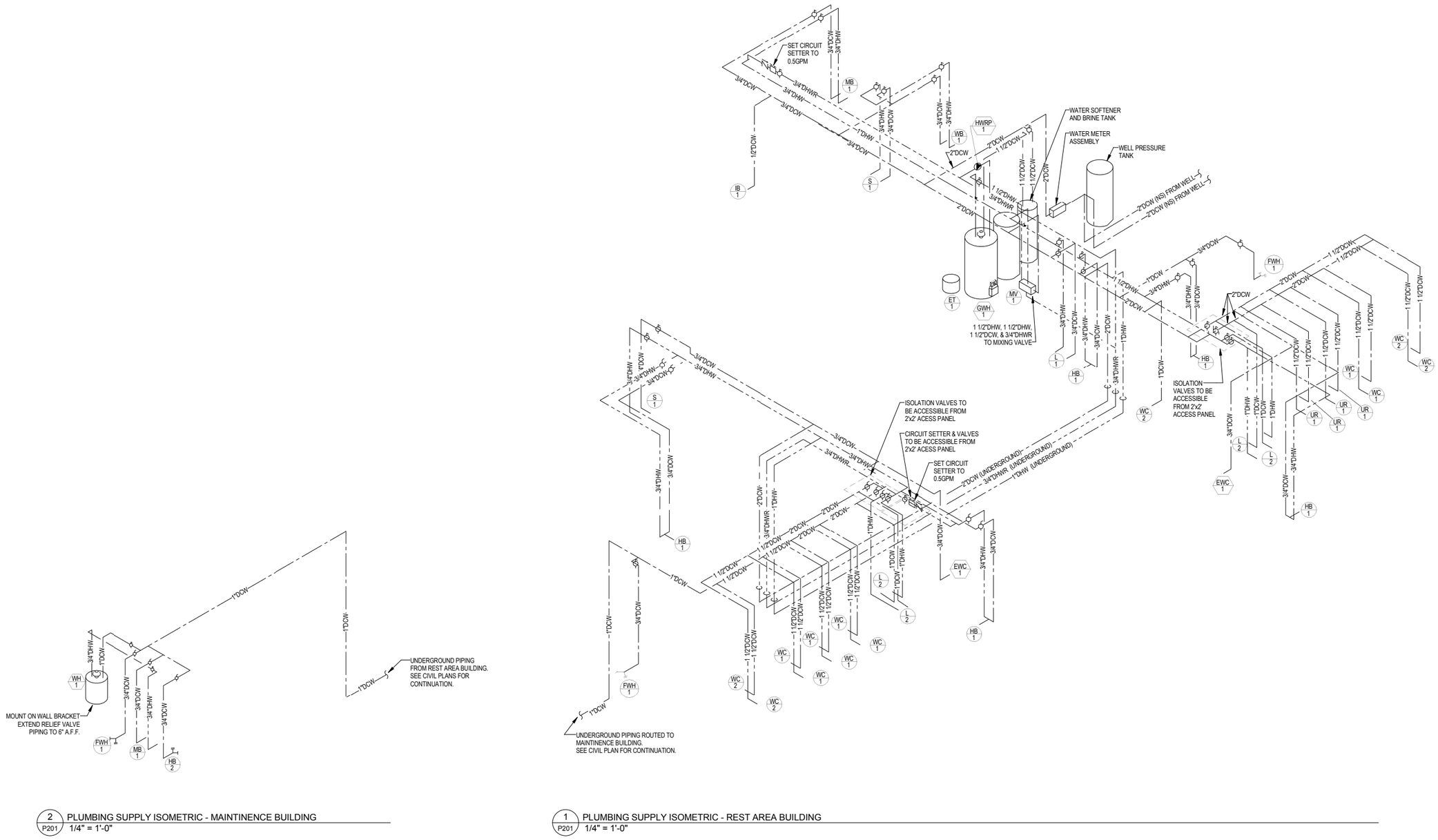
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PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	ABOVE FLOOR PLUMBING PLANS	SHEET 100 E

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PLOT DATE: 10/30/2015 2:34:11 PM PLOT BY: PLOT NAME: PLOT SCALE:

WISDOT/CADDS SHEET 42



2 P201 PLUMBING SUPPLY ISOMETRIC - MAINTINENCE BUILDING
1/4" = 1'-0"

1 P201 PLUMBING SUPPLY ISOMETRIC - REST AREA BUILDING
1/4" = 1'-0"

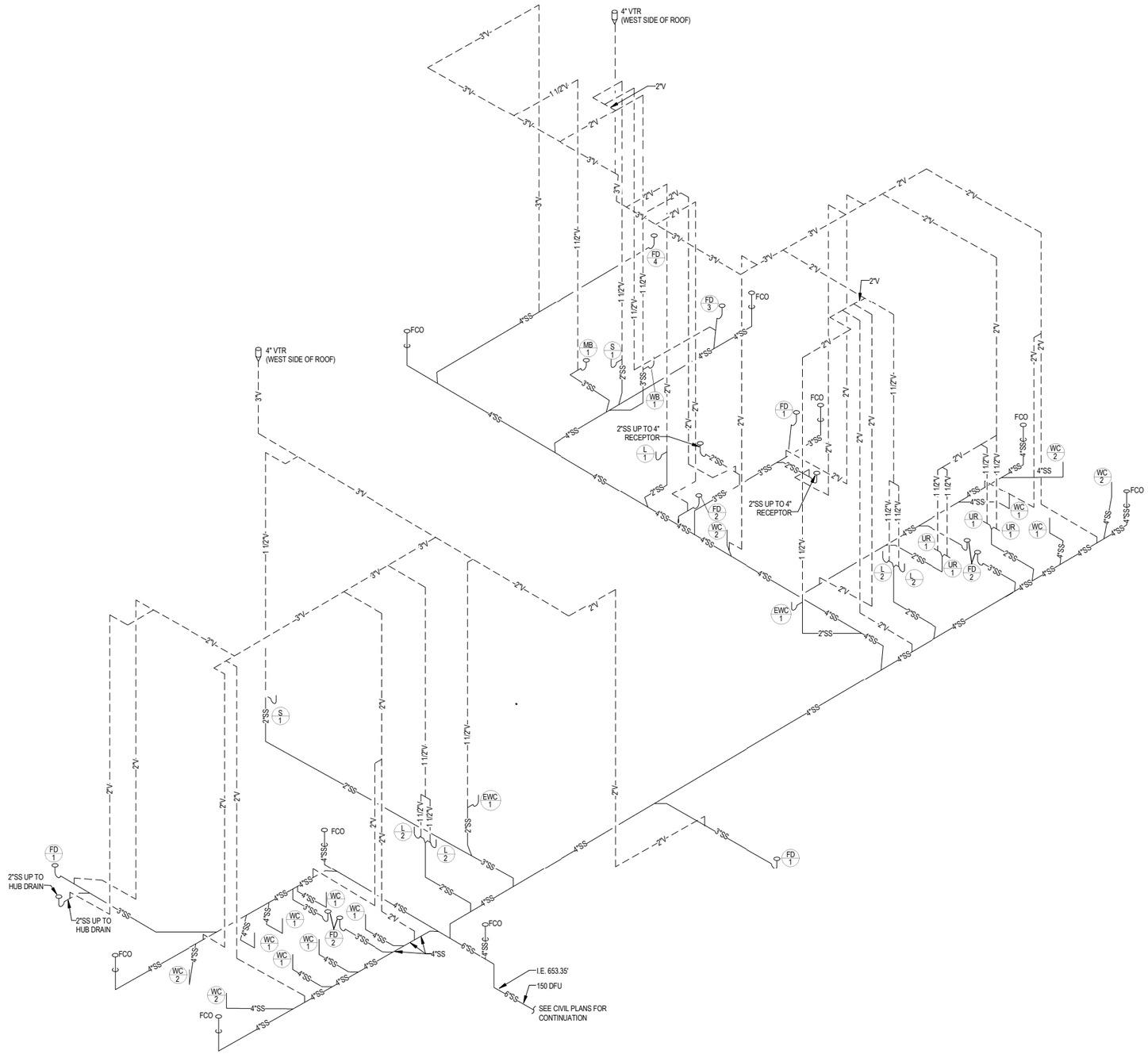
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PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	PLUMBING SUPPLY ISOMETRICS	SHEET 101 E

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WISDOT/CADDS SHEET 42



2 P202 PLUMBING WASTE/VENT ISOMETRIC - MAINTINENCE BUILDING
1/4" = 1'-0"



1 P202 PLUMBING WASTE/VENT ISOMETRIC - REST AREA BUILDING
1/4" = 1'-0"

P202

PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	PLUMBING WASTE/VENT ISOMETRICS	SHEET 102 E

FILE NAME: C:\Users\TAusprung.IBC\Documents\WITCO_MEP_TAusprung.rvt
LAYOUT NAME - BUILDING FLOOR PLAN
PLOT DATE: 10/30/2015 3:47:21 PM PLOT BY: PLOT NAME: PLOT SCALE:
WISDOT/CADDS SHEET 42

2

ELECTRICAL LEGEND

- $ — SWITCH
- $3 — THREE WAY WALL SWITCH
- $D — DIMMING SWITCH
- OS — SWITCH-BOX OCCUPANCY SENSOR
- OS — WALL MOUNT OCCUPANCY SENSOR
- OS — CEILING MOUNT OCCUPANCY SENSOR
- VS — WALL MOUNT VACANCY SENSOR
- VS — CEILING MOUNT VACANCY SENSOR
- C — CONTACTOR
- PC — EXTERIOR PHOTOELECTRIC SWITCH
- — SURFACE MOUNT LIGHT FIXTURE
- — SURFACE MOUNT LIGHT FIXTURE - EMERGENCY
- — 2X4 RECESSED FIXTURE
- — WALL MOUNTED FIXTURE
- — WALL MOUNTED FIXTURE - EMERGENCY
- — RECESSED FIXTURE
- — RECESSED FIXTURE - EMERGENCY
- — CEILING MOUNTED FIXTURE
- — TRACK LIGHT OR MONOPOINT
- — POLEMOUNT LUMINAIRE
- — BOLLARD
- — CEILING OR WALL MOUNTED EXIT, SINGLE FACE
- N E — EMERGENCY BYPASS TRANSFER RELAY
- — PULL BOX
- — DUPLEX RECEPTACLE
- — DUPLEX RECEPTACLE 6" ABOVE COUNTER OR BACKSPLASH OR AT HEIGHT INDICATED
- — DOUBLE DUPLEX RECEPTACLE
- — DUPLEX RECEPTACLE IN FLOOR BOX
- — SPECIAL PURPOSE OUTLET
- J — JUNCTION BOX
- — CIRCUIT BREAKER
- — GROUND
- — TRANSOCKET
- — SURFACE MOUNT PANEL
- — RECESSED PANEL
- M — METER
- — MANUAL DISCONNECT
- — NON-FUSED DISCONNECT
- — FUSED DISCONNECT
- — MAGNETIC STARTER
- — COMBINATION STARTER
- — MOTOR
- — TELEPHONE OUTLET
- — DATA OUTLET
- — DATA OUTLET IN FLOOR BOX
- — TELEPHONE/DATA OUTLET
- — HANDICAP DOOR OPERATOR PUSH PLATE
- S — CEILING MOUNTED SPEAKER
- V — VOLUME CONTROL
- — SECURITY CAMERA

ELECTRICAL ABBREVIATIONS

1P	SINGLE POLE
2P	TWO POLE
3P	THREE PHASE
3W	THREE WIRE
4W	FOUR WIRE
A	AMPERE
AC	ALTERNATING CURRENT
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHJ	AUTHORITY HAVING JURISDICTION
AMP	AMPERE
ARCH	ARCHITECT
BLDG	BUILDING
BKR	BREAKER
C	CONDUIT
CAT	CATALOG
CB	CIRCUIT BREAKER
CKT	CIRCUIT
CLG	CEILING
CT	CURRENT TRANSFORMER
D	DIMMING
DISC	DISCONNECT
DIST	DISTRIBUTION
DS	DAYLIGHT SENSOR
DWG	DRAWING
EBU	EMERGENCY BATTERY UNIT
EC	ELECTRICAL CONTRACTOR
EMER	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
ENCL	ENCLOSURE
EWC	ELECTRIC WATER COOLER
FLA	FULL LOAD AMPERE
FSS	FUSED SAFETY SWITCH
FU	FUSE
GC	GENERAL CONTRACTOR
GFI/ GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GND	GROUND
GRS	GALVANIZED RIGID CONDUIT
HH	HAND HOLE
HP	HORSE POWER
IU	IN UNIT
KW	KILOWATT
LCP	LIGHTING CONTROL PANEL
LED	LIGHT EMITTING DIODE
LTG	LIGHTING
MAG	MAGNETIC STARTER
MAN	MANUAL STARTER
MAX	MAXIMUM
MC	MECHANICAL CONTRACTOR
MCA	MAIN CIRCUIT AMPACITY
MCB	MAIN CIRCUIT BREAKER
MIN	MINIMUM
MOCP	MAXIMUM OVERCURRENT PROTECTION
MLO	MAIN LUG ONLY
MTD	MOUNTED
NEC	NATIONAL ELECTRICAL CODE
NF	NON-FUSIBLE
NFPA	NATIONAL FIRE PROTECTION AGENCY
NFSS	NON-FUSED SAFETY SWITCH
NIC	NOT INCLUDED IN CONTRACT
NTS	NOT TO SCALE
NU	NEAR UNIT
OS	OCCUPANCY SENSOR
OU	ON UNIT
P	POLE OR PILOT LIGHT
PB	PULL BOX
PC	PLUMING CONTRACTOR OR PHOTO ELECTRIC SWITCH
PEND	PENDANT
PH	PHASE
PNL	PANEL
PVC	POLYVINYL CHLORIDE (PLASTIC)
PW	PRE-WIRED
PWR	POWER
R	RELAY
RECPT	RECEPTACLE
RM	ROOM
REQD	REQUIRED
SPD	SURGE PROTECTION DEVICE
SPEC	SPECIFICATION
SW	SWITCH
TC	TIMECLOCK
TYP	TYPICAL
UG	UNDERGROUND
UL	UNDERWRITERS LABORATORY
UNV	UNIVERSAL
V	VOLT
VA	VOLT AMPERE
VFD	VARIABLE FREQUENCY DRIVE
VS	VACANCY SENSOR
W	WATT OR WIRE
WP	WEATHERPROOF
XFMR	TRANSFORMER

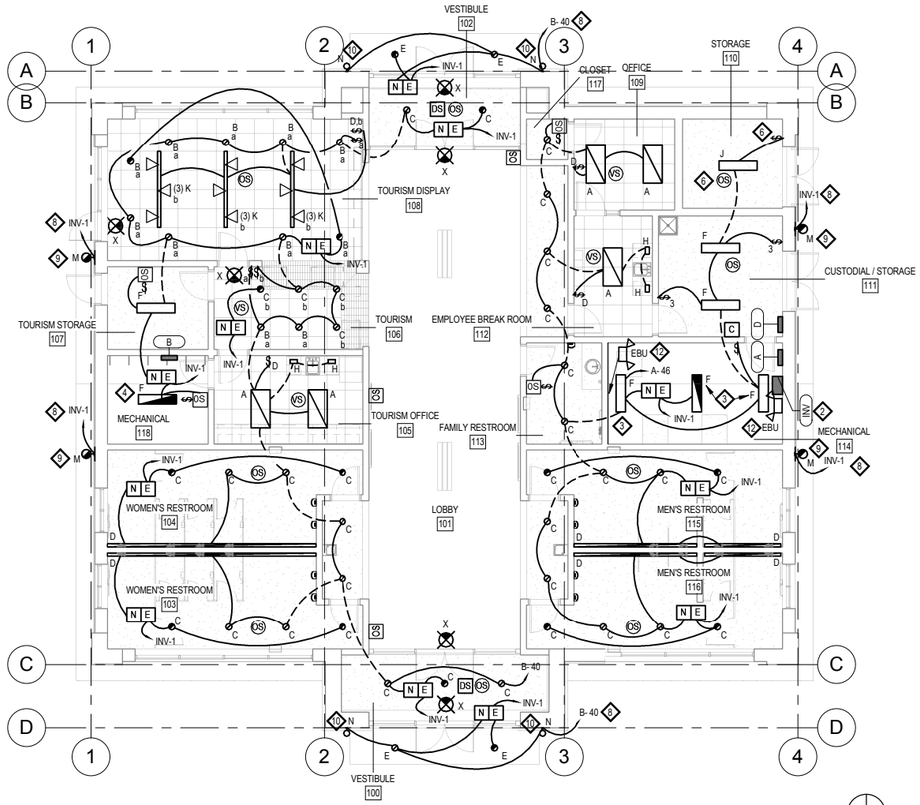
ELECTRICAL NOTES

1. ALL WORK SHALL COMPLY WITH APPLICABLE NATIONAL, STATE, LOCAL CODES, FEDERAL AND STATE REGULATIONS, AND ALL REQUIREMENTS OF THE LOCAL AUTHORITIES HAVING JURISDICTION.
2. THE CONTRACTOR SHALL VISIT THE SITE TO DETERMINE THE FULL EXTENT OF WORK, AND PROJECT CONDITIONS, AND SHALL BE FAMILIAR WITH THE LOCAL CONDITIONS AND CODES RELATING TO THE WORK. FAILURE TO DO SO WILL NOT RELIEVE THE CONTRACTOR OF THE OBLIGATIONS OF THE CONTRACT.
3. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT AND ENGINEER IN WRITING OF ANY EQUIPMENT, MATERIALS, INSTALLATIONS, ETC., THAT ARE DEFICIENT OR IN VIOLATION OF LOCAL CODES AND REGULATIONS.
4. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL MATERIAL, LABOR, EQUIPMENT, DEVICES, FIXTURES, SERVICE REQUIREMENTS, ETC. NECESSARY FOR A COMPLETE AND FULLY OPERATIONAL ELECTRICAL SYSTEM/INSTALLATION.
5. THE CONTRACTOR SHALL PERFORM WORK IN ACCORDANCE WITH THESE DRAWINGS. WHERE MORE STRINGENT REQUIREMENTS ARE SET FORTH BY THE ARCHITECTURAL DRAWINGS OR LOCAL CODES AND REGULATIONS, THE GREATER REQUIREMENTS SHALL GOVERN. ANY DEVIATIONS FROM THESE DRAWINGS SHALL BE RECORDED AND PROVIDED IN WRITING TO THE ARCHITECT AND ENGINEER.
6. THE ELECTRICAL DRAWINGS ARE DIAGRAMMATIC AND THE CONTRACTOR SHALL INSTALL EQUIPMENT TO MEET THE FIELD CONDITIONS WITH COORDINATION FROM APPROVED SHOP DRAWINGS.
7. THE CONTRACTOR SHALL COORDINATE ALL WORK WITH THE RESPECTIVE TRADES AND VERIFY LOCATIONS AND REQUIREMENTS FROM THE ARCHITECTURAL DRAWINGS, FIELD MEASUREMENTS AND SUPPLIER SHOP DRAWINGS.
8. THE CONTRACTOR SHALL CHECK ALL DRAWINGS AND SPECIFICATIONS OF OTHER TRADES AND INCLUDE IN THEIR BID ANY ADDITIONAL WORK REQUIRED BY THIS TRADE.
9. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATION AND MOUNTING HEIGHTS OF ALL LIGHT SWITCHES, POWER, AND COMMUNICATIONS OUTLETS. ALL OUTLETS SHALL BE MOUNTED VERTICALLY UNLESS OTHERWISE NOTED. COORDINATE ALL FINAL DEVICE REQUIREMENTS WITH ARCHITECT PRIOR TO INSTALLATION.
10. ALL CONDUITS SHALL BE SUPPORTED IN COMPLIANCE WITH CODE REQUIREMENTS AND INSTALLED IN A MANNER AS TO AFFORD MINIMUM INTERFERENCE WITH OTHER TRADES. ALL CONDUITS ABOVE CEILING SHALL BE RIGIDLY SUPPORTED BY SUITABLE HANGERS FROM THE STRUCTURAL SLAB DECK OR FRAMING ABOVE INDEPENDENT OF THE CEILING, CEILING SUPPORT SYSTEM AND OTHER TRADE COMPONENTS. ALL CONDUITS SHALL BE CONCEALED UNLESS OTHERWISE NOTED ON DRAWINGS.
11. FIRE RATED SEALS SHALL BE PROVIDED FOR ALL CONDUIT PENETRATIONS THROUGH FIRE RATED FLOORS, WALLS, AND CEILINGS.
12. CONTRACTOR SHALL VERIFY ALL EQUIPMENT CONNECTION CONFIGURATIONS BEFORE PURCHASE. ALL DEVICES SHOWN ARE FOR REFERENCE ONLY, TO COMMUNICATE DESIGN INTENT, FINAL LOCATION SHALL BE VERIFIED PRIOR TO INSTALLATION. THIS NOTE SHALL APPLY TO, BUT NOT BE LIMITED TO RECEPTACLES, SWITCHES, DATA PORTS, AUDIO/VIDEO DEVICES, AND TELEPHONE JACKS.
13. THE CONTRACTOR SHALL COORDINATE AND VERIFY ALL ABOVE CEILING REQUIREMENTS (PLENUM, NON-PLENUM, AIR HANDLING, ETC.) AS REQUIRED BY LOCAL AUTHORITY BEFORE THE INSTALLATION AND PURCHASE OF ELECTRICAL EQUIPMENT, MATERIALS AND DEVICES, WIRING, CABLING, AND THE ORDERING OF LIGHTING FIXTURES.
14. CONDUCTOR SIZES INDICATED ARE MINIMUM SIZES BASED ON 75°C COPPER CONDUCTOR. AMPACITIES OF CONDUCTORS DO NOT TAKE VOLTAGE DROP INTO CONSIDERATION. CONTRACTOR SHALL SIZE CONDUCTORS FOR FEEDERS AND BRANCH CIRCUITS TO PREVENT A VOLTAGE DROP EXCEEDING 3 PERCENT AT THE FARTHEST OUTLET OF POWER, HEATING, AND LIGHTING LOADS, OR COMBINATION OF SUCH LOADS, AND WHERE THE MAXIMUM TOTAL VOLTAGE DROP ON BOTH FEEDERS AND BRANCH CIRCUITS TO THE FARTHEST OUTLET DOES NOT EXCEED 5 PERCENT, TO PROVIDE REASONABLE EFFICIENCY OF OPERATION.

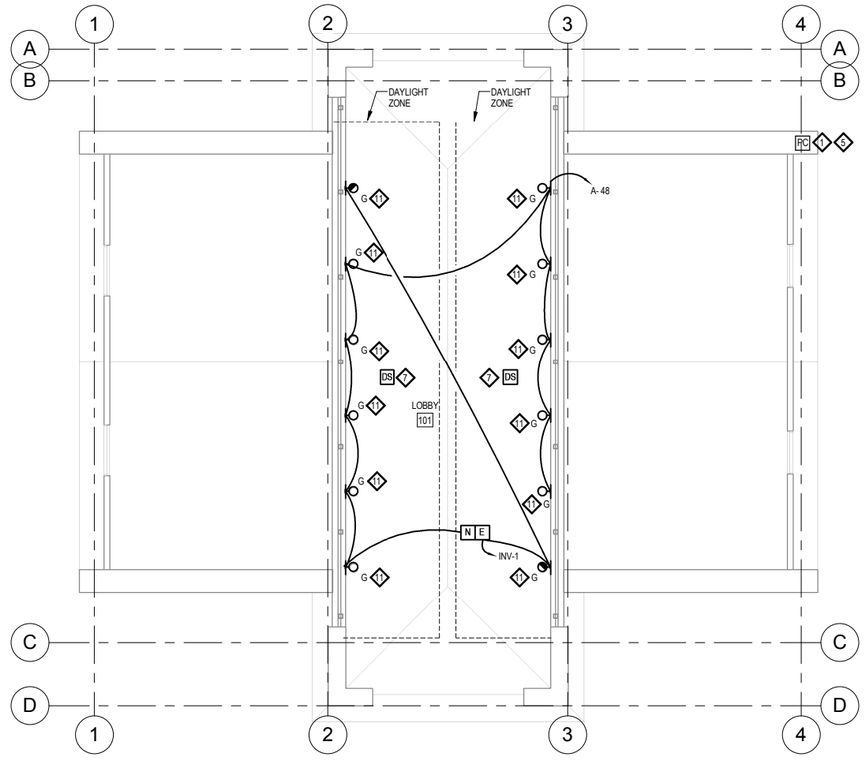
2

E001

PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	ELECTRICAL LEGEND, ABBREVIATIONS AND NOTES	SHEET 103 E



1 E101 FIRST FLOOR LIGHTING FLOOR PLAN
1/8" = 1'-0"



2 E101 CLERESTORY LIGHTING FLOOR PLAN
1/8" = 1'-0"

LIGHTING FIXTURE SCHEDULE

FIXTURE	MANUFACTURER	CATALOG NUMBER	LAMPING	DESCRIPTION	NOTES
A	METALUX LITHONIA DAY-BRITE	24CZ-LD4-40-UNV-L840-CD1 2VTL4 SERIES OR EQUAL EQUAL	4000 LUMENS, 4000K LED	2X4 LED RECESSED TROFFER, UNV DIMMING DRIVER	4
B	PORTFOLIO GOTHAM LIGHTOLIER	LD4A09840D010TE-LAR35NFL-4LA1H-WF EVO SERIES OR EQUAL EQUAL	900 LUMENS, 4000K LED	4.5" APERTURE RECESSED LED ADJUSTABLE DOWNLIGHT, UNV DRIVER	4
C	PORTFOLIO GOTHAM LIGHTOLIER	LD4A09D010TE-ERW4A09840-4LW1H-WF ICO ADJ SERIES OR EQUAL EQUAL	900 LUMENS, 4000K LED	4" APERTURE RECESSED LED DOWNLIGHT, UNV DRIVER	
D	PRUDENTIAL LIGHTING FOCAL POINT LEDALITE	BIO-PSTD-FLSH-LED4-LO-X-XXX-AWW-D1G-WTW-SC-UNV-X3-ND FSM4L SERIES OR EQUAL EQUAL	350 LUMENS/FT, 4000K LED	LED CONTINUOUS RECESSED PERIMETER WALL GRAZER, UNV DRIVER	
E	PMC LIGHTING GOTHAM LIGHTOLIER	6LE-XL-1100-R-4040-1-D-1-X EVO SERIES OR EQUAL EQUAL	1100 LUMENS, 4000K LED	6" APERTURE LED EXTERIOR RECESSED DOWNLIGHT, 120V DRIVER	
EBU	LITHONIA SURE-LITES CHLORIDE	ELM2-LED-SD EQUAL EQUAL	LED W/ UNIT	EMERGENCY BATTERY UNIT WITH SELF DIAGNOSTICS, UNV DRIVER	
F	METALUX LITHONIA DAY-BRITE	4WNLED-LD1-41-F-UNV-L840-CD1-SCA LBL4 SERIES OR EQUAL EQUAL	4100 LUMENS, 4000K LED	4'-0" LED SURFACE MOUNTED WRAPAROUND, UNV DRIVER	7
G	AMETRIX WINONA ELLIPTIPAR	ASYX-WM-S2-ID-U-W-L40-1-UNV-X-R-STD WINDIRECT OR EQUAL EQUAL	9812 LUMENS, 4000K LED	LED INDIRECT WALL MOUNT, UNV DRIVER	
H	HALO DAY-BRITE JUNO LIGHTING	HU10-09-D-9-40-P EQUAL EQUAL	200 LUMENS, 4000K LED	0'-9" LED UNDERCABINET FIXTUREWITH INTEGRAL ROCKER SWITCH, UNV DRIVER	5
J	NULITE LITHONIA DAY-BRITE	INT-4-50L40-UNV-DIM FEM4 LED SERIES OR EQUAL EQUAL	5000 LUMENS, 4000K LED	4'-0" LED SURFACE MOUNTED VAPORTITE, UNV DRIVER	
K	JUNO LIGHTING WAC LIGHTING CONTECH LIGHTING	T262L-4-D-F LED27 SERIES OR EQUAL CTL806 V SERIES OR EQUAL	1500 LUMENS, 4000K LED	LED FLOOD TRACK HEAD, 120V DRIVER	4,6
M	MCGRAW-EDISON LITHONIA GARDCO	ISC-F01-LED-E1-BL3-XX WSR LED SERIES OR EQUAL EQUAL	2231 LUMENS, 4000K LED	DECORATIVE EXTERIOR LED WALL PACK, TYPE III DISTRIBUTION WITH BACK LIGHT CONTROL, UNV DRIVER	
N	HYDREL LSI INDUSTRIES INTENSE LIGHTING	LOWELL-2/9LED38-40K-120-NSP-CN5-L3-C1 INTENSE LIGHTING EQUAL	4000K LED	WET LOCATION EXTERIOR LED WALL MOUNTED CYLINDER, NARROW SPOT DISTRIBUTION, SOFTENING LENS	
X	SURE-LITES LITHONIA CHLORIDE	LPX-7-SD LQM SERIES OR EQUAL EQUAL	LED W/ UNIT	SINGLE FACE BATTERY POWERED EXIT SIGN WITH SELF DIAGNOSTICS, UNV DRIVER	1,2,3

KEY NOTES

1. MOUNT PHOTOCELL AS HIGH AS POSSIBLE ON WALL AND AIM NORTH. MOUNT IN ACCESSIBLE LOCATION AND ACCORDING TO MANUFACTURER'S RECOMMENDATIONS. FIELD VERIFY EXACT LOCATION.
2. PROVIDE ISOLITE E3MAC-1000-1P-IA-OA INVERTER OR EQUAL. VERIFY EXACT LOCATION AND MOUNTING PRIOR TO ORDERING.
3. MOUNT BOTTOM OF FIXTURE TYPE "F" 11'-0" AFF.
4. MOUNT BOTTOM OF FIXTURE TYPE "F" 9'-0" AFF.
5. ALL EXTERIOR LIGHTING SHALL BE DUSK-TO-DAWN CONTROL BY PHOTOCELL VIA CONTACTOR LOCATED IN ROOM 111.
6. CONTROLS IN STORAGE 110 SHALL BE EXPLOSION-PROOF.
7. SWITCHED DAYLIGHT SENSOR SHALL TURN LUMINAIRES OFF IF 30 FOOTCANDLES IS PERCEIVED AT FLOOR. DAYLIGHT SENSOR SHALL CONTROL ALL GENERAL ILLUMINATION LUMINAIRES WITHIN THE DAYLIGHT ZONE. LOCATE AND MOUNT DAYLIGHT SENSORS PER THE MANUFACTURER'S RECOMMENDATIONS. THE OPERATION OF EACH DAYLIGHT SENSOR MUST BE DEMONSTRATED TO OWNER UNDER REALISTIC CONDITIONS FOR APPROVAL.
8. SITE AND EXTERIOR LIGHTING SHALL OPERATE DUSK-TO-DAWN VIA BUILDING MOUNTED PHOTOCELL. PHOTOCELL OPERATION SHALL BE ADJUSTED AND DEMONSTRATED TO OWNER AT DAWN OR DUSK FOR APPROVAL.
9. MOUNT BOTTOM OF FIXTURE TYPE "M" 8'-0" AFG.
10. MOUNT BOTTOM OF FIXTURE TYPE "N" 7'-6" AFG.
11. MOUNT BOTTOM OF FIXTURE TYPE "G" 12'-6" AFF.
12. MOUNT BOTTOM OF FIXTURE TYPE "EBU" 8'-0" AFF.

SHEET NOTES

1. ALL OCCUPANCY AND VACANCY SENSORS SHALL BE WIRED IN SERIES WITH ROOM SWITCHES.
2. ALL OCCUPANCY AND VACANCY SENSORS SHALL TURN LIGHTS OFF AFTER 15 MINUTES OF VACANCY. ALL OCCUPANCY AND VACANCY SENSORS SHALL BE DUAL TECHNOLOGY TYPE.
3. ALL EXIT SIGNS AND EMERGENCY BATTERY UNITS SHALL BE CIRCUITED TO THE UNSWITCHED PORTION OF THE NORMAL BRANCH CIRCUIT SERVING THE IMMEDIATE AREA.
4. ALL SHADED EMERGENCY LIGHTING SHALL IMMEDIATELY ILLUMINATE TO FULL OUTPUT UPON LOSS OF NORMAL POWER.
5. ALL EMERGENCY BYPASS TRANSFER RELAY DEVICES SHALL BE MOUNTED IN AN ACCESSIBLE LOCATION. DEVICE SHALL BE LABELED WITH CIRCUIT AND ROOM CONTROLLED.

LIGHTING FIXTURE SCHEDULE GENERAL NOTES:

A. CONTRACTOR SHALL CONFIRM CEILING TYPE PRIOR TO THE RELEASE OF THE ORDER.
B. CATALOG NUMBERS ARE TO PROVIDE GUIDANCE ONLY AND MAY NOT BE COMPLETE.
C. FIXTURES SPECIFIED TO MEET DESIGN INTENT. EQUALS MAY BE SUBSTITUTED SUBJECT TO DESIGN TEAM'S APPROVAL.
D. PROVIDE ALL PARTS AND PIECES NECESSARY FOR A COMPLETE AND FUNCTIONAL INSTALLATION.
E. ARCHITECT TO DETERMINE ALL FINISHES.

LIGHTING FIXTURE SCHEDULE NOTES:

1. FIELD SELECTABLE CHEVRONS SHALL BE APPLIED OR INSTALLED/REMOVED AS INDICATED ON PLANS AND AS REQUIRED BY ALL GOVERNING CODES.
2. PROVIDE NUMBER OF FACES AS INDICATED ON PLANS AND AS REQUIRED BY ALL GOVERNING CODES.
3. ALL EXIT SIGNS MUST MEET ALL CITY, STATE, AND NATIONAL CODES INCLUDING BUT NOT LIMITED TO IBC1011 AND ANSI-A117.1 SEC 703.10.
4. VERIFY DIMMING CONTROLS ARE COMPATIBLE WITH DIMMING DRIVER PROVIDED WITH FIXTURE.
5. PROVIDE ALL ACCESSORIES, WIRING COMPONENTS, ETC. REQUIRED FOR A COMPLETE HARDWIRED INSTALLATION.
6. PROVIDE WITH JUNO TRACMASTER SINGLE CIRCUIT 8' TRACK IN CONFIGURATION SHOWN ON PLANS. COORDINATE TRACK HEAD LOCATION AND AIMING WITH DISPLAY RACKS PROVIDED BY OWNER. PROVIDE 120W CURRENT LIMITING, END FEED DEVICE ON ALL TRACKS. TRACK FINISH SHALL MATCH FIXTURE FINISH.
7. PROVIDE STEMS IN LENGTH NECESSARY TO ACCOMMODATE MOUNTING HEIGHTS SHOWN ON PLANS.

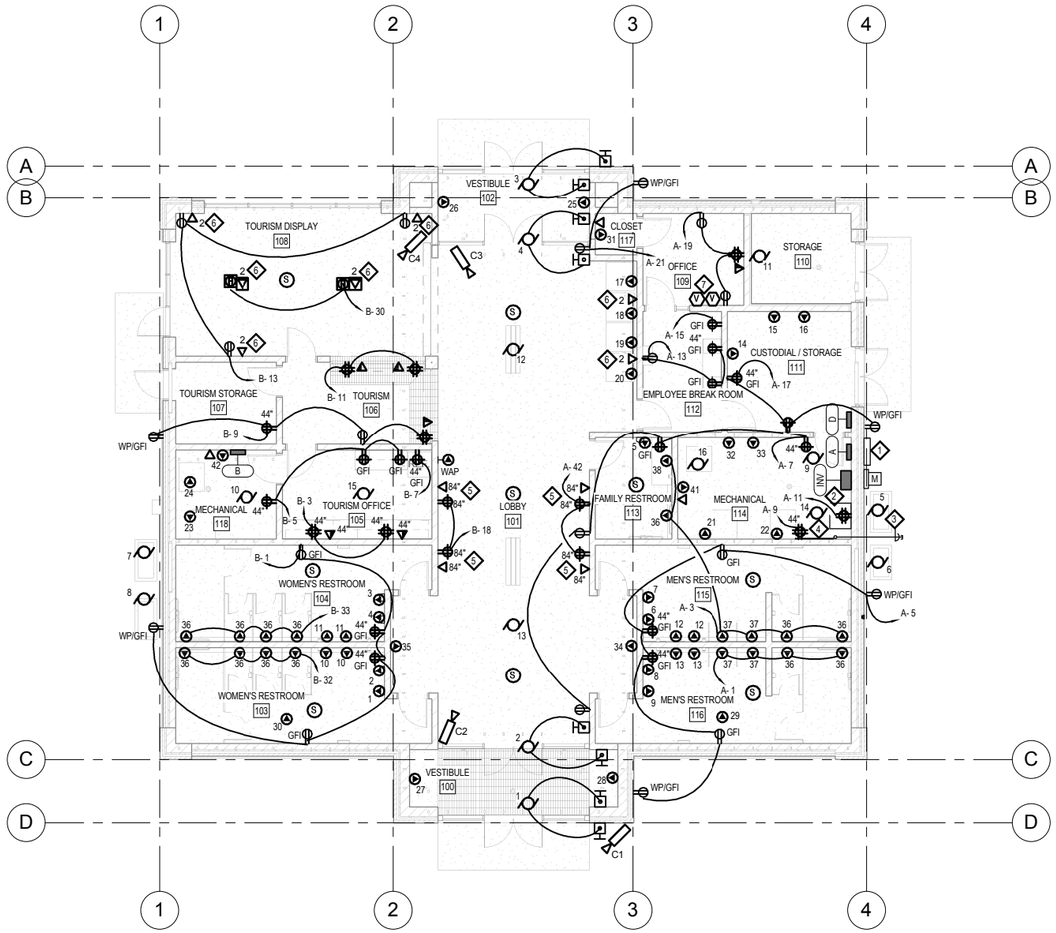
E101

PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	LIGHTING PLAN	SHEET 104 E

2

KEY NOTES

1. 400A 120/208V, 3PH, 4W METERING TRANSFORMER CABINET.
2. WALL MOUNTED IT DATA CABINET. PROVIDE DOUBLE DUPLEX RECEPTACLE INSIDE CABINET TO SERVE NETWORK COMPONENTS.
3. 4" PVC CONDUIT STUBBED OUT 5'-0" FROM BUILDING FOR INCOMING TELEPHONE/INTERNET SERVICE.
4. 4' X 4' X 3/4" PLYWOOD TELEPHONE BACKBOARD.
5. LOCATE RECEPTACLE AND DATA OUTLET INSIDE ENCLOSURE FOR WALL MONITOR.
6. "2" INDICATES QUANTITY OF DATA JACKS/CABLE DROPS TO EACH DATA OUTLET.
7. VOLUME CONTROLS FOR SPEAKERS. ONE VOLUME CONTROL FOR LOBBY SPEAKERS AND THE OTHER VOLUME CONTROL FOR RESTROOM AND TOURISM DISPLAY SPEAKERS.



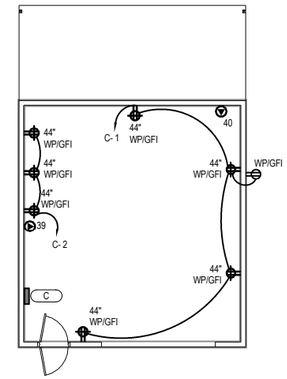
1 E102 Power & Systems Plan
1/8" = 1'-0"

NORTH

E102

PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	POWER & SYSTEMS PLAN	SHEET 105 E

FILE NAME: C:\Users\koranger\Documents\Revit 2014 Projects\WITCO_MEP_KOranger.rvt
LAYOUT NAME - BUILDING FLOOR PLAN
PLOT DATE: 10/30/2015 3:24:10 PM PLOT BY: PLOT NAME: PLOT SCALE:
WISDOT/CADDS SHEET 42



1 E103 MAINTENANCE BUILDING -POWER PLAN
1/8" = 1'-0"

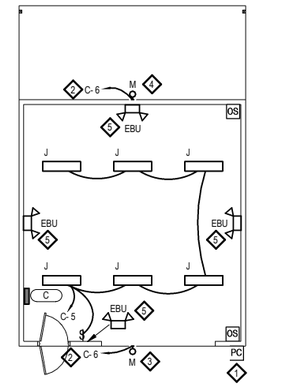
NORTH

SHEET NOTES

1. ALL OCCUPANCY SENSORS SHALL BE WIRED IN SERIES WITH ROOM SWITCHES.
2. ALL OCCUPANCY SENSORS SHALL TURN LIGHTS OFF AFTER 15 MINUTES OF VACANCY. ALL OCCUPANCY SENSORS SHALL BE DUAL TECHNOLOGY TYPE.
3. ALL EMERGENCY BATTERY UNITS SHALL BE CIRCUITED TO THE UNSWITCHED PORTION OF THE NORMAL BRANCH CIRCUIT SERVING THE IMMEDIATE AREA.

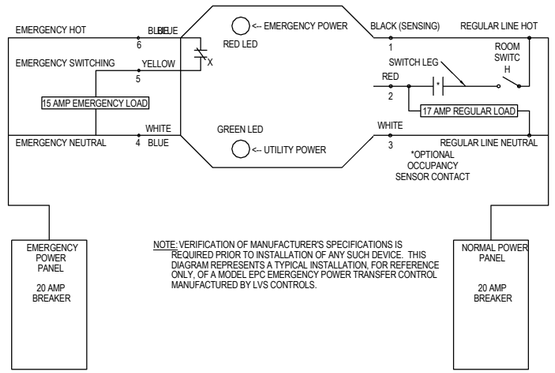
KEY NOTES

1. MOUNT PHOTOCELL AS HIGH AS POSSIBLE ON WALL AND AIM NORTH. MOUNT IN ACCESSIBLE LOCATION AND ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
2. FIXTURE TYPE "M" SHALL OPERATE DUSK-TO-DAWN VIA BUILDING MOUNTED PHOTOCELL.
3. MOUNT BOTTOM OF FIXTURE TYPE "M" 15'-0" AFG.
4. MOUNT BOTTOM OF FIXTURE TYPE "M" 9'-0" AFG.
5. MOUNT BOTTOM OF FIXTURE TYPE "EBU" 8'-0" AFF.



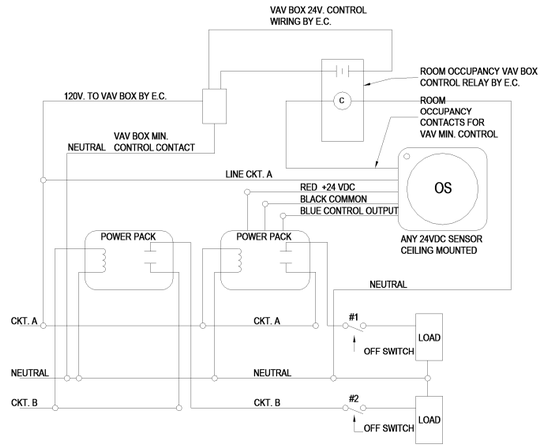
2 E103 MAINTENANCE BUILDING - LIGHTING PLAN
1/8" = 1'-0"

NORTH

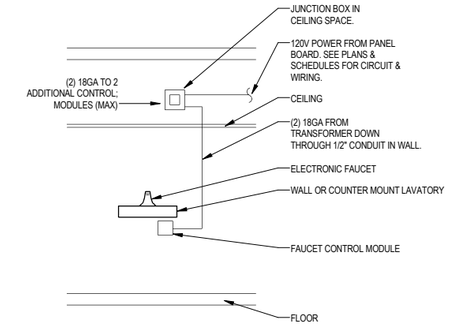


NOTE: VERIFICATION OF MANUFACTURER'S SPECIFICATIONS IS REQUIRED PRIOR TO INSTALLATION OF ANY SUCH DEVICE. THIS DIAGRAM REPRESENTS A TYPICAL INSTALLATION, FOR REFERENCE ONLY. OF A MODEL EPC EMERGENCY POWER TRANSFER CONTROL MANUFACTURED BY LVS CONTROLS.

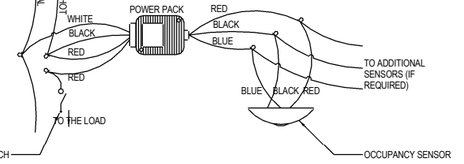
6 / E500 EMERGENCY BYPASS TRANSFER RELAY WIRING DIAGRAM
NTS



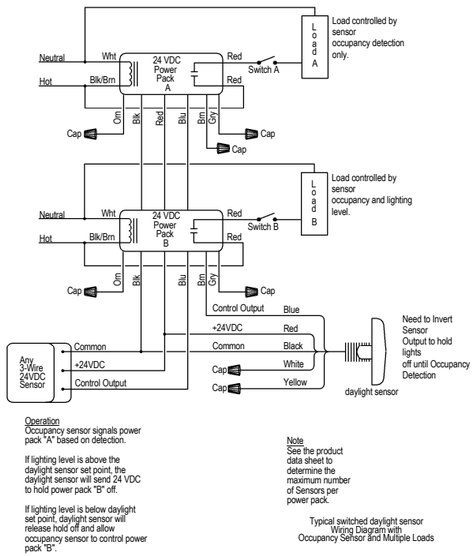
4 / E500 DUAL SWITCHING WITH CEILING MOUNTED OCCUPANCY SENSOR DETAIL
NTS



1 / E500 ELECTRONIC FAUCET CONTROL DETAIL (FAMILY RESTROOM)
NTS



2 / E500 OCCUPANCY SENSOR WIRING DETAIL
NTS



Operation
Occupancy sensor signals power pack "A" based on detection.

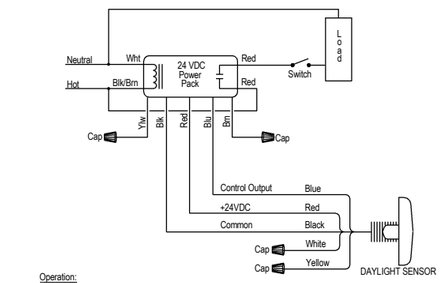
If lighting level is above the daylight sensor set point, the daylight sensor will send 24 VDC to hold power pack "B" off.

If lighting level is below daylight set point, daylight sensor will release hold off and allow occupancy sensor to control power pack "B".

Note
See the product data sheet to determine the maximum number of Sensors per power pack.

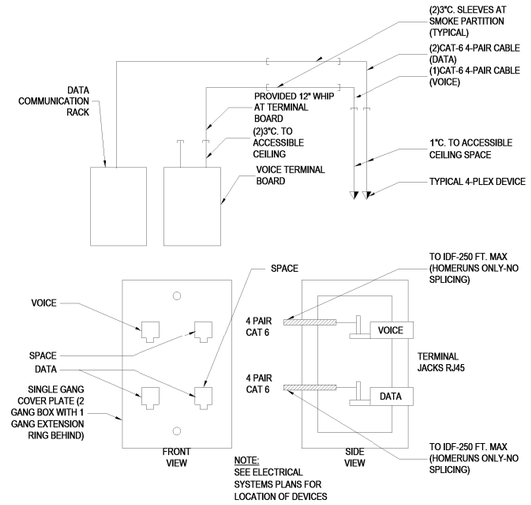
Typical switched daylight sensor Wiring Diagram with Occupancy Sensor and Multiple Loads

5 / E500 SWITCH DAYLIGHT SENSOR WITH OCUPANCY SENSOR & MULTIPLE LOAD WIRING DIAGRAM
NTS

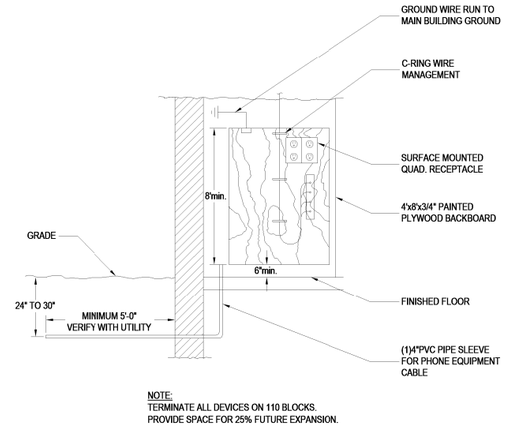


Operation:
Daylight sensor turns power pack ON/OFF based on light level.

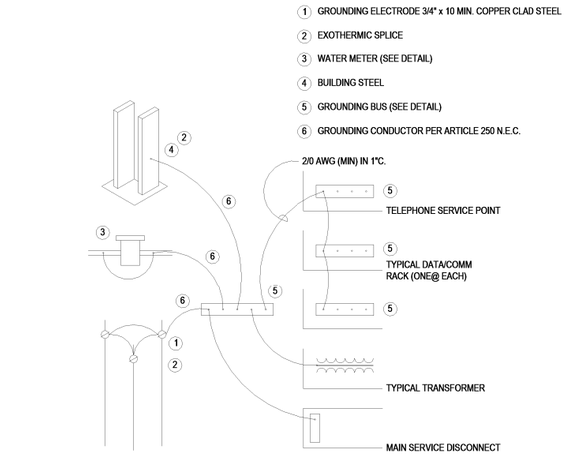
3 / E500 DAYLIGHT SENSOR SWITCHING WIRING DETAIL
NTS



7 E501 TYPICAL VOICE DATA OUTLET
NTS



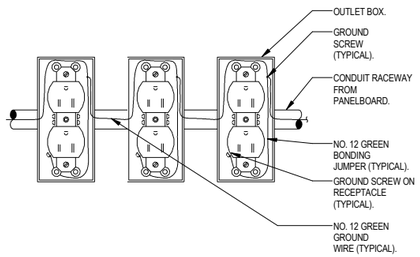
4 E501 TYPICAL TELEPHONE BACKBOARD DETAIL
NTS



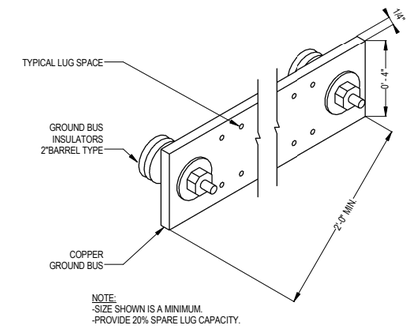
1 E501 GROUNDING RISER DIAGRAM
NTS

5 E501 TYPICAL WATER METER GROUNDING JUMPER DETAIL
NTS

2 E501 TYPICAL EQUIPMENT GROUNDING DETAIL
NTS



6 E501 TYPICAL RECEPTACLE GROUNDING DETAIL
NTS



3 E501 TYPICAL GROUND BUS DETAIL
NTS

MOTOR WIRING SCHEDULE

NO.	DRIVING	LOC.	HP	KW	FLA	VOLT	PH	FEED FROM PANEL	FEED FROM CIRCUIT	BREAKER SIZE	BREAKER POLE	STARTER TYPE	STARTER FURN	STARTER INS	STARTER WIRED	STARTER LOC	DISCONNECT TYPE	DISCONNECT FURN	DISCONNECT INS	DISCONNECT WIRED	DISCONNECT LOC	REMARKS
1	H.C. DOOR OPPERATOR	100	0.25		9.8 A	120 V	1	A	23	20	1	-	-	-	-	-	TOGGLE	EC	EC	EC	NU	1,2
2	H.C. DOOR OPPERATOR	100	0.25		9.8 A	120 V	1	A	25	20	1	-	-	-	-	-	TOGGLE	EC	EC	EC	NU	1,2
3	H.C. DOOR OPPERATOR	102	0.25		9.8 A	120 V	1	A	27	20	1	-	-	-	-	-	TOGGLE	EC	EC	EC	NU	1,2
4	H.C. DOOR OPPERATOR	102	0.25		9.8 A	120 V	1	A	29	20	1	-	-	-	-	-	TOGGLE	EC	EC	EC	NU	1,2
5	ACCU-1	OUTSIDE			21.4 A	208 V	3	A	31,33,35	30	3	MAG	MFR	MFR	MFR	IU	FSS	EC	EC	EC	NU	
6	ACCU-2	OUTSIDE			14.5 A	208 V	3	A	37,39,41	20	3	MAG	MFR	MFR	MFR	IU	FSS	EC	EC	EC	NU	
7	ACCU-3	OUTSIDE			21.4 A	208 V	3	B	15,17,19	30	3	MAG	MFR	MFR	MFR	IU	FSS	EC	EC	EC	NU	
8	ACCU-4	OUTSIDE			21.4 A	208 V	3	B	21,23,25	30	3	MAG	MFR	MFR	MFR	IU	FSS	EC	EC	EC	NU	
9	(2) ERU-1	114	0.75		7 A	208 V	3	A	62,64,66	15	3	MAG	MFR	MFR	MFR	IU	NFSS	MFR	MFR	MFR	OU	
10	(2) ERU-2	118	0.75		7 A	208 V	3	B	27,29,31	15	3	MAG	MFR	MFR	MFR	IU	NFSS	MFR	MFR	MFR	OU	
11	EF-1	110		.129	1.7 A	120 V	1	A	45	15	1	-	-	-	-	-	TOGGLE	EC	EC	EC	NU	3
12	DF-1	101			0.7 A	120 V	1	A	47	20	1	-	-	-	-	-	TOGGLE	EC	EC	EC	NU	
13	DF-2	101			0.7 A	120 V	1	A	47	20	1	-	-	-	-	-	TOGGLE	EC	EC	EC	NU	
14	RF-1	114	0.75		6.6 A	208 V	1	A	49,51	15	2	MAG	EC	EC	EC	NU	NFSS	EC	EC	EC	NU	
15	RF-2	105	1		12 A	208 V	1	B	26,28	20	2	MAG	EC	EC	EC	NU	NFSS	EC	EC	EC	NU	
16	HWRP-1	114	0.083		1.4 A	120 V	1	A	53	15	1	MAN	MAN	EC	EC	NU	TOGGLE	EC	EC	EC	NU	1
17	WELL PUMP #1	OUTSIDE	5		16.7 A	208 V	3	A	50,52,54	35	3	MAG	MFR	MFR	MFR	CP	NFSS	EC	EC	EC	RM. 114	4
18	WELL PUMP#2	OUTSIDE	5		16.7 A	208 V	3	B	41,43,45	35	3	MAG	MFR	MFR	MFR	CP	NFSS	EC	EC	EC	RM. 118	4

NOTES:
1. PROVIDE HORSEPOWER RATE TOGGLE TYPE MANUAL SWITCH.
2. PROVIDE OUTLET BOX ROUGH-IN FOR (2) PUSHBUTTON ACTIVATOR SWITCHES, AND RACEWAY BETWEEN THE SWITCHES AND THE OPERATOR HOUSING (LOW VOLTAGE WIRING BY DOOR OPERATOR INSTALLER).
3. EXHAUST FAN TO BE CONTROLLED BY LIGHT SWITCH.
4. VERIFY ELECTRICAL REQUIREMENTS FOR WELL PUMP AND CONTROLS WITH WELL DRILLER.

SPECIAL PURPOSE OUTLET SCHEDULE

NO.	TO FEED	LOCATION	KW	FLA	VOLTAGE	PHASE	FEED FROM PANEL	FEED FROM CKT	BREAKER SIZE	BREAKER POLE	TYPE RCPT	TYPE DIRECT	TYPE OTHER	SEE NOTE
1	HAND DRYER	103	1.5	12.5 A	120	1	B	2	20	1		Yes		1,2
2	HAND DRYER	103	1.5	12.5 A	120	1	B	4	20	1		Yes		1,2
3	HAND DRYER	104	1.5	12.5 A	120	1	B	6	20	1		Yes		1,2
4	HAND DRYER	104	1.5	12.5 A	120	1	B	8	20	1		Yes		1,2
5	HAND DRYER	113	1.5	12.5 A	120	1	A	2	20	1		Yes		1,2
6	HAND DRYER	115	1.5	12.5 A	120	1	A	4	20	1		Yes		1,2
7	HAND DRYER	115	1.5	12.5 A	120	1	A	6	20	1		Yes		1,2
8	HAND DRYER	116	1.5	12.5 A	120	1	A	8	20	1		Yes		1,2
9	HAND DRYER	116	1.5	12.5 A	120	1	A	10	20	1		Yes		1,2
10	LAVATORY SYSTEM	103	.035	2 A	120	1	B	10	20	1	Yes			3
11	LAVATORY SYSTEM	104	.035	2 A	120	1	B	10	20	1	Yes			3
12	LAVATORY SYSTEM	115	.035	2 A	120	1	A	12	20	1	Yes			3
13	LAVATORY SYSTEM	116	.035	2 A	120	1	A	12	20	1	Yes			3
14	ELECTRIC CLOTHES DRYER	111		24 A	208	1	A	14,16	30	2	Yes			4,5
15	FLOOR SCRUBBER CHARGER	111		15 A	120	1	A	18	20	1	Yes			4,5
16	FLOOR SCRUBBER CHARGER	111		15 A	120	1	A	20	20	1	Yes			4,5
17	VENDING MACHINE	101		10.5 A	120	1	A	22	20	1	Yes			4
18	VENDING MACHINE	101		10.5 A	120	1	A	24	20	1	Yes			4
19	VENDING MACHINE	101		10.5 A	120	1	A	26	20	1	Yes			4
20	VENDING MACHINE	101		10.5 A	120	1	A	28	20	1	Yes			4
21	GAS FIRED FURNACE GFF-1	114		20 A	120	1	A	30	25	1		Yes		
22	GAS FIRED FURNACE GFF-2	114		15 A	120	1	A	32	20	1		Yes		
23	GAS FIRED FURNACE GFF-3	118		20 A	120	1	B	12	25	1		Yes		
24	GAS FIRED FURNACE GFF-4	118		20 A	120	1	B	14	25	1		Yes		
25	ELEC. WALL HEATER EWH-1	102	4.0	11.1 A	208	3	A	56,58,60	15	3		Yes		
26	ELEC. WALL HEATER EWH-2	102	4.0	11.1 A	208	3	B	34,36,38	15	3		Yes		
27	ELEC. WALL HEATER EWH-3	100	4.0	11.1 A	208	3	B	35,37,39	15	3		Yes		
28	ELEC. WALL HEATER EWH-4	100	4.0	11.1 A	208	3	A	61,63,65	15	3		Yes		
29	RADIANT CEILING PANEL RCP-1	116	0.5	4 A	120	1	A	55	20	1		Yes		
30	RADIANT CEILING PANEL RCP-2	103	0.5	4 A	120	1	B	20	20	1		Yes		
31	PA SYSTEM AMPLIFIER	117	1.0	8.3 A	120	1	A	34	20	1	Yes			
32	GAS WATER HEATER GWH-1	114		15 A	120	1	A	38	20	1		Yes		
33	WATER SOFTENER	114		15 A	120	1	A	40	20	1		Yes		
34	ELEC. WATER COOLER EWC-1	101		4 A	120	1	A	36	20	1	Yes			1,7
35	ELEC. WATER COOLER EWC-1	101		4 A	120	1	B	16	20	1	Yes			1,7
36	TOILET FLUSH VALVE	SEE PLAN	.005		24/120	1	SEE	PLAN	20	1		Yes		6
37	URINAL FLUSH VALVE	SEE PLAN	.005		24/120	1	A	SEE PLAN	20	1		Yes		6
38	ELECTRONIC FAUCET SENSOR	113	.005		24/120	1	A	3	20	1		Yes		6
39	ELEC. WATER HEATER EWH-1	MAINT. BLDG.	1.5		208	1	C	7,9	15	2		Yes		
40	GAS FIRED UNIT HEATER GUH-1	MAINT. BLDG.		3.7 A	120	1	C	4	20	1		Yes		
41	WEB BASED BLDG. CONTROL	114		0.5 A	120	1	A	44	15	1		Yes		
42	WEB BASED BLDG. CONTROL	118		0.5 A	120	1	B	42	20	1		Yes		

NOTES:
1. PROVIDE GFI CIRCUIT BREAKER IN PANEL.
2. COORDINATE MOUNTING HEIGHT OF ELECTRICAL ROUGH IN FOR HAND DRYER WITH ARCHITECT.
3. PROVIDE GFCI TYPE RECEPTACLE LOCATED WITHIN BASE CABINET OF LAVATORY SYSTEM FOR ELECTRONIC FAUCETS. COORDINATE ELECTRICAL CONNECTION REQUIREMENTS WITH APPROVED SUBMITTAL DRAWINGS.
4. PROVIDE RECEPTACLE AT 44" AFF.
5. PROVIDE WALL RECEPTACLE THAT IS COMPATIBLE WITH CORD AND PLUG ATTACHED TO EQUIPMENT.
6. PROVIDE 4" SQ. OUTLET BOX WITH PLASTER RING FOR SENSOR MOUNTING. PROVIDE 120V POWER TO PRIMARY SIDE OF 24V TRANSFORMER (LOW VOLTAGE WIRING FROM TRANSFORMER TO SENSOR, AND FROM SENSOR TO FLUSH VALVE SOLENOID BY P.C.).
7. LOCATE DUPLEX RECEPTACLE WITHIN EWC CABINET HOUSING.

SECURITY CAMERA SCHEDULE

NUMBER	LOCATION	AREA SERVED	CAMERA TYPE	COMMENTS
C1	EXTR.	MAIN ENTERANCE	EXTERIOR	WALL MOUNTED 12'-0" AFF
C2	101	LOBBY	INTERIOR	WALL MOUNTED 10'-0" AFF
C3	101	LOBBY	INTERIOR	WALL MOUNTED 10'-0" AFF
C4	108	TOURISM DISPLAY	INTERIOR	CEILING MOUNTED

Branch Panel: B

LOCATION: MECHANICAL 118 | **VOLTS:** 120/208 Wye | **A.I.C. RATING:**
SUPPLY FROM: A | **PHASES:** 3 | **MAINS TYPE:** MLO
MOUNTING: Surface | **WIRES** 4 | **MAINS RATING:** 225 A
ENCLOSURE: Type 1 | **MCB RATING:**

POLE NO.	POLES	AMP	DESCRIPTION	VA	PHASE A	PHASE B	PHASE C	VA	DESCRIPTION	AMP	POLES	POLE NO.
1	1	20 A	RECEPT.	900 VA	900 / 1500			1500 VA	HAND DRYER (SPO #1) - GFI	20 A	1	2
3	1	20 A	RECEPT.	720 VA		720 / 1500		1500 VA	HAND DRYER (SPO #2) - GFI	20 A	1	4
5	1	20 A	RECEPT.	540 VA			540 / 1500	1500 VA	HAND DRYER (SPO #3) - GFI	20 A	1	6
7	1	20 A	REFRIGERATOR RECEPT.	180 VA	180 / 180			180 VA	HAND DRYER (SPO #4) - GFI	20 A	1	8
9	1	20 A	RECEPT.	900 VA		900 / 960		960 VA	LAVATORY SYSTEM (SPO #10&#11)	20 A	1	10
11	1	20 A	RECEPT.	720 VA			720 / 2400	2400 VA	FURNACE F-3 (SPO #23)	25 A	1	12
13	1	20 A	RECEPT.	540 VA	540 / 2400			2400 VA	FURNACE F-4 (SPO #24)	25 A	1	14
15	3	30 A	ACCU-3 (MTR#7)	7704 VA		2568 / 480		480 VA	ELEC. WATER COOLER EWC-1 (SPO #35)	20 A	1	16
17	--	--	--	--			2568 / 360	360 VA	RECEPT.	20 A	1	18
19	--	--	--	--	2568 / 500			500 VA	RADIANT CEILING PANEL RCP-2 (SPO #30)	20 A	1	20
21	3	30 A	ACCU-4 (MTR#8)	7704 VA		2568 / 0		--	SPARE	20 A	1	22
23	--	--	--	--			2568 / 0	--	SPARE	20 A	1	24
25	--	--	--	--	2568 / 1248			2496 VA	RF-2 (MTR#15)	20 A	2	26
27	3	15 A	(2) ERU-2 (MTR#10)	1456 VA		485 / 1248		--	--	--	--	28
29	--	--	--	--			485 / 360	360 VA	FLOOR RECEPT.	20 A	1	30
31	--	--	--	--	485 / 400			400 VA	FLUSH VALVES	20 A	1	32
33	1	20 A	FLUSH VALVES	400 VA		400 / 1333		4000 VA	ELEC. WALL HEATER EWH-2 (SPO #26)	15 A	3	34
35	3	15 A	ELEC. WALL HEATER EWH-3 (SPO #27)	4000 VA			1333 / 1333	--	--	--	--	36
37	--	--	--	--	1333 / 1333			--	--	--	--	38
39	--	--	--	--		1333 / 967		967 VA	LIGHTING (SOUTH INTERIOR AND CANOPY)	20 A	1	40
41	3	35 A	WELL PUMP #2 (MTR#18)	6016 VA			2005 / 60	60 VA	WEB BASED BLDG CONTROL (SPO #42)	20 A	1	42
43	--	--	--	--	2005 / 0			--	SPARE	20 A	1	44
45	--	--	--	--		2005 / 0		--	SPARE	20 A	1	46
47												48
49												50
51												52
53												54
				Total Load:	18141 VA	17468 VA	16233 VA					
				Total Amps:	153 A	147 A	135 A					

Notes:

Branch Panel: A

LOCATION: MECHANICAL 114 | **VOLTS:** 120/208 Wye | **A.I.C. RATING:**
SUPPLY FROM: UTILITY | **PHASES:** 3 | **MAINS TYPE:** MAIN BREAKER
MOUNTING: Surface | **WIRES** 4 | **MAINS RATING:** 400 A
ENCLOSURE: Type 1 | **MCB RATING:** 400 A

POLE NO.	POLES	AMP	DESCRIPTION	VA	PHASE A	PHASE B	PHASE C	VA	DESCRIPTION	AMP	POLES	POLE NO.
1	1	20 A	FLUSH VALVES	400 VA	400 / 180			180 VA	HAND DRYER (SPO #5) - GFI	20 A	1	2
3	1	20 A	FLUSH VALVES	760 VA		760 / 1500		1500 VA	HAND DRYER (SPO #6) - GFI	20 A	1	4
5	1	20 A	RECEPT.	1080 VA			1080 / 1500	1500 VA	HAND DRYER (SPO #7) - GFI	20 A	1	6
7	1	20 A	RECEPT.	720 VA	720 / 1500			1500 VA	HAND DRYER (SPO #8) - GFI	20 A	1	8
9	1	20 A	RECEPT. FOR TELEPHONE SYSTEM	360 VA		360 / 1500		1500 VA	HAND DRYER (SPO #9) - GFI	20 A	1	10
11	1	20 A	RECEPT. FOR DATA CABINET	1800 VA			1800 / 960	960 VA	LAVATORY SYSTEM (SPO #12 &13)	20 A	1	12
13	1	20 A	RECEPT.	540 VA	540 / 2496			4992 VA	ELECTRIC CLOTHES DRYER (SPO #14)	30 A	2	14
15	1	20 A	REFERGERATOR RECEPT.	180 VA		180 / 2496		--	--	--	--	16
17	1	20 A	RECEPT.	540 VA			540 / 1800	1800 VA	FLOOR SCRUBBER CHAGER (SPO #15)	20 A	1	18
19	1	20 A	RECEPT.	720 VA	720 / 1800			1800 VA	FLOOR SCRUBBER CHARGER (SPO #16)	20 A	1	20
21	1	20 A	RECEPT.	360 VA		360 / 1260		1260 VA	VENDING MACHINE (SPO #17)	20 A	1	22
23	1	20 A	H.C. DOOR OPPERATOR (MTR#1)	1176 VA			1176 / 1260	1260 VA	VENDING MACHINE (SPO #18)	20 A	1	24
25	1	20 A	H.C. DOOR OPPERATOR (MTR#2)	1176 VA	1176 / 1260			1260 VA	VENDING MACHINE (SPO #19)	20 A	1	26
27	1	20 A	H.C. DOOR OPPERATOR (MTR#3)	1176 VA		1176 / 1260		1260 VA	VENDING MACHINE (SPO #20)	20 A	1	28
29	1	20 A	H.C. DOOR OPPERATOR (MTR#4)	1176 VA			1176 / 2400	2400 VA	FURANCE F-1 (SPO# 21)	25 A	1	30
31	3	30 A	ACCU-1 (MTR#5)	7710 VA	2570 / 1800			1800 VA	FURNANCE F-2 (SPO #22)	20 A	1	32
33	--	--	--	--		2570 / 996		996 VA	PA SYSTEM AMPLIFIER (SPO #31)	20 A	1	34
35	--	--	--	--			2570 / 480	480 VA	ELEC. WATER COOLER EWC-1 (SPO #34)	20 A	1	36
37	3	20 A	ACCU-2 (MTR#6)	5220 VA	1740 / 1800			1800 VA	GAS WATER HEATER GWH-1 (SPO #32)	20 A	1	38
39	--	--	--	--		1740 / 1800		1800 VA	WATER SOFTENER (SPO #33)	20 A	1	40
41	--	--	--	--			1740 / 360	360 VA	RECEPT.	20 A	1	42
43	1	20 A	SPARE	--	0 / 60			60 VA	WEB BASED BLDG. CONTROL (SPO #41)	15 A	1	44
45	1	15 A	EF-1 (MTR #11)	204 VA		204 / 702		702 VA	LIGHTING (NORTH INTERIOR)	20 A	1	46
47	1	20 A	DF-1 AND DF-2 (MTR#12 AND MTR#13)	166 VA			166 / 1070	1070 VA	LIGHTING (LOBBY 101)	20 A	1	48
49	2	15 A	RF-1 (MTR#14)	1373 VA	687 / 2005			6016 VA	WELL PUMP #1 (MTR#17)	35 A	3	50
51	--	--	--	--		687 / 2005		--	--	--	--	52
53	1	15 A	HWRP-1 (MTR#16)	168 VA			168 / 2005	--	--	--	--	54
55	1	20 A	RADIANT CEILING PANEL RCP-1 (SPO #29)	500 VA	500 / 1333			4000 VA	ELEC. WALL HEATER EWH-1 (SPO #25)	15 A	3	56
57	1	20 A	SPARE	--		0 / 1333		--	--	--	--	58
59	1	20 A	SPARE	--			0 / 1333	--	--	--	--	60
61	3	15 A	ELEC. WALL HEATER EWH-4 (SPO #28)	4000 VA	1333 / 485			1456 VA	(2) ERU-1 (MTR#9)	15 A	3	62
63	--	--	--	--		1333 / 485		--	--	--	--	64
65	--	--	--	--			1333 / 485	--	--	--	--	66
67	1	20 A	SPARE	--	0 / 0			--	SPARE	20 A	1	68
69												70
71												72
73	3	100 A	PANEL D	4893 VA	1891 / 1927			3854 VA	PANEL C	100 A	2	74
75	--	--	--	--		1372 / 1927		--	--	--	--	76
77	--	--	--	--			1631 / 0					78
79	3	60 A	SPD	--	0 / 18141			51823 VA	PANEL B	200 A	3	80
81	--	--	--	--		0 / 17449		--	--	--	--	82
83	--	--	--	--			0 / 16233	--	--	--	--	84
				Total Load:	47065 VA	45455 VA	43267 VA					
				Total Amps:	395 A	382 A	361 A					

Notes:

Branch Panel: D

LOCATION: CUSTODIAL / STORAGE 111 | **VOLTS:** 120/208 Wye | **A.I.C. RATING:**
SUPPLY FROM: A | **PHASES:** 3 | **MAINS TYPE:** MLO
MOUNTING: Surface | **WIRES** 4 | **MAINS RATING:** 100 A
ENCLOSURE: Type 1 | **MCB RATING:** 100 A

POLE NO.	POLES	AMP	DESCRIPTION	VA	PHASE A	PHASE B	PHASE C	VA	DESCRIPTION	AMP	POLES	POLE NO.
1	2	20 A	CAR PARKING LIGHTING	752	376 / 188			376	ROADWAY LIGHTING	20 A	2	2
3	--	--	--	752		376 / 188		376	--	--	--	4
5	2	20 A	ROADWAY LIGHTING	326			163 / 232	464	TRUCK PARKING LIGHTING	20 A	2	6
7	--	--	--	326	163 / 232			464	--	--	--	8
9	2	20 A	ROADWAY LIGHTING	470		235 / 232		464	TRUCK PARKING LIGHTING	20 A	2	10
11	--	--	--	470			235 / 232	464	--	--	--	12
13	2	20 A	PATHWAY LIGHTING	190	95 / 94			188	TRUCK PARKING LIGHTING	20 A	2	14
15	--	--	--	190		95 / 94		188	--	--	--	16
17	2	20 A	PATHWAY LIGHTING	95			48 / 416	416	GABIONS 6-12 LIGHTING	20 A	1	18
19	--	--	--	95	48 / 104			104	FLOODLIGHTING	20 A	1	20
21	2	20 A	PATHWAY LIGHTING	114		57 / 95		95	FLOODLIGHTING	20 A	1	22
23	--	--	--	114			57 / 248	248	GABIONS 4-5 LIGHTING	20 A	1	24
25	1	20 A	SPARE	0	0 / 591			591	GABIONS 1-3, FLAG LIGHTING	20 A	1	26
27												28
29												30
				Total Load:	1891 VA	1372 VA	1631 VA					
				Total Amps:	16 A	11 A	14 A					

Notes:

Branch Panel: C

Location: MAINT. BLDG. | **Volts:** 120/208 Single | **A.I.C. Rating:**
Supply From: A | **Phases:** 1 | **Mains Type:** MLO
Mounting: Surface | **Wires:** 3 | **Mains Rating:** 100 A
Enclosure: Type 1 | **MCB Rating:** 100 A

CKT	Poles	Breaker	Description	VA	A	B	VA	Description	Breaker	Poles	CKT
1	1	20 A	Receptacle	900 VA	900 / 540		540 VA	Receptacle	20 A	1	2
3	1	20 A	SPARE	0 VA		0 / 444	444 VA	GAS FIRED UNIT HEATER (SPO #40)	20 A	1	4
5	1	20 A	LIGHTING	312 VA	312 / 64		64 VA	EXTERIOR LIGHTING	20 A	1	6
7	2	15 A	ELEC. WATER HEATER EWH-1 (SPO #39)	1500 VA		750 / 47	94 VA	SITE LIGHTING	20 A	2	8
9	--	--	--	1500 VA	750 / 47		94 VA	--	--	--	10
11	1	20 A	SPARE	0 VA		0 / 0	0 VA	SPARE	20 A	1	12
13	1	20 A	SPARE	0 VA	0 / 0		0 VA	SPARE	20 A	1	14
15											16
17											18
			Total Load:	2613 VA	1241 VA						
			Total Amps:	23 A	12 A						

Notes:

FEEDER SCHEDULE

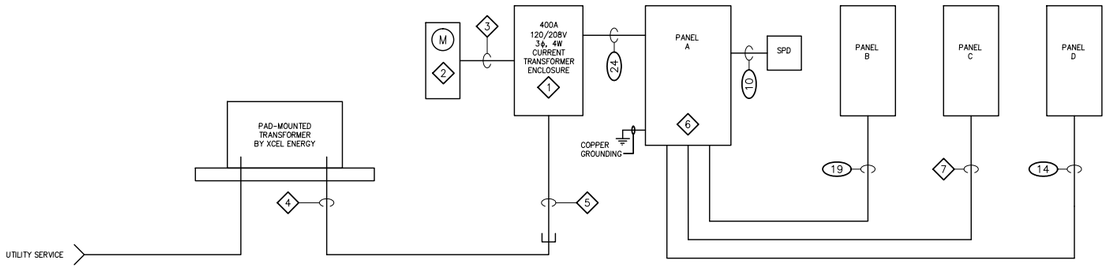
ID #	AMPS	SINGLE PHASE, 2 WIRE		1 OR 3 PHASE, 3 WIRE		THREE PHASE, 4 WIRE		ALL
		CND SIZE	PHASE CONDUCTORS	CND SIZE	PHASE CONDUCTORS	CND SIZE	PHASE CONDUCTORS	EQUIP. GRD. CONDUCTOR
1	10	3/4"	(2) #12	3/4"	(3) #12	3/4"	(4) #12	#12
2	15	3/4"	(2) #12	3/4"	(3) #12	3/4"	(4) #12	#12
3	20	3/4"	(2) #12	3/4"	(3) #12	3/4"	(4) #12	#12
4	25	3/4"	(2) #10	3/4"	(3) #10	3/4"	(4) #10	#10
5	30	3/4"	(2) #10	3/4"	(3) #10	3/4"	(4) #10	#10
6	35	3/4"	(2) #8	3/4"	(3) #8	3/4"	(4) #8	#10
7	40	3/4"	(2) #8	3/4"	(3) #8	3/4"	(4) #8	#10
8	45	3/4"	(2) #8	3/4"	(3) #8	3/4"	(4) #8	#10
9	50	3/4"	(2) #8	3/4"	(3) #6	3/4"	(4) #6	#10
10	60	3/4"	(2) #6	1"	(3) #6	1"	(4) #6	#10
11	70	1"	(2) #4	1"	(3) #4	1-1/4"	(4) #4	#8
12	80	1"	(2) #4	1"	(3) #4	1-1/4"	(4) #3	#8
13	90	1"	(2) #3	1-1/4"	(3) #3	1-1/4"	(4) #3	#8
14	100	1"	(2) #3	1-1/4"	(3) #3	1-1/4"	(4) #3	#8
15	110	1"	(2) #2	1-1/4"	(3) #2	1-1/2"	(4) #2	#6
16	125	1-1/4"	(2) #1	1-1/2"	(3) #1	1-1/2"	(4) #1	#6
17	150	1-1/4"	(2) #1/0	1-1/2"	(3) #1/0	2"	(4) #1/0	#6
18	175	N / A	N / A	2"	(3) #3/0	2"	(4) #3/0	#6
19	200	N / A	N / A	2"	(3) #3/0	2"	(4) #3/0	#6
20	225	N / A	N / A	2"	(3) #4/0	2-1/2"	(4) #4/0	#4
21	250	N / A	N / A	2-1/2"	(3) 250 kcmil	3"	(4) 250 kcmil	#4
22	300	N / A	N / A	3"	(3) 350 kcmil	3"	(4) 350 kcmil	#4
23	350	N / A	N / A	3"	(3) 500 kcmil	3-1/2"	(4) 500 kcmil	#3
24	400	N / A	N / A	(2) 2"	2 SETS OF (3) #3/0	(2) 2"	2 SETS OF (4) #3/0	#3

ELECTRICAL RISER DIAGRAM NOTATION:

(X) – SINGLE-PHASE, TWO-WIRE FEEDER, NUMBER IS THE FEEDER ID #

[X] – SINGLE OR THREE-PHASE, THREE-WIRE FEEDER, NUMBER IS THE FEEDER ID #

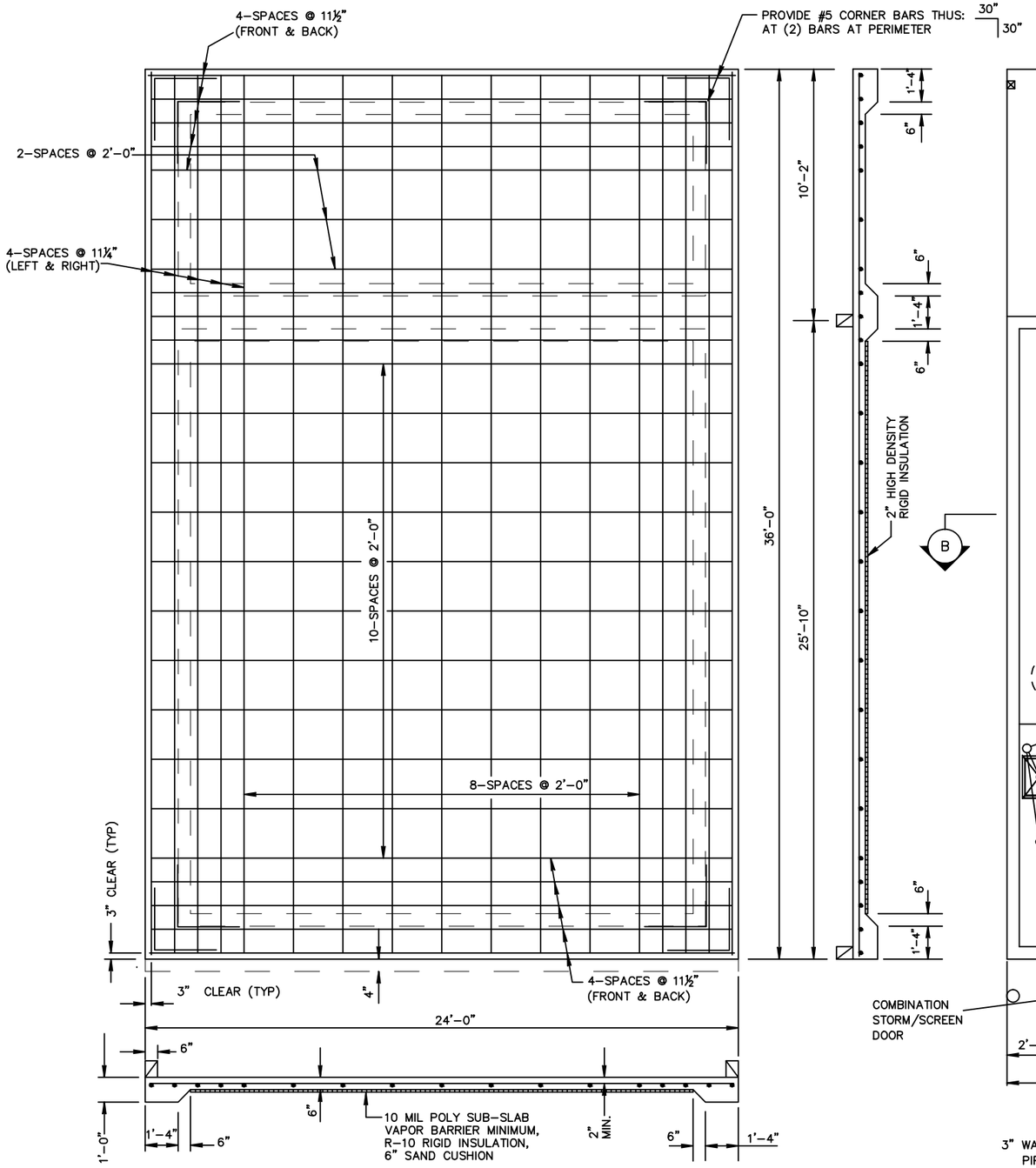
(X) – THREE PHASE, FOUR-WIRE FEEDER, NUMBER IS THE FEEDER ID#



1 ELECTRICAL RISER DIAGRAM
N.T.S.

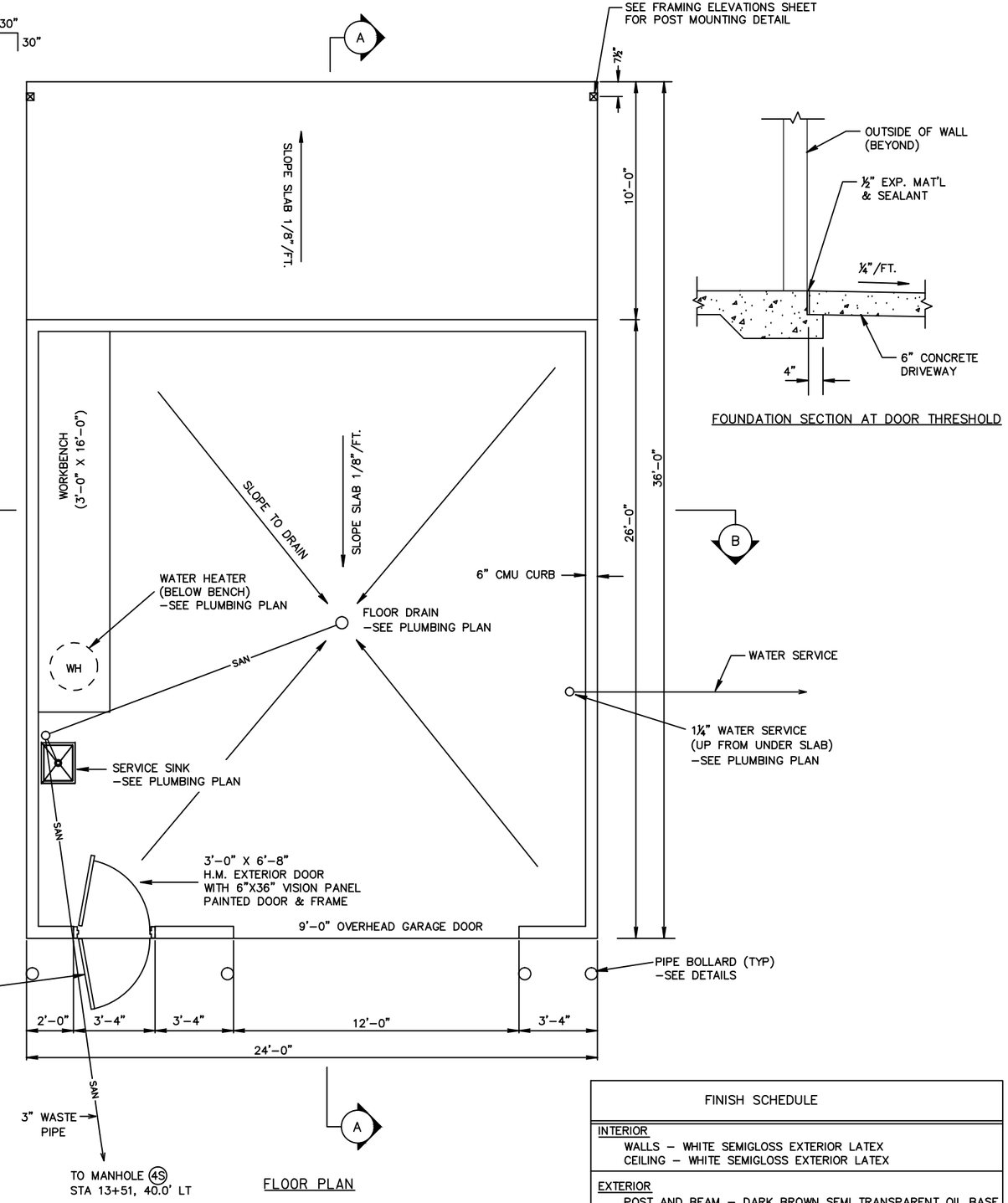
KEY NOTES

1. UTILITY APPROVED CURRENT TRANSFORMER ENCLOSURE.
2. TRANSFORMER RATED METER SOCKET FURNISHED BY XCEL ENERGY, INSTALLED BY EC.
3. 1" CONDUIT.
4. 400A, 120/208V, 3 PH, 4W SERVICE LATERAL BY XCEL ENERGY.
5. 4" C. SERVICE LATERAL CONDUIT.
6. AVAILABLE FAULT CURRENT TO BE COORDINATED WITH XCEL ENERGY. PROVIDE CIRCUIT BREAKERS WITH A.I.C. RATING GREATER THAN UTILITY'S LISTED AVAILABLE FAULT CURRENT.
7. (3) – #1/0, #6 GND. IN 2" CONDUIT.



SLAB AND REINFORCEMENT PLAN

NOTE: ALL BARS ARE #5



FLOOR PLAN

FOUNDATION SECTION AT DOOR THRESHOLD

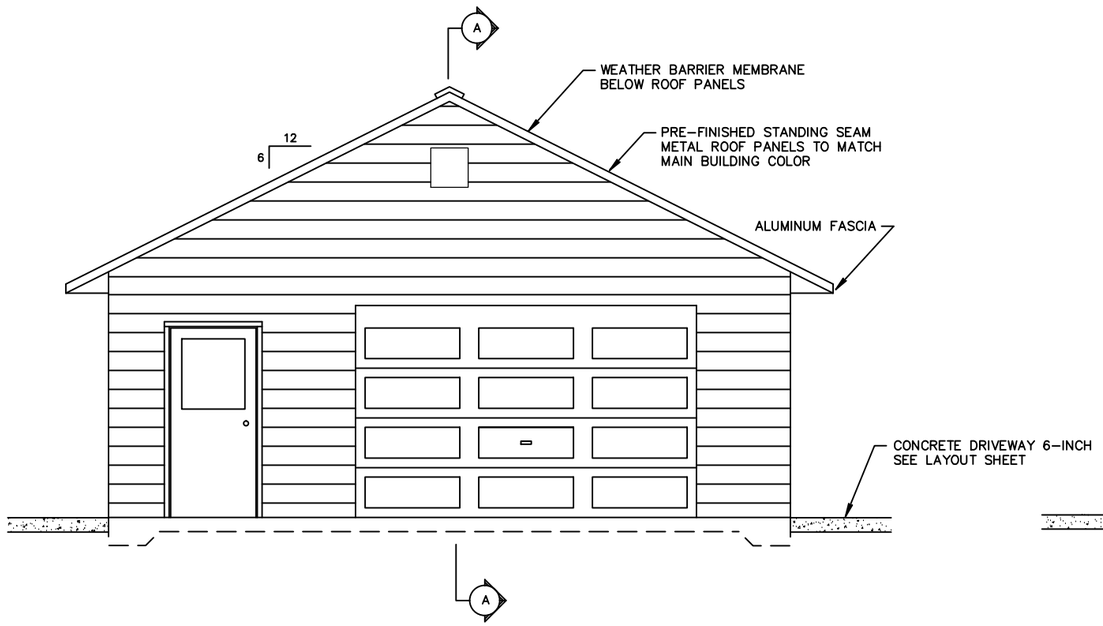
FINISH SCHEDULE
INTERIOR
WALLS – WHITE SEMIGLOSS EXTERIOR LATEX
CEILING – WHITE SEMIGLOSS EXTERIOR LATEX
EXTERIOR
POST AND BEAM – DARK BROWN SEMI TRANSPARENT OIL BASE

PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	MAINTENANCE BUILDING - FOUNDATION & FLOOR PLAN	SHEET	E

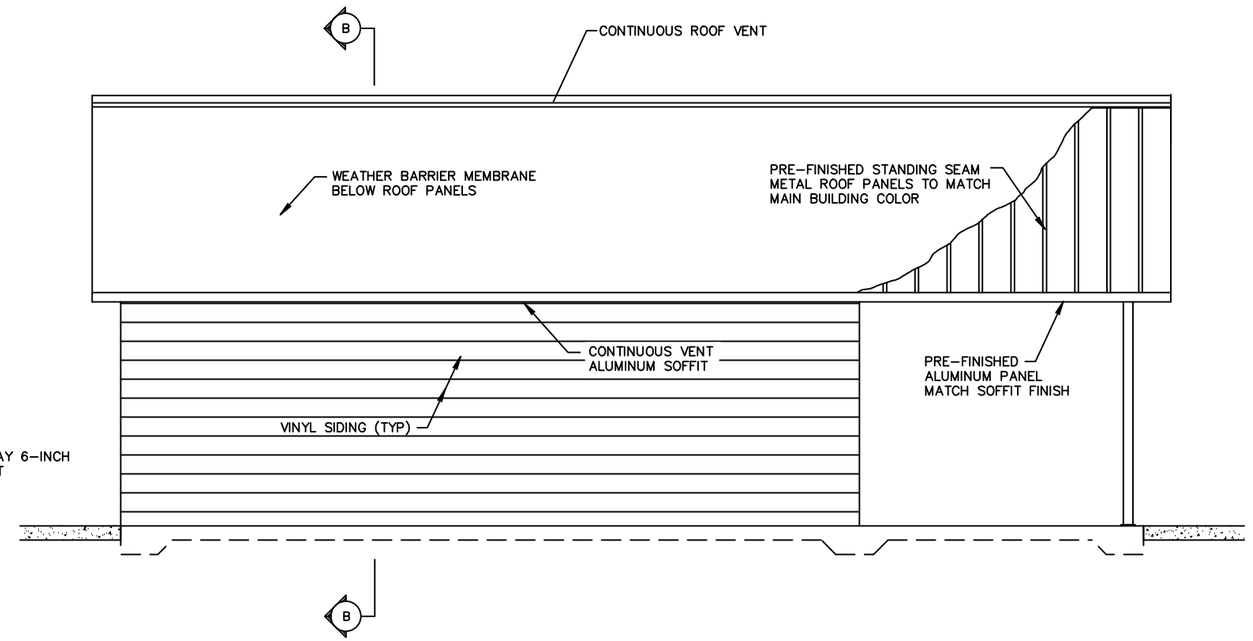
FILE NAME : P:\UZ\W\WITCO\131411\5-FINAL-DSGN\51-CONST-DWGS-CAD\40-TRANSHWY\PLN SHTS\020111-MB.DWG
LAYOUT NAME - MAINTENANCE BUILDING - FOUNDATION & FLOOR PLAN

PLOT DATE : 12/17/2015 11:32 PM PLOT BY : NATE MCLAUGHLIN PLOT NAME : PLOT SCALE : 3/16" = 1'-0"

2



FRONT ELEVATION

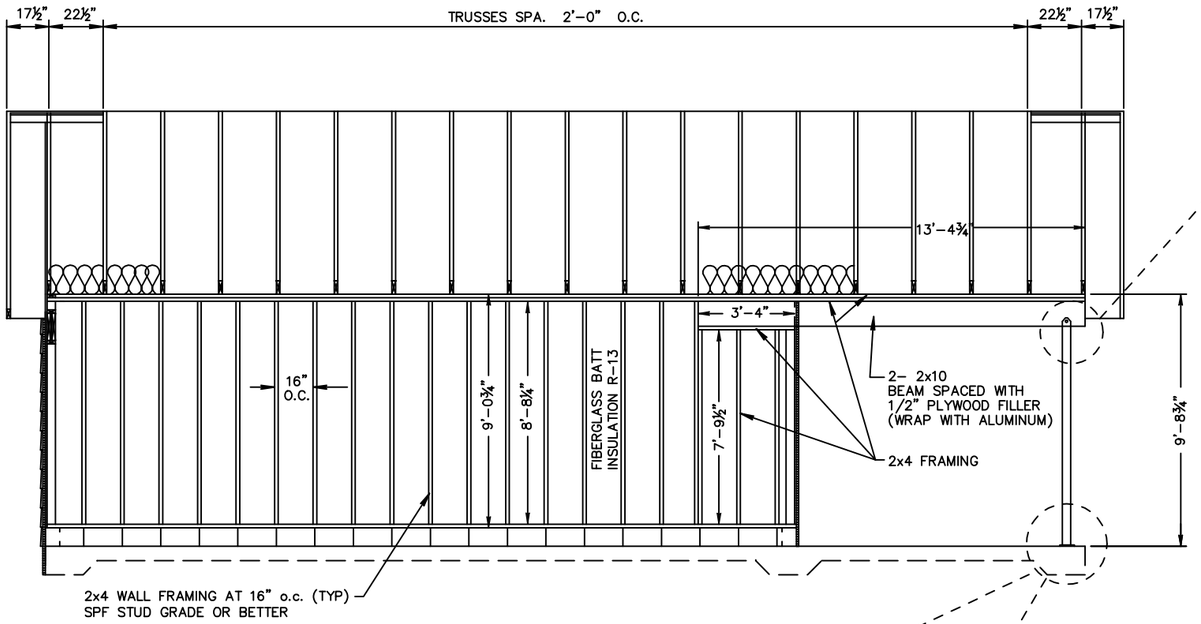


SIDE ELEVATION

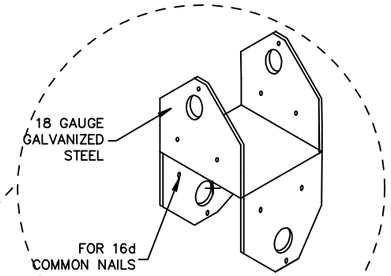
PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	MAINTENANCE BUILDING - EXTERIOR ELEVATIONS	SHEET	E

FILE NAME : P:\UZ\W\WITCO\131411\5-FINAL-DSGN\51-CONST-DWGS-CAD\40-TRANSHWY\PLN SHTS\020112-MB.DWG
LAYOUT NAME - MAINTENANCE BUILDING - EXTERIOR ELEVATIONS

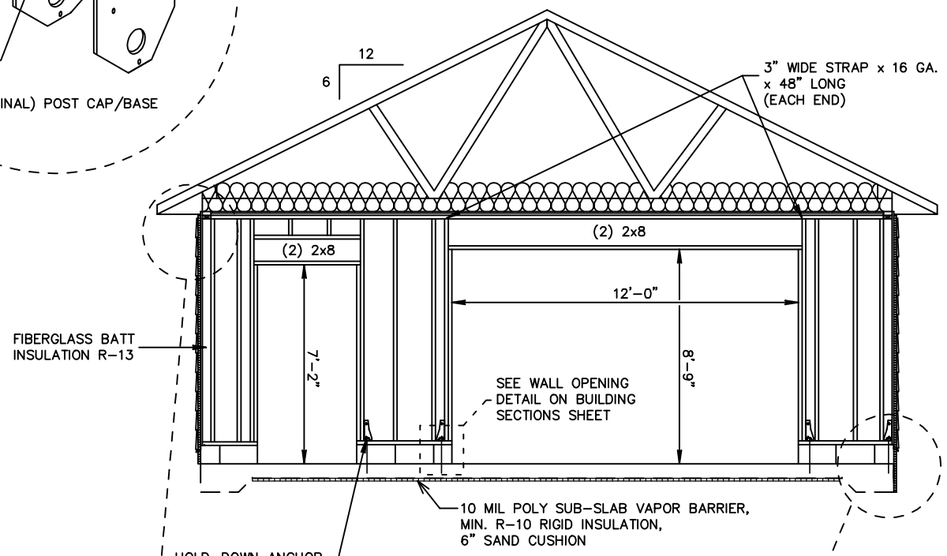
PLOT DATE : 12/17/2015 11:32 PM PLOT BY : NATE MCLAUGHLIN PLOT NAME : PLOT SCALE : 3/16" = 1'-0"



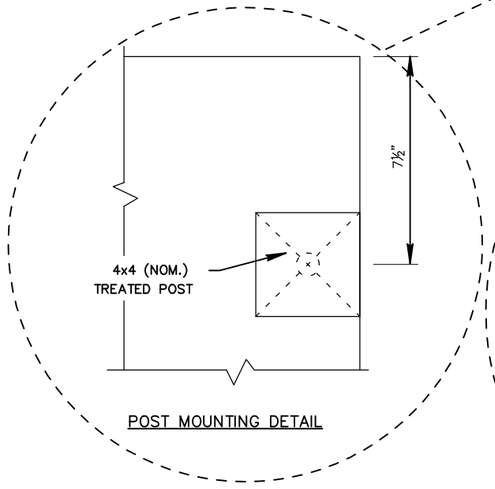
FRAMING DETAIL



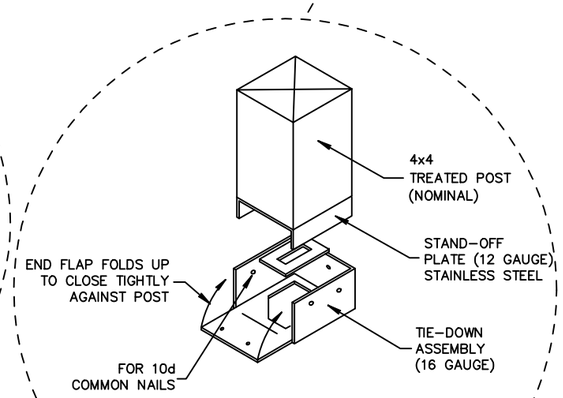
4x4 (NOMINAL) POST CAP/BASE



DOOR FRAMING DETAIL

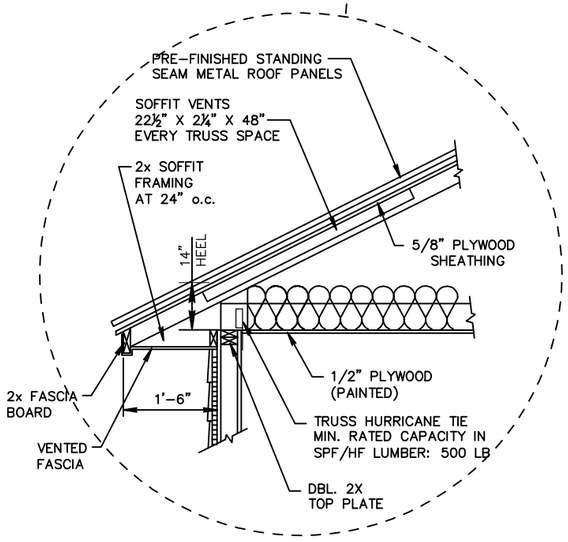


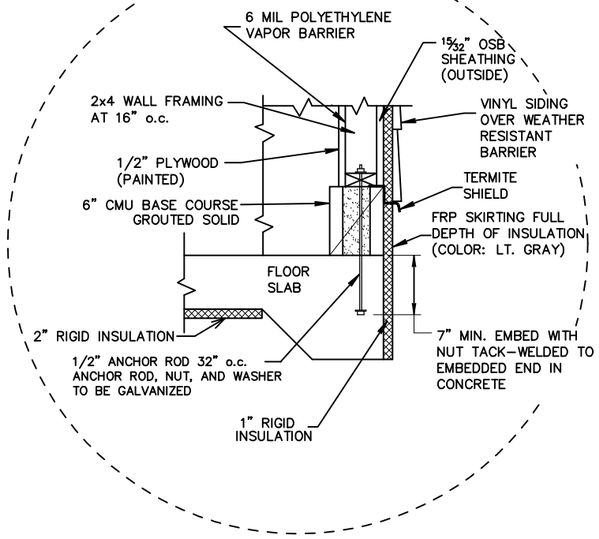
POST MOUNTING DETAIL



4x4 (NOMINAL) ADJUSTABLE STAND-OFF BASE PLATE

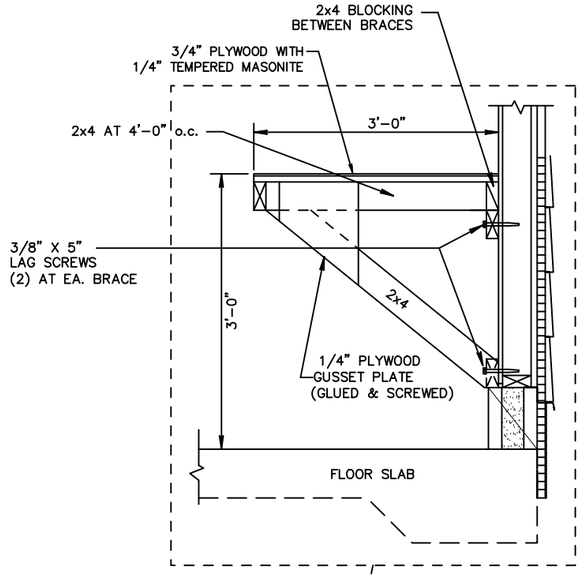
(USE 1/2" DIA. GALVANIZED ANCHOR ROD AND HARDWARE)

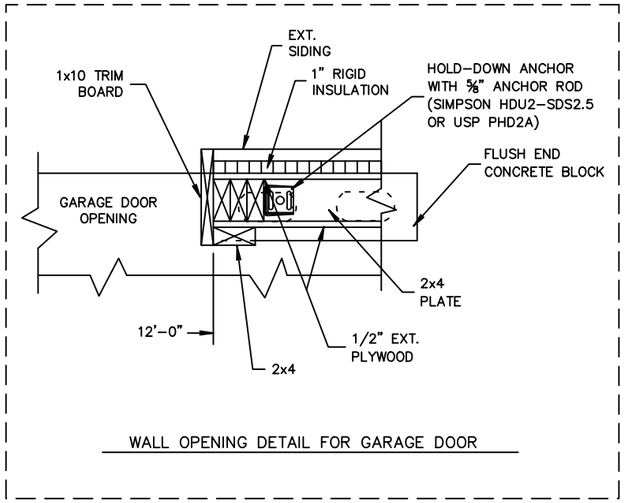




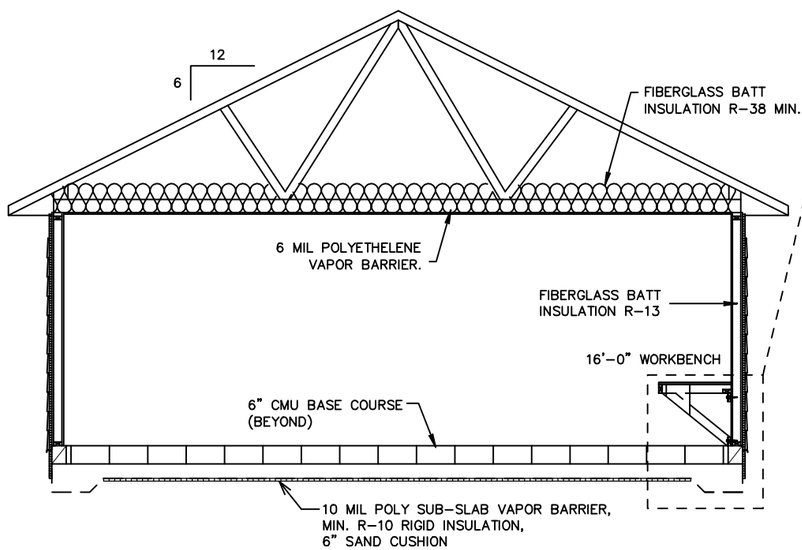
PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	MAINTENANCE BUILDING - FRAMING ELEVATIONS	SHEET 114 E

NOTE:
3/4" PLYWOOD SHALL BE GLUED AND SCREWED TO 2x4 FRAMING
1/4" MASONITE SHALL BE GLUED TO PLYWOOD SURFACE

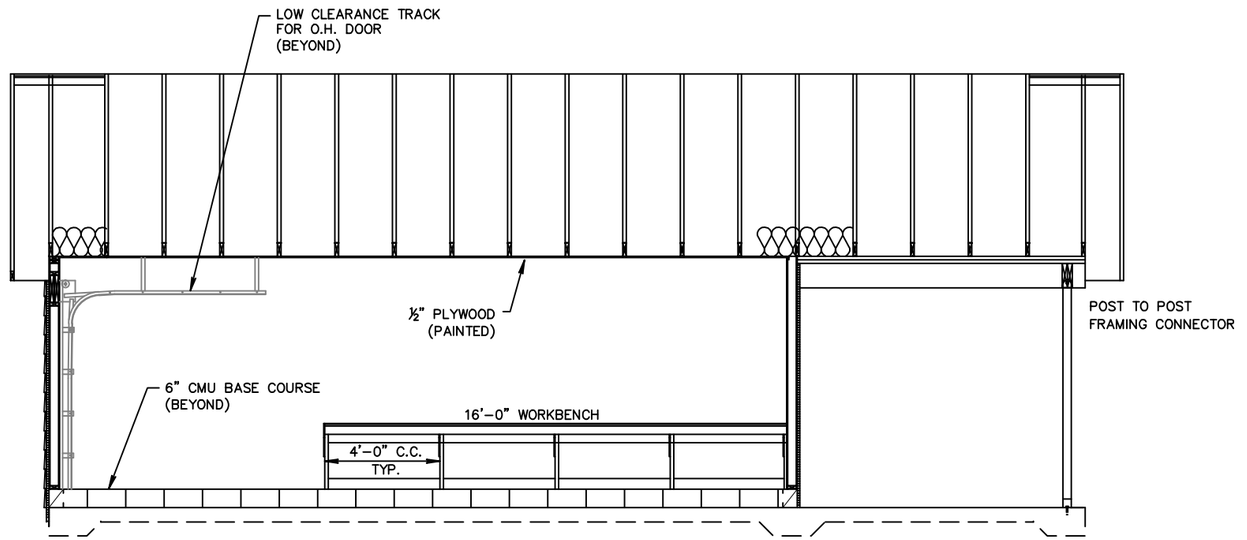




WALL OPENING DETAIL FOR GARAGE DOOR

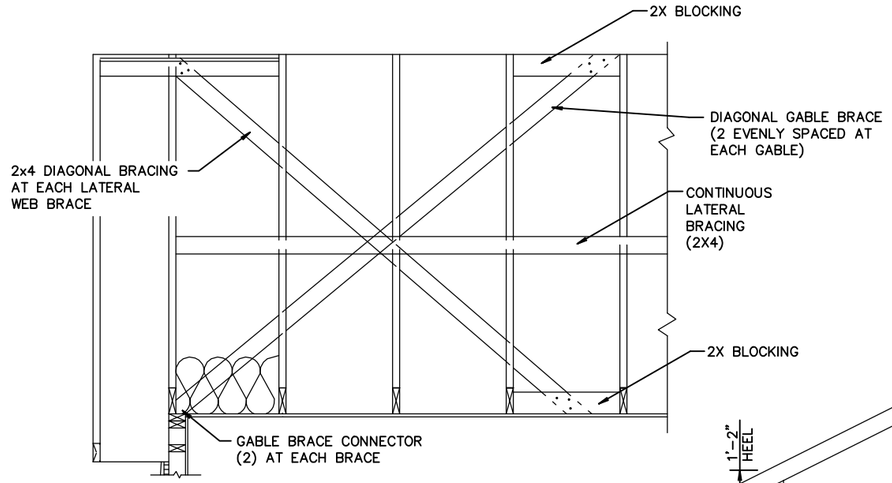


B BUILDING SECTION WITH INTERIOR DETAILS

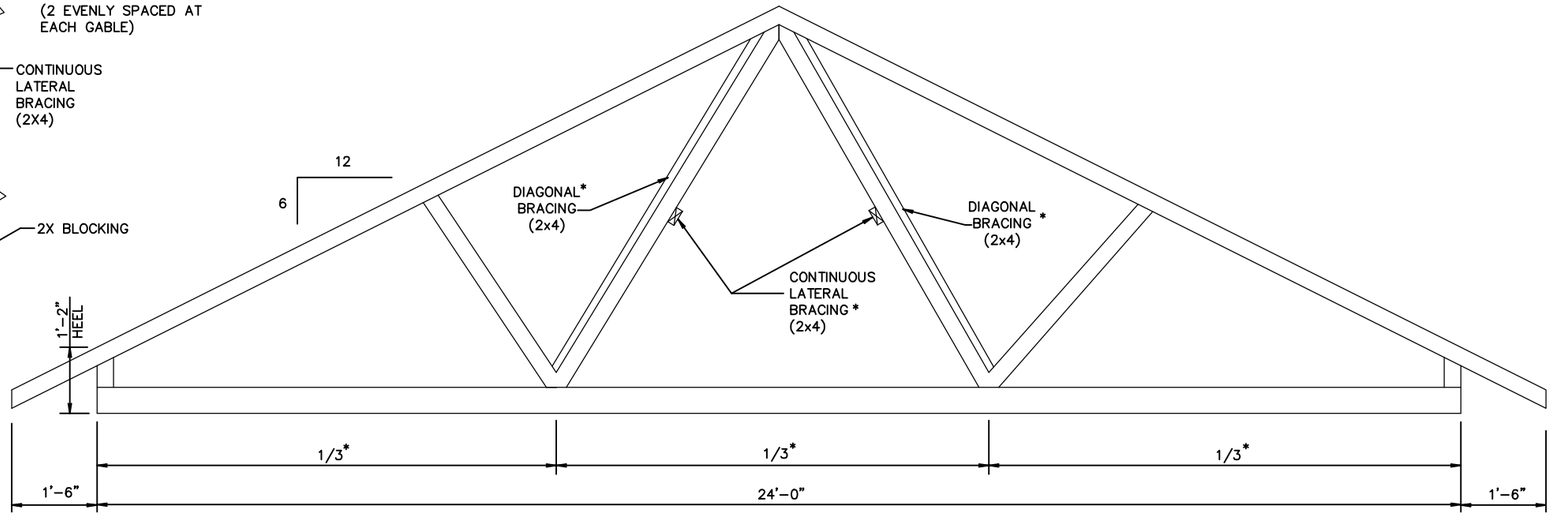


A BUILDING SECTION WITH INTERIOR DETAILS

PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	MAINTENANCE BUILDING - BUILDING SECTIONS	SHEET 115	E

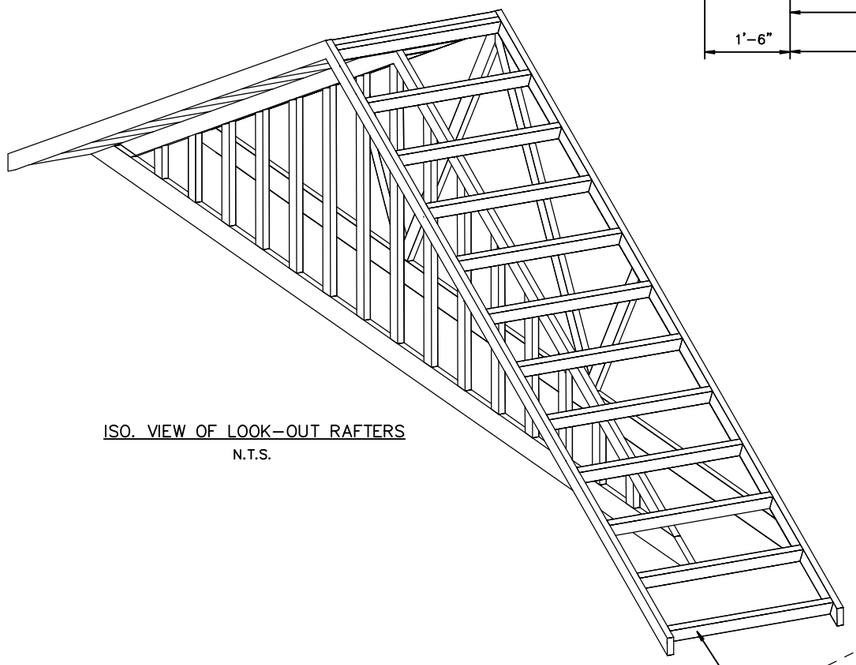


ROOF LATERAL BRACING

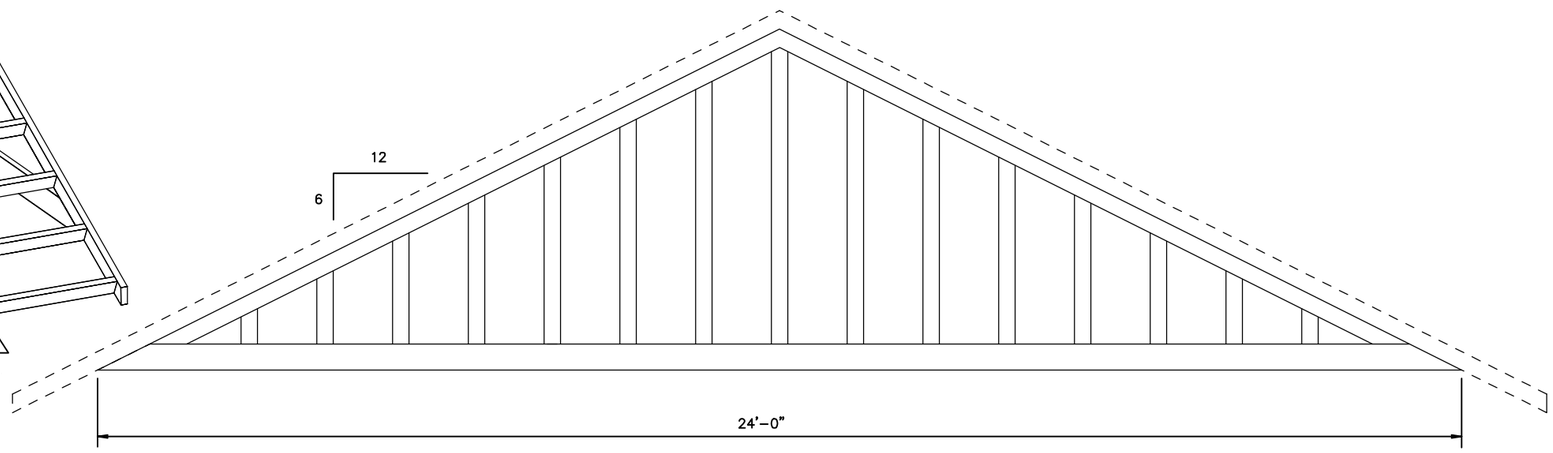


TRUSS DESIGN

* PANEL POINT LOCATIONS AND LATERAL BRACING REQUIREMENTS ARE ILLUSTRATIVE ONLY. TRUSS COMPONENT DESIGN ENGINEER IS RESPONSIBLE FOR FINAL DESIGN OF WEB ARRANGEMENT AND WEB BRACING NEEDS.



ISO. VIEW OF LOOK-OUT RAFTERS
N.T.S.



GABLE ENDWALL

GENERAL NOTES

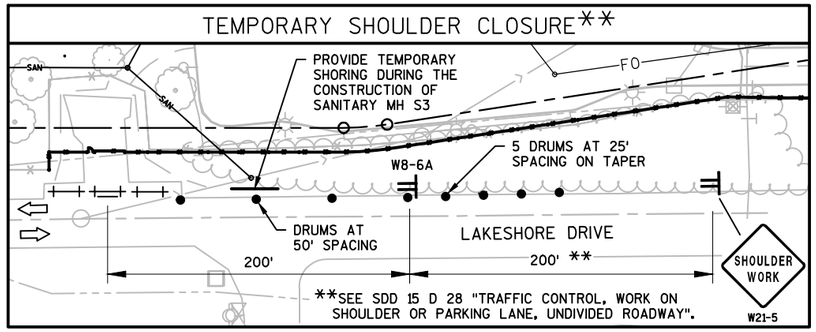
DRAWINGS SHOW TRAFFIC CONTROL FOR A TYPICAL SITUATION. ADDITIONAL TRAFFIC CONTROL DEVICES MAY BE REQUIRED AND/OR LAYOUT DETAILS MODIFIED DEPENDING ON CONTRACTOR METHODS OR SEQUENCE OF OPERATION.

ALL TRAFFIC CONTROL SIGNING WILL CONFORM TO PART VI OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, 2009 EDITION, & THE WISCONSIN SUPPLEMENT, DATED MAY 25, 2011.

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 NOTED.

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.



COORDINATE TRAFFIC CONTROL REQUIREMENTS OF RAMP CLOSURE WITH IH90 EASTBOUND PROJECT #1071-06-81. ALL TRAFFIC CONTROL ITEMS RELATED TO THE RAMP CLOSURE ARE PROVIDED WITH THE IH 90 EASTBOUND PROJECT. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL TRAFFIC CONTROL IS INPLACE PRIOR TO BEGINNING CONSTRUCTION AND DURING THE CONSTRUCTION OF REST AREA NO. 31

LEGEND

- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA
- TYPE III BARRICADE WITH ATTACHED SIGN AND WARNING LIGHTS
- TYPE III BARRICADE
- TRAFFIC CONTROL DRUM

BEGIN PROJECT 1070-00-71
STA 0+15.58'RA'

MISSISSIPPI RIVER
FRENCH SLOUGH
EXISTING HIKING TRAIL
C.I.P. RET. WALL
MODULAR BLOCK RET. WALL
I-90 (EASTBOUND)
RIVER LOOKOUT
REST AREA 31
TRAVEL WELCOME CENTER
PICNIC AREA
TOT LOT
PET EXERCISE AREA
CAR PARKING
WELCOME SIGN
BUS PARKING
RAIN GARDEN
TRUCK PARKING
EXISTING WELCOME SIGN
INFILTRATION BASIN
MAINTENANCE BUILDING
TRAILER PARKING
LAKESHORE DRIVE (COUNTY ROAD BW)
END PROJECT 1070-00-71
STA 24+05.55'RA'

ROAD WORK 500 FT
W20-1D

300' *
200' *
200' *
300' *

END ROAD WORK
G20-2A
48"X24"

TRUCKS ENTERING & LEAVING
W8-6A

CONSTRUCTION ACCESS TRACKING PAD

ROAD CLOSED
R11-2
48"X30"

TRUCKS ENTERING & LEAVING
W8-6A

ROAD WORK 500 FT
W20-1D

END ROAD WORK
G20-2A
48"X24"

*SEE SDD 15 D 29 "TRAFFIC CONTROL VEHICLE ENTRANCE/EXIT OR HAUL ROAD" FOR ADDITIONAL INFORMATION.

PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	TRAFFIC CONTROL	SHEET 117	E

CURVE 1
△ = 74°29'16"
T = 103.39
L = 176.81
R = 136.00
PI STA = 101+03.39'TP'
PI Y = 148986.972
PI X = 439960.740
PC STA = 100+00.00'TP'
PC Y = 148995.293
PC X = 439857.681
PT STA = 101+76.81'TP'
PT Y = 148885.443
PT X = 439980.285
D = 42°07'45"
SE = NA

CURVE 2
△ = 49°07'07"
T = 59.41
L = 111.45
R = 130.00
PI STA = 5+69.05'RA'
PI Y = 148624.043
PI X = 440004.887
PC STA = 5+09.64'RA'
PC Y = 148680.921
PC X = 439987.739
PT STA = 6+21.09'RA'
PT Y = 148599.782
PT X = 440059.115
D = 44°04'25"
SE = NA

CURVE 3
△ = 65°53'13"
T = 55.08
L = 97.75
R = 85.00
PI STA = 8+18.53'RA'
PI Y = 148519.149
PI X = 440239.342
PC STA = 7+63.45'RA'
PC Y = 148541.643
PC X = 440189.064
PT STA = 8+61.20'RA'
PT Y = 148464.068
PT X = 440239.352
D = 67°24'24"
SE = NA

CURVE 4
△ = 180°00'00"
T = INFINITY
L = 125.66
R = 40.00
PI STA = NA 'RA'
PI Y = NA
PI X = NA
PC STA = 12+24.84'RA'
PC Y = 148100.426
PC X = 440239.412
PT STA = 13+50.50'RA'
PT Y = 148100.439
PT X = 440319.412
D = 143°14'22"
SE = NA

CURVE 5
△ = 8°41'04"
T = 14.43
L = 28.80
R = 190.00
PI STA = 16+51.84'RA'
PI Y = 148401.773
PI X = 440319.362
PC STA = 16+37.41'RA'
PC Y = 148387.346
PC X = 440319.364
PT STA = 16+66.21'RA'
PT Y = 148416.034
PT X = 440317.181
D = 30°09'20"
SE = NA

CURVE 6
△ = 22°30'19"
T = 28.65
L = 56.56
R = 144.00
PI STA = 20+19.56'RA'
PI Y = 148765.322
PI X = 440263.771
PC STA = 19+90.91'RA'
PC Y = 148737.001
PC X = 440268.101
PT STA = 20+47.47'RA'
PT Y = 148789.829
PT X = 440248.929
D = 39°47'19"
SE = NA

CURVE 7
△ = 110°42'56"
T = 208.41
L = 278.26
R = 144.00
PI STA = 23+35.70'RA'
PI Y = 149036.376
PI X = 440099.620
PC STA = 21+27.29'RA'
PC Y = 148858.106
PC X = 440207.580
PT STA = 24+05.55'RA'
PT Y = 149074.296
PT X = 440304.553
D = 39°47'19"
SE = 0.06'/'

CURVE 8
△ = 74°29'16"
T = 103.39
L = 176.81
R = 136.00
PI STA = 101+03.39'TP'
PI Y = 148986.972
PI X = 439960.740
PC STA = 100+00.00'TP'
PC Y = 148995.293
PC X = 439857.681
PT STA = 101+76.81'TP'
PT Y = 148885.443
PT X = 439980.285
D = 42°07'45"
SE = NA

CURVE 9
△ = 60°00'00"
T = 27.71
L = 50.27
R = 48.00
PI STA = 103+96.27'TP'
PI Y = 148669.940
PI X = 440021.770
PC STA = 103+68.55'TP'
PC Y = 148697.153
PC X = 440016.532
PT STA = 104+18.82'TP'
PT Y = 148660.870
PT X = 440047.957
D = 119°21'58"
SE = NA

CURVE 10
△ = 120°00'00"
T = 100.46
L = 121.47
R = 58.00
PI STA = 106+38.21'TP'
PI Y = 148589.068
PI X = 440255.268
PC STA = 105+37.75'TP'
PC Y = 148621.946
PC X = 440160.341
PT STA = 106+59.23'TP'
PT Y = 148687.716
PT X = 440236.278
D = 98°47'09"
SE = NA

CURVE 11
△ = 62°19'05"
T = 12.09
L = 21.75
R = 20.00
PI STA = 50+21.25'S'
PI Y = 148589.446
PI X = 439996.798
PC STA = 50+09.16'S'
PC Y = 148597.960
PC X = 440005.386
PT STA = 50+30.91'S'
PT Y = 148577.886
PT X = 440000.347
D = 286°28'44"
SE = NA

CURVE 12
△ = 39°18'20"
T = 17.86
L = 34.30
R = 50.00
PI STA = 50+60.29'S'
PI Y = 148549.800
PI X = 440008.972
PC STA = 50+42.43'S'
PC Y = 148566.869
PC X = 440003.730
PT STA = 50+76.73'S'
PT Y = 148539.912
PT X = 440023.840
D = 114°35'30"
SE = NA

CURVE 13
△ = 56°22'11"
T = 64.30
L = 118.06
R = 120.00
PI STA = 51+75.43'S'
PI Y = 148485.258
PI X = 440106.025
PC STA = 51+11.13'S'
PC Y = 148520.865
PC X = 440052.481
PT STA = 52+29.19'S'
PT Y = 148420.956
PT X = 440106.032
D = 47°44'47"
SE = NA

CURVE 14
△ = 16°42'17"
T = 8.52
L = 16.91
R = 58.00
PI STA = 53+91.64'S'
PI Y = 148258.506
PI X = 440106.048
PC STA = 53+83.12'S'
PC Y = 148267.022
PC X = 440106.047
PT STA = 54+00.03'S'
PT Y = 148250.350
PT X = 440108.497
D = 98°47'09"
SE = NA

CURVE 15
△ = 2°27'57"
T = 10.03
L = 20.05
R = 466.00
PI STA = 54+83.29'S'
PI Y = 148170.612
PI X = 440132.435
PC STA = 54+73.26'S'
PC Y = 148180.218
PC X = 440129.552
PT STA = 54+93.31'S'
PT Y = 148160.892
PT X = 440134.903
D = 12°17'43"
SE = NA

CURVE 16
△ = 7°37'16"
T = 33.70
L = 67.31
R = 506.00
PI STA = 56+10.01'S'
PI Y = 148047.781
PI X = 440163.616
PC STA = 55+76.31'S'
PC Y = 148080.448
PC X = 440155.325
PT STA = 56+43.62'S'
PT Y = 148016.503
PT X = 440176.166
D = 11°19'24"
SE = NA

CURVE 17
△ = 173°05'52"
T = 549.96
L = 100.20
R = 33.17
PI STA = 62+52.39'S'
PI Y = 147707.016
PI X = 440695.558
PC STA = 57+02.43'S'
PC Y = 147973.278
PC X = 440214.345
PT STA = 58+02.63'S'
PT Y = 148029.179
PT X = 440249.831
D = 172°45'04"
SE = NA

CURVE 18
△ = 54°07'55"
T = 51.10
L = 94.48
R = 100.00
PI STA = 58+53.72'S'
PI Y = 148059.111
PI X = 440208.418
PC STA = 58+02.63'S'
PC Y = 148029.179
PC X = 440249.831
PT STA = 58+97.10'S'
PT Y = 148110.209
PT X = 440208.410
D = 57°17'45"
SE = NA

CURVE 19
△ = 90°25'33"
T = 26.19
L = 41.03
R = 26.00
PI STA = 0+38.37
PI Y = 148480.674
PI X = 440041.803
PC STA = 0+12.17
PC Y = 148501.231
PC X = 440058.037
PT STA = 0+53.21
PT Y = 148464.593
PT X = 440062.481
D = 220°22'06"
SE = NA

CURVE 20
△ = 75°41'59"
T = 41.97
L = 71.35
R = 54.01
PI STA = 0+95.18
PI Y = 148438.828
PI X = 440095.608
PC STA = 0+53.21
PC Y = 148464.593
PC X = 440062.481
PT STA = 1+24.56
PT Y = 148400.363
PT X = 440078.824
D = 106°05'20"
SE = NA

CURVE 21
△ = 14°53'09"
T = 13.85
L = 27.54
R = 106.00
PI STA = 1+38.88
PI Y = 148387.291
PI X = 440072.981
PC STA = 1+25.03
PC Y = 148399.934
PC X = 440078.631
PT STA = 1+52.57
PT Y = 148373.622
PT X = 440070.768
D = 54°03'09"
SE = NA

BEGIN PROJECT 1070-00-71
STA 0+15.58'RA' = A PT 7.5' LT OF
STA 99+12.78 ('RA' LINE 1071-06-81)
Y = 148988.066
X = 439699.188

BEGIN CONSTRUCTION
TRUCK PARKING
STA 100+00.00'TP'
Y = 148995.293
X = 439857.681

END CONSTRUCTION
TRUCK PARKING
STA 108+13.28'TP'
Y = 148838.325
X = 440207.284

END PROJECT 1070-00-71
STA 24+05.55 = A PT 7.5' LT OF
STA 105+25.00 ('RA' LINE 1071-06-81)
Y = 149074.296
X = 440304.553

CONTROL POINTS			
NO.	Y	X	Z
1	148804.581	440021.624	657.02
2	148956.611	440167.705	655.82
3	148592.368	440127.411	656.17
4	148257.530	440219.663	657.28
5	148303.013	440096.572	656.64
6	148146.526	440073.226	639.88
7	148517.520	439969.427	638.44
8	149000.573	440011.911	654.73

ADDITION ALIGNMENT POINTS		
DESCRIPTION	Y-COORDINATE	X-COORDINATE
BEGIN 'S'	148604.407	440011.888
END 'S'	148116.827	440208.409
BEGIN 'RL'	148510.786	440065.583
END 'RL'	148294.402	440057.946

CONTROL POINT TIE DETAILS

CONTROL POINT 1
¾" IRON PIPE W/SURVEY CAP
Y=148804.581
X=440021.624

CONTROL POINT 2
¾" IRON PIPE W/SURVEY CAP
Y=148956.611
X=440167.705

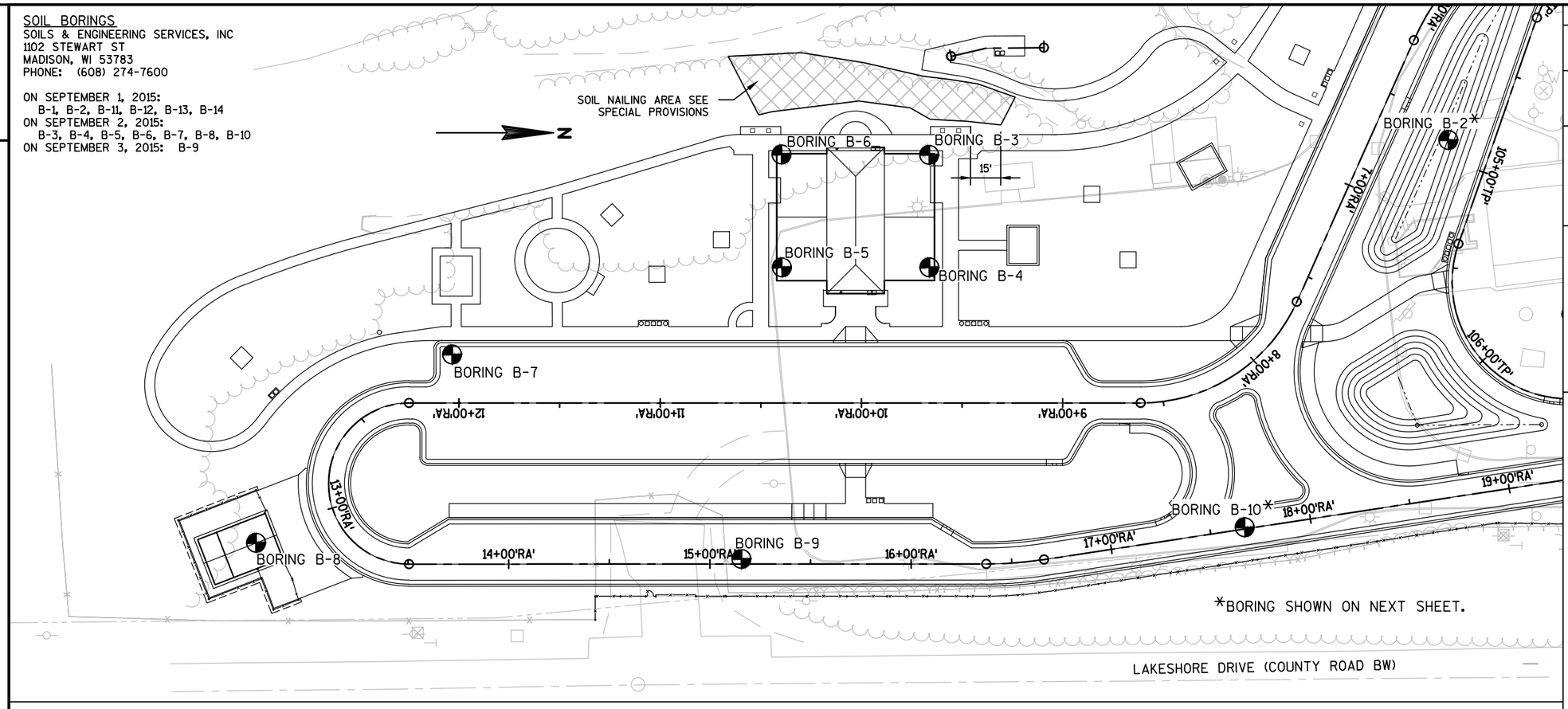
PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	ALIGNMENT DETAIL AND CONTROL POINT TIES	SHEET E

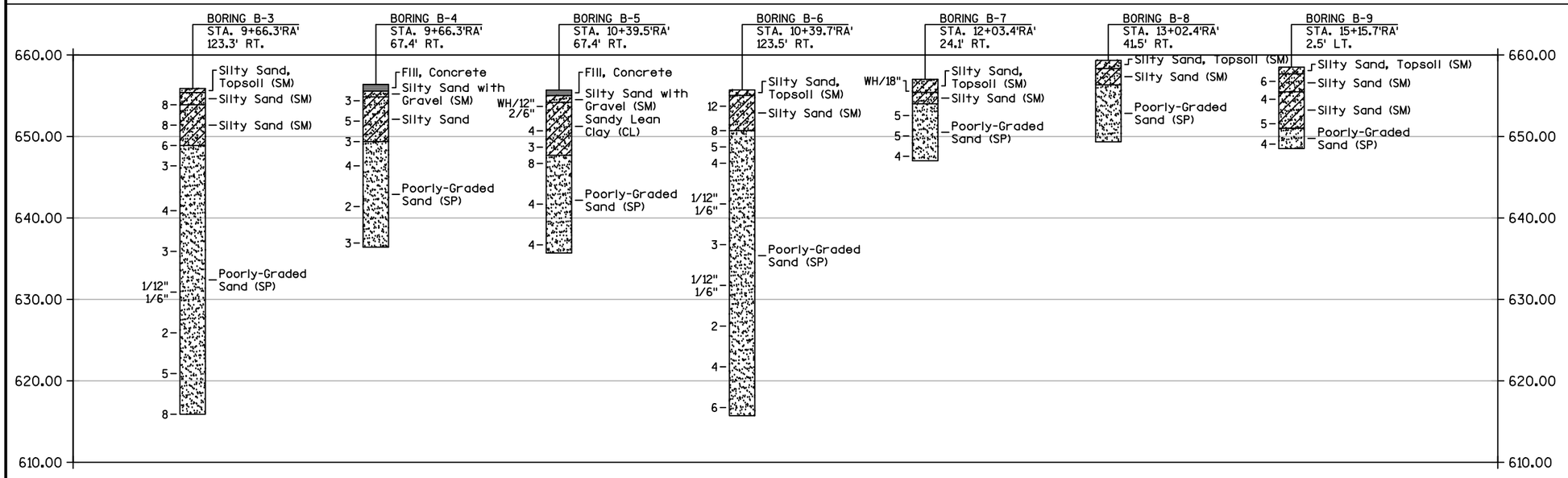
FILE NAME : P:\UZ\W\WITCO\131411\5-FINAL-DSGN\51-CONST-DWGS-CAD\40-TRANSHWY\PLN SHTS\020141-AD.DWG
LAYOUT NAME - ALIGNMENT DETAIL AND CONTROL POINT TIES
PLOT DATE : 12/17/2015 11:34 PM PLOT BY : NATE MCLAUGHLIN PLOT NAME : PLOT SCALE : 1 IN:100 FT

SOIL BORINGS

SOILS & ENGINEERING SERVICES, INC
1102 STEWART ST
MADISON, WI 53783
PHONE: (608) 274-7600

ON SEPTEMBER 1, 2015:
B-1, B-2, B-11, B-12, B-13, B-14
ON SEPTEMBER 2, 2015:
B-3, B-4, B-5, B-6, B-7, B-8, B-10
ON SEPTEMBER 3, 2015: B-9





STATE PROJECT NUMBER

1070-00-71

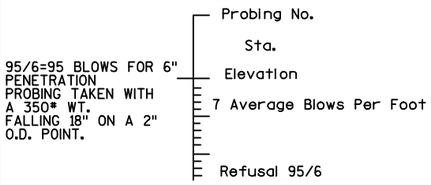
ABBREVIATIONS

F— Fine M—Medium C— Coarse
Ws— Weathered So — Sound

MATERIAL SYMBOLS

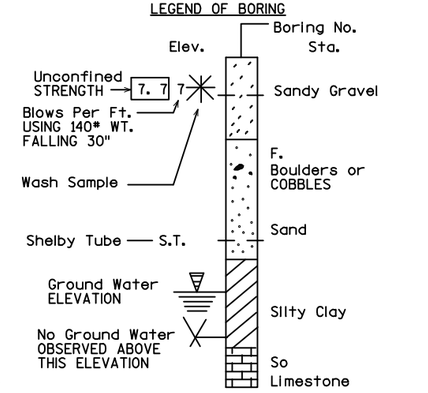
Topsoil, Silt, Sandstone
Sand, Peat, Limestone
Gravel, Clay, Igneous Rock

LEGEND OF PROBING



95/6=95 BLOWS FOR 6" PENETRATION
PROBING TAKEN WITH A 350* WT. FALLING 18" ON A 2" O.D. POINT.

LEGEND OF BORING



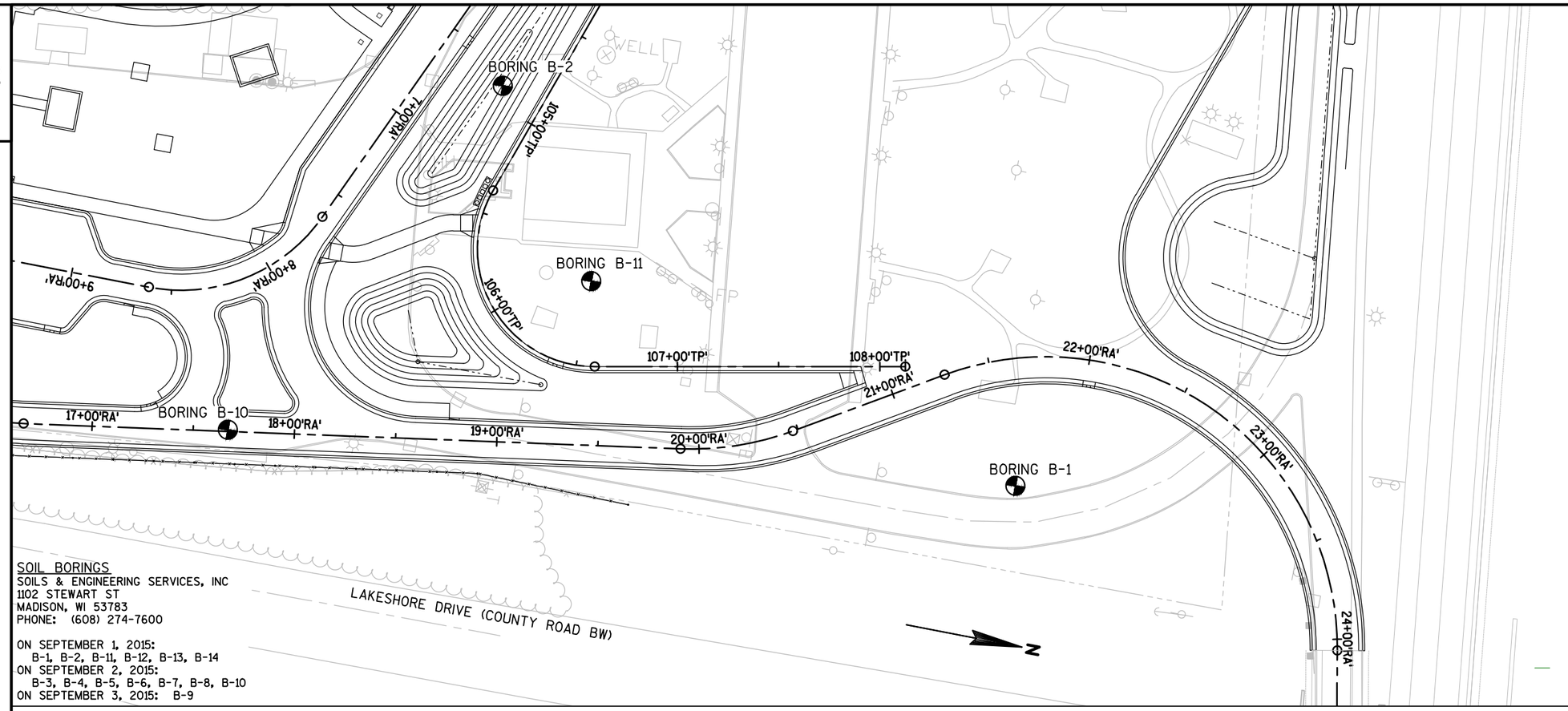
UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140* HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

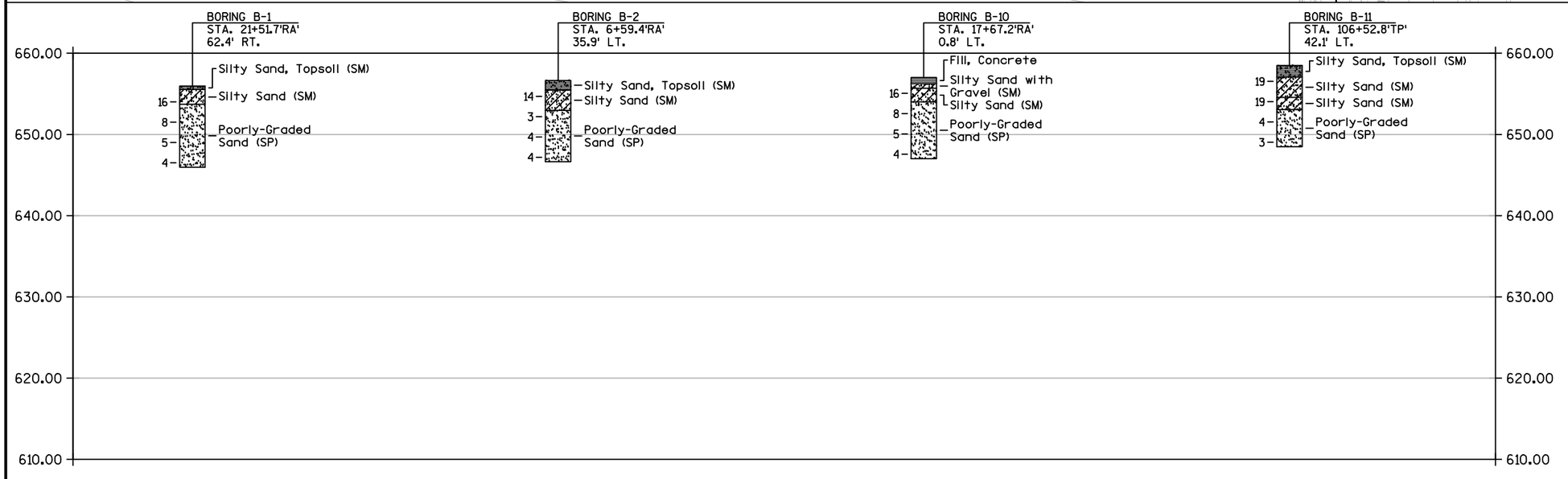
PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	SURFACE EXPLORATION	SHEET	E

FILE NAME : P:\UZ\W\WITCO\131411\5-FINAL-DSGN\51-CONST-DWGS-CAD\40-TRANSHWY\PLN SHTS\020173_SE.DWG
LAYOUT NAME - SURFACE EXPLORATION
PLOT DATE : 12/17/2015 11:35 PM PLOT BY : NATE MCLAUGHLIN PLOT NAME : PLOT SCALE : 1 IN:60 FT



SOIL BORINGS
SOILS & ENGINEERING SERVICES, INC
1102 STEWART ST
MADISON, WI 53783
PHONE: (608) 274-7600

ON SEPTEMBER 1, 2015:
B-1, B-2, B-11, B-12, B-13, B-14
ON SEPTEMBER 2, 2015:
B-3, B-4, B-5, B-6, B-7, B-8, B-10
ON SEPTEMBER 3, 2015: B-9



STATE PROJECT NUMBER

1070-00-71

ABBREVIATIONS

F— Fine M—Medium C— Coarse
Ws— Weathered So — Sound

MATERIAL SYMBOLS

Topsoil, Silt, Sandstone
Sand, Peat, Limestone
Gravel, Clay, Igneous Rock

LEGEND OF PROBING

Probing No.
Sta.
Elevation
7 Average Blows Per Foot
Refusal 95/6

95/6=95 BLOWS FOR 6" PENETRATION
PROBING TAKEN WITH A 350# WT. FALLING 18" ON A 2" O.D. POINT.

LEGEND OF BORING

Boring No.
Elev.
Sta.
Unconfined STRENGTH → 7. 7 7
Blows Per Ft. USING 140# WT. FALLING 30"
Wash Sample
Shelby Tube — S.T.
Ground Water ELEVATION
No Ground Water OBSERVED ABOVE THIS ELEVATION
Sandy Gravel
F. Boulders or COBBLES
Sand
Silty Clay
So Limestone

UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

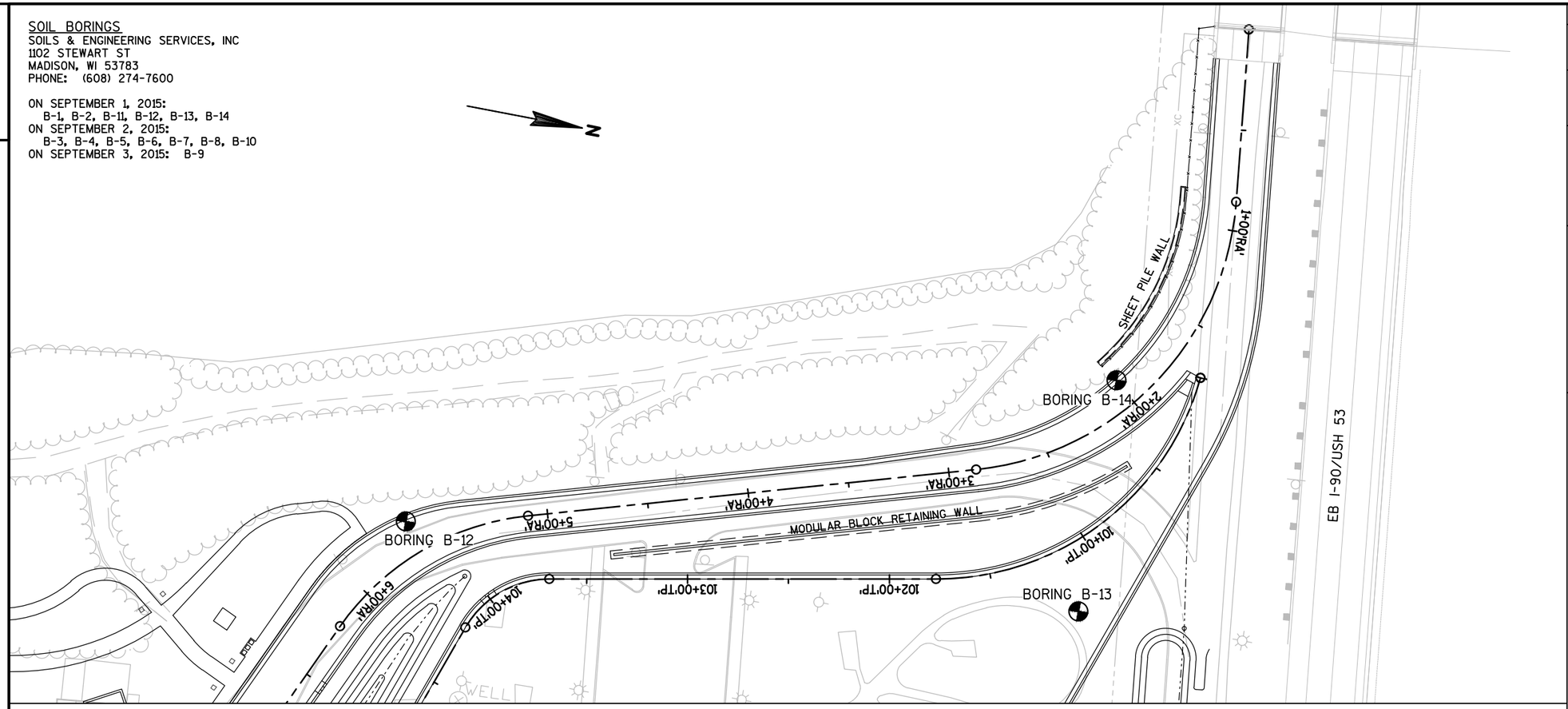
PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	SURFACE EXPLORATION	SHEET	E

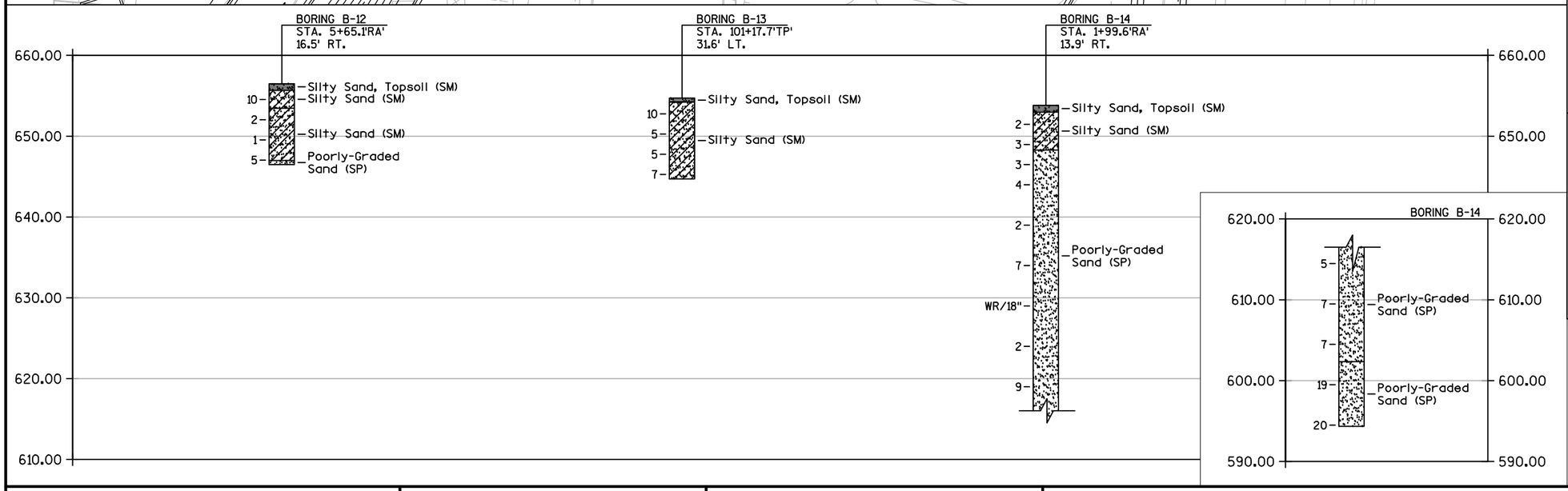
FILE NAME : P:\UZ\W\WITCO\131411\5-FINAL-DSGN\51-CONST-DWGS-CAD\40-TRANSHWY\PLN SHTS\020173_SE.DWG
LAYOUT NAME - SURFACE EXPLORATION
PLOT DATE : 12/17/2015 11:35 PM PLOT BY : NATE MCLAUGHLIN PLOT NAME : PLOT SCALE : 1 IN:60 FT

WISDOT/CADDS SHEET 42

SOIL BORINGS
SOILS & ENGINEERING SERVICES, INC
1102 STEWART ST
MADISON, WI 53783
PHONE: (608) 274-7600

ON SEPTEMBER 1, 2015:
B-1, B-2, B-11, B-12, B-13, B-14
ON SEPTEMBER 2, 2015:
B-3, B-4, B-5, B-6, B-7, B-8, B-10
ON SEPTEMBER 3, 2015: B-9





STATE PROJECT NUMBER

1070-00-71

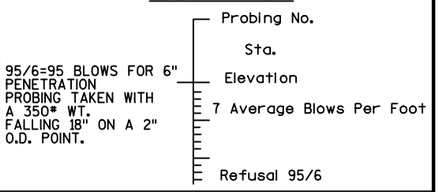
ABBREVIATIONS

F— Fine M—Medium C— Coarse
Ws— Weathered So — Sound

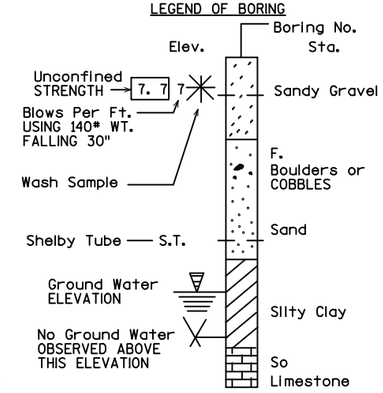
MATERIAL SYMBOLS

Topsoil, Silt, Sandstone
Sand, Peat, Limestone
Gravel, Clay, Igneous Rock

LEGEND OF PROBING



LEGEND OF BORING



UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140* HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	SURFACE EXPLORATION	SHEET 121	E

DATE 28JAN16 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	1070-00-71 QUANTITY
0010	201.0215	Grubbing	ACRE	2.820	2.820
0020	204.0100	Removing Pavement	SY	12,164.000	12,164.000
0030	204.0130	Removing Curb	LF	338.000	338.000
0040	204.0155	Removing Concrete Sidewalk	SY	1,095.000	1,095.000
0050	204.0165	Removing Guardrail	LF	60.000	60.000
0060	204.0170	Removing Fence	LF	789.000	789.000
0070	204.0175	Removing Concrete Slope Paving	SY	4.000	4.000
0080	204.0195	Removing Concrete Bases	EACH	19.000	19.000
0090	204.0205	Removing Utility Poles	EACH	19.000	19.000
0100	204.0210	Removing Manholes	EACH	2.000	2.000
0110	204.0220	Removing Inlets	EACH	8.000	8.000
0120	204.0240	Site Clearance (parcel) 01. Existing Rest Area 31	LS	1.000	1.000
0130	204.0245	Removing Storm Sewer (size) 01. 12-Inch	LF	64.000	64.000
0140	204.0245	Removing Storm Sewer (size) 02. 18-Inch	LF	745.000	745.000
0150	204.0265	Abandoning Wells	EACH	1.000	1.000
0160	204.9060.S	Removing (item description) 01. Pull Box	EACH	2.000	2.000
0170	204.9060.S	Removing (item description) 02. Flag Pole	EACH	1.000	1.000
0180	204.9060.S	Removing (item description) 03. Planter	EACH	1.000	1.000
0190	204.9060.S	Removing (item description) 04. Yard Hydrant And Supply Piping	EACH	6.000	6.000
0200	204.9090.S	Removing (item description) 01. Sanitary Sewer Pipe (6-Inch)	LF	278.000	278.000
0210	204.9090.S	Removing (item description) 02. Sanitary Sewer Pipe (8-Inch)	LF	116.000	116.000
0220	205.0100	Excavation Common	CY	12,845.000	12,845.000
0230	206.3000	Excavation for Structures Retaining Walls (structure) 01. R-32-65	LS	1.000	1.000
0240	213.0100	Finishing Roadway (project) 01. 1070-00-71	EACH	1.000	1.000
0250	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	6,668.000	6,668.000
0260	405.0100	Coloring Concrete Red	CY	27.000	27.000
0270	415.0080	Concrete Pavement 8-Inch	SY	5,797.000	5,797.000
0280	415.0100	Concrete Pavement 10-Inch	SY	8,994.000	8,994.000
0290	416.0160	Concrete Driveway 6-Inch	SY	270.000	270.000
0300	416.0508	Concrete Roundabout Truck Apron 8-Inch	SY	118.000	118.000
0310	504.0500	Concrete Masonry Retaining Walls	CY	19.000	19.000
0320	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	1,220.000	1,220.000
0330	512.0500	Piling Steel Sheet Permanent Delivered	SF	3,440.000	3,440.000
0340	512.0600	Piling Steel Sheet Permanent Driven	SF	3,440.000	3,440.000
0350	516.0500	Rubberized Membrane Waterproofing	SY	3.000	3.000
0360	522.0118	Culvert Pipe Reinforced Concrete Class III 18-Inch	LF	47.000	47.000
0370	522.0318	Culvert Pipe Reinforced Concrete Class IV 18-Inch	LF	53.000	53.000
0380	522.1015	Apron Endwalls for Culvert Pipe Reinforced Concrete 15-Inch	EACH	2.000	2.000
0390	522.1018	Apron Endwalls for Culvert Pipe Reinforced Concrete 18-Inch	EACH	5.000	5.000
0400	522.1024	Apron Endwalls for Culvert Pipe Reinforced Concrete 24-Inch	EACH	1.000	1.000
0410	523.0519	Apron Endwalls for Culvert Pipe Reinforced Concrete Horizontal Elliptical 19x30-Inch	EACH	1.000	1.000

3

DATE 28JAN16 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	1070-00-71 QUANTITY
0420	601.0551	Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type A	LF	209.000	209.000
0430	602.0410	Concrete Sidewalk 5-Inch	SF	18,214.000	18,214.000
0440	602.0415	Concrete Sidewalk 6-Inch	SF	1,408.000	1,408.000
0450	602.0505	Curb Ramp Detectable Warning Field Yellow	SF	103.000	103.000
0460	606.0200	Riprap Medium	CY	24.000	24.000
0470	606.0700	Grouted Riprap Heavy	CY	3.000	3.000
0480	608.0315	Storm Sewer Pipe Reinforced Concrete Class III 15-Inch	LF	787.000	787.000
0490	608.0318	Storm Sewer Pipe Reinforced Concrete Class III 18-Inch	LF	285.000	285.000
0500	608.0324	Storm Sewer Pipe Reinforced Concrete Class III 24-Inch	LF	65.000	65.000
0510	610.0419	Storm Sewer Pipe Reinforced Concrete Horizontal Elliptical Class HE-IV 19x30-Inch	LF	87.000	87.000
0520	611.0530	Manhole Covers Type J	EACH	1.000	1.000
0530	611.0535	Manhole Covers Type J-Special	EACH	3.000	3.000
0540	611.0615	Inlet Covers Type F	EACH	2.000	2.000
0550	611.0624	Inlet Covers Type H	EACH	8.000	8.000
0560	611.0639	Inlet Covers Type H-S	EACH	1.000	1.000
0570	611.0642	Inlet Covers Type MS	EACH	3.000	3.000
0580	611.0645	Inlet Covers Type MS-A	EACH	1.000	1.000
0590	611.2004	Manholes 4-FT Diameter	EACH	1.000	1.000
0600	611.3004	Inlets 4-FT Diameter	EACH	6.000	6.000
0610	611.3230	Inlets 2x3-FT	EACH	5.000	5.000
0620	611.3901	Inlets Median 1 Grate	EACH	3.000	3.000
0630	611.3902	Inlets Median 2 Grate	EACH	1.000	1.000
0640	611.9800.S	Pipe Grates	EACH	3.000	3.000
0650	612.0206	Pipe Underdrain Unperforated 6-Inch	LF	117.000	117.000
0660	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	509.000	509.000
0670	612.0902.S	Insulation Board Polystyrene (inch) 01. 2-Inch	SY	198.000	198.000
0680	616.0206	Fence Chain Link 6-FT	LF	706.000	706.000
0690	616.0329	Gates Chain Link (width) 01. 8-Ft	EACH	2.000	2.000
0700	616.0329	Gates Chain Link (width) 02. 4-Ft	EACH	1.000	1.000
0710	618.0100	Maintenance And Repair of Haul Roads (project) 01. 1070-00-71	EACH	1.000	1.000
0720	619.1000	Mobilization	EACH	1.000	1.000
0730	620.0300	Concrete Median Sloped Nose	SF	44.000	44.000
0740	624.0100	Water	MGAL	800.000	800.000
0750	625.0500	Salvaged Topsoil	SY	22,738.000	22,738.000
0760	627.0200	Mulching	SY	10,769.000	10,769.000
0770	628.1504	Silt Fence	LF	2,327.000	2,327.000
0780	628.1520	Silt Fence Maintenance	LF	4,654.000	4,654.000
0790	628.1905	Mobilizations Erosion Control	EACH	2.000	2.000
0800	628.1910	Mobilizations Emergency Erosion Control	EACH	4.000	4.000
0810	628.2004	Erosion Mat Class I Type B	SY	2,462.000	2,462.000
0820	628.2021	Erosion Mat Class II Type A	SY	40.000	40.000
0830	628.2027	Erosion Mat Class II Type C	SY	1,144.000	1,144.000
0840	628.7005	Inlet Protection Type A	EACH	13.000	13.000
0850	628.7010	Inlet Protection Type B	EACH	2.000	2.000
0860	628.7015	Inlet Protection Type C	EACH	11.000	11.000
0870	628.7504	Temporary Ditch Checks	LF	30.000	30.000

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DATE 28JAN16 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	1070-00-71 QUANTITY
0880	628.7555	Culvert Pipe Checks	EACH	8.000	8.000
0890	628.7560	Tracking Pads	EACH	1.000	1.000
0900	629.0210	Fertilizer Type B	CWT	23.000	23.000
0910	630.0130	Seeding Mixture No. 30	LB	148.000	148.000
0920	630.0140	Seeding Mixture No. 40	LB	54.000	54.000
0930	630.0175	Seeding Mixture No. 75	LB	8.000	8.000
0940	630.0200	Seeding Temporary	LB	306.000	306.000
0950	631.0300	Sod Water	MGAL	6.000	6.000
0960	631.1200	Sod Erosion Control Sandy Soil	SY	40.000	40.000
0970	632.0101	Trees (species) (size) (root) 01. Northwoods Red Maple 1 3/4-Inch Cal B&B	EACH	10.000	10.000
0980	632.0101	Trees (species) (size) (root) 02. Thornless Hawthorn 1 3/4-Inch Cal B&	EACH	9.000	9.000
0990	632.0101	Trees (species) (size) (root) 03. Common Hackberry 1 3/4-Inch Cal B&B	EACH	1.000	1.000
1000	632.0101	Trees (species) (size) (root) 04. Shademaster Honeylocust 1 3/4-Inch Cal B&B	EACH	5.000	5.000
1010	632.0101	Trees (species) (size) (root) 05. Prairiefire Flowering Crab 1 3/4-Inch Cal B&B	EACH	7.000	7.000
1020	632.0101	Trees (species) (size) (root) 06. Ironwood 1 3/4-Inch Cal B&B	EACH	3.000	3.000
1030	632.0101	Trees (species) (size) (root) 07. Quaking Aspen #25 Cg	EACH	3.000	3.000
1040	632.0101	Trees (species) (size) (root) 08. Swamp White Oak 1 3/4-Inch Cal B&B	EACH	12.000	12.000
1050	632.0101	Trees (species) (size) (root) 09. Bur Oak 1 3/4-Inch Cal B&B	EACH	3.000	3.000
1060	632.0101	Trees (species) (size) (root) 10. Clump River Birch 6-Ft Ht B&B	EACH	3.000	3.000
1070	632.0101	Trees (species) (size) (root) 11. Autumn Brilliance Serviceberry 1 3/4 Inch Cal B&B	EACH	2.000	2.000
1080	632.0101	Trees (species) (size) (root) 12. New Horizon Elm 1 3/4-Inch Cal B&B	EACH	21.000	21.000
1090	632.0101	Trees (species) (size) (root) 13. Black Hills Spruce 5-Ft Ht B&B	EACH	2.000	2.000
1100	632.0101	Trees (species) (size) (root) 14. Red Pine 5-Ft Ht B&B	EACH	12.000	12.000
1110	632.0101	Trees (species) (size) (root) 15. White Pine 5-Ft Ht B&B	EACH	7.000	7.000
1120	632.0101	Trees (species) (size) (root) 16. Techny Arborvitae #10 Cg	EACH	24.000	24.000
1130	632.0201	Shrubs (species) (size) (root) 01. Peking Cotoneaster #2 Cg	EACH	11.000	11.000
1140	632.0201	Shrubs (species) (size) (root) 02. Red-Twig Dogwood #2 Cg	EACH	26.000	26.000
1150	632.0201	Shrubs (species) (size) (root) 03. Dwarf Bush Honeysuckle #2 Cg	EACH	31.000	31.000
1160	632.0201	Shrubs (species) (size) (root) 04. Little Quick Fire Hydrangea #2 Cg	EACH	6.000	6.000
1170	632.0201	Shrubs (species) (size) (root) 05. Gro-Low Sumac #2 Cg	EACH	35.000	35.000
1180	632.0201	Shrubs (species) (size) (root) 06. Daphne Spirea #2 Cg	EACH	24.000	24.000
1190	632.0201	Shrubs (species) (size) (root) 07. Little Princess Spirea #2 Cg	EACH	12.000	12.000

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LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1070-00-71 QUANTITY
1200	632.0201	Shrubs (species) (size) (root) 08. Miss Kim Lilac #2 Cg	EACH	12.000	12.000
1210	632.0201	Shrubs (species) (size) (root) 09. Arrowwood Viburnum 3-Ft Ht Cg	EACH	20.000	20.000
1220	632.0201	Shrubs (species) (size) (root) 10. Mohican Viburnum 3-Ft Ht Cg	EACH	3.000	3.000
1230	632.0201	Shrubs (species) (size) (root) 11. Calgary Carpet Juniper #2 Cg	EACH	14.000	14.000
1240	632.9101	Landscape Planting Surveillance and Care Cycles	EACH	20.000	20.000
1250	633.0100	Delineator Posts Steel	EACH	8.000	8.000
1260	633.0500	Delineator Reflectors	EACH	8.000	8.000
1270	633.5200	Markers Culvert End	EACH	9.000	9.000
1280	634.0614	Posts Wood 4x6-Inch X 14-FT	EACH	32.000	32.000
1290	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	12.000	12.000
1300	634.0618	Posts Wood 4x6-Inch X 18-FT	EACH	2.000	2.000
1310	636.0100	Sign Supports Concrete Masonry	CY	5.000	5.000
1320	636.1000	Sign Supports Steel Reinforcement HS	LB	350.000	350.000
1330	637.1220	Signs Type I Reflective SH	SF	50.800	50.800
1340	637.2210	Signs Type II Reflective H	SF	239.000	239.000
1350	637.2230	Signs Type II Reflective F	SF	13.300	13.300
1360	638.2602	Removing Signs Type II	EACH	47.000	47.000
1370	638.3000	Removing Small Sign Supports	EACH	28.000	28.000
1380	639.0108	Drill Hole in Earth 8-Inch	LF	40.000	40.000
1390	639.0112	Drill Hole in Earth 12-Inch	LF	120.000	120.000
1400	639.1008	Well Casing Pipe 8-Inch	LF	142.000	142.000
1410	639.1700	Well Screen	LF	20.000	20.000
1420	639.2100	Grout for Sealing Well Casing	CF	54.000	54.000
1430	639.4000	Test Pumping	EACH	2.000	2.000
1440	641.8100	Overhead Sign Support (structure) 01. S-32-67	LS	1.000	1.000
1450	642.5401	Field Office Type D	EACH	1.000	1.000
1460	643.0100	Traffic Control (project) 01. 1070-00-71	EACH	1.000	1.000
1470	643.0300	Traffic Control Drums	DAY	40.000	40.000
1480	643.0420	Traffic Control Barricades Type III	DAY	642.000	642.000
1490	643.0705	Traffic Control Warning Lights Type A	DAY	428.000	428.000
1500	643.0900	Traffic Control Signs	DAY	1,503.000	1,503.000
1510	645.0120	Geotextile Fabric Type HR	SY	76.000	76.000
1520	646.0106	Pavement Marking Epoxy 4-Inch	LF	231.000	231.000
1530	646.0126	Pavement Marking Epoxy 8-Inch	LF	60.000	60.000
1540	647.0156	Pavement Marking Arrows Epoxy Type 1	EACH	4.000	4.000
1550	647.0256	Pavement Marking Symbols Epoxy	EACH	4.000	4.000
1560	647.0456	Pavement Marking Curb Epoxy	LF	24.000	24.000
1570	647.0566	Pavement Marking Stop Line Epoxy 18-Inch	LF	19.000	19.000
1580	647.0606	Pavement Marking Island Nose Epoxy	EACH	1.000	1.000
1590	647.0656	Pavement Marking Parking Stall Epoxy	LF	3,375.000	3,375.000
1600	647.0706	Pavement Marking Diagonal Epoxy 6-Inch	LF	383.000	383.000
1610	647.0766	Pavement Marking Crosswalk Epoxy 6-Inch	LF	112.000	112.000
1620	647.0776	Pavement Marking Crosswalk Epoxy 12-Inch	LF	42.000	42.000
1630	647.0796	Pavement Marking Crosswalk Epoxy 24-Inch	LF	133.000	133.000
1640	650.4000	Construction Staking Storm Sewer	EACH	21.000	21.000
1650	650.4500	Construction Staking Subgrade	LF	3,203.000	3,203.000
1660	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	5,935.000	5,935.000

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LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1070-00-71 QUANTITY
1670	650.6000	Construction Staking Pipe Culverts	EACH	2.000	2.000
1680	650.6500	Construction Staking Structure Layout (structure) 01. R-32-65	LS	1.000	1.000
1690	650.6500	Construction Staking Structure Layout (structure) 02. S-32-67	LS	1.000	1.000
1700	650.7000	Construction Staking Concrete Pavement	LF	3,241.000	3,241.000
1710	650.8500	Construction Staking Electrical Installations (project) 01. 1070-00-71	LS	1.000	1.000
1720	650.9910	Construction Staking Supplemental Control (project) 01. 1070-00-71	LS	1.000	1.000
1730	650.9920	Construction Staking Slope Stakes	LF	3,203.000	3,203.000
1740	652.0210	Conduit Rigid Nonmetallic Schedule 40 1-Inch	LF	27.000	27.000
1750	652.0225	Conduit Rigid Nonmetallic Schedule 40 2-Inch	LF	9,408.000	9,408.000
1760	652.0800	Conduit Loop Detector	LF	60.000	60.000
1770	653.0115	Pull Boxes Steel 12x36-Inch	EACH	7.000	7.000
1780	653.0130	Pull Boxes Steel 18x36-Inch	EACH	2.000	2.000
1790	653.0135	Pull Boxes Steel 24x36-Inch	EACH	1.000	1.000
1800	653.0145	Pull Boxes Steel 24x48-Inch	EACH	4.000	4.000
1810	654.0101	Concrete Bases Type 1	EACH	1.000	1.000
1820	654.0106	Concrete Bases Type 6	EACH	21.000	21.000
1830	654.0111	Concrete Bases Type 11	EACH	26.000	26.000
1840	655.0144	Cable In Duct 4-4 AWG	LF	211.000	211.000
1850	655.0610	Electrical Wire Lighting 12 AWG	LF	11,738.000	11,738.000
1860	655.0615	Electrical Wire Lighting 10 AWG	LF	7,394.000	7,394.000
1870	655.0620	Electrical Wire Lighting 8 AWG	LF	6,884.000	6,884.000
1880	655.0625	Electrical Wire Lighting 6 AWG	LF	6,255.000	6,255.000
1890	655.0800	Loop Detector Wire	LF	279.000	279.000
1900	657.0100	Pedestal Bases	EACH	26.000	26.000
1910	657.0255	Transformer Bases Breakaway 11 1/2-Inch Bolt Circle	EACH	21.000	21.000
1920	657.0327	Poles Type 6-Aluminum	EACH	21.000	21.000
1930	657.0610	Luminaire Arms Single Member 4 1/2-Inch Clamp 6-FT	EACH	11.000	11.000
1940	657.0715	Luminaire Arms Truss Type 4 1/2-Inch Clamp 15-FT	EACH	15.000	15.000
1950	659.1115	Luminaires Utility LED A	EACH	19.000	19.000
1960	659.1130	Luminaires Utility LED D	EACH	7.000	7.000
1970	671.0112	Conduit HDPE 1-Duct 2-Inch	LF	792.000	792.000
1980	673.0105	Communication Vault Type 1	EACH	1.000	1.000
1990	690.0150	Sawing Asphalt	LF	24.000	24.000
2000	715.0415	Incentive Strength Concrete Pavement	DOL	4,493.000	4,493.000
2010	999.1800.S	Picnic Tables Single Pedestal	EACH	10.000	10.000
2020	ASP.1T0A	On-the-Job Training Apprentice at $5. 00/HR	HRS	200.000	200.000
2030	SPV.0005	Special 01. Tree Shrub And Groundcover Watering	ACRE	4.000	4.000
2040	SPV.0005	Special 02. Tree Trimming **P**	ACRE	0.150	0.150
2050	SPV.0035	Special 01. Double Shredded Hardwood Mulch	CY	12.000	12.000
2060	SPV.0035	Special 02. Planter Soil	CY	25.000	25.000
2070	SPV.0035	Special 03. Engineered Soil	CY	580.000	580.000
2080	SPV.0035	Special 04. Limestone Screenings	CY	60.000	60.000
2090	SPV.0055	Special 01. Telephone Service	DOL	2,000.000	2,000.000
2100	SPV.0055	Special 02. Electrical Service	DOL	5,000.000	5,000.000

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LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1070-00-71 QUANTITY
2110	SPV.0055	Special 03. Natural Gas Service	DOL	7,500.000	7,500.000
2120	SPV.0060	Special 01. Gates Chain Link Slatted 8-Ft	EACH	2.000	2.000
2130	SPV.0060	Special 02. Gates Chain Link Slatted 12-Ft	EACH	1.000	1.000
2140	SPV.0060	Special 03. Pitless Adapter	EACH	2.000	2.000
2150	SPV.0060	Special 04. Well Pump	EACH	2.000	2.000
2160	SPV.0060	Special 05. Salvaged Trash Receptacles	EACH	10.000	10.000
2170	SPV.0060	Special 06. Salvaged Cigarette Snuffers	EACH	2.000	2.000
2180	SPV.0060	Special 07. Flagpoles	EACH	2.000	2.000
2190	SPV.0060	Special 08. Benches	EACH	6.000	6.000
2200	SPV.0060	Special 09. Trash Receptacles	EACH	2.000	2.000
2210	SPV.0060	Special 10. Salvaged Recycle Receptacles	EACH	17.000	17.000
2220	SPV.0060	Special 11. Walkway Lighting Units	EACH	26.000	26.000
2230	SPV.0060	Special 12. Sanitary Sewer Manhole 4-Ft	EACH	3.000	3.000
2240	SPV.0060	Special 13. Moving Historical Sign	EACH	2.000	2.000
2250	SPV.0060	Special 14. Wall Mounted Lighting Fixture	EACH	15.000	15.000
2260	SPV.0060	Special 15. Moving Veterans Sign	EACH	1.000	1.000
2270	SPV.0060	Special 16. Pet Waste Station	EACH	1.000	1.000
2280	SPV.0060	Special 17. Picnic Shelter	EACH	3.000	3.000
2290	SPV.0060	Special 18. Portable Planters	EACH	1.000	1.000
2300	SPV.0060	Special 19. Gabion Planter Wisconsin Sign	EACH	1.000	1.000
2310	SPV.0060	Special 20. Gabion Planter Saw Blade	EACH	1.000	1.000
2320	SPV.0060	Special 21. Gabion Planter Trees	EACH	2.000	2.000
2330	SPV.0060	Special 22. Gabion Column	EACH	4.000	4.000
2340	SPV.0060	Special 23. Linear Gabion Planter	EACH	2.000	2.000
2350	SPV.0060	Special 24. Curved Gabion Planter	EACH	1.000	1.000
2360	SPV.0060	Special 25. Gabion Column Interpretive Sign	EACH	4.000	4.000
2370	SPV.0060	Special 26. Gabion Column Fence	EACH	1.000	1.000
2380	SPV.0060	Special 27. Karl Foerster Feather Reed Grass 4-In Pot	EACH	26.000	26.000
2390	SPV.0060	Special 28. Stella D'Oro Daylilly 4-In Pot	EACH	48.000	48.000
2400	SPV.0060	Special 29. Flame Grass 4-In Pot	EACH	19.000	19.000
2410	SPV.0060	Special 30. Walker's Low Catmint 4-In Pot	EACH	10.000	10.000
2420	SPV.0060	Special 31. Emerald Pink Creeping Phlox 4-In Pot	EACH	66.000	66.000
2430	SPV.0060	Special 32. Northwind Switch Grass 4-In Pot	EACH	3.000	3.000
2440	SPV.0060	Special 33. Prairie Drop Seed 4-In Pot	EACH	110.000	110.000
2450	SPV.0060	Special 34. Sanitary Sewer Cleanout 6-Inch	EACH	1.000	1.000
2460	SPV.0060	Special 35. Floodlight Lighting Fixture	EACH	4.000	4.000
2470	SPV.0060	Special 36. Flexible Lighting Fixture	EACH	4.000	4.000
2480	SPV.0060	Special 37. Floodlight Landscape Lighting Fixture	EACH	13.000	13.000
2490	SPV.0090	Special 01. Fence Chain Link Slatted 8-Ft	LF	153.000	153.000
2500	SPV.0090	Special 02. Sanitary Sewer Pvc 6-Inch	LF	217.000	217.000
2510	SPV.0090	Special 03. Sanitary Sewer Pvc 8-Inch	LF	225.000	225.000

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LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1070-00-71 QUANTITY
2520	SPV.0090	Special 04. Underground Copper Water Line 2-In	LF	363.000	363.000
2530	SPV.0090	Special 05. Construction Staking Sanitary Sewer System	LF	442.000	442.000
2540	SPV.0090	Special 06. Underground Copper Water Line 1-In	LF	372.000	372.000
2550	SPV.0090	Special 07. Steel Landscape Edging 1/4-In x 6-In Black	LF	762.000	762.000
2560	SPV.0090	Special 08. Concrete Curb And Gutter 36-Inch Type A Special	LF	5,726.000	5,726.000
2570	SPV.0090	Special 09. Stainless Steel Handrail	LF	59.000	59.000
2580	SPV.0090	Special 10. Cable In Duct 3-1/0 AWG	LF	443.000	443.000
2590	SPV.0090	Special 11. Electrical Wire Power 6 AWG	LF	443.000	443.000
2600	SPV.0105	Special 01. Rest Area 31 Maintenance Building	LS	1.000	1.000
2610	SPV.0105	Special 02. Rest Area 31 Building General Construction	LS	1.000	1.000
2620	SPV.0105	Special 03. Rest Area 31 Building Plumbing	LS	1.000	1.000
2630	SPV.0105	Special 04. Rest Area Building Heating And Ventilation	LS	1.000	1.000
2640	SPV.0105	Special 05. Rest Area Building Electrical	LS	1.000	1.000
2650	SPV.0105	Special 06. Play Equipment Rest Area 31	LS	1.000	1.000
2660	SPV.0105	Special 07. Play Lot Surfacing Rest Area 31	LS	1.000	1.000
2670	SPV.0105	Special 08. Well System Controls Rest Area 31	LS	1.000	1.000
2680	SPV.0105	Special 09. Construction Staking Joint Layout	LS	1.000	1.000
2690	SPV.0165	Special 01. Temporary Shoring Special	SF	240.000	240.000
2700	SPV.0165	Special 02. Construction Staking Sidewalk	SF	19,613.000	19,613.000
2710	SPV.0165	Special 03. Gravity Wall Modular Block Landscape **p**	SF	702.000	702.000
2720	SPV.0165	Special 04. Soil Nail Reinforced Slope	SF	2,892.000	2,892.000
2730	SPV.0180	Special 01. Concrete Pavement 8-Inch Colored	SY	63.000	63.000
2740	SPV.0180	Special 02. Wet Mesic Prairie	SY	1,839.000	1,839.000
2750	SPV.0180	Special 03. Sod - Kentucky Blue And Fescue Mix	SY	1,567.000	1,567.000
2760	SPV.0195	Special 01. Mississippi River Rock	TON	142.000	142.000

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GRUBBING

STATION - STATION	LOCATION	201.0215 GRUBBING (ACRE)
PROJECT SITE		2.82
	TOTAL	2.82

*SEE GRUBBING FOR ADDITIONAL QUANTITY BREAKOUT.

REMOVING PAVEMENT

STATION	-	STATION	LOCATION	204.0100 REMOVING PAVEMENT (SY)
0+15.58'RA'	-	6+77.42'RA'	ENTRANCE RAMP	2,182
4+10.00'RA'	-	5+00.00'RA'	CAR PARKING	1,853
6+77.42'RA'	-	18+84.34'RA'	TRUCK PARKING	6,190
18+84.34'RA'	-	24+05.55'RA'	EXIT RAMP	1,939
			TOTAL	12,164

REMOVING CURB & GUTTER

STATION	-	STATION	LOCATION	204.0150 REMOVING CURB & GUTTER (LF)
0+15.58'RA'	-	6+77.42'RA'	ENTRANCE RAMP	1059
4+10.00'RA'	-	5+00.00'RA'	CAR PARKING	673
6+77.42'RA'	-	18+84.34'RA'	TRUCK PARKING	958
18+84.34'RA'	-	24+05.55'RA'	EXIT RAMP	1055
			TOTAL	3745

REMOVING CONCRETE SIDEWALK

STATION	-	STATION	LOCATION	204.0155 REMOVING CONCRETE SIDEWALK (SY)
4+10.00'RA'	-	5+00.00'RA'	CAR PARKING	330
5+00.00'RA'	-	6+77.42'RA'	MAIN BUILDING AREA	618
6+77.42'RA'	-	18+84.34'RA'	TRUCK PARKING	147
			TOTAL	1095

REMOVING GUARDRAIL

STATION	-	STATION	LOCATION	204.0165 REMOVING GUARDRAIL (LF)
23+53.03'RA'	-	24+05.55'RA'	RT	60
			TOTAL	60

REMOVING FENCE

STATION	-	STATION	LOCATION	204.0170 REMOVING FENCE (LF)
0+15.58'RA'	-	1+62.76'RA'	RT	165
14+43.04'RA'	-	19+66.07'RA'	LT/RT	624
			TOTAL	789

REMOVING CONCRETE SLOPE PAVING

STATION	LOCATION	204.0175 REMOVING CONCRETE SLOPE PAVING (SY)
1+66.00'RA'	30' RT	4
	TOTAL	4

REMOVING MANHOLES

STATION	LOCATION	204.0210 REMOVING MANHOLES (EACH)
16+88.02'RA'	11' RT	1
19+21.36'RA'	84' LT	1
	TOTAL	2

REMOVING CONCRETE BASES

STATION	LOCATION	204.0195 CONCRETE BASES (EACH)
2+81.82'RA'	127' LT	1
4+04.94'RA'	53' LT	1
4+13.76'RA'	102' LT	1
4+85.12'RA'	39' LT	1
4+93.49'RA'	89' LT	1
5+02.10'RA'	138' LT	1
7+23.26'RA'	39' LT	1
7+18.79'RA'	52' RT	1
9+72.24'RA'	97' RT	1
15+31.85'RA'	40' LT	1
15+98.76'RA'	2' LT	1
17+10.78'RA'	11' RT	1
18+29.45'RA'	4' RT	1
20+29.86'RA'	99' LT	1
20+05.77'RA'	47' LT	1
21+31.94'RA'	112' LT	1
21+16.45'RA'	68' LT	1
20+92.43'RA'	17' LT	1
22+91.14'RA'	87' LT	1
	TOTAL	19

REMOVING UTILITY POLES

STATION	LOCATION	204.0205 UTILITY POLES (EACH)
2+81.82'RA'	127' LT	1
4+04.94'RA'	53' LT	1
4+13.76'RA'	102' LT	1
4+85.12'RA'	39' LT	1
4+93.49'RA'	89' LT	1
5+02.10'RA'	138' LT	1
7+23.26'RA'	39' LT	1
7+18.79'RA'	52' RT	1
9+72.24'RA'	97' RT	1
15+31.85'RA'	40' LT	1
15+98.76'RA'	2' LT	1
17+10.78'RA'	11' RT	1
18+29.45'RA'	4' RT	1
20+29.86'RA'	99' LT	1
20+05.77'RA'	47' LT	1
21+31.94'RA'	112' LT	1
21+16.45'RA'	68' LT	1
20+92.43'RA'	17' LT	1
22+91.14'RA'	87' LT	1
	TOTAL	19

REMOVING INLETS

STATION	LOCATION	204.0220 REMOVING INLETS (EACH)
1+15.54'RA'	33' LT	1
2+34.94'RA'	55' LT	1
6+77.45'RA'	6' LT	1
6+86.89'RA'	24' RT	1
18+57.32'RA'	3' RT	1
18+80.23'RA'	20' LT	1
22+69.95'RA'	21' LT	1
23+79.64'RA'	10' RT	1
	TOTAL	8

ABANDONING WELLS

STATION	LOCATION	204.0265 ABANDONING WELLS (EACH)
6+13.62'RA'	69' LT	1
	TOTAL	1

REMOVING PULL BOX

STATION	LOCATION	204.9060.S 01. PULL BOX (EACH)
7+16.53'RA'	31' LT	1
20+48.00'RA'	116' LT	1
	TOTAL	2

REMOVING YARD HYDRANT AND SUPPLY PIPING

STATION	LOCATION	204.9060.S 04. YARD HYDRANT & SUPPLY PIPING (EACH)
102+01.75'TP'	181' LT	1
102+11.08'TP'	117' LT	1
102+16.71'TP'	77' LT	1
102+34.99'TP'	11' LT	1
104+42.65'TP'	12' LT	1
104+64.06'TP'	14' LT	1
	TOTAL	6

REMOVING STORM SEWER

STATION	-	STATION	LOCATION	204.0245 12-INCH (LF)	204.0245 18-INCH (LF)
1+15.54'RA'	-	1+34.78'RA'	33' LT - 36' RT		71
1+72.52'RA'	-	2+34.94'RA'	21'RT - 55' LT		102
2+34.94'RA'	-	22+69.95'RA'	55' - 21' LT		240
6+40.79'RA'	-	6+77.45'RA'	41' RT - 6' LT		59
6+77.45'RA'	-	6+86.89'RA'	6' LT - 24' RT	31	
6+77.45'RA'	-	18+80.23'RA'	6' LT - 20' LT		158
18+57.32'RA'	-	18+80.23'RA'	3' RT - 20' LT	33	
22+69.95'RA'	-	23+79.64'RA'	21' LT - 10' RT		115
			TOTAL	64	745

REMOVING FLAG POLE

STATION	LOCATION	204.9060.S 02. FLAG POLE (EACH)
20+13.51'RA'	71' LT	1
	TOTAL	1

REMOVING PLANTER

STATION	LOCATION	204.9060.S 03. PLANTER (EACH)
104+61.00'TP'	57' LT	1
	TOTAL	1

REMOVING SANITARY SEWER PIPE

STATION	-	STATION	LOCATION	204.9090.S 01. 6-INCH PIPE (EACH)	204.9060.S 02. 8-INCH PIPE (EACH)
15+76.39'RA'	-	16+87.98'RA'	RT		116
16+87.98'RA'	-	19+21.32'RA'	LT & RT	278	
			TOTAL	278	116

PROJECT ITEMS

LOCATION	204.0240 SITE CLEARANCE 01. EXISTING REST AREA 31 (LS)	213.0100 FINISHING ROADWAY 01. 1070-00-71 (EACH)	618.0100 MAINTENANCE AND REPAIR OF HAUL ROADS 01. 1070-00-71 (EACH)	619.1000 MOBILIZATION (EACH)	642.5401 FIELD OFFICE TYPE D (EACH)	643.0100 TRAFFIC CONTROL 01. 1070-00-71 (EACH)
PROJECT	1	1	1	1	1	1
TOTAL	1	1	1	1	1	1

TREE TRIMMING

STATION - STATION	LOCATION	SPV.0005.02 TREE TRIMMING (ACRE)
AREA #3		0.15
	TOTAL	0.15

EARTHWORK SUMMARY

STATION	-	STATION	LOCATION	205.0100 EXCAVATION COMMON CUT FROM EW DATA (CY)	(2) EBS (CY)	(3) SALVAGED / UNUSABLE PAVEMENT MATERIAL (CY)	(4) AVAILABLE MATERIAL (CY)	(5) REDUCED EBS IN FILL FACTOR = 0.8 (CY)	(6) EXPANDED EBS BACKFILL FACTOR = 1.3 (CY)	(7) EXPANDED FILL FROM EW DATA (CY)	(8) EXPANDED FILL (CY)	(9) MASS ORIDNATE (CY)
0+15.58'RA'	-	24+05.55'RA'	PROJECT	12,225	620	2,703	9,522	500	810	3005	3315	6207
			TOTAL	12,225	620	2,703	9,522	500	810	3,005	3,315	6,207
			205.0100 EXCAVATION COMMON	12,845 CY (1)								

(1) Common Excavation is the sum of the Cut and EBS Excavation columns. Item number 205.0100
(2) EBS Excavation to be backfilled with Common Excavation or borrow and paid as common excavation.
EBS is to be an undistributed quantity of 5% of common excavation.
EBS quantites are used in Earthwork balance.
(3) Salvaged/Unsuable Pavement Material is included in Cut.
(4) Available Material = Cut - Salvaged/Unusuable Pavement Material
(5) Reduced EBS in Fill - Excavated EBS material is usuable in Fills outside the 1:1 slope. EBS in Fill Reduction factor = 0.8
(6) Expanded EBS Backfill - This is to be filled with Select Borrow material. EBS Backfill Factor = 1.3.
(7) Expanded Fill from Earthwork Data. Factor = 1.30
(8) Expanded Fill = Expanded Filll from EW Data + Expanded EBS Backfill - Reduced EBS in Fill
(9) The Mass Ordinate + or - Qty calculated for the Project. Plus is excess Minus is shortage of material.

CONCRETE PAVEMENT

STATION	-	STATION	LOCATION	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH (TON)	405.0100 COLORING CONCRETE RED (CY)	415.0080 CONCRETE PAVEMENT 8-INCH (SY)	415.0100 CONCRETE PAVEMENT 10-INCH (SY)	416.0508 ROUNDABOUT TRUCK APRON 8-INCH (SY)	SPV.0180.01 CONCRETE PAVEMENT 8-INCH COLORED (SY)	650.7000 CONSTRUCTION STAKING CONCRETE PAVEMENT (LF)	715.0415 INCENTIVE STRENGTH CONCRETE PAVEMENT (DOL)
0+15.58'RA'	-	1+71.25'RA'	LT & RT	184			551			156	165
1+71.25'RA'	-	8+79.93'RA'	LT & RT	539		1,618				709	485
8+43.78'RA'	-	8+66.69'RA'	LT	9	6			26			8
8+79.93'RA'	-	9+97.90'RA'	LT & RT	226		679				118	204
9+97.90'RA'	-	10+07.90'RA'	LT & RT	21					63	10	19
10+07.90'RA'	-	17+20.67'RA'	LT & RT	842		2526				713	758
17+20.67'RA'	-	20+89.15'RA'	LT & RT	225		675				368	203
17+47.36'RA'	-	18+09.71'RA'	LT	100		299				60	90
18+09.71'RA'	-	18+76.08'RA'	LT	31	21			92			28
20+89.15'RA'	-	24+05.55'RA'	LT & RT	245			734			316	220
100+00.00'TP'	-	107+90.56'TP'	LT	2570			7,709			791	2,313
			TOTAL	4,992	27	5,797	8,994	118	63	3,241	4,493

CULVERT PIPE SUMMARY

STATION	-	STATION	LOCATION	522.0118 CULVERT PIPE REINFORCED CONCRETE CLASS III 18-INCH (LF)	522.0318 CULVERT PIPE REINFORCED CONCRETE CLASS IV 18-INCH (LF)	522.1018 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 18-INCH (EACH)	611.9800.S PIPE GRATES (EACH)	650.6000 CONSTRUCTION STAKING PIPE CULVERTS (EACH)	*PIPE TIES (EACH)
22+49.00'RA'			LT & RT		53	2	2	1	6
7+07.84'RA'	-	7+62.98'RA'	LT	47		2		1	6
			TOTALS	47	53	4	2	2	12

* NON-BID ITEM: FOR INFORMATION ONLY

CONCRETE CURB & GUTTER

STATION	-	STATION	LOCATION	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH (TON)	601.0551 CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE A (SF)	SPV.0090.08 CONCRETE CURB & GUTTER 36-INCH TYPE A SPECIAL (SF)	620.0300 CONCRETE MEDIAN SLOPED NOSE (SF)	650.5500 CONSTRUCTION STAKING CURB AND GUTTER (LF)
0+15.58'RA'	-	1+71.25'RA'	LT & RT	58		311		311
1+71.25'RA'	-	8+79.93'RA'	LT & RT	244		1,320		1,320
8+79.93'RA'	-	17+20.67'RA'	LT & RT	323		1,741		1,741
17+20.67'RA'	-	20+89.15'RA'	LT & RT	106		574		574
17+47.36'RA'	-	18+09.71'RA'	LT	31		167		167
20+89.15'RA'	-	24+05.55'RA'	LT & RT	86		465		465
100+00.00'TP'	-	107+90.56'TP'	TRUCK PARKING	213		1,148		1,148
17+14.00'RA'	-	17+46.00'RA'	LT	14	78			78
18+05.00'RA'	-	18+81.00'RA'	LT	24	131			131
1+71.25'RA'			LT	1			17	
20+89.15'RA'			LT	1			27	

CONCRETE DRIVEWAY

STATION	-	STATION	LOCATION	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH (TON)	416.0160 CONCRETE DRIVEWAY 6-INCH (SY)
12+84.40'RA'	-	13+28.66'RA'	RT	90	270
			TOTAL	90	270

CONCRETE SIDEWALK

STATION	-	STATION	LOCATION	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH (TON)	602.0410 CONCRETE SIDEWALK 5-INCH (SF)	602.0415 CONCRETE SIDEWALK 6-INCH (SF)	SPV.0165.02 CONSTRUCTION STAKING SIDEWALK (SF)
105+35'TP'	-	105+71'TP'	RT	18	720		720
5+82'RA'	-	12+08'RA'	RT	117	4,717		4,717
6+47'RA'	-	12+64'RA'	RT	35		1,408	1,408
9+86'RA'	-	10+20'RA'	RT	12	488		488
13+70'RA'	-	16+11'RA'	LT	48	1,933		1,933
0+00'RL'	-	1+70'RL'	LT & RT	34	1,379		1,379
50+08'S'	-	59+04'S'	LT & RT	142	5,760		5,760
51+22'S'	-	51+34'S'	LT	8	342		342
52+53'S'	-	52+85'S'	LT	20	819		819
53+71'S'	-	54+18'S'	LT	19	763		763
54+69'S'	-	55+10'S'	LT	18	734		734
55+26'S'	-	55+53'S'	LT	12	472		472
1+77'RA'			LT	1	31		31
20+82'RA'			LT	1	47		47
			TOTAL	485	18,205	1,408	19,613

STORM SEWER STRUCTURES

STRUCTURE	STATION	LOCATION	522.1015 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 15-INCH (EACH)	522.1018 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 18-INCH (EACH)	522.1024 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH (EACH)	523.0519 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL 19X30-INCH (EACH)	611.0530 MANHOLE COVERS TYPE J (EACH)	611.0615 INLET COVERS TYPE F (EACH)	611.0624 INLET COVERS TYPE H (EACH)	611.0639 INLET COVERS TYPE H-S (EACH)	611.0642 INLET COVERS TYPE MS (EACH)	611.0645 INLET COVERS TYPE MS-A (EACH)	611.2004 MANHOLES 4-FT DIAMETER (EACH)	611.3004 INLETS 4-FT DIAMETER (EACH)	611.3230 INLETS 2X3-FT (EACH)	611.3901 INLETS MEDIAN 1 GRATE (EACH)	611.3902 INLETS MEDIAN 2 GRATE (EACH)	611.9800.S PIPE GRATES (EACH)	628.7005 INLET PROTECTION TYPE A (EACH)	628.7010 INLET PROTECTION TYPE B (EACH)	628.7015 INLET PROTECTION TYPE C (EACH)	650.4000 CONSTRUCTION STAKING STORM SEWER (EACH)	RIM ON	INVERT ON	DEPTH** FT
1A	15+32'RA'	22' LT							1					1						1		1	1	657.15	653.35	2.98
2A	10+30'RA'	30' LT							1					1						1		1	1	656.58	653.09	2.68
3A	17+21'RA'	35' LT										1					1			1			1	655.01	652.19	2.61
4A	17+46'RA'	33.1' LT						1						1						1		1	1	655.93	652.01	3.23
5A	7+98'RA'	35.1' LT						1						1						1		1	1	654.98	651.65	2.64
6A	7+85'RA'	49.1' LT				1																	1		651.53	
1B	10+30'RA'	30' RT							1							1				1		1	1	656.90	652.96	3.13
2B	9+05'RA'	30' RT								1						1				1		1	1	656.07	652.28	2.98
3B	7+81'RA'	44.8' LT	1																				1		651.53	
1C	7+71'RA'	61.8' LT									1							1				1	1	653.00	647.00	5.79
2C	7+15'RA'	32' LT									1							1				1	1	653.00	646.00	6.79
3C	6+41'RA'	40.6' RT					1						1										1	655.62	641.30	13.58
1D	101+00'TP'	2.0' RT							1							1				1		1	1	655.48	652.26	2.40
2D	101+00'TP'	40' LT							1							1				1		1	1	655.61	651.00	3.79
3D	100+99'TP'	58.3' LT	1																				1		650.91	
1E	2+95'RA'	11.8' RT							1							1				1		1	1	654.90	648.40	5.68
2E	100+08'TP'	2.0' RT							1					1						1		1	1	654.37	647.09	6.46
1F	1+62'RA'	57.9' LT		1															1				1		650.53	
2F	0+76'RA'	29.1' LT									1							1		1		1	1	651.11	645.10	6.19
3F	0+77'RA'	15.5' RT							1					1						1		1	1	652.28	643.11	8.35
4F	0+77'RA'	35.3' RT			1																		1		642.18	
		TOTALS	2	1	1	1	1	2	8	1	3	1	1	6	5	3	1	1	13	2	11	21			

REMARKS
* STATIONS AND OFFSETS ARE TO CENTER OF STRUCTURE
** DEPTH = RIM ELEV - TOP OF STRUCTURE BASE ELEV - COVER HEIGHT - 6 -INCH ADJUSTMENT RING HEIGHT

STORM SEWER PIPES

STRUCTURE FROM	-	TO	608.0315 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 15-INCH (LF)	608.0318 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 18-INCH (LF)	608.0324 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 24-INCH (LF)	610.0419 STORM SEWER PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-IV 19X30-INCH (LF)	PIPE TIES* (EACH)	INLET ELEVATION	DISCHARGE ELEVATION	SLOPE
1A	-	2A	31					653.35	653.14	0.70%
2A	-	3A	170					653.09	652.24	0.50%
3A	-	4A	25					652.19	652.06	0.50%
4A	-	5A				63		652.01	651.70	0.50%
5A	-	6A				24	2	651.65	651.53	0.50%
1B	-	2B	126					652.96	652.33	0.50%
2B	-	3B	150				14	652.28	651.53	0.50%
1C	-	2C		69				647.00	646.10	1.31%
2C	-	3C		104				646.00	642.88	3.00%
1D	-	2D	42					652.26	652.06	0.48%
2D	-	3D	18				2	651.00	650.91	0.52%
1E	-	2E	120					648.40	647.20	1.00%
2E	-	3F	105					647.09	645.00	2.00%
1F	-	2F		112				650.53	647.83	2.42%
2F	-	3F			45			645.10	643.53	3.52%
3F	-	4F			20		2	643.11	642.18	4.67%
			787	285	65	87	20			

* NON-BID ITEM: FOR INFORMATION ONLY

CONCRETE RAMP DETECTABLE WARNING FIELD

STATION	LOCATION	602.0505 YELLOW (SF)
105+56'TP'	RT	16
7+74'RA'	LT	16
7+94'RA'	RT	21
10+03'RA'	RT	20
10+03'RA'	LT	20
15+49'RA'	LT	10
	TOTAL	103

PIPE UNDERDRAIN

LOCATION	612.0206 PIPE UNDERDRAIN UNPERFORATED 6-INCH (LF)	612.0406 PIPE UNDERDRAIN WRAPPED 6-INCH (LF)
BASIN A EAST		88
BASIN A WEST		150
BASIN B	117	271
TOTAL	117	509

DELINEATORS AND CULVERT MARKERS

STATION	-	STATION	LOCATION	633.0100 DELINEATOR POSTS STEEL (EACH)	633.0500 DELINEATOR REFLECTORS (EACH)	633.5200 MARKERS CULVERT END (EACH)
0+15'RA'	-	3+50'RA'	RT	4	4	
21+00'RA'	-	24+00'RA'	RT	4	4	
0+77'RA'			35' RT			1
1+62'RA'			58' LT			1
22+49'RA'			RT			1
			BASIN A EAST			3
			BASIN A WEST			1
			BASIN B			2
			TOTAL	8	8	9

RIPRAP & GEOTEXTILE FABRIC

STATION	LOCATION	606.0200 RIPRAP MEDIUM (CY)	606.0700 GROUTED RIPRAP HEAVY (CY)	645.0120 GEOTEXTILE FABRIC TYPE HR (SY)
0+77'RA'	RT		3	
6+51'RA'	LT	1.5		4.5
7+79'RA'	LT	2.5		8
7+81'RA'	LT	4		12.5
9+04'RA'	LT	1.5		4.5
16+18'RA'	LT	1.5		4.5
17+28'RA'	LT	1.5		4.5
22+02'RA'	RT	1.5		4.5
22+49'RA'	LT	3		9.5
100+99'TP'	LT	2.5		8
101+02'TP'	LT	3		11
104+01'TP'	RT	1.5		4.5
	TOTAL	24	3	76

SALVAGE TOPSOIL

STATION	-	STATION	LOCATION	625.0500 SALVAGE TOPSOIL (SY)
0+15.58'RA'	-	2+50.00'RA'	LT & RT	1,494
100+88.00'RA'	-	108+12.60'RA'	INSIDE EXIST LOOP	9,204
2+50.00'RA'	-	6+75.00'RA'	RT	1,391
6+75.00'RA'	-	15+45.00'RA'	LT & RT	8,956
15+45.00'RA'	-	22+87.00'RA'	RT	1,066
22+87.00'RA'	-	24+05.55'RA'	LT & RT	627
			TOTAL	22,738

WATER

STATION	624.0100 WATER (MGAL)	SPV.0005.01 TREE SHRUB AND GROUND COVER WATERING (ACRE)
PROJECT	800	4
TOTAL	800	4

EROSION CONTROL

STATION	-	STATION	LOCATION	627.0200 MULCHING (SY)	628.1504 SILT FENCE (LF)	628.1520 SILT FENCE MAINTENANCE (LF)	628.1905 MOB EROSION CONTROL (EACH)	628.1910 MOB EMERGENCY EROSION CONTROL (EACH)	628.2004 EROSION MAT CLASS I TYPE B (SY)	628.2021 EROSION MAT CLASS II TYPE A (SY)	628.2027 EROSION MAT CLASS II TYPE C (SY)	628.7504 TEMP DITCH CHECKS (LF)	628.7555 CULVERT PIPE CHECKS (EACH)	628.7560 TRACKING PADS (EACH)	631.1200 SOD EROSION CONTROL SANDY SOIL (SY)
0+15'RA'	-	1+80'RA'	LT	396	216	432				20			4		20
0+15'RA'	-	13+18'RA'	RT	3,868	1,504	3,008					1,144				
100+11'TP'	-	105+60'TP'	RT	887					481						
13+18'RA'	-	14+43'RA'	RT	114	174	348			59						
14+73'RA'	-	14+93'RA'	RT											1	
13+00'RA'	-	18+00'RA'	LT	1,224											16
15+06'RA'	-	24+05'RA'	RT	1,806					564	4		30	4		4
105+60'TP'	-	107+80'TP'	RT	446					390	16					
23+47'RA'	-	24+05'RA'	LT	92	85	170									
100+00'TP'	-	23+47'RA'	BASIN B	1,936	348	696			968						
CONST STAGING							2	4							
			TOTAL	10,769	2,327	4,654	2	4	2,462	40	1,144	30	8	1	40

TREES

STATION	-	STATION	LOCATION	632.0101 01. TREES NORTHWOODS RED MAPLE 1 3/4" B&B (EACH)	632.0101 02. TREES THORNLESS HAWTHORN 1 3/4" B&B (EACH)	632.0101 03. TREES COMMON HACKBERRY 1 3/4" B&B (EACH)	632.0101 04. TREES SHADEMASTER LOCUST 1 3/4" B&B (EACH)	632.0101 05. TREES PRAIRIE FIRE CRAB 1 3/4" B&B (EACH)	632.0101 06. TREES IRONWOOD 1 3/4" B&B (EACH)	632.0101 07. TREES QUAKING ASPEN #25 CG (EACH)	632.0101 08. TREES SWAMP WHITE OAK 1 3/4" B&B (EACH)	632.0101 09. TREES BUR OAK 1 3/4" B&B (EACH)	632.0101 10. TREES CLUMP RIVER BIRCH 6-FT HT B&B (EACH)	632.0101 11. TREES AUTUMN BRILLIANCE SERVICEBERRY 1 3/4" B&B (EACH)	632.0101 12. TREES NEW HORIZON ELM 1 3/4" B&B (EACH)	632.0101 13. TREES BLACK HILLS SPRUCE 5-FT HT B&B (EACH)	632.0101 14. TREES RED PINE 5-FT HT B&B (EACH)	632.0101 15. TREES WHITE PINE 5-FT HT B&B (EACH)	632.0101 16. TREES TECHNY ARBORVIITAE #10 CG (EACH)
100+00.00'TP'	-	108+54.47'TP'	RT		1			4	3		8				9	2	9		24
5+50.00'RA'	-	10+82.00'RA'	RT	4	2		3			3	2	3	3	2	2			5	
10+82.00'RA'	-	18+00.00'RA'	LT	4	3		2	2							2			1	
10+82.00'RA'	-	18+00.00'RA'	RT	2	1	1		1			1				2		1	1	
18+00.00'RA'	-	24+50.00'RA'	RT												6				
			BASIN B		2						1						2		
			TOTAL	10	9	1	5	7	3	3	12	3	3	2	21	2	12	7	24

SHRUBS

STATION	-	STATION	LOCATION	632.0201 01. SHRUBS PEKING COTONEASTER #2 CG (EACH)	632.0201 02. SHRUBS RED-TWIG DOGWOOD #2 CG (EACH)	632.0201 03. SHRUBS DWARF BUSH HONEYSUCKLE #2 CG (EACH)	632.0201 04. SHRUBS LITTLE QUICK FIRE HYDRANGEA #2 CG (EACH)	632.0201 05. SHRUBS GRO-LOW SUMAC #2 CG (EACH)	632.0201 06. SHRUBS SPIREA 'DAPHNE' #2 CG (EACH)	632.0201 07. SHRUBS LITTLE PRINCESS SPIREA #2 CG (EACH)	632.0201 08. SHRUBS MISS KIM LILAC #2 CG (EACH)	632.0201 09. SHRUBS ARROWWOOD VIBURNUM 3-FT HT CG (EACH)	632.0201 10. SHRUBS MOHICAN VIBURNUM 3-FT HT CG (EACH)	632.0201 11. SHRUBS CALGARY CARPET JUNIPER #2 CG (EACH)
100+00.00'TP'	-	108+54.47'TP'	RT		26	14		29				17		
5+50.00'RA'	-	10+82.00'RA'	RT	11		17	6	6	24	12	12	3	3	14
			TOTAL	11	26	31	6	35	24	12	12	20	3	14

SIGNS TYPE II

SIGN NO.	SIGN CODE	SIGN MESSAGE	STATION	LOCATION	WIDTH (INCHES)	HEIGHT (INCHES)	637.2210 SIGNS TYPE II REFLECTIVE H (SF)	637.2230 SIGNS TYPE II REFLECTIVE F (SF)	634.0614 POSTS WOOD 4X6-INCH X 14-FT (EACH)	634.0616 POSTS WOOD 4X6-INCH X 16-FT (EACH)	634.0618 POSTS WOOD 4X6-INCH X 18-FT (EACH)
S3	R5-1A	WRONG WAY	0+86'RA'	LT	36	24	6.0			W/SIGN 1	
S4	R5-1A	WRONG WAY	0+94'RA'	RT	36	24	6.0			1	
S5	R8-74	DIRECTIONAL	1+77'RA'	LT	54	42	15.8				2
S6	R55-51	NO CAMPING	1+77'RA'	LT	18	18	2.3				W/SIGN 5
S7	R7-1D	NO PARKING	3+58'RA'	RT	12	18	1.5		W/LIGHT POLE		
S8	R7-1D	NO PARKING	5+48'RA'	RT	12	18	1.5		W/LIGHT POLE		
S9	W11-2	PEDESTRIAN XING	5+78'RA'	RT	30	30		6.3		1	
S10	W16-9P	AHEAD	5+78'RA'	RT	24	12		2.0		W/SIGN 9	
S11	SPECIAL	BUS PARKING	6+38'RA'	RT	24	18	3.0		1		
S12	R55-62A	WALK PETS	7+11'RA'	RT	30	12	2.5		1		
S13	SPECIAL	BUS PARKING	7+18'RA'	RT	24	18	3.0		1		
S14	D52-58	DIRECTIONAL	7+51'RA'	LT	48	24	8.0		1		
S15	R5-1	DO NOT ENTER	8+15'RA'	LT	30	30	6.3			1	
S16	R5-2	NO TRUCKS	8+21'RA'	RT	24	24	4.0			1	
S17	R5-1	DO NOT ENTER	8+21'RA'	RT	30	30	6.3			W/SIGN 16	
S18	R6-1	ONE WAY	8+25'RA'	LT	36	12	3.0			1	
S19	R1-1	STOP	8+25'RA'	LT	30	30	6.3			W/SIGN 18	
S20	R5-1	DO NOT ENTER	8+51'RA'	LT	30	30	6.3			1	
S21	R55-62A	WALK PETS	9+32'RA'	RT	30	12	2.5		W/LIGHT POLE		
S22	R55-64R	PET WALKING AREA	9+54'RA'	LT	24	24	4.0		1		
S23	R7-8A	RESERVED PARKING	9+71'RA'	RT	12	18	1.5		1		
S24	R7-8A	RESERVED PARKING	9+91'RA'	RT	12	18	1.5		1		
S25	R7-8V	VAN ACCESSIBLE	9+91'RA'	RT	12	6	0.5		W/SIGN 27		
S26	SPECIAL	NO SOLICITING	9+95'RA'	RT	18	24	3.0		W/BUILDING		
S27	R7-8A	RESERVED PARKING	10+30'RA'	RT	12	18	1.5		1		
S28	R7-8V	VAN ACCESSIBLE	10+30'RA'	RT	12	6	0.5		W/SIGN 30		
S29	R7-8A	RESERVED PARKING	10+45'RA'	RT	12	18	1.5		1		
S30	R55-62A	WALK PETS	10+87'RA'	RT	30	12	2.5		W/LIGHT POLE		
S31	R55-62A	WALK PETS	11+04'RA'	RT	30	12	2.5		W/LIGHT POLE		
S32	R55-64R	PET WALKING AREA	11+52'RA'	LT	24	24	4.0		1		
S33	R55-65	PET WALKING AREA	12+08'RA'	RT	24	24	4.0		1		
S34	R55-65	PET WALKING AREA	12+09'RA'	RT	24	24	4.0		1		
S35	R7-1D	NO PARKING	12+78'RA'	RT	12	18	1.5		1		
S36	SPECIAL	TRUCK/RV PARKING	13+49'RA'	LT	36	18	4.5		1		
S37	R55-64L	PET WALKING AREA	14+82'RA'	LT	24	24	4.0		1		
S38	R5-1	DO NOT ENTER	14+82'RA'	RT	30	30	6.3		W/GATE		
S39	R3-4A	AUTHORIZED VEHICLES	14+82'RA'	RT	36	12	3.0		W/GATE		
S40	R7-1D	NO PARKING	14+88'RA'	RT	24	30	5.0		W/GATE		
S41	R7-1D	NO PARKING	16+97'RA'	RT	12	18	1.5		1		
S42	D52-54	EXIT	17+80'RA'	RT	24	24	4.0		1		
S43	R6-1L	ONE WAY	17+91'RA'	LT	36	12	3.0			1	
					SUBTOTAL		148.1	8.3	17	7	2

SIGNS TYPE II

SIGN NO.	SIGN CODE	SIGN MESSAGE	STATION	LOCATION	WIDTH (INCHES)	HEIGHT (INCHES)	637.2210 SIGNS TYPE II REFLECTIVE H (SF)	637.2230 SIGNS TYPE II REFLECTIVE F (SF)	634.0614 POSTS WOOD 4X6-INCH X 14-FT (EACH)	634.0616 POSTS WOOD 4X6-INCH X 16-FT (EACH)	634.0618 POSTS WOOD 4X6-INCH X 18-FT (EACH)
S44	R1-2	YIELD	17+91'RA'	LT	36	31	7.8			W/SIGN 47	
S45	R3-2	NO LEFT TURN	18+13'RA'	RT	24	24	4.0		1		
S46	R6-2	ONE WAY	18+31'RA'	RT	24	30	5.0			1	
S47	R5-1A	WRONG WAY	19+48'RA'	LT	36	24	6.0		1		
S48	R5-1A	WRONG WAY	19+48'RA'	RT	36	24	6.0		1		
S49	R7-1D	NO PARKING	20+13'RA'	RT	12	18	1.5		1		
S50	R1-2	YIELD	20+79'RA'	LT	36	31	7.8			1	
S51	R5-1	DO NOT ENTER	20+79'RA'	LT	30	30	6.3			W/SIGN 54	
S52	R1-2	YIELD	20+79'RA'	RT	36	31	7.8			1	
S53	R5-1	DO NOT ENTER	20+79'RA'	RT	30	30	6.3			W/SIGN 56	
S54	R7-1D	NO PARKING	22+12'RA'	LT	12	18	1.5		1		
S55	R6-1R	ONE WAY	22+14'RA'	LT	54	18	6.8		2		
S56	W13-3	RAMP SPEED	22+63'RA'	RT	24	30		5.0		1	
S57	R5-1	DO NOT ENTER	100+57'TP'	LT	30	30	6.3			1	
S58	R5-1	DO NOT ENTER	100+57'TP'	RT	30	30	6.3		1		
S59	R7-1D	NO PARKING	100+93'TP'	LT	12	18	1.5		1		
S60	R7-1D	NO PARKING	101+95'TP'	RT	12	18	1.5		1		
S61	R7-1D	NO PARKING	103+35'TP'	RT	12	18	1.5		1		
S62	R7-1D	NO PARKING	104+29'TP'	RT	12	18	1.5		1		
S63	R7-1D	NO PARKING	105+27'TP'	RT	12	18	1.5		1		
S64	R55-62A	WALK PETS	105+69'TP'	RT	30	12	2.5		1		
S65	R7-1D	NO PARKING	107+23'TP'	RT	12	18	1.5		1		
					SUBTOTAL		90.9	5.0	15	5	0
					TOTAL		239.0	13.3	32	12	2

SIGNS TYPE I

SIGN NO.	SIGN MESSAGE	STATION	LOCATION	WIDTH (INCHES)	HEIGHT (INCHES)	637.1220 SIGNS TYPE I REFLECTIVE SH (SF)	636.0100 SIGN SUPPORTS CONCRETE MASONRY (CY)	636.1000 SIGN SUPPORTS STEEL REINFORCEMENT HS (LB)	641.8100 OVERHEAD SIGN SUPPORT 01. S-32-67 (LS)
S1	TRUCKS	0+86'RA'	LT	60	36	15.0	5	350	1
S2	DIRECTIONAL	0+86'RA'	LT	78	66	35.8	W\SIGN 1	W\SIGN 1	W\SIGN 1
				TOTAL		50.8	5	350	1

REMOVING SIGNS AND SIGN SUPPORTS

STATION	-	STATION	LOCATION	638.2602 REMOVING SIGNS TYPE II (EACH)	638.3000 REMOVING SMALL SIGN SUPPORTS (EACH)
0+15.58'RA'	-	24+05.55'RA'	LT & RT	47	28
			TOTAL	47	28

PAVEMENT MARKINGS

STATION	-	STATION	COLOR	646.0106 EPOXY 4-INCH SOLID (LF)	646.0106 EPOXY 4-INCH 3' LINE-9' GAP (LF)	646.0126 EPOXY 8-INCH (LF)	647.0156 ARROWS EPOXY TYPE 1 (EACH)	647.0256 SYMBOLS EPOXY (EACH)	647.0456 CURB EPOXY (LF)	647.0566 STOP LINE EPOXY 18-INCH (LF)	647.0606 ISLAND NOSE EPOXY (EACH)	647.0656 PARKING STALL EPOXY 4-INCH (LF)	647.0656 PARKING STALL EPOXY 6-INCH (LF)	647.0706 DIAGONAL EPOXY 6-INCH (LF)	647.0766 CROSSWALK EPOXY 6-INCH (LF)	647.0776 CROSSWALK EPOXY 12-INCH (LF)	647.0796 CROSSWALK EPOXY 24-INCH (LF)
9+00'RA'	-	12+25'RA'	YELLOW									1,551					
9+46'RA'	-	10+60'RA'	YELLOW											297			
12+00'RA'	-	12+25'RA'	YELLOW											68			
1+50'RA'	-	1+80'RA'	WHITE			60											
5+20'RA'	-	7+81'RA'	YELLOW		67												
6+10'RA'	-		YELLOW	12													
6+80'RA'	-		YELLOW	12													
7+72'RA'	-	7+94'RA'	YELLOW													42	35
8+40'RA'	-		YELLOW							19							
13+50'RA'	-	16+30'RA'	YELLOW		72												
14+29'RA'	-		YELLOW	13													
14+88'RA'	-		YELLOW	13													
20+89'RA'	-	22+46'RA'	YELLOW		42												
101+44'TP'	-	105+47'TP'	YELLOW										1,824				
101+47'TP'	-	80' LT	WHITE				1										
102+54'TP'	-	7' LT	WHITE				1										
104+62'TP'	-	7' LT	WHITE				1										
107+57'TP'	-	7' LT	WHITE				1										
9+63'RA'	-	10+42'RA'	YELLOW					4									
1+71'RA'	-	LT	YELLOW								1						
9+96'RA'	-	10+10'RA'	YELLOW												112		
15+49'RA'	-	LT	YELLOW											18			
1+74'RA'	-	1+86'RA'	YELLOW						12								
100+03'RA'		100+15'RA'	YELLOW						12								
9+96'RA'	-	10+10'RA'	YELLOW														98
			TOTAL	50	181	60	4	4	24	19	1	1,551	1,824	383	112	42	133
			ITEM TOTAL	231								3,375					

WATER WELL ITEMS

STATION	LOCATION	639.0108 DRILL HOLE IN EARTH 8-INCH (LF)	639.0112 DRILL HOLE IN EARTH 12-INCH (LF)	639.1008 WELL CASING PIPE 8-INCH (LF)	639.1700 WELL SCREEN (LF)	639.2100 GROUT FOR SEALING WELL CASING (CF)	639.4000 TEST PUMPING (EACH)	SPV.0060.03 PITLESS ADAPTER (EACH)	SPV.0060.04 WELL PUMP (EACH)
7+92.99'RA'	52.0' RT	20	60	71	10	27	1	1	1
10+76.10'RA'	61.8' RT	20	60	71	10	27	1	1	1
	TOTAL	40	120	142	20	54	2	2	2

TRAFFIC CONTROL

STATION - STATION	LOCATION	643.0300 DRUMS (DAY)	643.0420 BARRICADES TYPE III (DAY)	643.0705 WARNING LIGHTS TYPE A (DAY)	643.0900 SIGNS (DAY)
LAKESHORE DRIVE	MAINLINE		642	428	1,498
LAKESHORE DRIVE	TEMPORARY SHOULDER CLOSURE	40			5
	TOTAL	40	642	428	1,503

PROPOSED BUILDING ITEMS

LOCATION	SPV.0105.01 REST AREA 31 MAINTENANCE BUILDING (LS)	SPV.0105.02 BUILDING GENERAL CONSTRUCTION (LS)	SPV.0105.03 BUILDING PLUMBING (LS)	SPV.0105.04 BUILDING HEATING AND VENTILATION (LS)	SPV.0105.05 BUILDING ELECTRICAL (LS)	SPV.0105.08 WELL SYSTEM CONTROLS (LS)
PROJECT	1	1	1	1	1	1
TOTAL	1	1	1	1	1	1

PLAY EQUIPMENT AND SURFACE

STATION	LOCATION	SPV.0105.06 PLAY EQUIPMENT REST AREA 31 (EACH)	SPV.01050.07 PLAY LOT SURFACING REST AREA 31 (EACH)
11+51'RA'	RT	1	1
	TOTAL	1	1

ENGINEERED SOIL

LOCATION	SPV.0035.03 ENGINEERED SOIL (CY)
BASIN A WEST	61
BASIN A EAST	58
BASIN B	461
TOTAL	580

GRAVITY WALL MODULAR BLOCK LANDSCAPE

STATION	-	STATION	LOCATION	SPV.0165.03 GRAVITY WALL MODULAR BLOCK LANDSCAPE (SF)
2+20.00'RA'		4+66.50'RA'	23' LT	702
			TOTAL	702

SOIL NAIL REINFORCED SLOPE

STATION	-	STATION	LOCATION	SPV.0165.04 SOIL NAIL REINFORCED SLOPE (SF)
9+31'RA'		10+51'RA'	RT	2,892
			TOTAL	2,892

UTILITIES AND SERVICES

LOCATION	SPV.0055.01 TELEPHONE SERVICE (DOL)	SPV.0055.02 ELECTRICAL SERVICE (DOL)	SPV.0055.03 NATURAL GAS SERVICE (DOL)
PROJECT	2,000	5,000	7,500
TOTAL	2,000	5,000	7,500

TEMPORARY SHORING SPECIAL

STATION	LOCATION	SPV.0165.01 TEMPORARY SHORING SPECIAL (SF)
15+76.00'RA'	RT	240
	TOTAL	240

GABION SITE ELEMENTS

STATION	LOCATION	SPV.0060.19 GABION PLANTER WISCONSIN SIGN (EACH)	SPV.0060.20 GABION PLANTER SAW BLADE (EACH)	SPV.0060.21 GABION PLANTER TREES (EACH)	SPV.0060.22 GABION COLUMN (EACH)	SPV.0060.23 LINEAR GABION PLANTER (EACH)	SPV.0060.24 CURVED GABION PLANTER (EACH)	SPV.0060.25 GABION COLUMN INTERPRETIVE SIGN (EACH)	SPV.0060.26 GABION COLUMN FENCE (EACH)
8+98'RA'	RT	1							
10+02'RA'	RT		1						
10+19'RA'	RT			1					
9+86'RA'	RT			1					
6+50'RA'	RT				1				
6+81'RA'	RT				1				
6+58'RA'	RT				1				
6+70'RA'	RT				1				
7+17'RA'	RT					1			
9+01'RA'	RT					1			
10+71'RA'	RT						1		
10+49'RA'	RT							2	
9+55'RA'	RT							2	
10+02'RA'	RT								1
	TOTAL	1	1	2	4	2	1	4	1

LANDSCAPE ITEMS

STATION	LOCATION	632.9101 LANDSCAPE PLANTING SURV & CARE CYCLES (EACH)	SPV.0035.04 LIMESTONE SCREENINGS (CY)	SPV.0060.07 FLAGPOLES (EACH)	SPV.0060.08 BENCHES (EACH)	SPV.0060.13 MOVING HISTORICAL SIGN (EACH)	SPV.0060.15 MOVING VETERANS SIGN (EACH)	SPV.0060.16 PET WASTE STATION (EACH)	SPV.0060.17 PICNIC SHELTER (EACH)	SPV.0060.18 PORTABLE PLANTER (EACH)	SPV.0090.09 STAINLESS STEEL HANDRAIL (LF)
10+56'RA'	RT			1							
10+67'RA'	RT			1							
1+28'RL'	RT				1						59
53+18'S'	LT				1						
53+38'S'	LT				1						
9+88'RA'	RT				1						
10+17'RA'	RT				1						
11+31'RA'	RT				1						
9+46'RA'	RT					1					
10+58'RA'	RT					1					
10+63'RA'	RT						1				
59+74'S'	RT							1			
7+21'RA'	RT								1		
9+19'RA'	RT								1		
12+01'RA'	RT								1		
10+02'RA'	RT									1	
UNDISTRIBUTED		20	60								
	TOTAL	20	60	2	6	2	1	1	3	1	59

PICNIC TABLES SINGLE PEDESTAL

STATION	LOCATION	999.1800.S PICNIC TABLES SINGLE PEDESTAL (EACH)
6+50'RA'	RT	1
7+21'RA'	RT	1
8+67'RA'	RT	1
8+55'RA'	LT	1
9+19'RA'	LT	1
10+69'RA'	RT	1
11+01'RA'	RT	1
11+24'RA'	RT	1
12+01'RA'	RT	1
12+61'RA'	RT	1
	TOTAL	10

RECYCLE / TRASH / SNUFFER RECEPTACLES

STATION	LOCATION	SPV.0060.05 SALVAGE TRASH RECEPTACLE (EACH)	SPV.0060.06 SALVAGE CIGARETTE SNUFFER (EACH)	SPV.0060.09 TRASH RECEPTICAL (EACH)	SPV.0060.10 SALVAGE RECYCLE RECEPTACLE (EACH)
UNDIST		10	2	2	17
	TOTAL	10	2	2	17

UNDERGROUND COPPER WATER LINE

STATION	-	STATION	LOCATION	SPV.0090.04 2-INCH (LF)	SPV.0090.06 1-INCH (LF)
7+92.99'RA'	-	9+65.57'RA'	52.0' RT - 98.0' RT	139	
9+65.57'RA'	-	10+76.10'RA'	68.7' RT - 61.8' RT	224	
10+40.24'RA'	-	12+96.65'RA'	73.7' RT - 42.9' RT		372
			TOTAL	363	372

SANITARY SEWER PIPING

FROM	-	TO	SPV.0090.02 SANITARY SEWER PVC 6-INCH (LF)	SPV.0090.03 SANITARY SEWER PVC 8-INCH (LF)	612.0902.S INSULATION BOARD POLYSTYRENE 2-INCH (SY)	SPV.0090.05 CONSTRUCTION STAKING SANITARY SEWER (LF)	INLET ELEVATION	DISCHARGE ELEVATION	SLOPE
BLD	-	1S		11	5	11	653.35	653.31	0.40%
1S	-	2S		105	47	105	653.24	652.82	0.40%
2S	-	3S		109	49	109	652.74	652.30	0.40%
MBLD	-	4S	73		33	73	655.05	654.26	1.08%
4S	-	2S	144		64	144	654.26	652.82	1.00%
		TOTALS	217	225	198	442			

* NON-BID ITEM: FOR INFORMATION ONLY

SANITARY SEWER STRUCTURES

STRUCTURE	STATION	LOCATION	SPV.0060.12 SAN SEWER MANHOLE 4-FT (EACH)	611.0535 MANHOLE COVERS TYPE J-SPECIAL (EACH)	SPV.0060.34 CLEANOUT 6-INCH (EACH)	RIM ELEV	INVERT** ELEV	DEPTH*** FT
1S	10+30'RA'	52.2' RT	1	1		657.70	653.24	3.23
2S	14+95'RA'	39.6' LT	1	1		657.70	652.74	3.73
3S	15+65'RA'	35.8' RT	1	1		659.19	652.22	5.74
4S	13+51'RA'	40.0' LT			1	658.70	654.26	
ES1***	14+64'RA'	59.8' RT				659.74	651.66	
		TOTAL	3	3	1			

* STATIONS AND OFFSETS ARE TO CENTER OF STRUCTURE
** DEPTH = RIM ELEV - TOP OF STRUCTURE BASE ELEV - COVER HEIGHT - 6 -INCH ADJUSTMENT RING HEIGHT
*** PROVIDED FOR INFORMATION ONLY.

FENCE, CHAIN LINK

STATION	-	STATION	LOCATION	616.0206 FENCE CHAIN LINK 6-FT (LF)	616.0329 GATES CHAIN LINK 01. 8-FT (EACH)	616.0329 GATES CHAIN LINK 02. 4-FT (EACH)	SPV.0090.01 FENCE CHAIN LINK SLATTED 8-FT (LF)	SPV.0060.01 GATES CHAIN LINK SLATTED 8-FT (EACH)	SPV.0060.02 GATES CHAIN LINK SLATTED 12-FT (EACH)
0+00'RA'	-	2+00'RA'	RT	188					
12+89'RA'	-	13+20'RA'	RT				153	2	1
14+42'RA'	-	19+66'RA'	RT	518	2	1			
			TOTAL	706	2	1	153	2	1

PERENNIALS

STATION	-	STATION	LOCATION	SPV.0060.27 KARL FOERSTER FREATHER REED GRASS 4-INCH POT (EACH)	SPV.0060.28 STELL D'ORO DAYLILLY 4-INCH POT (EACH)	SPV.0060.29 FLAME GRASS 4-INCH POT (EACH)	SPV.0060.30 WALKER'S LOW CATMINT 4-INCH POT (EACH)	SPV.0060.31 EMERALD PINK CREEPING PHLOX 4-INCH POT (EACH)	SPV.0060.32 NORTHWIND SWITCH GRASS 4-INCH POT (EACH)	SPV.0060.33 PRAIRIE DROP SEED 4-INCH POT (EACH)
5+50.00'RA'	-	10+82.00'RA'	RT	26	48	19	10	66	3	110
			TOTAL	26	48	19	10	66	3	110

CONSTRUCTION STAKING

STATION	-	STATION	LOCATION	650.4500 CONSTRUCTION STAKING SUBGRADE (LF)	650.6500 CONSTRUCTION STAKING STRUCTURE LAYOUT 01. R-32-65 (LS)	650.6500 CONSTRUCTION STAKING STRUCTURE LAYOUT 02. S-32-67 (LS)	650.8500 CONSTRUCTION STAKING ELEC INSTALL 01. 1070-00-71 (LS)	650.9910 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL 01. 1070-00-71 (LS)	650.9920 CONSTRUCTION STAKING SLOPE STAKES (LF)	SPV.0105.09 CONSTRUCTION STAKING JOINT LAYOUT (LS)
0+15.58'RA'		24+05.55'RA'	SITE	2,390	1	1	1	1	2,390	1
100+00.00'RA'		108+13.28'RA'	SITE	813					813	
		TOTAL		3,203	1	1	1	1	3,203	1

TRAFFIC COUNTER

STATION	-	STATION	LOCATION	602.0410 CONCRETE SIDEWALK 5-INCH (SF)	652.0210 CONDUIT RIGID NON-METALLIC SCH 40 1-INCH (LF)	652.0225 CONDUIT RIGID NON-METALLIC SCH 40 2-INCH (LF)	652.0800 CONDUIT LOOP DETECTOR (LF)	653.0115 PULL BOXES STEEL 12X36-INCH (EACH)	654.0101 CONCRETE BASE TYPE 1 (EACH)	655.0800 LOOP DETECTOR WIRE (LF)	SPV.0165.02 CONSTRUCTION STAKING SIDEWALK (SF)
1+90.00'RA'			LT & RT	9	27	12	60	1	1	279	9
		TOTAL		9	27	12	60	1	1	279	9

SAWING ASPHALT

STATION	LOCATION	690.0150 SAWING ASPHALT (LF)
14+81.00'RA'	17' RT	24
TOTAL		24

FERTILIZER, SEEDING AND SOD

STATION	-	STATION	LOCATION	629.0210 FERTILIZER TYPE B (CWT)	630.0120 SEEDING MIXTURE NO. 30 (LBS)	630.0140 SEEDING MIXTURE NO. 40 (LBS)	630.0175 SEEDING MIXTURE NO. 75 (LBS)	630.0200 TEMPORARY SEEDING (LBS)	SPV.0180.02 WET MESIC PRAIRE SEED (SY)	SPV.0180.03 SOD - KENTUCKY BLUE AND FESCUE (SY)	631.0300 SOD WATER (MGAL)
100+00.00'TP'	-	108+54.47'TP'	RT	2	24			35	860		
1+00'RA'		5+50.00'RA'	RT	1	12		2	20			
5+50.00'RA'	-	10+82.00'RA'	RT	2	10	22	6	55		627	
10+82.00'RA'	-	18+00.00'RA'	LT	1	20			29			
10+82.00'RA'	-	18+00.00'RA'	RT	14	10	32		61		940	
18+00.00'RA'	-	24+05.00'RA'	RT	2	37			55			
			BASIN B	3	35			51	979		
			UNDISTRIBUTED								6
			TOTAL	23	148	54	8	306	1,839	1,567	6

LANDSCAPING MULCH

STATION	-	STATION	LOCATION	SPV.0035.01 DOUBLE SHREDDED HARDWOOD MULCH 3-INCH THICK (CY)	SPV.0035.02 PLANTER SOIL (CY)	SPV.0090.07 STEEL LANDSCAPE EDGING 1/4" X 6" BLACK (LF)	SPV.0195.01 MISSISSIPPI RIVER ROCK 3-INCH THICK (TON)
6+75'RA'	-	10+90'RA'	RT	12	25	114	25
100+00'TP'	-	108+54'TP'	RT			648	117
			TOTAL	12	25	762	142

CONDUIT & WIRE

LOCATION	652.0225 RIGID NONMETALLIC SCHEDULE 40 2-INCH (LF)	655.0610 ELEC. WIRE LIGHTING 12 AWG (LF)	655.0615 ELEC. WIRE LIGHTING 10 AWG (LF)	655.0620 ELEC. WIRE LIGHTING 8 AWG (LF)	655.0625 ELEC. WIRE LIGHTING 6 AWG (LF)	SPV.0090.10 CABLE IN DUCT 3-1/0 AWG (LF)	SPV.0090.11 ELEC. WIRE POWER 6 AWG (LF)	655.0144 CABLE IN DUCT 4-4AWG (LF)
SITE	9,396	11,738	7,394	6,884	6,255	443	443	211
TOTAL	9,396	11,738	7,394	6,884	6,255	443	443	211

PULLBOXES

PB#	STATION	LOCATION	653.0115 PULL BOXES STEEL 12X36-INCH (EACH)	653.0130 PULL BOXES STEEL 18X36-INCH (EACH)	653.0135 PULL BOXES STEEL 24X36-INCH (EACH)	653.0145 PULL BOXES STEEL 24X48-INCH (EACH)
PB1	9+72.47'RA'	RT 51.184'				1
PB2	9+72.49'RA'	LT 34.316'		1		
PB3	10+92.74'RA'	LT 34.296'	1			
PB4	12+49.90'RA'	LT 32.931'	1			
PB5	17+29.06'RA'	RT 13.500'	1			
PB6	8+69.75'RA'	RT 42.949'				1
PB7	7+73.87'RA'	RT 29.000'				1
PB8	105+65.25'TP'	RT 6.924'				1
PB9	103+82.67'TP'	RT 11.199'		1		
PB10	2+15.79'RA'	RT 20.816'	1			
PB11	52+57.72'S'	LT 13.584'			1	
PB12	3+52.44'RA'	LT 36.731'	1			
PB13	2+53.28'RA'	LT 108.913'	1			
	TOTAL		6	2	1	4

ROADWAY & AREA LIGHTING

FIXTURE	STATION	LOCATION	654.0106 CONCRETE BASE TYPE 6 (EACH)	657.0255 TRANSFORMER BASES STANDARD 11 1/2-INCH BOLT CIRCLE (EACH)	657.0327 POLES TYPE 6 (LF)	657.0610 LUMINAIRE ARMS SINGLE MEMBER 4 1/2-INCH CLAMP 6-FT (EACH)	657.0715 LUMINAIRE ARMS TRUSS TYPE 4 1/2-INCH CLAMP 15-FT (EA)	659.1115 LUMINAIRES UTILITY LED-A LED A (EACH)	659.1130 LUMINAIRES UTILITY LED D (EACH)
LED-A-1	0+70.53'RA'	RT 21.176'	1	1	1	1		1	
LED-A-2	2+07.09'RA'	LT 20.470'	1	1	1	2		2	
LED-A-3	3+58.45'RA'	RT 15.995'	1	1	1	1		1	
LED-A-4	5+48.32'RA'	RT 22.061'	1	1	1	1		1	
LED-A-5	6+76.45'RA'	LT 13.375	1	1	1	1		1	
LED-A-6	8+53.93'RA'	LT 30.478'	1	1	1		2	2	
LED-A-7	9+81.34'RA'	LT 36.035'	1	1	1		2	2	
LED-A-8	10+81.34'RA'	LT 36.019'	1	1	1		2	2	
LED-A-9	11+81.34'RA'	LT 36.002'	1	1	1		2	2	
LED-A-10	12+84.63'RA'	RT 27.240'	1	1	1	1		1	
LED-A-11	18+71.54'RA'	RT 14.875'	1	1	1	1		1	
LED-A-12	20+31.53'RA'	RT 17.698'	1	1	1	1		1	
LED-A-13	22+29.30'RA'	RT 21.743'	1	1	1	1		1	
LED-A-14	23+32.79'RA'	RT 18.512'	1	1	1	1		1	
LED-D-1	102+15.41'TP'	RT 7.997'	1	1	1		1		1
LED-D-2	103+40.41'TP'	RT 8.006'	1	1	1		1		1
LED-D-3	6+53.49'RA'	LT 52.096	1	1	1		1		1
LED-D-4	106+71.00'TP'	RT 8.020'	1	1	1		1		1
LED-D-5	107+73.51'TP'	RT 7.998'	1	1	1		1		1
LED-D-6	101+17.65'TP'	LT 61.888'	1	1	1		1		1
LED-D-7	101+62.65'TP'	LT 140.409'	1	1	1		1		1
	TOTAL		21	21	21	11	15	19	7

WALKWAY LIGHTING UNITS

FIXTURE	STATION	LOCATION	SPV.0060.11 WALKWAY LIGHTING UNITS (EACH)	654.0111 CONCRETE BASE TYPE 11 (EACH)	657.0100 PEDESTAL BASE (EACH)
LED-E-1	5+99.30'RA'	RT 35.446'	1	1	1
LED-E-2	50+73.71'S'	LT 10.082'	1	1	1
LED-E-3	6+30.28'RA'	RT 34.530'	1	1	1
LED-E-4	51+55.16'S'	LT 13.008'	1	1	1
LED-E-5	52+22.38'S'	LT 12.993'	1	1	1
LED-E-6	52+99.56'S'	RT 5.004'	1	1	1
LED-E-7	53+56.56'S'	RT 5.010'	1	1	1
LED-E-8	54+33.26'S'	LT 10.048'	1	1	1
LED-E-9	9+75.25'RA'	RT 42.967'	1	1	1
LED-E-10	10+37.75'RA'	RT 42.977'	1	1	1
LED-E-11	10+86.75'RA'	RT 42.985'	1	1	1
LED-E-12	11+29.75'RA'	RT 42.992'	1	1	1
LED-E-13	11+76.47'RA'	RT 43.000'	1	1	1
LED-E-14	55+83.48'S'	LT 9.978'	1	1	1
LED-E-15	58+68.45'S'	LT 9.993'	1	1	1
LED-E-16	58+04.87'S'	LT 9.966'	1	1	1
LED-E-17	57+25.87'S'	LT 9.968'	1	1	1
LED-E-18	55+83.48'S'	LT 9.978'	1	1	1
LED-E-19	56+55.92'S'	LT 9.998'	1	1	1
LED-E-20	9+31.75'RA'	RT 42.960'	1	1	1
LED-E-21	8+69.75'RA'	RT 42.949'	1	1	1
LED-E-22	7+78.95'RA'	RT 15.701'	1	1	1
LED-E-23	7+46.42'RA'	RT 34.998'	1	1	1
LED-E-24	6+93.19'RA'	RT 34.790'	1	1	1
LED-E-25	7+59.90'RA'	LT 20.713'	1	1	1
LED-E-26	105+52.06'TP'	RT 15.242'	1	1	1
	TOTAL		26	26	26

CONDUIT - COMMUNICATION

STATION	LOCATION	671.0112 CONDUIT HDPE 1-DUCT 2-INCH (LF)	673.0105 COMMUNICATION VAULT TYPE 1 (EACH)
	PROJECT	792	
17+81.00'RA'	16' LT		1
TOTAL		792	1

GABION & ACCENT LIGHTING

GABION OR FIXTURE #	STATION	LOCATION	SPV.0060.35 FLOODLIGHT LIGHTING FIXTURE (EACH)	SPV.0060.14 WALL MOUNTED LIGHTING FIXTURE (EACH)	SPV.0060.36 FLEXIBLE LIGHTING FIXTURE (EACH)	SPV.0090.37 FLOODLIGHT LANDSCAPE LIGHTING FIXTURE (EACH)
1				3		
2					1	2
3					1	2
4				2		
5					1	2
6				3		
7					1	2
8				3		
9				1		
10				1		
11				1		
12				1		
LED-F-1	10+66.47'RA'	RT 44.482'	1			
LED-F-2	10+60.16'RA'	RT 50.356'	1			
LED-F-3	22+21.67'RA'	LT 132.361'	1			
LED-F-4	22+27.84'RA'	LT 131.903'	1			
LED-K-1						1
LED-K-2						1
LED-K-3						1
LED-K-4						1
LED-K-5						1
TOTAL			4	15	4	13

BENCHMARKS				
NO	STATION	LOCATION	DESCRITIOIN	ELEVATION
BM9051	6+13.92	68.9' LT	TOP OF WELL CAP.	659.16
BM9052	22+16.96	116.3' LT	SE COR. RET. WALL OF WELCOME TO WISCONSIN SIGN.	657.64

CONSTRUCTION OF THIS STRUCTURE AND PIPE IS PAID FOR UNDER PROJECT 1071-06-81, CONTRACTOR SHALL COORDINATE WITH THE CONTRACTOR OF THAT PROJECT

TO TRUCK PARKING AREA

EB I-90

1+00'RA'

2+00'RA'

3+00'RA'

4+00'RA'

5+00'RA'

6+00'RA'

7+00'RA'

MATCHLINE STA 7+00'RA'

27'

13.5'

13.5'

PC: 0+85.58'RA'

PT: 2+86.34'RA'

2+00.64, 23.9' RT
END FENCE
AT END OF WALL

SHEET PILE WALL

1+43.11 24.7' RT
WALL MID PT

FENCE
0+85.40
24.7' RT

SLOPE INTERCEPT

FENCE
0+01.37
24.7' RT

0+00.00, 17.2' RT
BEGIN FENCE
NEXT TO BRIDGE

BEGIN PROJECT 1070-00-71
STA. 0+15.58 'RA'
Y = 148988.066
X = 439699.187
MATCH CONSTRUCTION OF
PROJECT 1071-06-81

BM9051

CURB FACE DROP

INFILTRATION BASIN

28'

BUS PARKING

'RA' LINE

PC: 5+09.64'RA'

PT: 6+21.09'RA'

SLOPE INTERCEPT

EXISTING STORM SEWER

N

VCL = 100.00
K = 151.50

VCL = 200.00
K = 111.11

VCL = 200.00
K = 158.46

VPC STA 1+20.00
VPC EL 653.17

VPI STA 1+70.00
VPI EL 653.44

VPT STA 2+20.00
VPT EL 654.04

VPC STA 3+07.00
VPC EL 655.08

VPI STA 4+07.00
VPI EL 656.28

VPT STA 5+07.00
VPT EL 655.68

VPC STA 5+51.50
VPC EL 655.42

VPI STA 6+51.50
VPI EL 654.82

FINISHED ℄ PROFILE
'RA' LINE

+0.54%

+1.20%

-0.60%

EXISTING ℄ GROUND

STA 0+15.58
EL. 652.61

EXISTING ℄ ELEVATIONS

FINISHED ℄ ELEVATIONS

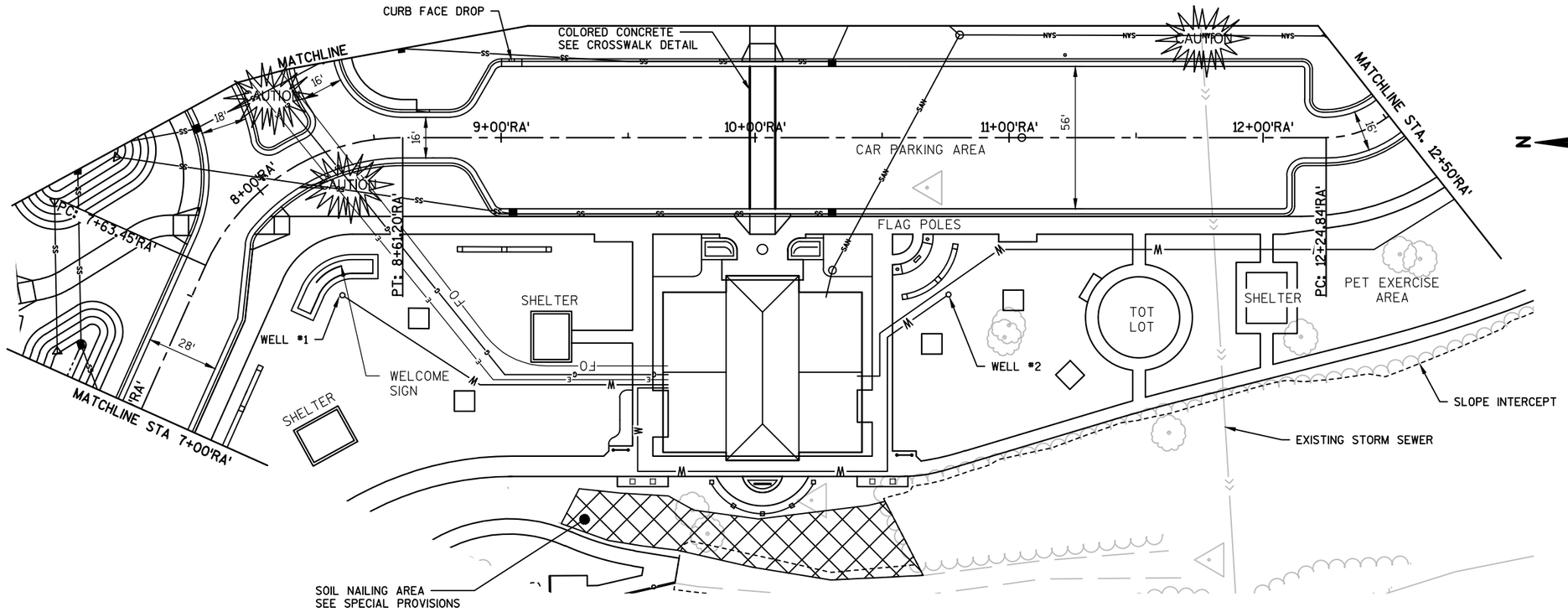
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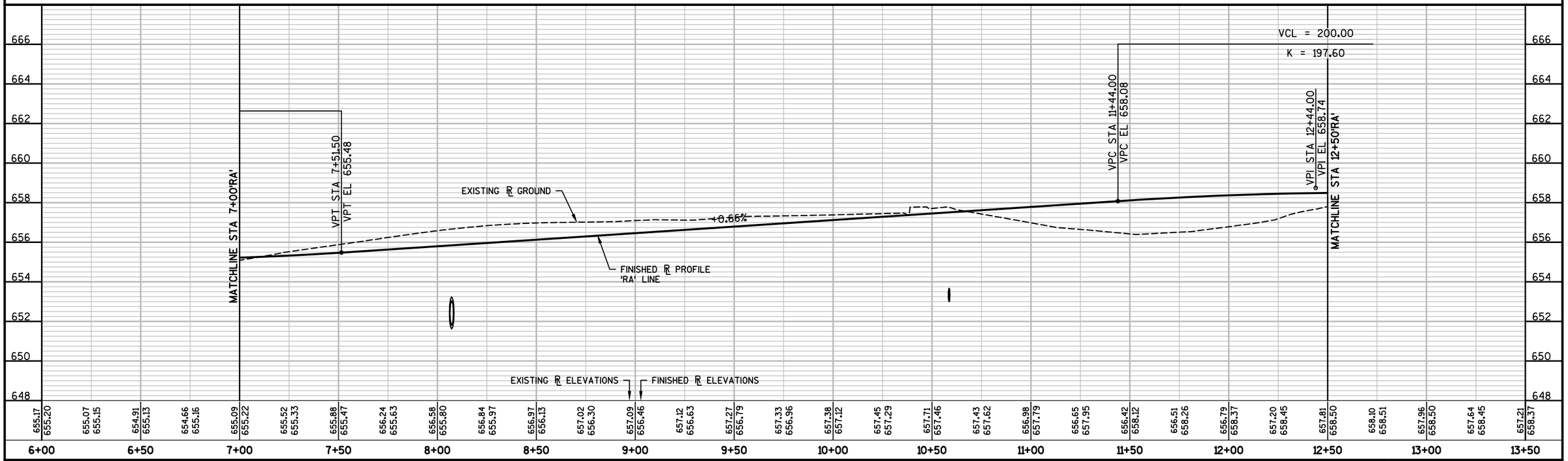
652.52 652.66 | 652.62 652.79 | 652.78 652.93 | 652.99 653.06 | 653.03 653.20 | 652.83 653.36 | 652.32 653.57 | 653.29 653.81 | 654.32 654.10 | 653.89 654.40 | 653.77 654.70 | 654.38 655.00 | 654.86 655.29 | 655.18 655.52 | 655.51 655.69 | 655.74 655.81 | 655.88 655.87 | 655.92 655.88 | 655.85 655.83 | 655.73 655.72 | 655.61 655.58 | 655.35 655.43 | 655.25 655.29 | 655.17 655.20 | 655.07 655.15 | 654.91 655.13 | 654.66 655.16 | 655.09 655.22 | 655.52

0+00 0+50 1+00 1+50 2+00 2+50 3+00 3+50 4+00 4+50 5+00 5+50 6+00 6+50 7+00

PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	PLAN AND PROFILE	SHEET E

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LAYOUT NAME - PLAN AND PROFILE
PLOT DATE : 12/17/2015 11:38 PM PLOT BY : NATE MCLAUGHLIN PLOT NAME : PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 44



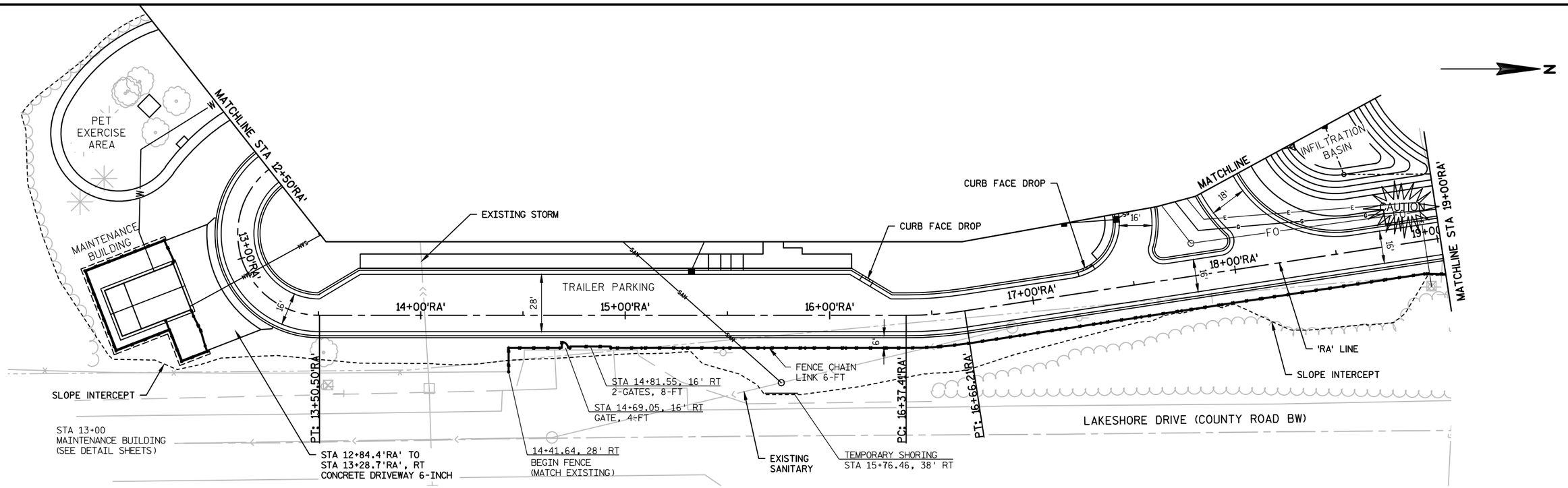


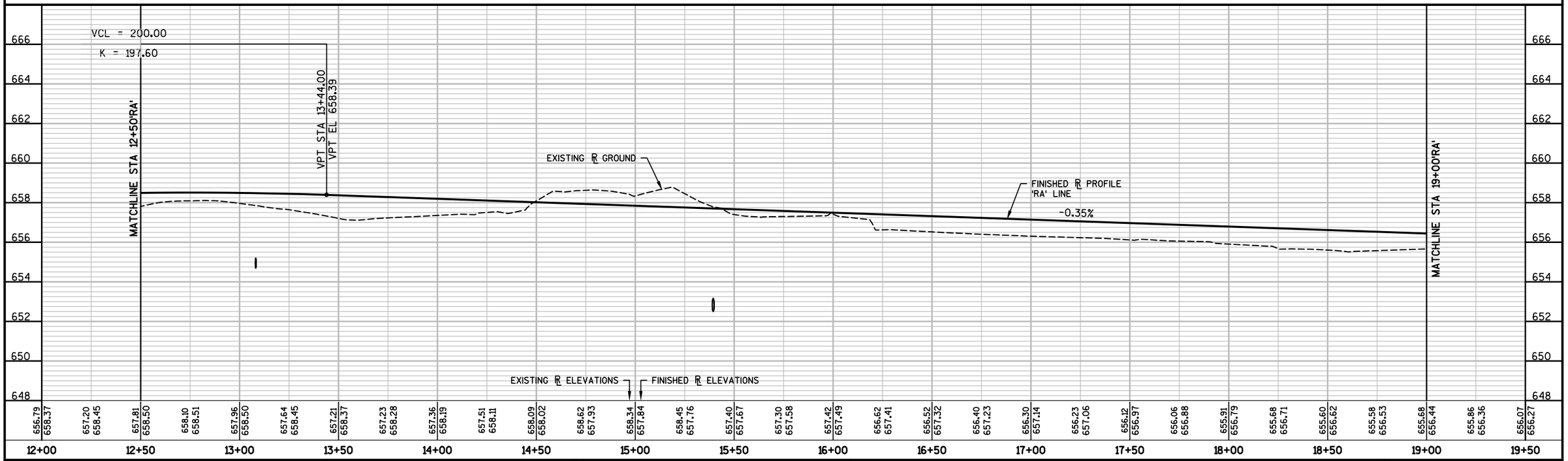
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LAYOUT NAME - PLAN AND PROFILE

PLOT DATE : 12/17/2015 11:39 PM PLOT BY : NATE MCLAUGHLIN PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 44



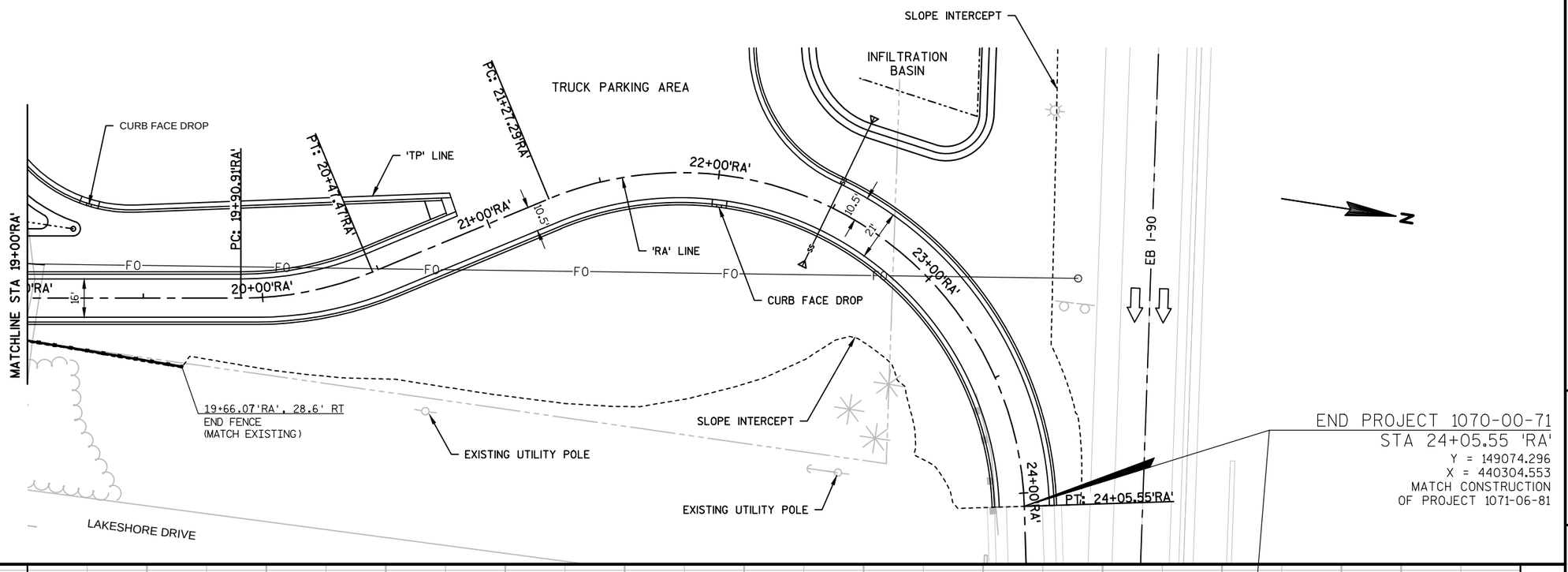


PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	PLAN AND PROFILE	SHEET	E

FILE NAME : P:\UZ\W\WITCO\131411\5-FINAL-DSGN\51-CONST-DWGS-CAD\40-TRANSHWY\PLN SHTS\050101-PP.DWG
LAYOUT NAME - PLAN AND PROFILE

PLOT DATE : 12/17/2015 11:39 PM PLOT BY : NATE MCLAUGHLIN PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 44

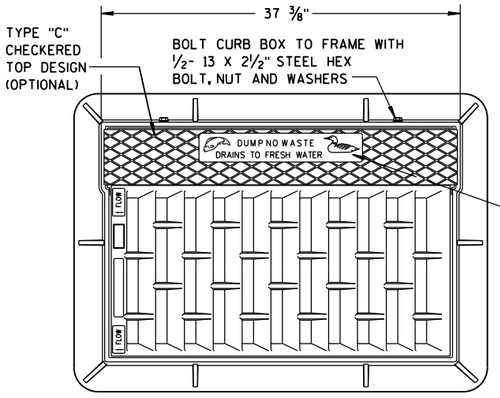


PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	PLAN AND PROFILE	SHEET 148 E

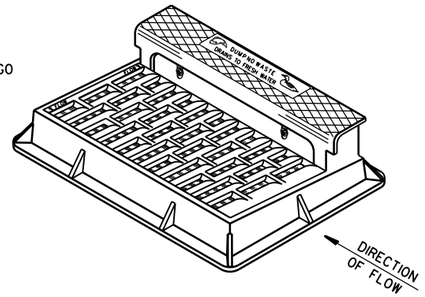
Standard Detail Drawing List

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
08A05-19C	INLET COVERS TYPE F, HM, HM-S, S, T, V, HM-GJ, & HM-GJ-S
08A05-19D	INLET COVER TYPE BW, MANHOLE COVERS, TYPE K, J, J-S, L & M
08B09-01	MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER
08C06-01	INLETS 3-FT AND 4-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
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
09B04-11	PULL BOX
09C02-07	CONCRETE BASES, TYPES 1, 2, 5, & 6
09C03-04	TRANSFORMER/PEDESTAL BASES
09E01-14E	POLE MOUNTINGS FOR LIGHTING UNITS, TYPE 6 (35 FEET)
09E01-14G	HARDWARE DETAILS FOR POLE MOUNTINGS
09E03-05	NON-FREEWAY LIGHTING UNIT POLE WIRING
09E04-06	WALKWAY LIGHTING UNIT AND CONCRETE BASE, TYPE 11
09F15-04B	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)
09H09-01	COMMUNICATION VAULT
10A01-03	ELECTRICAL HANDHOLE WIRING
10A02-03	IDENTIFICATION PLAQUES LIGHT POLES
10A07-02	ELECTRICAL DETAILS GROUND MOUNT LIGHT POLES PHASE-TO-PHASE SYSTEMS
11B02-02	CONCRETE MEDIAN NOSE
12A03-10	NAME PLATE (STRUCTURES)
12A04-03	STRUCTURE IDENTIFICATION PLAQUES, RAMP GATES, SIGN BRIDGES & OVERHEAD SIGN SUPPORTS & TRAFFIC SIGNALS
13C01-18	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
13C13-08	URBAN DOWELED CONCRETE PAVEMENT
13C18-03A	CONCRETE PAVEMENT JOINTING
13C18-03C	CONCRETE PAVEMENT JOINT TYPES
13C18-03D	CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES
14A02-01	TREE PLANTING DETAIL
14C02-02	HISTORICAL MARKER CONSTRUCTION
14C07-03A	PICNIC TABLE, SINGLE PEDESTAL
14C07-03B	PICNIC TABLE, SINGLE PEDESTAL
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
15B03-15A	FENCE CHAIN LINK
15B03-15B	FENCE CHAIN LINK
15C07-12A	PAVEMENT MARKING SYMBOLS
15C07-12C	PAVEMENT MARKING ARROWS
15C08-16F	PAVEMENT MARKING (ISLANDS)
15C25-02	42" DIAMETER CANTILEVER OVERHEAD SIGN SUPPORT BASE
15C33-01	STOP LINE AND CROSSWALK PAVEMENT MARKING
15D28-03	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
15D29-03	TRAFFIC CONTROL, VEHICLE ENTRANCE/EXIT OR HAUL ROAD

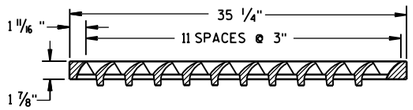
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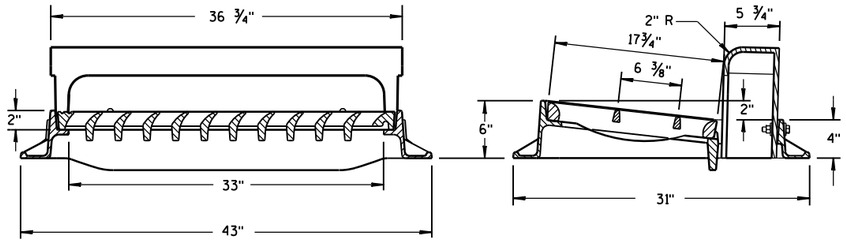


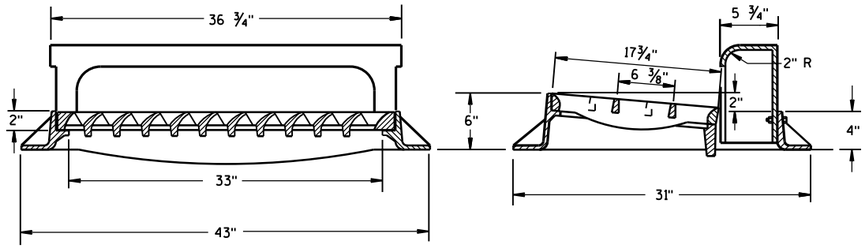
NOTE:
GRATE IS REVERSIBLE.



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

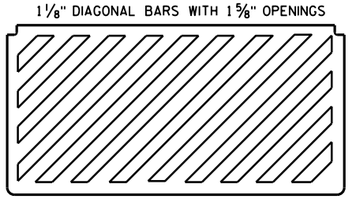






TYPE "H"

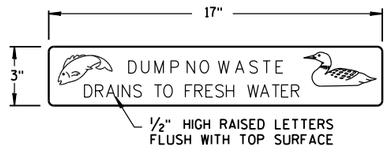
NOTE: EITHER CASTING IS ACCEPTABLE



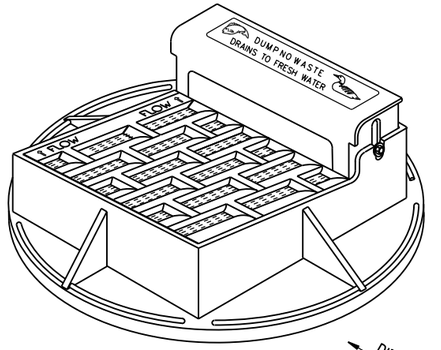
SPECIAL GRATE FOR TYPE "H" COVER

(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"

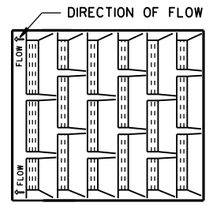
NOTE:
GRATE IS REVERSIBLE.

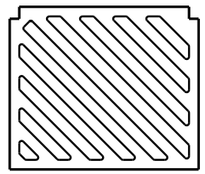
GENERAL NOTES

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.

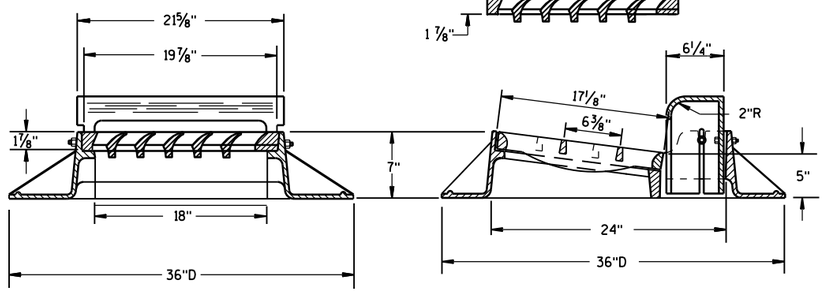




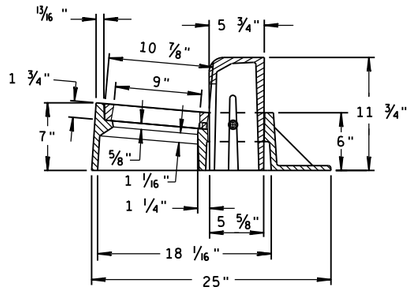
SPECIAL GRATE FOR TYPE "A" COVER

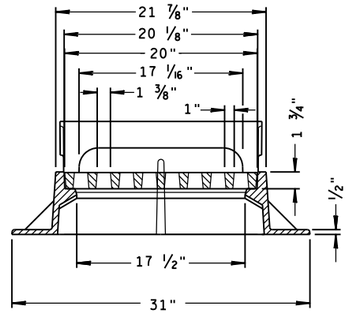
(MEASURES 19 3/4" X 17" X 1 7/8")

(NOTED AS TYPE A-S ON DRAINAGE TABLE)

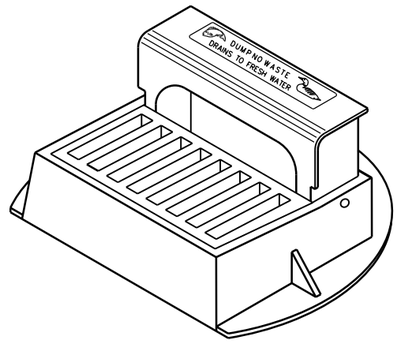


TYPE "A"





TYPE "Z"



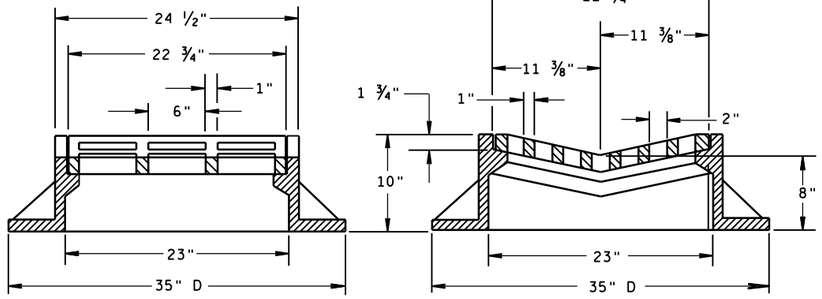
INLET COVERS
TYPE A, H, A-S, H-S & Z

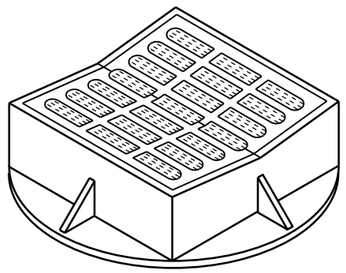
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11-27-13 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

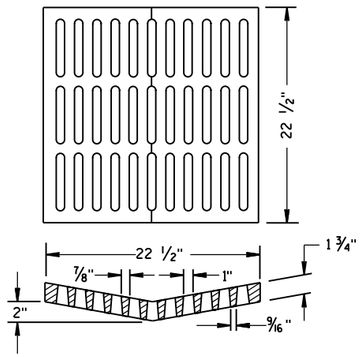
6

S.D.D. 8 A 5-19a



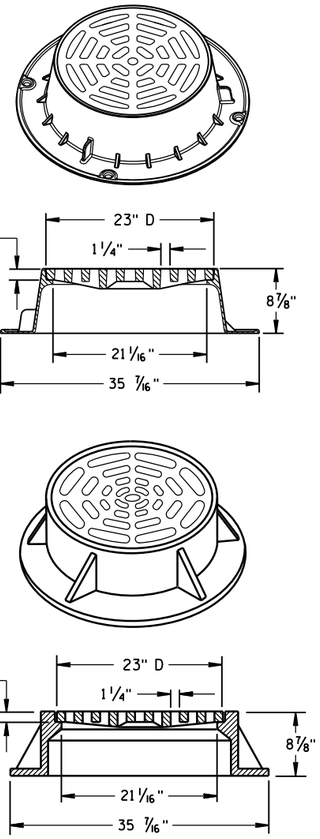


TYPE "B"



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"

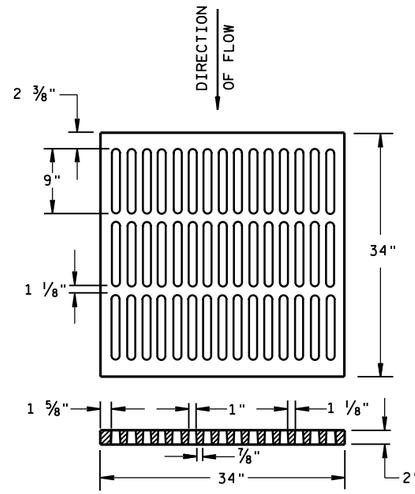
NOTE: EITHER CASTING IS ACCEPTABLE

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.

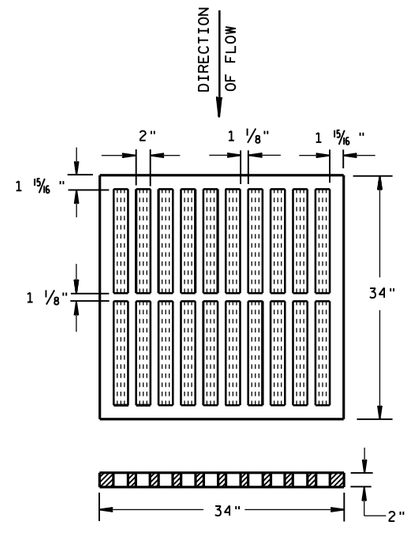
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.



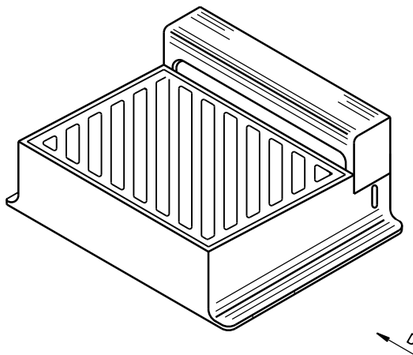
ALTERNATIVE TYPE "MS"

USE WHERE PEDESTRIAN OR BICYCLE TRAFFIC IS PERMITTED
NOTED AS TYPE MS-A ON THE DRAINAGE TABLE



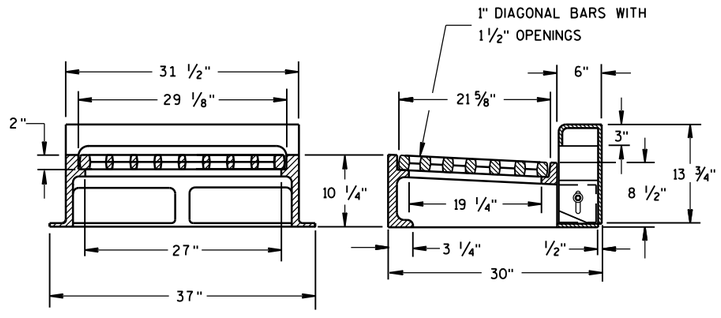
TYPE "MS"

USE ON FREEWAYS AND EXPRESSWAYS
NOTED AS TYPE MS ON DRAINAGE TABLE



DIRECTION OF FLOW

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"

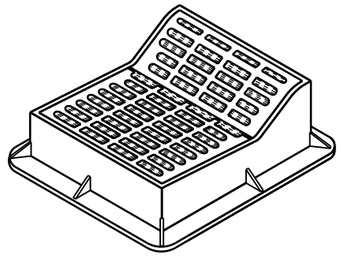
INLET COVERS
TYPE B, B-A, C,
MS, MS-A, & WM

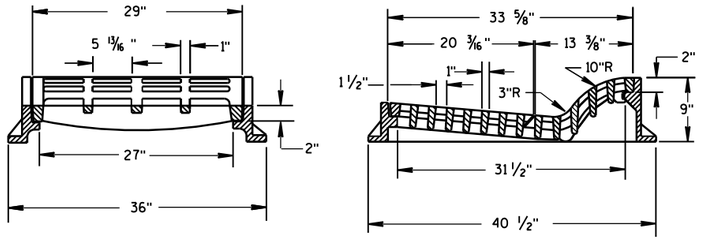
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/27/2013
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

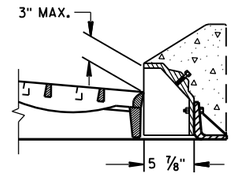
S.D.D. 8 A 5-19b





TYPE "F"

USE WITH TYPES A & D CONCRETE CURB & GUTTER, 36 INCH.



ALTERNATIVE CURB BOX FOR TYPE "HM" COVER

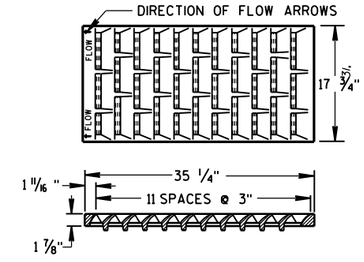
USE WITH TYPES G & J CONCRETE CURB & GUTTER, 30 INCH
NOTED AS TYPE HM-GJ ON DRAINAGE TABLE

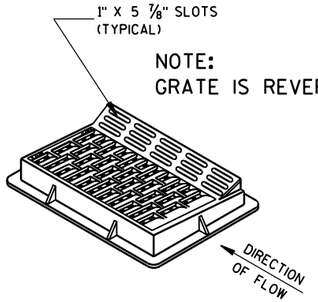
NOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM-GJ" COVER
NOTED AS TYPE HM-GJ-S ON DRAINAGE TABLE

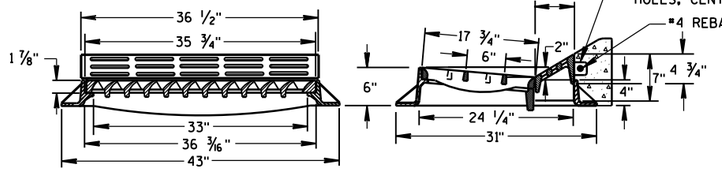
GENERAL NOTES

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 INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.



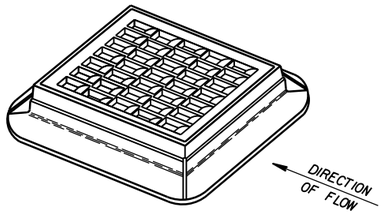


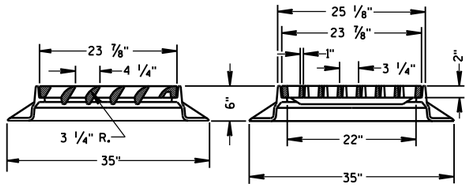


TYPE "HM"

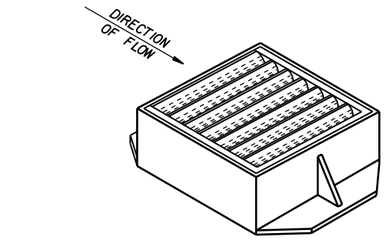
USE WITH TYPES A & D CONCRETE CURB & GUTTER, 36 INCH.

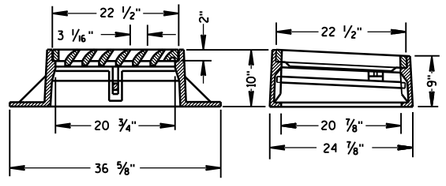
NOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM" COVER
NOTED AS TYPE HM-S ON DRAINAGE TABLE



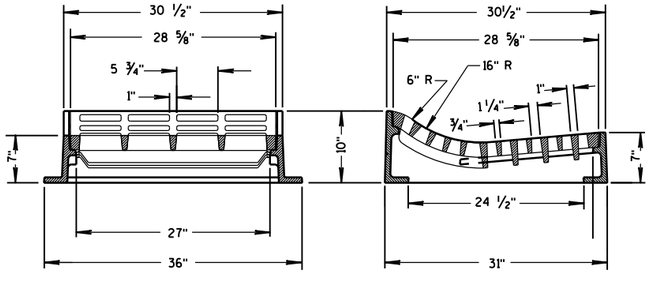


TYPE "S"



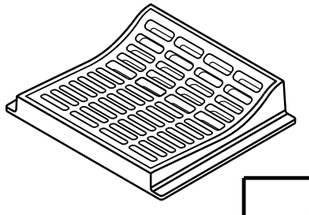


TYPE "V"



TYPE "T"

USE WITH TYPES R & T CONCRETE CURB & GUTTER, 36 INCH.



INLET COVERS
TYPE F, HM, HM-S, S, T, V, HM-GJ, & HM-GJ-S

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

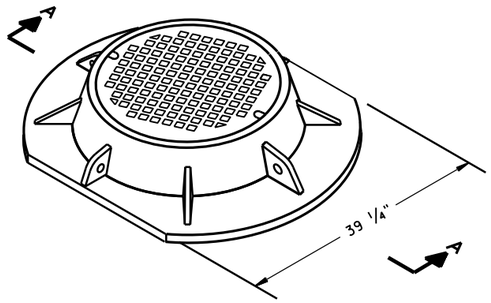
APPROVED
11/27/2013
DATE

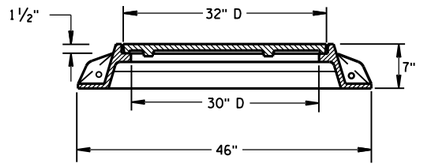
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

FHWA

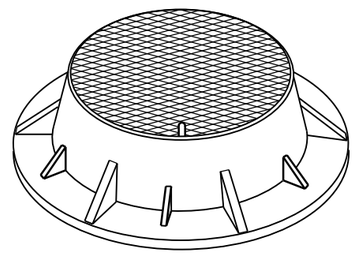
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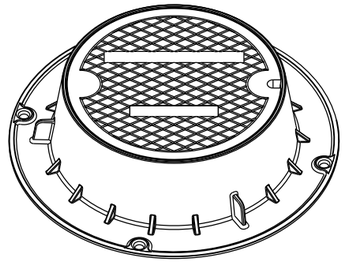
S.D.D. 8 A 5-19c

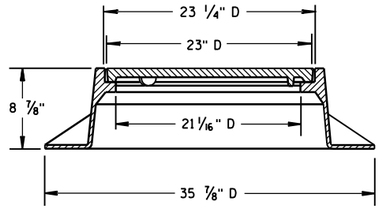


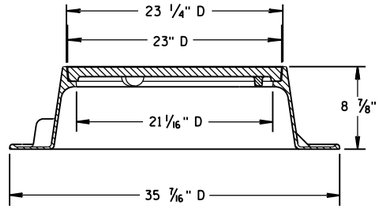


SECTION A-A
TYPE "K"









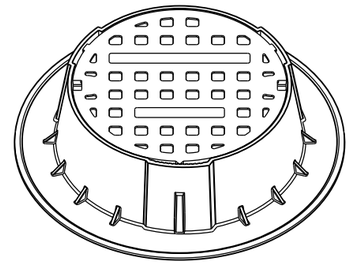
TYPE "J"
NOTE: EITHER CASTING IS ACCEPTABLE

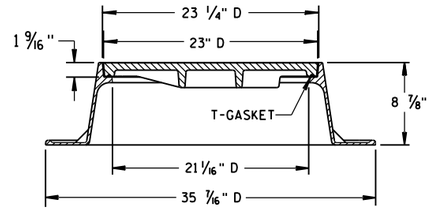
GENERAL NOTES

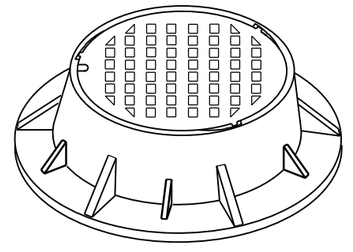
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

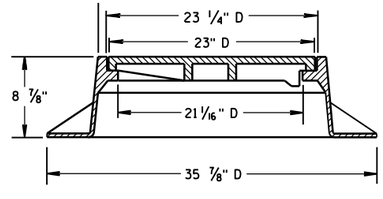
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR MANHOLE COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.

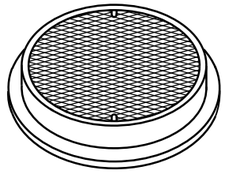


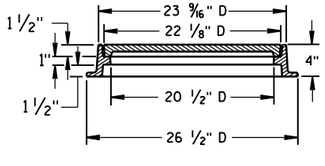




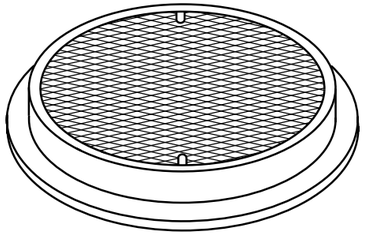


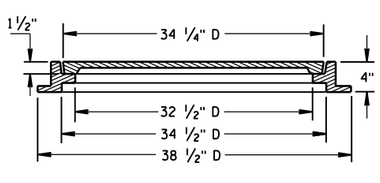
TYPE "J" SPECIAL
TYPE "B" NON-ROCKING SELF-SEAL LID
(NOTED AS TYPE J-S ON THE DRAINAGE TABLE)
NOTE: EITHER CASTING IS ACCEPTABLE



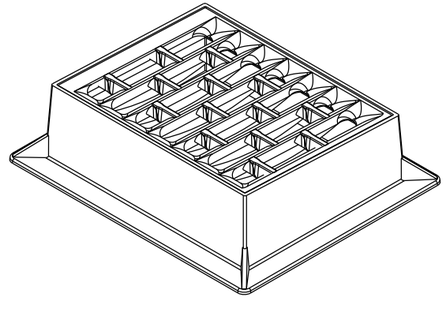


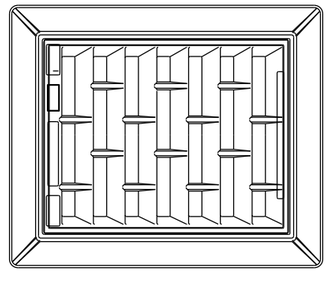
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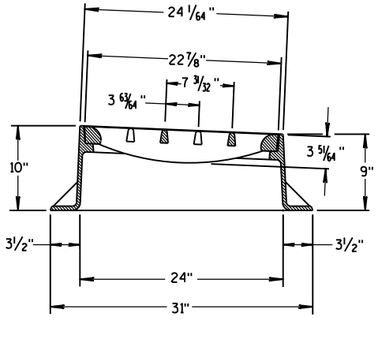


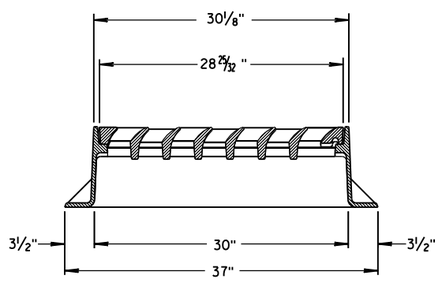


TYPE "M"









INLET COVER TYPE "BW"

INLET COVER TYPE BW
MANHOLE COVERS, TYPE K, J, J-S, L & M

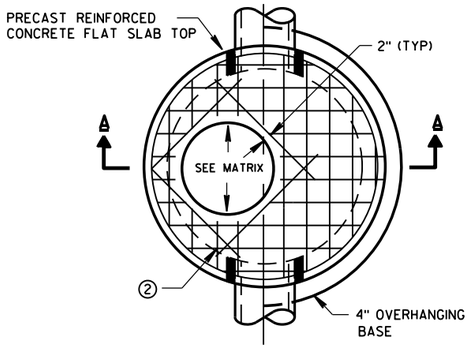
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/27/2013
DATE
FHWA

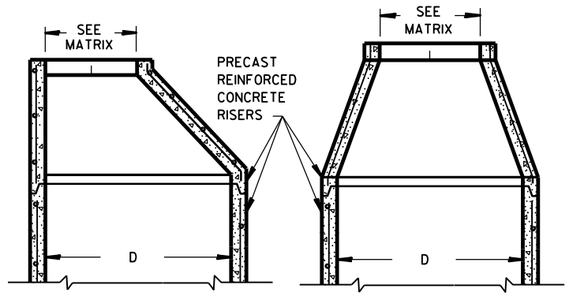
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER

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S.D.D. 8 A 5-19d

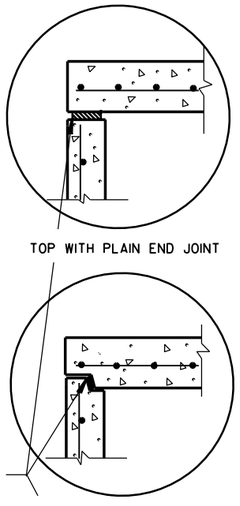


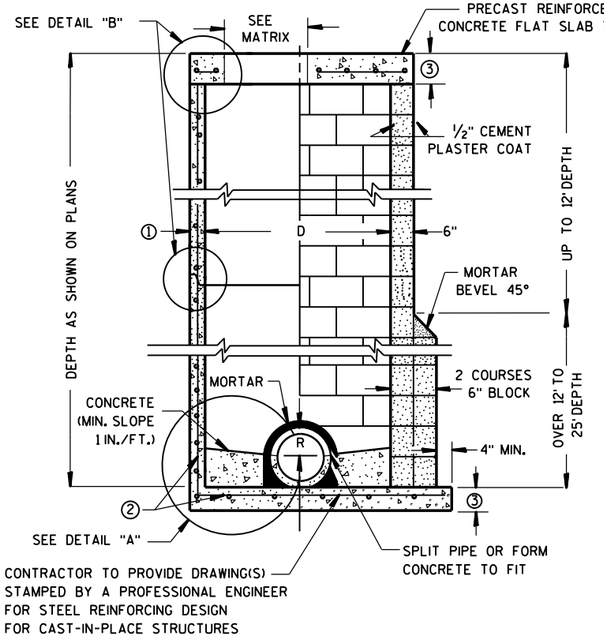
PLAN VIEW CIRCULAR OPENING



OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP

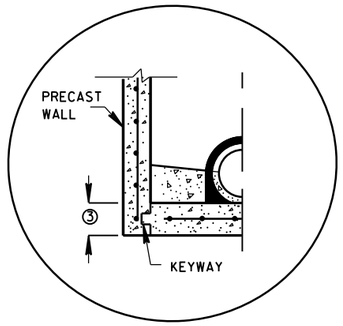
OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP



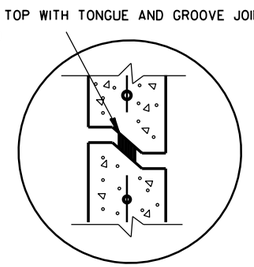


PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

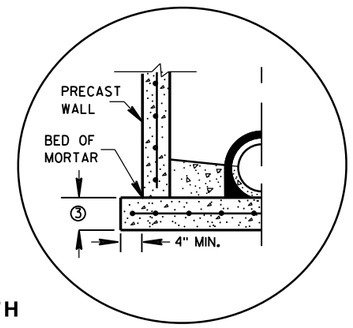
CONCRETE BLOCK WITH CAST-IN-PLACE OR PRECAST REINFORCED CONCRETE BASE ②



PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION

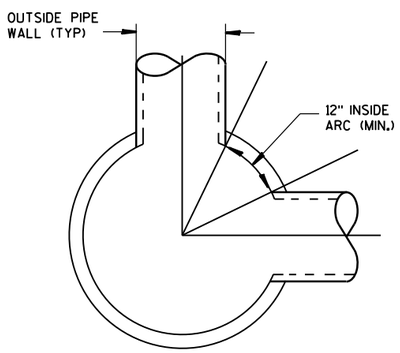


DETAIL "B"



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

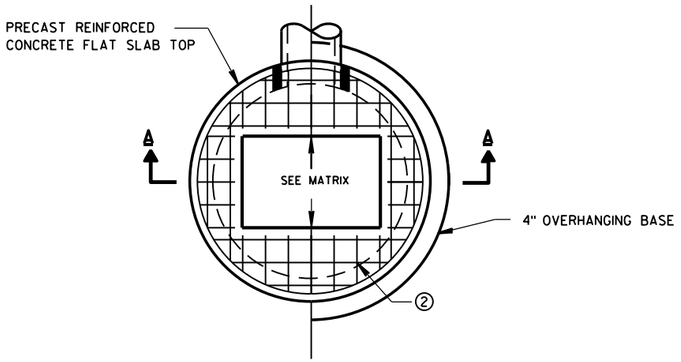
MANHOLE SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	180° SEPARATION (IN)	90° SEPARATION (IN)
3-FT	15	12
4-FT	24	18
5-FT	36	24
6-FT	42	36
7-FT	48	36
8-FT	60	42

MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER

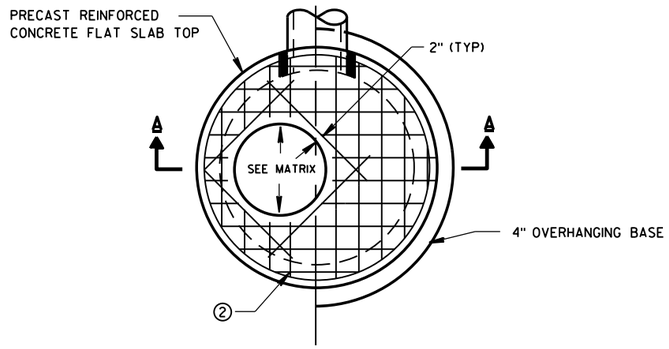
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/5/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

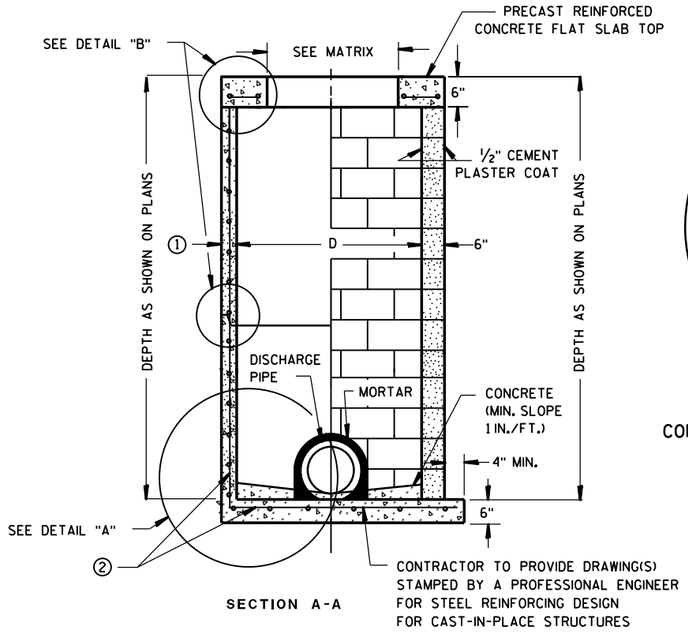
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PLAN VIEW RECTANGULAR OPENING



PLAN VIEW CIRCULAR OPENING

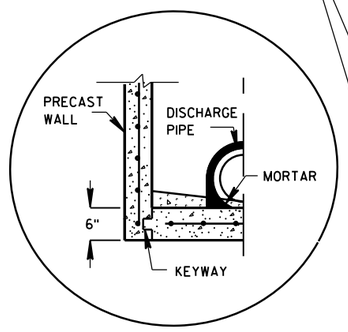


SECTION A-A

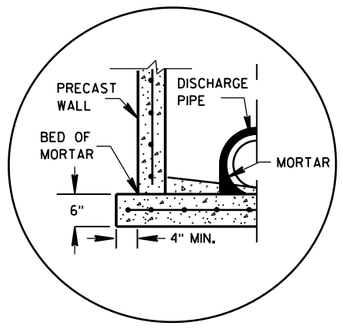
PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

CONCRETE BLOCK WITH CAST-IN-PLACE OR PRECAST REINFORCED CONCRETE BASE ②

CIRCULAR INLETS W/ FLAT TOP

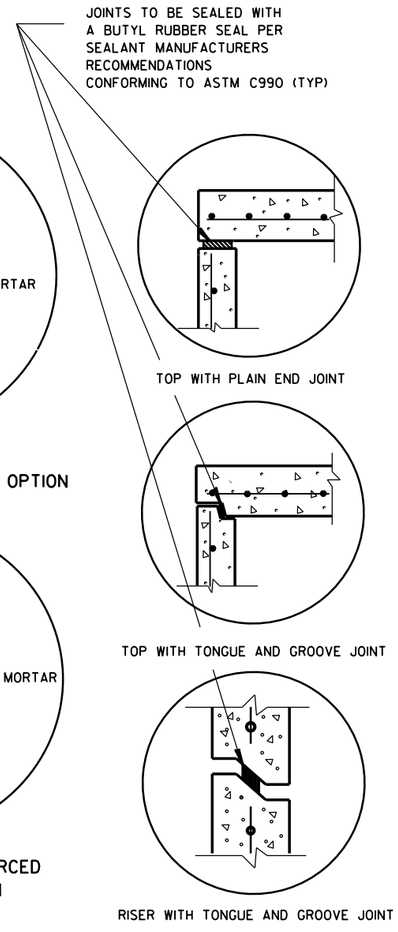


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"



DETAIL "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.

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 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.

ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M199.

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

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.

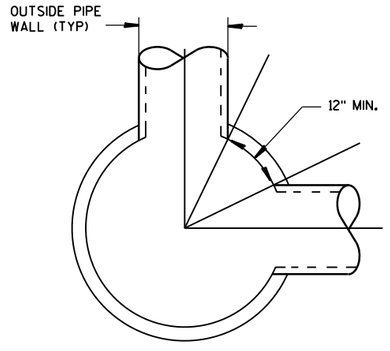
FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES AS MEASURED FROM THE INSIDE OF THE STRUCTURE WALL BETWEEN THE OUTSIDE PIPE WALLS OF ADJACENT PIPES. SEE DETAIL "C".

① MINIMUM WALL THICKNESS SHALL BE 4-IN FOR 3-FT DIAMETER AND 5-IN FOR 4-FT DIAMETER PRECAST INLETS.

② FOR PRECAST CATCH BASINS PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.

INLET COVER OPENING MATRIX

	INLET COVER TYPE	ALL A'S	ALL B'S	BW	C	F	ALL H'S	S	T	V	WM	Z
INLET SIZE	OPENING SIZE (FT)											
3-FT	2 DIA.				X							X
	2X2	X	X					X		X		
4-FT	2 DIA.				X							X
	2X2	X	X					X		X		
	2X2.5			X				X	X	X	X	
	2X3						X					
	2.5X3					X						



DETAIL "C"

PIPE MATRIX

INLET SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	180° SEPARATION (IN)	90° SEPARATION (IN)
3-FT	15	12
4-FT	24	18

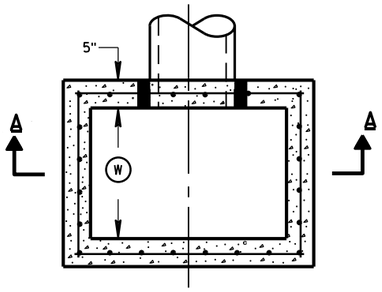
INLETS 3-FT AND 4-FT DIAMETER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

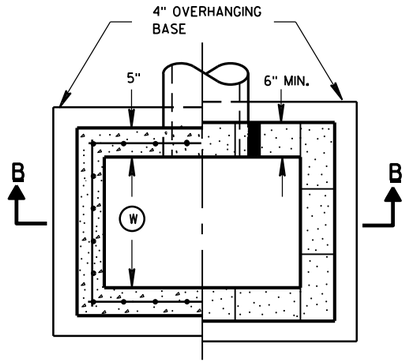
APPROVED
6/5/2012
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

INLETS 3-FT AND 4-FT DIAMETER

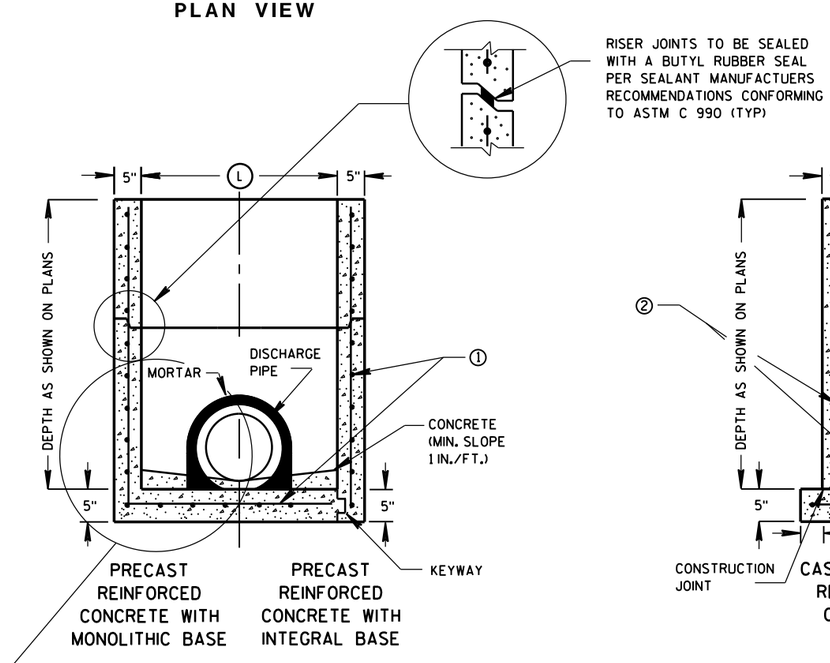
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S.D.D. 8 C 6-1



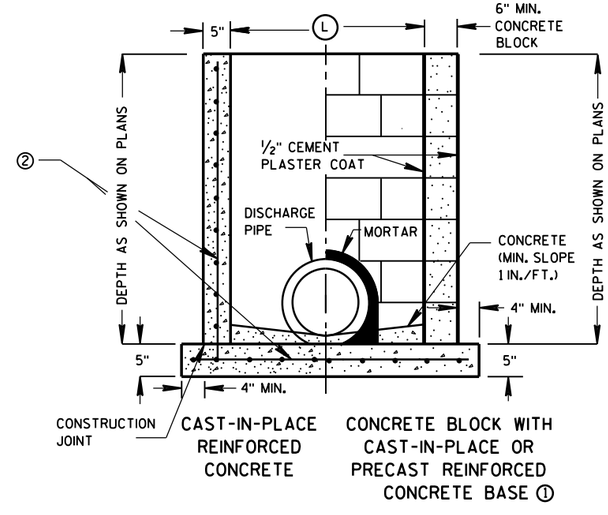
PLAN VIEW



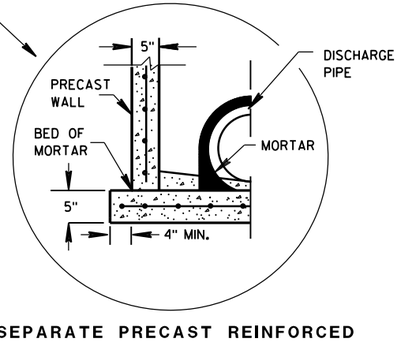
PLAN VIEW



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.

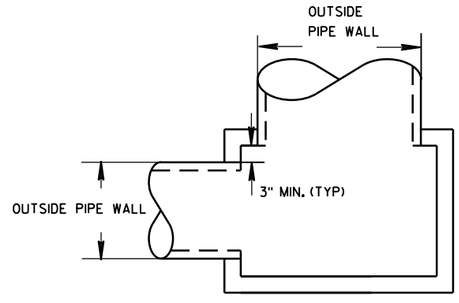
② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

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

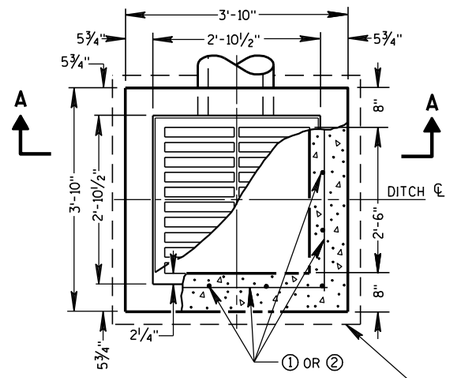
APPROVED
6/5/2012
DATE
FHWA

/S/ Jerry H. Zogg
ROADWAY STANDARDS DE ENGINEER

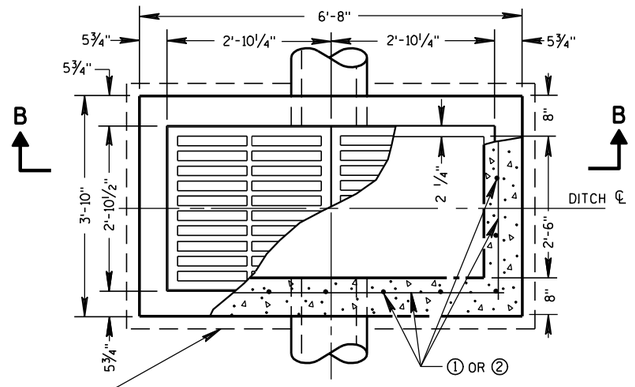
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S.D.D. 8 C 7-1

INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT

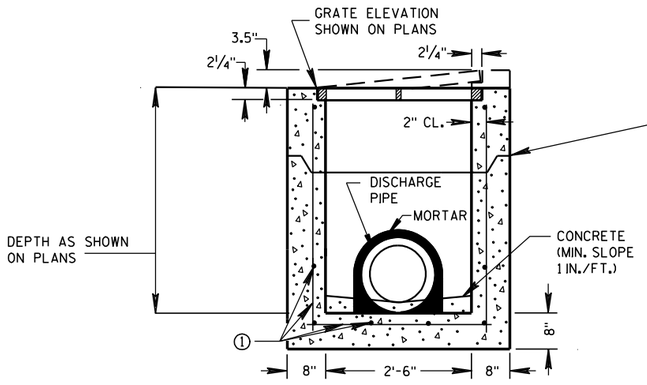


PLAN VIEW

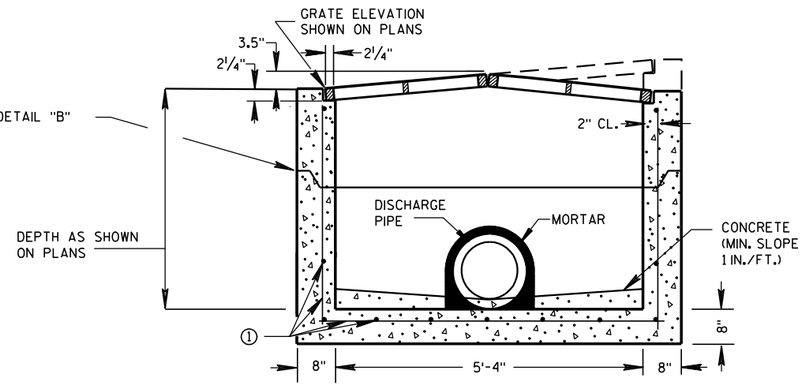


PLAN VIEW

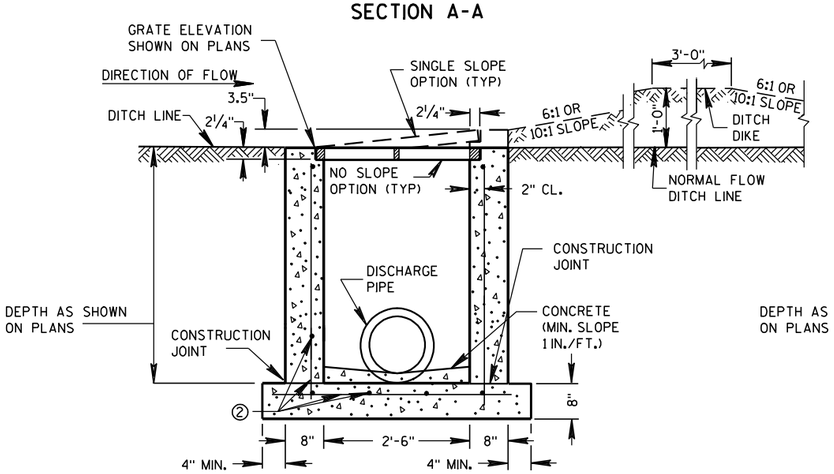
4" OVERHANGING BASE ON REINFORCED CAST-IN-PLACE CONCRETE INLETS



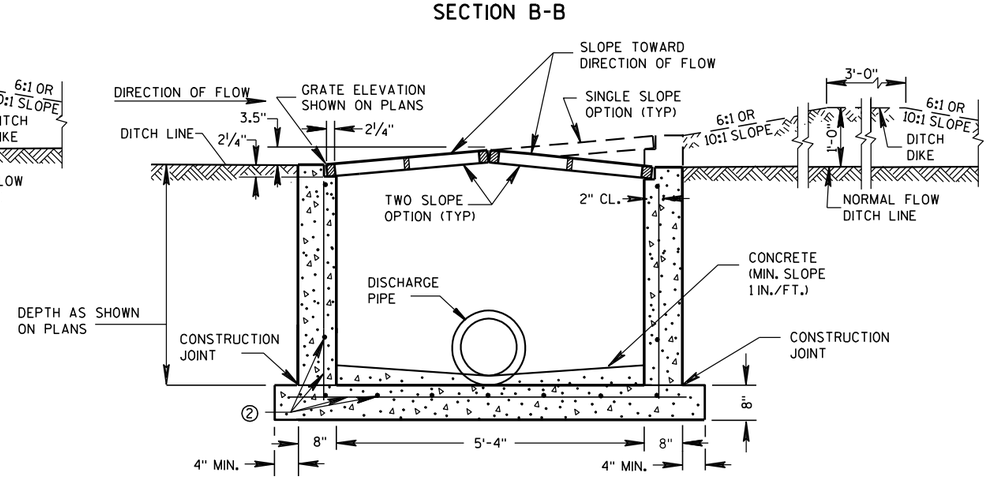
PRECAST REINFORCED CONCRETE SECTION A-A



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.

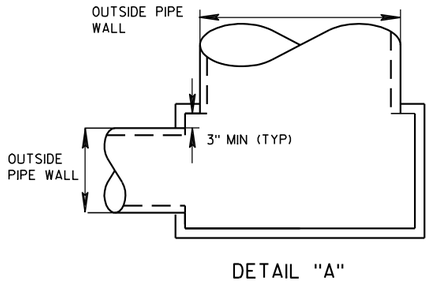
MAXIMUM INSIDE PIPE DIAMETER DETERMINED BY 3" CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "A". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

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.

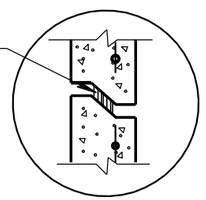
PIPE MATRIX

	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

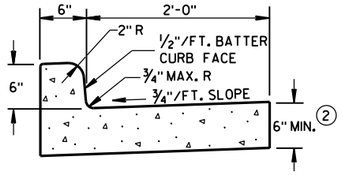
APPROVED
6/5/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

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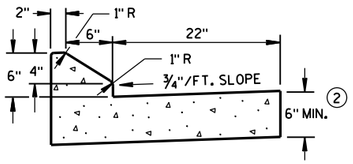
S.D.D. 8 C 8-1

6

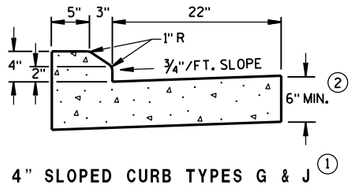
S.D.D. 8 C 8-1



TYPES A & D ①

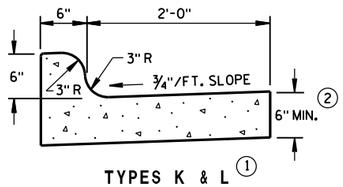


6" SLOPED CURB TYPES G & J ①

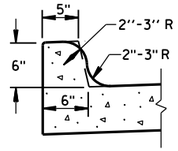


4" SLOPED CURB TYPES G & J ①

CONCRETE CURB & GUTTER 30"

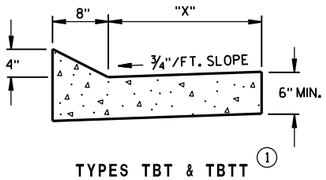


TYPES K & L ①



OPTIONAL CURB SHAPE FOR TYPES K & L ①

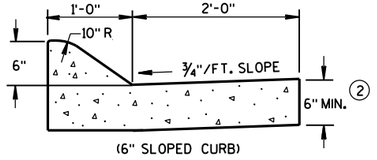
CONCRETE CURB & GUTTER 30"



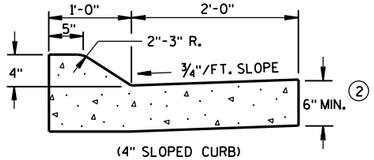
TYPES TBT & TBTT ①

CONCRETE CURB & GUTTER

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

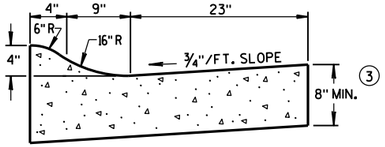


(6" SLOPED CURB)



(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.

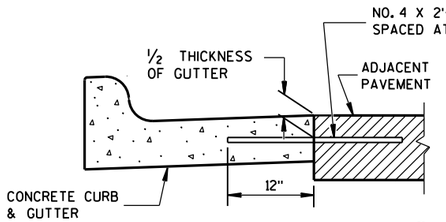
① TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K, R AND TBTT.

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.

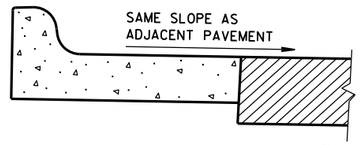
③ THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.

④ THE FACE OF CURB IS 6" FROM THE BACK OF CURB.

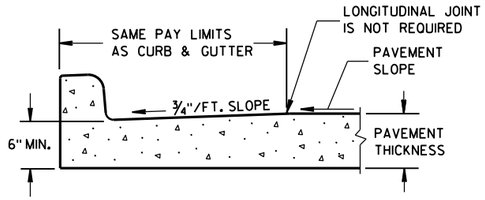
⑤ WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.



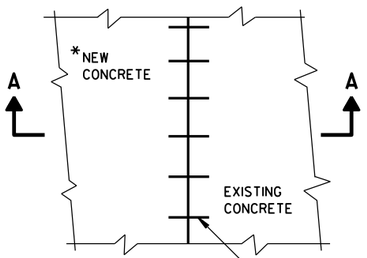
TYPICAL TIE BAR LOCATION ①



REVERSE SLOPE GUTTER ⑤
(TYPICAL FOR ALL CURB & GUTTER TYPES)

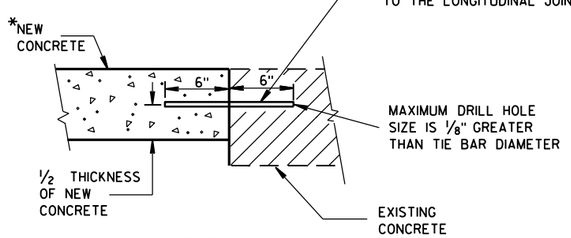


PARTIAL SECTION OF PAVEMENT
WITH INTEGRAL CURB & GUTTER



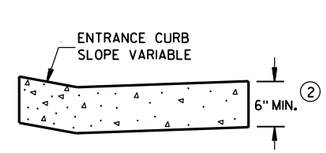
PLAN VIEW

*NEW CURB & GUTTER, SURFACE DRAINS, CONCRETE PAVEMENT OR OTHER NEW CONCRETE.

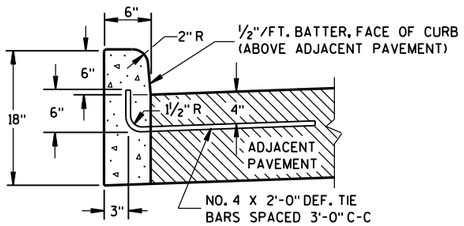


SECTION A-A

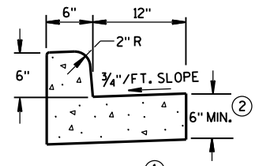
TIE BARS DRILLED
INTO EXISTING PAVEMENT



DRIVEWAY ENTRANCE CURB
(WHEN DIRECTED BY THE ENGINEER)

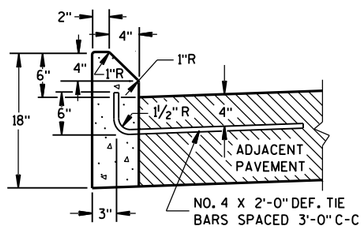


① TYPES A & D

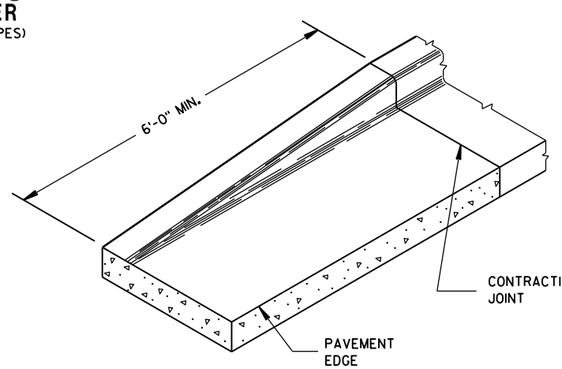


① TYPES A & D

CONCRETE CURB & GUTTER 18"



① TYPES G & J



END SECTION CURB & GUTTER

CONCRETE CURB

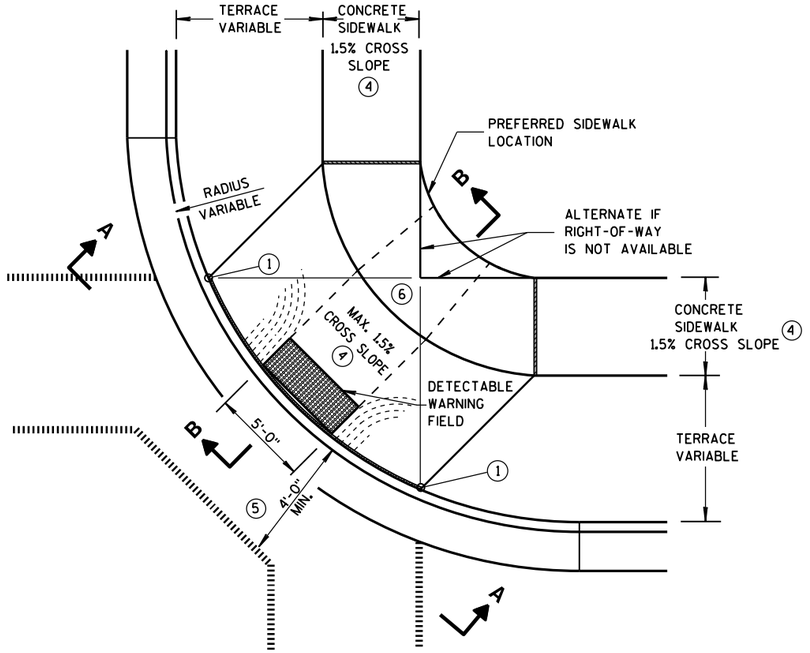
CONCRETE CURB, CONCRETE CURB & GUTTER AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

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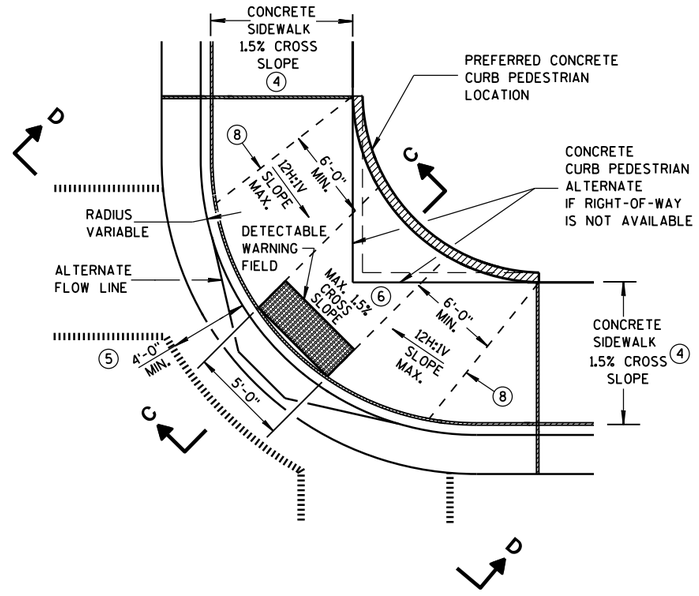
S.D.D. 8 D 1-18



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 $\frac{1}{4}$-INCH ARE ALLOWED.

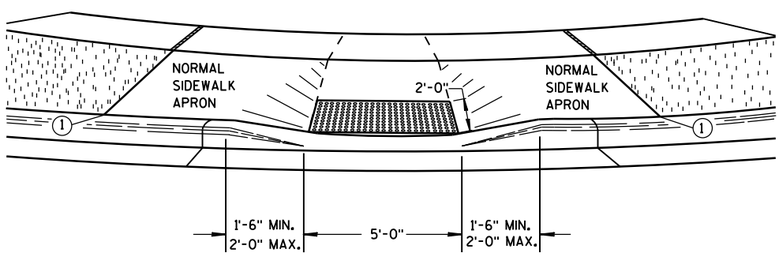
(3) ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

(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.

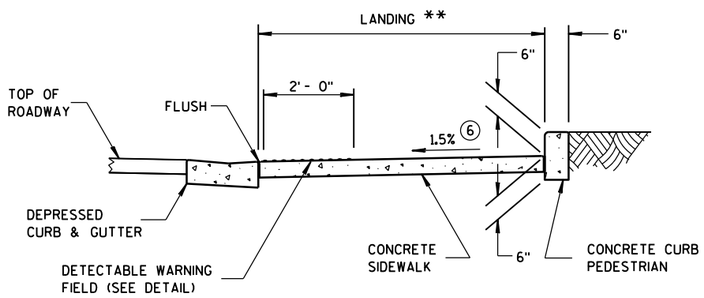
(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET (MINIMUM 4 FEET X 4 FEET).

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.



VIEW A-A

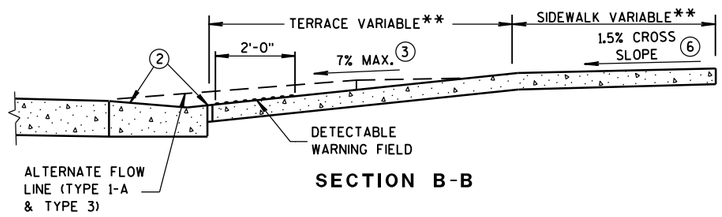
** WIDTH SHOWN ELSEWHERE IN THE PLANS



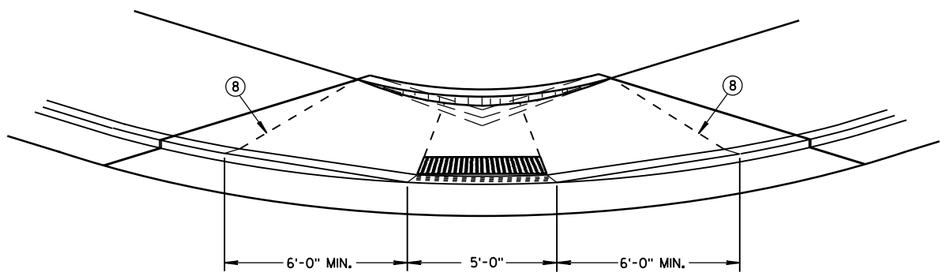
SECTION C-C

LEGEND

- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)
- ALTERNATIVE LAYOUT



SECTION B-B



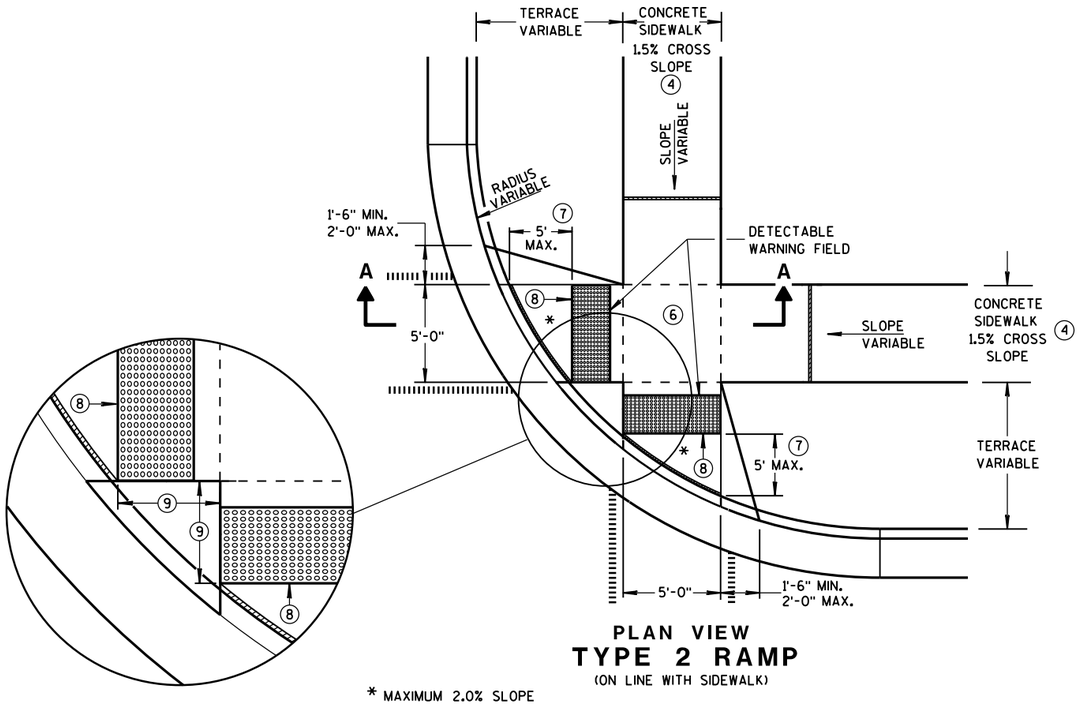
VIEW D-D

CURB RAMPS TYPES 1 AND 1-A

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 8 D 5-16a

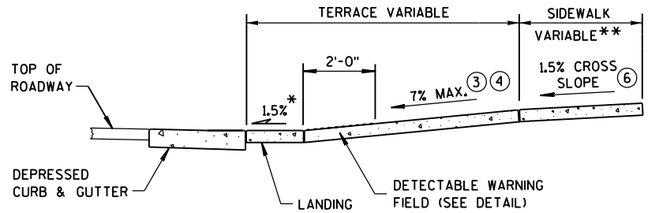


PLAN VIEW

TYPE 2 RAMP

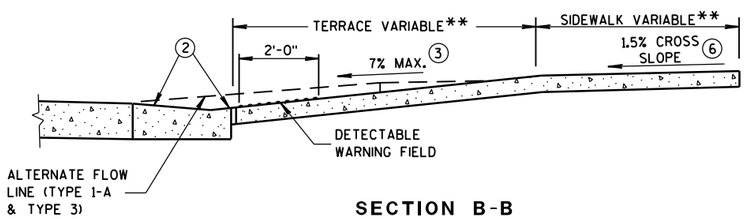
(ON LINE WITH SIDEWALK)

* 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).

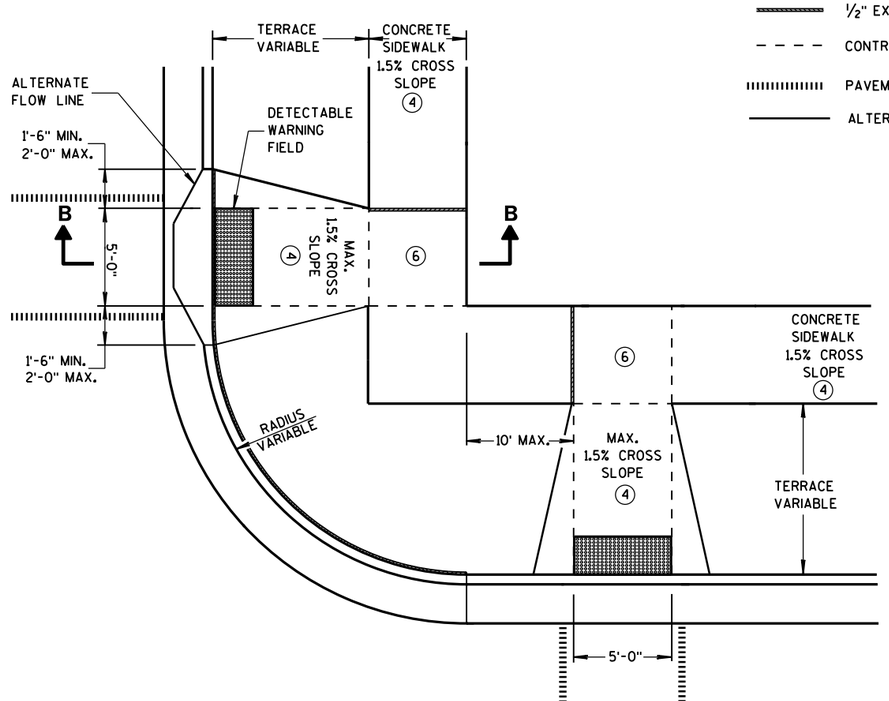
(7) WHEN THIS DISTANCE EXCEEDS 5 FEET, USE MULTIPLE DETECTABLE WARNING PANELS ACROSS THE RAMP AND STAGGER ADDITIONAL DETECTABLE WARNING PANEL(S) FORWARD TO REDUCE THIS DISTANCE.

(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

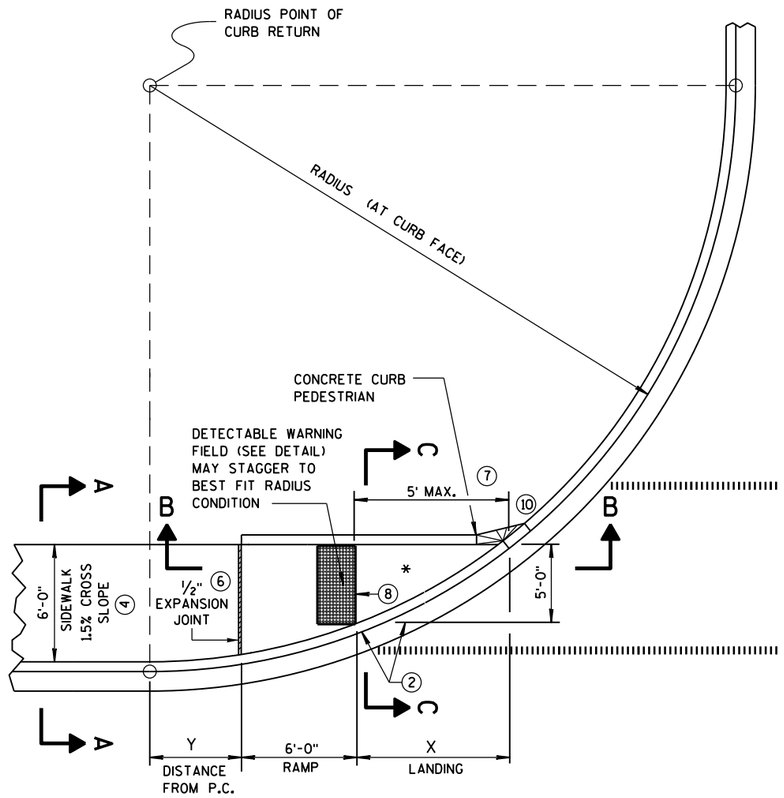
(OUTSIDE OF CROSSWALK AREA)

CURB RAMPS TYPES 2 AND 3

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 8 D 5-16b

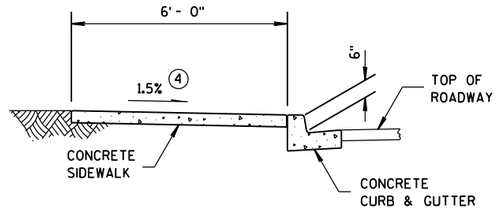


CURB RAMP TYPE 4A

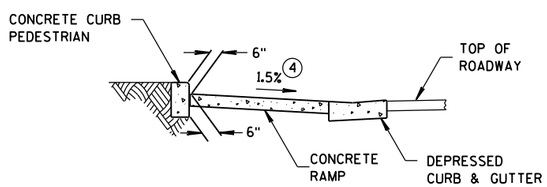
PLAN VIEW

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"

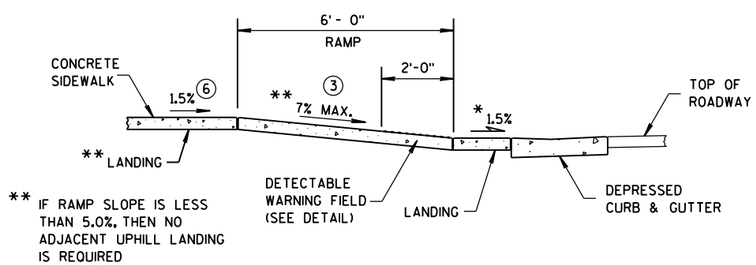
INTERMEDIATE RADII CAN BE INTERPOLATED



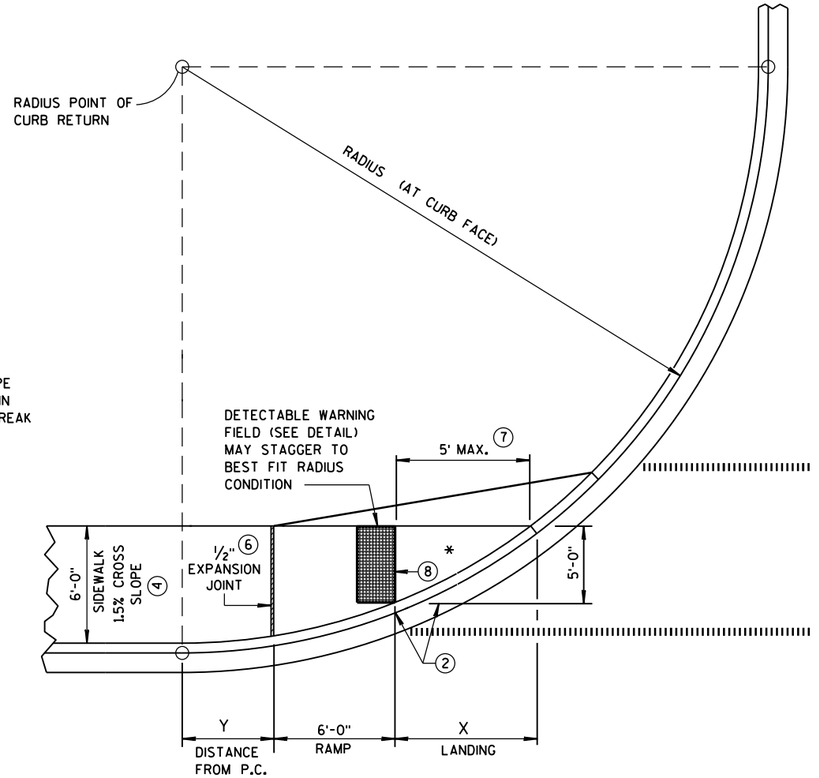
SECTION A-A FOR TYPE 4A



SECTION C-C FOR TYPE 4A



SECTION B-B 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.

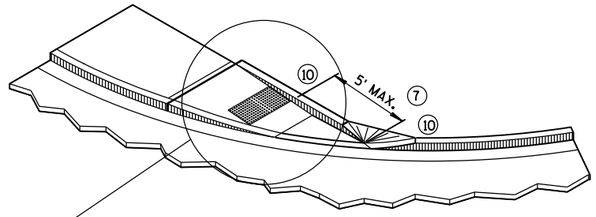
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(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).

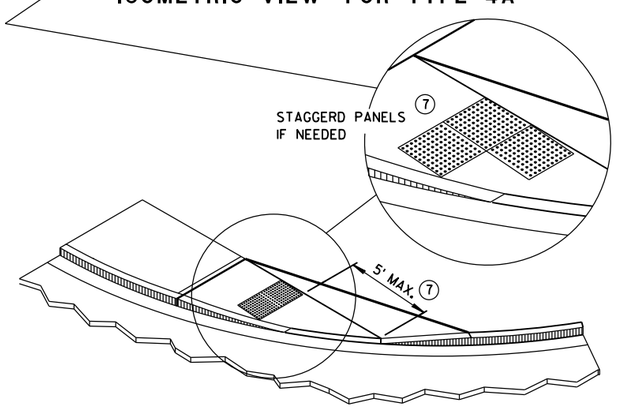
(7) WHEN THIS DISTANCE EXCEEDS 5 FEET, USE MULTIPLE DETECTABLE WARNING PANELS ACROSS THE RAMP AND STAGGER ADDITIONAL DETECTABLE WARNING PANEL(S) FORWARD TO REDUCE THIS DISTANCE.

(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

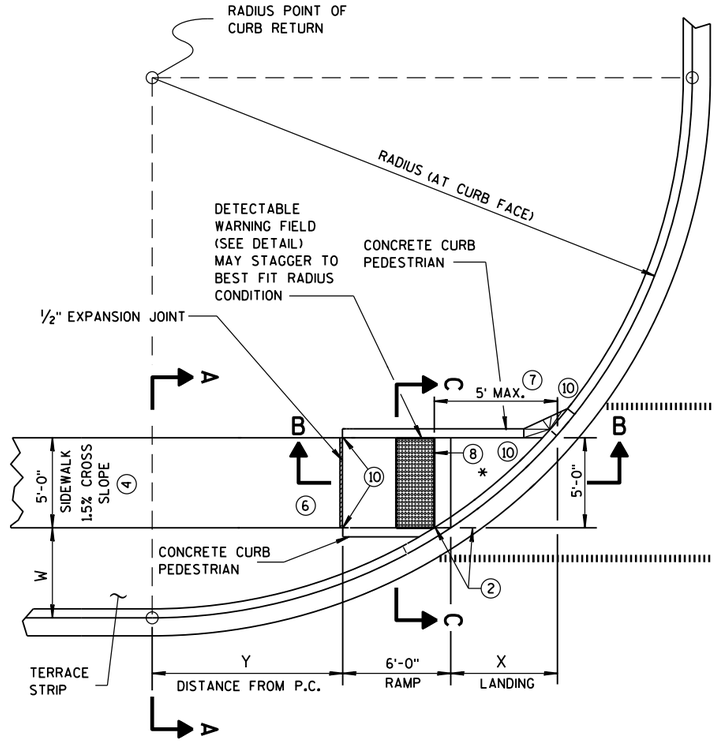
- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS
TYPES 4A AND 4A1

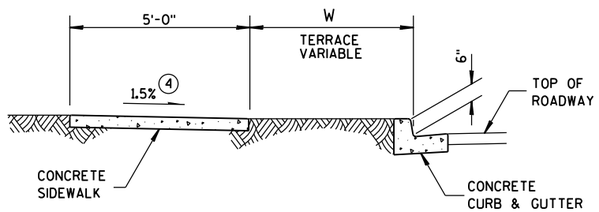
STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

6

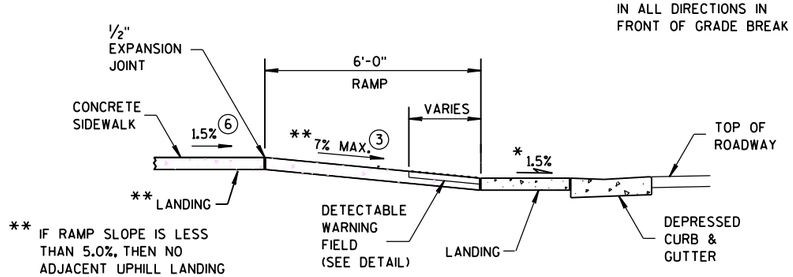
S.D.D. 8 D 5-16c



CURB RAMP TYPE 4B
PLAN VIEW



SECTION A-A FOR TYPE 4B



* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK

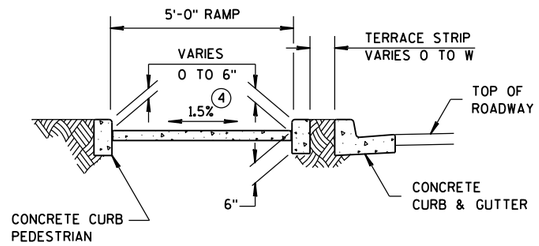
SECTION B-B FOR TYPE 4B

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.

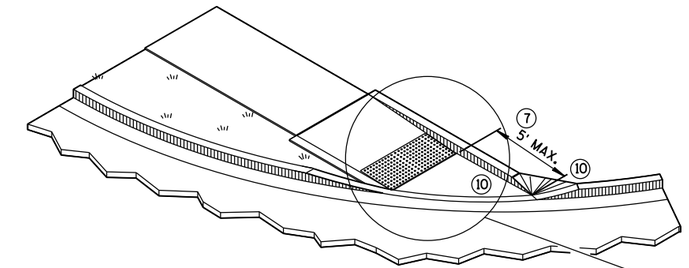
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(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).

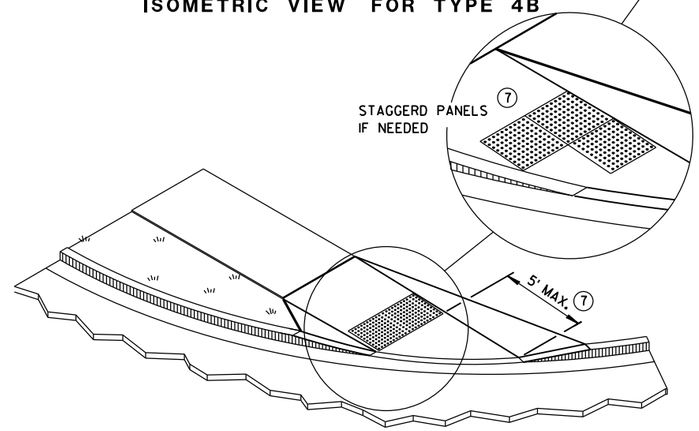
(7) WHEN THIS DISTANCE EXCEEDS 5 FEET, USE MULTIPLE DETECTABLE WARNING PANELS ACROSS THE RAMP AND STAGGER ADDITIONAL DETECTABLE WARNING PANEL(S) FORWARD TO REDUCE THIS DISTANCE.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

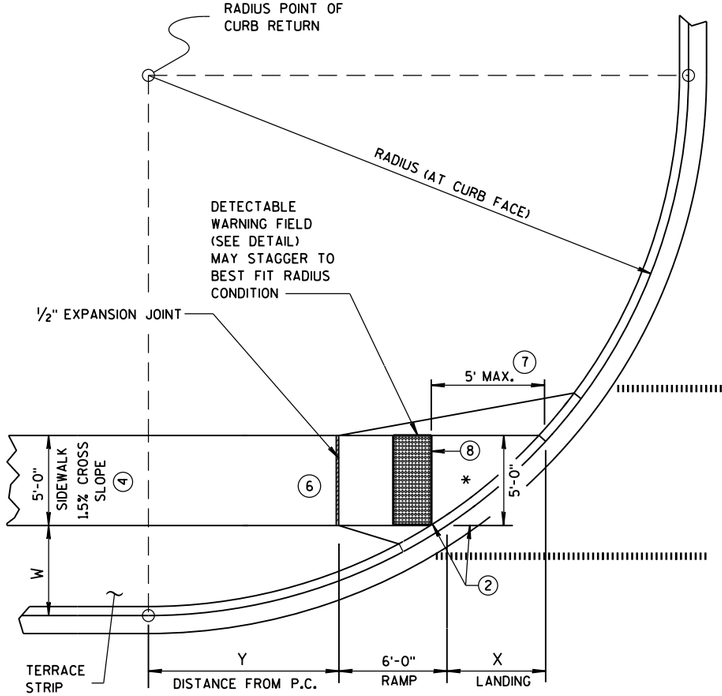
(10) INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.



ISOMETRIC VIEW FOR TYPE 4B



ISOMETRIC VIEW FOR TYPE 4B1



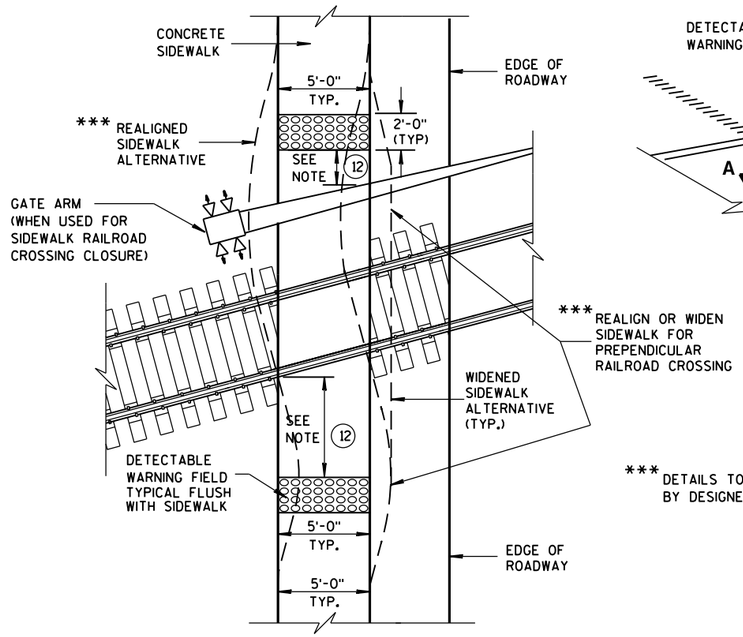
CURB RAMP TYPE 4B1
PLAN VIEW

CURB RAMPS
TYPE 4B AND 4B1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

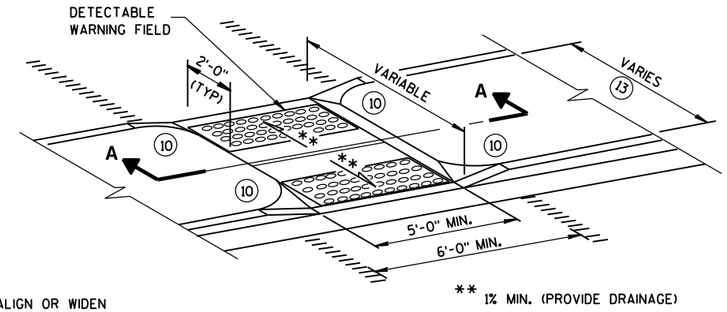
6

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.

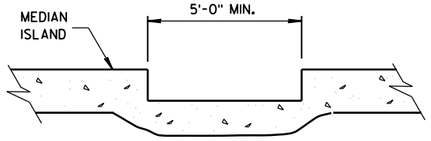
(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET (MINIMUM 4 FEET X 4 FEET).

(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.

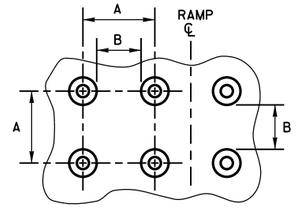
(13) DO NOT INSTALL DETECTABLE WARNING FIELDS IF MEDIAN WIDTH BETWEEN BACK OF CURBS IS LESS THAN 6 FEET.



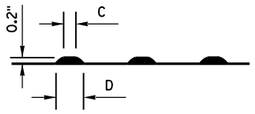
SECTION A-A

	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.

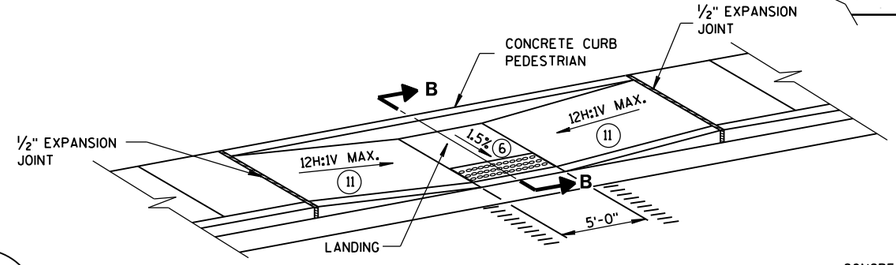


PLAN VIEW

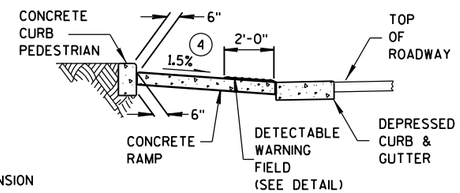


ELEVATION VIEW

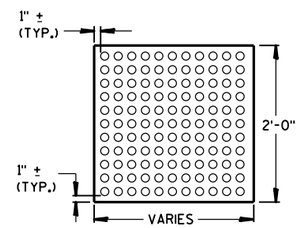
TRUNCATED DOMES
DETECTABLE WARNING PATTERN DETAIL



MID-BLOCK CROSSING
TYPE 7A



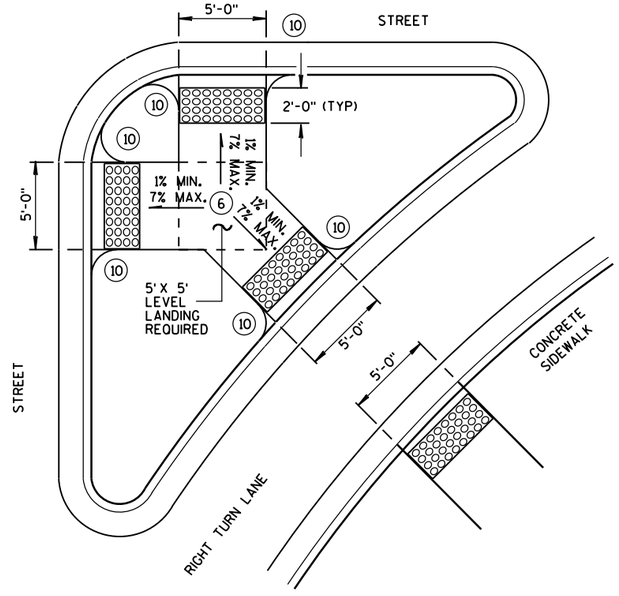
SECTION B-B



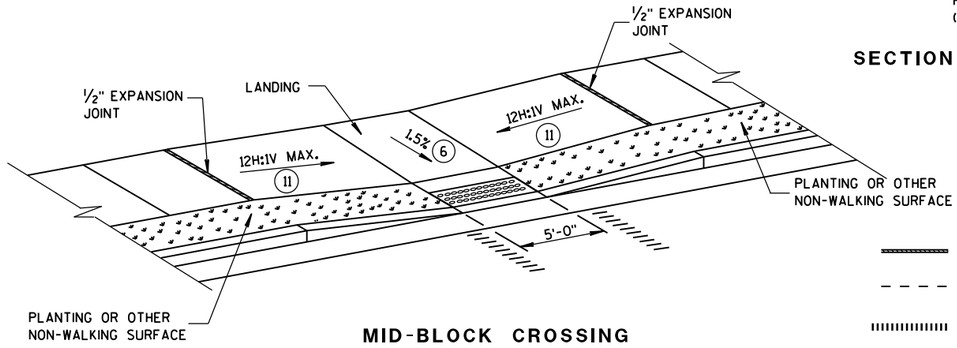
PLAN VIEW

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

- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

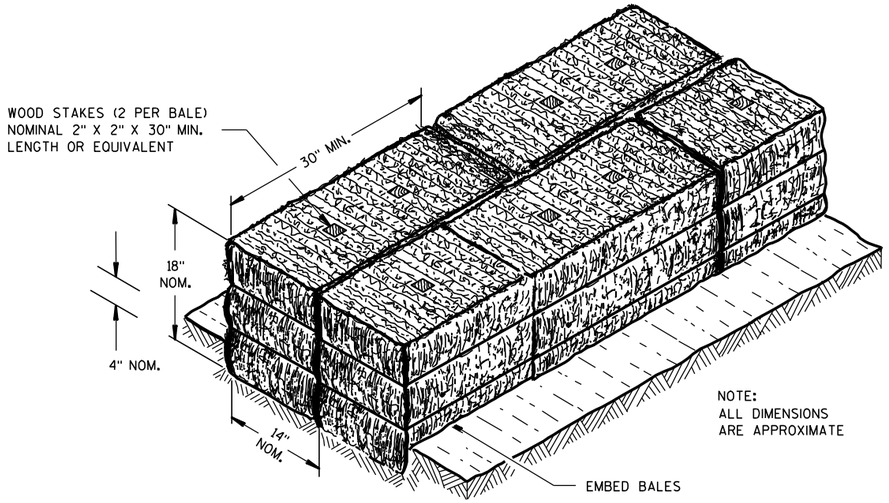
CURB RAMPS
TYPES 5, 6, 7A, 7B & 8

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

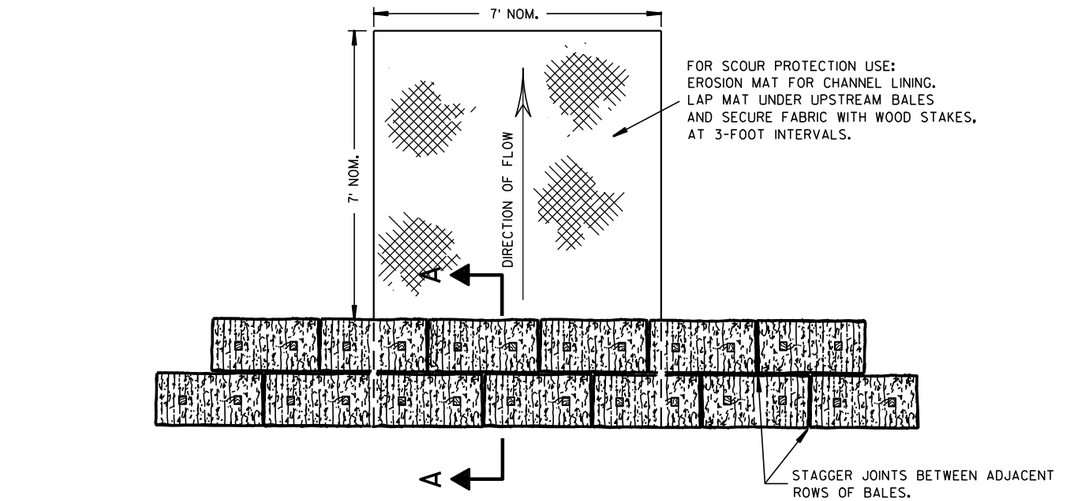
APPROVED
June, 2015 — DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER
FHWA

6

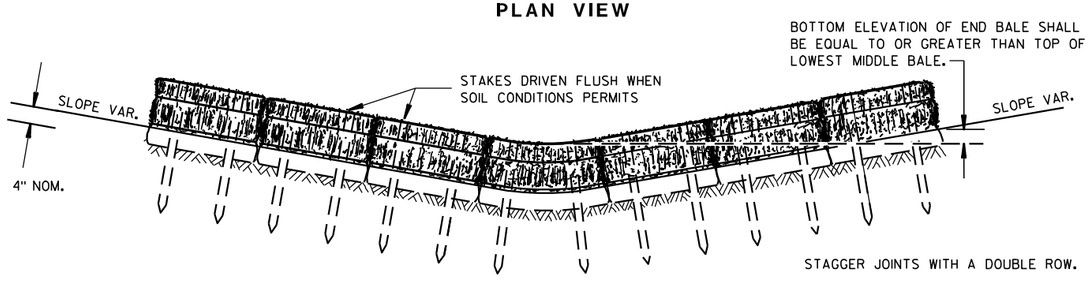
S.D.D. 8 D 5-16e



SECTION A-A



PLAN VIEW



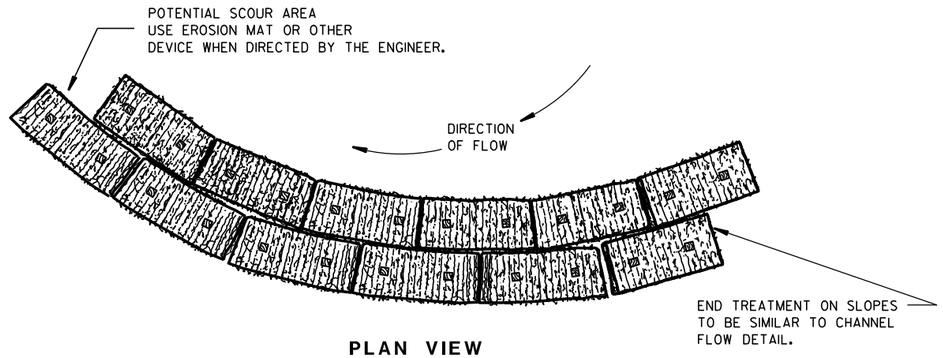
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

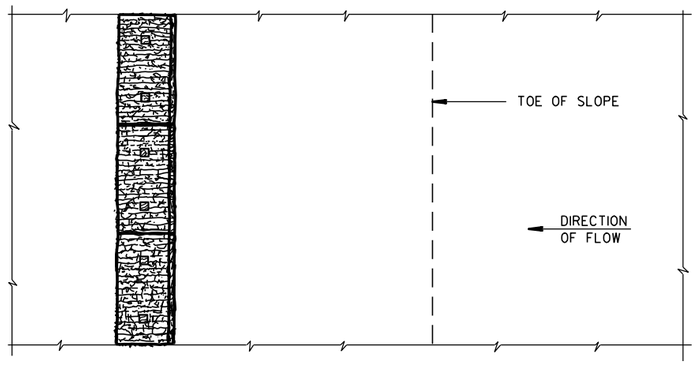
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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.

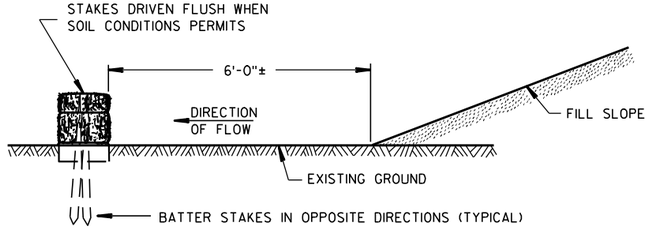


PLAN VIEW

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

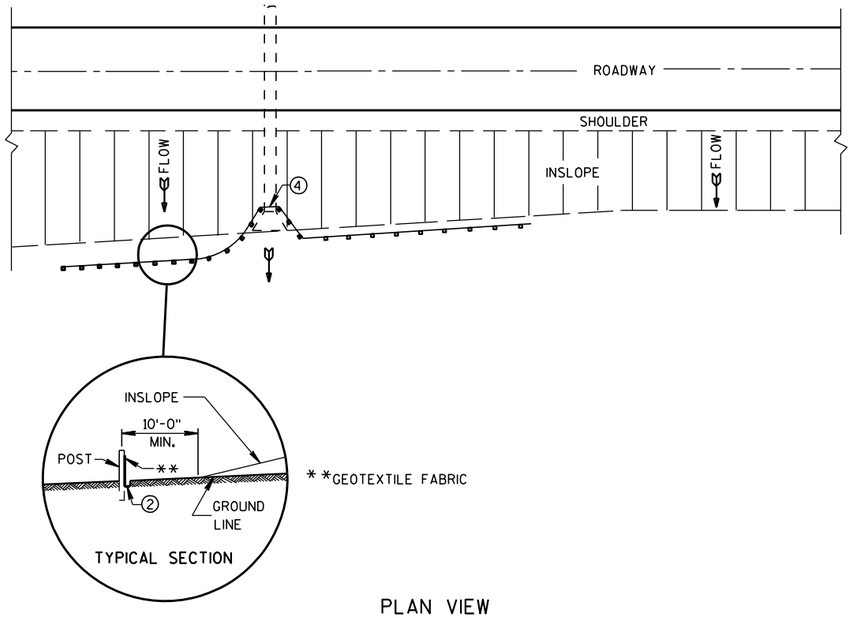
APPROVED
6/04/02 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 8 E 8-3

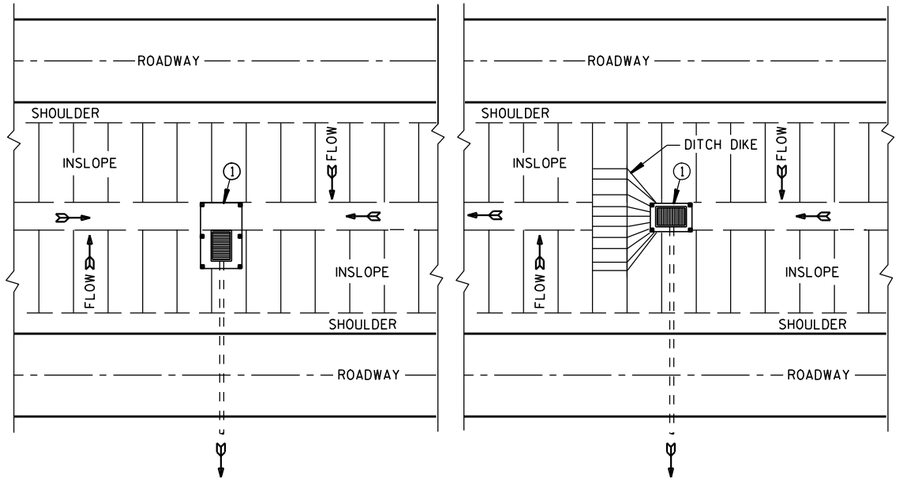
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S.D.D. 8 E 8-3



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.

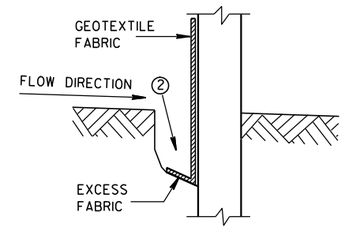
① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

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.

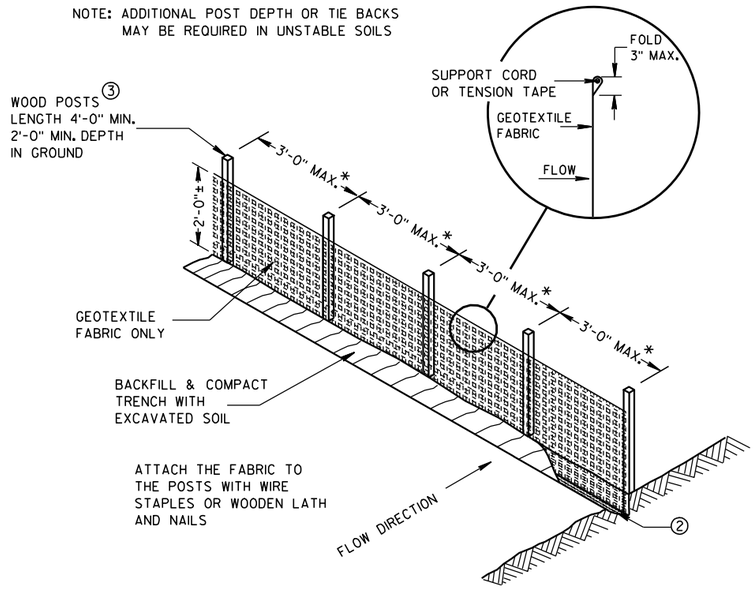
③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.

④ SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.

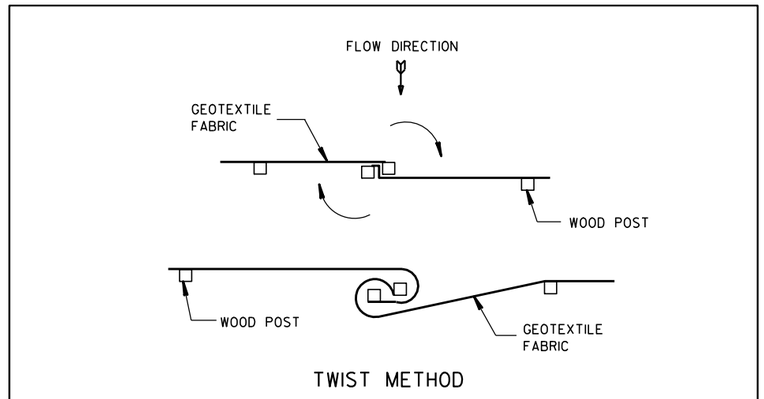
⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



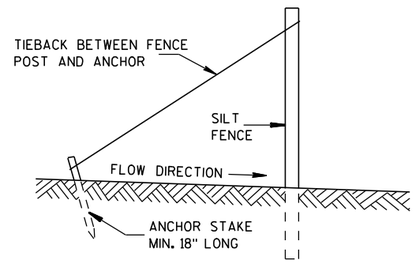
TRENCH DETAIL



SILT FENCE



JOINING TWO LENGTHS OF SILT FENCE ⑤



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

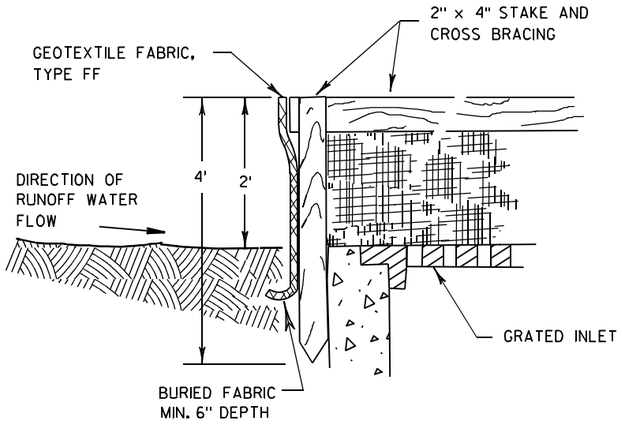
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

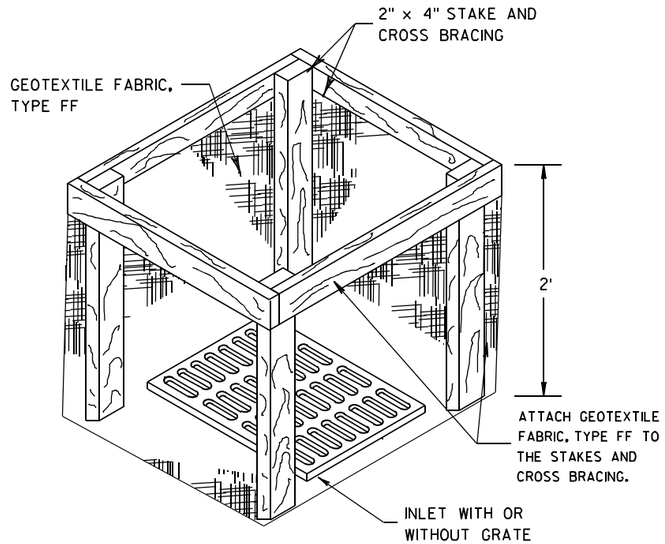
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S.D.D. 8 E 9-6

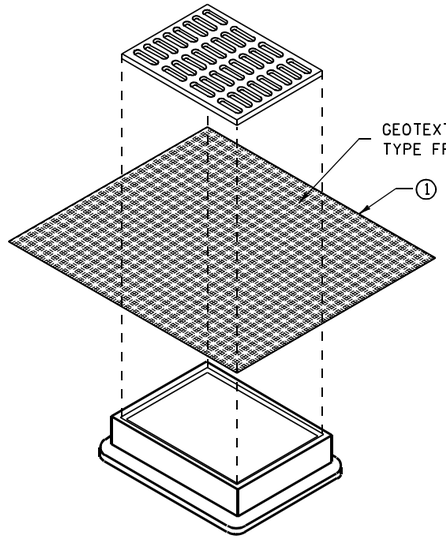
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S.D.D. 8 E 9-6



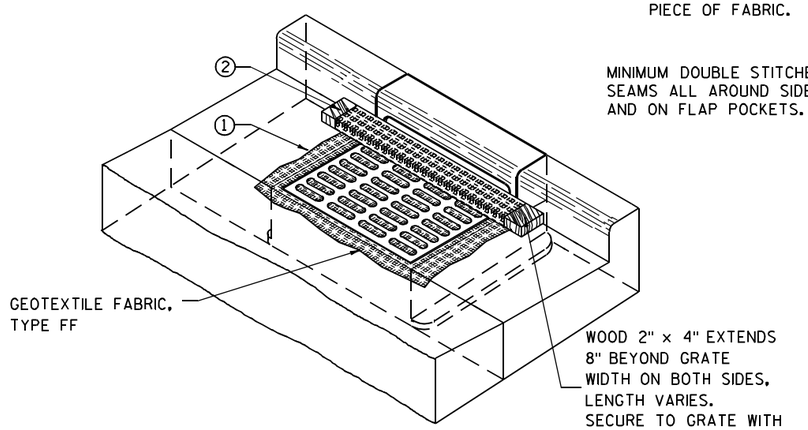


INLET PROTECTION, TYPE A

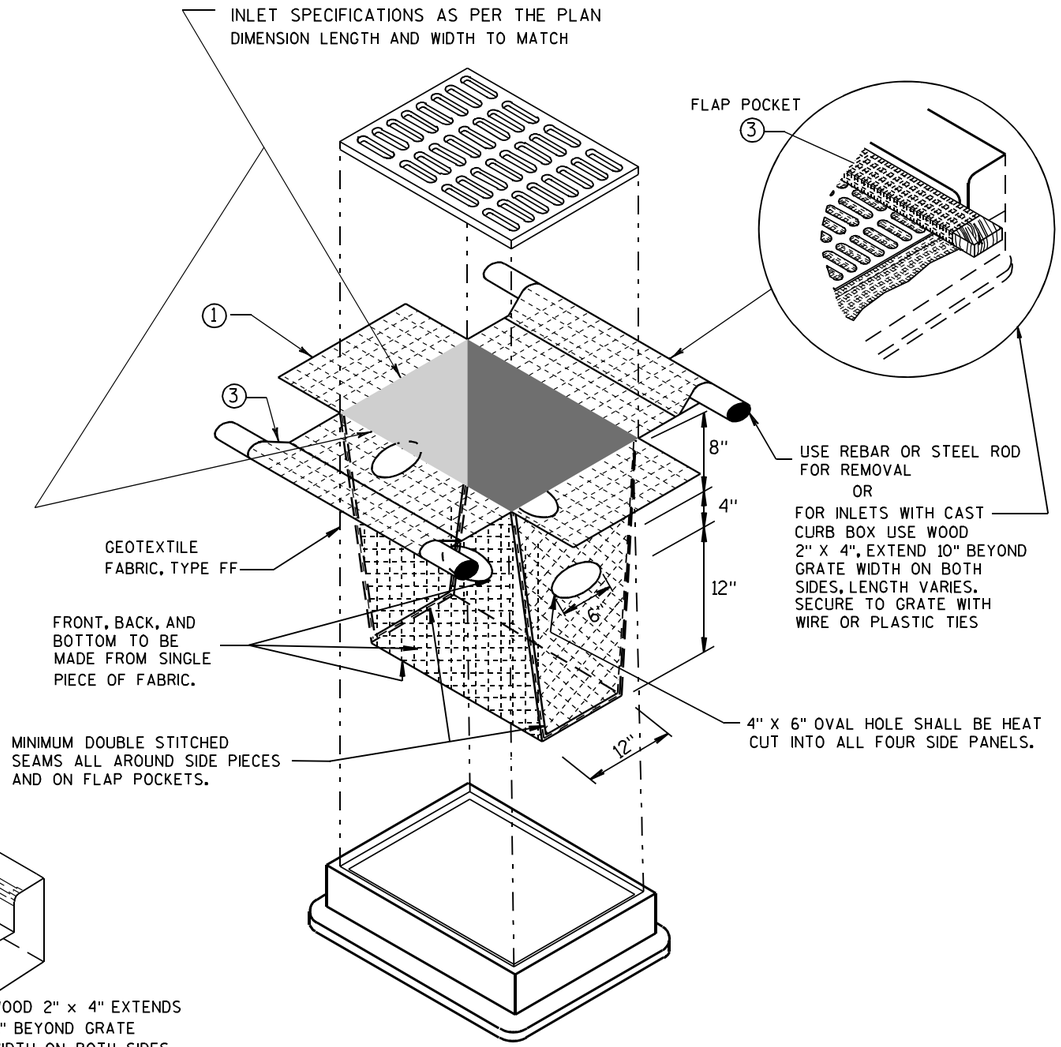


INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

(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

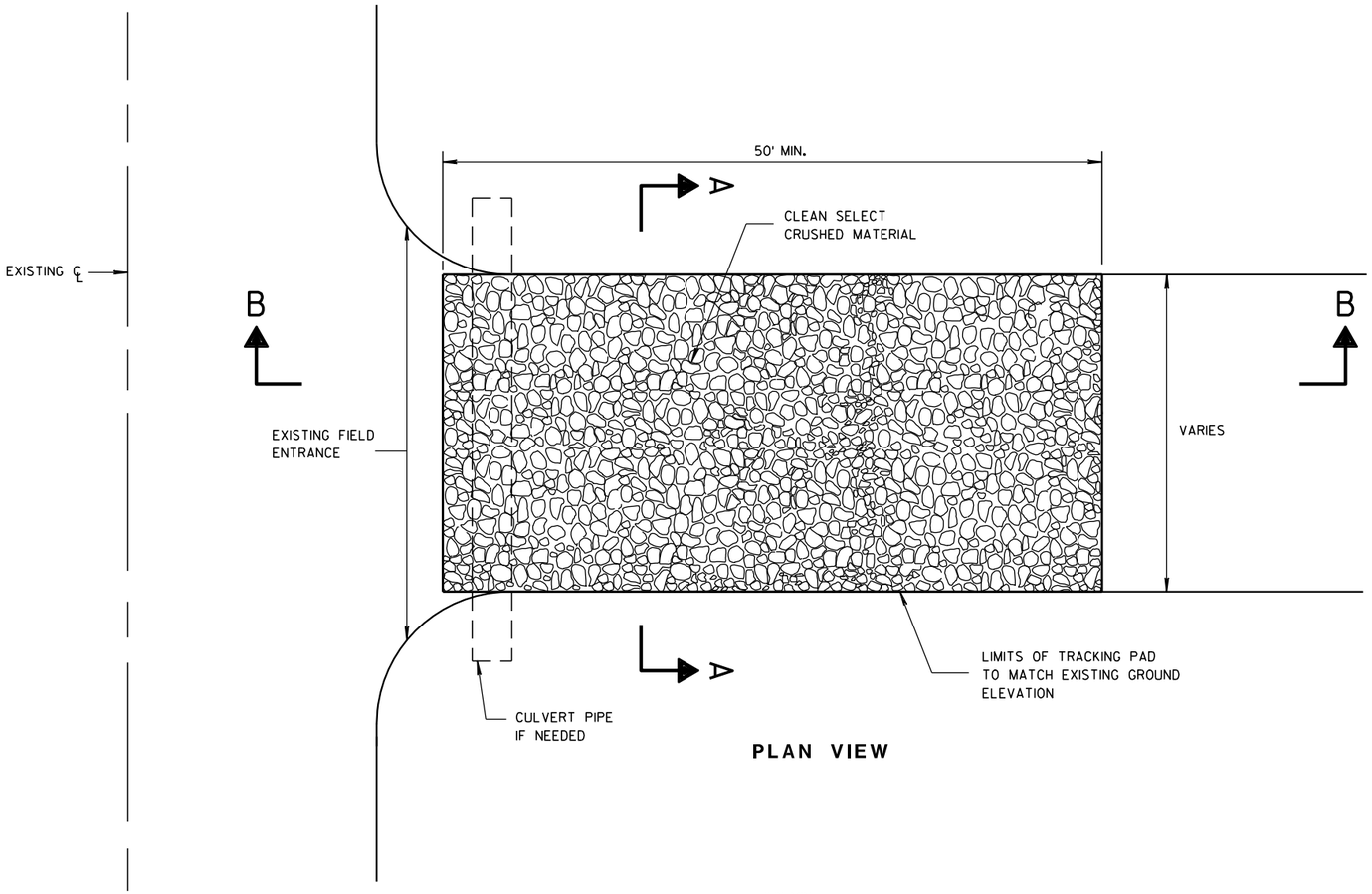
10/16/02
DATE

/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER

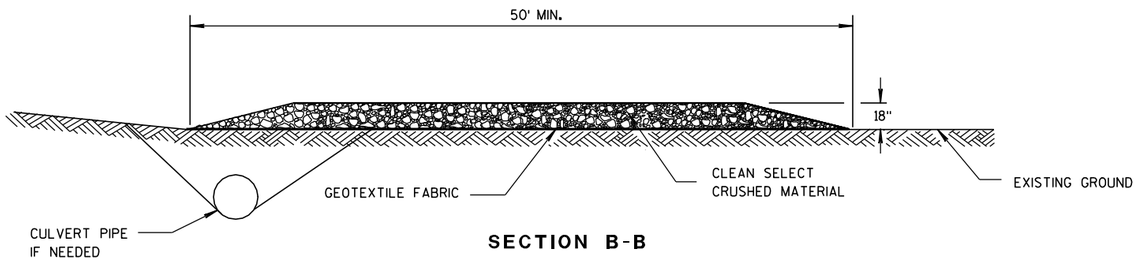
FHWA

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.

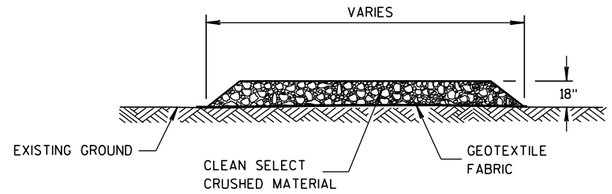
TRACKING PAD TO BE REMOVED AFTER CONSTRUCTION IS COMPLETED.

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
/S/ Jerry H. Zoda — ROADWAY STANDARDS ENGINEER
ENT
FHWA

6

S.D.D. 8 E 14-1

6

S.D.D. 8 E 14-1

METAL APRON ENDWALLS

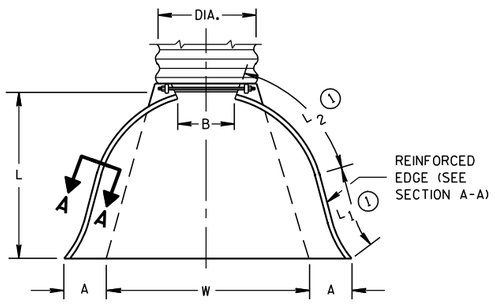
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4	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

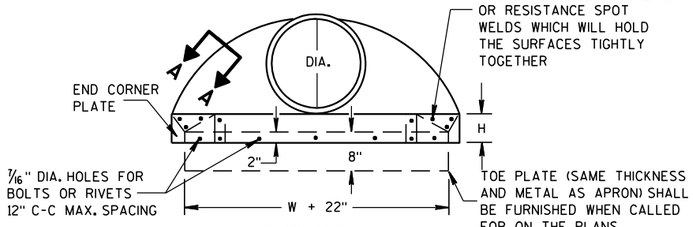
REINFORCED CONCRETE APRON ENDWALLS

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

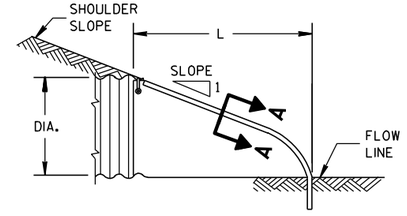
* MINIMUM
** MAXIMUM



PLAN VIEW

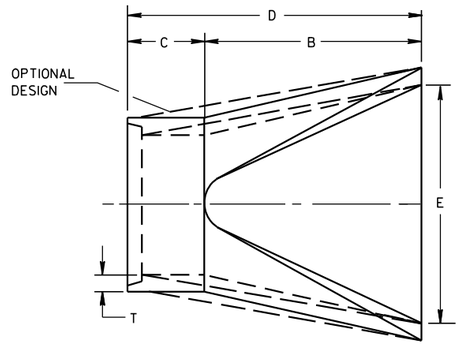


END VIEW

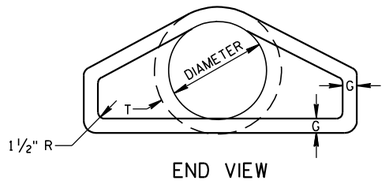


SIDE ELEVATION

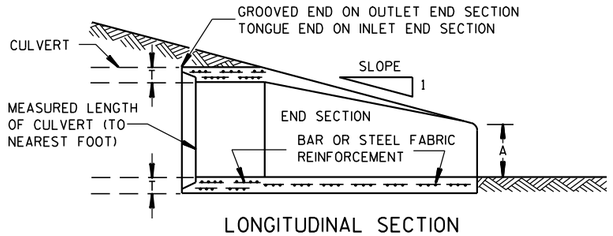
METAL ENDWALLS



PLAN

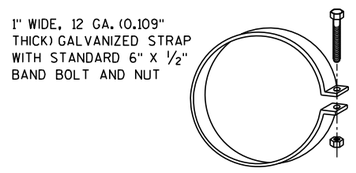


END VIEW



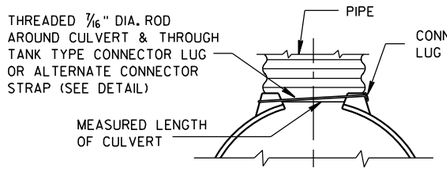
LONGITUDINAL SECTION

CONCRETE ENDWALLS

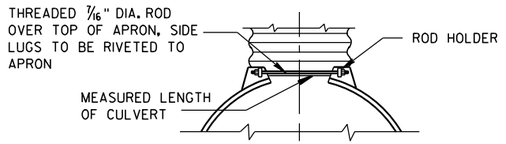


ALTERNATE FOR TYPE 1 CONNECTION

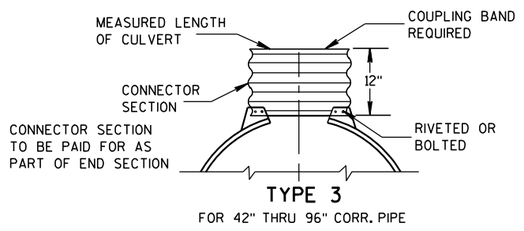
END SECTION CONNECTOR STRAP



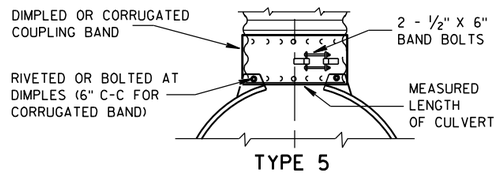
TYPE 1
FOR 12" THRU 24" CORR. PIPE



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

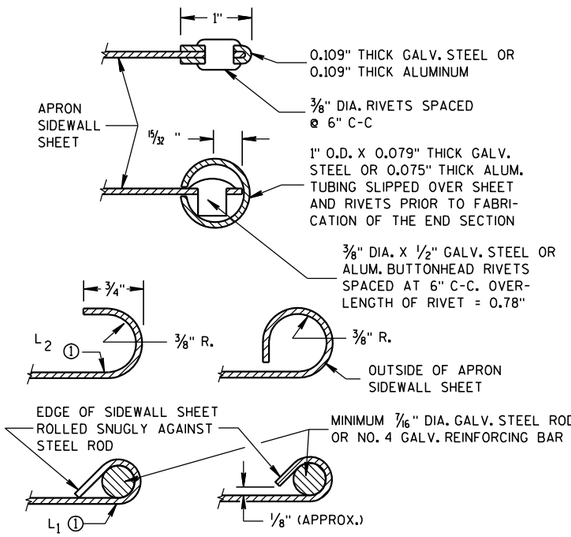
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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.

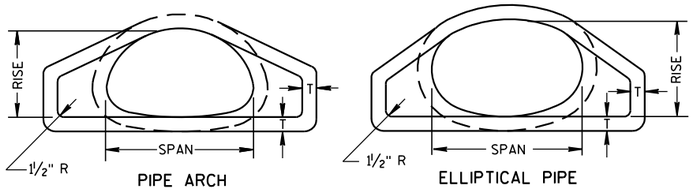
① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR CULVERT PIPE

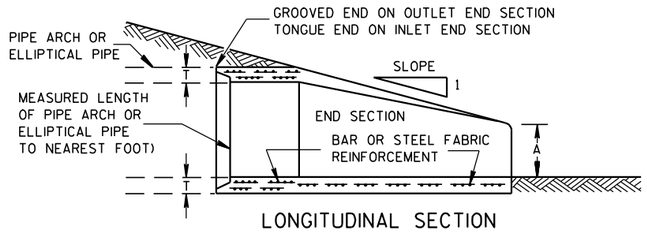
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/30/94 DATE
/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

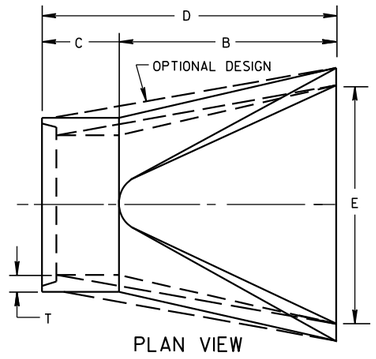
6
S.D.D. 8 F 1-11



END VIEW

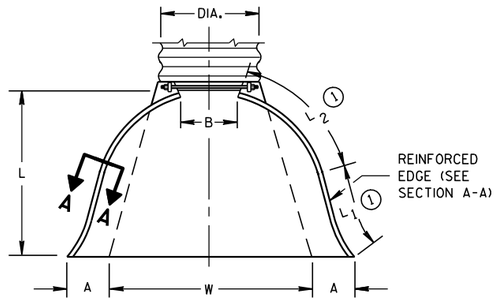


LONGITUDINAL SECTION

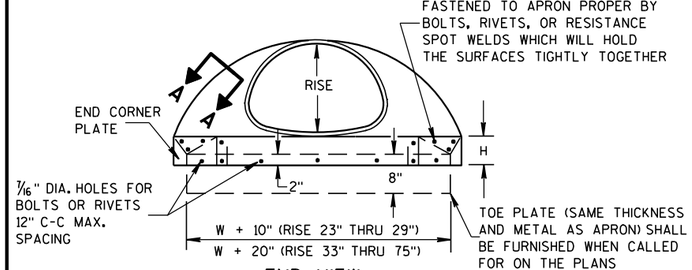


PLAN VIEW

CONCRETE ENDWALLS

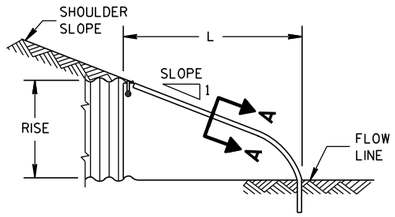


PLAN VIEW



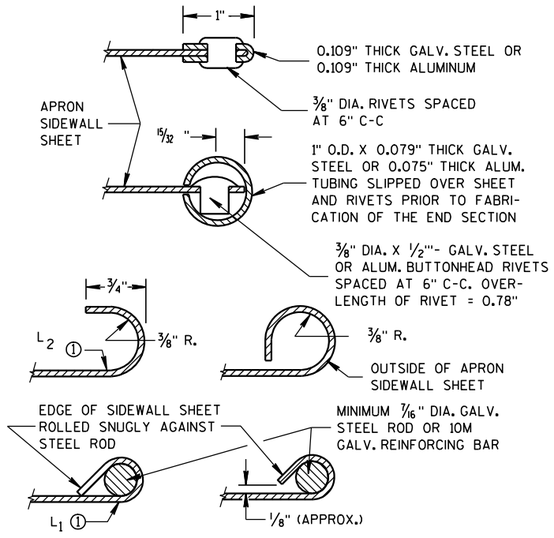
END CORNER PLATES MAY BE FASTENED TO APRON PROPER BY BOLTS, RIVETS, OR RESISTANCE SPOT WELDS WHICH WILL HOLD THE SURFACES TIGHTLY TOGETHER

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

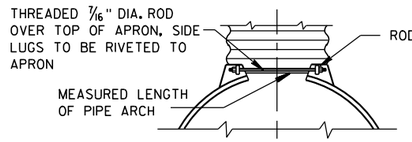
REINFORCED CONCRETE PIPE ARCH

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

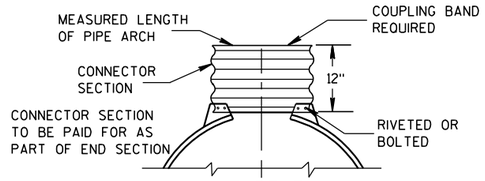
EQUIV. DIA. (Inches)	DIMENSIONS (Inches) ** SPAN	** RISE	T	A	B	C	D	E	APPROX. SLOPE
24	30	19	3¼	8½	39	33	72	48	3 to 1
30	38	24	3¾	9½	54	18	72	60	3 to 1
36	45	29	4½	11⅛	60	24	84	72	2½ to 1
42	53	34	5	15¾	60	36	96	78	2½ to 1
48	60	38	5½	21	60	36	96	84	2½ to 1
54	68	43	6	25½	60	36	96	90	2½ to 1
60	76	48	6½	30	60	36	96	96	2½ to 1

**NOMINAL SIZE



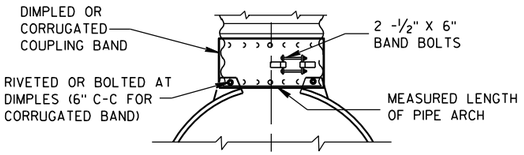
TYPE 2

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

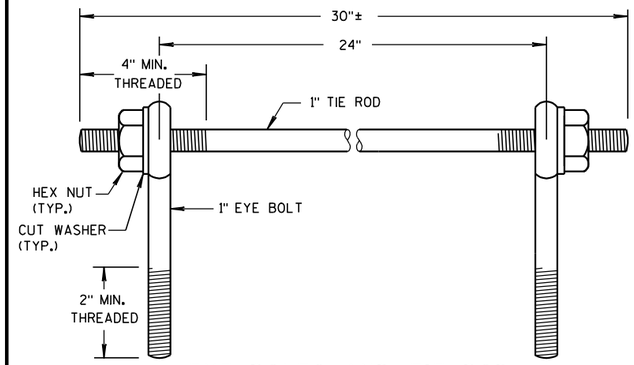
FHWA

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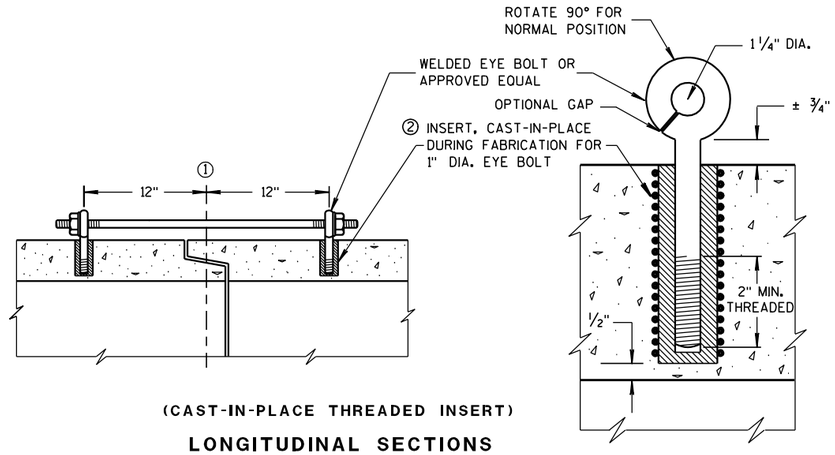
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S.D.D. 8 F 2-1



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.

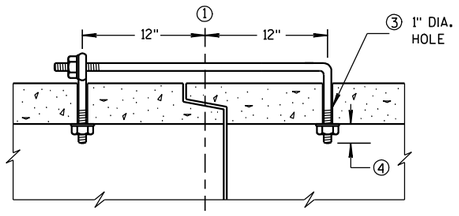
② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.

③ HOLES SHALL BE CAST-IN-PLACE OR DRILLED 12 INCHES FROM ℄ OF TONGUE AND GROOVE.

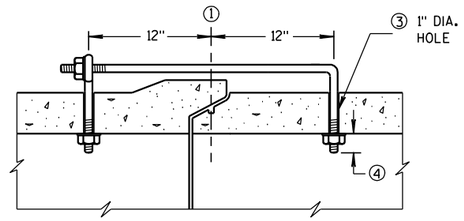
④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.

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)

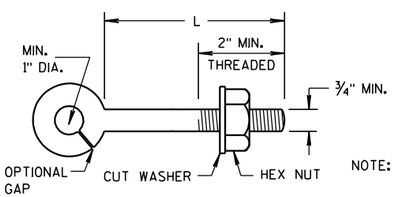


(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

EYE BOLT DIMENSION TABLE

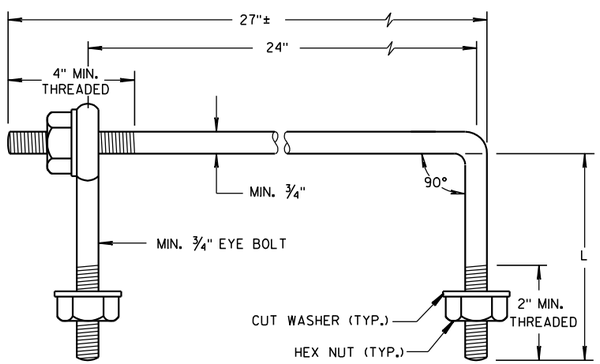
PIPE SIZE	L = LENGTH	
	TONGUE & GROOVE PIPE	MODIFIED BELL PIPE
18" TO 24"	4 1/2"	6 1/4"
30"	5"	7"
36"	5 1/2"	7"
42"	6"	
48"	6 1/2"	
60"	7 1/2"	
66"	8"	



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

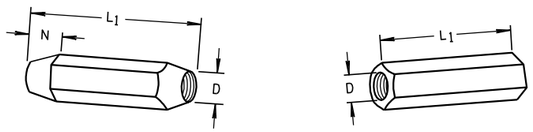
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

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

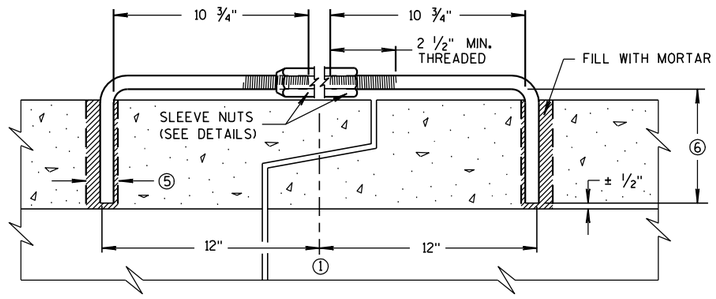
DIMENSIONS SHOWN ARE IN INCHES



TAPERED PLAIN

RIGHT AND LEFT THREADS

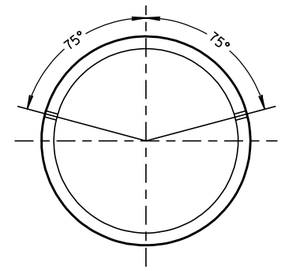
SLEEVE NUTS



LONGITUDINAL SECTION

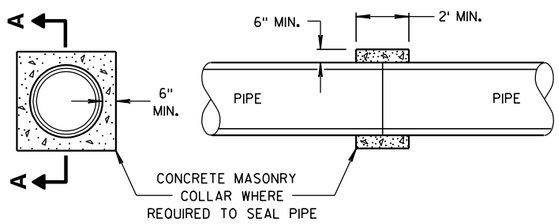
(JOINT TIES FOR 12" TO 108" DIA. CONCRETE PIPE)

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

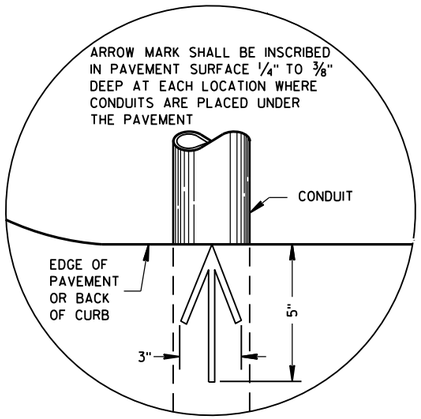
JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/5/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
170
FHWA

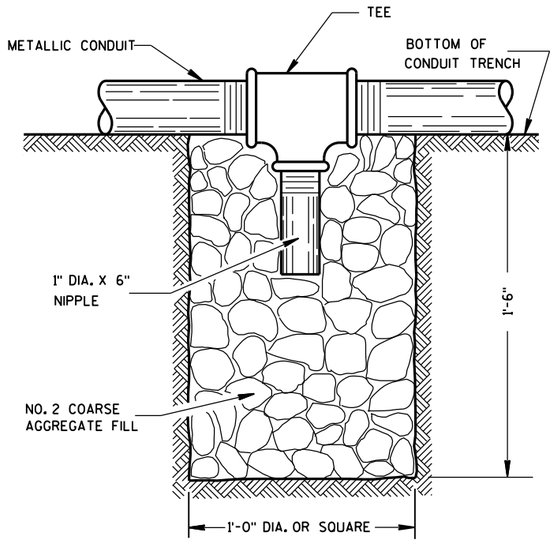
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S.D.D. 8 F 4-7



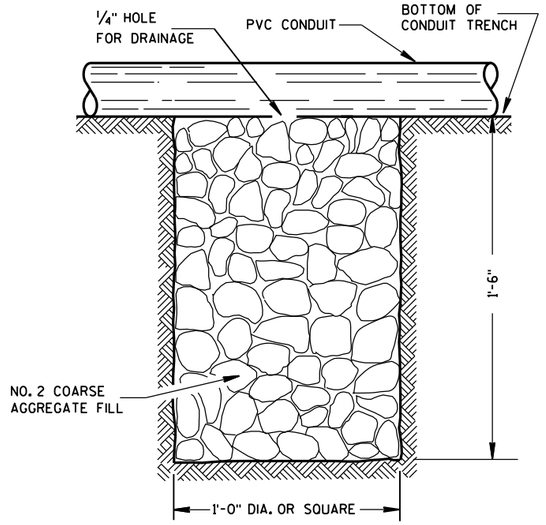
PLAN VIEW

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.

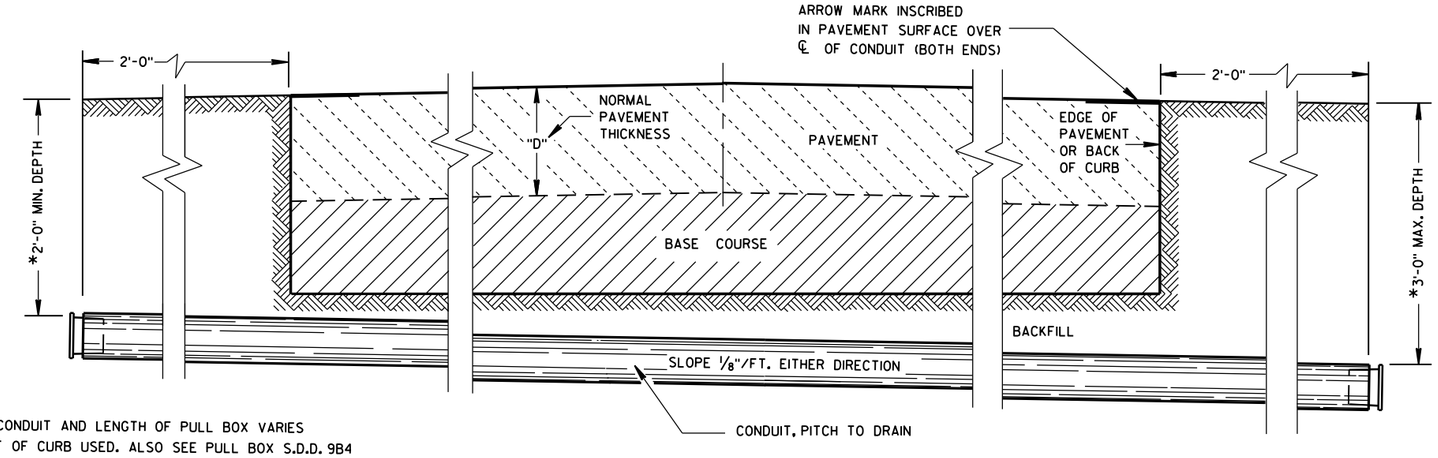
PRIOR TO CONDUIT ACCEPTANCE, CONDUIT CAPS OR PLUGS SHALL BE REMOVED, AND THE CAPS, PLUGS AND CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND THEN THE CAPS OR PLUGS REINSTALLED TO ENSURE THAT THE CAPS OR PLUGS CAN BE EASILY REMOVED IN THE FUTURE.

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
FHWA

6

S.D.D. 9 B 2-9

6

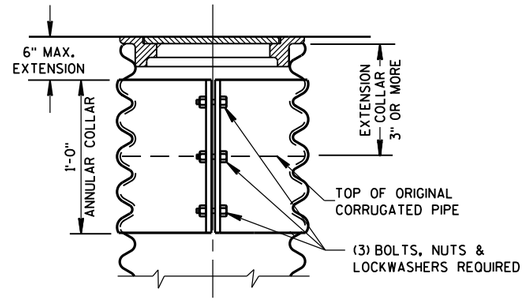
S.D.D. 9 B 2-9

TABLE OF NOMINAL DIMENSIONS AND WEIGHTS

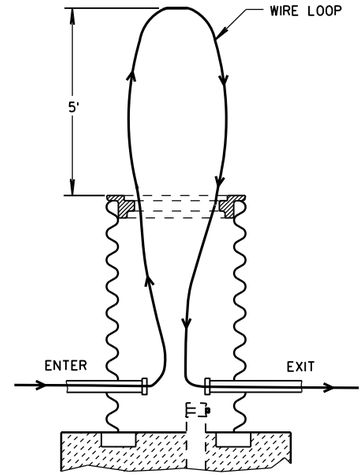
DIMENSION IN INCHES		CORRUGATED STEEL PIPE								
PIPE DIAMETER (INSIDE)	A	12	12	12	18	18	18	24	24	24
PIPE LENGTH **	B	24	30	36	24	30	36	36	42	48
WALL THICKNESS	C	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064
COVER	D	10 1/4	10 1/4	10 1/4	16 1/4	16 1/4	16 1/4	22 1/4	22 1/4	22 1/4
FRAME	E	14 1/2	14 1/2	14 1/2	20 1/2	20 1/2	20 1/2	26 1/2	26 1/2	26 1/2
FRAME	F	8 1/2	8 1/2	8 1/2	14 1/2	14 1/2	14 1/2	20 1/2	20 1/2	20 1/2
FRAME	G	11 1/2	11 1/2	11 1/2	17 1/2	17 1/2	17 1/2	23 1/2	23 1/2	23 1/2
WEIGHT IN POUNDS *										
FRAME AND COVER		60	60	60	110	110	110	155	155	155

* THE ACTUAL WEIGHT OF THE MANHOLE FRAME AND COVER MAY VARY WITHIN 5 PERCENT PLUS OR MINUS OF THE WEIGHTS SHOWN.

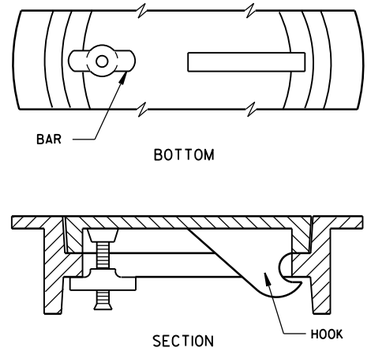
** NORMALLY USED LENGTHS. THE PROJECT ENGINEER SHALL DETERMINE IF PIPE LENGTHS, OTHER THAN THOSE SPECIFIED, SHALL BE USED, TO A MAXIMUM OF 48" (CONTINUOUS LENGTH, NON-SPLICED). THE ADDITIONAL LENGTH SHALL BE INCIDENTAL TO THE PULL BOX BID PRICE.



CORRUGATED PIPE EXTENDER

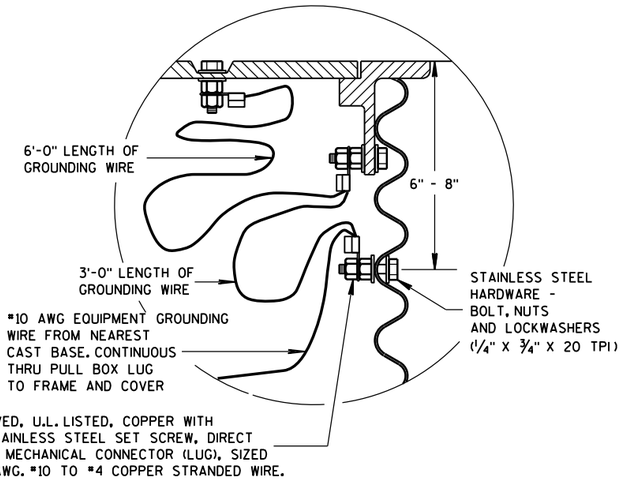


MEASUREMENT DETAIL FOR WIRE/CABLE IN THE PULL BOX

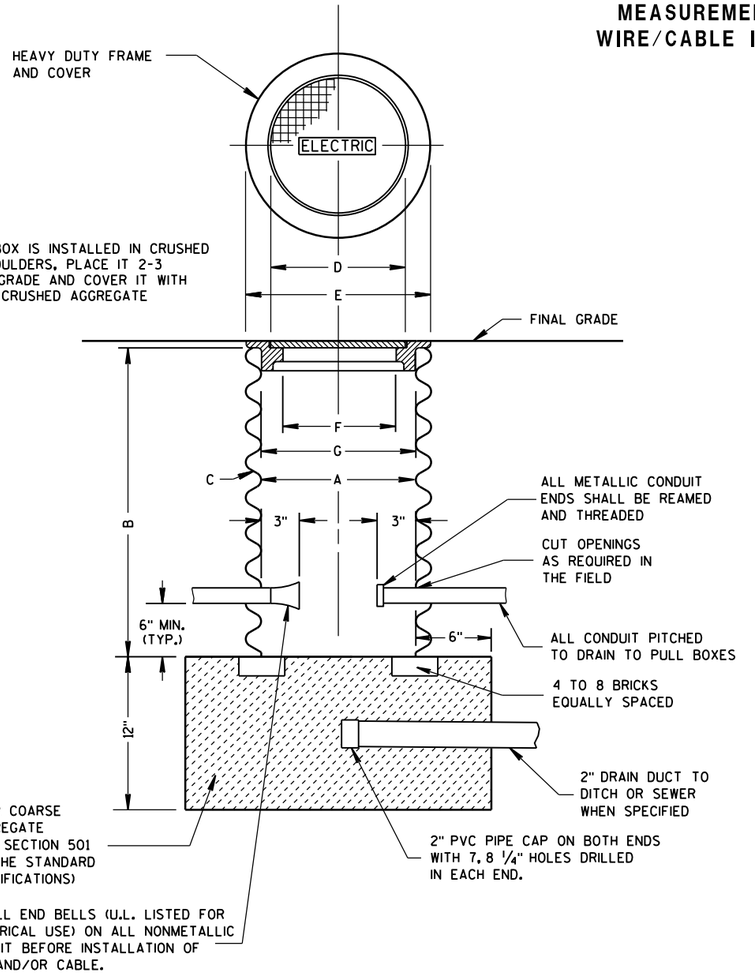


ALTERNATE COVER (LOCKING)

TIGHTENING BAR TYPE



EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES



PULL BOX

GENERAL NOTES

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

ALL FRAMES AND COVERS SHALL BE HEAVY DUTY TYPE, SUITABLE FOR VEHICULAR TRAFFIC LOADS.

PULL BOXES LOCATED IN THE ROADWAYS SHALL HAVE LOCKING COVERS.

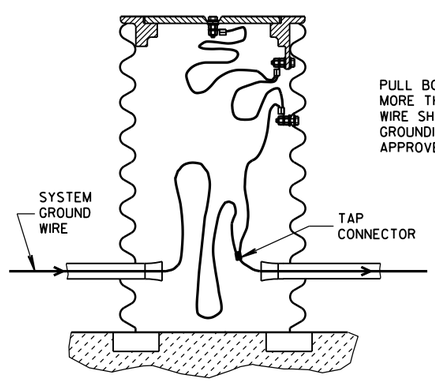
ENTRANCE HOLES INTO PULL BOXES SHALL BE CUT WITH A CIRCULAR HOLE SAW OR HYDRAULIC CONDUIT PUNCH. HOLE SIZE SHALL BE THE OUTSIDE DIAMETER OF THE CONDUIT THAT IS TO FIT IN THE OPENING PLUS NO MORE THAN 1/4".

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

GROUNDING LUGS (MECHANICAL CONNECTORS) SHALL BE U.L. LISTED AND APPROVED FOR USE WITH COPPER WIRE.

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

WHEN PULL BOXES ARE INSTALLED FOR FUTURE USE, DO NOT INSTALL THE EQUIPMENT GROUNDING LUG. THE EQUIPMENT GROUNDING LUG, THE EQUIPMENT GROUNDING ELECTRODE AND THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE REQUIRED AND INSTALLED UNDER A FUTURE WIRING CONTRACT.



PULL BOX TO NEAREST BASE DISTANCE MORE THAN 20 FEET. PULL BOX GROUND WIRE SHALL CONNECT AT SYSTEM GROUNDING WIRE. USE DEPARTMENT APPROVED TAP CONNECTOR.

EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES

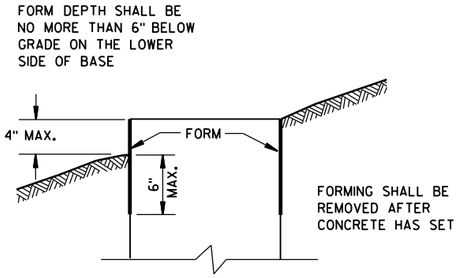
PULL BOX

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014
DATE
/S/ Ahmet Demirbilek
STATE ELECTRICAL
FHWA

6

S.D.D. 9 B 4-11



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.

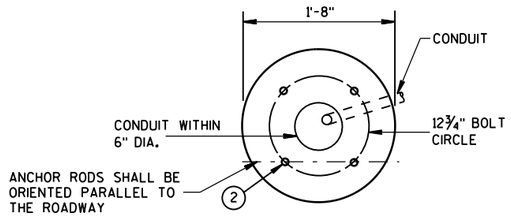
(4) (6) NO. 6 X 6'-8" BAR STEEL REINFORCEMENT.

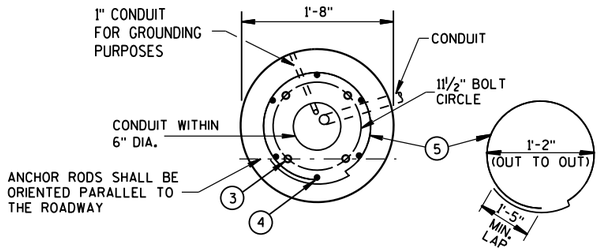
(5) (7) NO. 4 X 5'-1" BAR STEEL REINFORCEMENT @ 1'-0" C-C.

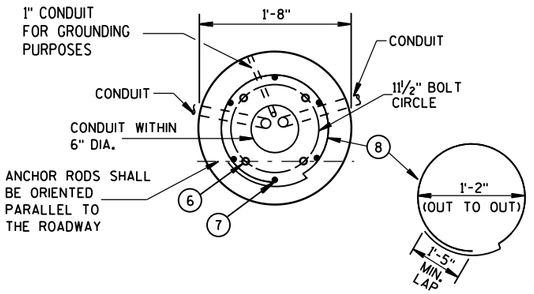
(6) (4) 1" DIA. X 3'-6" ANCHOR RODS.

(7) (6) NO.4 X 4'-8" BAR STEEL REINFORCEMENT.

(8) (5) NO. 4 X 5'-1" BAR STEEL REINFORCEMENT @ 1'-0" C-C.

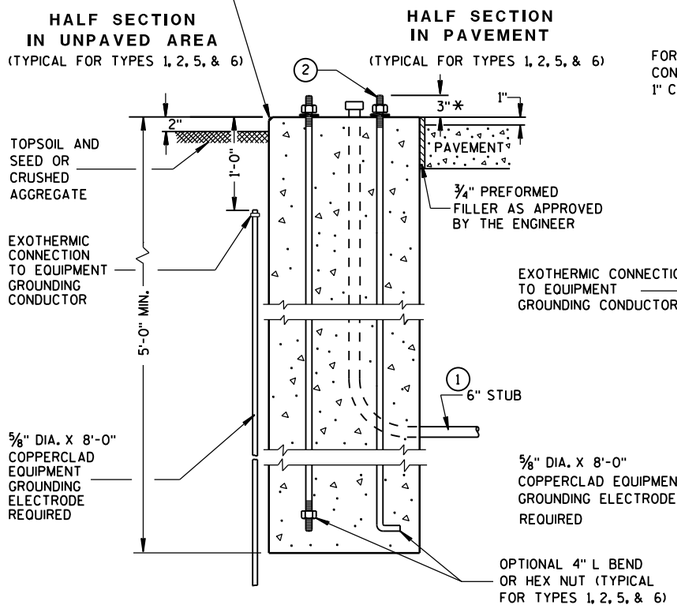


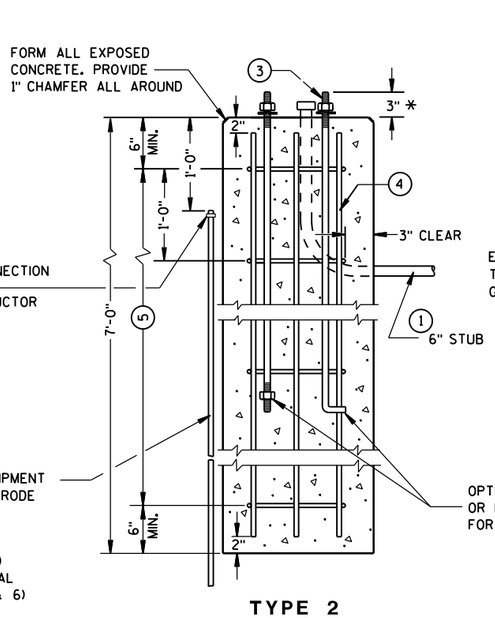




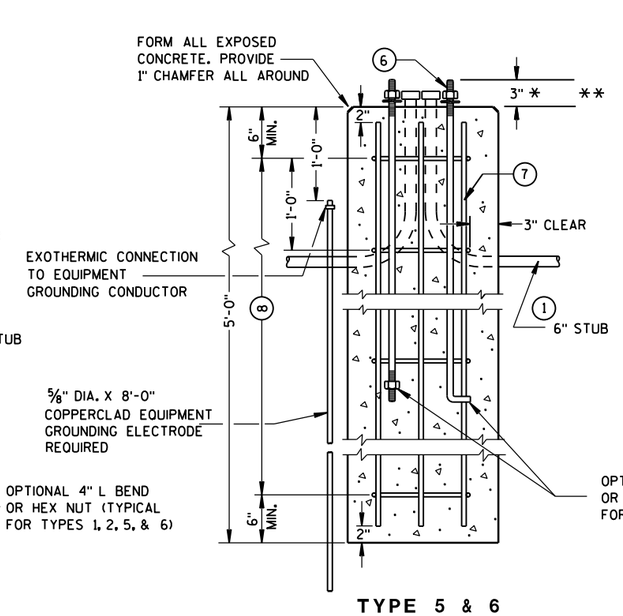
HALF SECTION IN UNPAVED AREA
(TYPICAL FOR TYPES 1, 2, 5, & 6)

HALF SECTION IN PAVEMENT
(TYPICAL FOR TYPES 1, 2, 5, & 6)





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.

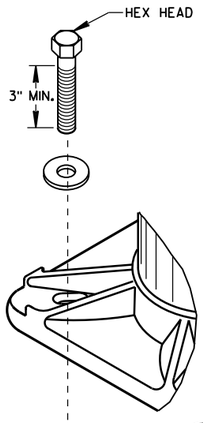
THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

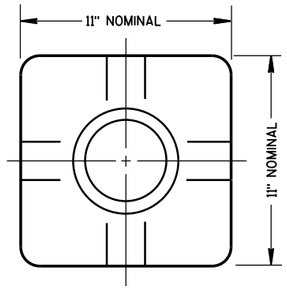
SHOULD THE MANNER OF ATTACHMENT OF THE LUG REQUIRE WASHERS, HEX NUTS, LOCK WASHER - THEY SHALL BE STAINLESS STEEL AS IS THE BOLT. THE MANNER OF ATTACHMENT SHALL NOT BLOCK ACCESSIBILITY TO WIRE PLACEMENT IN THE CONNECTOR.

PEDESTAL BASE COLLAR THREADING SHALL BE TAPERED AND IN ACCORDANCE WITH NATIONAL PIPE THREADING DIMENSIONS.

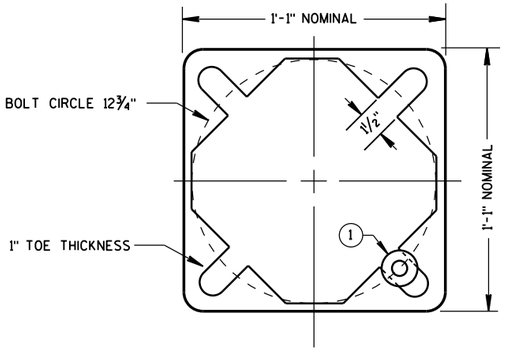
BASE COLLAR THREADING SHALL EXTEND INTO THE BASE COLLAR WITH SUFFICIENT DEPTH TO ACCEPT THE INSTALLATION OF TRAFFIC SIGNAL STANDARDS TO A DEPTH OF 1 1/2", THEN TIGHTENING TO A POINT OF BEING IMMOVABLE.

THE ACCESS DOOR SHALL BE OF THE SAME MATERIAL AS THE BASE.

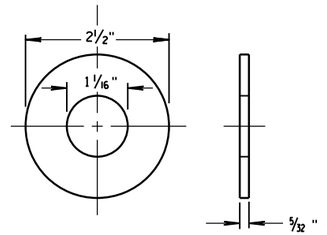




TOP VIEW
(PEDESTAL BASE)

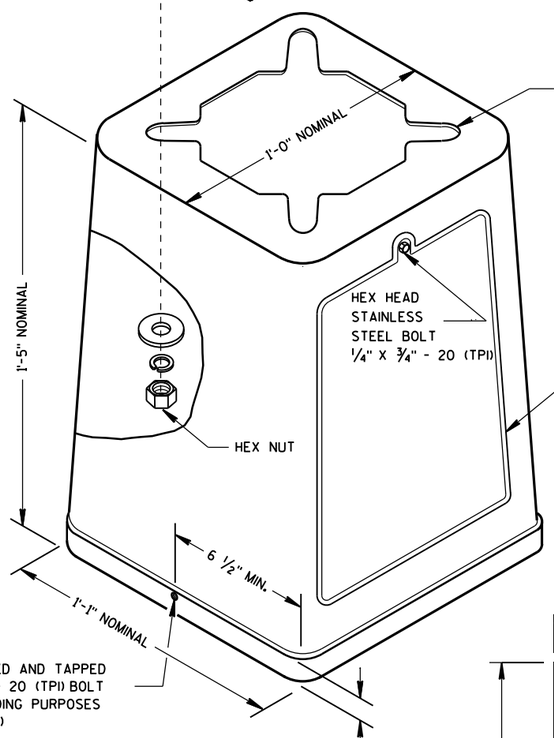


BOTTOM VIEW
(PEDESTAL BASE)

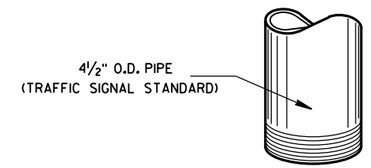


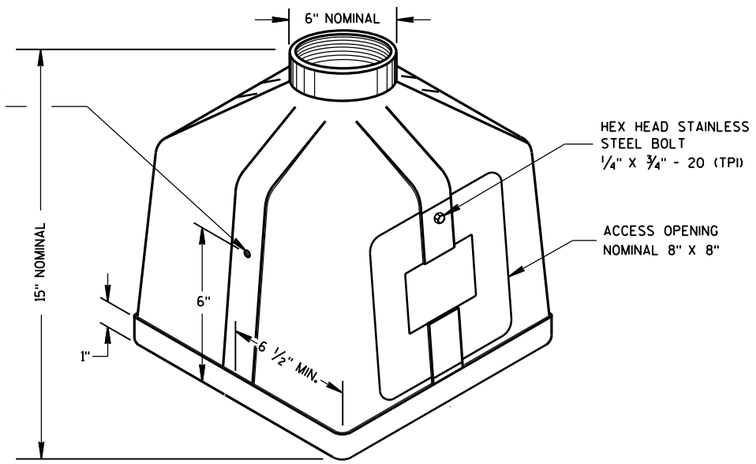
ZINC COATED STEEL WASHER
TO BE PROVIDED BY THE CONTRACTOR

PEDESTAL BASE WASHER (1)



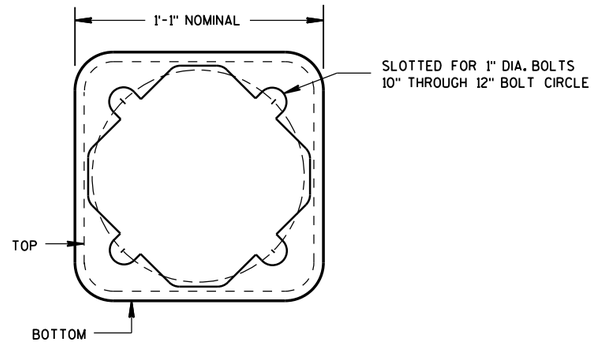
ISOMETRIC VIEW



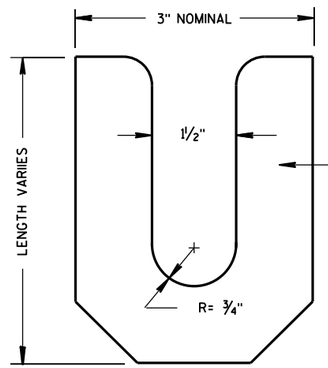


ISOMETRIC VIEW

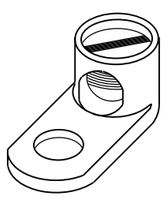
PEDESTAL BASE



BOTTOM VIEW
(TRANSFORMER BASE)



LEVELING SHIM



TYPICAL MECHANICAL CONNECTOR LUG

TO BE FURNISHED WITH EACH BASE

TRANSFORMER BASE

INTENDED FOR USE WITH TYPE 2, 3, 4, 5 & 6 POLES

TRANSFORMER/PEDESTAL BASES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

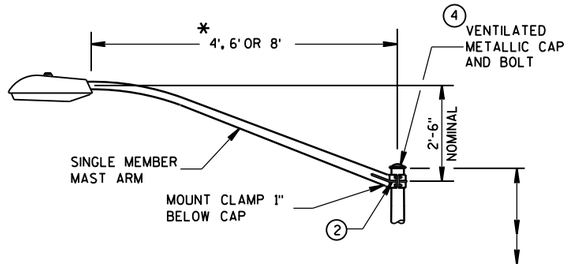
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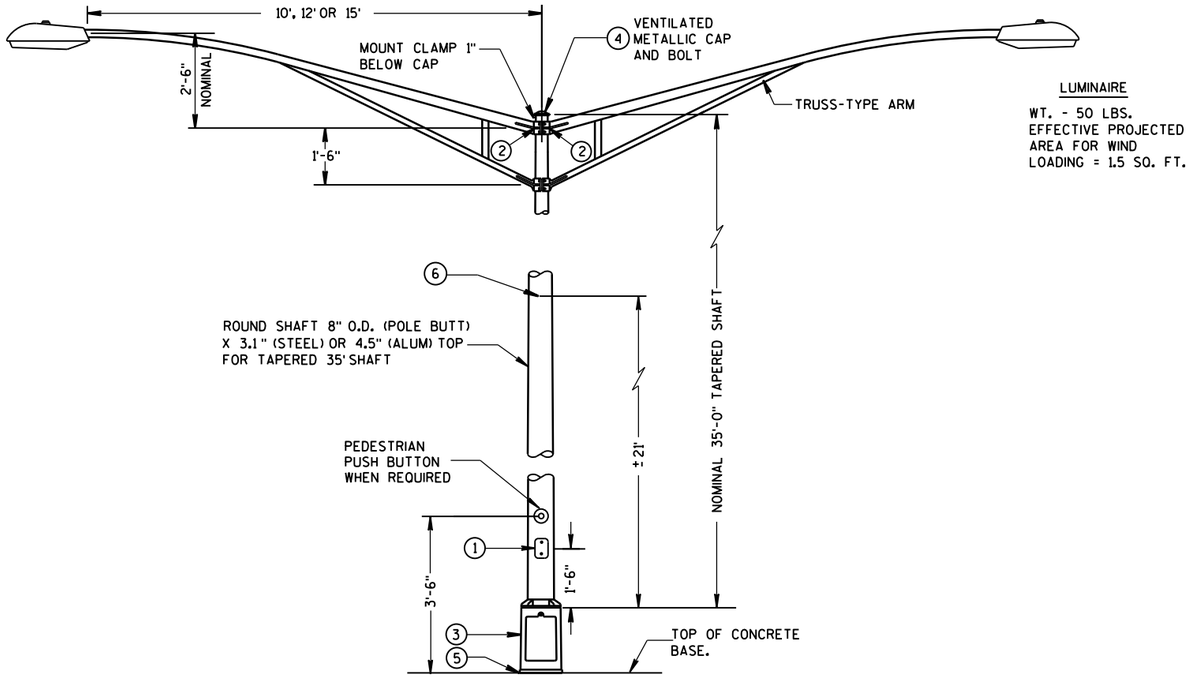
S.D.D. 9 C 3-4

6

S.D.D. 9 C 3-4

* RISE FOR 4' ARM SHALL BE 2'-0".

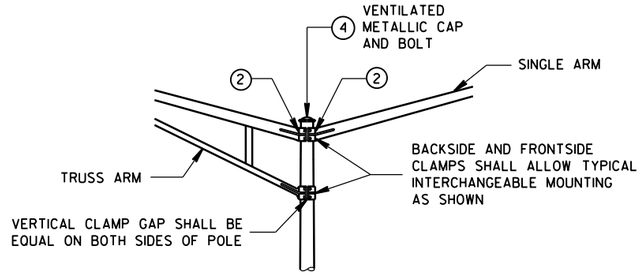




TYPE 6 POLE MOUNTING CONFIGURATION

(MAXIMUM LOAD)

LIGHTING ONLY



INTERCHANGEABLE MOUNTING DETAIL

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.

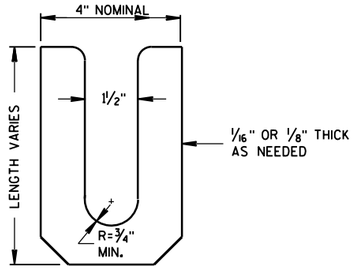
(6) INTERNAL DUMBBELL-TYPE VIBRATION DAMPER.

POLE MOUNTINGS FOR LIGHTING UNITS, TYPE 6 (35 FEET)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

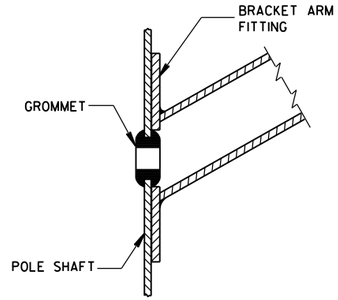
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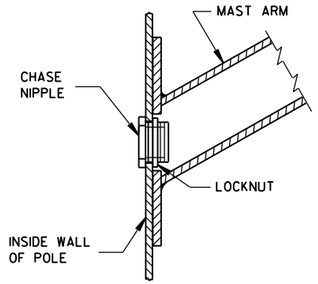


LEVELING SHIM (13)

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.

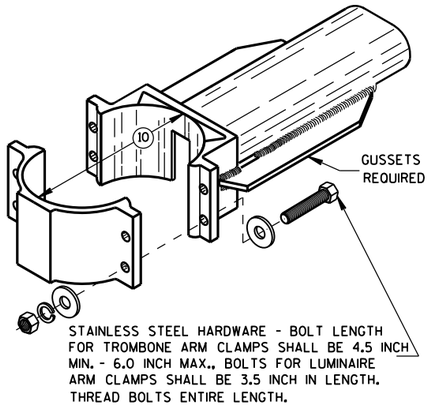
(10) 4.5" I.D. FOR LUMINAIRE MAST ARM CLAMP.
6.625" I.D. FOR TROMBONE MAST ARM CLAMP.

(11) INDIVIDUAL BASE PLATE ANCHOR ROD COVERS. (4 REQUIRED)

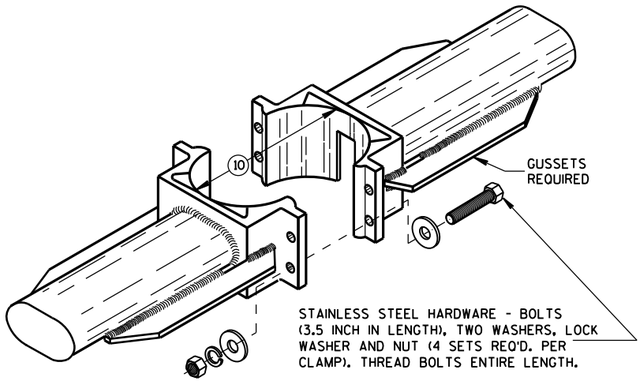
(12) BASE PLATE SLOTTED TO ACCEPT 11" THROUGH 12" BOLT CIRCLE USING 1" DIAMETER ANCHOR RODS.

(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.

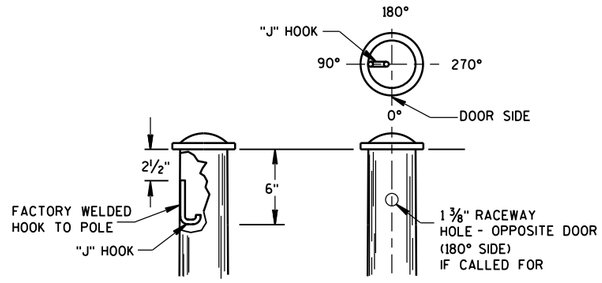
SHIMS SHALL BE LONG ENOUGH AND WIDE ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.



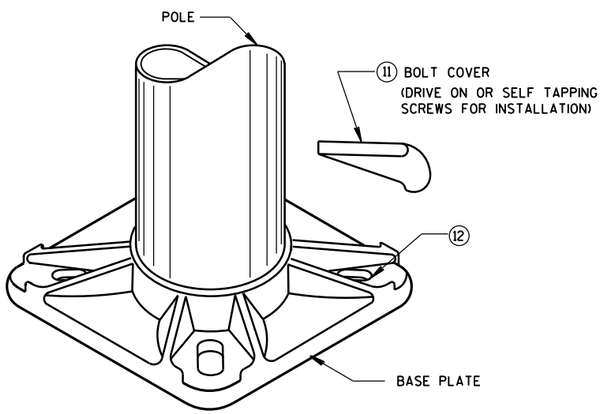
TYPICAL TROMBONE MAST ARM AND SINGLE LUMINAIRE MAST ARM MOUNTING CLAMP



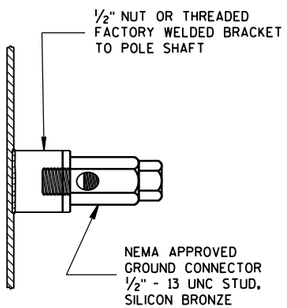
TYPICAL LUMINAIRE MAST ARM (DOUBLE) MOUNTING BRACKETS

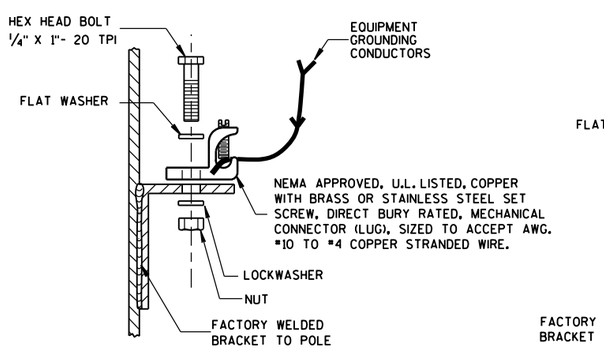


TYPICAL "J" HOOK LOCATION



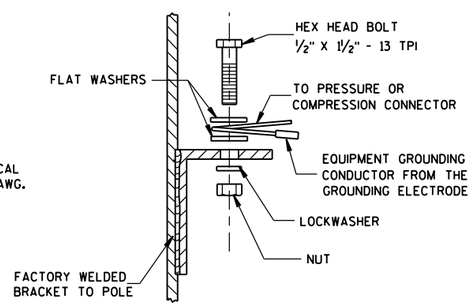
BASE PLATE





TYPICAL GROUNDING CONNECTIONS

NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL



HARDWARE DETAILS FOR POLE MOUNTINGS

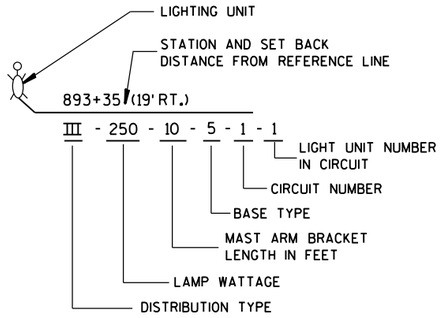
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Feb. 2015
DATE

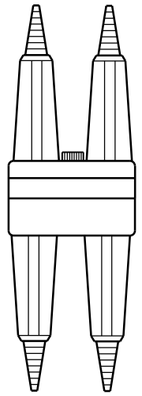
/S/ Ahmet Demirbilek
STATE ELECTRICAL

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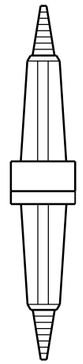
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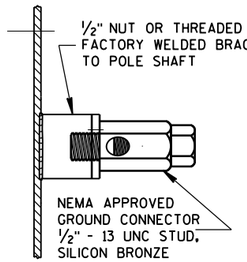
LIGHTING UNIT CODE
(TYPICAL)

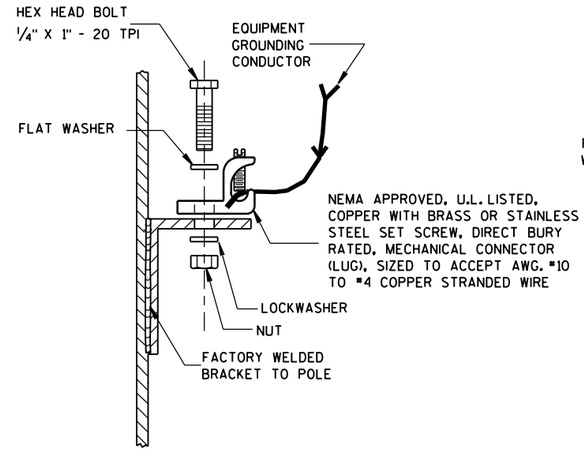


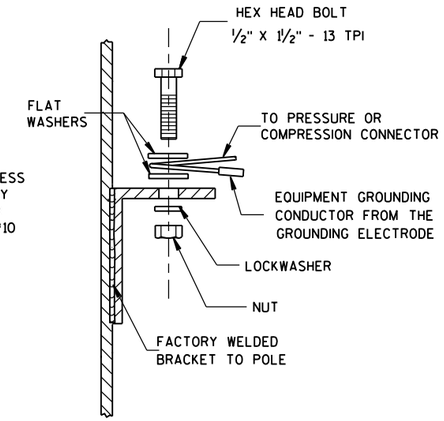
DETAIL "A"
BREAKAWY
DOUBLE POLE WITH
WATERPROOF
INSULATING BOOT



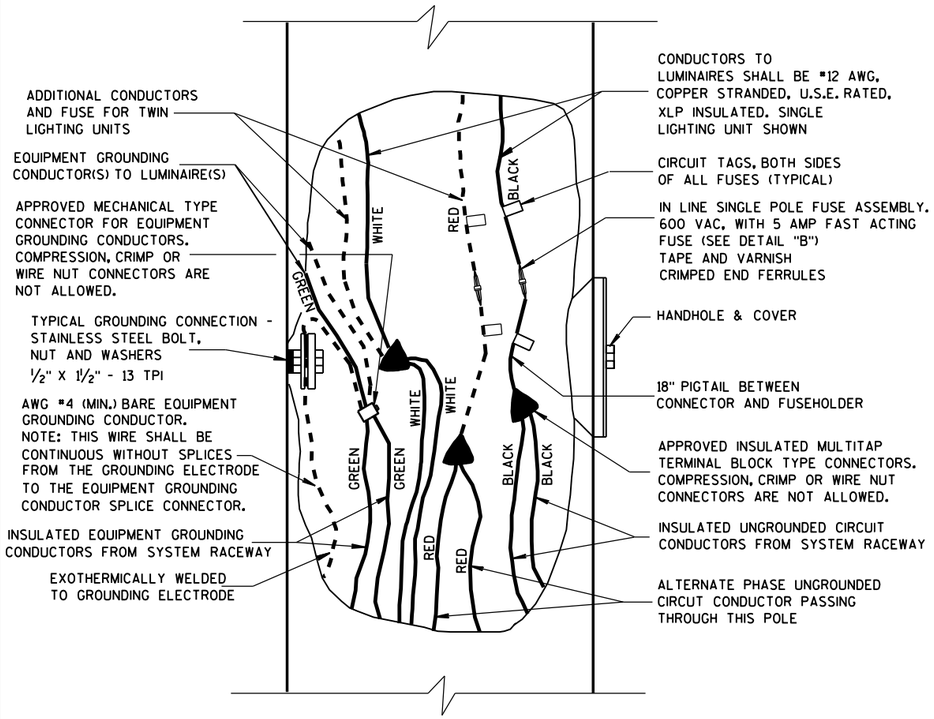
DETAIL "B"
BREAKAWY
SINGLE POLE WITH
WATERPROOF
INSULATING BOOT



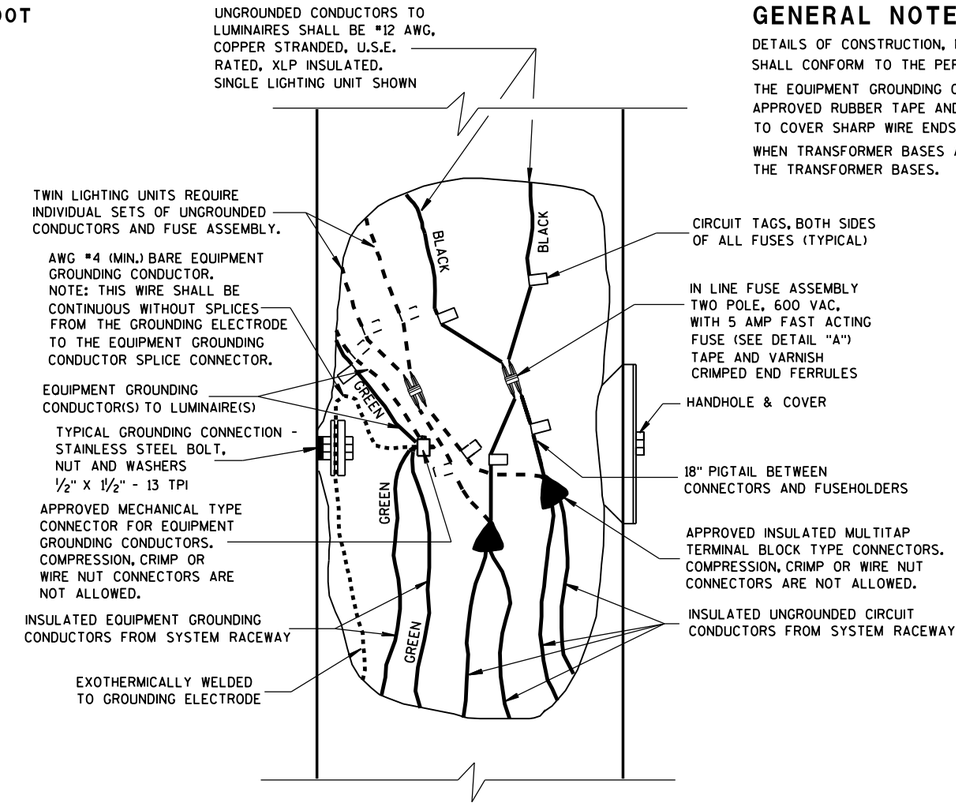




TYPICAL GROUNDING CONNECTIONS
NUT, BOLT, WASHERS AND LOCKWASHERS SHALL BE STAINLESS STEEL



3 WIRE - 120, 240 OR 480 VAC (UNGROUNDED CONDUCTOR) WITH GROUNDED CONDUCTOR AND WITH EQUIPMENT GROUNDING CONDUCTOR



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 GROUNDING 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.

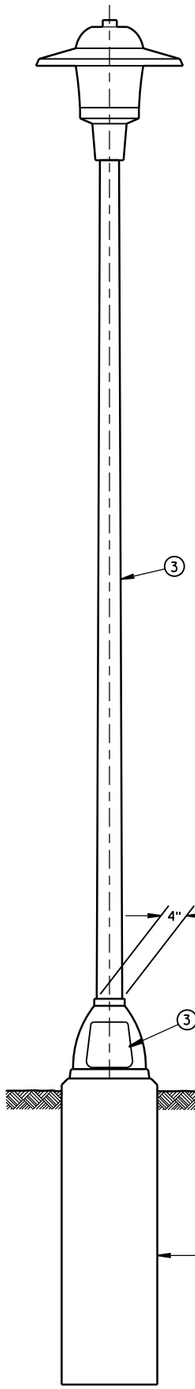
WHEN TRANSFORMER BASES ARE USED, ALL WIRING CONNECTIONS SHALL OCCUR WITHIN THE TRANSFORMER BASES.

NON-FREEWAY LIGHTING UNIT POLE WIRING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
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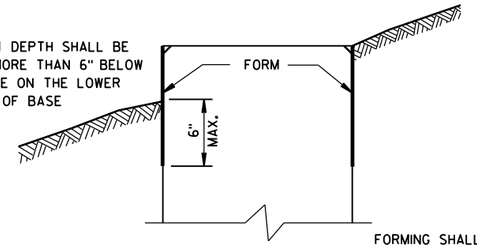


LUMINAIRE

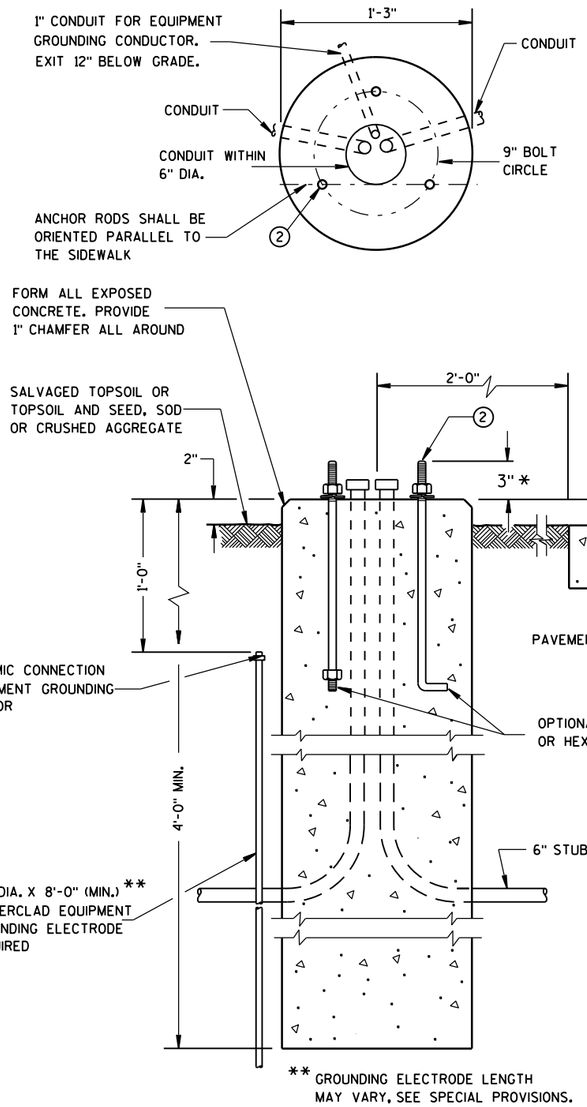
WT. = 50 LBS.
EFFECTIVE PROJECTED AREA
FOR WIND LOADING = 1.5 SQ. FT.

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.

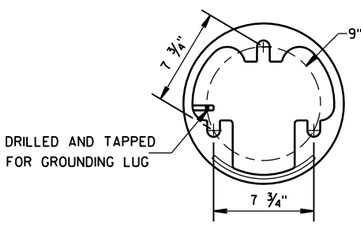
THE BELL SHAPED BASE SHALL BE 12 ½ INCHES IN DIAMETER AND HAVE A 9-INCH BOLT CIRCLE. ANCHOR RODS SHALL BE INCLUDED WITH THE BASE.

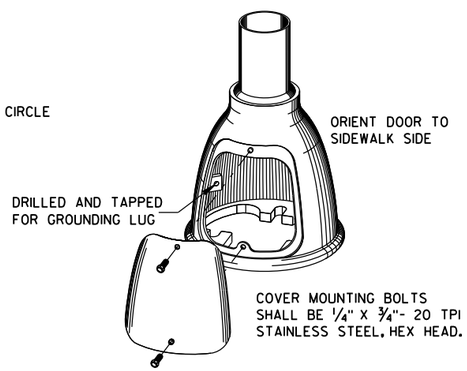
THE ACCESS DOOR OPENING SHALL BE APPROXIMATELY 7½ X 5¼ X 7½-INCHES.

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

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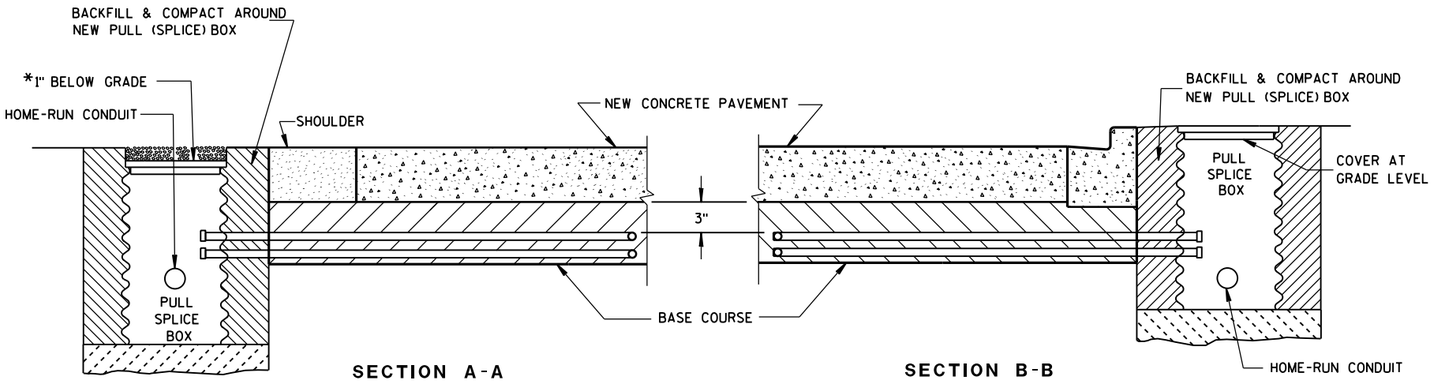
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Sept. 2014 — DATE
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SECTION A-A
NO CURB & GUTTER

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.

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.

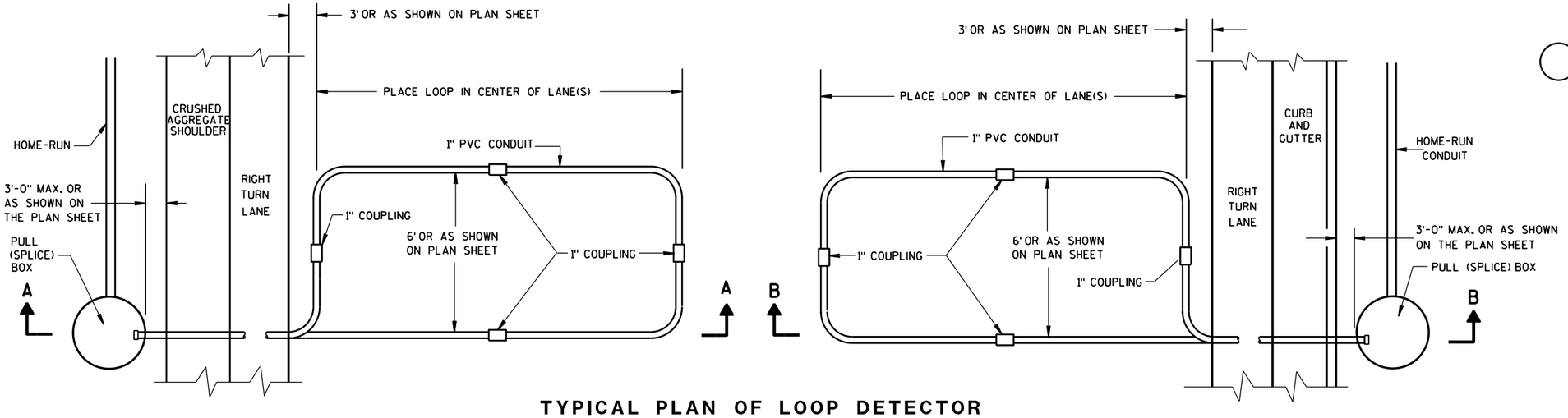
THE #12 AWG. LOOP WIRE IN THE PULL (SPLICE) BOX SHALL BE HAND TWISTED AT LEAST 3 TWISTS PER FOOT BEFORE BEING SPLICED TO THE LOOP LEAD-IN CABLE.

SPLICES OF LOOP WIRE TO LEAD-IN CABLE SHALL BE MADE ONLY IN PULL (SPLICE) BOXES AT THE SIDE OF THE ROAD.

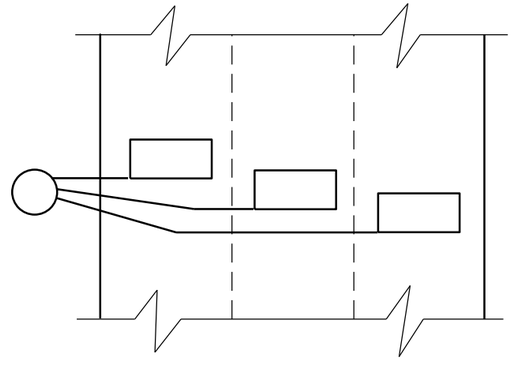
THE #12 AWG LOOP WIRE SHALL BE INSTALLED FROM THE ROADSIDE PULL (SPLICE) BOX, THROUGH THE LOOP CONDUIT, BACK TO THE ROADSIDE PULL (SPLICE) BOX, AND BE INSTALLED IN ONE, NON-SPLICED CONTINUOUS LENGTH.

PROTECTION OF THE CONDUITS IN THE BASE COURSE SHALL BE REQUIRED AFTER INSTALLATION AND BEFORE NEW PAVEMENT IS INSTALLED.

SHOULD INSTALLATION REPAIR BE REQUIRED, IT SHALL BE DONE UNDER THE DIRECTION OF THE PROJECT ENGINEER.



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
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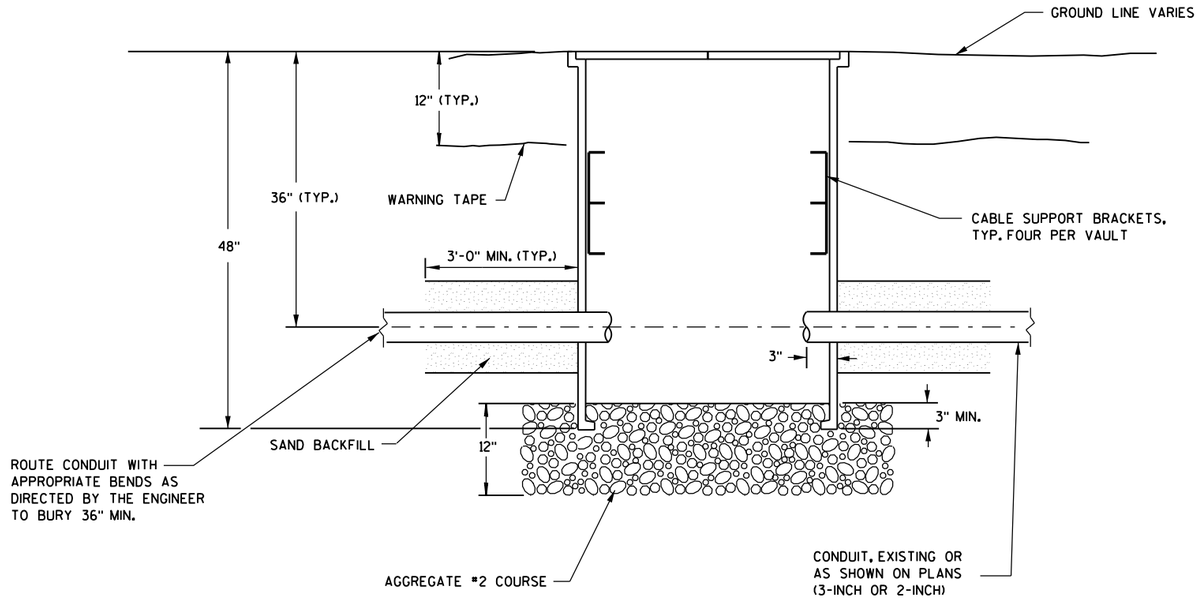
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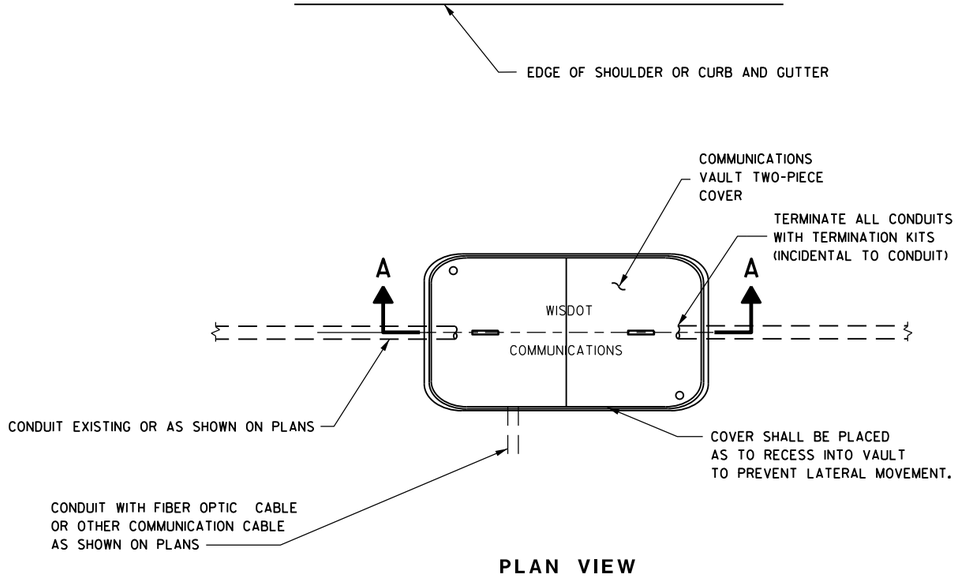
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S.D.D. 9 F 15-4b



SECTION A-A



PLAN VIEW

COMMUNICATIONS VAULT

GENERAL NOTES

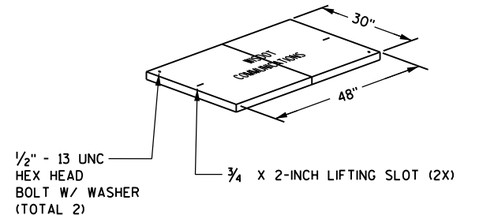
BOX SHALL HAVE AN OPEN BASE.

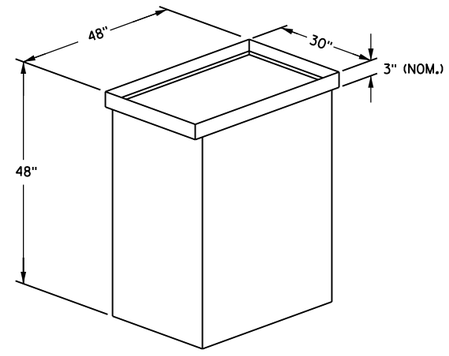
COVER SHALL BE DETECTABLE, AND HAVE A MINIMUM DESIGN LOAD OF 15,000 LBS AND SHALL LOCK.

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.

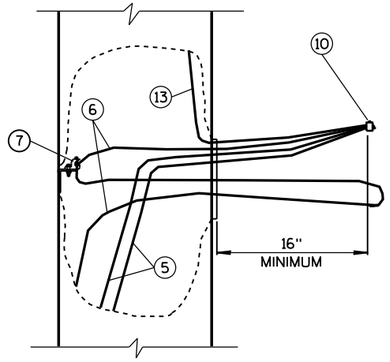
FIELD PLACEMENT OF COMMUNICATIONS VAULTS SHALL BE AS DIRECTED BY THE ENGINEER.



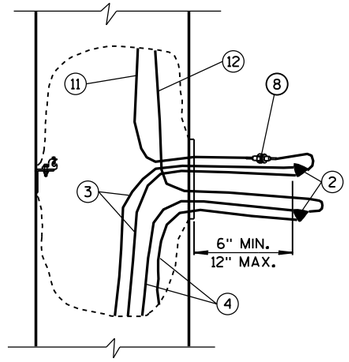


ISOMETRIC VIEW

COMMUNICATION VAULT	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
Sept. 2014	/S/ Ahmet Demirbilek
DATE	STATE ELECTRICAL
FHWA	

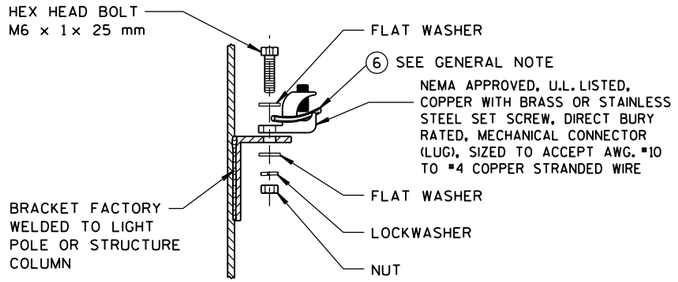


EQUIPMENT GROUNDING CONDUCTOR SLACK



UNGROUNDED CONDUCTOR SLACK (AND GROUNDED NEUTRAL SLACK IN GROUNDED NEUTRAL SYSTEM)

TYPICAL CONDUCTOR SLACK AT HANDHOLES



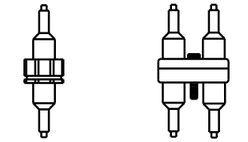
HANDHOLE GROUNDING LUG

(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.

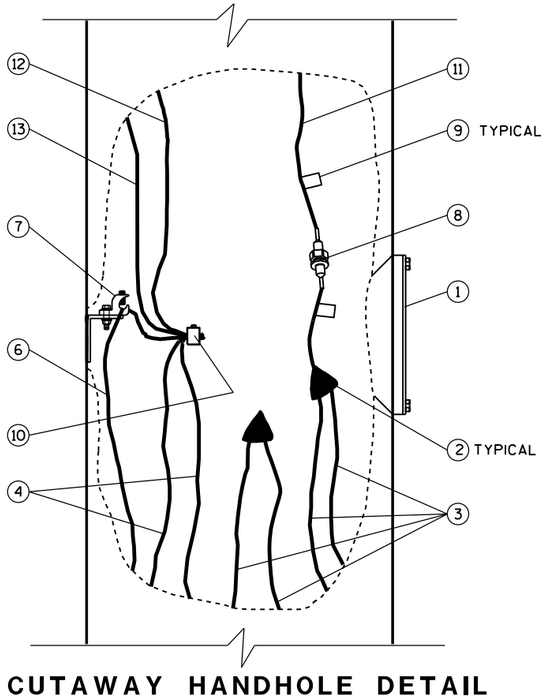
USE THIS DETAIL IN CONJUNCTION WITH THE ELECTRICAL DETAILS FOR THE APPLICATION, WHICH MAY BE A LIGHT POLE, SIGN BRIDGE, ETC.

THE GROUNDING ELECTRODE CONDUCTOR SHALL BE CONTINUOUS WITHOUT SPLICES FROM THE GROUNDING ELECTRODE THROUGH THE HANDHOLE GROUNDING LUG TO THE CONNECTOR.

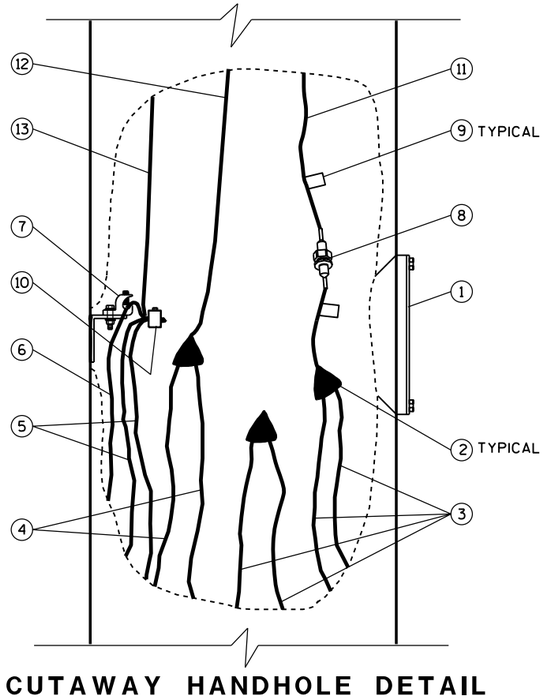
THREE POLE WIRES ARE SHOWN FOR A SINGLE LUMINAIRE LIGHT POLE. THREE ADDITIONAL POLE WIRES REQUIRED FOR TWIN LUMINAIRE LIGHT POLES ARE OMITTED FROM THE DRAWING FOR CLARITY. IN THE TWIN POLE CASE, BUNDLE EACH SET OF THREE WIRES WITH A NYLON CABLE TIE.

IN 3-PHASE SYSTEMS, THERE WILL BE ONE MORE UNGROUNDED LINE WIRE, WHICH IS OMITTED FROM THE DRAWING FOR CLARITY.

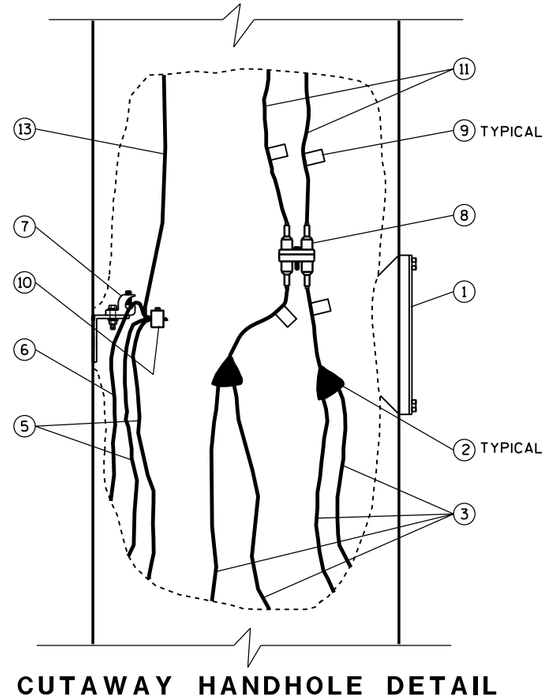
CIRCUIT TAGS SHALL BE INSTALLED ONLY WHERE REQUIRED IN THE SPECIAL PROVISIONS.



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

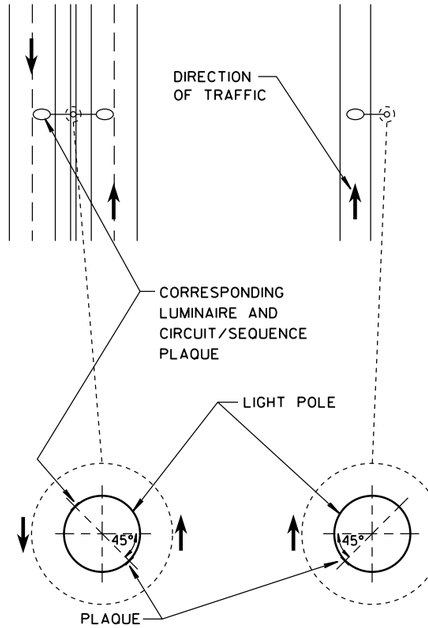
ELECTRICAL HANDHOLE WIRING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

6

S.D.D. 10 A 1-3



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

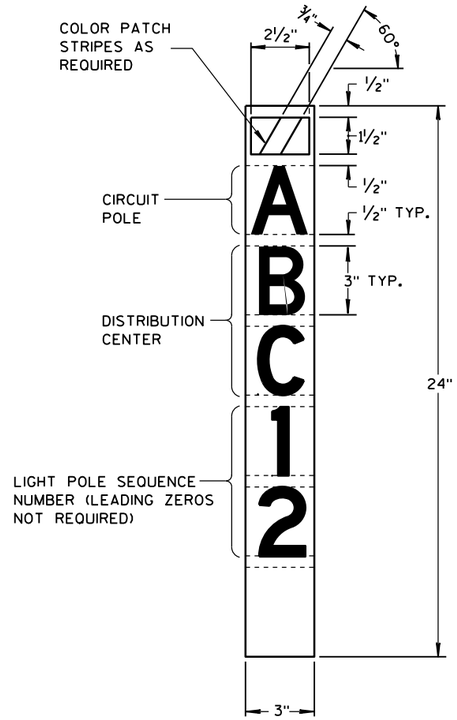
COLOR PATCHES - VARIOUS COLORS, SELF-ADHESIVE VINYL SHEETING

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 AND LED LUMINAIRES

HPS	LED	COLOR PATCH CODE
1000 WATT		NO PATCH
400 WATT	CATEGORY D	ORANGE
310 WATT		BLUE
250 WATT	CATEGORY C	ORANGE WITH WHITE STRIPE
200 WATT		RED
150 WATT	CATEGORY B	GREEN
100 WATT	CATEGORY A	BROWN
70 WATT	CATEGORY UDL	BROWN WITH WHITE STRIPE



LIGHT POLE CIRCUIT/SEQUENCE PLAQUE

6

S.D.D. 10 A 2-3

6

S.D.D. 10 A 2-3

IDENTIFICATION PLAQUES LIGHT POLES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

Feb. 2015 — DATE

/S/ Ahmet Demirbilek — STATE ELECTRICAL

FHWA

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 DETAIL FOR ELECTRICAL HANDHOLE WIRING.

THE GROUNDING ELECTRODE CONDUCTOR SHALL BE CONTINUOUS WITHOUT SPLICES FROM THE GROUNDING ELECTRODE THROUGH THE HANDHOLE GROUNDING LUG TO THE CONNECTOR.

WIRING FOR SINGLE LUMINAIRE POLES IS SHOWN WITH SOLID LINES. WIRING FOR THE SECOND LUMINAIRE OF TWIN LUMINAIRE POLES IS SHOWN WITH DOTTED LINES.

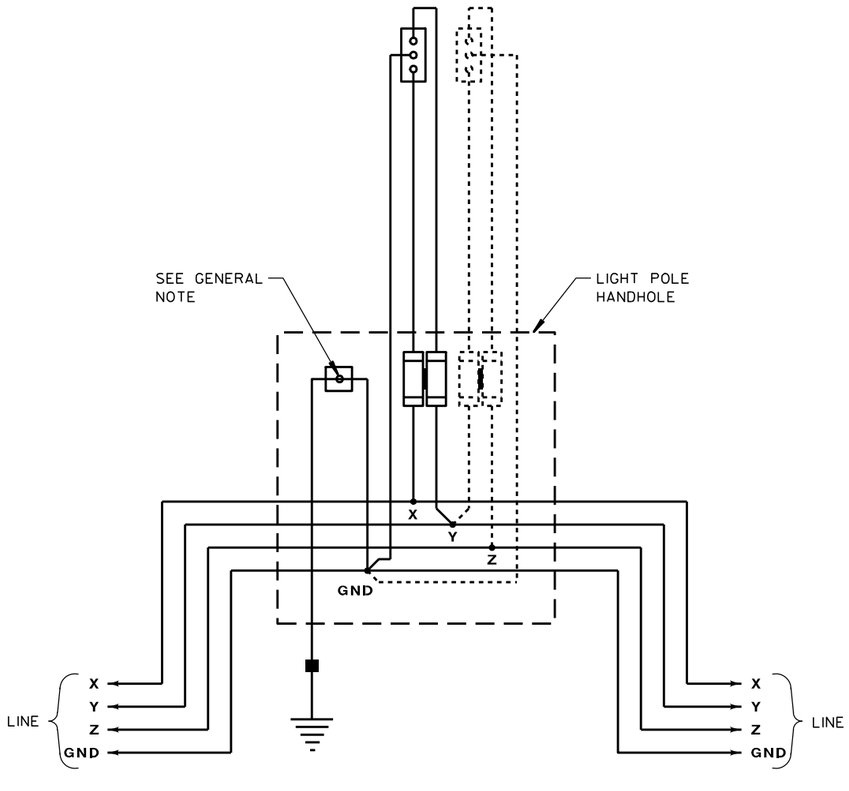
THE PLANS WILL SHOW WHICH CIRCUIT LEG(S) ARE CONNECTED TO EACH INSTALLATION.

HANDHOLE FUSE SCHEDULES

LINE VOLTAGE ϕ-ϕ	BALLAST WATTAGE 70-200 W	BALLAST WATTAGE 250-400 W
240 VAC	2P-5 A	2P-5 A
480 VAC	2P-5 A	2P-5 A

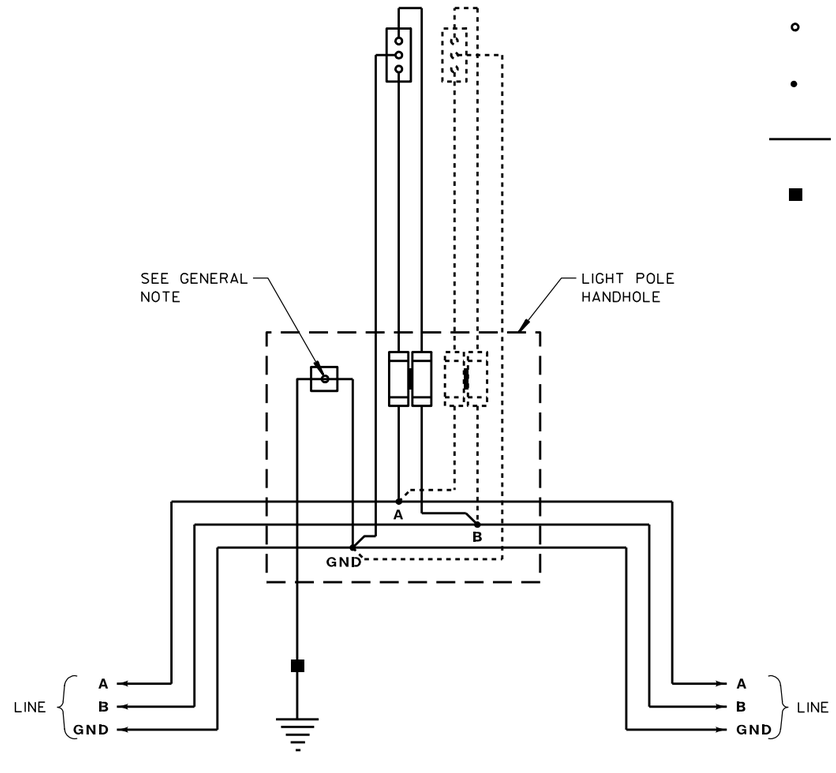
LEGEND

A,B,X,Y,Z	UNGROUNDED CIRCUIT CONDUCTORS
N	GROUNDED CIRCUIT CONDUCTORS
GND	EQUIPMENT GROUNDING CONDUCTOR
P	POLE (ELECTRICAL CIRCUIT)
ϕ	PHASE (ELECTRICAL CURRENT)
	HANDHOLE GROUND LUG
	SINGLE-POLE (1P) FUSE ASSEMBLY
	TWO-POLE (2P) FUSE ASSEMBLY
	UNFUSED LUMINAIRE
	EQUIPMENT GROUNDING ELECTRODE
	TERMINAL
	SPLICE
	CONDUCTOR
	EXOTHERMIC WELD



TYPICAL WIRING DIAGRAM

PHASE-TO-PHASE DELTA SYSTEM
3-ϕ 480VAC 3 WIRE



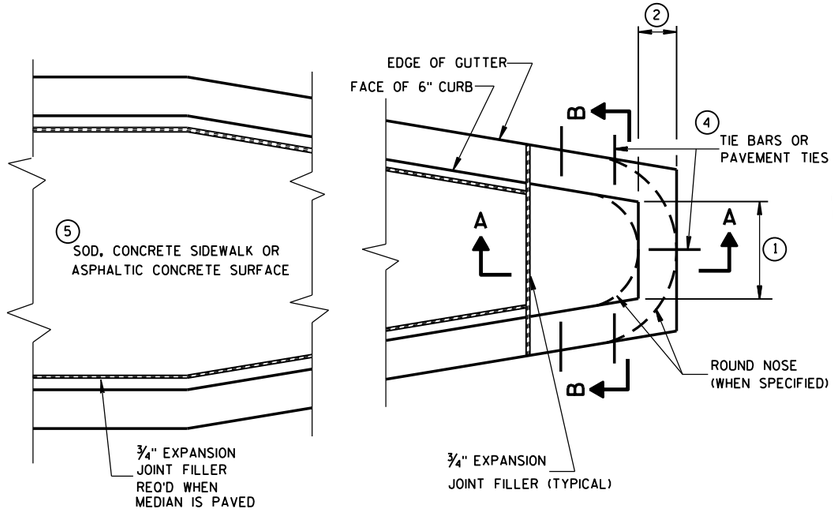
TYPICAL WIRING DIAGRAM

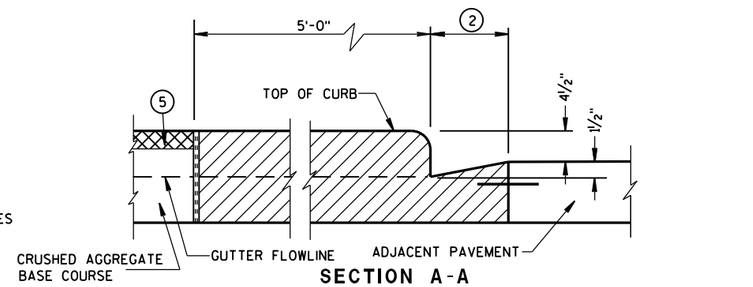
UNGROUNDED SYSTEM
1-ϕ 120-120VAC 2 WIRE

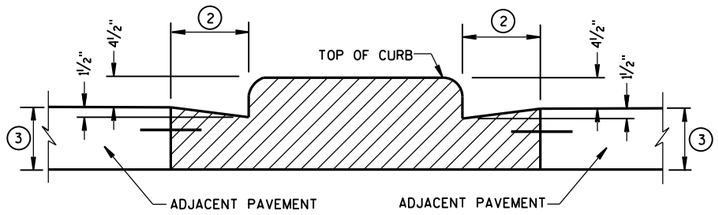
ELECTRICAL DETAILS
GROUND MOUNT LIGHT POLES
PHASE-TO-PHASE SYSTEMS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/25/2010 DATE
/S/ John Corbin STATE ELECTRICAL ENGI
183
HWYS
FHWA







CONCRETE MEDIAN BLUNT NOSE DETAIL

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) SEE PLAN FOR MEDIAN NOSE WIDTH AND RADIUS (FOR ROUND NOSE ALTERNATE).

(2) WIDTH OF GUTTER TO MATCH EXISTING ADJACENT GUTTER OR AS SPECIFIED ELSEWHERE IN THE PLAN.

(3) DEPTH EQUAL TO ADJACENT PAVEMENT. ADJACENT PAVEMENT STRUCTURE DETAILS ARE SHOWN ON THE PLAN. TYPICAL OPTIONS ARE:

(1) NEW OR EXISTING CONCRETE PAVEMENT.

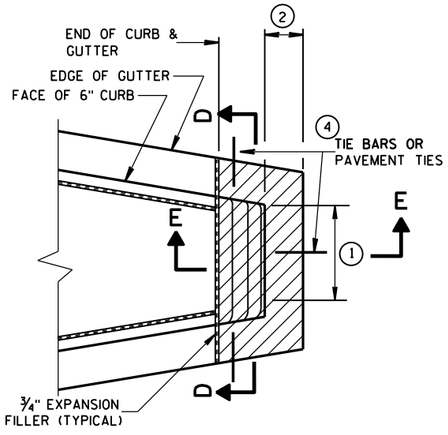
(2) ASPHALTIC CONCRETE PAVEMENT OVER NEW OR EXISTING CONCRETE BASE COURSE.

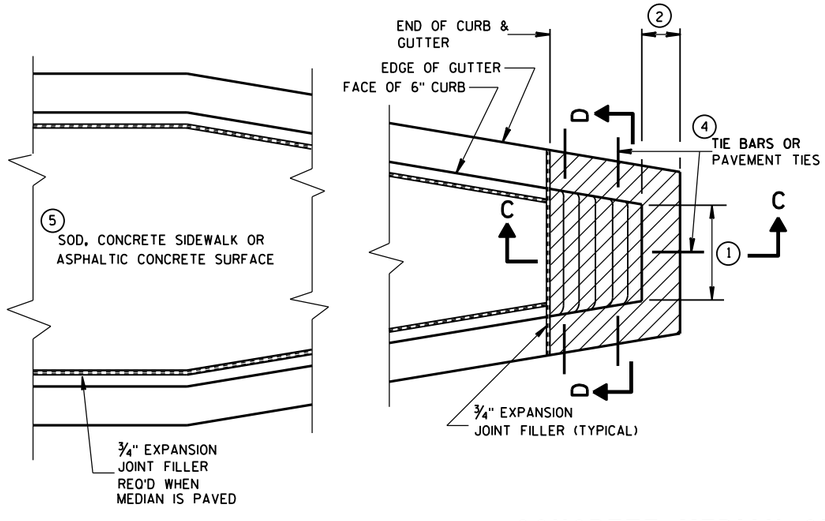
(3) ASPHALTIC CONCRETE PAVEMENT OVER CRUSHED AGGREGATE BASE COURSE.

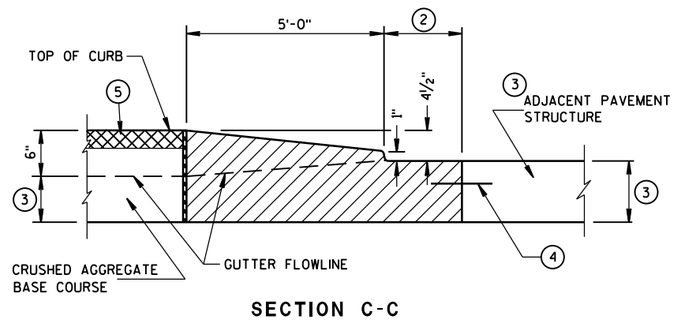
(4) TIE BARS OR PAVEMENT TIES REQUIRED IN NEW CONCRETE PAVEMENT OR CONCRETE BASE COURSE. TIE BARS SHALL BE NO. 4 X 2'-0" SPACED AT 2'-0" C-C.

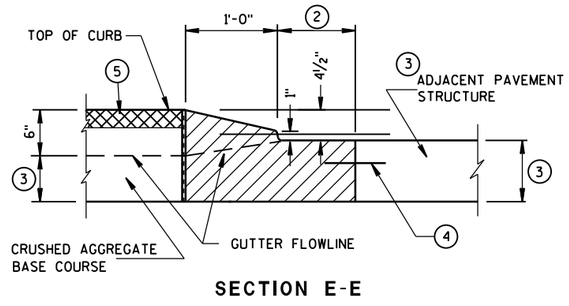
PAVEMENT TIES REQUIRED IN EXISTING CONCRETE BASE COURSE. PAVEMENT TIES SHALL BE NO. 6 X 1'-0" SPACED AT 3'-0" C-C INSTALLED ON A HORIZONTAL SKEW OF 6:1. THE DIRECTION OF SKEW SHALL ALTERNATE AFTER EVERY ONE OR TWO BARS.

(5) SURFACE TYPE AND DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.



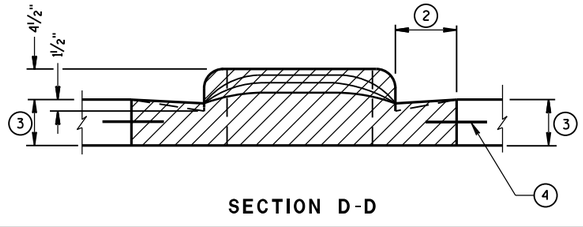






CONCRETE MEDIAN SLOPED NOSE TYPE 2

CONCRETE MEDIAN SLOPED NOSE TYPE 1



CONCRETE MEDIAN NOSE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

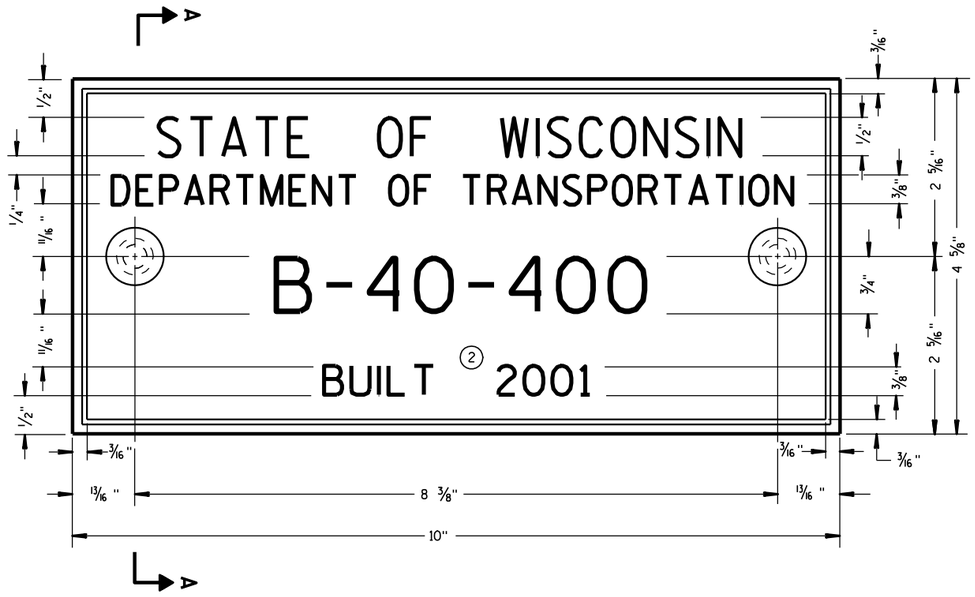
APPROVED
6/8/2006
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS D ENGINEER
FHWA

6

S.D.D. 11 B 2-2

6

S.D.D. 11 B 2-2



TYPICAL NAME PLATE
(BRIDGES, CULVERTS, AND RETAINING WALLS)

NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES

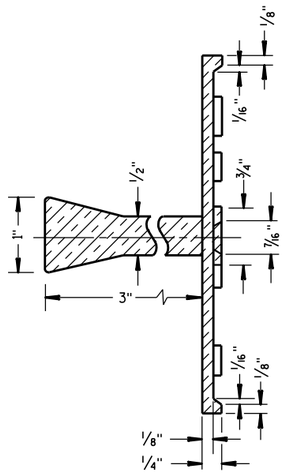
GENERAL NOTES

NAME PLATES TO BE INSTALLED ON BRIDGES, CULVERTS, AND RETAINING WALLS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS.

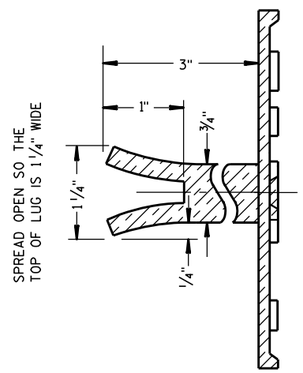
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

(1) EPOXY RESIN SHALL BE FROM AN APPROVED MANUFACTURER AND USED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

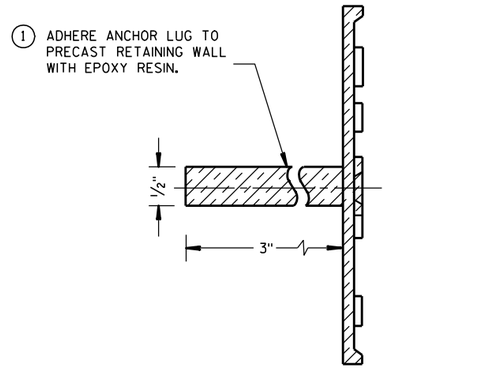
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A



ALTERNATE LUG



ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/26/10 DATE — /S/ Scot Beck — CHIEF STRUCTURAL DEVELOP ENGINEER

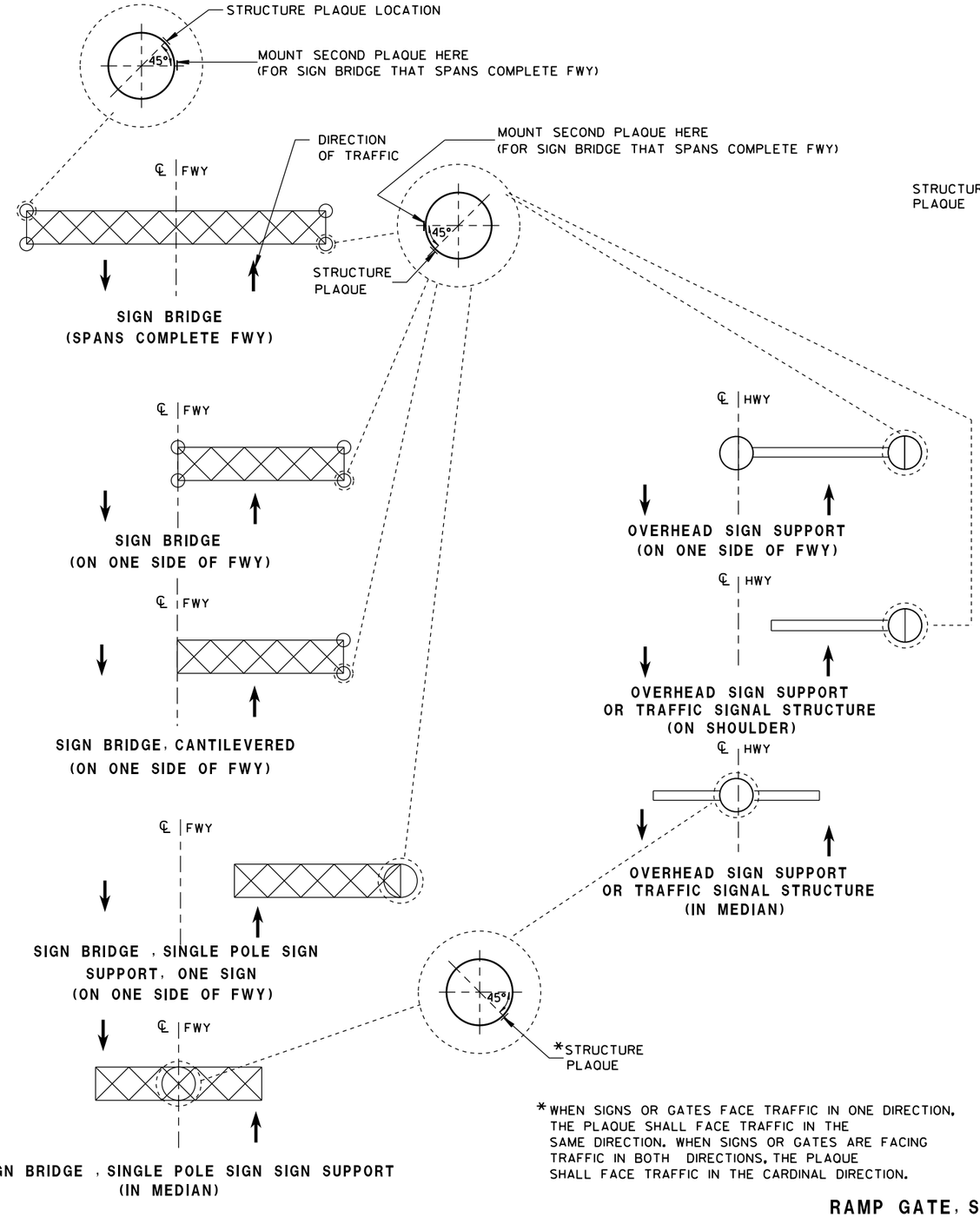
FHWA

6

S.D.D. 12 A 3-10

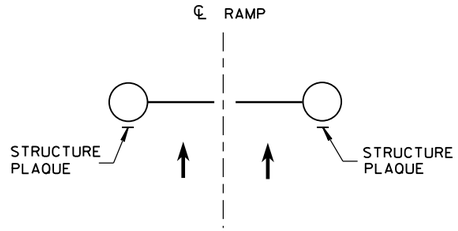
6

S.D.D. 12 A 3-10

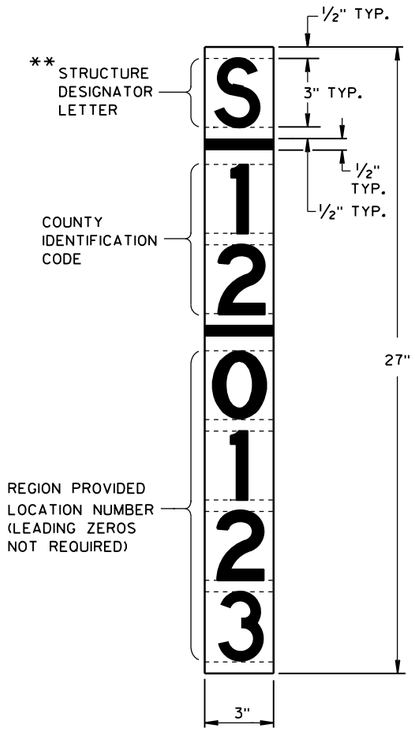


*WHEN SIGNS OR GATES FACE TRAFFIC IN ONE DIRECTION, THE PLAQUE SHALL FACE TRAFFIC IN THE SAME DIRECTION. WHEN SIGNS OR GATES ARE FACING TRAFFIC IN BOTH DIRECTIONS, THE PLAQUE SHALL FACE TRAFFIC IN THE CARDINAL DIRECTION.

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.

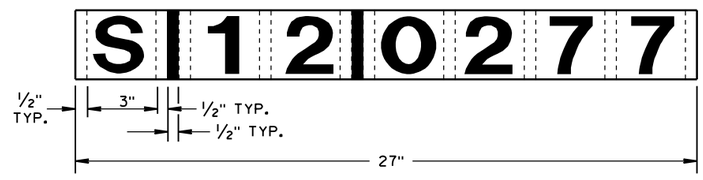
FACE - WHITE, SELF-ADHESIVE VINYL SHEETING, NON-RETROREFLECTIVE

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

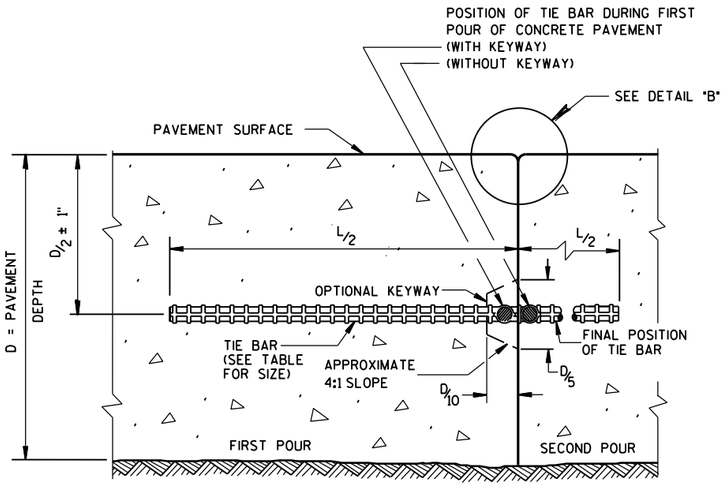
STRUCTURE IDENTIFICATION PLAQUES, RAMP GATES, SIGN BRIDGES, OVERHEAD SIGN SUPPORTS, & TRAFFIC SIGNALS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

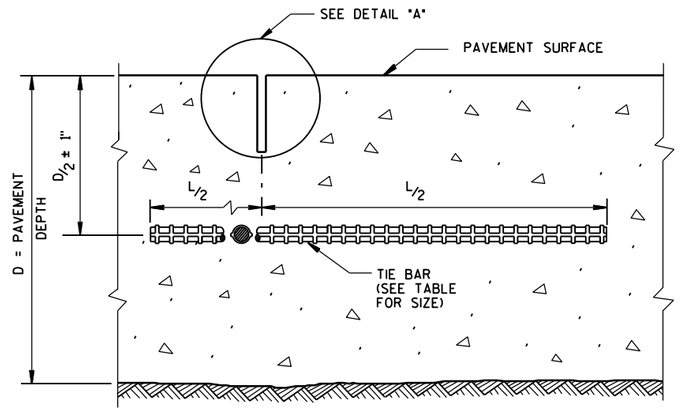
APPROVED
12/4/2012 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

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S.D.D. 12 A 4-3



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"

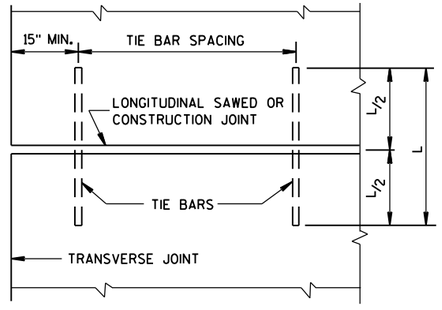
DETAIL "C"

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

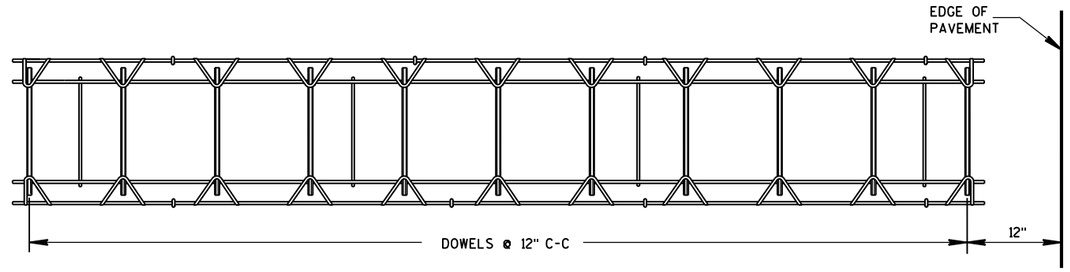
CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015 — DATE
/S/ Peter Kemp, P.E. — PAVEMENT SUPER
FHWA

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S.D.D. 13 C 1-18

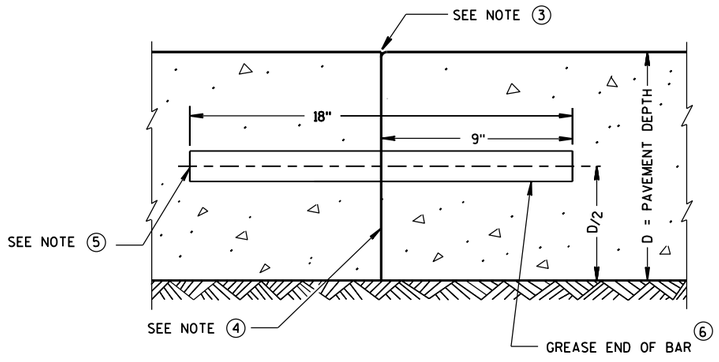


PLAN VIEW

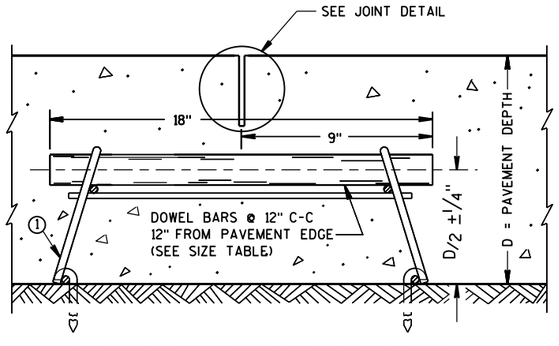


SIDE VIEW

CONTRACTION JOINT DOWEL ASSEMBLY ①



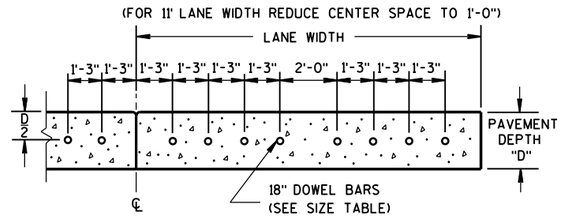
TRANSVERSE CONSTRUCTION JOINT



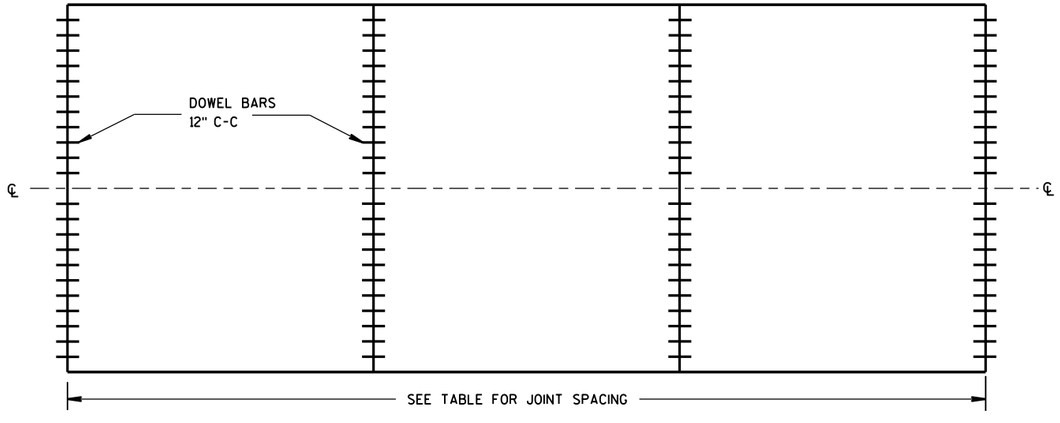
DOWELED CONTRACTION JOINT

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'



DRILLED DOWEL BAR CONSTRUCTION JOINT ⑦



CONTRACTION JOINT LOCATIONS

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 LONGITUDINAL JOINT AND 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 **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.

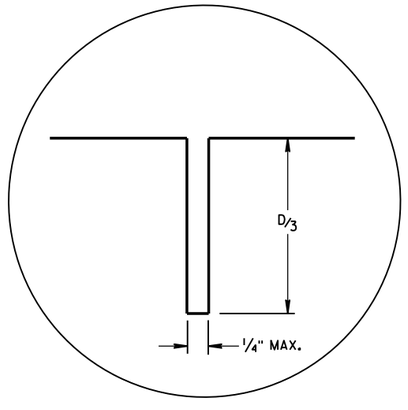
③ FORM OR SAW CONSTRUCTION JOINTS. PROVIDE A ¼-INCH RADIUS AT FORMED JOINTS.

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 ⅛-INCH GREATER THAN DOWEL BAR DIAMETER, 9 INCHES IN LENGTH.



JOINT DETAIL

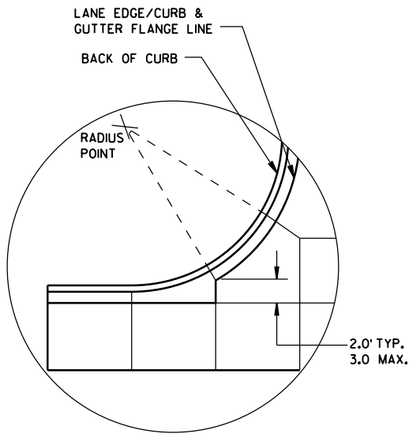
URBAN DOWELED CONCRETE PAVEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

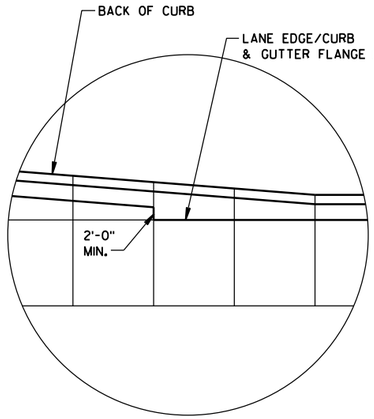
APPROVED
5/3/2013 DATE
/S/ Deb Bischoff
PAVEMENT POLICY & DE ...NEER
FHWA

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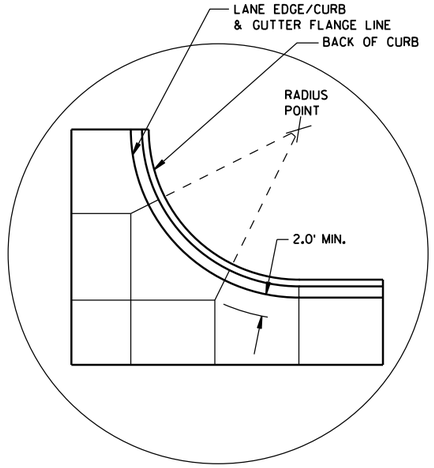
S.D.D. 13 C 13-8



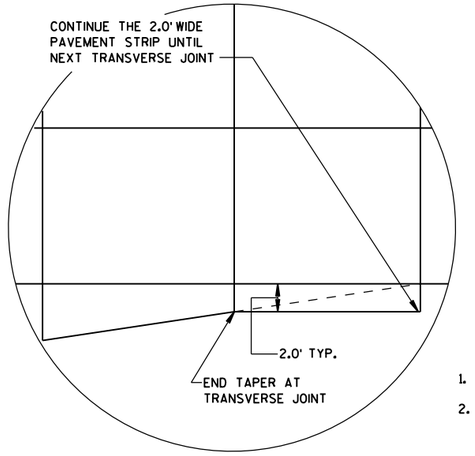
DETAIL "A"



DETAIL "B"



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.

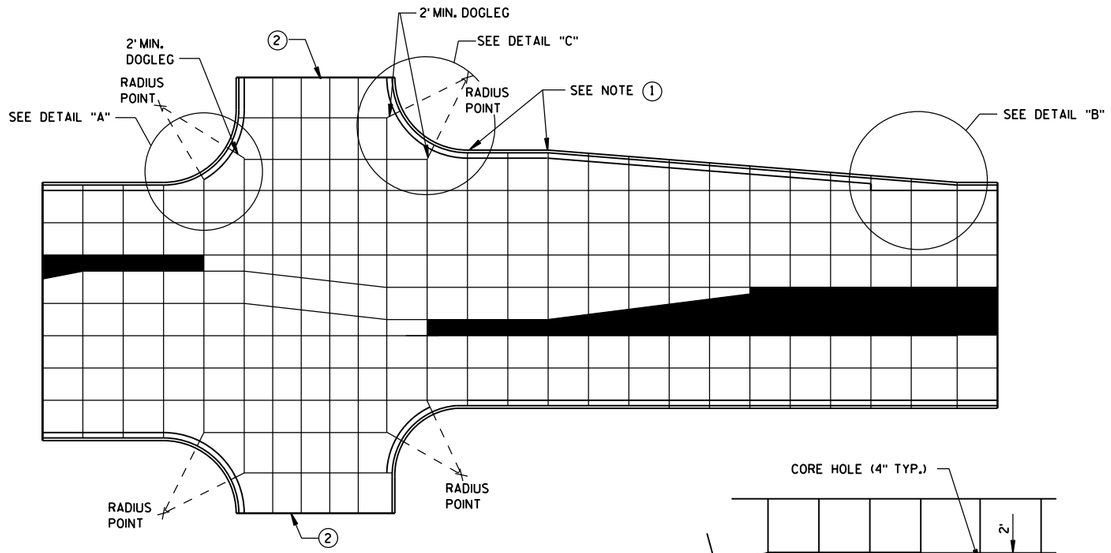
AVOID SLABS LESS THAN 2 FEET WIDE OR GREATER THAN 15 FEET WIDE.

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.

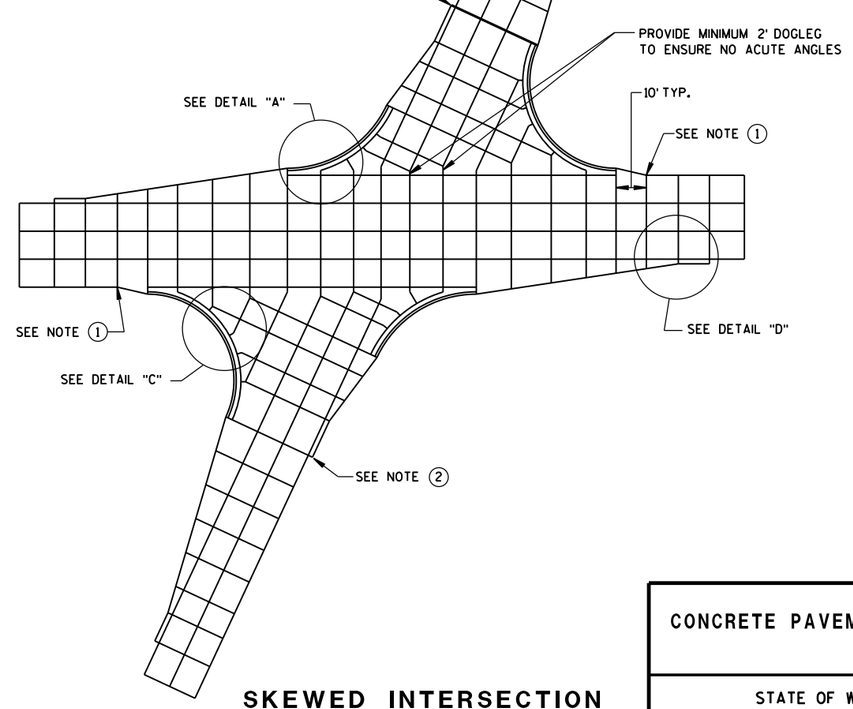
1. PROVIDE TRANSVERSE JOINTS AT ALL PAVEMENT WIDTH CHANGES.
2. CONSTRUCT DOWELED EXPANSION JOINT ON THE SIDE ROAD OF AN INTERSECTION IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH. ALIGN EXPANSION JOINT WITH EDGE OF RADIUS.
3. THE ENGINEER MAY APPROVE SLIGHT VARIATIONS FROM THESE JOINTING DETAILS.



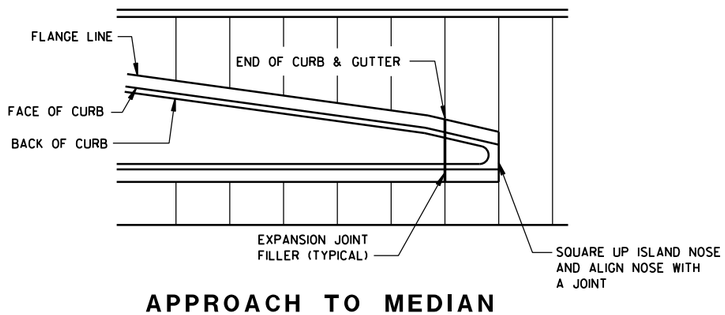
STANDARD INTERSECTION

PAVEMENT DEPTH AND JOINT SPACING TABLE

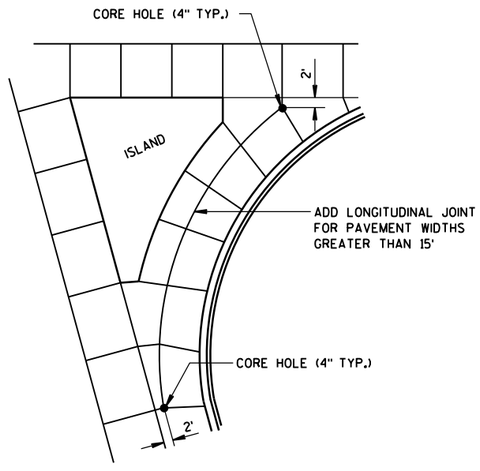
PAVEMENT DEPTH (D)	CONTRACTION JOINT SPACING
6", 6½"	12'
7", 7½"	14'
8" & ABOVE	15'



SKEWED INTERSECTION



APPROACH TO MEDIAN

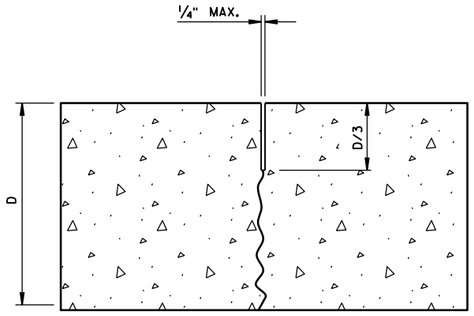


LARGE RIGHT TURN

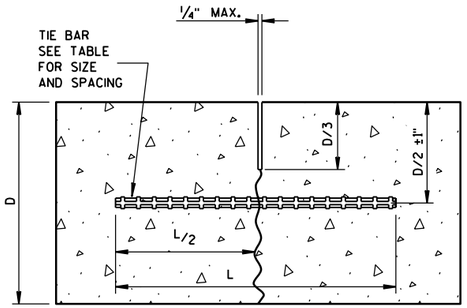
CONCRETE PAVEMENT JOINTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6
S.D.D. 13 C 18-3a



UNDOWELED-TRANSVERSE



TIED LONGITUDINAL

TIE BAR TABLE

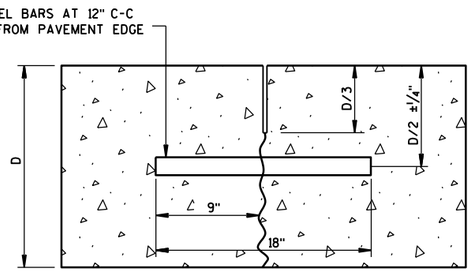
PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 1/2"	NO. 4	30"	36"
≥ 10 1/2"	NO. 5	36"	36"
	NO. 4*	30"	24"**

* 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

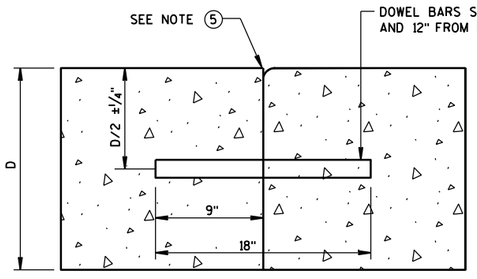
1. USE DOWELED EXPANSION JOINTS ON SIDE ROADS AT INTERSECTIONS (TO ISOLATE THE SIDE ROAD FROM THE THROUGH STREET) IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH.
2. SPACE CONTRACTION JOINTS IN ACCORDANCE WITH 13C4, 13C11 OR 13C13.
3. LOCATE CONSTRUCTION JOINTS A MINIMUM OF 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.



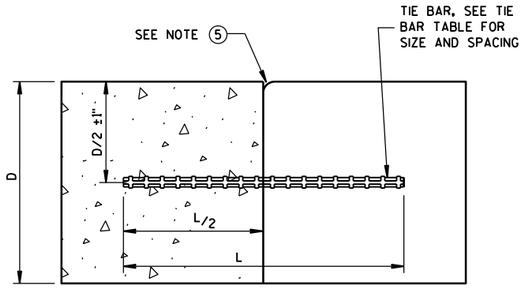
DOWELED-TRANSVERSE

CONTRACTION JOINTS

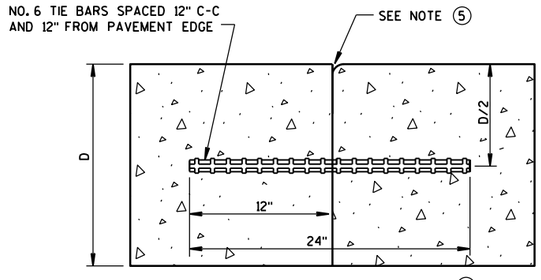
SEE NOTE (2)



DOWELED TRANSVERSE (3)

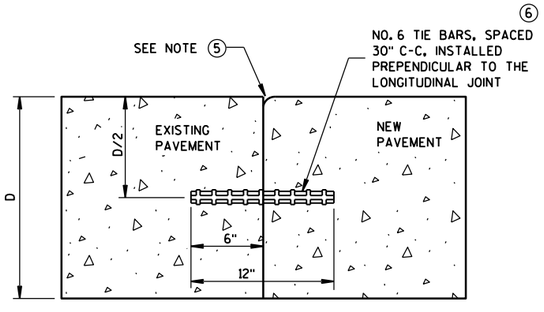


TIED LONGITUDINAL



TIED TRANSVERSE (3)

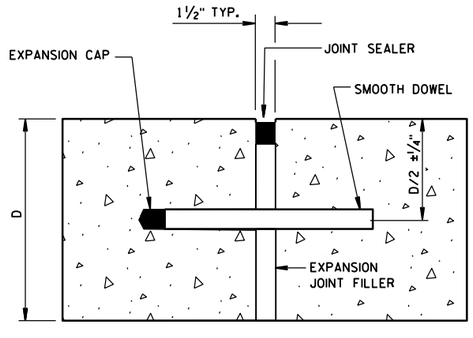
(FOR USE ON NON-DOWELED PAVEMENTS ONLY)



TIED LONGITUDINAL TO EXISTING

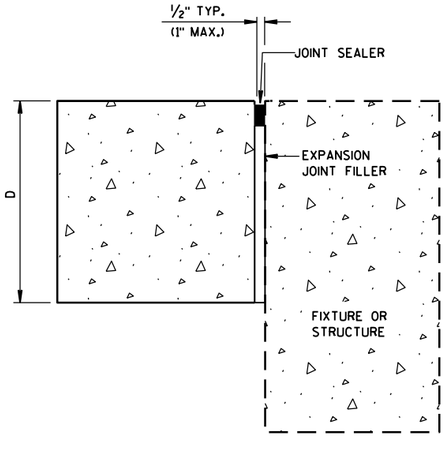
CONSTRUCTION JOINTS

SEE NOTE (4)



DOWELED-TRANSVERSE

SEE NOTE (1)



UNTIED-LONGITUDINAL

EXPANSION JOINTS

6

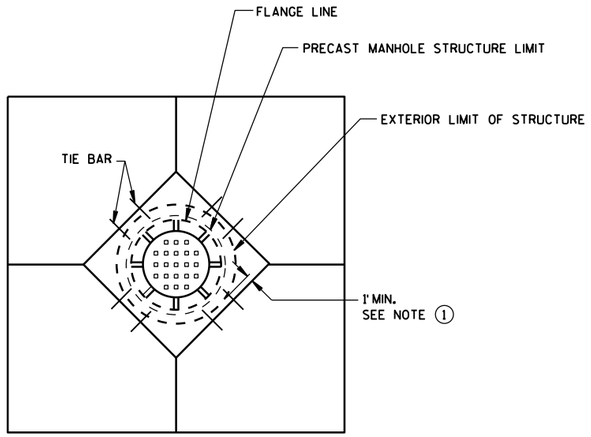
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S.D.D. 13 C 18-3c

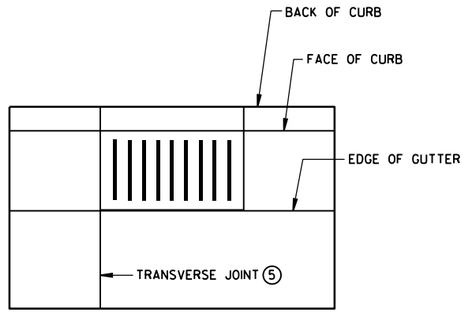
S.D.D. 13 C 18-3c

CONCRETE PAVEMENT
JOINT TYPES

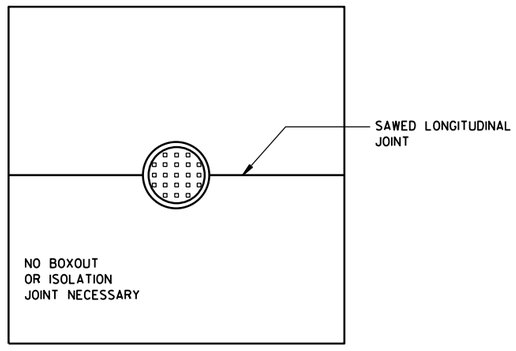
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI



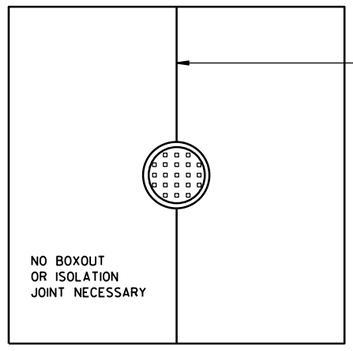
DIAGONAL MANHOLE BOXOUT FOR CONSTRUCTION JOINTS



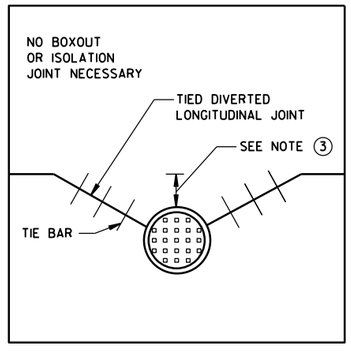
INLET WITH TRANSVERSE JOINT



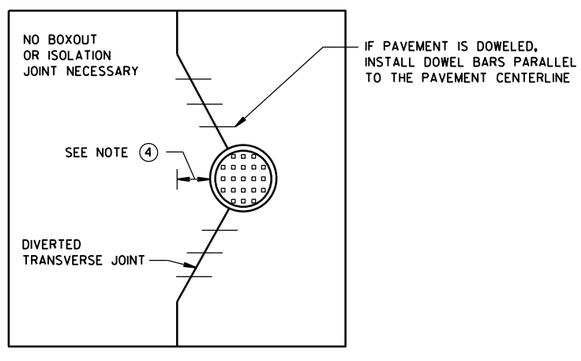
MANHOLE WITH LONGITUDINAL JOINT



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.

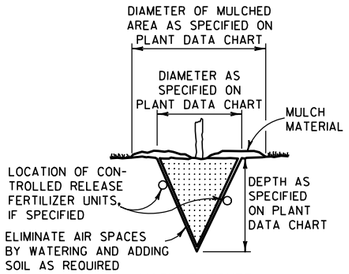
CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

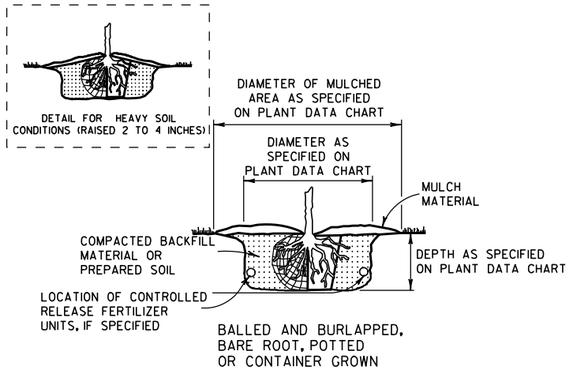
APPROVED
June, 2015 — DATE
/S/ Peter Kemp, P.E. — PAVEMENT SUPER
FHWA

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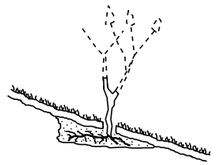
S.D.D. 13 C 18-3d



MACHINE MOVED

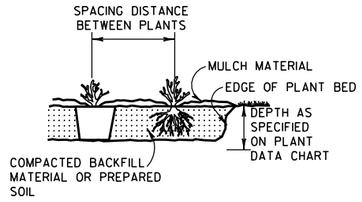


BALLED AND BURLAPPED, BARE ROOT, POTTED OR CONTAINER GROWN



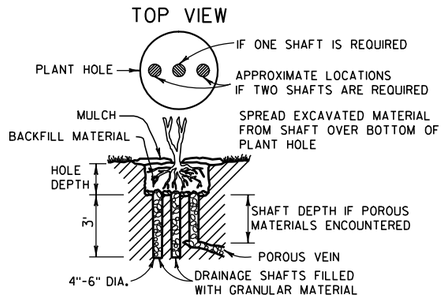
ACCOMMODATE ROOTS (SMOOTH AND STAGHORN SUMAC)

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



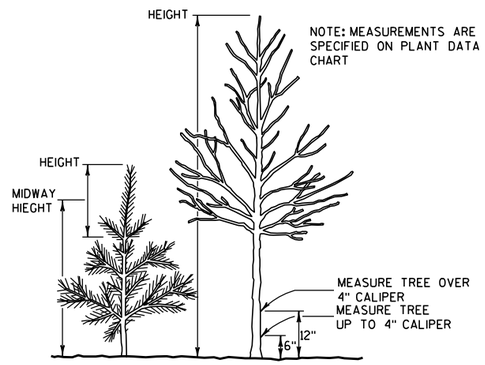
PREPARED BED (BARE ROOT AND POTTED)

PLANTING

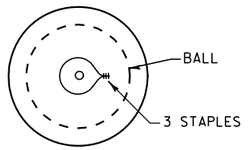


NOTE:
DRAINAGE SHAFT AS SPECIFIED ON PLANT DATA CHART

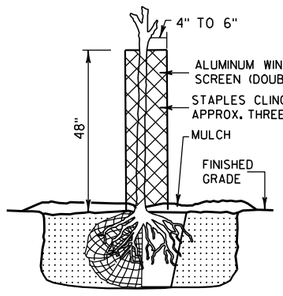
DRAINING



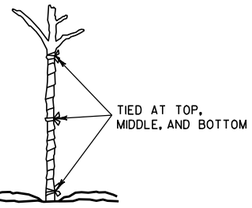
MEASURING



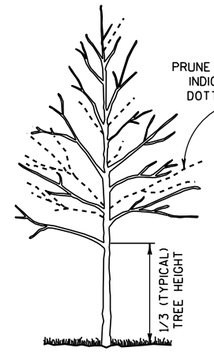
TOP VIEW



RODENT PROTECTION



WRAPPING



TALL DECIDUOUS TREES (ASH, MAPLE, LINDEN, OAK)

SINGLE STEMMED LOW DECIDUOUS TREES (CRABS AND OTHER SINGLE STEM TYPE)

MULTI-STEMMED LOW DECIDUOUS TREES OR LARGE SHRUBS (HAWTHORN, SERVICEBERRY)

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

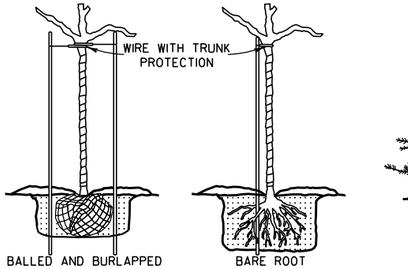


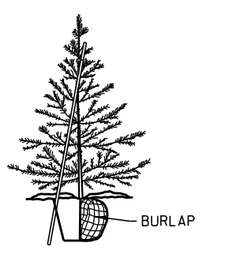
SHRUBS (GRAY DOGWOOD ARROWWOOD VIBURNUM)

SUMAC

TREE TYPE EVERGREENS (PINE, SPRUCE, FIR) EVERGREENS USUALLY ARE NOT PRUNED

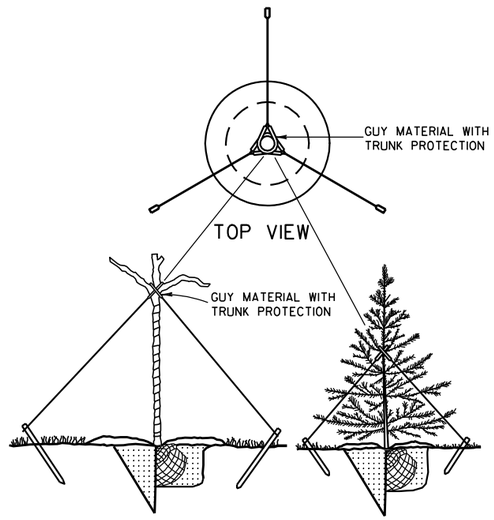
PRUNING



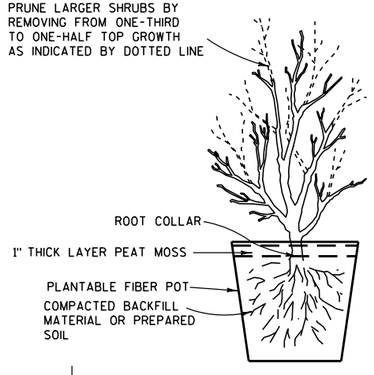


NOTE: BRACING STAKE
1) SHALL BE DRIVEN INTO THE GROUND AS CLOSE TO THE TREE AS POSSIBLE WITHOUT DAMAGING THE BRANCHES.
2) MAY BE DRIVEN AT SUCH AN ANGLE THAT IT DOES NOT PENETRATE THE BALL OR POT.
3) SHALL NOT PROTRUDE ABOVE THE TOP OF THE TREE; AND
4) SHALL HAVE A HOLE NEAR THE TOP TO HOLD THE WIRE 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.

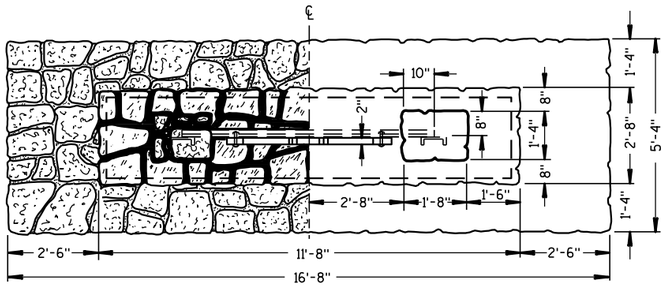
TREE PLANTING DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

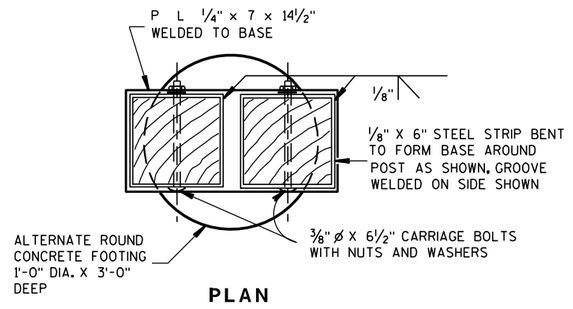
APPROVED
4/11/94
DATE
/S/ Rory L. Rhinesmith
CHIEF METHODS DEVELOPMENT ENGINEER
FHWA

S.D.D. 14 A 2-1

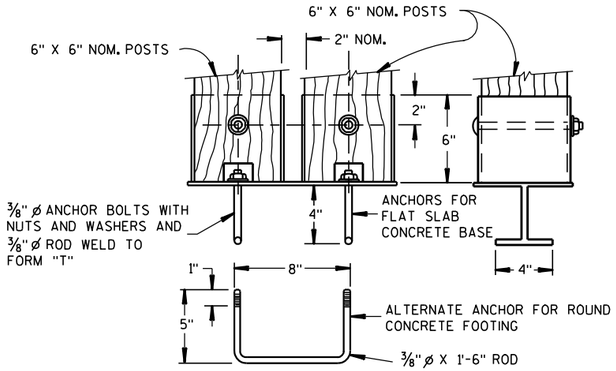
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S.D.D. 14 A 2-1



TOP VIEW



PLAN



POST BASE DETAIL

(DIMENSIONED POST CONSTRUCTION)

BILL OF MATERIALS

DIMENSIONED POST CONSTRUCTION

ITEM	UNIT	QUANTITY
CONCRETE (FLAT SLAB)	CY	0.80
WIRE FABRIC (FLAT SLAB)	SY	4.6
STEEL POST BASES	EA	2
POSTS	6" X 6" X 7'-3"	4
LUMBER	2" X 6" X 6'-10"	2
ANCHOR BOLTS (FLAT SLAB)	3/8" X 5"	4
CARRIAGE BOLTS	3/8" X 4"	4
CARRIAGE BOLTS	3/8" X 14"	4
CARRIAGE BOLTS	3/8" X 6 1/2"	4
ANCHOR BOLTS (ROUND FOOTING)	3/8"ø"U"	2
CONCRETE (ROUND FOOTING)	CY	0.17

RUSTIC POST CONSTRUCTION

ITEM	UNIT	QUANTITY
POSTS	1'-2"ø X 10'-9"	4
POSTS	1'-2"ø X 3'-6"	2
RAILS	7"ø X 8'-10"	2
CARRIAGE BOLTS	3/8" X 8"	4
CARRIAGE BOLTS	5/8" X 27"	4

MASONRY CONSTRUCTION

ITEM	UNIT	QUANTITY
CONCRETE	CY	2.3
ASHLAR MASONRY	CY	3.5
WIRE FABRIC	SY	9.8
CHANNEL STEEL	LBS	396
CARRIAGE BOLTS	3/8" X 2 3/4"	4

TOP VIEW

GENERAL NOTES

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

CAST ALUMINUM PLAQUE SHALL BE STATE FURNISHED.

ALL CARRIAGE BOLTS USED IN CONSTRUCTION SHALL BE CUT OFF FLUSH WITH THE NUTS AND ALL NUTS SHALL BE COUNTER SUNK, EXCEPT FOR THOSE FASTENED TO THE PLAQUE. BOLT HEADS AND NUTS SHALL BE PAINTED WITH DARK BROWN PAINT.

DIMENSIONED POSTS & RAILS

POSTS SHALL BE DOUGLAS FIR, CONSTRUCTION GRADE. CROSS MEMBERS SHALL BE DOUGLAS FIR, FINISHED LUMBER, GRADE "C" SELECT OR BETTER. POSTS AND CROSS MEMBERS SHALL BE PAINTED WITH TWO COATS OF BROWN WOOD STAIN.

WELDED STEEL POST BASES SHALL BE FABRICATED. BASES SHALL BE PAINTED WITH DARK BROWN PAINT. POST BASE CAULKING SHALL BE USED.

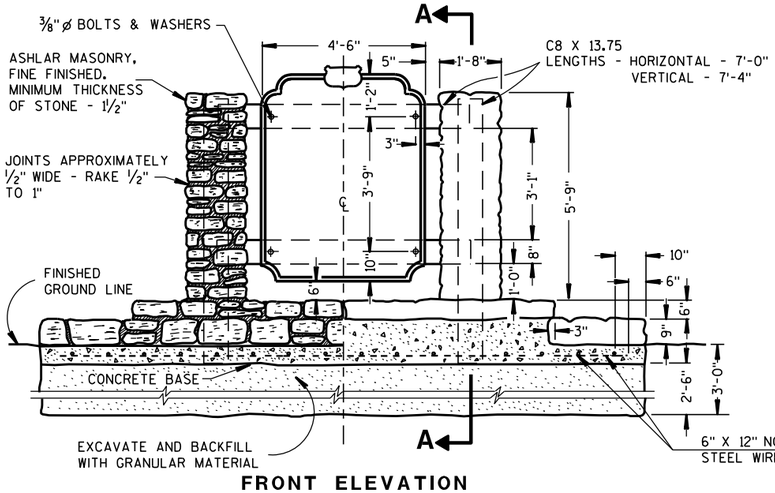
RUSTIC POSTS AND RAILS

POSTS AND CROSS MEMBERS MAY BE FROM ONE OF THE FOLLOWING SPECIES (SALVAGED UTILITY POLES OR TREATED TIMBER PILINGS MAY BE USED).

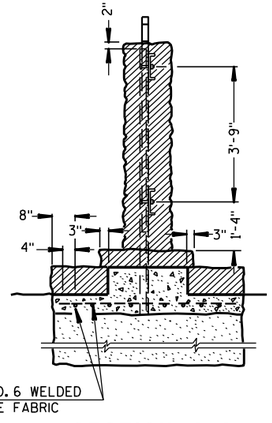
- WHITE PINE
- RED (NORWAY) PINE
- NORTHERN WHITE CEDAR
- NORTHERN HEMLOCK OR OAK

BUTTS OF UNTREATED POSTS SHALL BE TREATED IN ACCORDANCE WITH THE REQUIREMENTS OF THE "COLD-DIPPED TREATMENT", STANDARD SPECIFICATION.

THE ABOVE-GROUND PORTION OF THE TREATED AND UNTREATED POSTS AND RAILS SHALL BE PAINTED WITH TWO COATS OF BROWN WOOD STAIN.

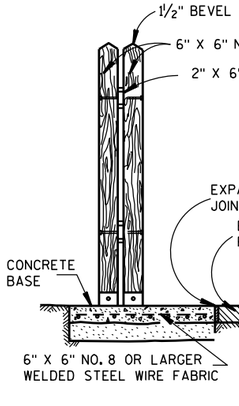


FRONT ELEVATION

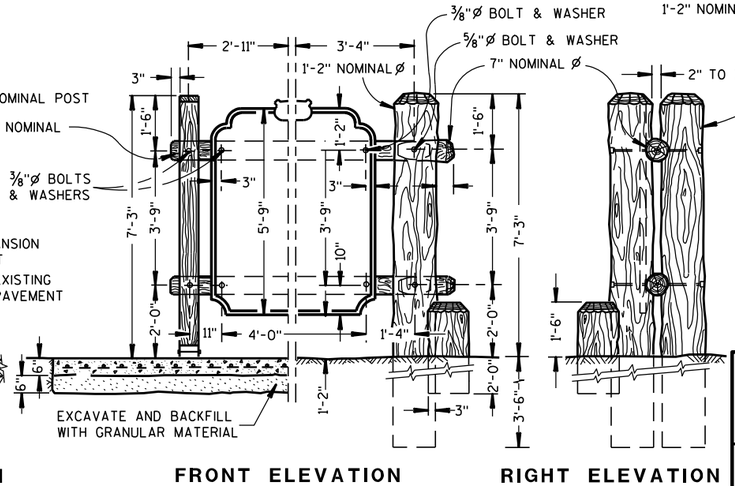


SECTION A-A

MASONRY CONSTRUCTION



LEFT ELEVATION



FRONT ELEVATION

RIGHT ELEVATION

DIMENSIONED POST CONSTRUCTION

RUSTIC POST CONSTRUCTION

HISTORICAL MARKER CONSTRUCTION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/16/75
DATE
/S/ H. FIELDER
STATE HIGHWAY E

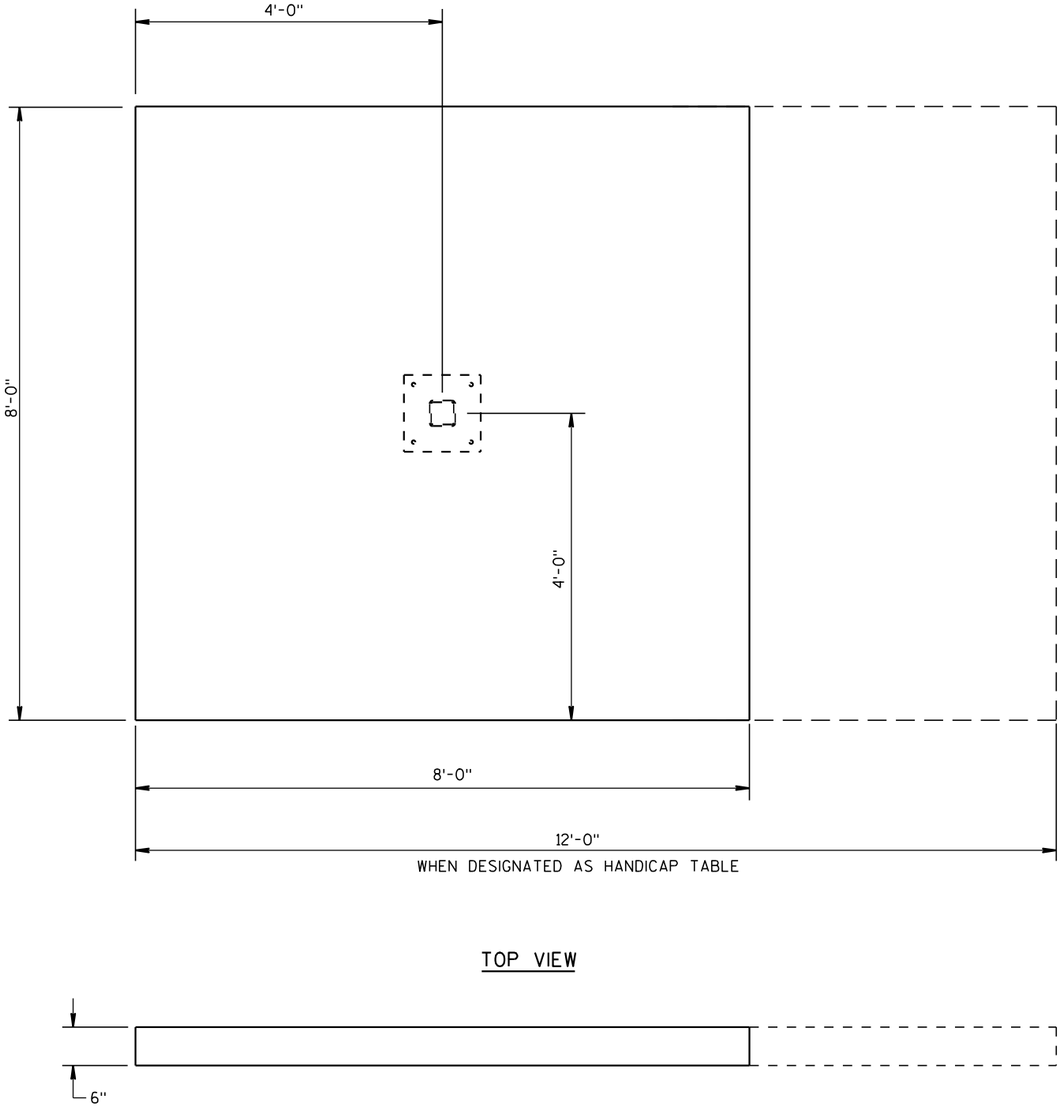
FHWA

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S.D.D. 14 C 2-2

6

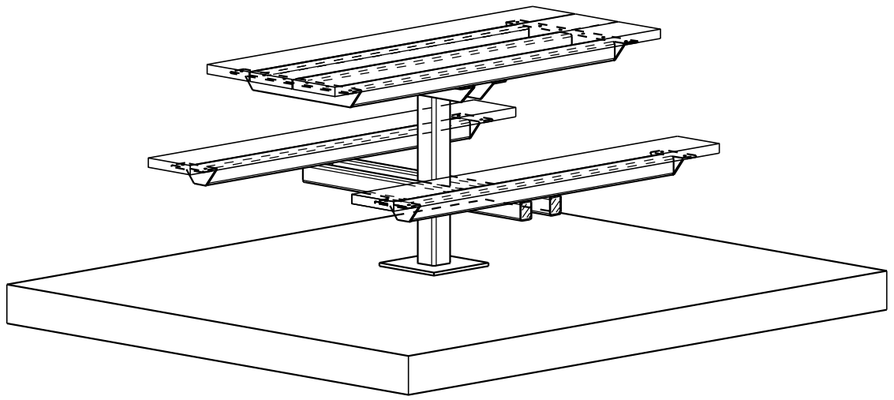
S.D.D. 14 C 2-2



TOP VIEW

SLAB ELEVATION

CONCRETE PAD FOR PICNIC TABLE



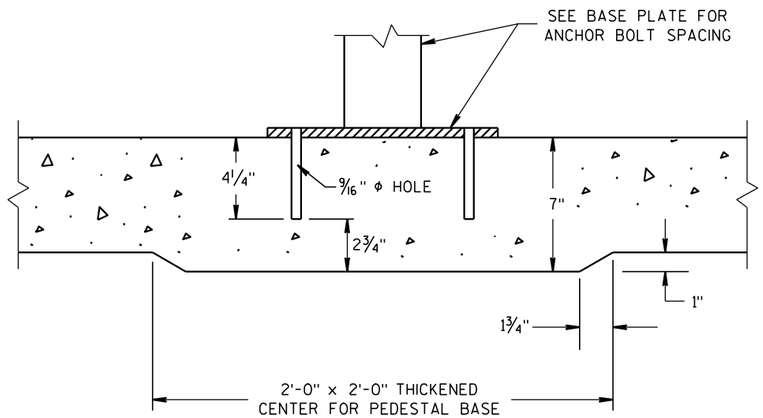
PERSPECTIVE VIEW

NOTES:

PICNIC TABLE PAD SHALL BE PAID FOR AS CONCRETE SIDEWALK 6-INCH.

PICNIC TABLE PAD SHALL BE LEVEL.

HANDICAP TABLES MUST HAVE SIDEWALK EXTENSION FOR ACCESSABILITY.

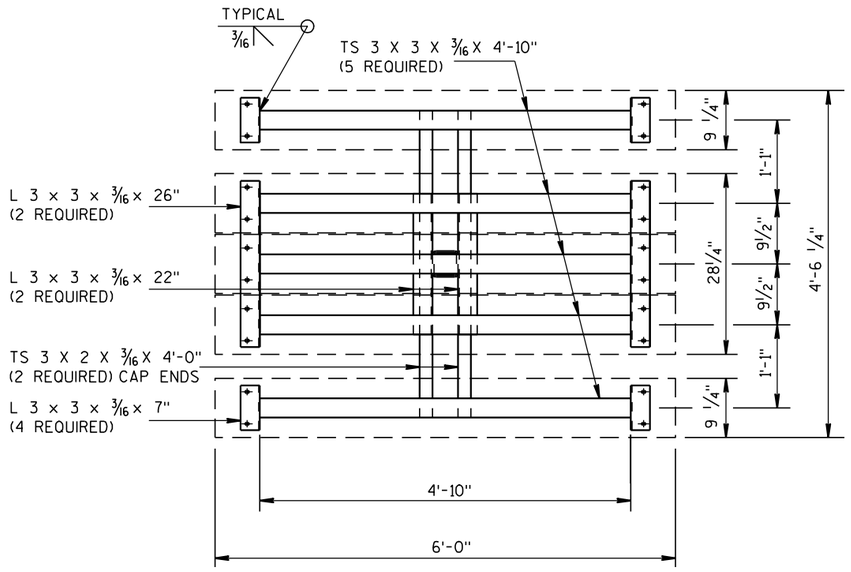


ANCHOR BOLT HOLE DETAIL

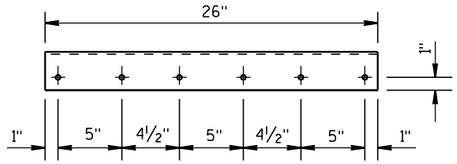
PICNIC TABLE
SINGLE PEDESTAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

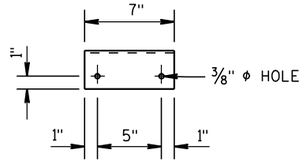
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S.D.D. 14 C 7-3a



TOP VIEW

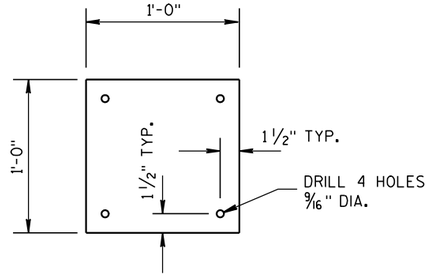


TOP ANGLE
L 3 X 3 X 3/16
(2 REQUIRED)



SEAT ANGLE
L 3 X 3 X 3/16
(4 REQUIRED)

PUNCHED HOLE LAYOUT



BASE PLATE LAYOUT

NOTES:

ALL EDGES AND CORNERS OF CUT ANGLES TO BE ROUNDED TO PREVENT SHARP EDGES.

ALL STRUCTURAL TUBES TO BE 46 KSI YIELD, ALL OTHER STEEL TO BE 36 KSI YIELD MIN.

PLANKS TO BE MADE OF RECYCLED PLASTIC.

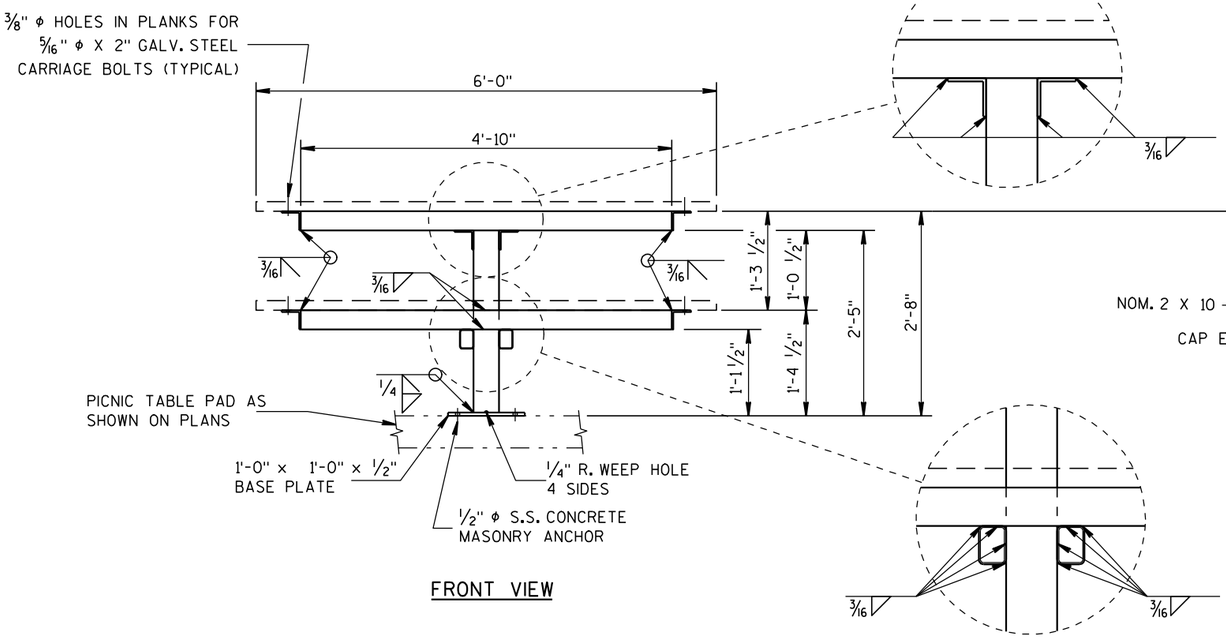
ACTUAL SIZE OF NOMINAL 2 X 10 PLANKS SHALL BE 1 1/2" X 9 1/4".

ALL NUTS, BOLTS, AND WASHERS SHALL BE ASTM A36.

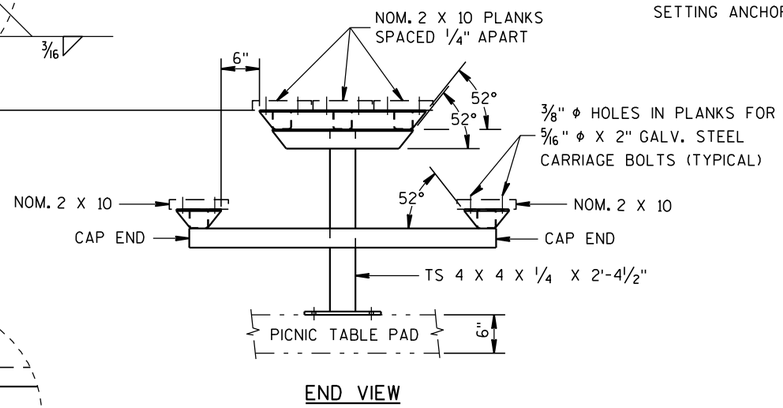
THE 1/2" ϕ STAINLESS STEEL CONCRETE MASONRY ANCHOR SHALL BE TYPE S IN ACCORDANCE WITH SECTION 502.5.2.2 OF THE STANDARD SPECIFICATION.

THE TYPE S MASONRY ANCHOR SHALL DEVELOP A MIN. OF 2400 LBS. TENSION.

CONCRETE SHALL BE CURED MIN. OF 7 DAYS PRIOR TO SETTING ANCHOR BOLTS.



FRONT VIEW



END VIEW

PICNIC TABLE
SINGLE PEDESTAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

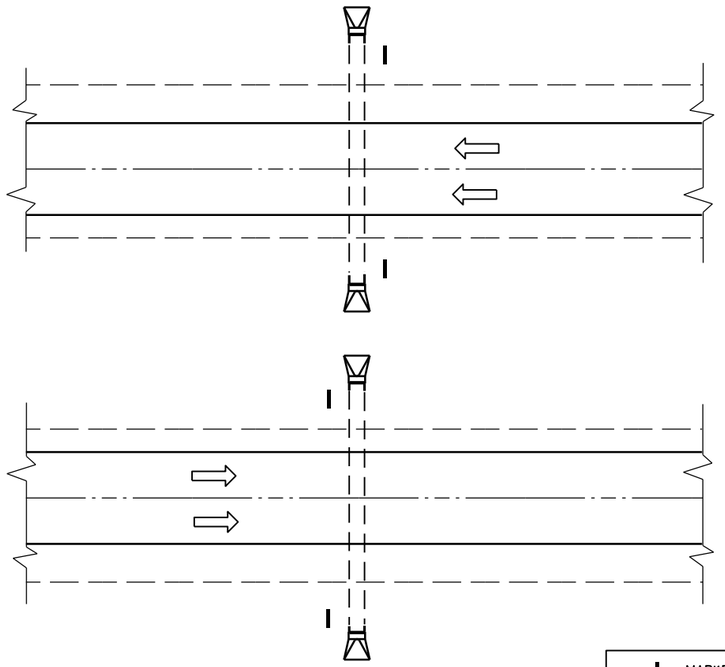
APPROVED

3/6/00 DATE

/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOP ENGINEER

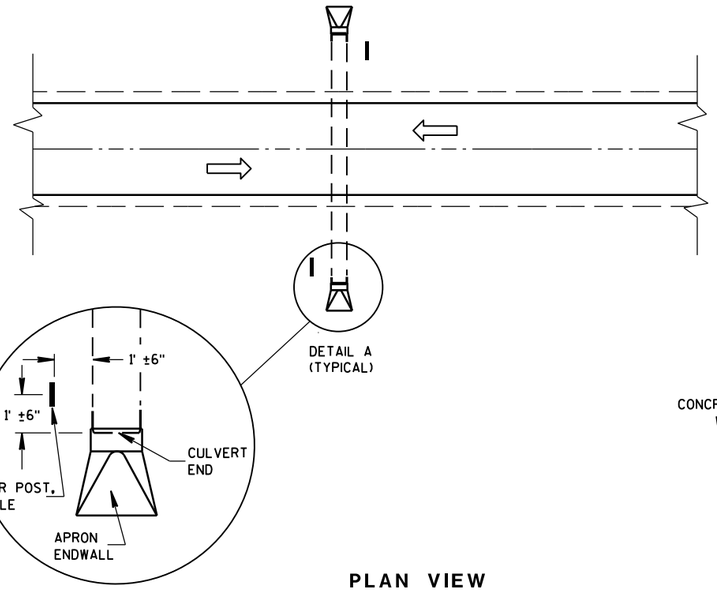
FHWA

S.D.D. 14 C 7-3b



PLAN VIEW

DIVIDED HIGHWAY



DETAIL A
(TYPICAL)

PLAN VIEW

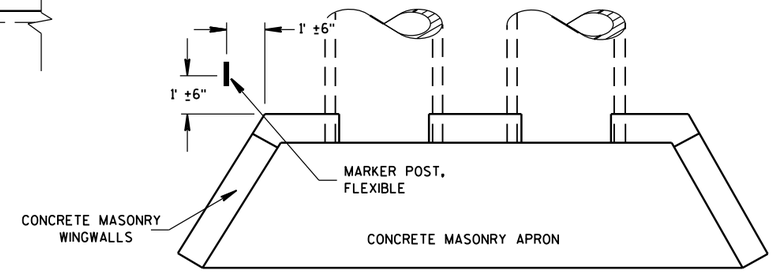
UNDIVIDED HIGHWAY

MARKER POST, FLEXIBLE

DIRECTION OF TRAFFIC FLOW

GENERAL NOTES

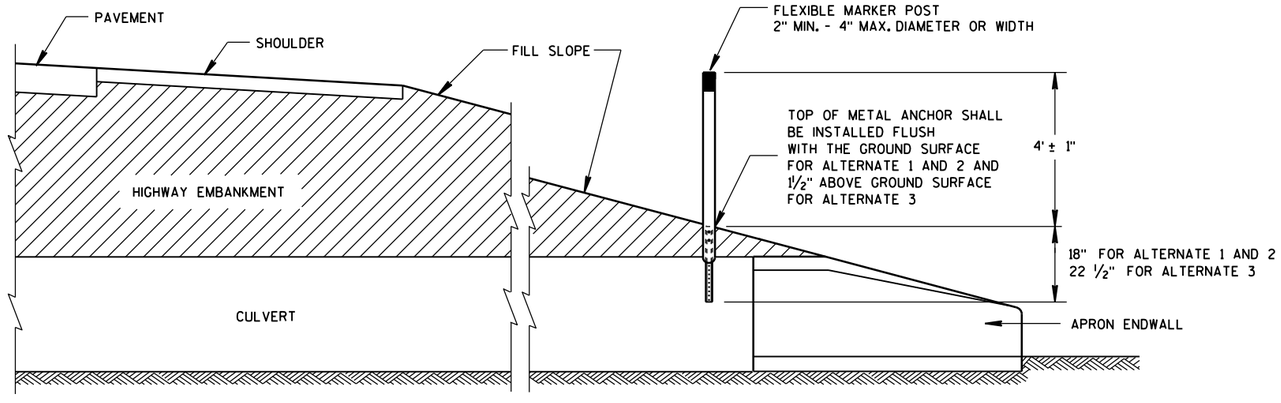
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



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

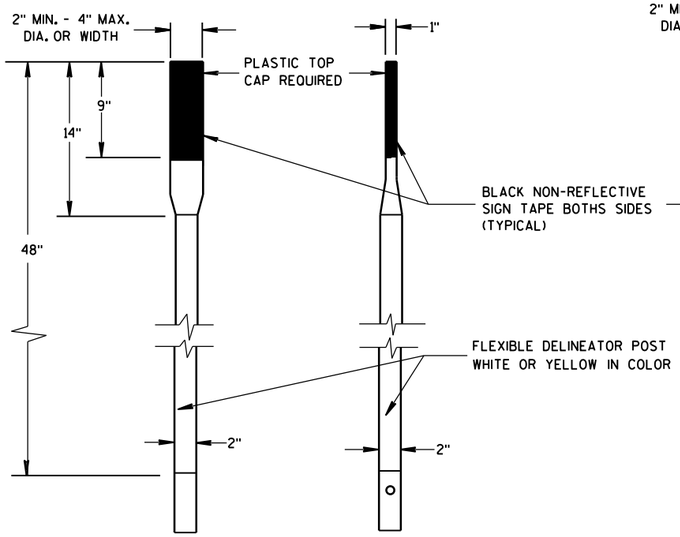
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

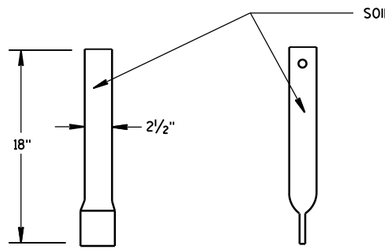
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S.D.D. 15 A 3-2a

6

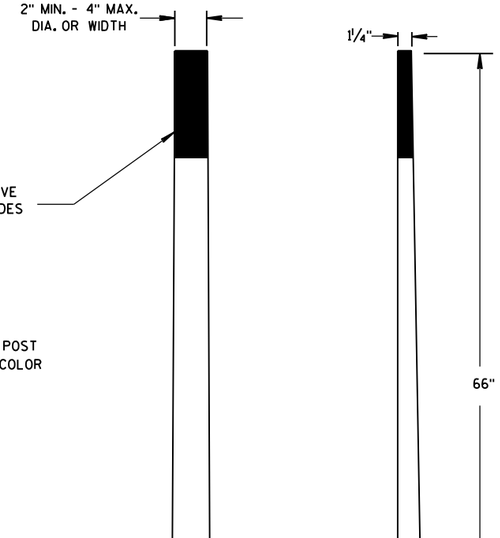
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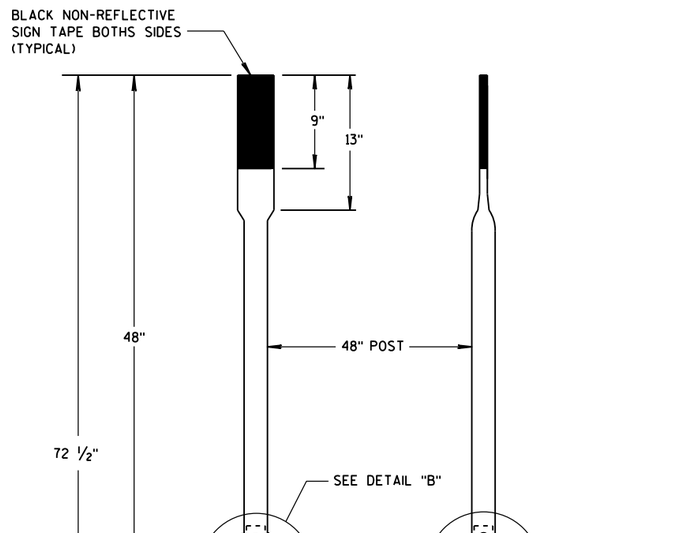
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

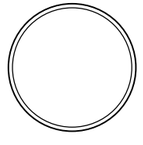
ALTERNATE 2



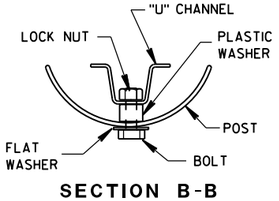
FRONT VIEW SIDE VIEW

ALTERNATE 3

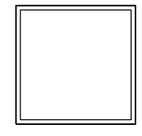
FLEXIBLE MARKER POSTS



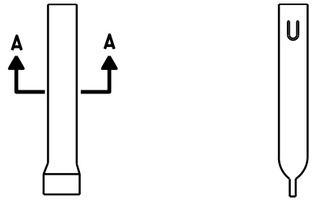
SECTION A-A



SECTION B-B

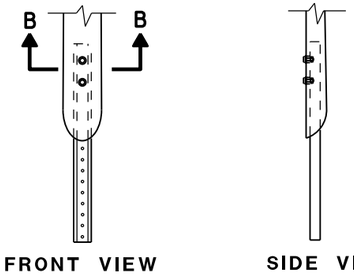


SECTION C-C



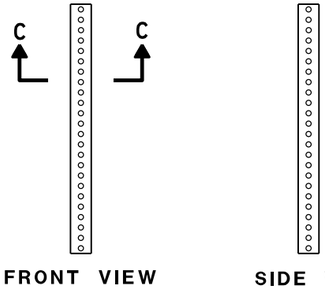
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

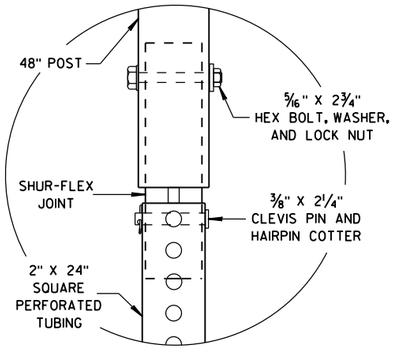
ALTERNATE 2



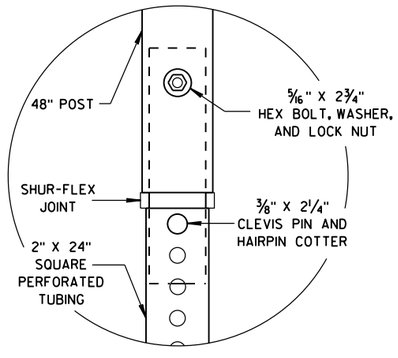
FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POST ANCHORS



DETAIL B



DETAIL C

FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

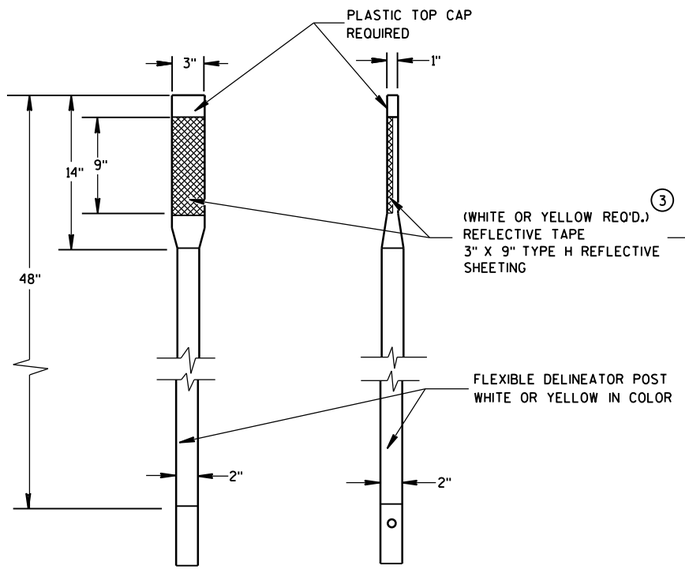
APPROVED
10/1/2012 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

6

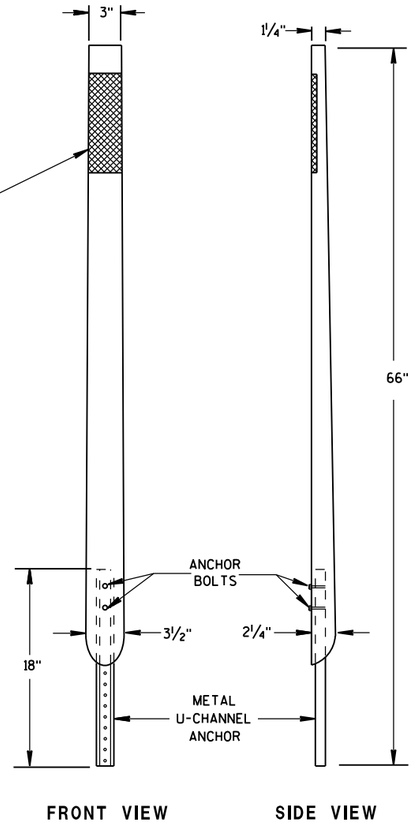
S.D.D. 15 A 3-2b

6

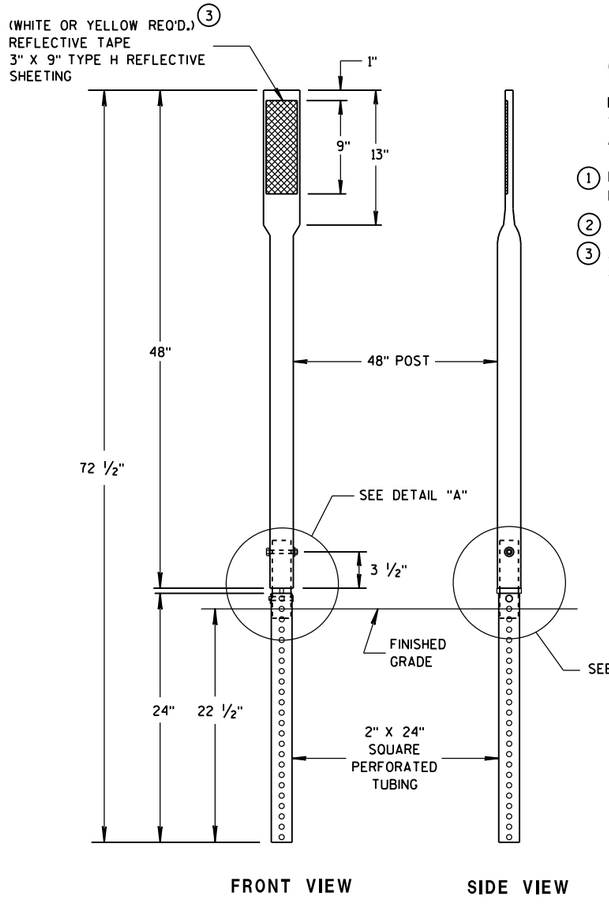
S.D.D. 15 A 3-2b



ALTERNATE 1



ALTERNATE 2



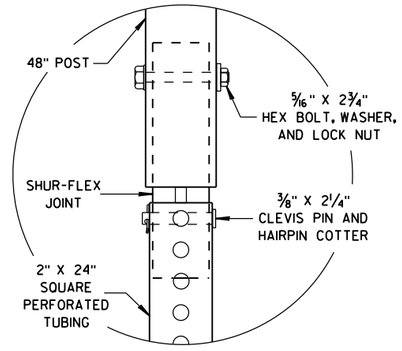
ALTERNATE 3

FLEXIBLE DELINEATOR POSTS

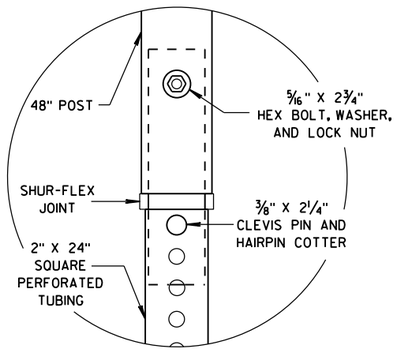
GENERAL NOTES

DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDATRD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

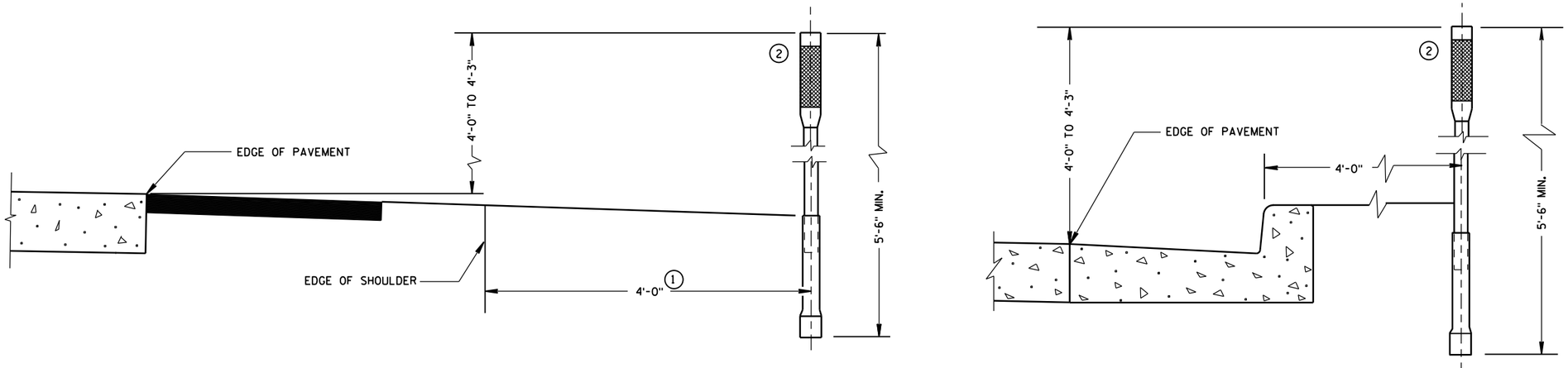
1. DELINEATORS SHALL BE PLACED AT A CONSTANT DISTANCE FROM THE EDGE OF THE SHOULDER FOR THE LENGTH OF THE INSTALLATION.
2. EITHER ALTERNATE NO. 1, NO. 2 OR NO. 3 MAY BE FURNISHED.
3. AS PER SECTION 637.2.2.2. OF THE STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION.



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

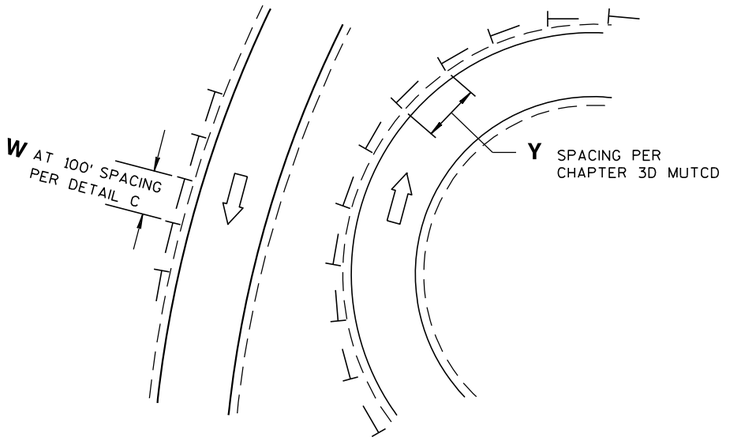
S.D.D. 15 A 4-2

6

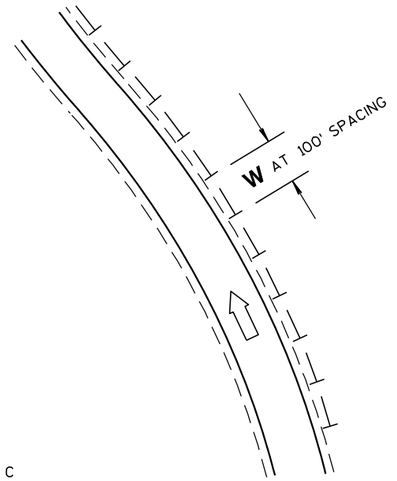
S.D.D. 15 A 4-2

GENERAL NOTES

* USE DOUBLE DELINEATOR ALONG ACCELERATION-DECELERATION LANES AND TAPERS. USE SINGLE DELINEATOR WHEN RAMP PAVEMENT IS FULL WIDTH.



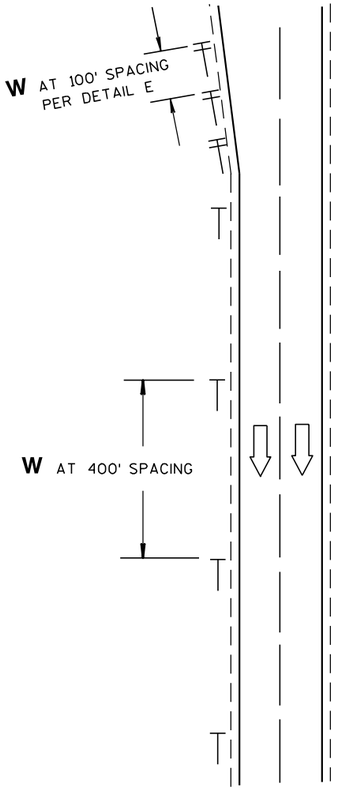
DETAIL A
DELINEATOR LAYOUT AT CURVED RAMP



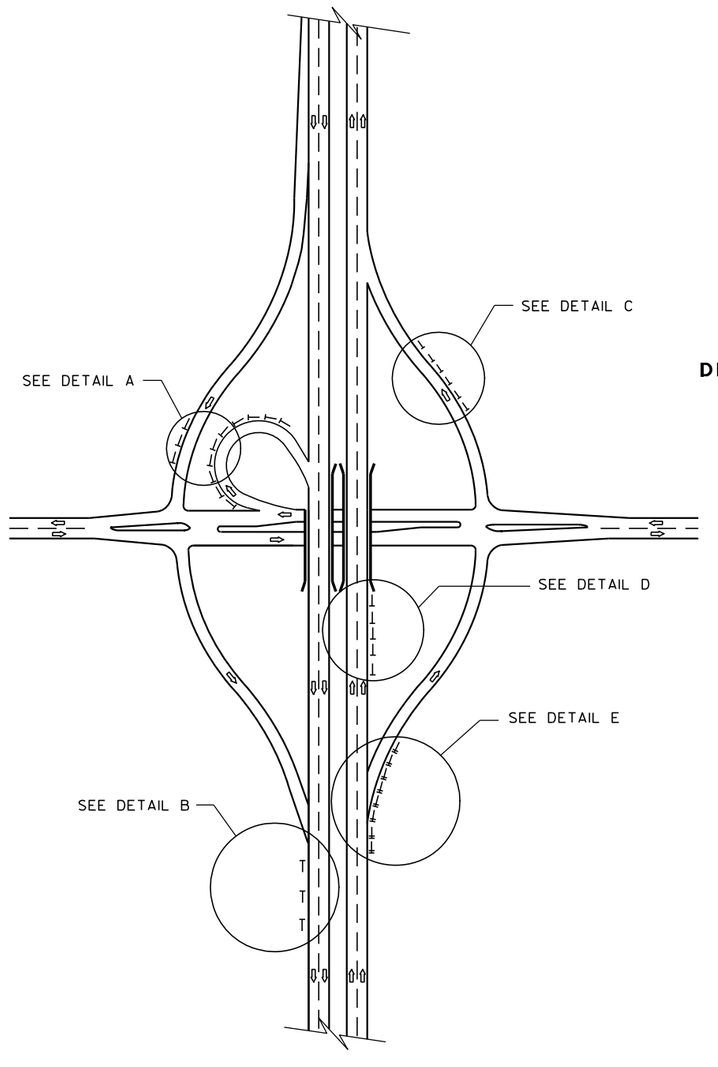
DETAIL C
DELINEATOR LAYOUT ALONG RAMP

LEGEND

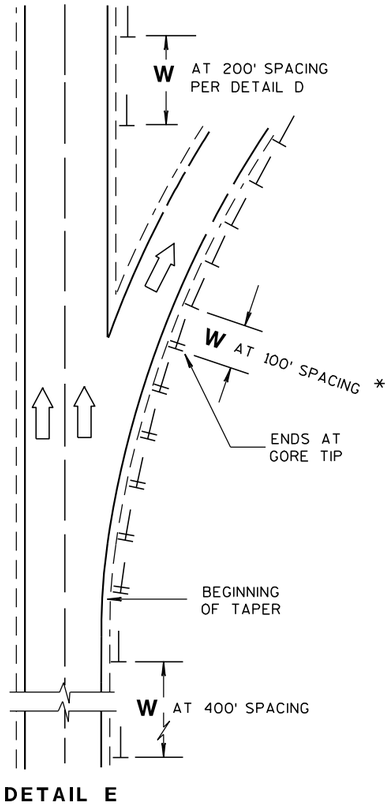
- DIRECTION OF TRAFFIC FLOW
- SINGLE DELINEATOR
- DOUBLE DELINEATOR
- W — WHITE
- Y — YELLOW



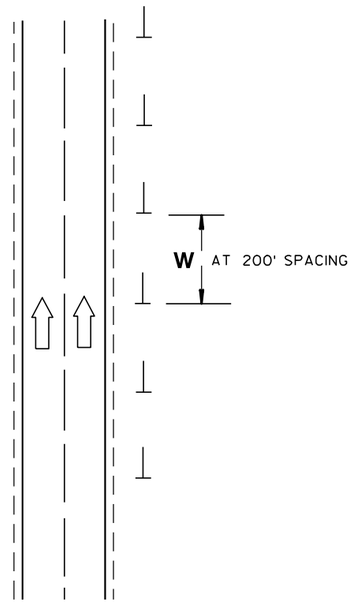
DETAIL B
DELINEATOR LAYOUT ALONG MAINLINE



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

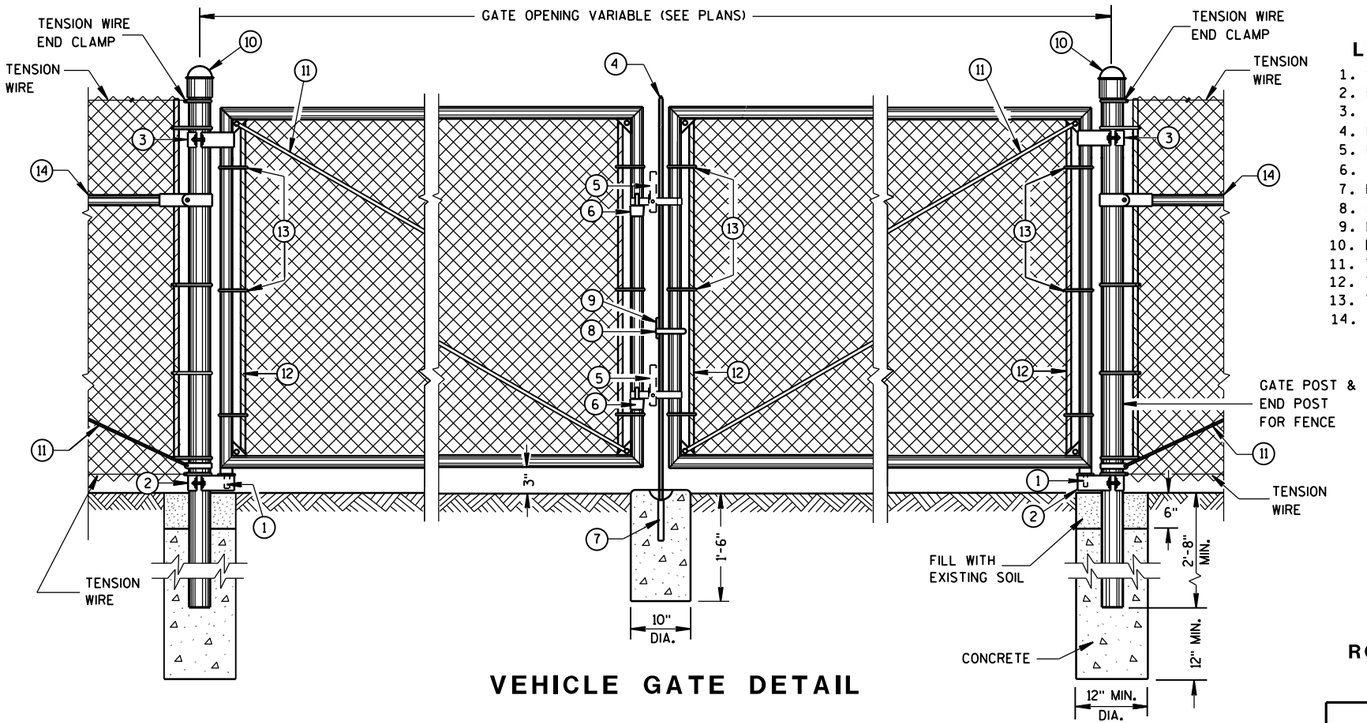
APPROVED
2/5/09 DATE
/S/ Thomas N. Nothdurft STATE TRAFFIC ENGINEER
FHWA

6

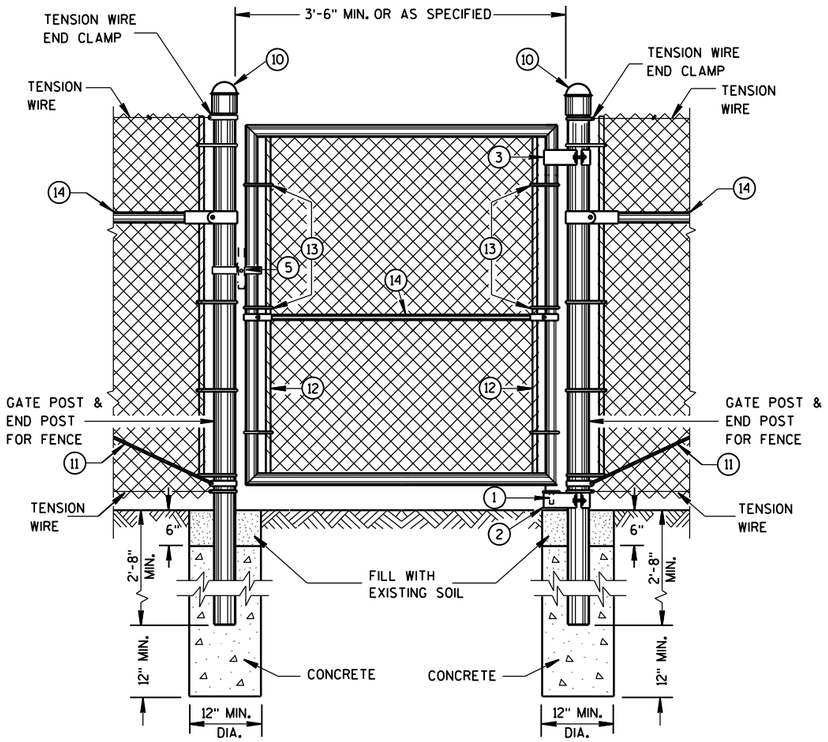
S.D.D. 15 A 6-2

6

S.D.D. 15 A 6-2



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.

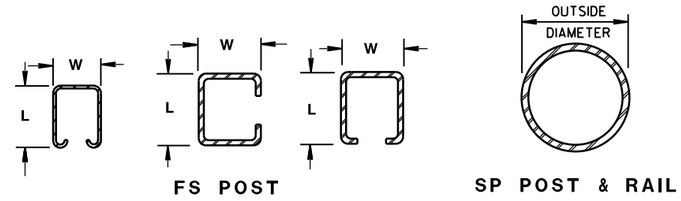
USE FENCE FABRIC KNUCKLED AT BOTH SELVAGES.

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

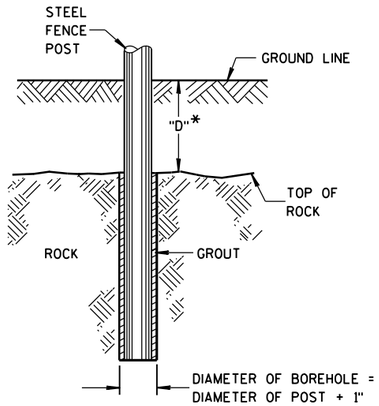
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 15 B 3-15a

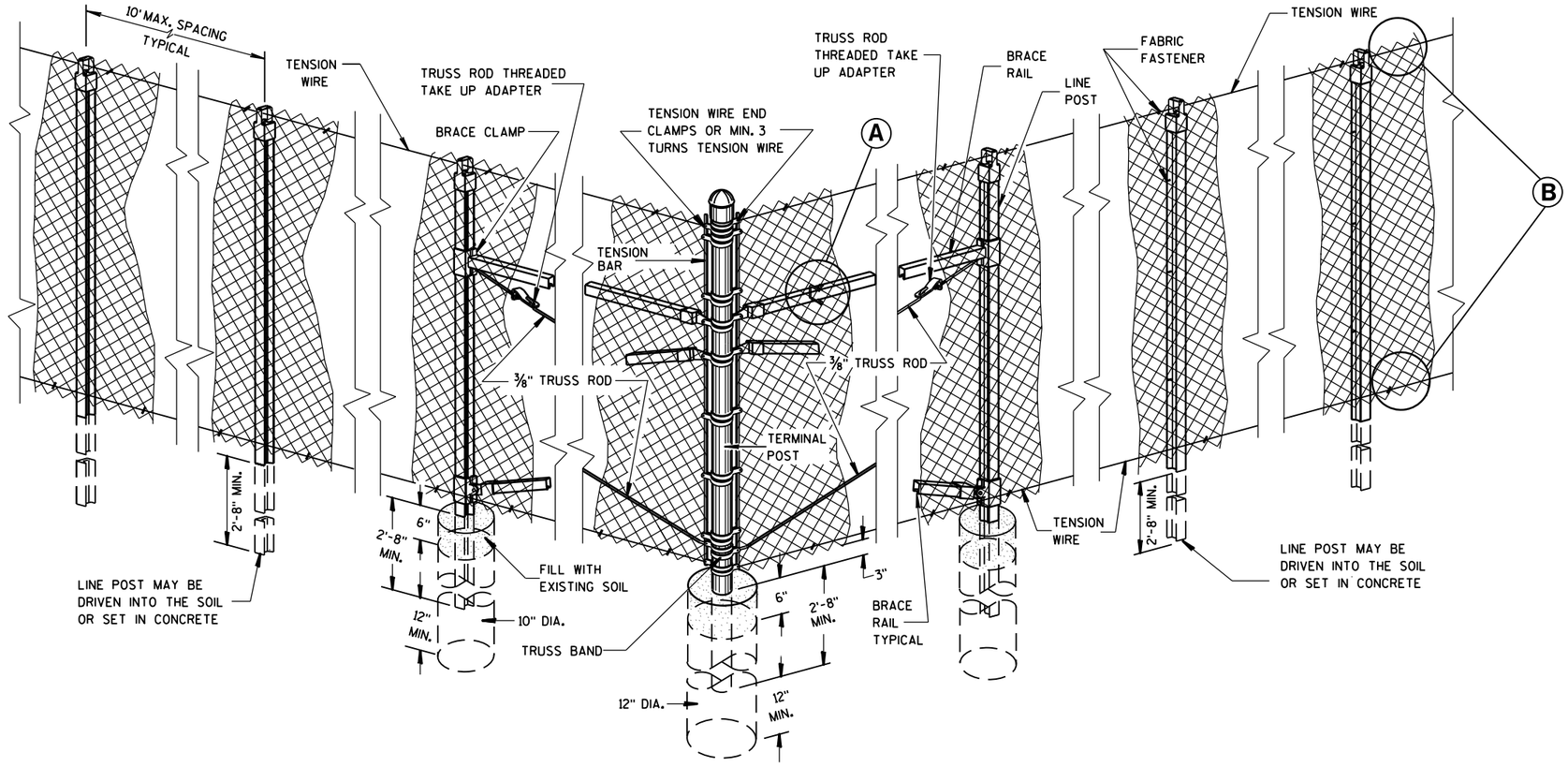
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S.D.D. 15 B 3-15a

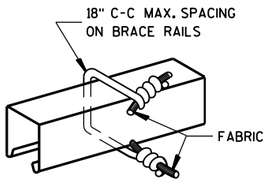


*IF "D" IS LESS THAN 2'-6", DRILL ROCK AND INSTALL GROUT

ROCK INSTALLATION OF LINE POST



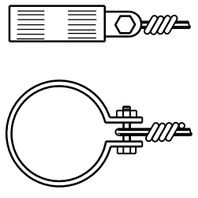
END, CORNER, ANGLE INTERSECTION & INTERMEDIATE BRACED POSTS



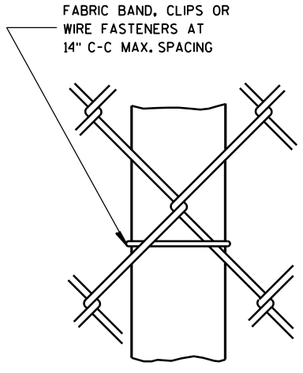
BRACE RAIL

FABRIC FASTENER

Ⓐ



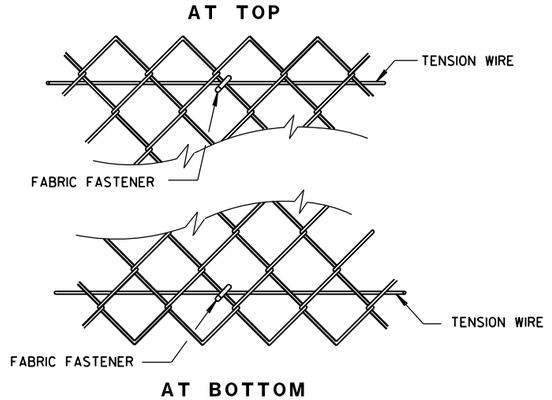
TENSION WIRE END CLAMP



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

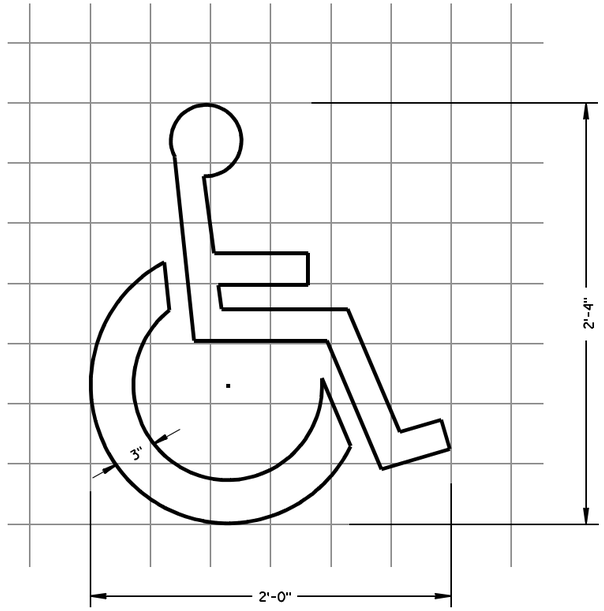
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S.D.D. 15 B 3-15b

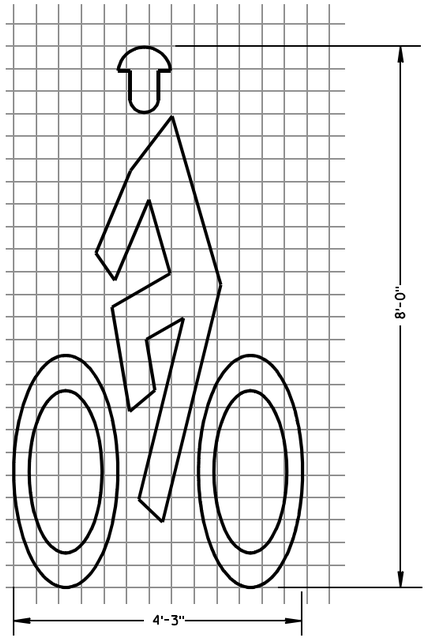
GENERAL NOTES

DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

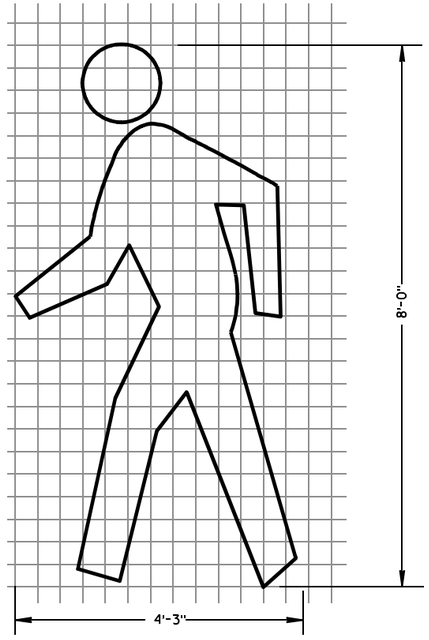
ALL LETTERS, ARROWS AND SYMBOLS SHALL BE IN CONFORMANCE WITH REQUIREMENTS INCLUDED IN "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKING" BOOK BY THE FEDERAL HIGHWAY ADMINISTRATION. ALL LETTERS, ARROWS AND SYMBOLS SHALL BE WHITE AND REFLECTORIZED. SMALL DIFFERENCES IN DIMENSIONS WITHIN THE TOLERANCES OF THAT BOOK ARE ACCEPTABLE.

A DETAILED DRAWING OF THE HANDICAPPED PARKING SYMBOL IS ILLUSTRATED IN THE "STANDARD HIGHWAY SIGNS MANUAL" BY THE FEDERAL HIGHWAY ADMINISTRATION.

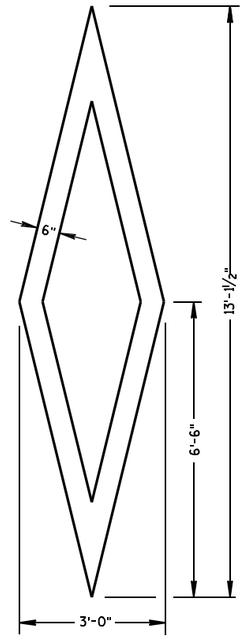




BIKE CROSSING SYMBOL



PEDESTRIAN SYMBOL



PREFERENTIAL LANE SYMBOL

6

6

S.D.D. 15 C 7-12a

S.D.D. 15 C 7-12a

PAVEMENT MARKING SYMBOLS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7/1/11 DATE

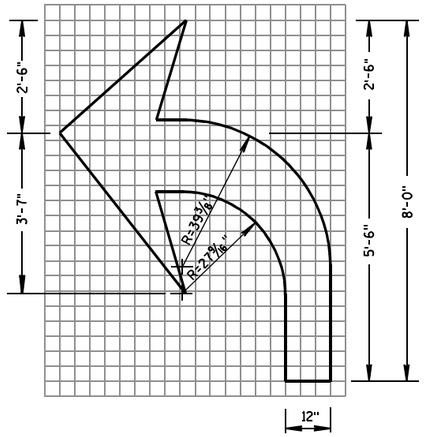
/S/ Thomas N Nathan
STATE TRAFFIC ENGINEER

FHWA

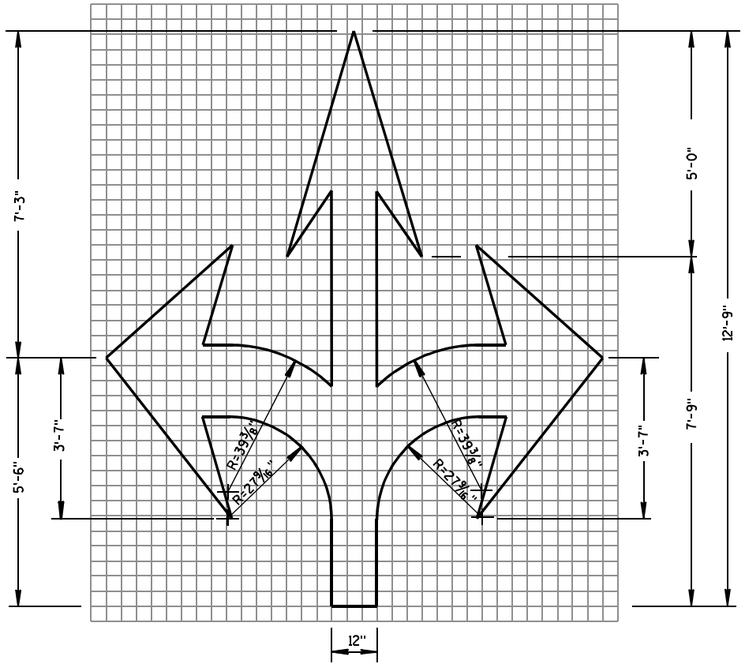
GENERAL NOTES

DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

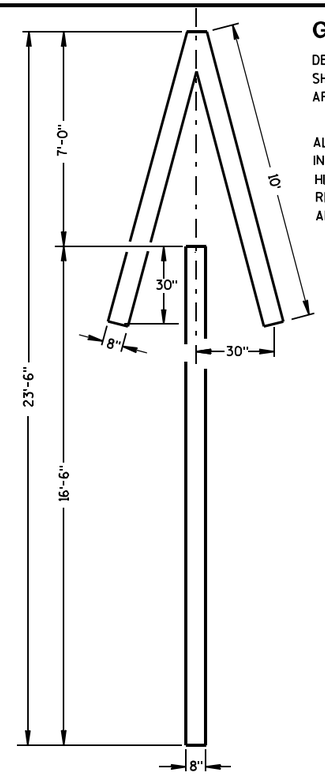
ALL LETTERS, ARROWS AND SYMBOLS SHALL BE IN CONFORMANCE WITH REQUIREMENTS INCLUDED IN "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKING" BOOK BY THE FEDERAL HIGHWAY ADMINISTRATION. ALL LETTERS, ARROWS AND SYMBOLS SHALL BE WHITE AND REFLECTORIZED. SMALL DIFFERENCES IN DIMENSIONS WITHIN THE TOLERANCES OF THAT BOOK ARE ACCEPTABLE.



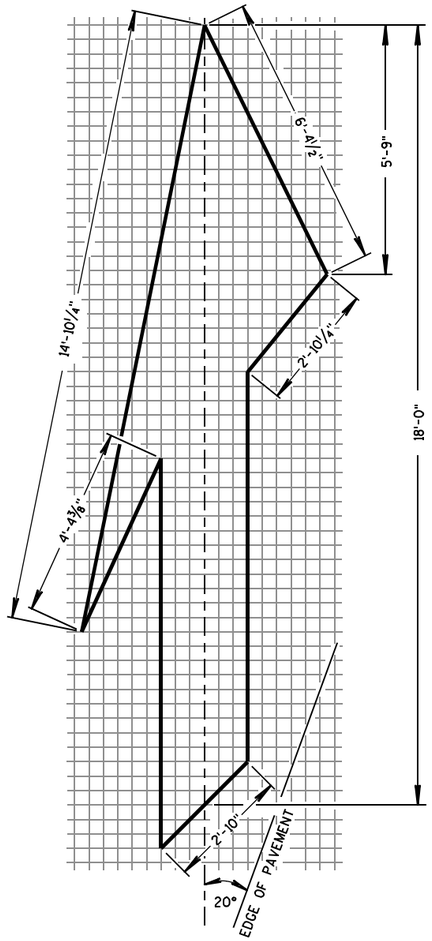
TYPE 2



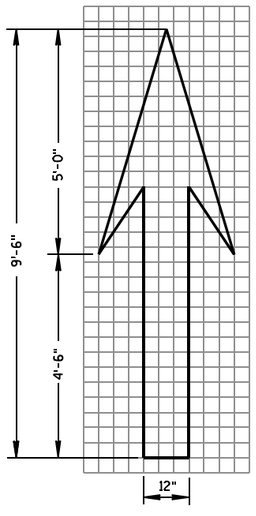
TYPE 6



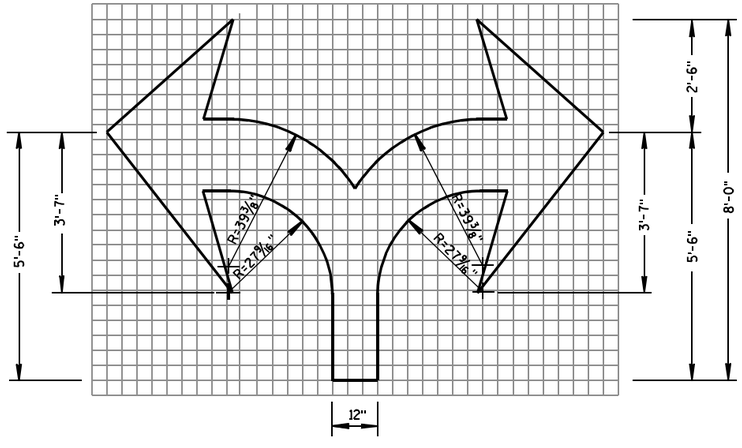
TYPE 4



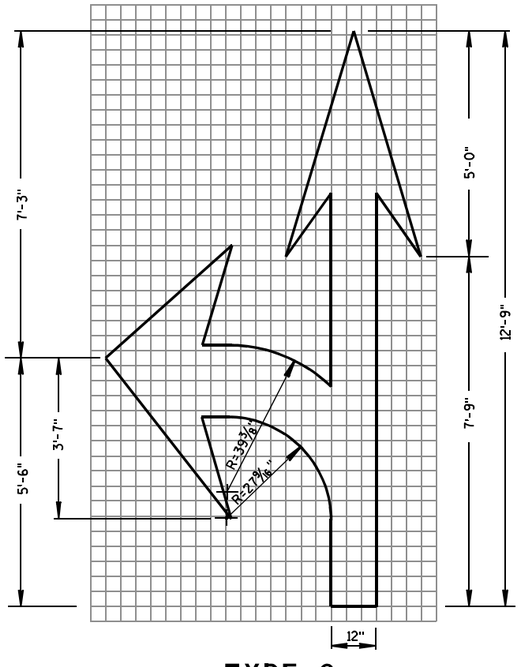
TYPE 5 LANE DROP ARROW



TYPE 1



TYPE 7



TYPE 3

PAVEMENT MARKING ARROWS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7/1/11 — DATE

/S/ Thomas N. Nothdurft — STATE TRAFFIC ENGINEER

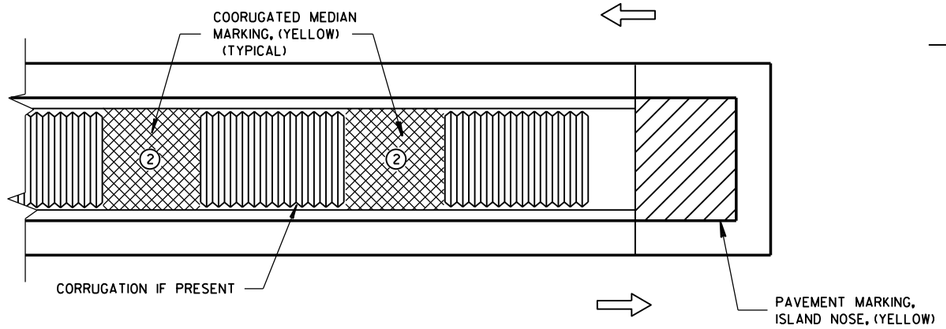
FHWA

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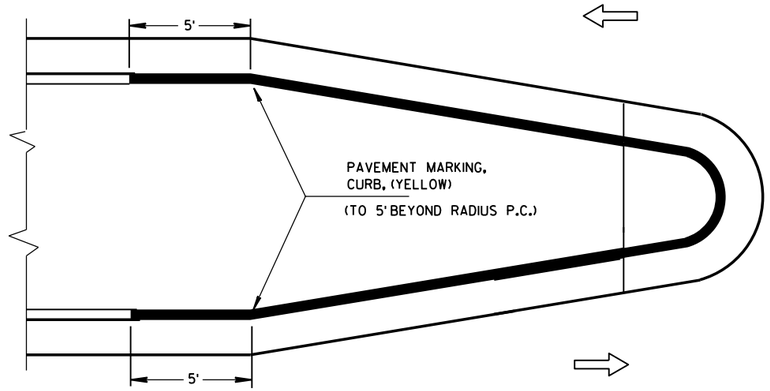
S.D.D. 15 C 7-12c

6

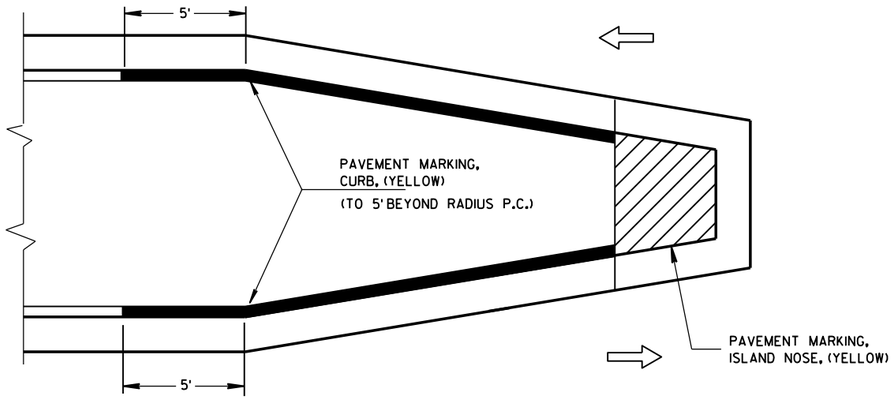
S.D.D. 15 C 7-12c



MEDIAN ISLAND WITH SQUARE BLUNT NOSE

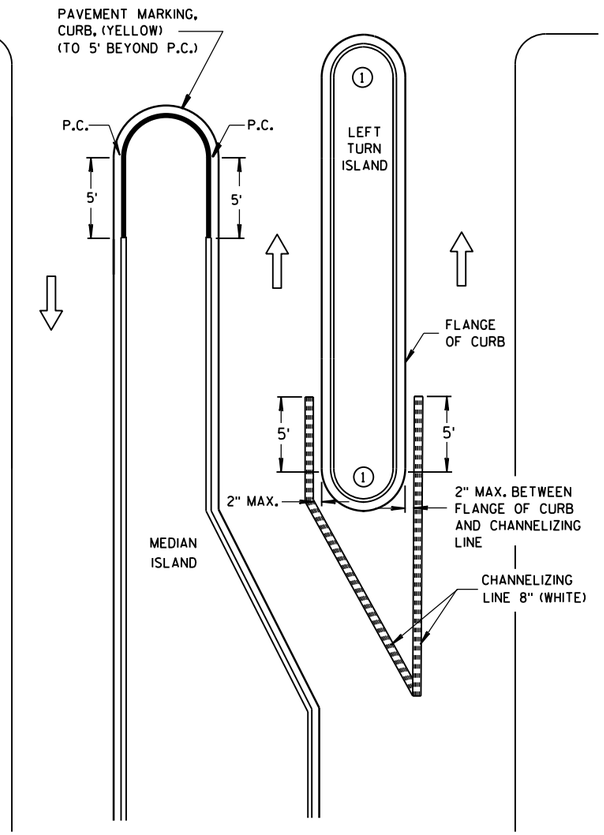


MEDIAN ISLAND WITH ROUND BLUNT NOSE



MEDIAN ISLAND WITH SLOPED NOSE

TYPICAL PLACEMENT OF PAVEMENT MARKING ON MEDIAN ISLANDS

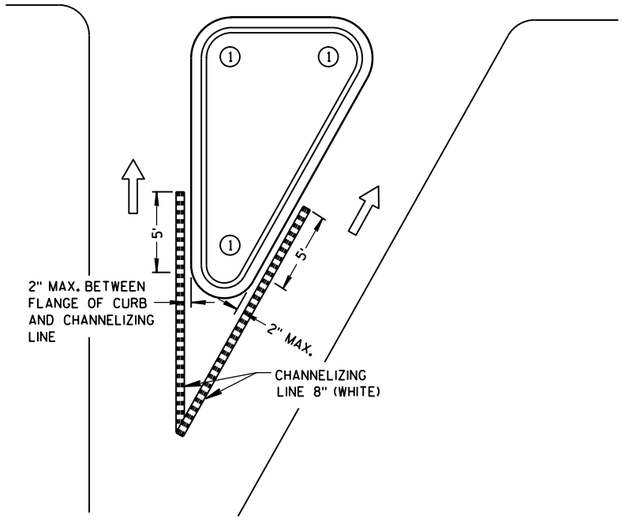


LEFT TURN & MEDIAN ISLAND

GENERAL NOTES

1. DO NOT MARK CURB NOSES THAT SEPARATE LANES OF TRAFFIC TRAVELING IN THE SAME DIRECTION.

2. WHEN CONCRETE CORRUGATED MEDIAN IS CONSTRUCTED TO SEPARATE TRAFFIC OPERATING IN THE OPPOSING DIRECTION YELLOW PAVEMENT MARKING SHALL BE APPLIED TO THE FLAT PORTION OF THE CONCRETE CORRUGATED MEDIAN. THE ITEM OF PAVEMENT MARKING, CONCRETE CORRUGATED MEDIAN, WILL BE MEASURED IN PLACE AND AND ACCEPTED IN ACCORDANCE WITH THE CONTRACT AND PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE FOOT.



RIGHT TURN ISLAND

LEGEND

- ISLAND NOSE MARKING
- CURB MARKING
- CORRUGATED MEDIAN MARKING
- DIRECTION OF TRAVEL

PAVEMENT MARKING
(ISLANDS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 15 C 8-16f

6

S.D.D. 15 C 8-16f

GENERAL NOTES

ORIENT ANCHOR BOLTS IN FOOTING AND PROVIDE ANCHOR BOLT STICK OUT ABOVE TOP OF CONCRETE FOOTING BASE PER FABRICATION DRAWING.

BENDING DIMENSIONS FOR REINFORCING BARS ARE OUT TO OUT.

USE 3" CLEAR FOR ALL REINFORCEMENT UNLESS NOTED OTHERWISE.

SIGN SUPPORTS SHALL BE LOCATED NORMAL TO ROADWAY.

THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO THE TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO.

WELDING OF ANCHOR BOLTS TO THE CAGE IS UNACCEPTABLE. TEMPLATES SHALL BE USED.

BAR CAGE TO BE ASSEMBLED USING TIE WIRES ONLY, NO WELDING.

BASES (SHAFT) SHALL BE EXCAVATED BY THE USE OF A CIRCULAR AUGER. IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE SOIL, THE FORM SHALL BE REMOVED BEFORE BACK FILLING AROUND THE BASE. ANY REQUIRED BACKFILL SHALL BE WELL COMPACTED IN LAYERS OF 1 FOOT OR LESS. COMPACTION SHALL BE BY MECHANICAL MEANS. CARE SHALL BE TAKEN SO NO DAMAGE OCCURS TO THE CONCRETE BASE DURING COMPACTION.

EXCAVATION OF MATERIALS NOT OCCUPIED BY CONCRETE SHALL BE MINIMIZED TO REDUCE DISTURBANCE OF THE SURROUNDING SOILS.

THE BOTTOM OF THE DRILLED HOLE SHALL BE FIRM AND THOROUGHLY CLEANED SO NO LOOSE OR COMPRESSIBLE MATERIALS ARE PRESENT AT THE TIME OF THE CONCRETE PLACEMENT.

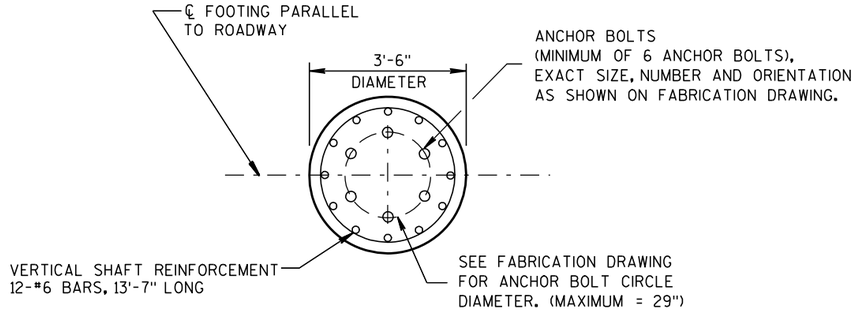
IF THE DRILLED HOLE CONTAINS STANDING WATER, THE CONCRETE SHALL BE PLACED USING A TREMIE TO DISPLACE THE WATER.

THE REINFORCEMENT AND ANCHOR BOLTS SHALL BE ADEQUATELY SUPPORTED IN THE PROPER POSITIONS SO NO MOVEMENT OCCURS DURING CONCRETE PLACEMENT.

ANY DAMAGE TO THE CONCRETE BASE DURING CONSTRUCTION OPERATIONS SHALL BE REPAIRED AT THE ENGINEER'S DIRECTION, AT THE EXPENSE OF THE CONTRACTOR.

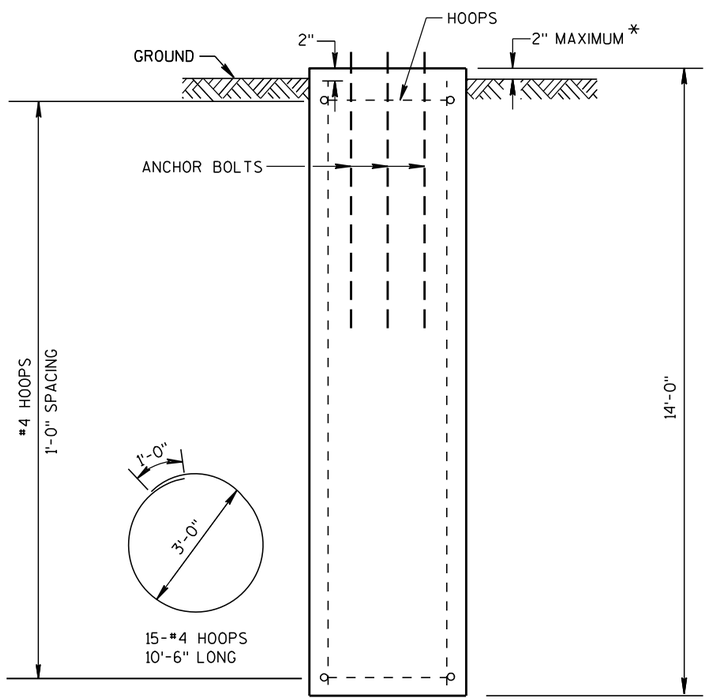
CONCRETE MASONRY ---------- fc=3,500 p.s.i.
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60 ------- fy=60,000 p.s.i.
ANCHOR BOLTS ---------- AASHTO M314 GRADE 55

THIS FOOTING HAS BEEN DESIGNED FOR SITES WHERE SOILS EXHIBIT A PHI-ANGLE GREATER THAN OR EQUAL TO 20 DEGREES (GRANULAR SOILS), OR A COHESION VALUE GREATER THAN OR EQUAL TO 350 PSF (COHESIVE SOILS).



PLAN VIEW

* FOR OVERHEAD SIGN SUPPORTS THAT ARE INSTALLED ADJACENT TO SIDEWALKS, THE TOP OF THE BASE SHALL BE POURED FLUSH WITH THE GROUND.



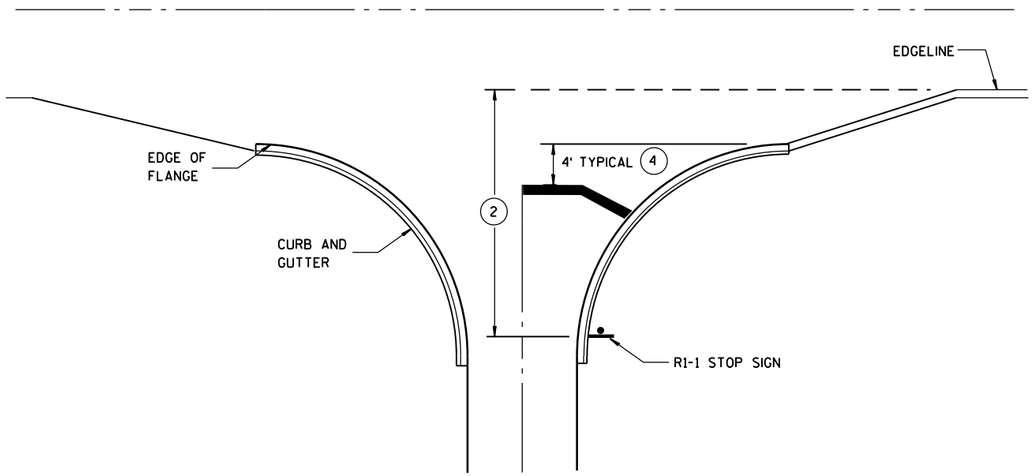
ELEVATION VIEW

CONCRETE - 5.0 C.Y. PER FOOTING
H.S. REINFORCEMENT - 350 LBS. PER FOOTING

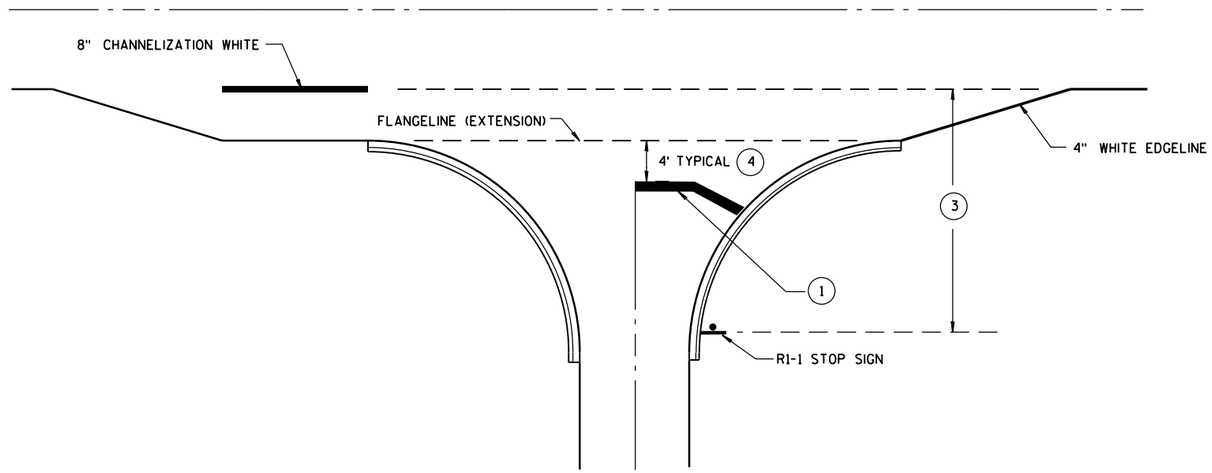
42" DIAMETER CANTILEVER OVERHEAD SIGN SUPPORT BASE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

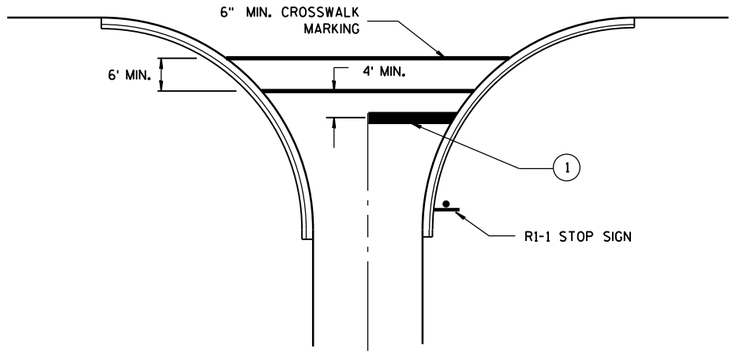
APPROVED
4-17-09 DATE
/S/ Thomas N. Nothdurm STATE TRAFFIC ENGINEER
205 SIGN
FHWA



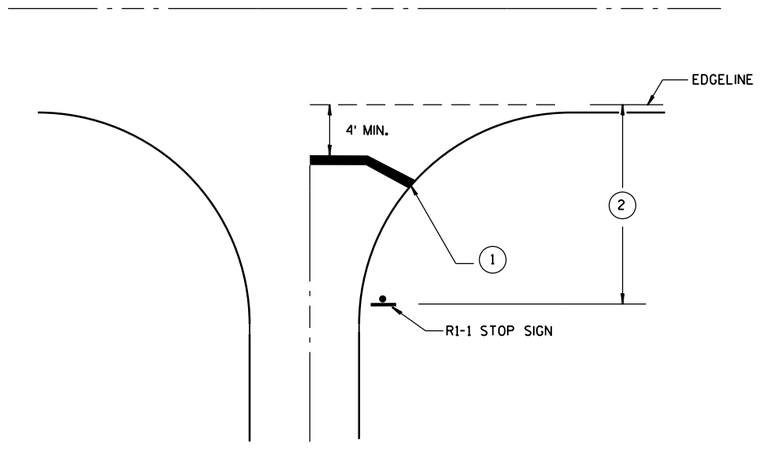
TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER



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

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.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" SIGNS MAY BE USED IF APPROVED BY DISTRICT TRAFFIC UNIT.

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

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.

W20-1A AND G20-2A SIGNS ARE NOT REQUIRED IF THE WORK AREA IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT. G20-2A SIGNS MAY ALSO BE OMITTED IF DURATION OF WORK IS LESS THAN 7 CONTINUOUS DAYS AND NIGHTS.

CHANNELIZING DEVICES PLACED ADJACENT TO THE WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

TABLE A

SHOULDER TAPER LENGTH (FEET)					BUFFER SPACE (FEET)
S \ W	4	6	8	10	
30	20	30	40	50	200
35	30	45	55	70	250
40	40	55	75	90	305
45	60	90	120	150	360
50	70	100	135	170	425
55	75	110	150	185	495

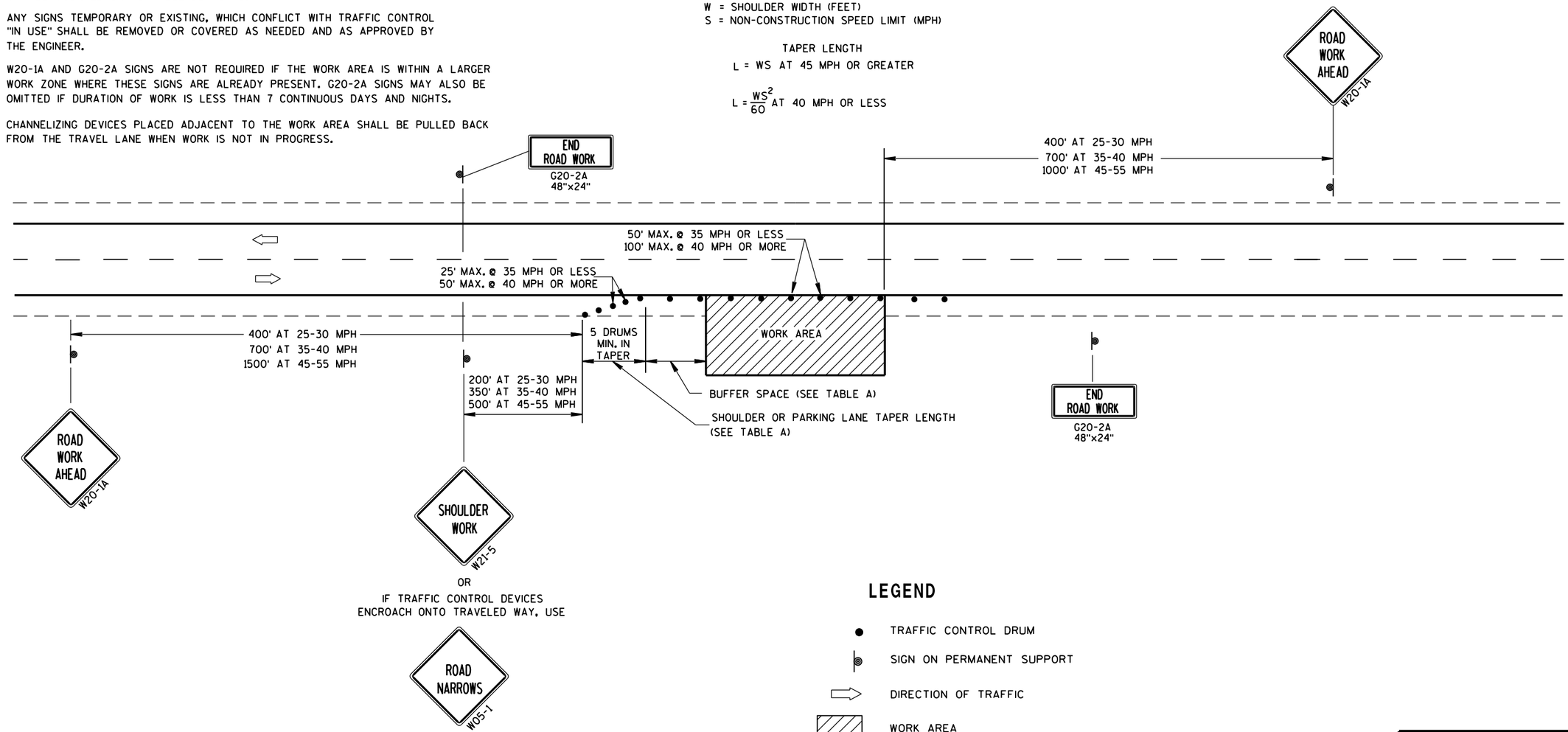
W = SHOULDER WIDTH (FEET)
S = NON-CONSTRUCTION SPEED LIMIT (MPH)

TAPER LENGTH

L = WS AT 45 MPH OR GREATER

$L = \frac{WS^2}{60}$ AT 40 MPH OR LESS

SHOULDER TAPER LENGTH = $\frac{1}{3}L$



LEGEND

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

TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

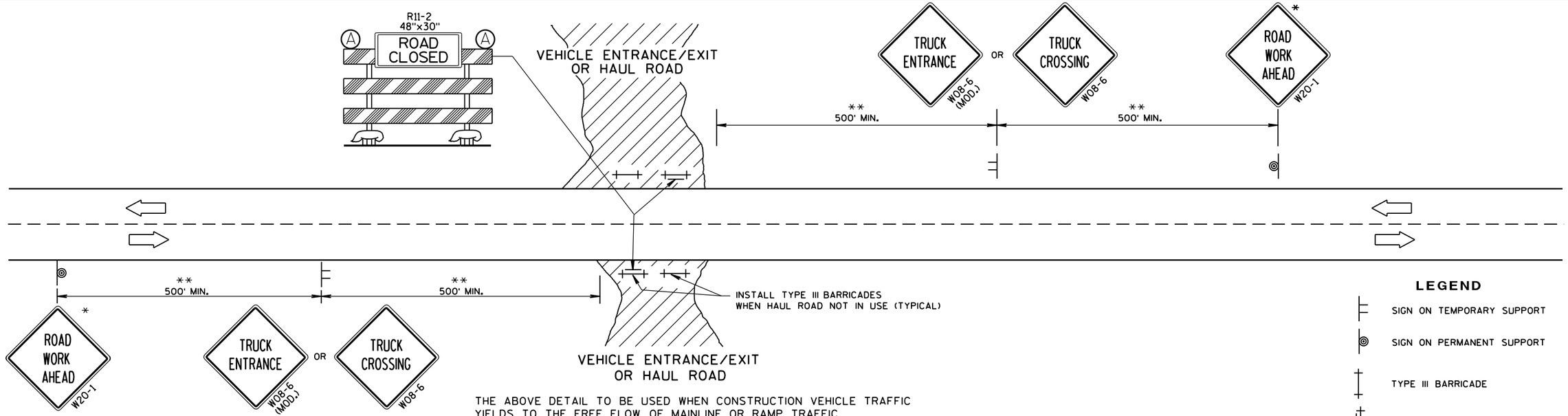
July 14, 2015 — DATE

/S/ Peter Amakobe Atepe
STATEWIDE WORK ZO[illegible] SAFETY ENGI[illegible]

FHWA

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S.D.D. 15 D 28-3
S.D.D. 15 D 28-3



THE ABOVE DETAIL TO BE USED WHEN CONSTRUCTION VEHICLE TRAFFIC YIELDS TO THE FREE FLOW OF MAINLINE OR RAMP TRAFFIC

LEGEND

- SIGN ON TEMPORARY SUPPORT
- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC

GENERAL NOTES

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

WHEN ACTIVITY REFLECTED BY THE SIGN IS NOT CURRENTLY TAKING PLACE, THE HIGHWAY SHALL BE RESTORED TO NORMAL CONDITION AND THE SIGNS SHALL BE REMOVED, COVERED OR TURNED AWAY FROM TRAFFIC.

WHEN A SIDE ROAD OR RAMP INTERSECTS WITHIN THE ADVANCE SIGNING AREA, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

* THESE SIGNS ARE TO BE USED ONLY WHEN VEHICLE ENTRANCE/EXIT CONDITIONS ARE SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA OR SIGNING OR AS DIRECTED BY THE ENGINEER.

** 500 FEET SHOWN IS FOR ROADWAYS WITH A NON-CONSTRUCTION REGULATORY SPEED LIMIT OF 45 MPH OR MORE. FOR 35-40 MPH, USE 350 FEET. FOR 25-30 MPH, USE 200 FEET. USE 1000 FEET/1500 FEET FOR EXPRESSWAY/FREEWAY.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

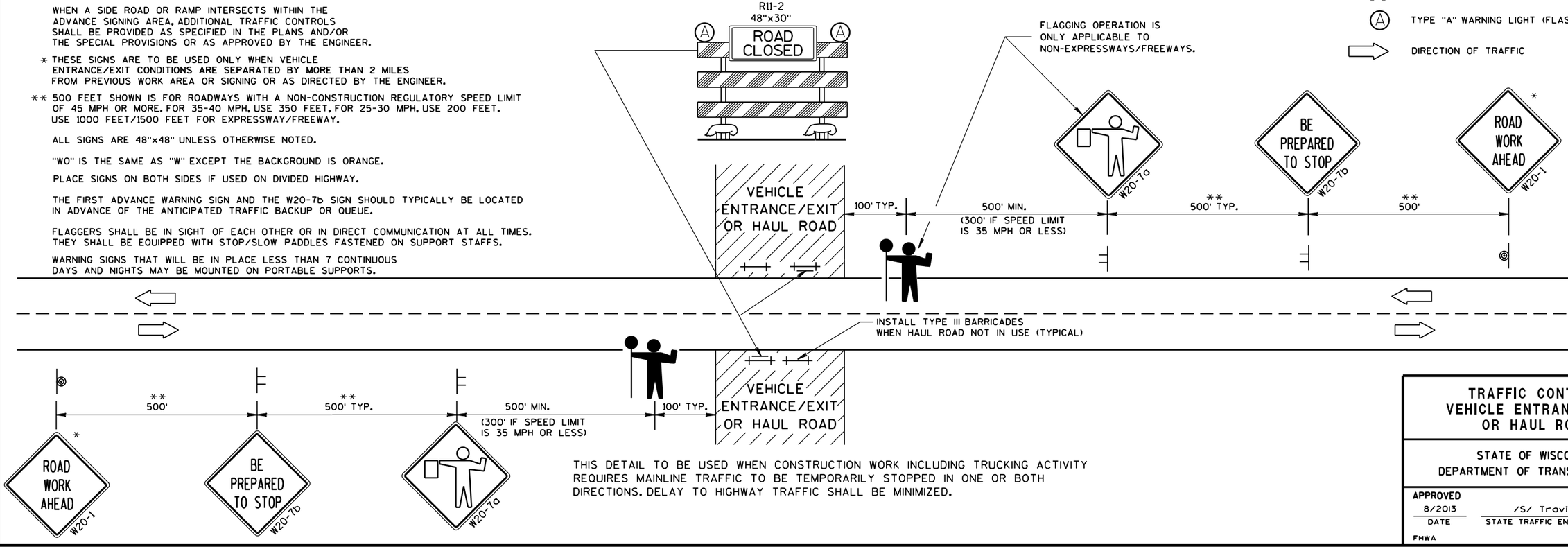
"WO" IS THE SAME AS "W" EXCEPT THE BACKGROUND IS ORANGE.

PLACE SIGNS ON BOTH SIDES IF USED ON DIVIDED HIGHWAY.

THE FIRST ADVANCE WARNING SIGN AND THE W20-7b SIGN SHOULD TYPICALLY BE LOCATED IN ADVANCE OF THE ANTICIPATED TRAFFIC BACKUP OR QUEUE.

FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS.

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



THIS DETAIL TO BE USED WHEN CONSTRUCTION WORK INCLUDING TRUCKING ACTIVITY REQUIRES MAINLINE TRAFFIC TO BE TEMPORARILY STOPPED IN ONE OR BOTH DIRECTIONS. DELAY TO HIGHWAY TRAFFIC SHALL BE MINIMIZED.

TRAFFIC CONTROL, VEHICLE ENTRANCE/EXIT OR HAUL ROAD

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

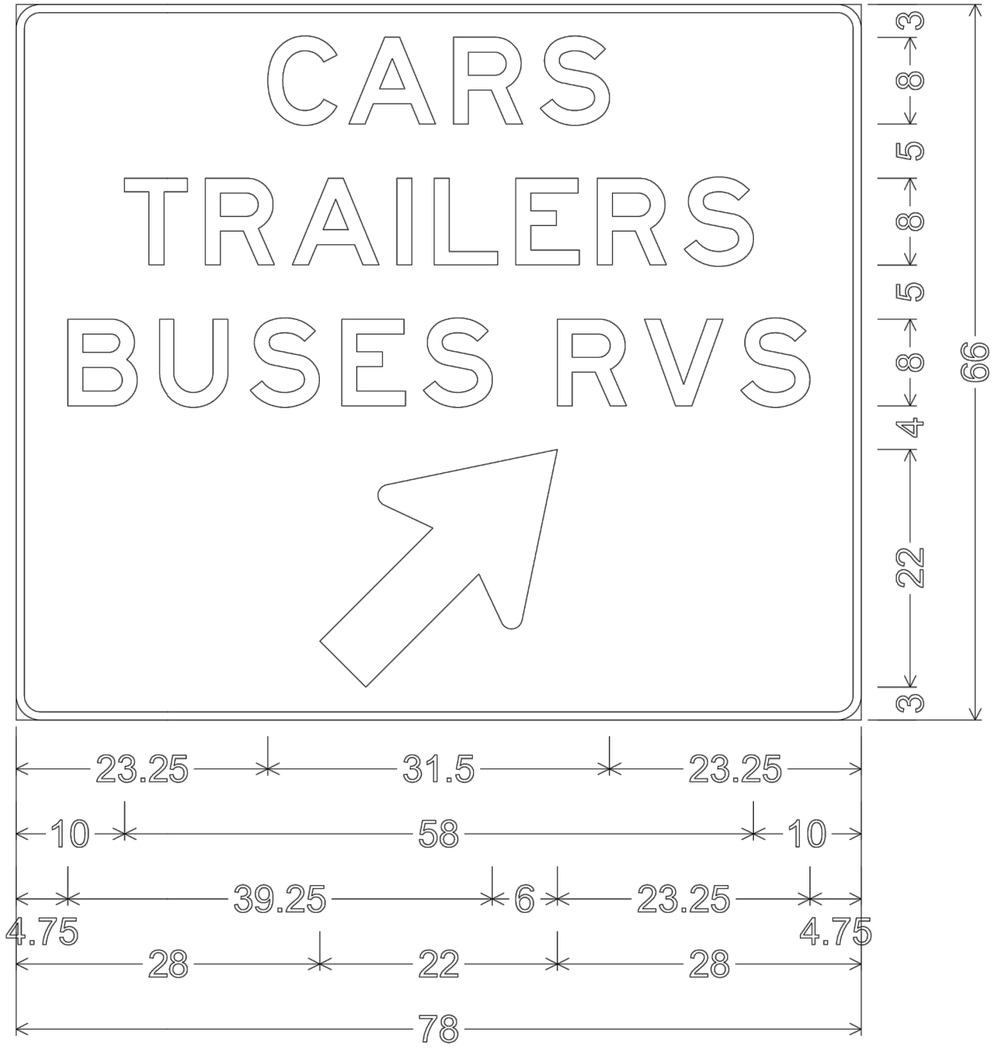
APPROVED
8/2013 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

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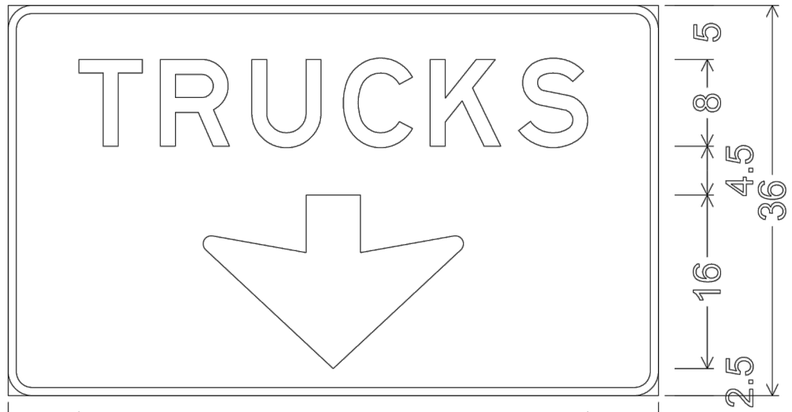
S.D.D. 15 D 29-3

NOTES

1. Signs are Type I - Type SH Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - E



2.250" Radius, 0.750" Border,



2.250" Radius, 0.750" Border

7

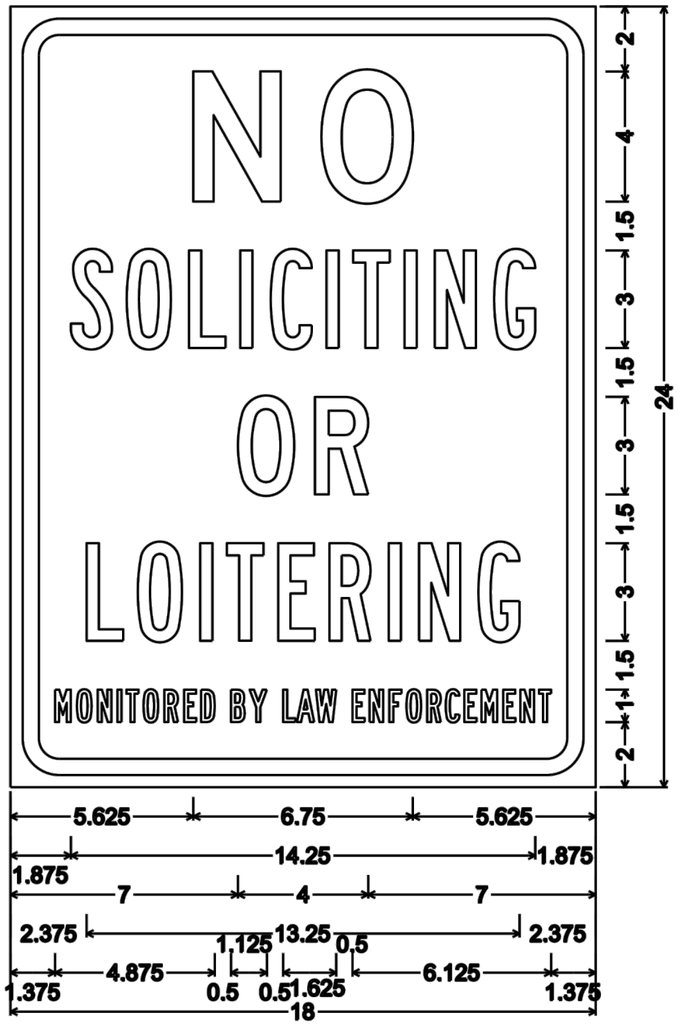
7

PROJECT NO:1070-00-71	HWY:REST AREA NO. 31	COUNTY:LA CROSSE	PERMANENT SIGNING	SHEET	E

FILE NAME : P:\UZ\W\WITCO\131411\5-FINAL-DSGN\51-CONST-DWGS-CAD\40-TRANSHWY\PLN SHTS\070101_SG.DWG
LAYOUT NAME - PERMANENT SIGNING
PLOT DATE : 12/17/2015 11:40 PM PLOT BY : NATE MCLAUGHLIN PLOT NAME : PLOT SCALE : 1" = 1'

NOTES

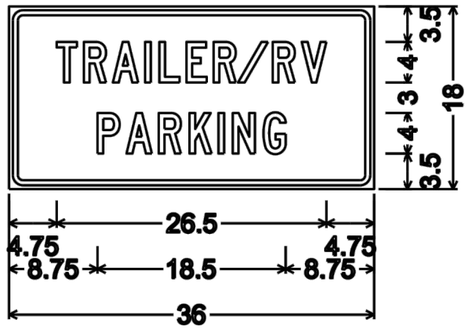
1. Signs are Type II - Type H Reflective
2. Color:
   Background - White
   Message - Red
3. Message Series - As noted



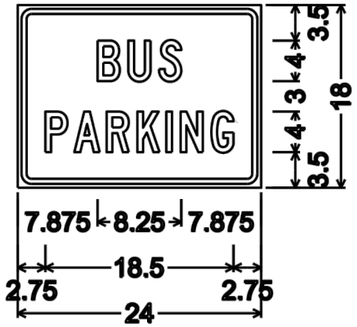
1.500" Radius, 0.500" Border, 0.375" Indent, Red on White;
"NO" D; "SOLICITING" B; "OR" C; "LOITERING" B;
"MONITORED" B; "BY" B; "LAW" B;
"ENFORCEMENT" B;

NOTES

1. All Signs Type II - Type H Reflective
2. Color:
   Background - White
   Message - Green
3. Message Series - C



1.375" Radius, 0.500" Border, 0.375" Indent

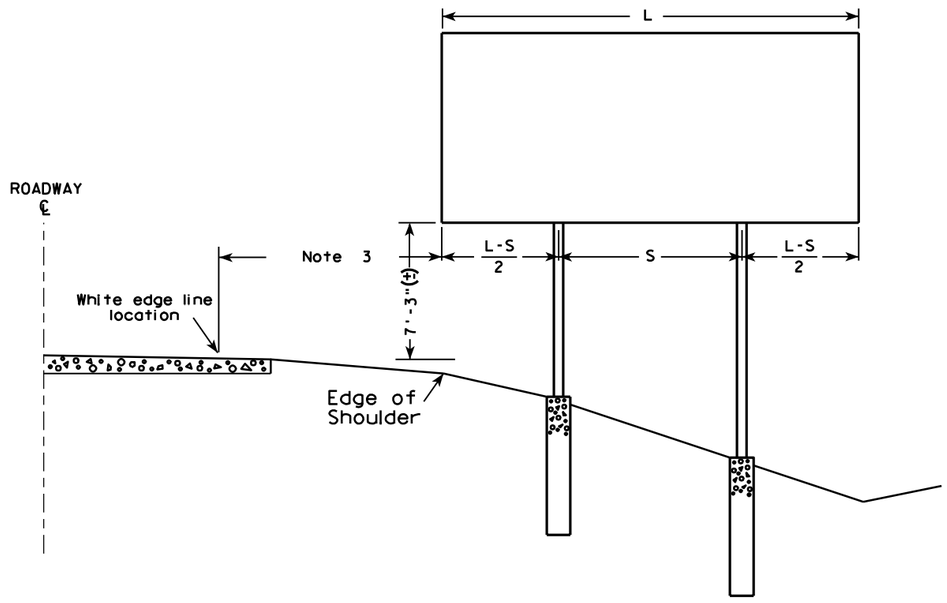


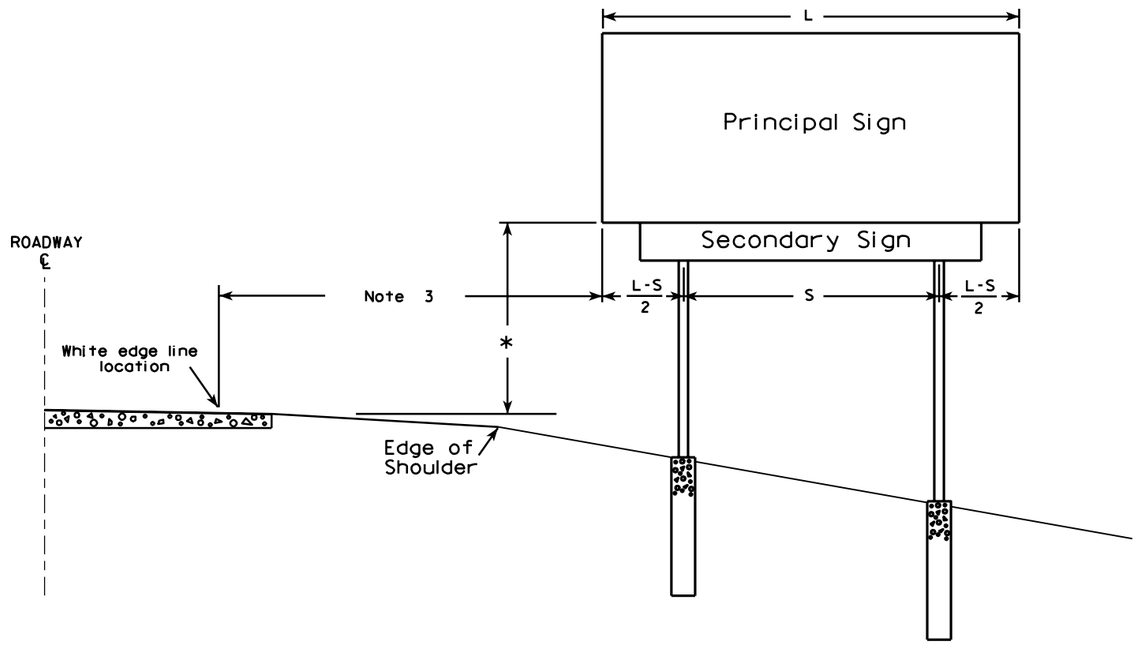
1.375" Radius, 0.500" Border, 0.375" Indent

7

7

PROJECT NO:1070-00-71	HWY:REST AREA NO. 31	COUNTY:LA CROSSE	PERMANENT SIGNING	SHEET 211	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"(±).

7

7

TYPICAL INSTALLATION
OF TYPE I SIGNS

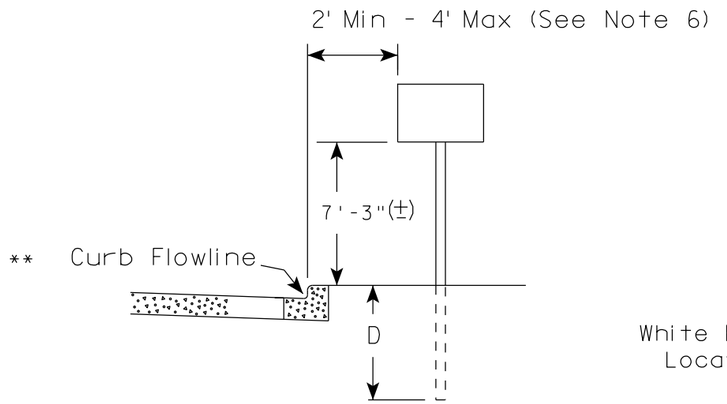
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

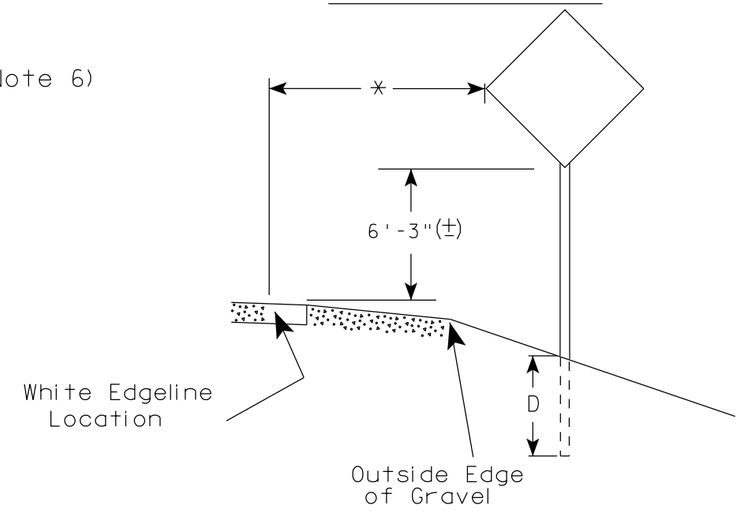
DATE 4/02/08 PLATE NO. A4-1.9

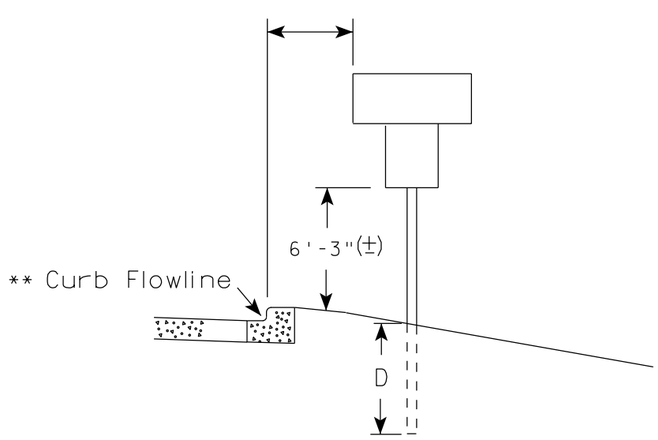
PROJECT NO:				SHEET NO: 212	E

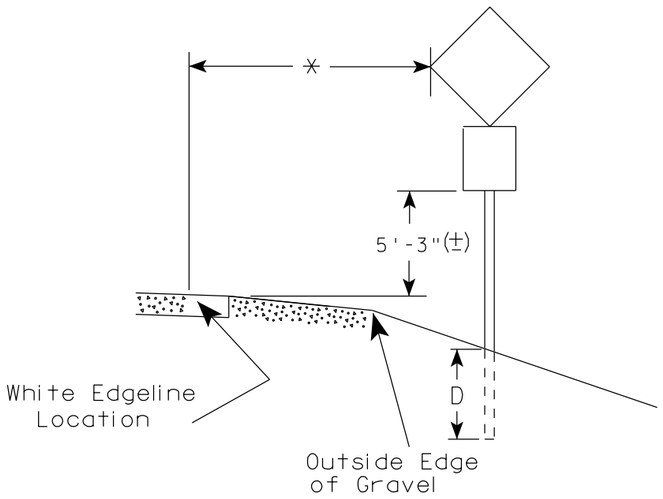
URBAN AREA



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.

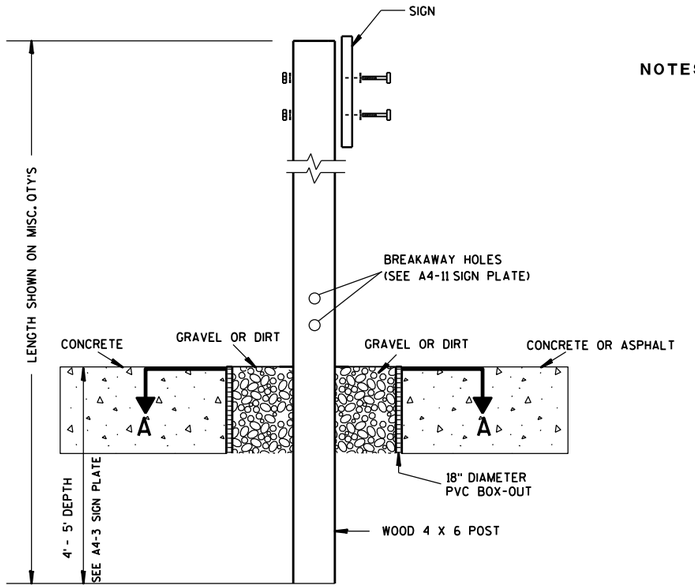
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/23/15 PLATE NO. A4-3.20

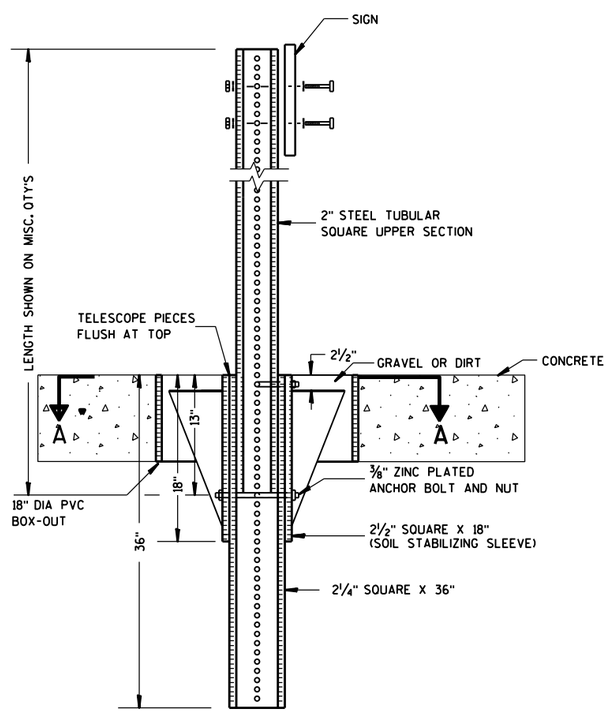
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



ELEVATION VIEW

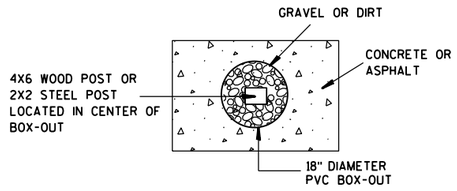
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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

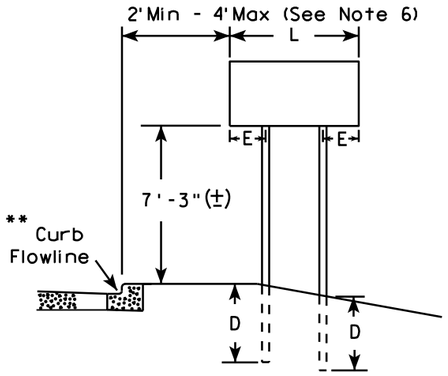
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/27/14 PLATE NO. A4-3B.1

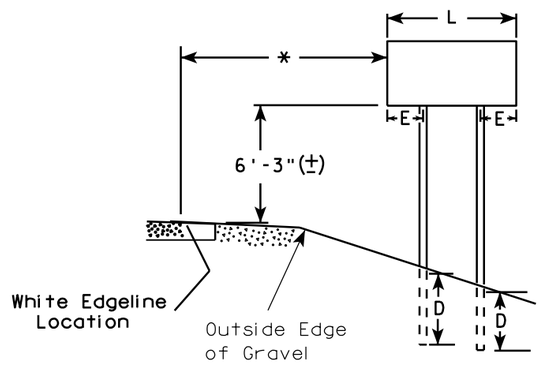
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

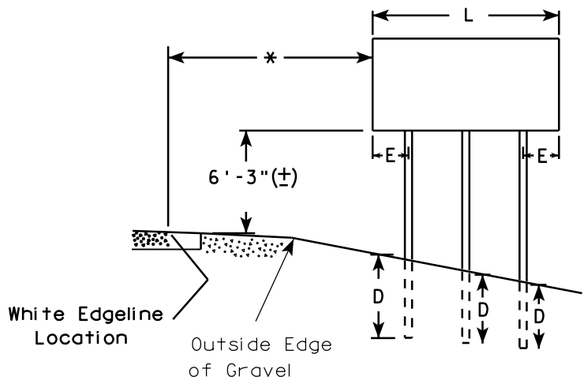
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN PLOT DATE : 27-JAN-2014 09:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42

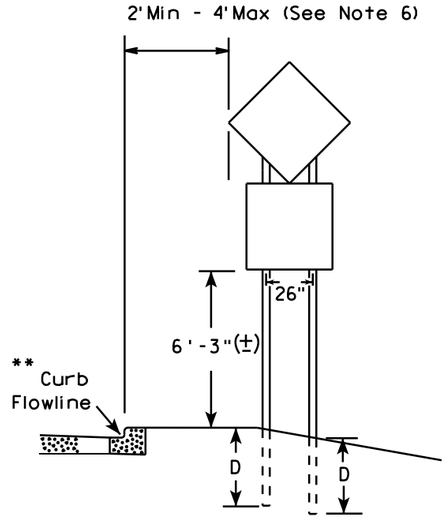
URBAN AREA



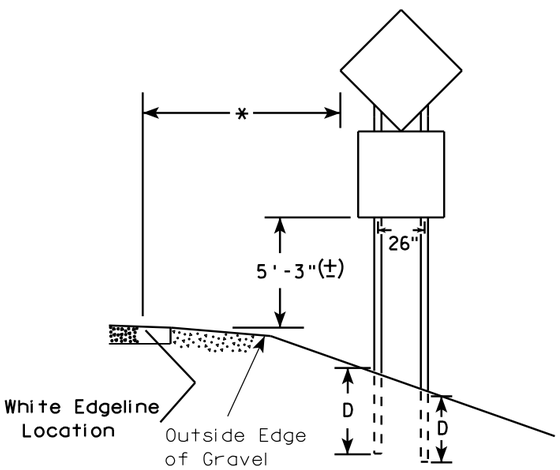
RURAL AREA (See Note 3)







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

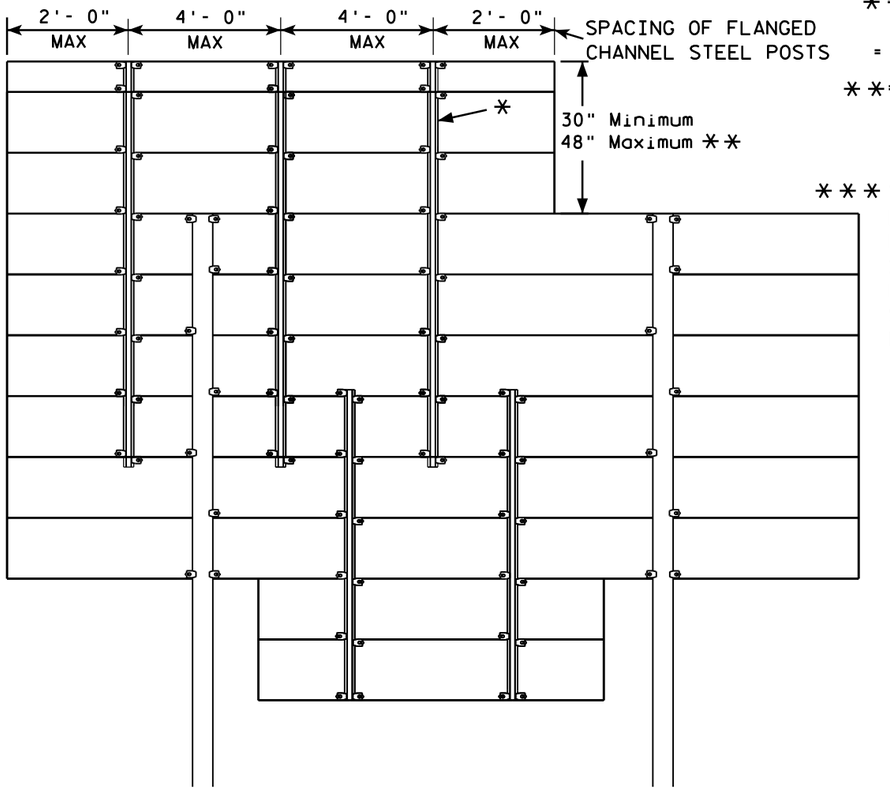
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/23/15 PLATE NO. A4-4 14 215

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

GROUND MOUNTED SIGN

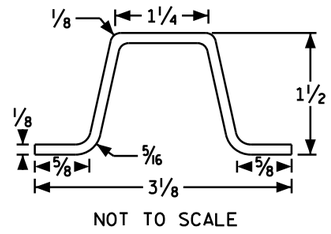


*=2.00 lb/ft FLANGED CHANNEL, MIN. YIELD STRENGTH = 60,000 PSI (GRADE 60) GALVANIZED

**=FOR 48" HEIGHT PANELS ON OVERHEAD STRUCTURES, ENTIRE SIGN SHALL BE CENTERED VERTICALLY ABOUT THE DEPTH OF THE TRUSS.

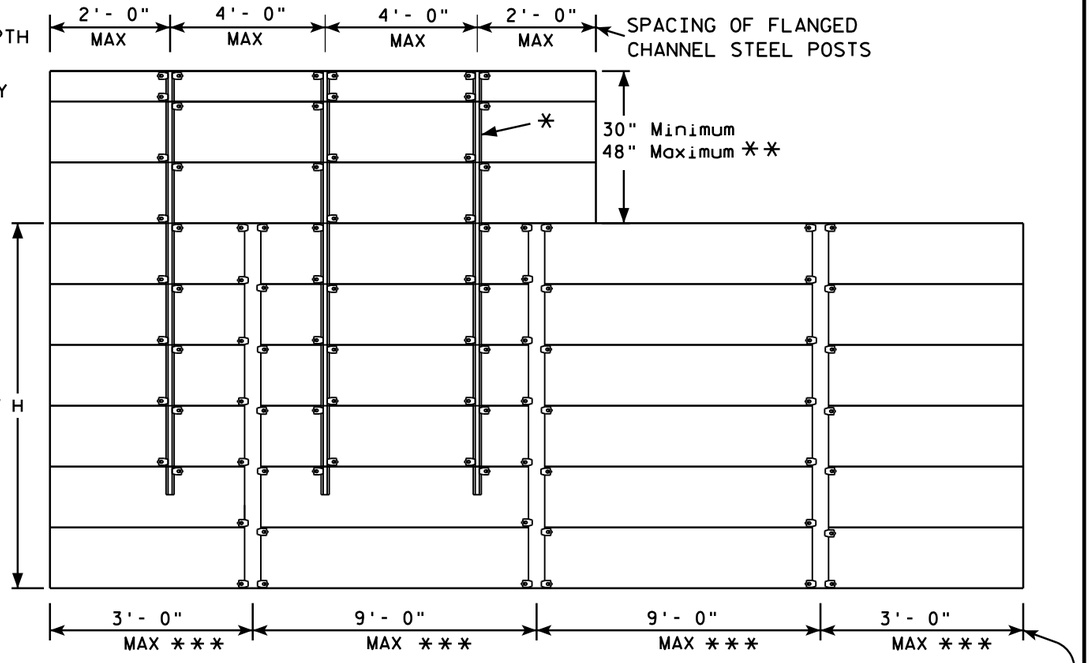
*** THESE SPACING DISTANCES SHALL ONLY BE USED WHEN THE MAIN SIGN HAS A MAXIMUM HEIGHT (DIMENSION H) OF 16 FT OR LESS. FOR SIGNS WITH A HEIGHT OF GREATER THAN 16 FT, STRUCTURAL CALCULATIONS SHALL BE PERFORMED.

FLANGE CHANNEL DETAIL



NOT TO SCALE

SIGN BRIDGE MOUNTED SIGN



SPACING OF ALUMINUM SIGN SUPPORTS
5" X 3.5" X 3.7 LBS./ft.

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.

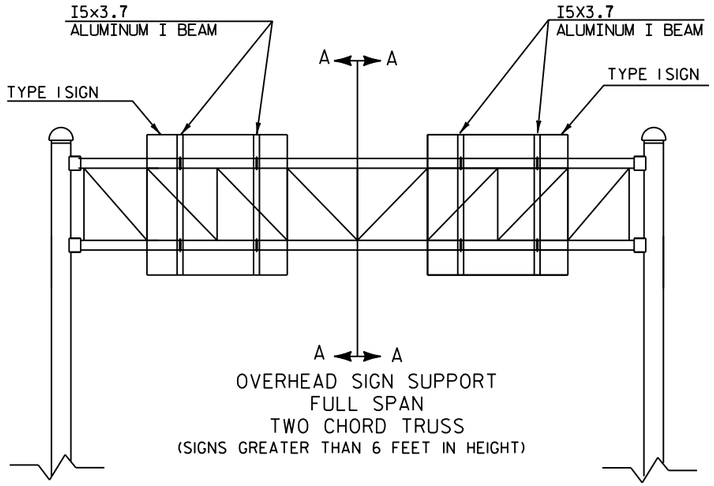
ATTACHMENT OF GUIDE SIGNS TO SUPPORTS

WISCONSIN DEPT OF TRANSPORTATION

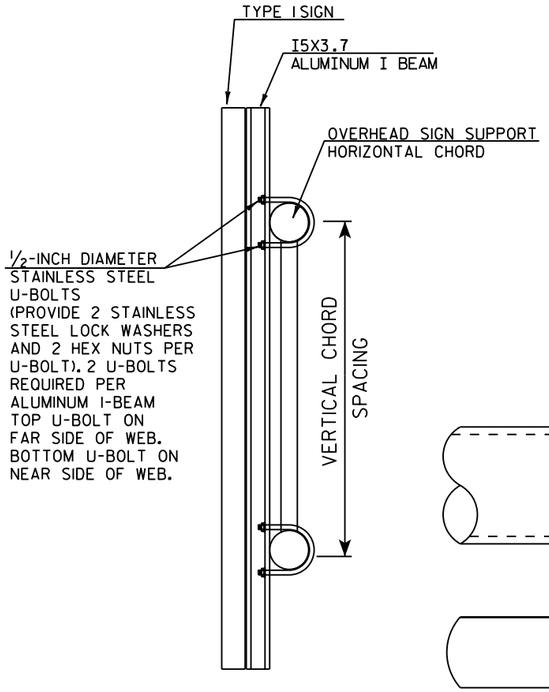
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/05/13 PLAT 216 A4-6.12

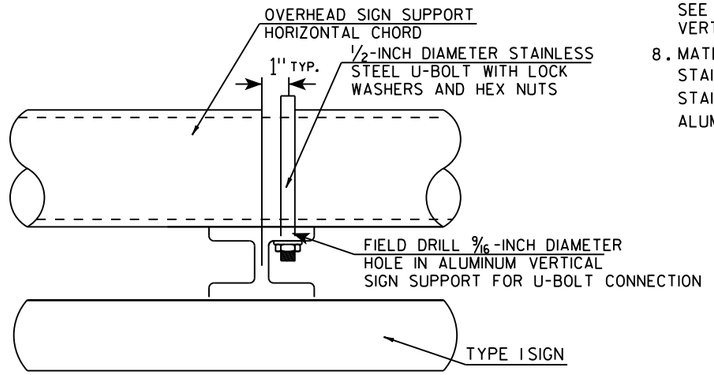
PROJECT NO:				SHEET NO:	E



OVERHEAD SIGN SUPPORT
FULL SPAN
TWO CHORD TRUSS
(SIGNS GREATER THAN 6 FEET IN HEIGHT)



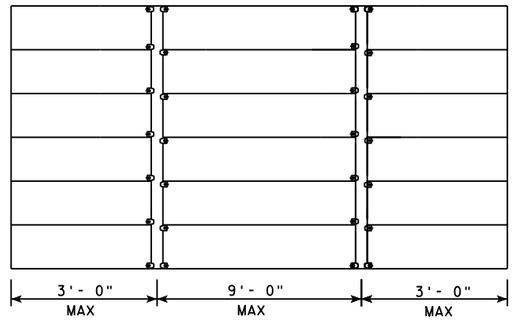
CUT SECTION A-A



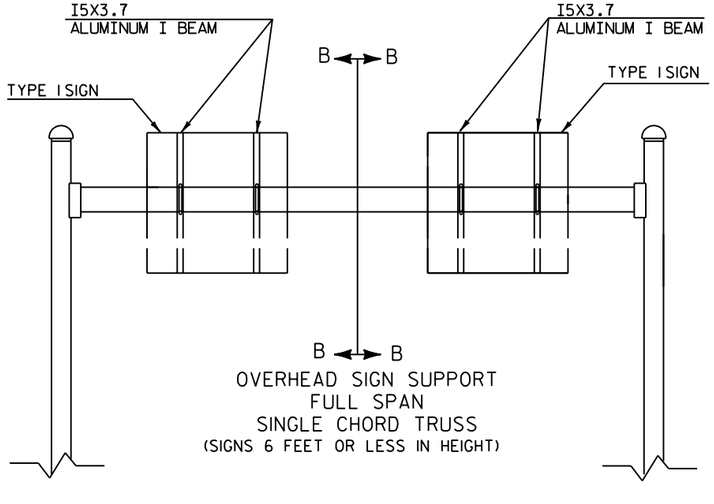
TYPICAL SIGN CONNECTION FOR
TWO CHORD TRUSS
PLAN VIEW

GENERAL NOTES

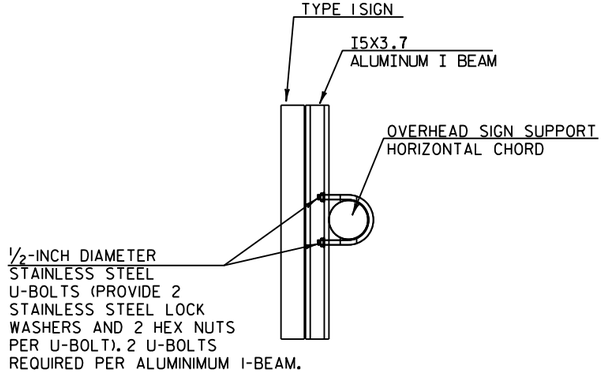
1. USE STAINLESS STEEL U-BOLTS, WASHERS, AND NUTS.
2. USE CLIPS ON EVERY EXTRUDED PANEL JOINT PER SIGN PLATE A4-6.
3. USE ALUMINUM VERTICAL SIGN SUPPORT BEAMS HAVING A 5 INCH BEAM DEPTH AND WEIGHT OF 3.7 LBS PER FOOT.
4. U-BOLTS SHALL BE STAINLESS STEEL AND MANUFACTURED TO THE PROPER SIZE TO FIT THE CHORDS OF THE OVERHEAD SIGN STRUCTURE.
5. DIAMETER OF U-BOLTS SHALL BE AS SHOWN.
6. THE LENGTH OF THE ALUMINUM VERTICAL SIGN SUPPORT BEAMS SHALL BE THE SAME AS THE HEIGHT OF THE SIGN THEY ARE SUPPORTING. BEAM LENGTHS MAY BE LONGER FOR PROPER ATTACHMENT TO CHORDS.
7. MINIMUM NUMBER OF BRACKETS PER SIGN IS TWO. SEE DETAIL BELOW FOR SPACING OF ALUMINUM VERTICAL SIGN SUPPORTS
8. MATERIAL NOTES:
   STAINLESS STEEL U-BOLTS AND LOCKWASHERS ASTM 304.
   STAINLESS STEEL HEX NUTS ASTM A276.
   ALUMINUM I-BEAMS ARE 6061-T6.



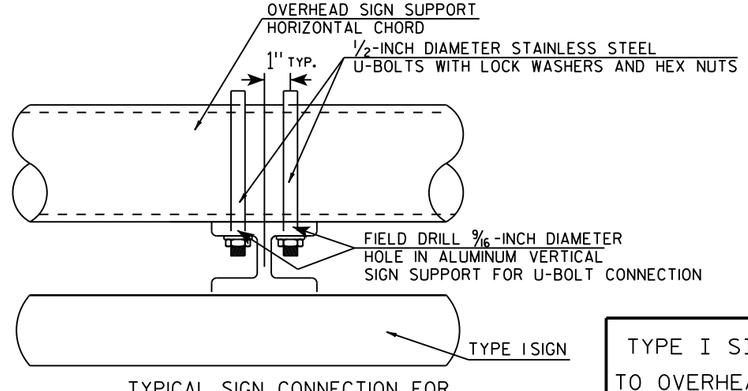
SPACING OF I5X3.7 ALUMINUM
VERTICAL SIGN SUPPORT



OVERHEAD SIGN SUPPORT
FULL SPAN
SINGLE CHORD TRUSS
(SIGNS 6 FEET OR LESS IN HEIGHT)



CUT SECTION B-B



TYPICAL SIGN CONNECTION FOR
SINGLE CHORD TRUSS
PLAN VIEW

TYPE I SIGN CONNECTION TO OVERHEAD SIGN SUPPORT

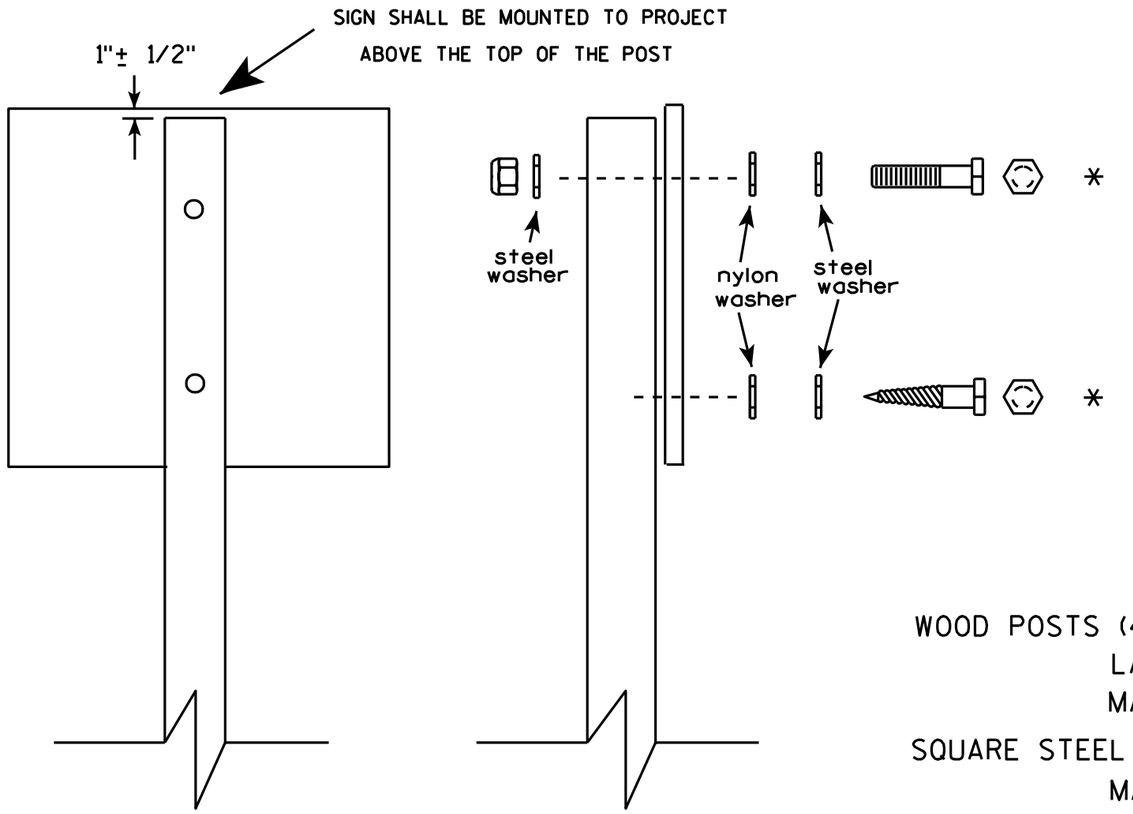
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 11/10/15 PLATE NO. A4-7.4

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A47.DGN PLOT DATE : 01-DEC-2015 17:42 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 38.916838:1.000000



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

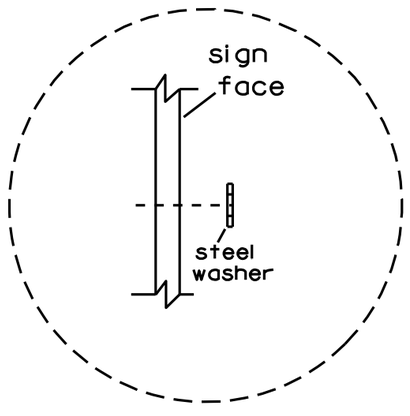
b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

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.

WOOD POSTS (4" x 4" or 4" x 6")
LAG SCREWS - 3/8" X 3"
MACHINE BOLTS - 5/16" X 6-1/2" or 7" Length w/ nuts

SQUARE STEEL POSTS (2" x 2")
MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts
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 3/23/10 PLATE NO. A4-8.7

7

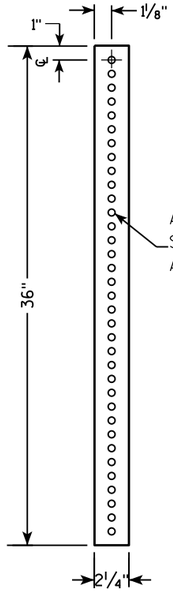
7

PROJECT NO:

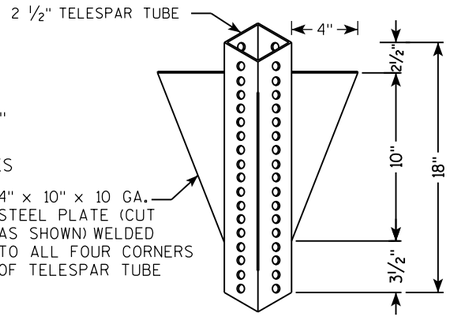
SHEET NO: 218 E

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

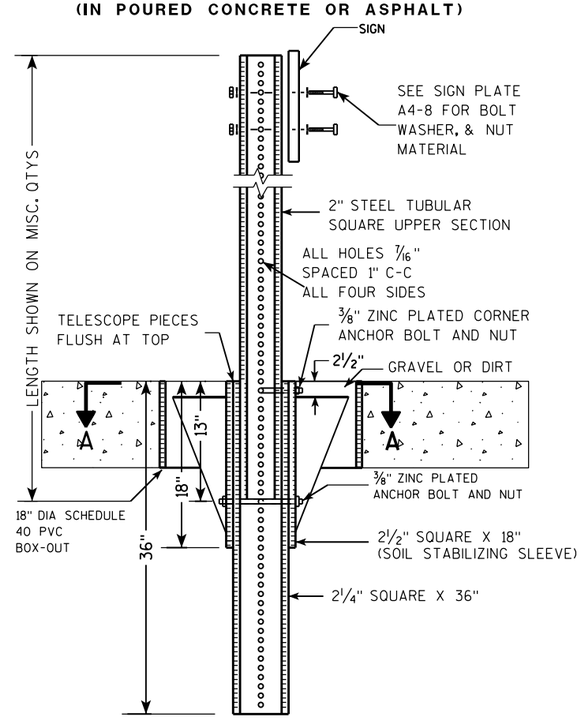
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



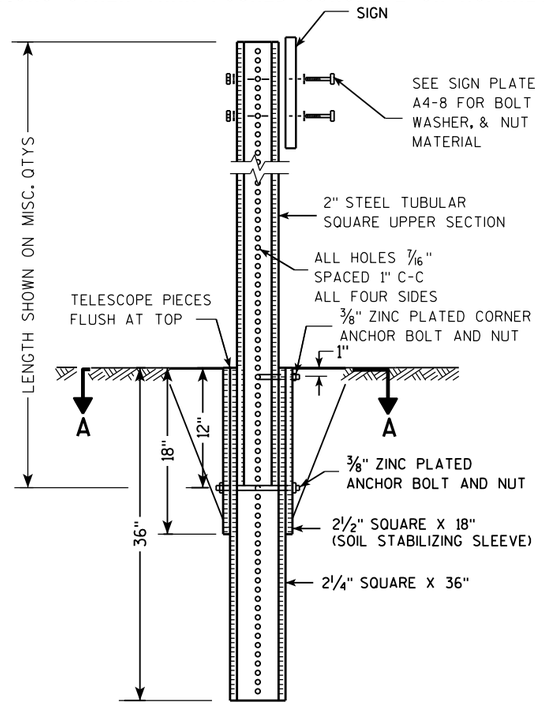
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

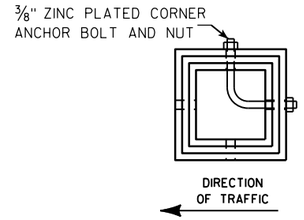


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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

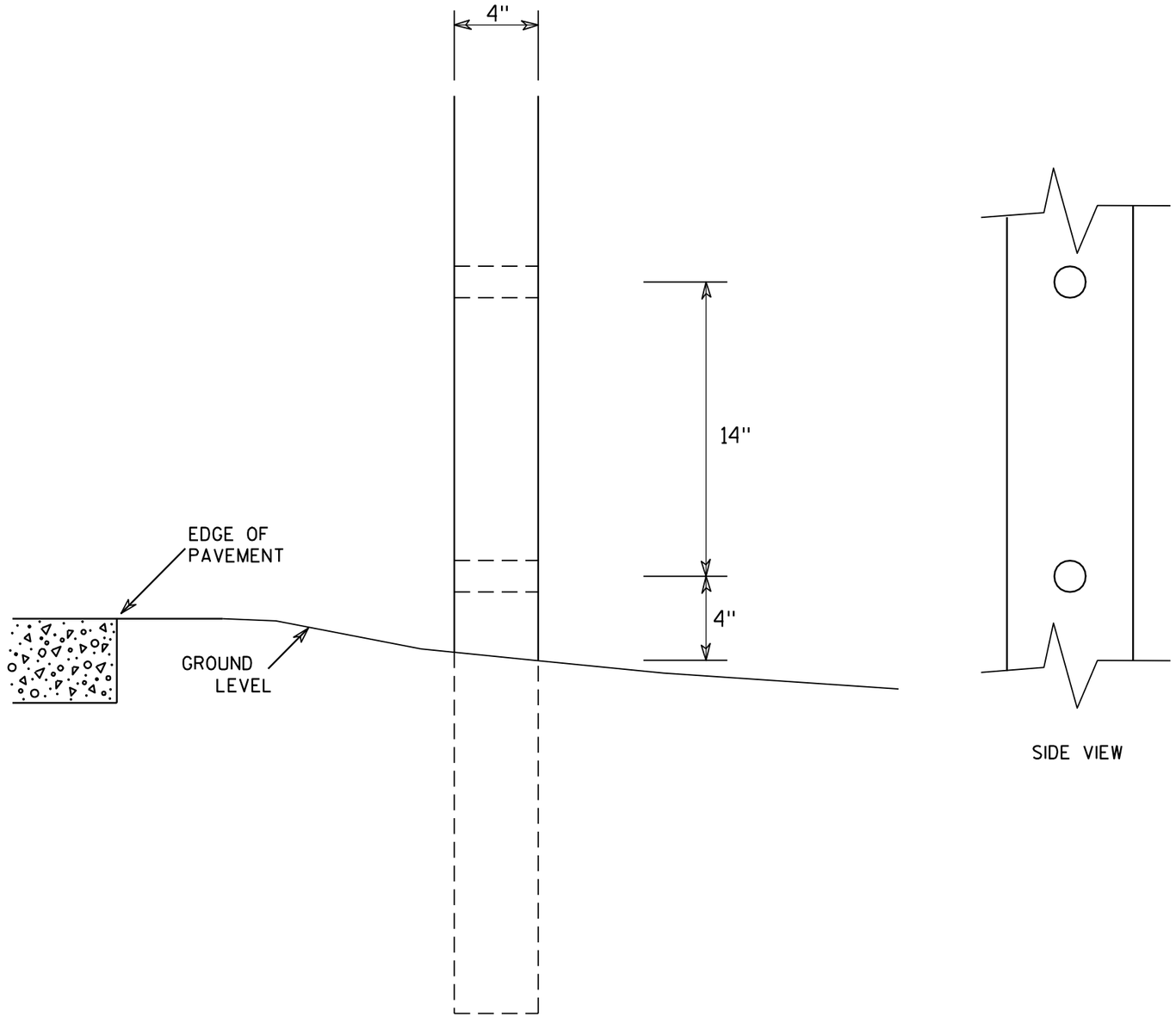
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE 219 A4-9.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A49.DGN PLOT DATE : 05-FEB-2015 17:09 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000

WISDOT/CADDS SHEET 42



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.

7

7

4 X 6 WOOD POST MODIFICATIONS

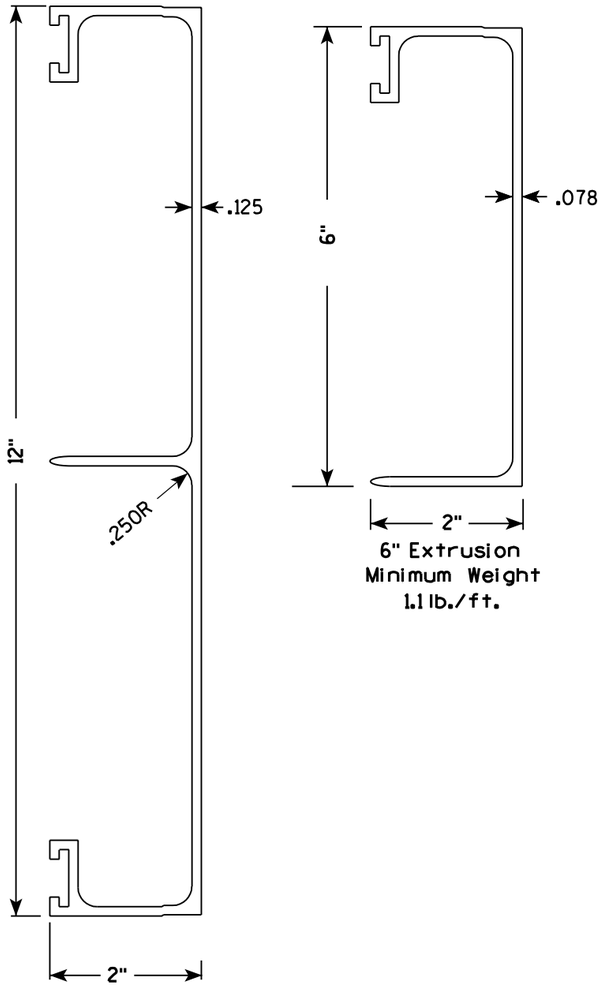
WISCONSIN DEPT OF TRANSPORTATION

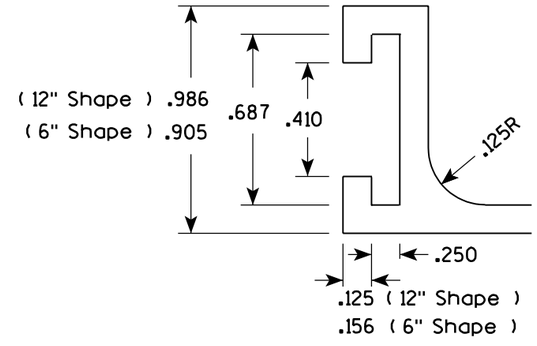
APPROVED Chester J Spang for State Traffic Engineer

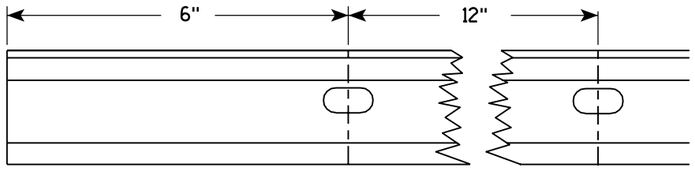
DATE 3/27/97 PLATE NO. A4-11.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 220	E

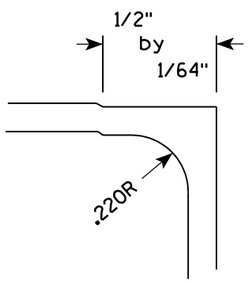
Extruded Shape







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.

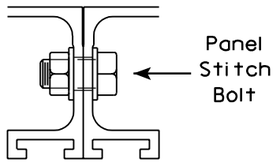


Hardware

STITCH BOLT, WASHER & NUT

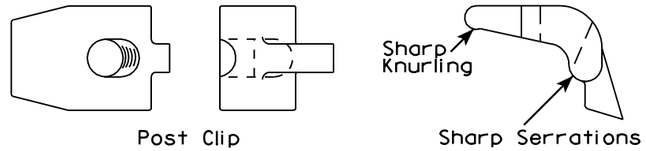
The hardware includes:

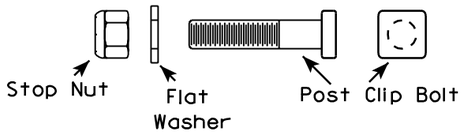
3/8 " - 16 X 3/4 " Economy Bolt 2024-T4 alloy
3/8 " - Stainless steel stop nut
3/8" X .064 Flat Washers, Alclad 2024-T4 alloy



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 Spagg
for State Traffic Engineer

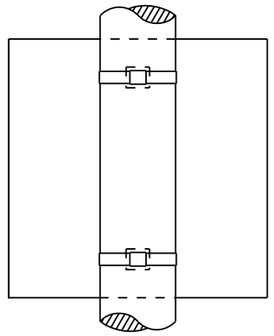
DATE 11/18/99 PLATE NO. A5-2.9

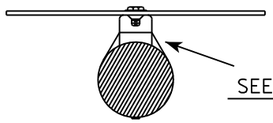
PROJECT NO:

SHEET NO: 221 E

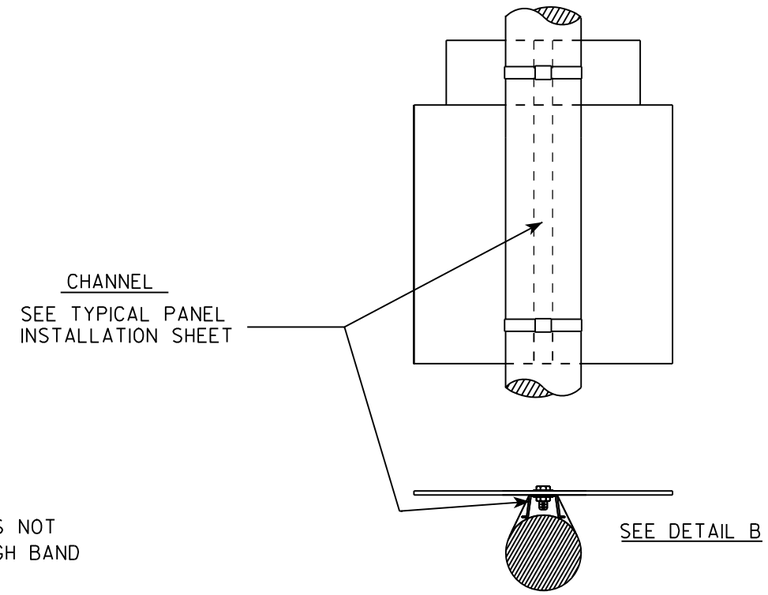
BANDING

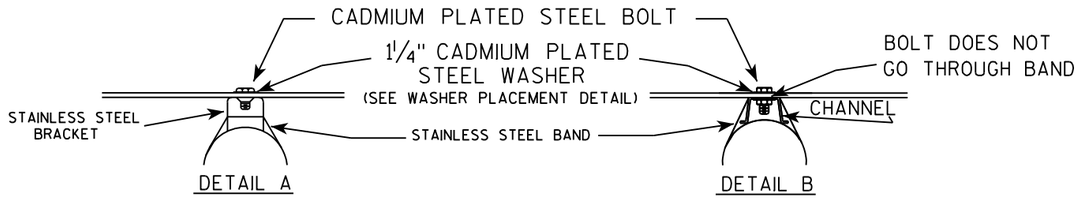
SINGLE SIGN



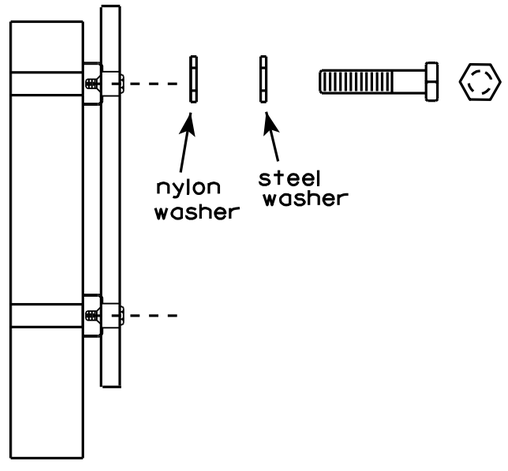


"J" ASSEMBLY





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 ¾" in width and 0.025" thickness.

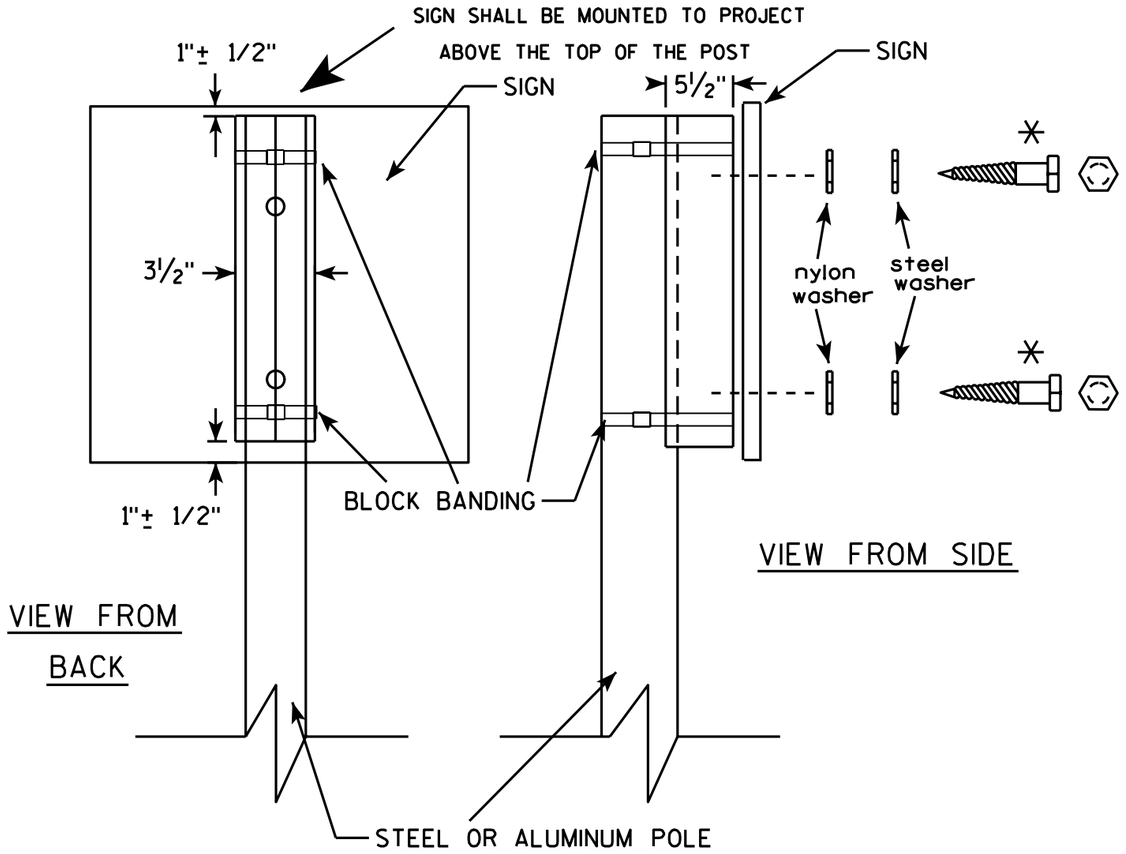
STANDARD SIGN
SIGN BANDING DETAILS

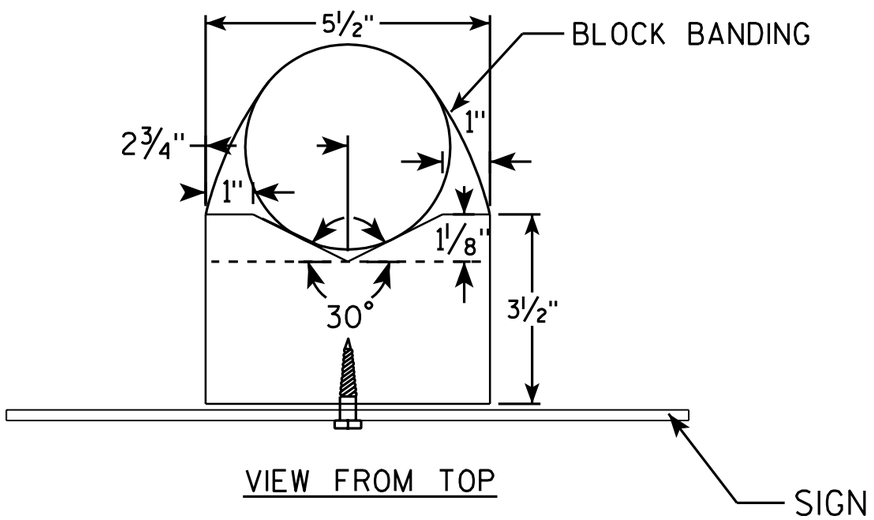
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/16/13 PLATE NO. A5-9.3

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 222	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

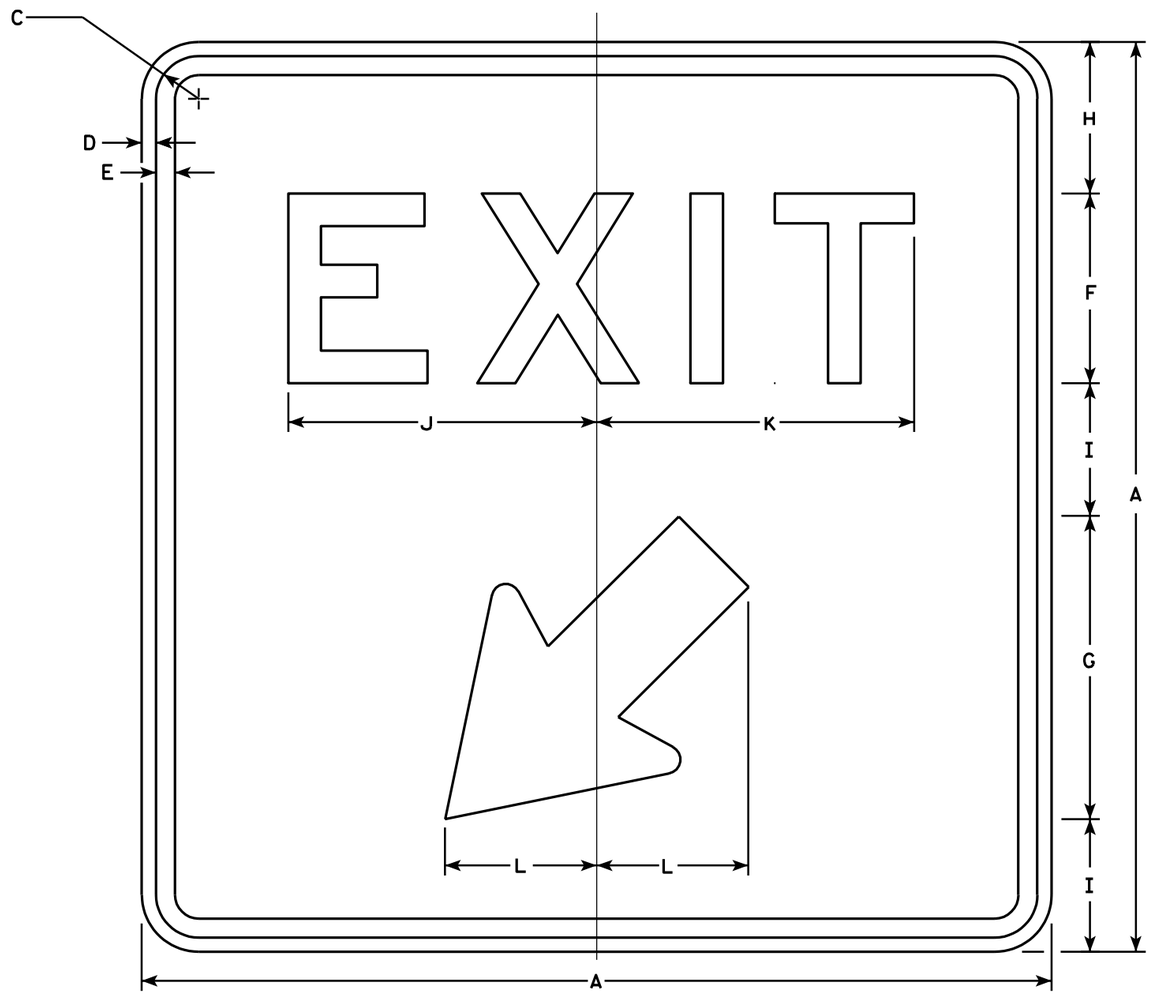
DATE 7/12/07 PLATE NO. A5-10.1

PROJECT NO:

SHEET NO: 223 E

FILE NAME : C:\Users\Projects\tr_stdplate\A510.dgn PLOT DATE : 06-AUG-2007 13:37 PLOT BY : ditjph

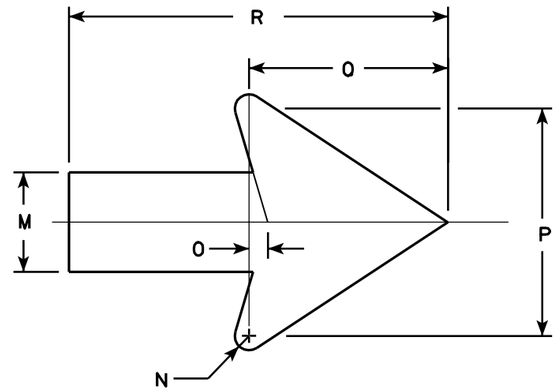
WISDOT/CADDS SHEET 42



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

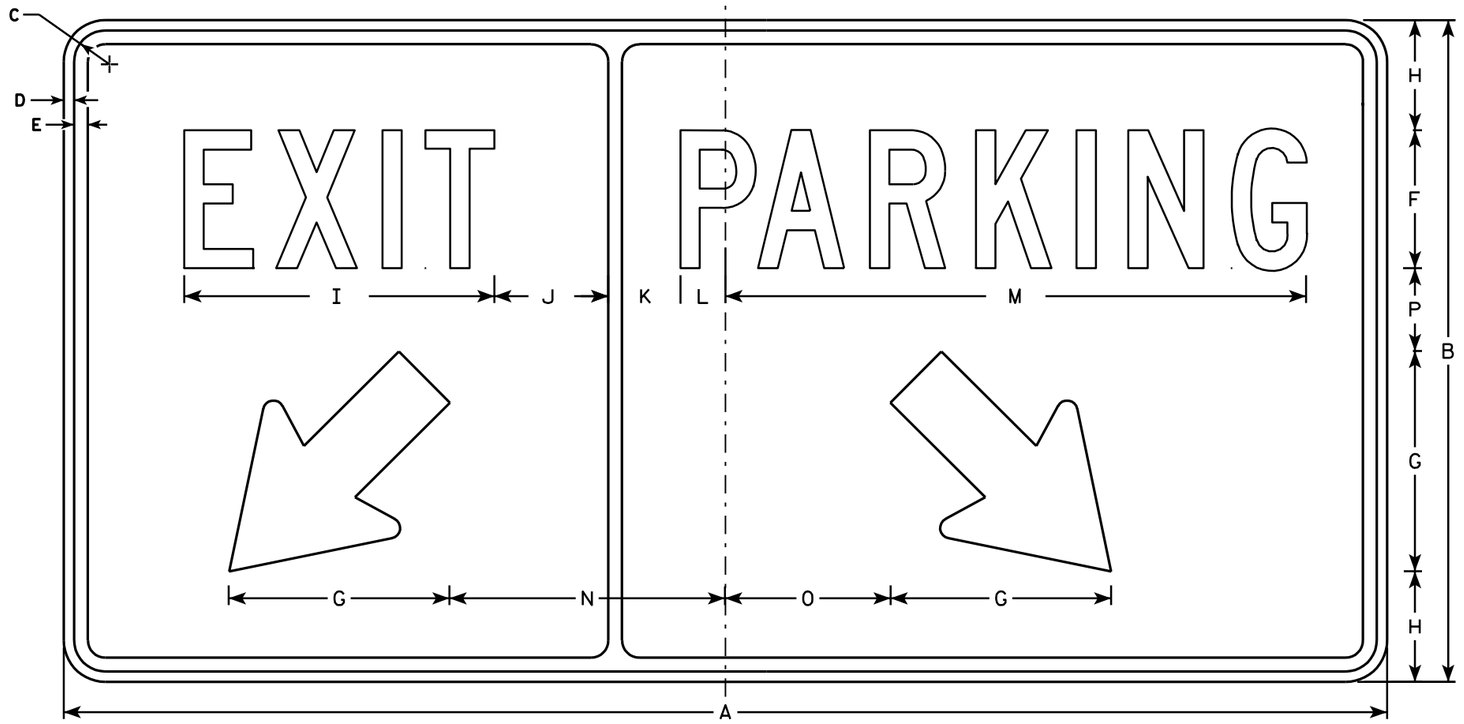
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang for State Traffic Engineer

DATE 1/18/02 PLATE NO. D52-54.7

PROJECT NO:

SHEET NO: 224 E



D52-58

NOTES

1. All Signs 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 - C
4. Corners may be squared 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.

Metric equivalent for this sign is:

SIZE	
1	
2	1200 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 m2
1																												
2	48	24	1 1/8	3/8	1/2	5	8	4	11 1/4	4 1/8	2 5/8	1 5/8	21 1/8	10	6	3											8	.72
3																												
4																												
5																												

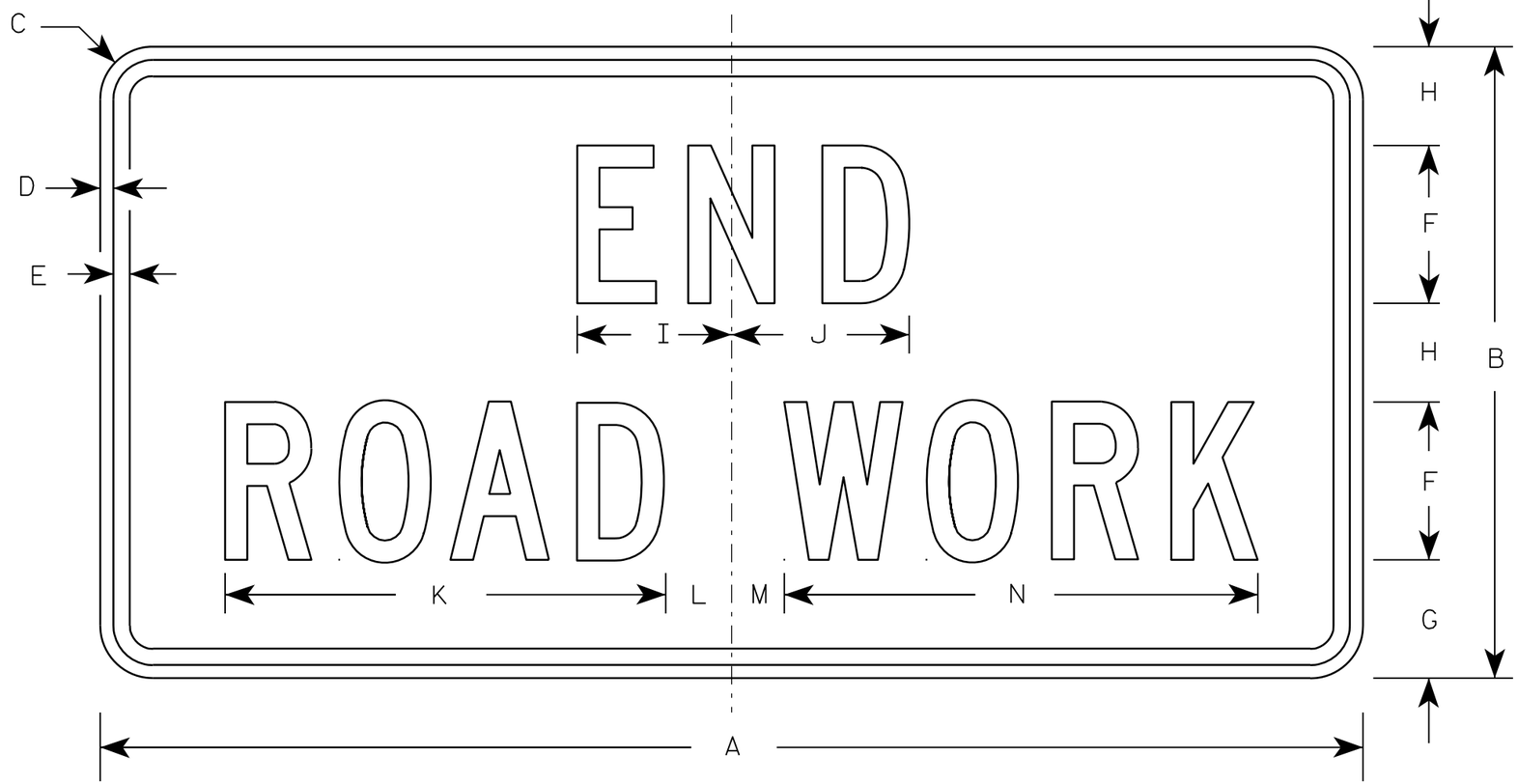
STANDARD SIGN
D52-58

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/21/06 PLATE NO. D52-58.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 225	E



G20-2A

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 - 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.

Metric equivalent for this sign is:

SIZE	
1	900 mm X 450 mm
2	1200 mm X 600 mm
3	1200 mm X 600 mm
4	1200 mm X 600 mm
5	1200 mm X 600 mm

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 m2
1	36	18	1 1/8	3/8	1/2	4	3 3/4	2 1/2	4 1/8	4 1/8	11 1/8	2	1	12 1/8													4.5	0.41
2	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
3	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
4	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
5	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72

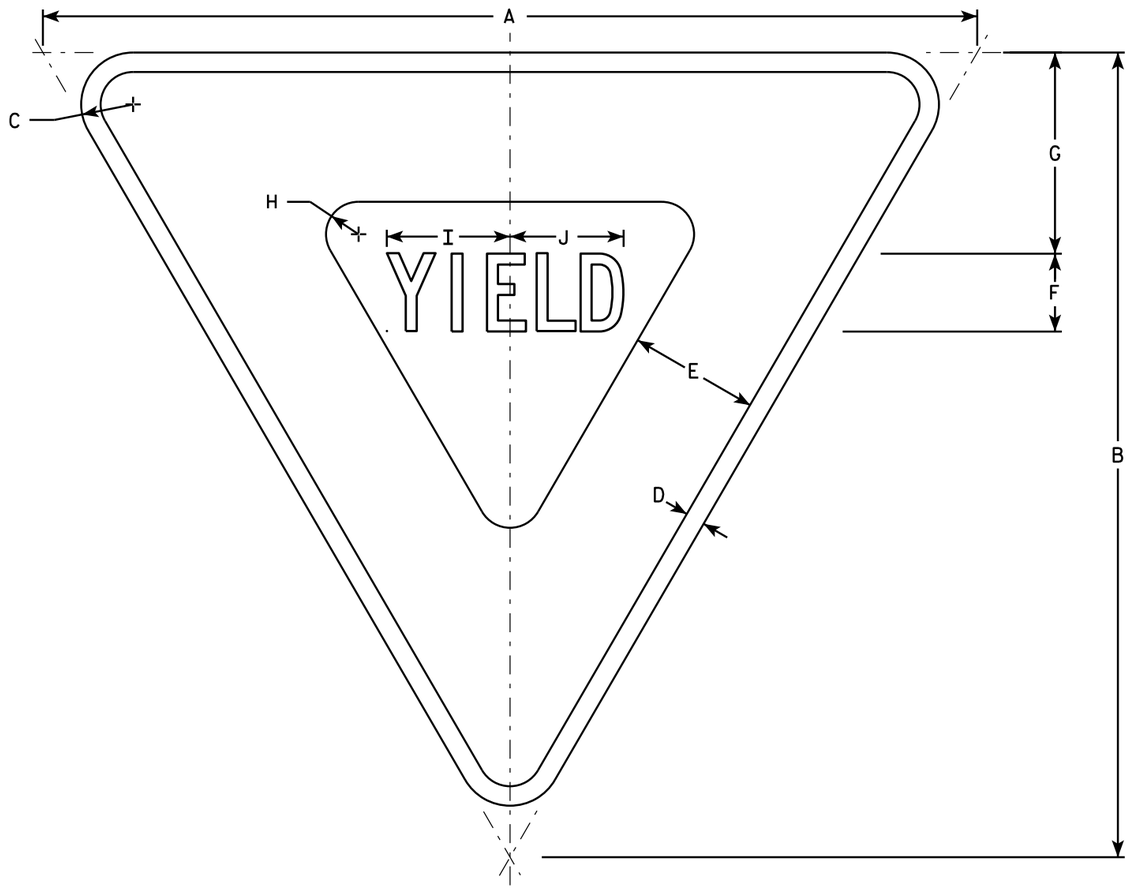
STANDARD SIGN
G20-2A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/30/09 PLATE NO. G20-2A.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 226	E



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

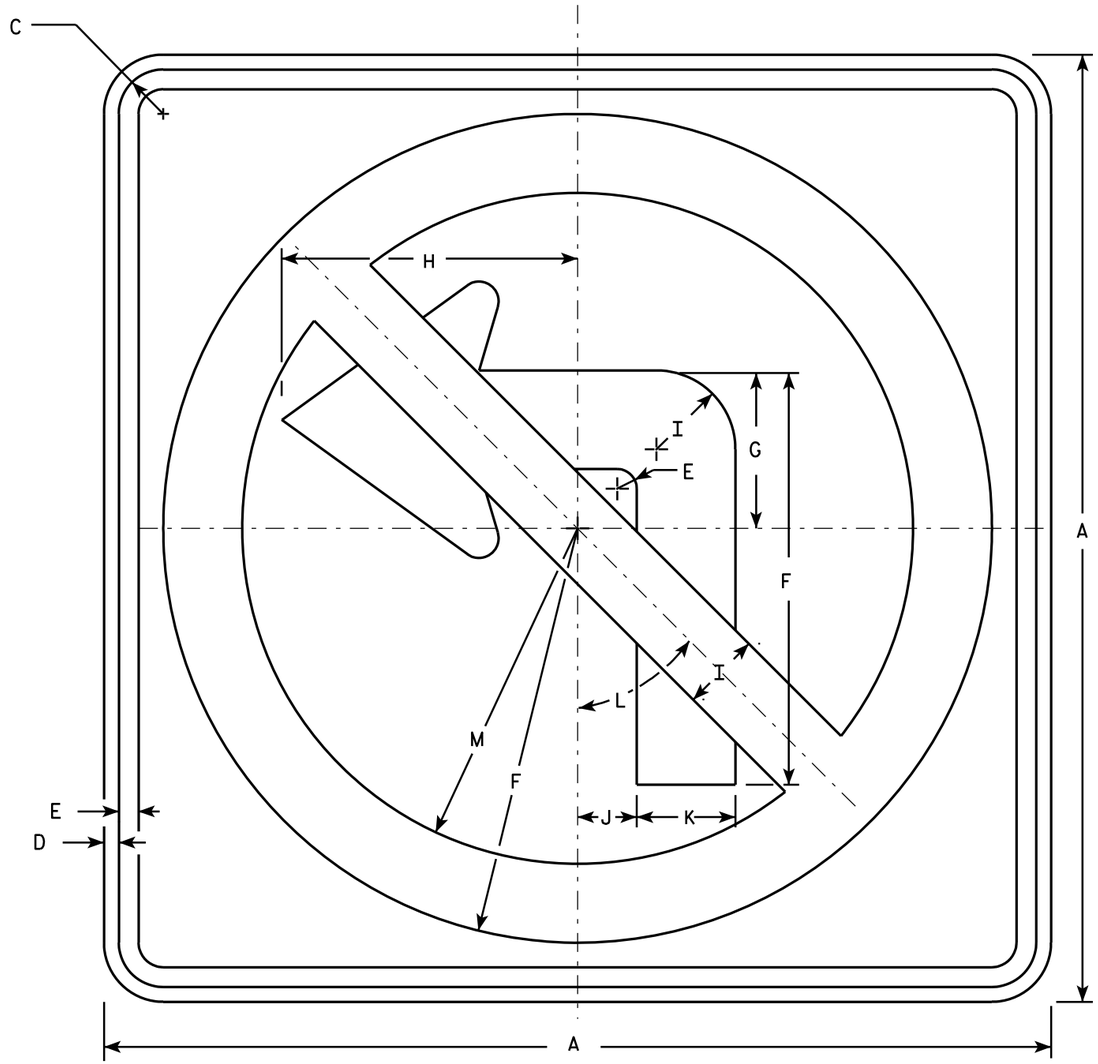
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/13/14 PLATE R1-2.12

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

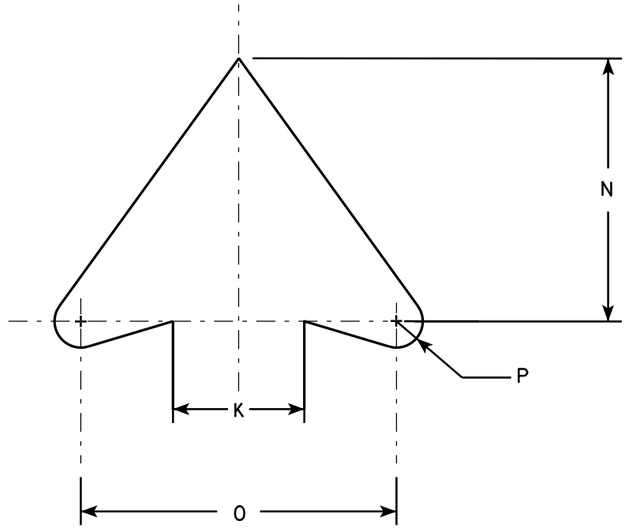
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\R12.DGN PLOT DATE : 13-OCT-2014 15:12 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 5.837526:1.000000
WISDOT/CADDS SHEET 42



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

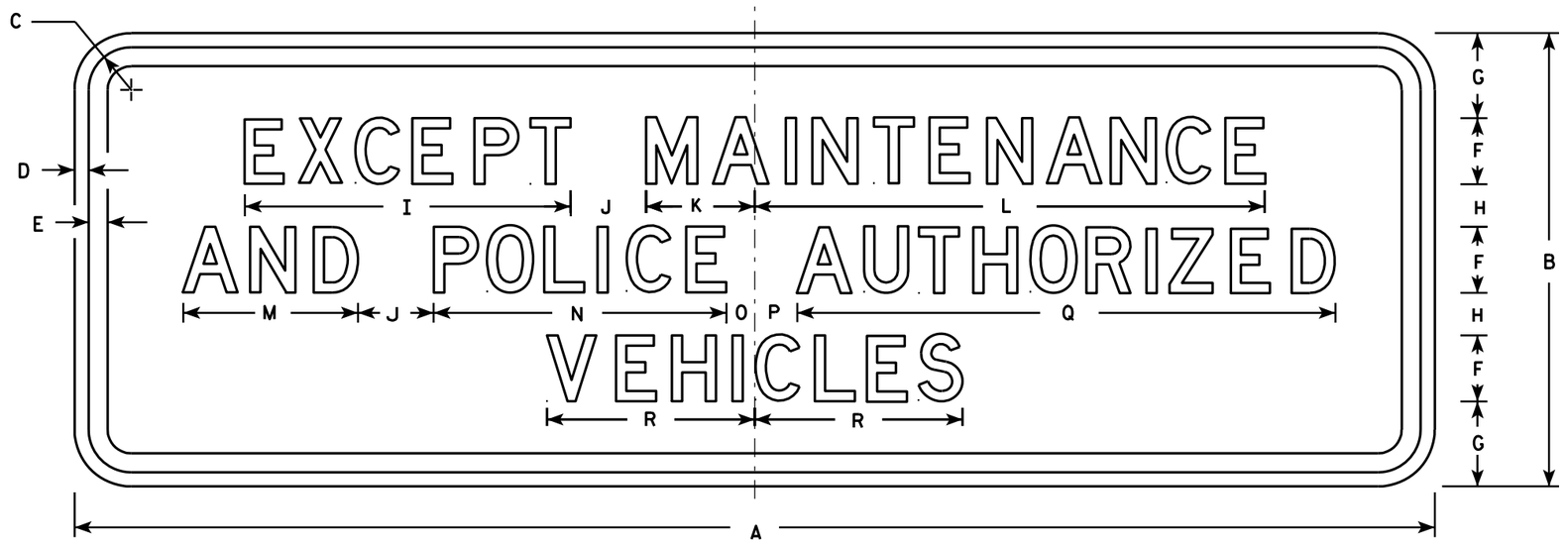
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/08/10 PLATE NO. R3-2.10

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 228	E

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.



R3-4A

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S																											
2M																											
3																											
4	36	12	1 3/8	1/2	3/8	1 3/4	2 1/4	1 1/8	8 5/8	2	2 7/8	13 1/2	4 5/8	7 3/4	3/4	1 1/8	14 1/4	5 1/2										3.0
5	36	12	1 3/8	1/2	3/8	1 3/4	2 1/4	1 1/8	8 5/8	2	2 7/8	13 1/2	4 5/8	7 3/4	3/4	1 1/8	14 1/4	5 1/2										3.0

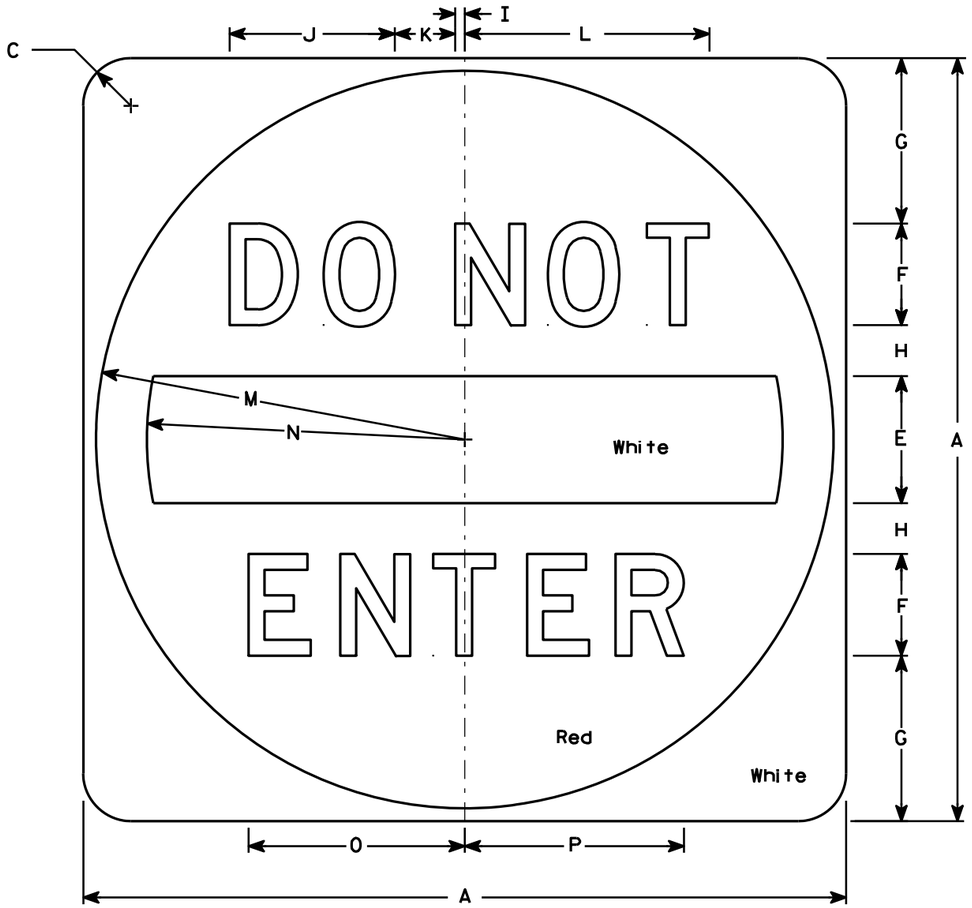
STANDARD SIGN
R3-4A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/17/2011 PLATE NO. R3-4A.10

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 229	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

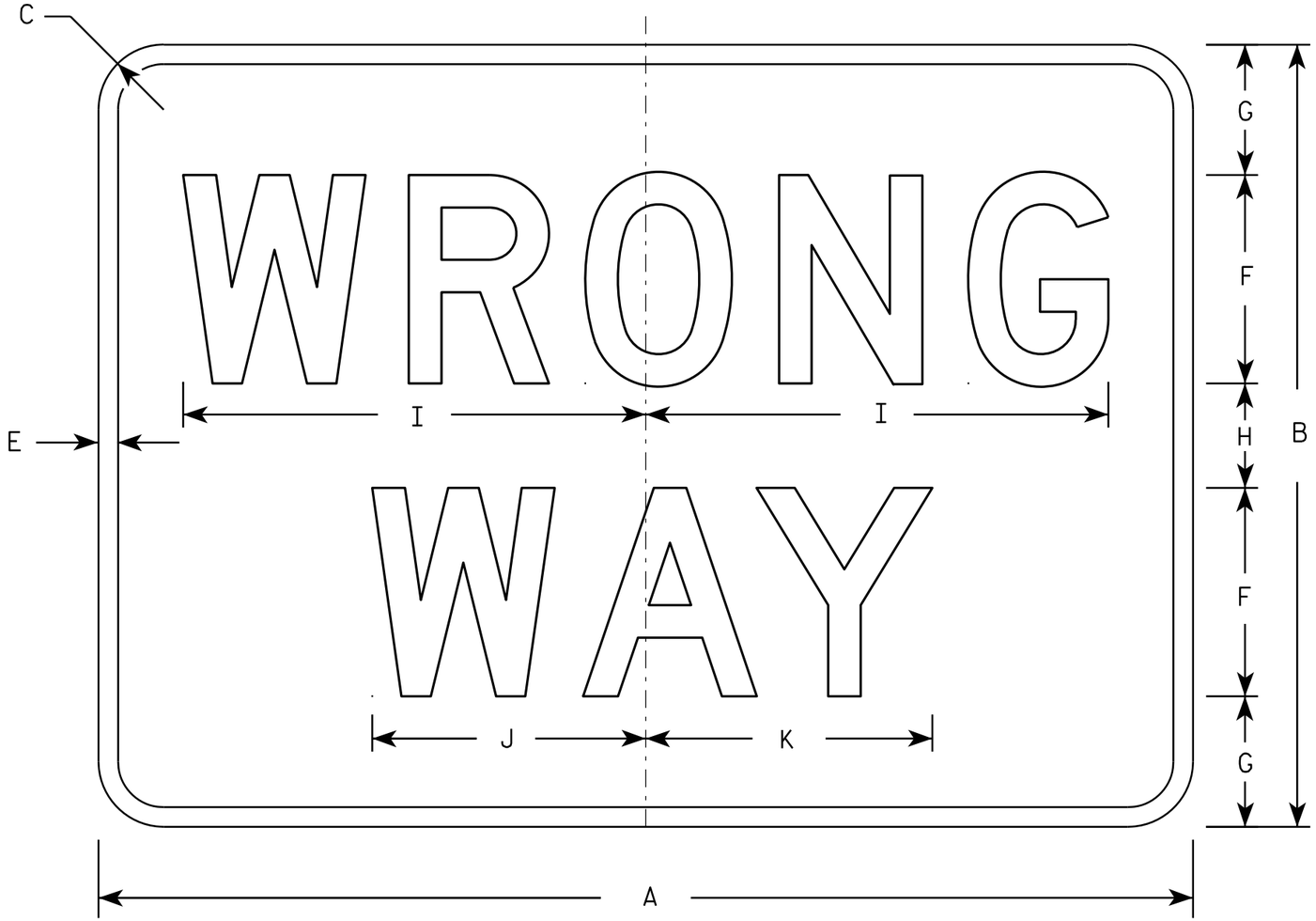
STANDARD SIGN
R5-1

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: 230 | 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

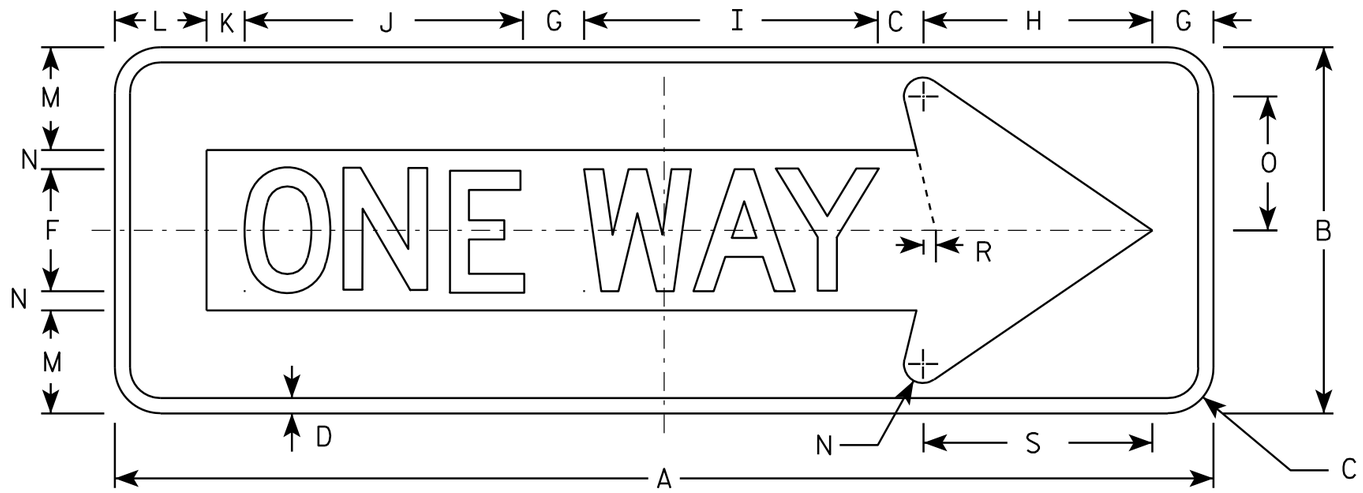
STANDARD SIGN
R5-1A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/17/10 PLATE NO. R5-1A.2

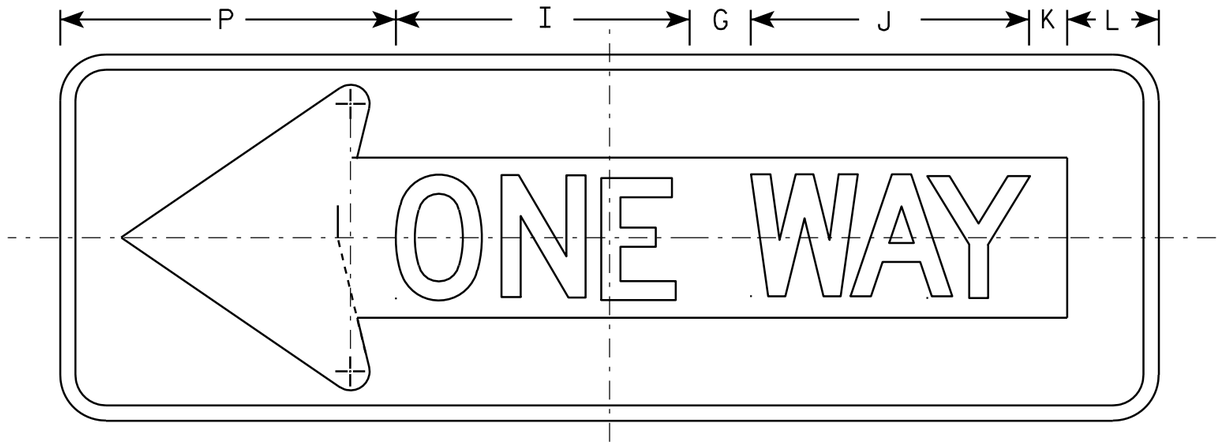
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 231	E



R6-1R

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - BLACK
   Message - BLACK LEGEND & WHITE ARROW & BORDER
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.



R6-1L

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	36	12	1 ½	½		4	2	7 ½	9 ⅝	9 ⅛	1 ¼	3	3 ⅜	⅝	4 ⅜	11		⅜	7 ½								3.0
2M	54	18	2 ¼	¾		6	3	11 ¼	14 ½	13 ⅝	1 ⅞	4 ½	5	1	6 ½	16 ½		⅝	11 ¼								6.75
3	54	18	2 ¼	¾		6	3	11 ¼	14 ½	13 ⅝	1 ⅞	4 ½	5	1	6 ½	16 ½		⅝	11 ¼								6.75
4	54	18	2 ¼	¾		6	3	11 ¼	14 ½	13 ⅝	1 ⅞	4 ½	5	1	6 ½	16 ½		⅝	11 ¼								6.75
5																											

STANDARD SIGN
R6-1 L & R

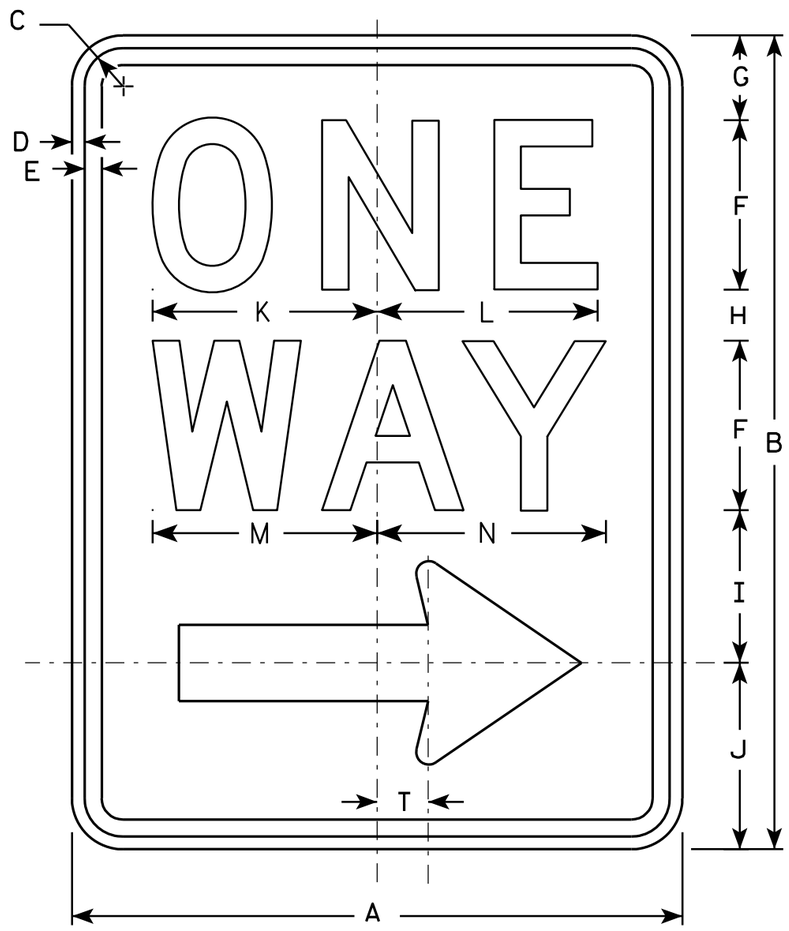
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/17/10 PLATE NO. R6-1.2

PROJECT NO:

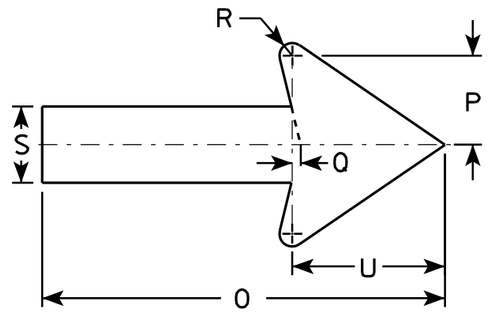
SHEET NO: 232 E



R6-2R

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. R6-2L same as R6-2R except arrow points to the left.



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
1	18	24	1 1/8	3/8	1/2	5	2 1/2	1 1/2	4 1/2	5 1/2	6 5/8	6 1/2	6 5/8	6 3/4	11 7/8	2 5/8	1/4	3/8	2 1/4	1 1/2	4 1/2					
2S	24	30	1 1/8	3/8	1/2	6	3	2 1/2	5 1/2	7	8 1/8	8 1/8	8 1/2	8 5/8	16	3 1/2	3/8	1/2	3	2	6					
2M	30	36	1 3/8	1/2	5/8	8	2 1/2	2 5/8	6 7/8	8	10 1/2	10 1/2	11 1/4	11 1/4	20	4 3/8	1/2	5/8	3 3/4	2 1/2	7 1/2					
3	36	48	1 7/8	1/2	5/8	10	5 1/4	3 1/4	9	10 1/2	12 3/4	12 3/4	13 1/4	13 1/2	24	5 5/8	1/2	3/4	4 3/4	3	9					
4	36	48	1 7/8	1/2	5/8	10	5 1/4	3 1/4	9	10 1/2	12 3/4	12 3/4	13 1/4	13 1/2	24	5 5/8	1/2	3/4	4 3/4	3	9					
5																										

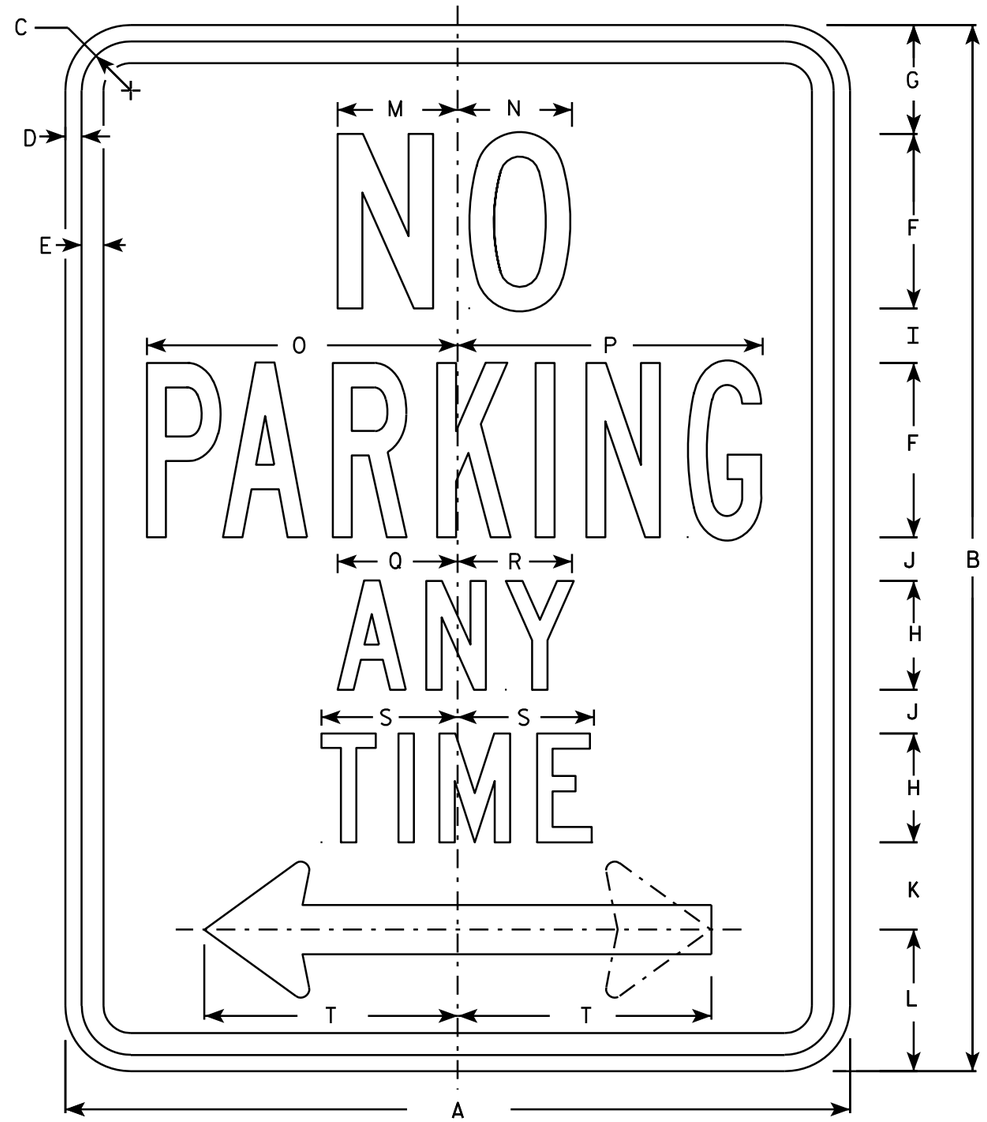
STANDARD SIGN
R6-2 R&L

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/2/10 PLATE NO. R6-2.8

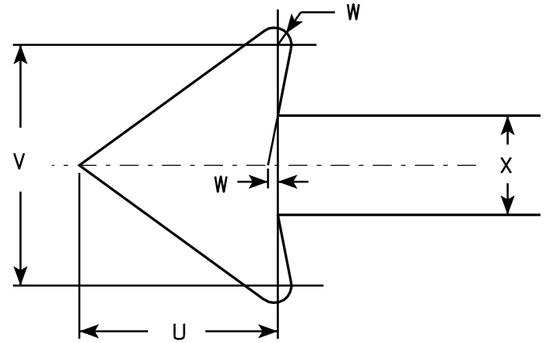
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 233	E



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																											

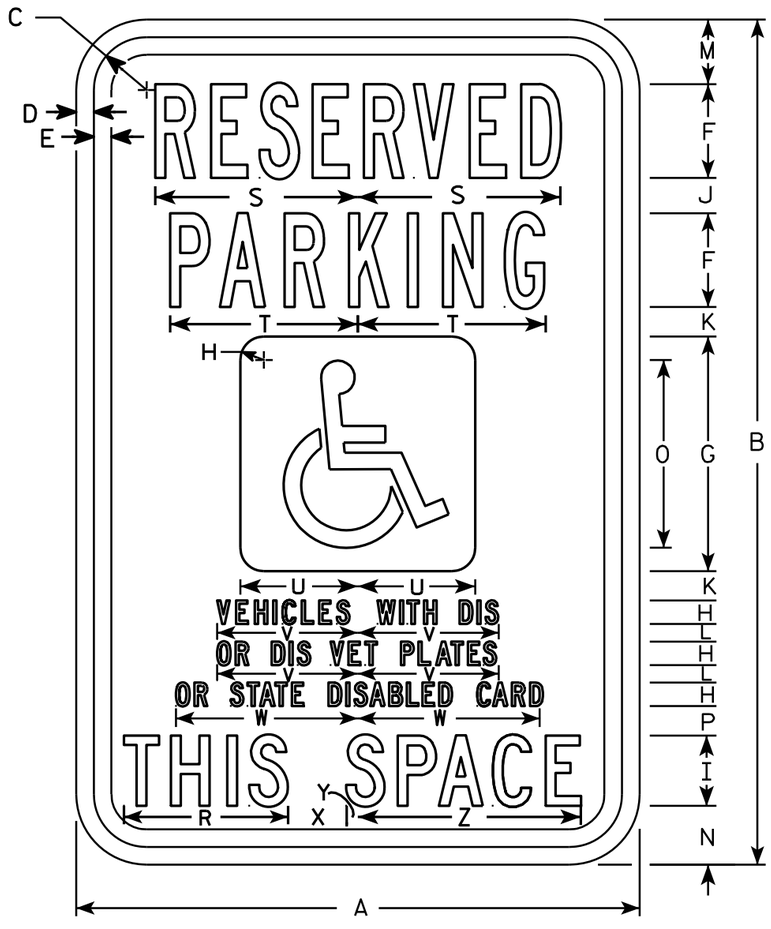
STANDARD SIGN
R7-1

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: 234	E



R7-8A

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Sign is white Type H Reflective; paraplegic background is blue.
   Message - Legend and border are green; paraplegic symbol is white
3. Message Series - Lines 1 & 2 are Series B
   Lines 3, 4, 5 & 6 are 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																											
2S	12	18	1 1/8	3/8	3/8	2	5	1/2	1 1/2	3/4	5/8	3/8	1 3/8	1 1/4	4	5/8		3 1/2	4 3/8	4	2 1/2	3	3 7/8	1 1/4	1/4	4 3/4	1.5
2M	18	24	1 1/8	3/8	1/2	3	6	3/4	2	7/8	5/8	1/2	1 7/8	2	5	3/4		4 5/8	6 1/2	5 3/8	3	4 1/2	5 7/8	1 1/2	1/4	6 3/8	3.0
3	18	24	1 1/8	3/8	1/2	3	6	3/4	2	7/8	5/8	1/2	1 7/8	2	5	3/4		4 5/8	6 1/2	5 3/8	3	4 1/2	5 7/8	1 1/2	1/4	6 3/8	3.0
4																											
5																											

STANDARD SIGN
R7-8A

WISCONSIN DEPT OF TRANSPORTATION

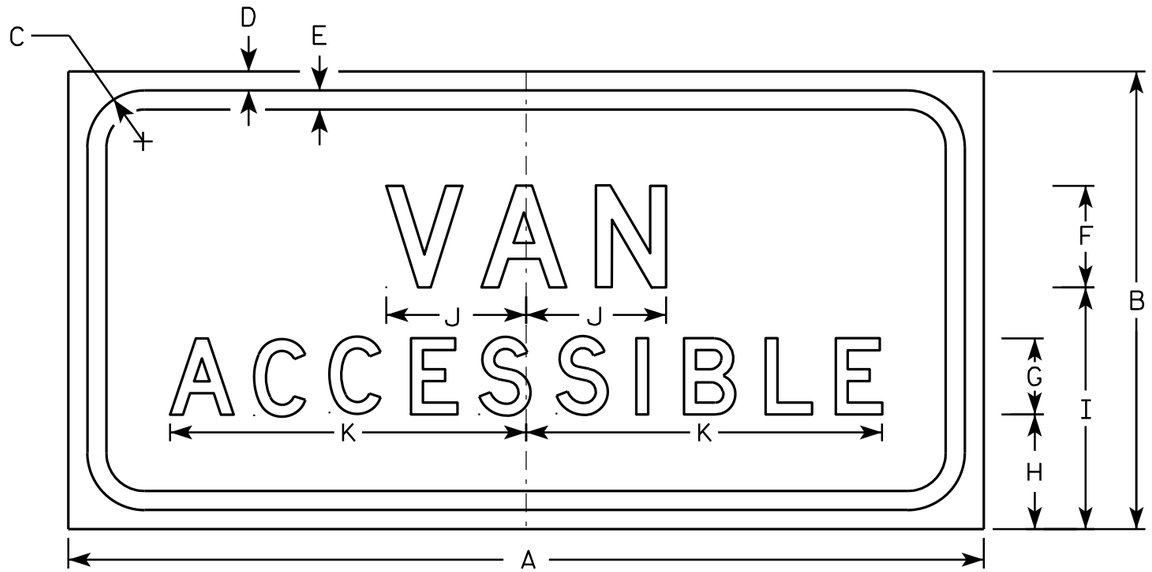
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/25/2011 PLATE NO. R7-8A.6

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 235 | E

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 - Green - Type H Reflective
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.



R7-8V

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	12	6	1 1/8	3/8	3/8	1 1/2	1	1 5/8	3 1/2	2	4 1/4																0.50
2M	18	9	1 1/8	3/8	3/8	2	1 1/2	2 1/4	4 3/4	2 3/4	7																0.75
3	18	9	1 1/8	3/8	3/8	2	1 1/2	2 1/4	4 3/4	2 3/4	7																0.75
4																											
5																											

STANDARD SIGN
R7-8V

WISCONSIN DEPT OF TRANSPORTATION

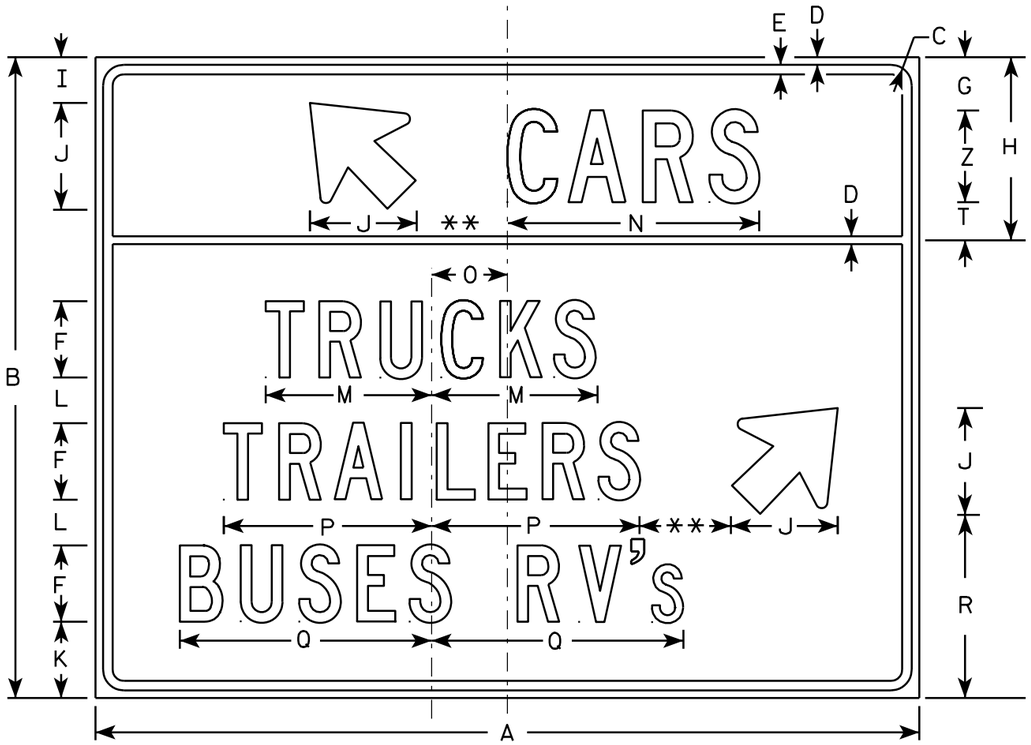
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/31/2011 PLATE NO. R7-8V.5

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 236 | E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R78V.DGN PLOT DATE : 31-MAR-2011 11:13 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 2.979520:1.000000

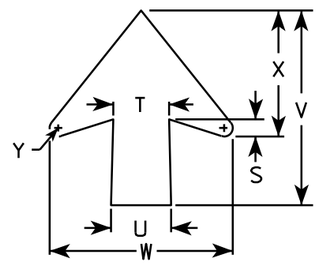
WISDOT/CADDS SHEET 42



R8-74

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 - 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. Substitute appropriate arrow configuration and/or placement in relationship to the message and optically adjust spacing to achieve proper balance.
6. The word "CARS" with letter height 10" is 5 3/8" off center to the left.



** See Note 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.
1																											
2S	54	42	1 3/8	1/2	5/8	5	3 1/2	12	3	7	5	3	10 7/8	16 1/2	5	13 5/8	16 1/2	12	3/4	2 1/2	2 5/8	8 1/2	8	5 1/2	3/8	6	15.75
2M	54	42	1 3/8	1/2	5/8	5	3 1/2	12	3	7	5	3	10 7/8	16 1/2	5	13 5/8	16 1/2	12	3/4	2 1/2	2 5/8	8 1/2	8	5 1/2	3/8	6	15.75
3	72	54	2 1/4	3/4	1	8	3 5/8	16	4	9 3/8	4	3 5/8	16 1/2	22 1/4	6 5/8	21	25 3/8	15 3/4	7/8	3 1/2	3	9 5/8	9	6 1/4	3/8	10	27.00
4	72	54	2 1/4	3/4	1	8	3 5/8	16	4	9 3/8	4	3 5/8	16 1/2	22 1/4	6 5/8	21	25 3/8	15 3/4	7/8	3 1/2	3	9 5/8	9	6 1/4	3/8	10	27.00
5	72	54	2 1/4	3/4	1	8	3 5/8	16	4	9 3/8	4	3 5/8	16 1/2	22 1/4	6 5/8	21	25 3/8	15 3/4	7/8	3 1/2	3	9 5/8	9	6 1/4	3/8	10	27.00

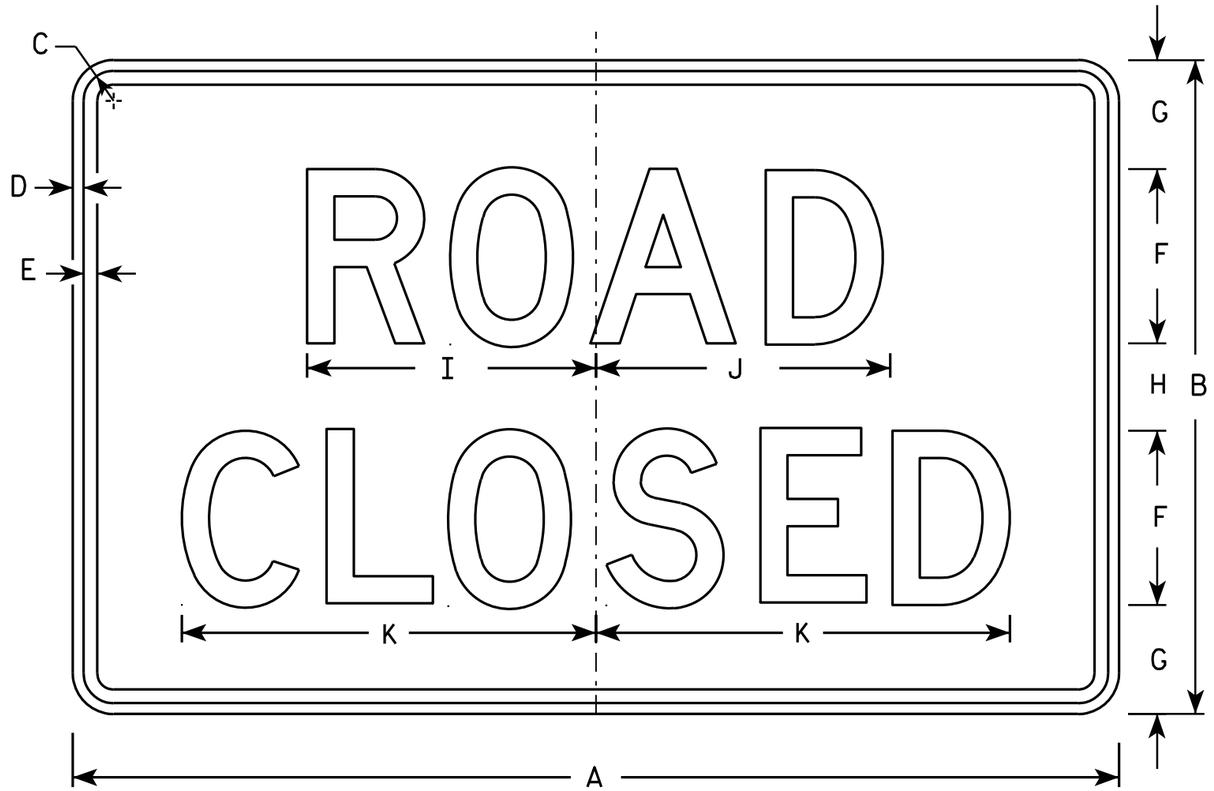
STANDARD SIGN
R8-74

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/1/2011 PLATE NO. R8-74.8

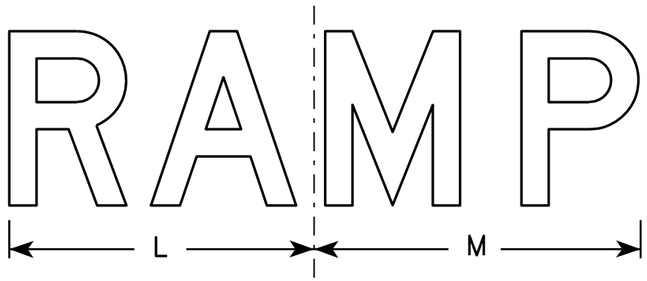
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 237	E



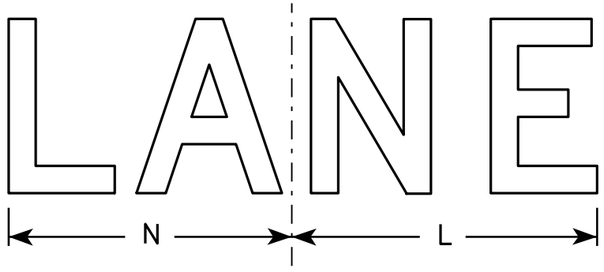
R11-2

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: 238 | E



R55-51

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 - B
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	18		1 1/2	3/8	3/8	4	3	2	1 1/2	2	2 1/8	6 7/8	7	7 1/4													2.25
2M	18		1 1/2	3/8	3/8	4	3	2	1 1/2	2	2 1/8	6 7/8	7	7 1/4													2.25
3																											
4																											
5																											

STANDARD SIGN
R55-51

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/30/11 PLATE NO. R55-51.5

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 239	E



R55-61

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 - 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 and 2 are Series B.
   Lines 3, 4, 5 and 6 are Series D.

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	18	1 1/8	3/8	1/2	2	5/8	1 3/4	7/8	3 3/4	1 3/8	4 3/8		8 1/4	3	1	10 5/8	5 1/2	7 1/2	9 3/8	3/4	6 5/8	4 7/8	7 1/4	8 1/2		3.0
2S	24	18	1 1/8	3/8	1/2	2	5/8	1 3/4	7/8	3 3/4	1 3/8	4 3/8		8 1/4	3	1	10 5/8	5 1/2	7 1/2	9 3/8	3/4	6 5/8	4 7/8	7 1/4	8 1/2		3.0
2M	24	18	1 1/8	3/8	1/2	2	5/8	1 3/4	7/8	3 3/4	1 3/8	4 3/8		8 1/4	3	1	10 5/8	5 1/2	7 1/2	9 3/8	3/4	6 5/8	4 7/8	7 1/4	8 1/2		3.0
3																											
4																											
5																											

STANDARD SIGN
R55-61

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer
DATE 3/30/11 PLATE NO. R55-61.6

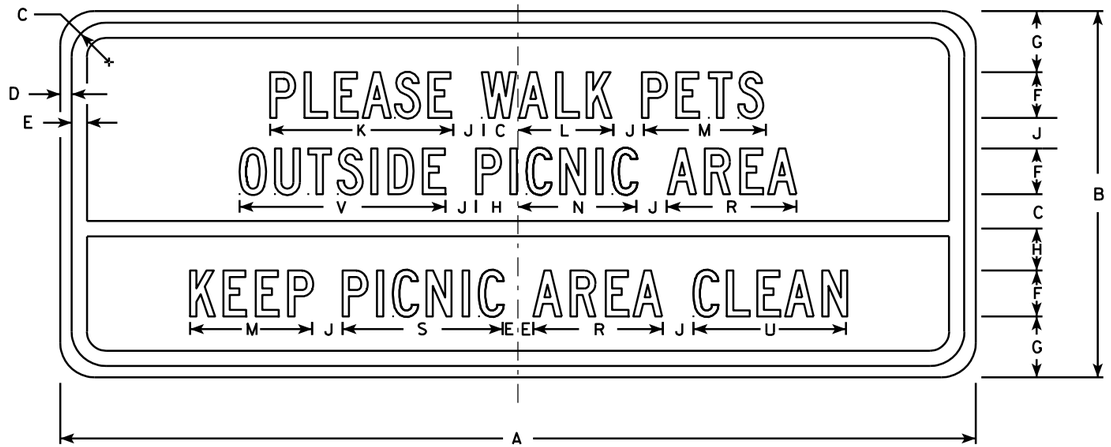
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 240	E



R55-62A



R55-62B



R55-62C

NOTES

1. Signs are 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 - 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	30	12	1 1/8	3/8	1/2	1 1/2	2	1 3/8		1	6	3 1/8	4	3 7/8	4 1/8	5/8	6 7/8	4 1/4	5 1/4		5	6 3/4					2.50
2S	30	12	1 1/8	3/8	1/2	1 1/2	2	1 3/8		1	6	3 1/8	4	3 7/8	4 1/8	5/8	6 7/8	4 1/4	5 1/4		5	6 3/4					2.50
2M	30	12	1 1/8	3/8	1/2	1 1/2	2	1 3/8		1	6	3 1/8	4	3 7/8	4 1/8	5/8	6 7/8	4 1/4	5 1/4		5	6 3/4					2.50
3																											
4																											
5																											

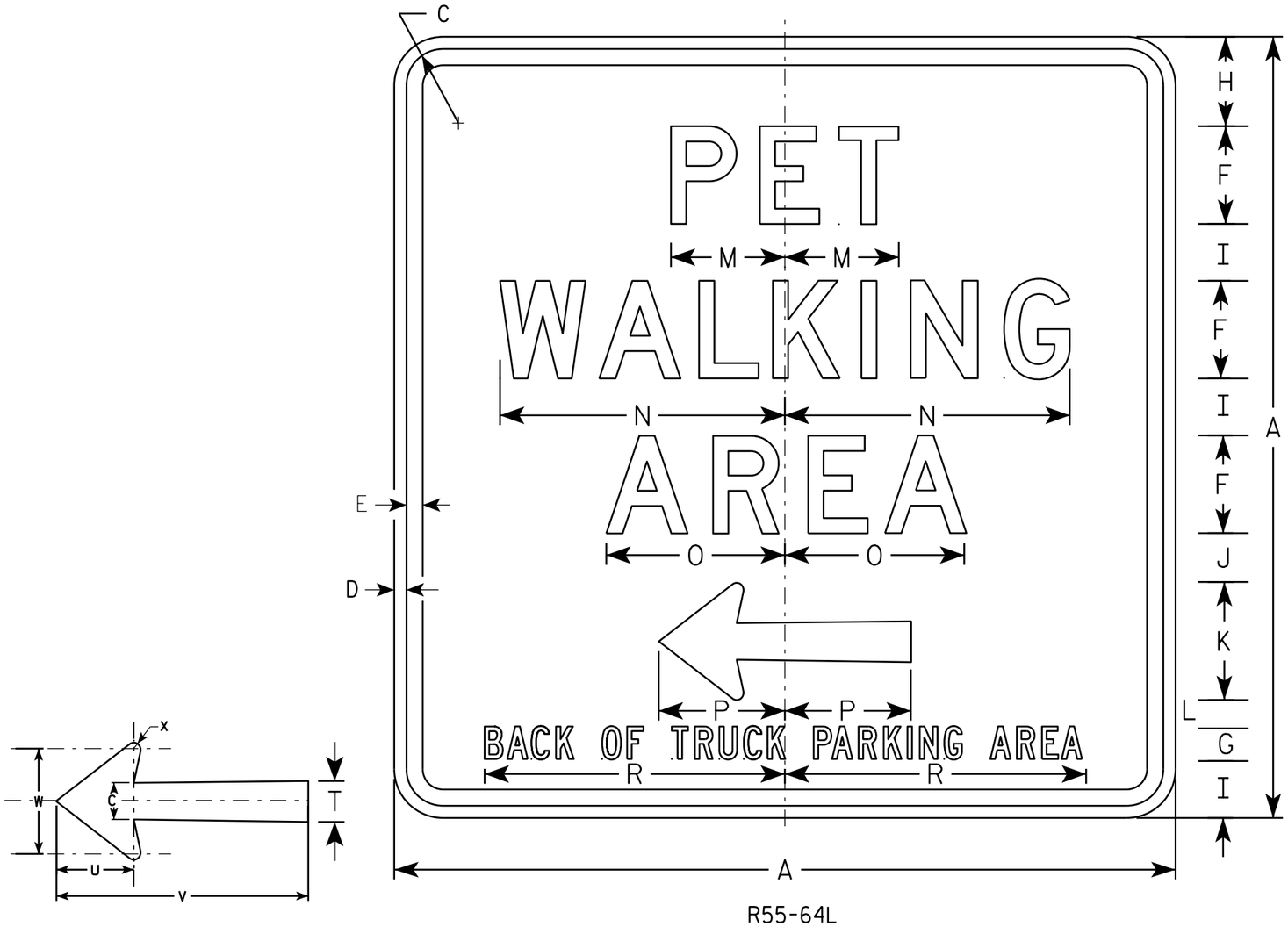
STANDARD SIGN
R55-62A, B & C

WISCONSIN DEPT OF TRANSPORTATION

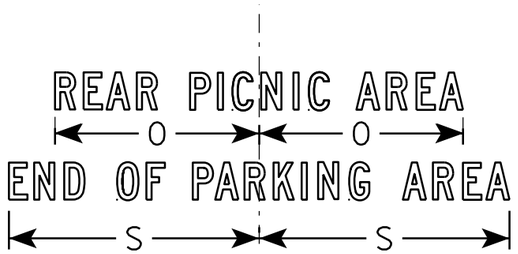
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/30/11 PLATE NO. R55-62.5

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 241 | E



R55-64L



NOTES

1. Sign is TYPE II - Type H Reflective
2. Color:
   Background - White
   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. Lines 1, 2 & 3 are Series D
   Bottom line is Series C
6. Substitute appropriate message.
7. R55-64R same as R55-64L except arrow is reversed.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24		1 1/8	3/8	1/2	3	1	2 3/4	1 3/4	1 1/2	3 5/8	7/8	3 1/2	8 3/4	5 1/2	3 7/8		9 1/4	6 3/4	1 1/4	2 3/8	7 3/4	3 1/4	1/4			4.0
2M	24		1 1/8	3/8	1/2	3	1	2 3/4	1 3/4	1 1/2	3 5/8	7/8	3 1/2	8 3/4	5 1/2	3 7/8		9 1/4	6 3/4	1 1/4	2 3/8	7 3/4	3 1/4	1/4			4.0
3																											
4																											
5																											

STANDARD SIGN
R55-64

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/13/14 PLATE NO. R55-64.5

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\R5564.DGN PLOT DATE : 13-NOV-2014 09:52 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 4.086271:1.000000
WISDOT/CADDS SHEET 42



R55-65

NOTES

1. Sign is Type II - Type H Reflective
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	24		1 1/8	3/8	1/2	3	4	5	3 1/2	8 3/4	5 1/2																4.0
2M	24		1 1/8	3/8	1/2	3	4	5	3 1/2	8 3/4	5 1/2																4.0
3																											
4																											
5																											

STANDARD SIGN
R55-65

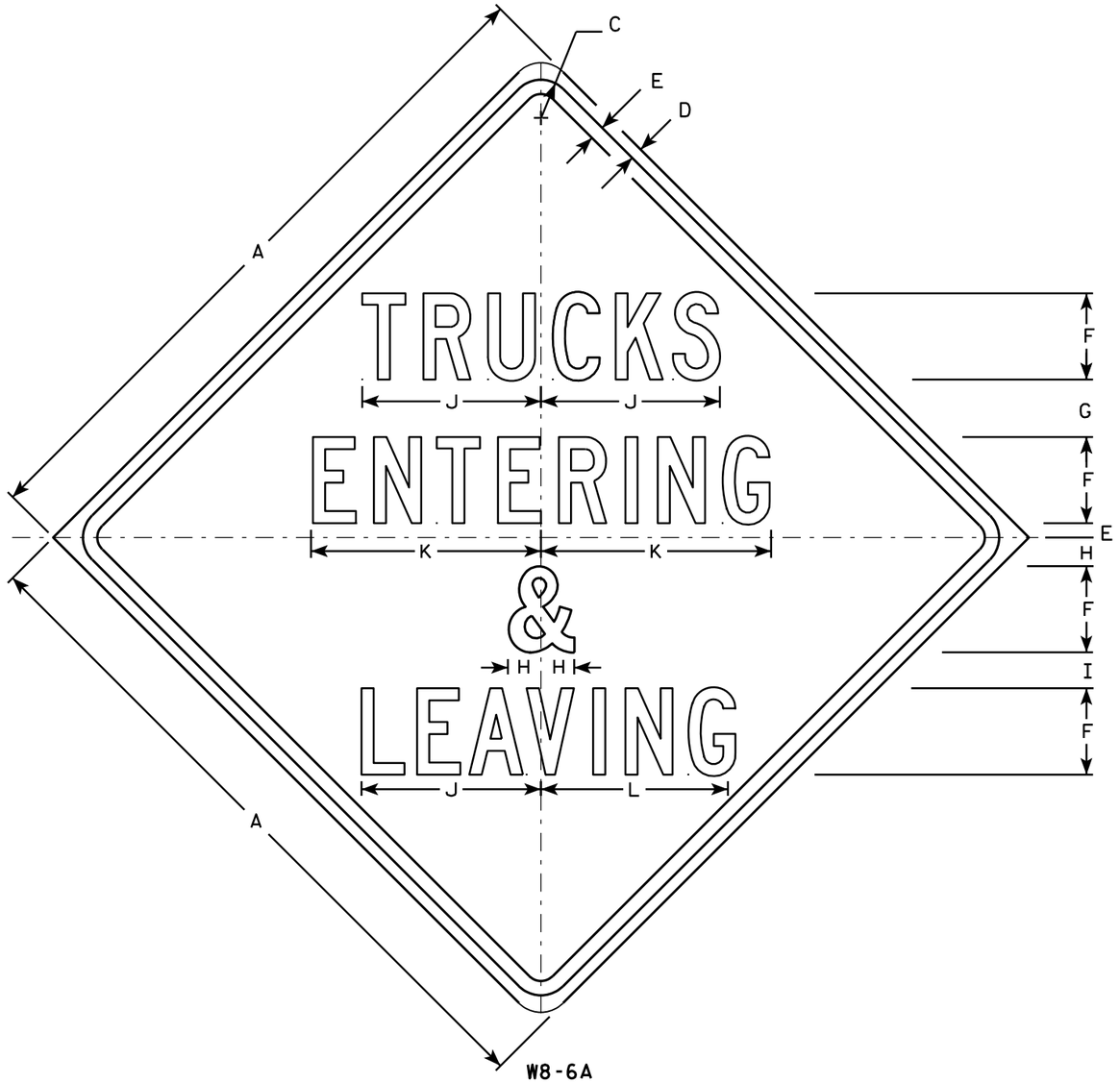
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/27/14 PLATE NO. R55-65.5

PROJECT NO: | HWY: | COUNTY: | | SHEET NO: E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\R5565.DGN PLOT DATE : 27-OCT-2014 09:13 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 3.839926:1.000000
WISDOT/CADDS SHEET 42



W8-6A

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 - 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	4 1/2	3	1 1/2	1 7/8	9 3/8	12	9 3/4															9
2S	48		2 1/4	3/4	1	6	4	2	2 1/2	12 1/2	16	13															16
2M	48		2 1/4	3/4	1	6	4	2	2 1/2	12 1/2	16	13															16
3	48		2 1/4	3/4	1	6	4	2	2 1/2	12 1/2	16	13															16
4	48		2 1/4	3/4	1	6	4	2	2 1/2	12 1/2	16	13															16
5	48		2 1/4	3/4	1	6	4	2	2 1/2	12 1/2	16	13															16

STANDARD SIGN
W8-6A

WISCONSIN DEPT OF TRANSPORTATION

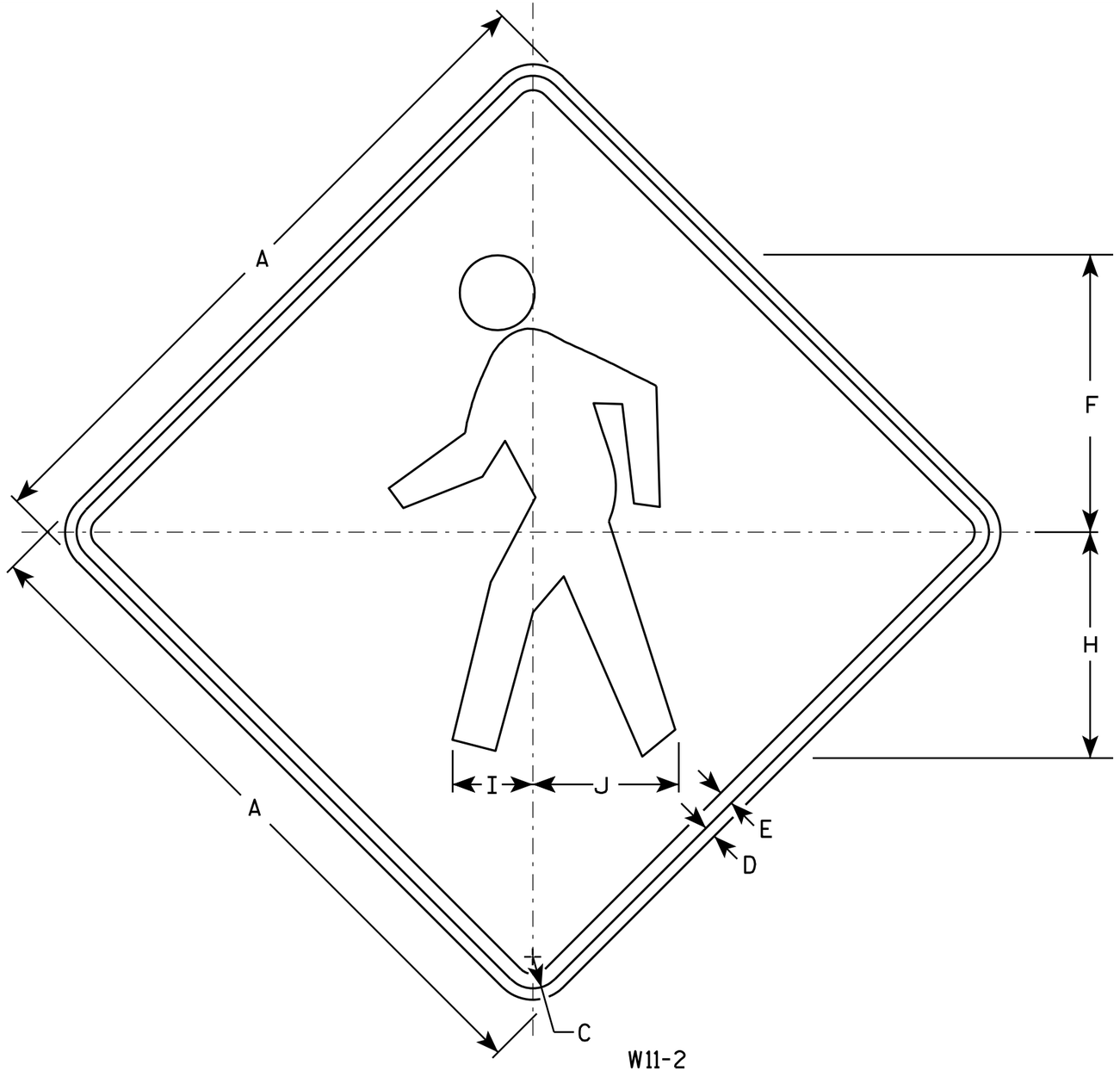
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/23/11 PLATE NO. W8-6A.2

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 244 | E

7

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W86A.DGN PLOT DATE : 23-MAR-2011 10:02 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 10.136330:1.000000 WISDOT/CADDS SHEET 42



W11-2

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.

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	9 3/4		7 7/8	2 7/8	5 1/8																	4.0
2S	30		1 3/8	1/2	5/8	12 1/8		9 7/8	3 1/2	6 3/8																	6.25
2M	36		1 5/8	5/8	3/4	14 1/2		11 7/8	4 1/4	7 5/8																	9.0
3	36		1 5/8	5/8	3/4	14 1/2		11 7/8	4 1/4	7 5/8																	9.0
4	48		2 1/4	3/4	1	19 3/8		15 3/4	5 5/8	10 1/4																	16.0
5																											

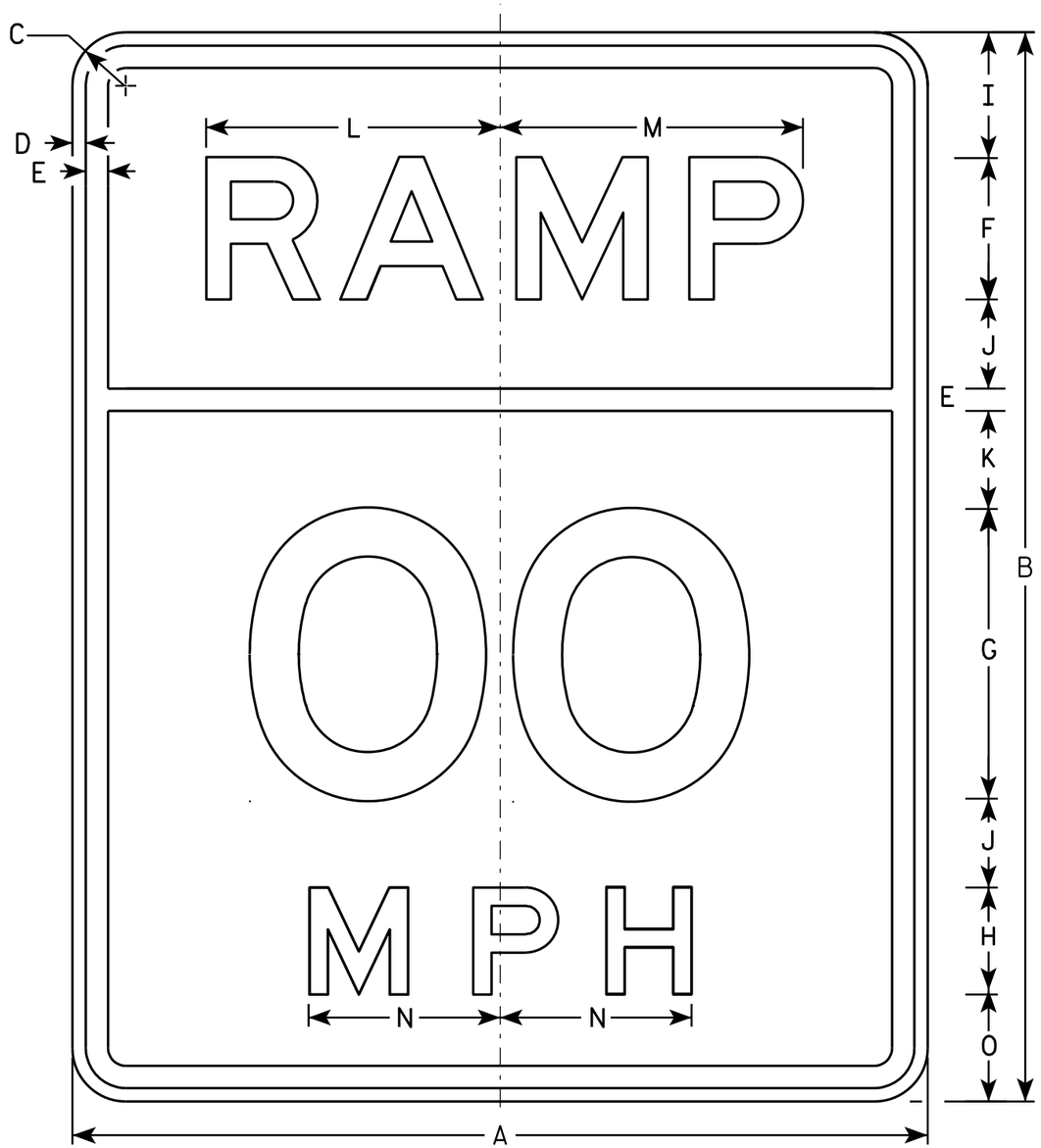
STANDARD SIGN
W11-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W11-2.7

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 245	E



W13-3

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. 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 space about centerline 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	24	30	1 1/8	3/8	5/8	4	8	3	3 1/2	2 1/2	2 7/8	8 1/4	8 1/2	5 3/8	3												5.0
2S	24	30	1 1/8	3/8	5/8	4	8	3	3 1/2	2 1/2	2 7/8	8 1/4	8 1/2	5 3/8	3												5.0
2M	24	30	1 1/8	3/8	5/8	4	8	3	3 1/2	2 1/2	2 7/8	8 1/4	8 1/2	5 3/8	3												5.0
3																											
4	36	48	1 5/8	5/8	7/8	6	12	4	6	4 1/8	5 1/8	13 1/2	13 5/8	7 1/8	6												12.0
5	48	60	2 1/4	3/4	1 1/4	8	16	6	7	5	5 3/4	16 1/2	17	10 5/8	6												20.0

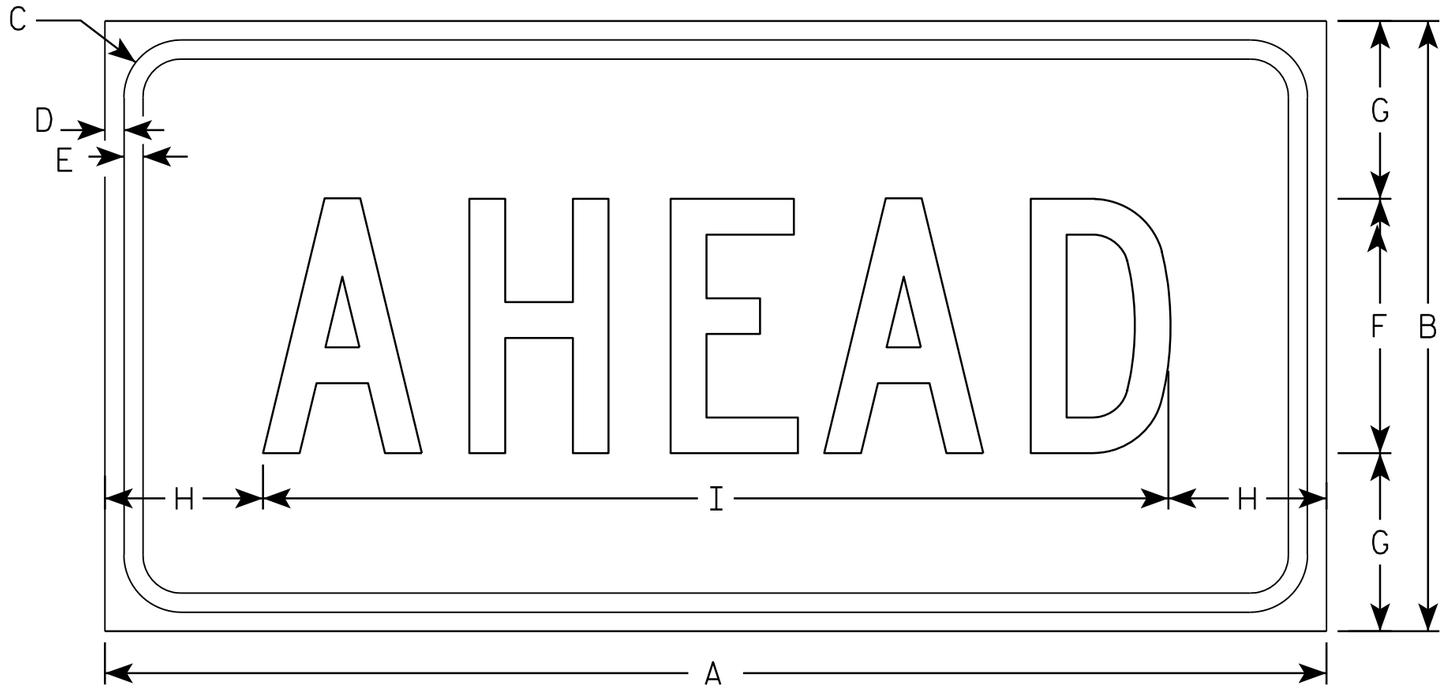
STANDARD SIGN
W13-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/13/13 PLATE NO. W13-3.9

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 246 | E



W16-9P

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. 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																											
2S	24	12	1 1/8	3/8	3/8	5	3 1/2	3 1/8	17 3/4																		2.0
2M	30	18	1 1/8	3/8	1/2	7	5 1/2	2 3/4	24 1/2																		3.75
3	30	18	1 1/8	3/8	1/2	7	3 1/2	2 3/4	24 1/2																		3.75
4	48	24	1 3/8	1/2	5/8	10	7	6 1/8	35 3/4																		8.0
5																											

STANDARD SIGN
W16-9P

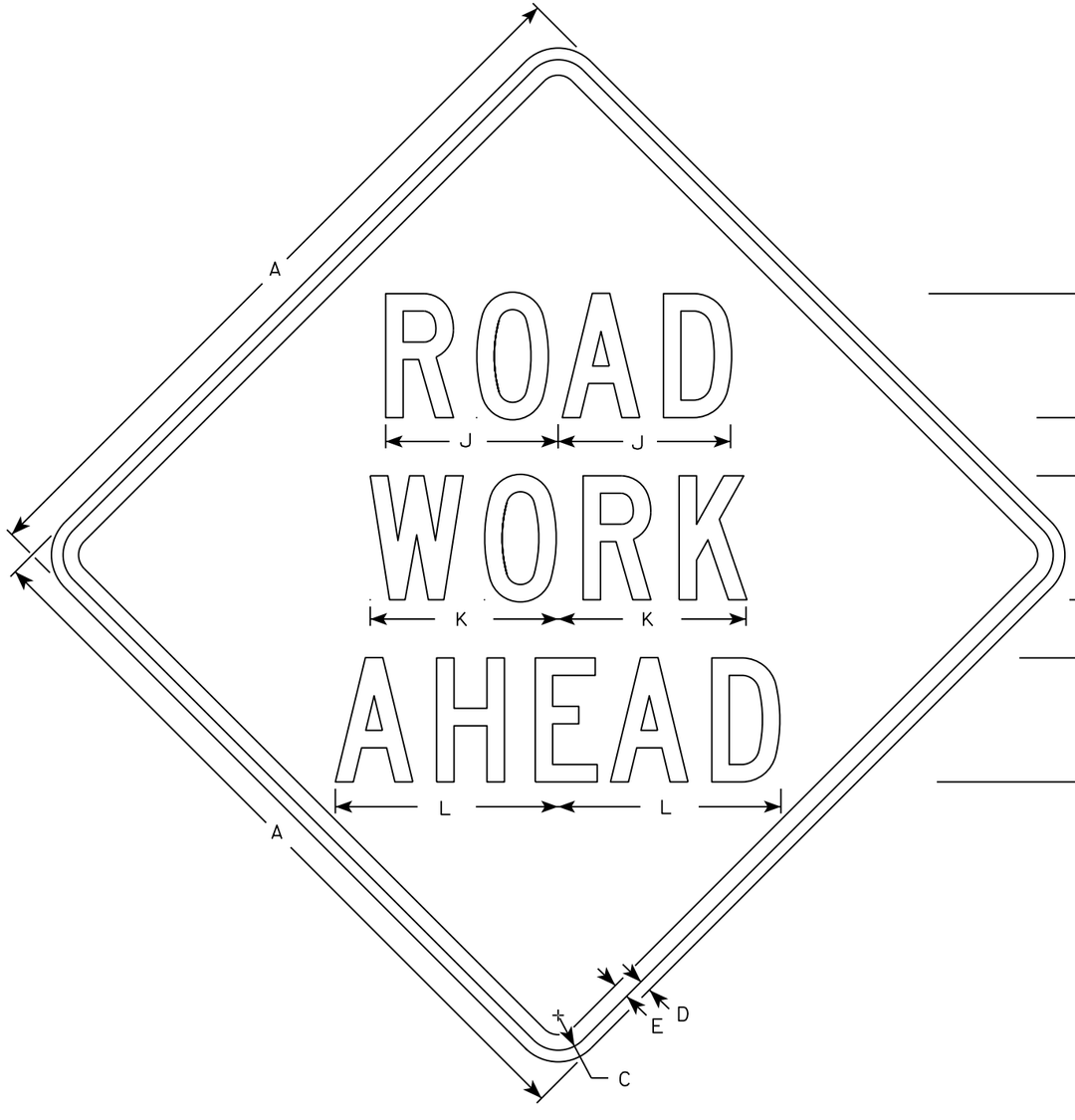
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

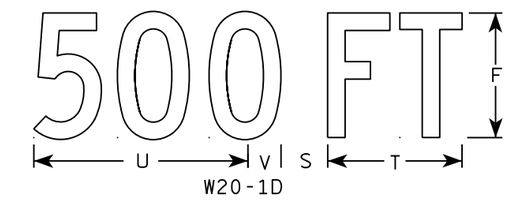
DATE 12/28/10 PLATE NO. W16-9P.6

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 247 | E

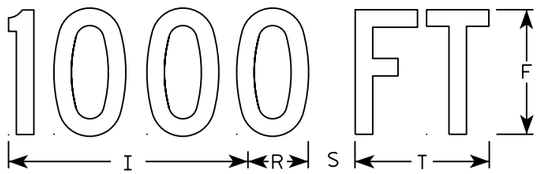
FILE NAME : C:\Users\PROJECTS\tr_stdplate\W169P.DGN PLOT DATE : 28-DEC-2010 13:39 PLOT BY : dotsja PLOT NAME : PLOT SCALE : 2.979524:1.000000
WISDOT/CADDS SHEET 42



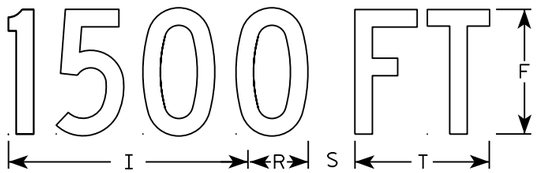
W20-1A



W20-1D



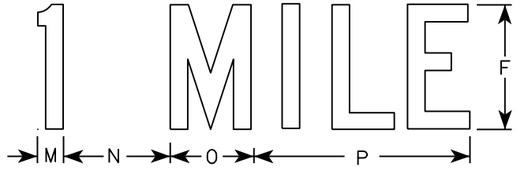
W20-1C



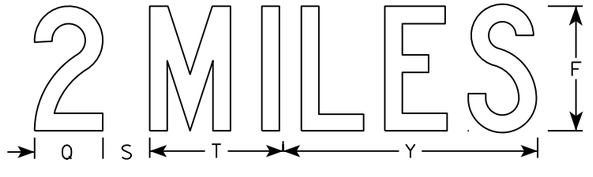
W20-1B



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

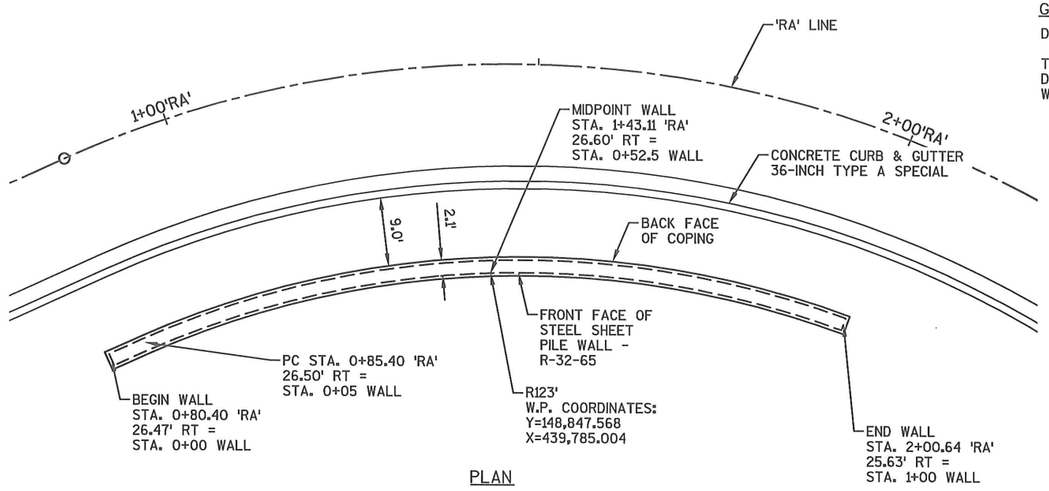
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/07/15 PLATE NO. W20-1.10

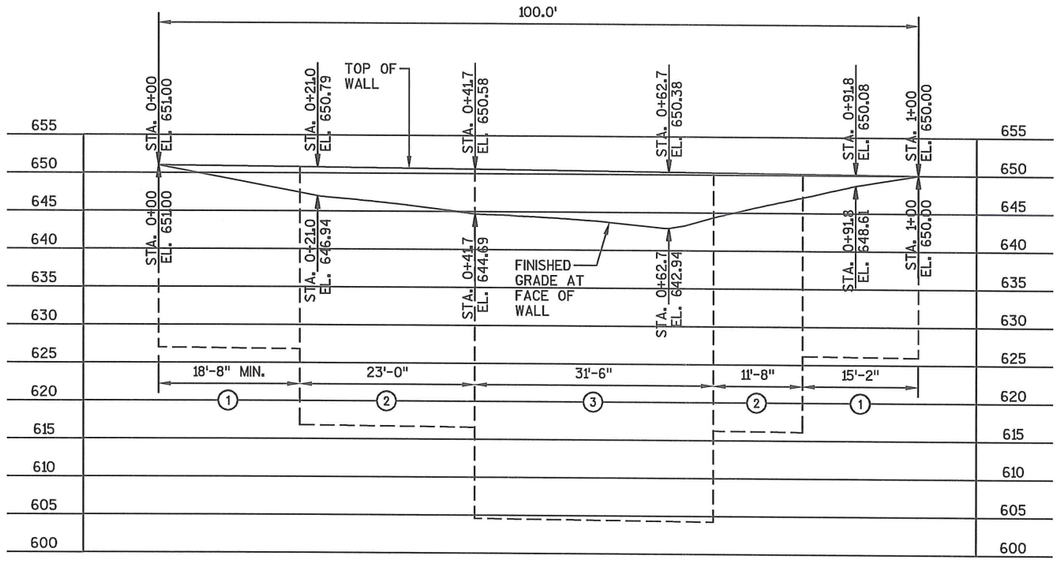
PROJECT NO:

SHEET NO: E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W201.DGN PLOT DATE : 01-DEC-2015 18:24 PLOT BY : $$ plotuser $$



PLAN



ELEVATION

WALL EXTERNAL & OVERALL STABILITY EVALUATION

DIMENSIONS	EVALUATED LOCATIONS			
DESIGN WALL HEIGHT (FEET)	8.9	7.4	4.9	2.9
EXPOSED WALL HEIGHT (FEET)	7.4	5.9	3.4	1.4
BORING USED	14	14	14	14

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

THE PLAN QUANTITY FOR THE BID ITEM PILING STEEL SHEET PERMANENT DELIVERED/DRIVEN IS BASED ON A WALL HEIGHT MEASURED FROM THE TOP OF WALL TO THE DEPTH BELOW TOP OF WALL SHOWN IN ELEVATION VIEW.

KEYNOTES

(1) 24' SHEET PILE SECTION
MIN. REQUIRED SECTION MODULUS = 15.3 IN^3/FT. (A328)
= 11.9 IN^3/FT. (A572 Gr. 50)

(2) 34' SHEET PILE SECTION
MIN. REQUIRED SECTION MODULUS = 33.6 IN^3/FT. (A328)
= 26.2 IN^3/FT. (A572 Gr. 50)

(3) 46' SHEET PILE SECTION
MIN. REQUIRED SECTION MODULUS = 74.2 IN^3/FT. (A328)
= 57.9 IN^3/FT. (A572 Gr. 50)

SOIL PARAMETERS

STRATUM LOCATIONS AND SOIL DESCRIPTIONS	TOTAL UNIT WEIGHT (PCF)	FRICTION ANGLE (DEGREES)	COHESION (PCF)
SILTY SAND (SM) RETAINED SOIL *	120		
SILTY SAND (SM) RETAINED SOIL ⊗ EL. 648.3 - EL. 653	130	28-30	0
POORLY GRADED SAND (SP) ⊗ EL. 601.8 - EL. 648.3	105	27-30	0

CONSULTANT CONTACT

SEH INC.
717 3RD AVENUE SE
ROCHESTER MN 55904
TELEPHONE: 507-288-6464
ATTENTION: BEN WOLF
EMAIL: BWOLF@SEHINC.COM

BUREAU OF STRUCTURES CONTACT

WILLIAM DREHER, P.E.
TELEPHONE: 608-266-8489

WISCONSIN
BENJAMIN
A. WOLF
35248-006
ROCHESTER,
MN
PROFESSIONAL ENGINEER
12-18-2015

STATE PROJECT NUMBER
1070-00-71

DESIGN DATA

PLANS, ELEVATIONS, AND DETAILS SHOWN ON THESE DRAWINGS ARE INTENDED TO INDICATE WALL LOCATIONS, LENGTHS, HEIGHTS, AND DETAILS COMMON TO THE WALL SYSTEM SELECTED.

THE RETAINING WALL IS DESIGNED USING THE ELEVATIONS GIVEN ON THIS SHEET.

RETAINING WALL IS DESIGNED TO PROVIDE FOR FINISHED GRADE SLOPED BEHIND WALL AS SHOWN WITH A LIVE LOAD SURCHARGE OF 240 psf.

ULTIMATE DESIGN STRESSES:
CONCRETE MASONRY _____ f'c = 3,500 psi
HIGH STRENGTH BAR STEEL REINFORCEMENT _____ fy = 60,000 psi
STEEL SHEET PILING (ASTM A328) _____ fy = 39,000 psi
OR (ASTM A572 Gr. 50) _____ fy = 50,000 psi

DESIGNER NOTES

MINIMUM EMBEDMENT BASED ON SITE SPECIFIC PARAMETERS. FIELD EMBEDMENTS SHALL MEET OR EXCEED THE MINIMUM EMBEDMENTS. FIELD EMBEDMENTS BELOW MINIMUM EMBEDMENT SHALL NOT BE INCLUDED IN THE PAY LIMITS.

⊗ SEE SOIL BORINGS SHEET FOR STRATUM LOCATIONS AND SOIL DESCRIPTIONS AT EACH BORING LOCATION.

SHEET PANEL DIMENSIONS SHOWN ARE DESIGN MINIMUMS. THE CONTRACTOR SHALL PROVIDE DETAILS BASED ON NOMINAL PANEL DIMENSIONS AND CONFIGURATION OF THEIR SELECTED SHEET PILE SYSTEM. THE CONTRACTOR SHALL COORDINATE DETAILS BASED ON THE ACTUAL SHEET DIMENSIONS.

TOTAL ESTIMATED QUANTITIES

BID ITEM #	BID ITEM	QUANTITY	UNIT
206.3000	EXCAVATION FOR STRUCTURES RETAINING WALL R-32-65	1	LS
504.0500	CONCRETE MASONRY RETAINING WALLS	19	CY
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	1,220	LB
512.0500	PILING STEEL SHEET PERMANENT DELIVERED	3,440	SF
512.0600	PILING STEEL SHEET PERMANENT DRIVEN	3,440	SF
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	3	SY

NO.	DATE	REVISION	BY

SEH INC.
717 3RD AVENUE SE
ROCHESTER MN 55904
TELEPHONE: 507-288-6464

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SDR 12/21/15
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE R-32-65

SHEET PILING WALL WITH SOIL ANCHORS RA STA 0+80.40 TO STA 2+00.64

COUNTY LA CROSSE | TOWN ~~CITY/VILLAGE~~ CAMPBELL

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY JCT | DESIGN CK'D. BAW | DRAWN BY TLD | PLANS CK'D. BAW

CONSTRUCTION DETAILS SHEET PILE WALL

SHEET 1 OF 2

249

DATE: Dec-15

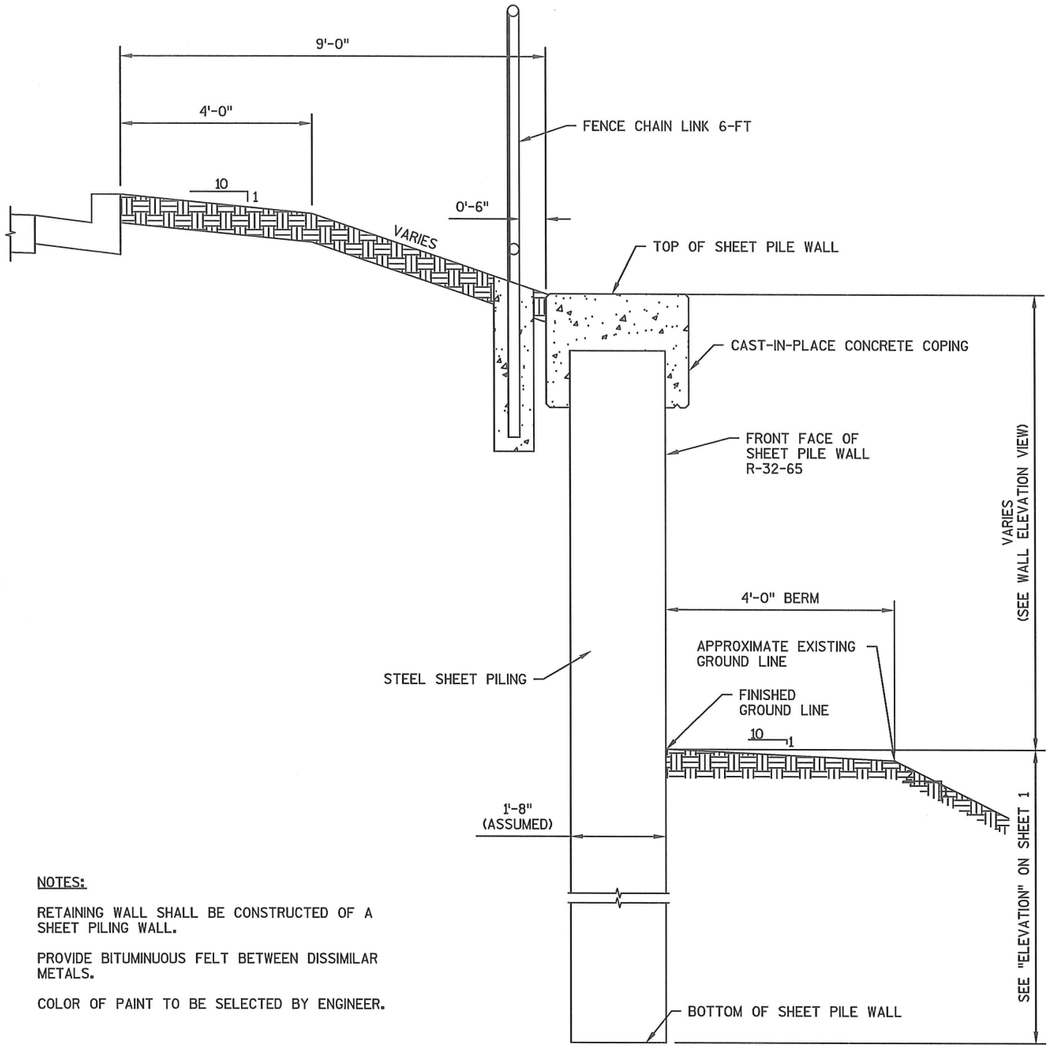
SCALE = 1:20

8

8

LAYOUT NAME - SHEET PILE WALL

PLOT SCALE : 1 IN:20 FT



NOTES:

RETAINING WALL SHALL BE CONSTRUCTED OF A SHEET PILING WALL.

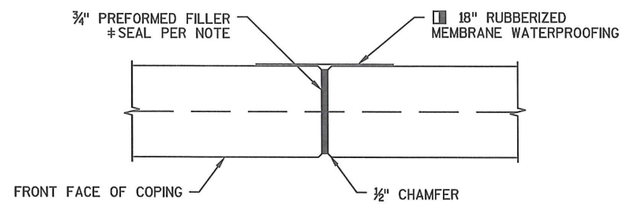
PROVIDE BITUMINUOUS FELT BETWEEN DISSIMILAR METALS.

COLOR OF PAINT TO BE SELECTED BY ENGINEER.

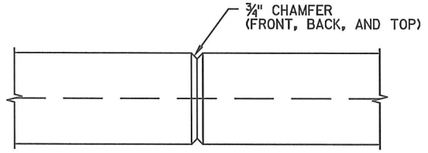
TYPICAL CROSS-SECTION OF RETAINING WALL
STA 0+80.40'RA' - STA 2+00.64 'RA'

± SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛"BELOW SURFACE OF CONC.)

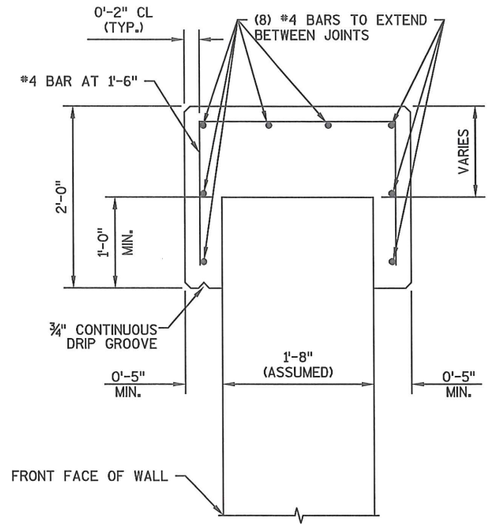
MEMBRANE WATERPROOFING TO EXTEND FROM TOP OF COPING TO BOTTOM OF COPING.



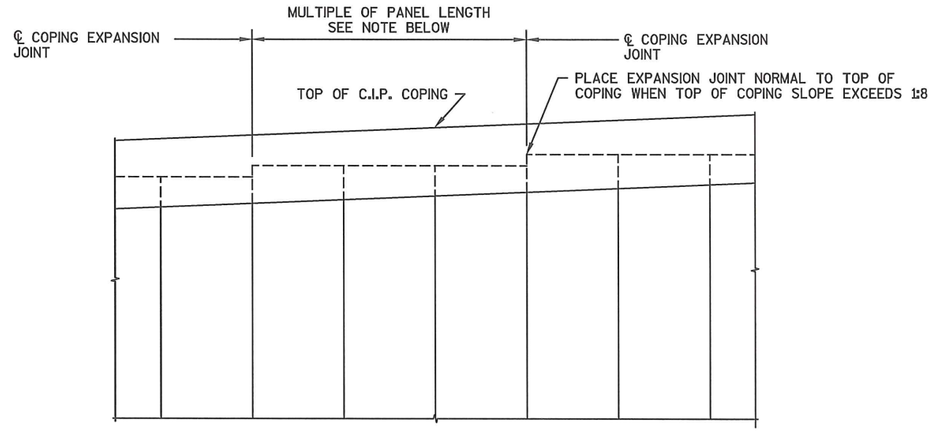
COPING EXPANSION JOINT
DO NOT RUN BAR STEEL THRU JOINT.
MAX. SPACING OF JOINT = 50'



COPING CONTRACTION JOINT
DO NOT RUN BAR STEEL THRU JOINT.
MAX. SPACING OF JOINT = 12'



CAST-IN-PLACE CONCRETE COPING DETAIL



SHEET PILE WALL PARTIAL ELEVATION
NOTES:

ALL COPING JOINTS SHALL BE LOCATED TO COINCIDE WITH PANEL JOINTS ON FRONT FACE.

STATE PROJECT NUMBER
1070-00-71

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-32-65

DRAWN BY TLD | PLANS CK'D. JCT

CONSTRUCTION DETAILS SHEET PILE WALL

SHEET 2

250

8

8

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

LAYOUT NAME - CONSTRUCTION DETAILS SHEET PILE WALL

EARTHWORK DETAILED TABULATION

STATION	DISTANCE	END AREA CUT (SF)	END AREA FILL (SF)	(UNADJUSTED) INCREMENTAL VOLUME CUT (CY)	(UNADJUSTED) INCREMENTAL VOLUME FILL (CY)	EXPANSION FACTOR = 1.3 CUMULATIVE VOLUME CUT (CY)	EXPANSION FACTOR = 1.3 CUMULATIVE VOLUME EXPANDED FILL (CY)	MASS ORDINATE (CY)
0+15.58'RA'	0.00	41.26	4.47	0	0	0	0	0
0+50.00'RA'	34.42	37.83	8.25	50	8	50	10	40
1+00.00'RA'	50.00	42.38	37.28	74	42	124	65	59
1+25.00'RA'	25.00	36.72	68.27	37	49	161	129	32
1+50.00'RA'	25.00	21.40	91.24	27	74	188	225	-37
1+75.00'RA'	25.00	7.01	75.09	13	77	201	325	-124
2+00.00'RA'	25.00	36.51	49.76	20	58	221	400	-179
2+25.00'RA'	25.00	81.31	88.02	55	64	276	483	-207
2+50.00'RA'	25.00	142.09	127.66	103	100	379	613	-234
2+75.00'RA'	25.00	68.85	98.28	98	105	477	750	-273
3+00.00'RA'	25.00	112.25	85.35	84	85	561	861	-300
3+50.00'RA'	50.00	153.72	57.90	246	133	807	1034	-227
4+00.00'RA'	50.00	141.98	37.81	274	89	1081	1150	-69
4+50.00'RA'	50.00	42.41	30.37	171	63	1252	1232	20
5+00.00'RA'	50.00	150.24	7.68	178	35	1430	1278	152
5+25.00'RA'	25.00	202.44	7.87	163	7	1593	1287	306
5+50.00'RA'	25.00	179.74	5.22	177	6	1770	1295	475
5+75.00'RA'	25.00	252.92	0.17	200	2	1970	1298	672
6+00.00'RA'	25.00	360.19	0.00	284	0	2254	1298	956
6+34.56'RA'	34.56	400.96	2.01	487	1	2741	1299	1442
6+50.00'RA'	15.44	365.10	7.81	219	3	2960	1303	1657
6+70.00'RA'	20.00	371.31	18.29	273	10	3233	1316	1917
7+00.00'RA'	30.00	462.73	14.48	463	18	3696	1339	2357
7+50.00'RA'	50.00	120.81	17.47	540	30	4236	1378	2858
7+75.00'RA'	25.00	195.19	12.52	146	14	4382	1396	2986
8+00.00'RA'	25.00	146.51	10.45	158	11	4540	1410	3130
8+25.00'RA'	25.00	71.11	10.87	101	10	4641	1423	3218
8+50.00'RA'	25.00	90.83	9.70	75	10	4716	1436	3280
9+00.00'RA'	50.00	262.78	29.05	327	36	5043	1483	3560
9+50.00'RA'	50.00	165.50	118.00	397	136	5440	1660	3780
10+00.00'RA'	50.00	107.81	15.94	253	124	5693	1821	3872
10+50.00'RA'	50.00	146.38	2.45	235	17	5928	1843	4085
11+00.00'RA'	50.00	43.68	47.53	176	46	6104	1903	4201
11+50.00'RA'	50.00	9.25	77.24	49	116	6153	2054	4099
12+00.00'RA'	50.00	10.90	39.13	19	108	6172	2194	3978
12+25.00'RA'	25.00	22.62	67.21	16	49	6188	2258	3930
12+50.00'RA'	25.00	36.05	39.89	27	50	6215	2323	3892
12+75.00'RA'	25.00	41.31	42.10	36	38	6251	2372	3879
13+00.00'RA'	25.00	21.67	33.31	29	35	6280	2418	3862
13+25.00'RA'	25.00	9.14	43.38	14	36	6294	2465	3829
13+50.00'RA'	25.00	2.30	46.19	5	41	6299	2518	3781
14+00.00'RA'	50.00	11.43	22.30	13	63	6312	2600	3712
14+50.00'RA'	50.00	48.76	5.83	56	26	6368	2634	3734
15+00.00'RA'	50.00	79.09	0.00	118	5	6486	2641	3845
15+50.00'RA'	50.00	35.84	2.82	106	3	6592	2645	3947
16+00.00'RA'	50.00	41.23	1.76	71	4	6663	2650	4013
16+50.00'RA'	50.00	34.54	7.89	70	9	6733	2662	4071
17+00.00'RA'	50.00	22.25	5.11	53	12	6786	2678	4108
17+50.00'RA'	50.00	40.18	0.84	58	6	6844	2686	4158
18+00.00'RA'	50.00	48.91	0.48	82	1	6926	2687	4239
18+50.00'RA'	50.00	133.40	4.76	169	5	7095	2694	4401
19+00.00'RA'	50.00	171.00	4.74	282	9	7377	2706	4671
19+50.00'RA'	50.00	324.06	0.86	458	5	7835	2713	5122
20+00.00'RA'	50.00	316.01	0.00	593	1	8428	2714	5714
20+25.00'RA'	25.00	269.09	0.07	271	0	8699	2714	5985
20+50.00'RA'	25.00	231.90	3.75	232	2	8931	2717	6214
21+00.00'RA'	50.00	280.82	22.89	475	25	9406	2750	6656
21+50.00'RA'	50.00	365.86	27.13	599	46	10005	2810	7195
21+75.00'RA'	25.00	348.72	28.96	331	26	10336	2844	7492
22+00.00'RA'	25.00	322.63	23.92	311	24	10647	2875	7772
22+25.00'RA'	25.00	438.59	19.80	352	20	10999	2901	8098
22+50.00'RA'	25.00	570.16	11.73	467	15	11466	2921	8545
22+75.00'RA'	25.00	232.90	25.85	372	17	11838	2943	8895
23+00.00'RA'	25.00	99.62	4.35	154	14	11992	2961	9031
23+25.00'RA'	25.00	76.64	10.71	82	7	12074	2970	9104
23+50.00'RA'	25.00	60.03	10.13	63	10	12137	2983	9154
23+75.00'RA'	25.00	44.32	10.23	48	9	12185	2995	9190
24+00.00'RA'	25.00	30.17	5.80	34	7	12219	3004	9215
24+05.55'RA'	5.55	27.76	5.20	6	1	12225	3005	9220
		TOTAL		12,225	2,308			

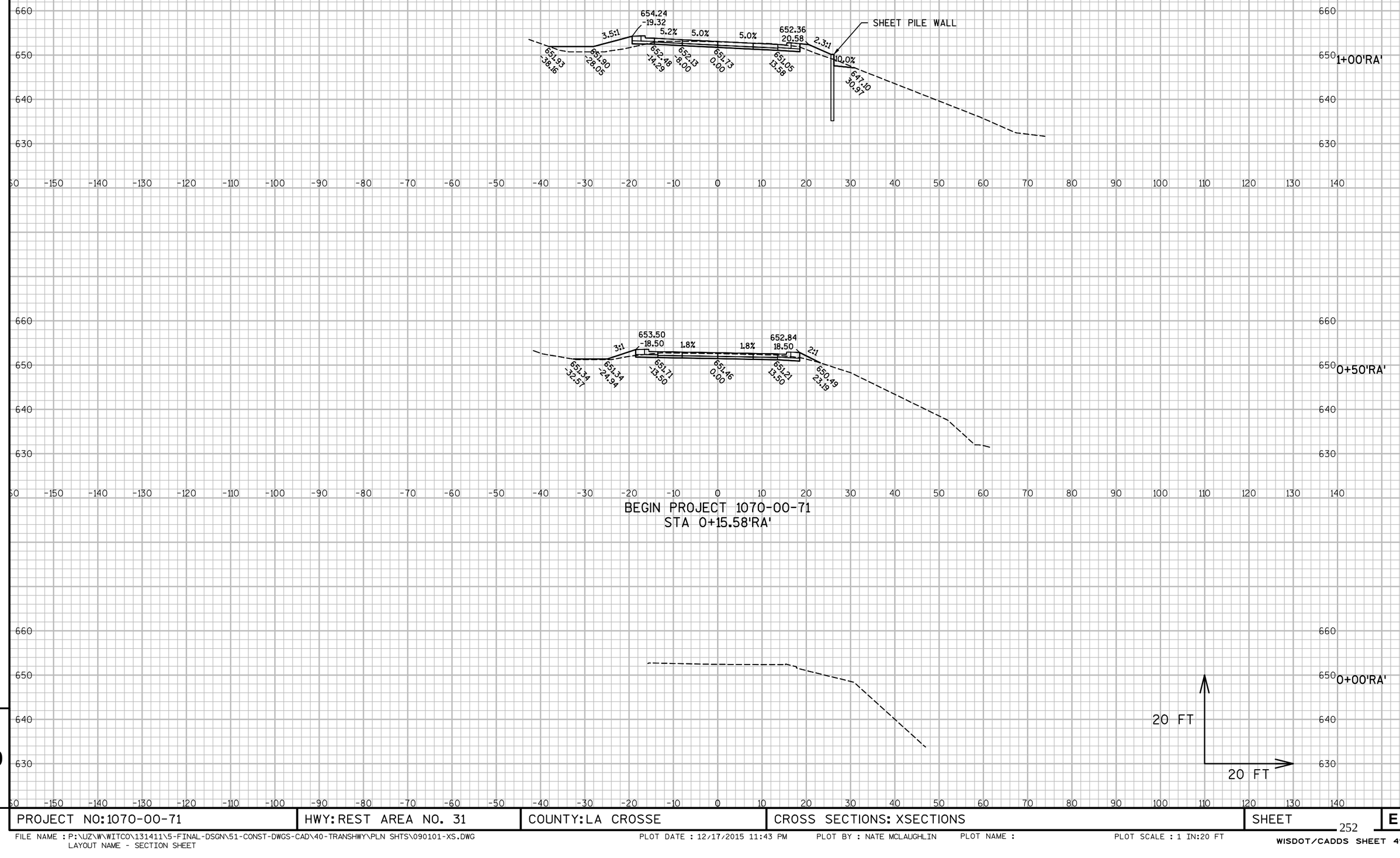
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PROJECT NO:1070-00-71 | HWY:REST AREA NO. 31 | COUNTY:LA CROSSE | CROSS SECTIONS:XSECTIONS | SHEET 251 E

FILE NAME : P:\UZ\W\WITCO\131411\5-FINAL-DSGN\51-CONST-DWGS-CAD\40-TRANSHWY\PLN SHTS\090101-XS.DWG
LAYOUT NAME - DETAILED EARTHWORK TABULATION

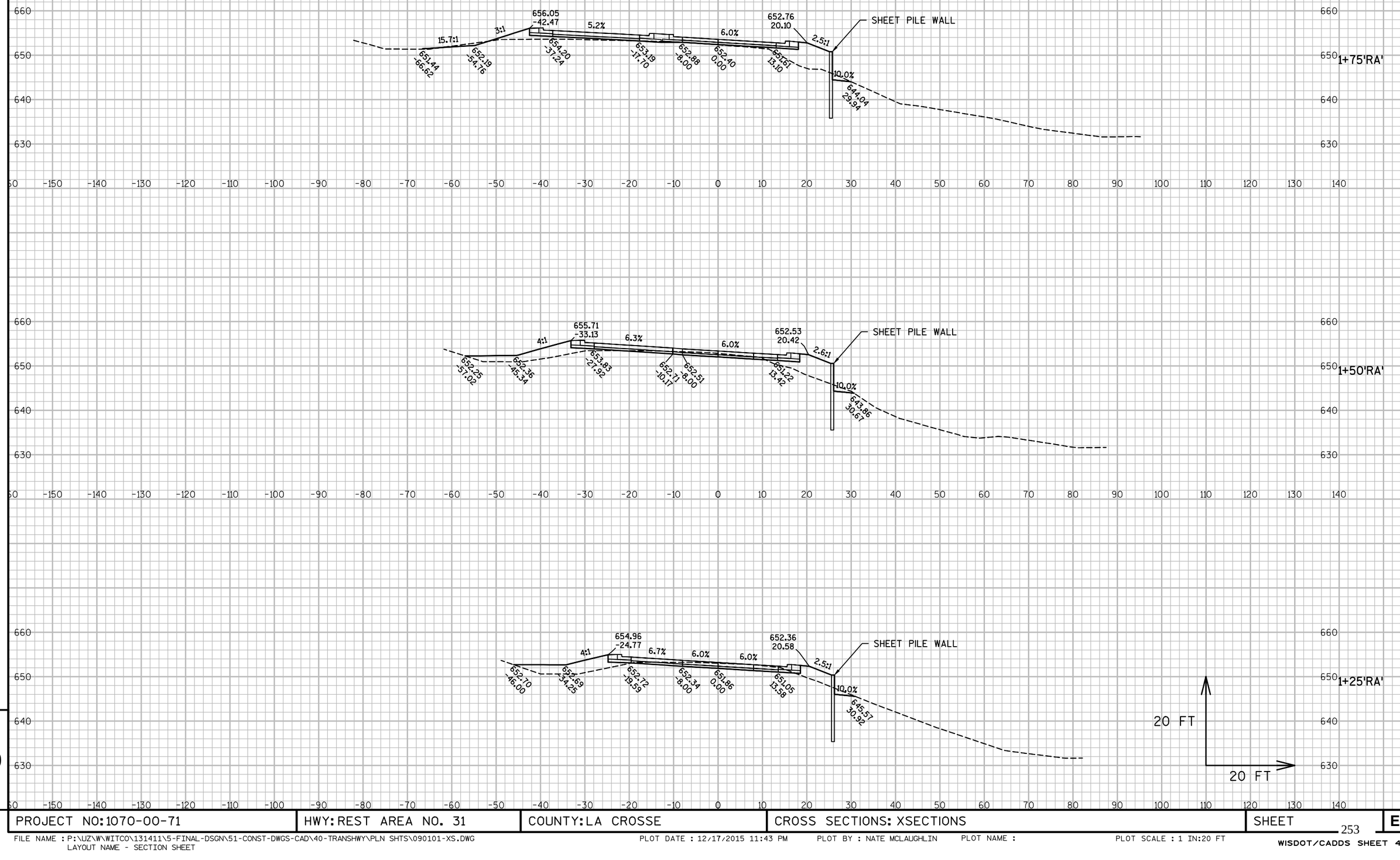
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PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	CROSS SECTIONS: XSECTIONS	SHEET E

FILE NAME : P:\UZ\W\WITCO\131411\5-FINAL-DSGN\51-CONST-DWGS-CAD\40-TRANSHWY\PLN SHTS\090101-XS.DWG
LAYOUT NAME - SECTION SHEET

PLOT DATE : 12/17/2015 11:43 PM PLOT BY : NATE MCLAUGHLIN PLOT NAME : PLOT SCALE : 1 IN:20 FT

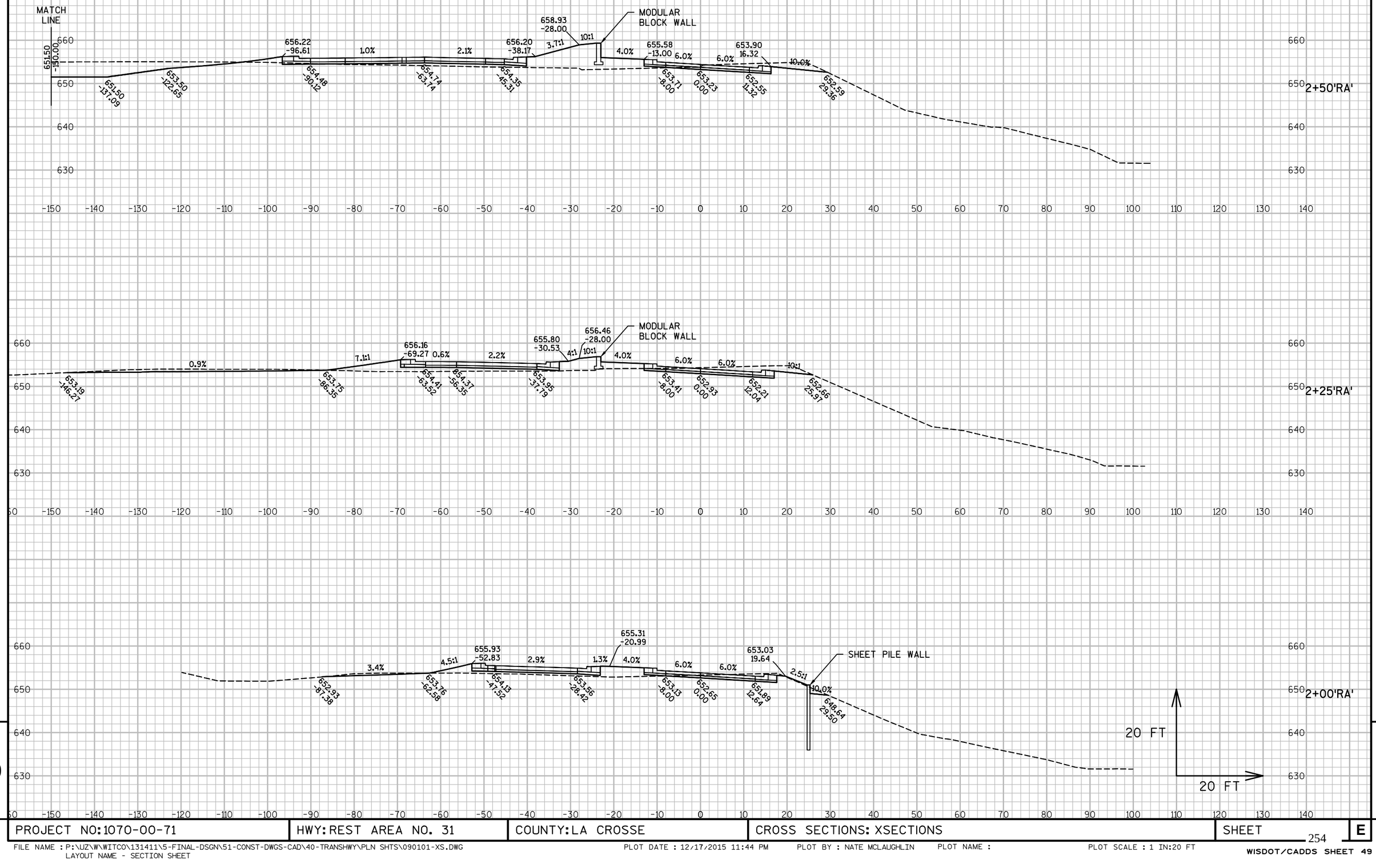


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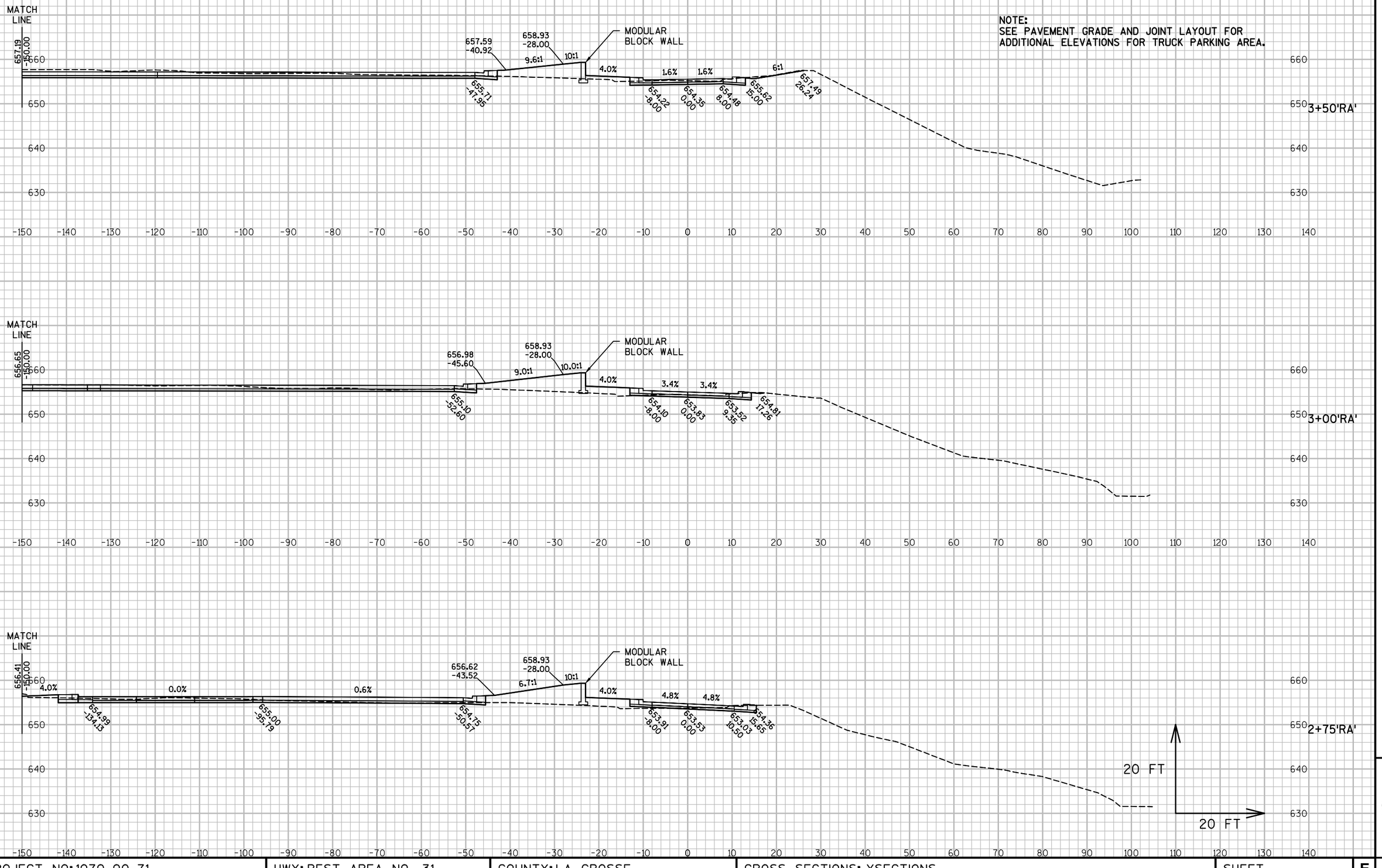
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FILE NAME : P:\UZ\W\WITCO\131411\5-FINAL-DSGN\51-CONST-DWGS-CAD\40-TRANSHWY\PLN SHTS\090101-XS.DWG
LAYOUT NAME - SECTION SHEET

PLOT DATE : 12/17/2015 11:43 PM PLOT BY : NATE MCLAUGHLIN PLOT NAME : PLOT SCALE : 1 IN:20 FT



PROJECT NO:1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	CROSS SECTIONS: XSECTIONS	SHEET 254	E



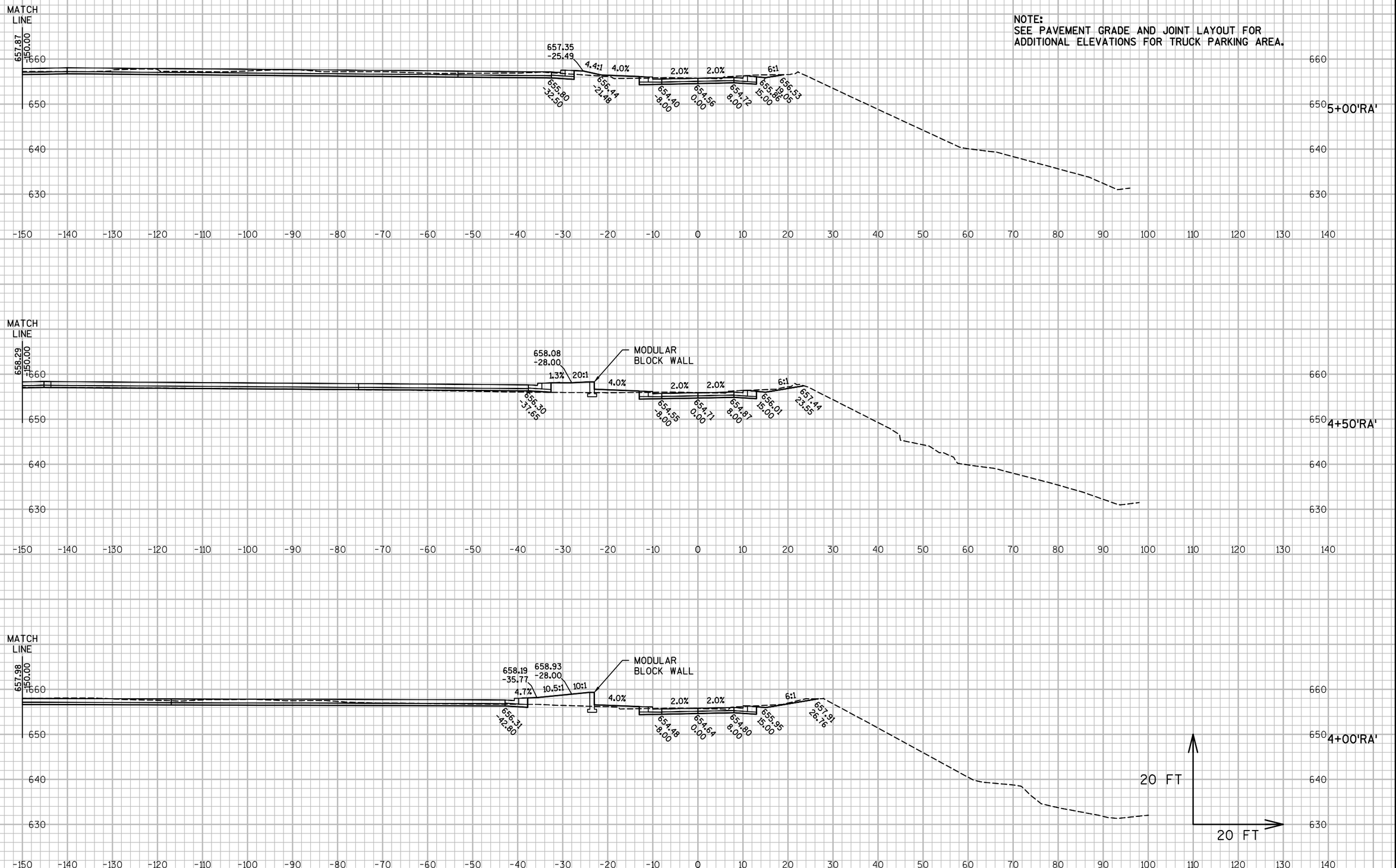
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PROJECT NO:1070-00-71	HWY: REST AREA NO. 31	COUNTY:LA CROSSE	CROSS SECTIONS: XSECTIONS	SHEET	E

FILE NAME : P:\UZ\W\WITCO\131411\5-FINAL-DSGN\51-CONST-DWGS-CAD\40-TRANSHWY\PLN SHTS\090101-XS.DWG
LAYOUT NAME - SECTION SHEET
PLOT DATE : 12/17/2015 11:44 PM PLOT BY : NATE MCLAUGHLIN PLOT NAME : PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 49

NOTE:
SEE PAVEMENT GRADE AND JOINT LAYOUT FOR
ADDITIONAL ELEVATIONS FOR TRUCK PARKING AREA.



9

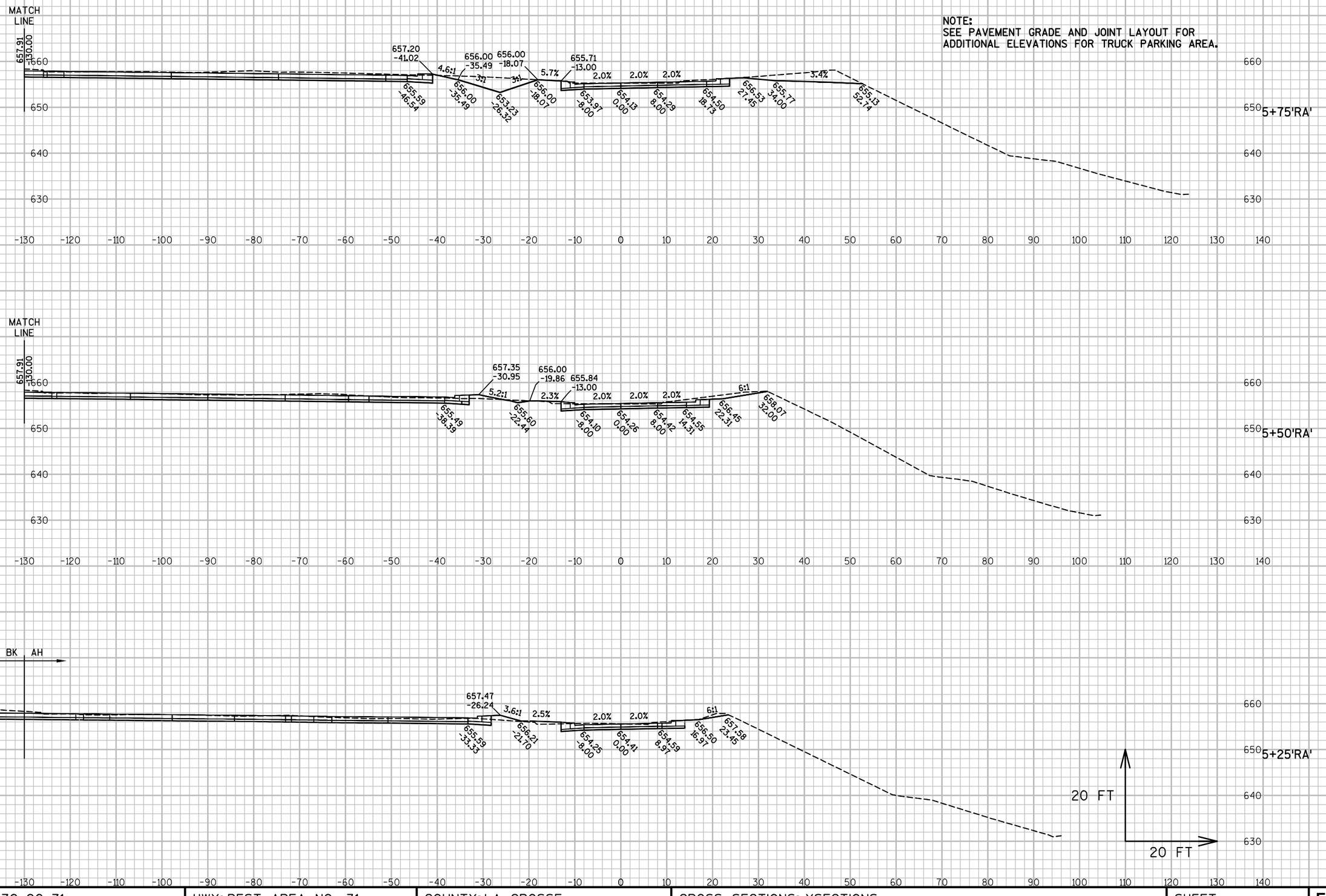
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LAYOUT NAME - SECTION SHEET

PLOT DATE : 12/17/2015 11:44 PM PLOT BY : NATE MCLAUGHLIN PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

NOTE:
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ADDITIONAL ELEVATIONS FOR TRUCK PARKING AREA.



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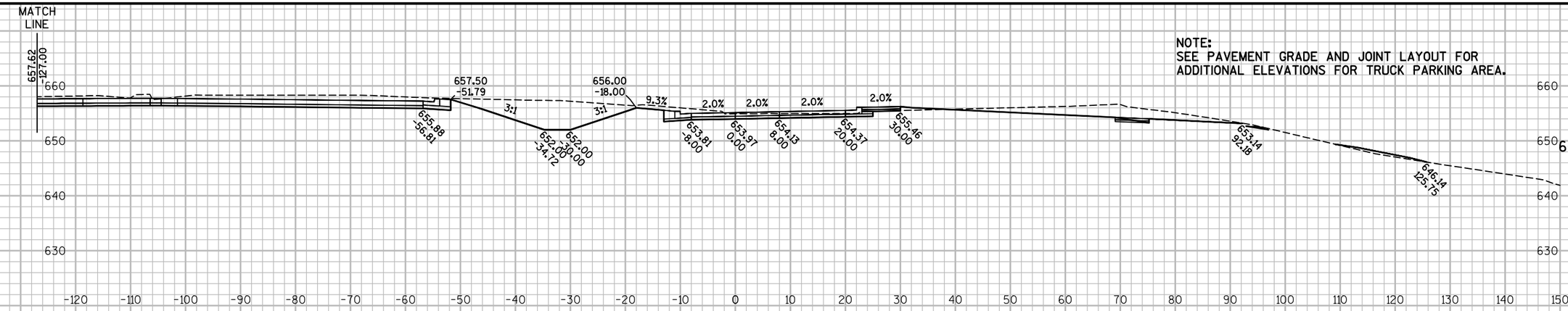
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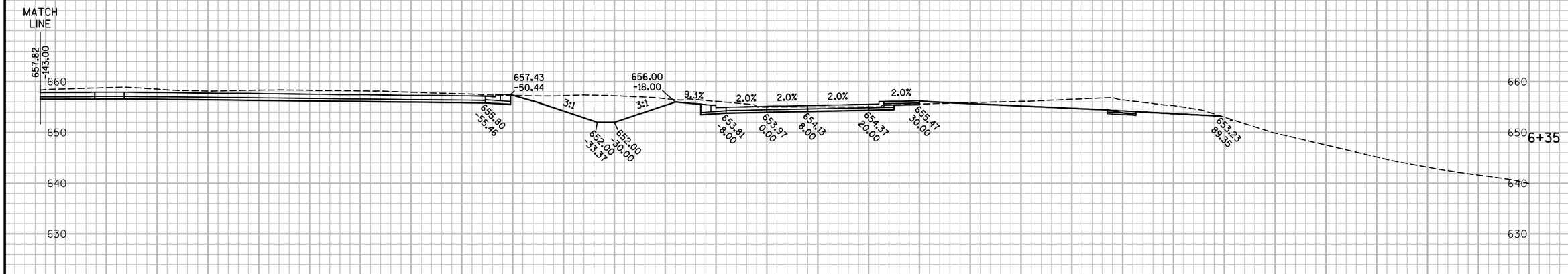
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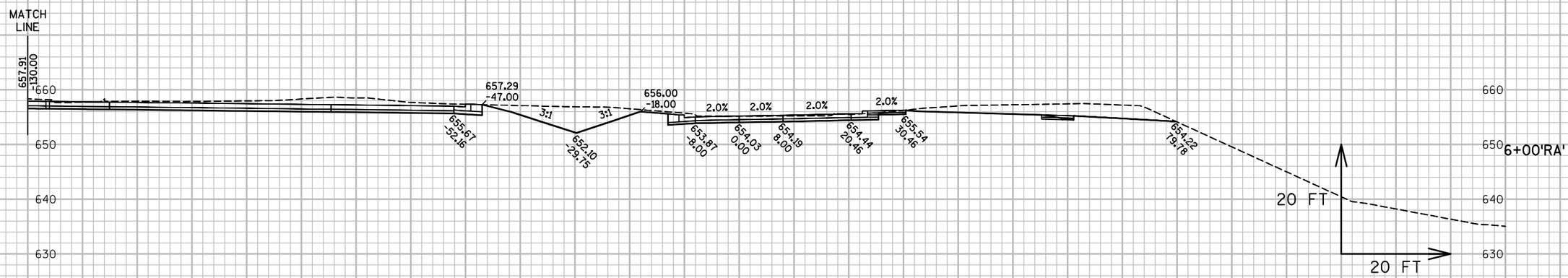
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LAYOUT NAME - SECTION SHEET

PLOT DATE : 12/17/2015 11:44 PM PLOT BY : NATE MCLAUGHLIN PLOT NAME : PLOT SCALE : 1 IN:20 FT

NOTE:
SEE PAVEMENT GRADE AND JOINT LAYOUT FOR
ADDITIONAL ELEVATIONS FOR TRUCK PARKING AREA.





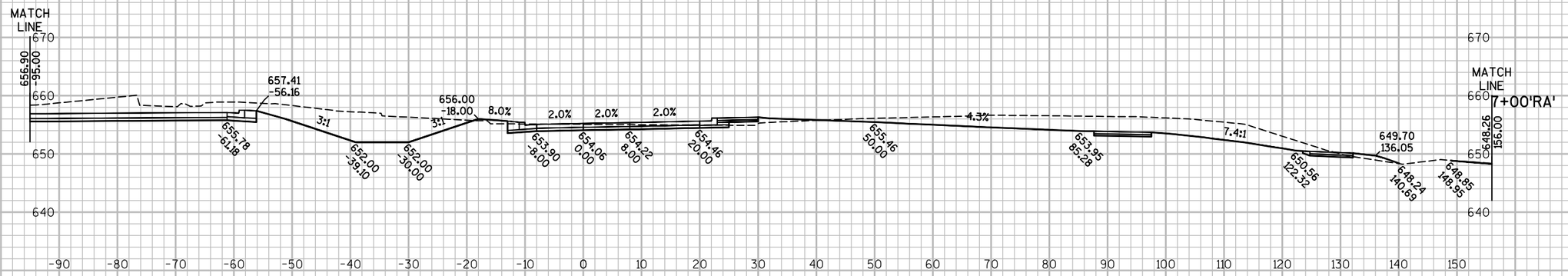


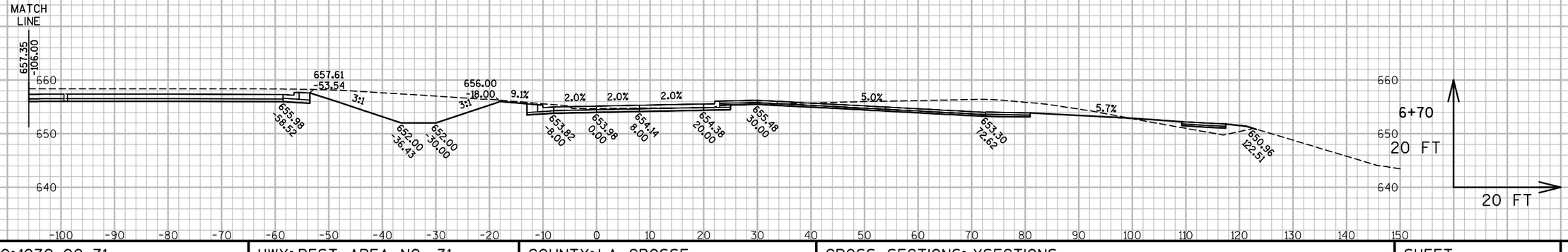
PROJECT NO:1070-00-71	HWY:REST AREA NO. 31	COUNTY:LA CROSSE	CROSS SECTIONS: XSECTIONS	SHEET E

FILE NAME : P:\UZ\W\WITCO\131411\5-FINAL-DSGN\51-CONST-DWGS-CAD\40-TRANSHWY\PLN SHTS\090101-XS.DWG
LAYOUT NAME - SECTION SHEET
PLOT DATE : 12/17/2015 11:44 PM PLOT BY : NATE MCLAUGHLIN PLOT NAME : PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 49

NOTE:
SEE PAVEMENT GRADE AND JOINT LAYOUT FOR
ADDITIONAL ELEVATIONS FOR TRUCK PARKING AREA.



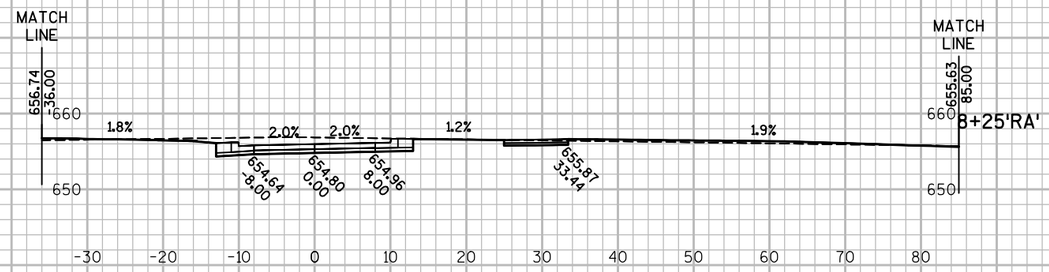


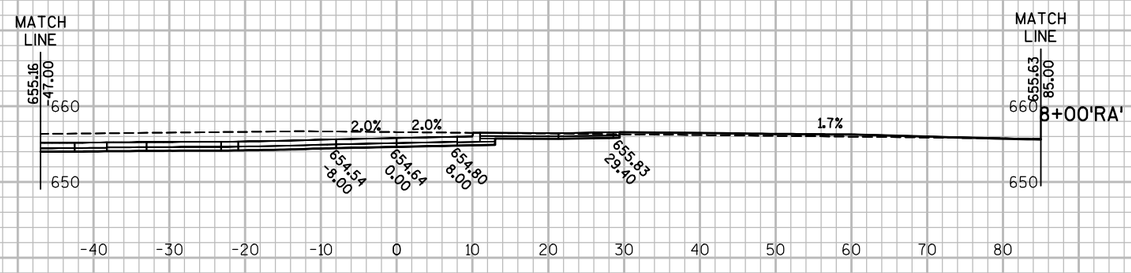


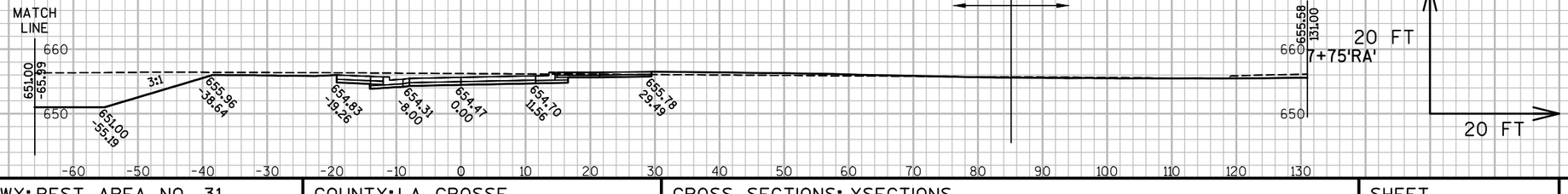
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PROJECT NO:1070-00-71	HWY:REST AREA NO. 31	COUNTY:LA CROSSE	CROSS SECTIONS: XSECTIONS	SHEET	E

FILE NAME : P:\UZ\W\WITCO\131411\5-FINAL-DSGN\51-CONST-DWGS-CAD\40-TRANSHWY\PLN SHTS\090101-XS.DWG
LAYOUT NAME - SECTION SHEET
PLOT DATE : 12/17/2015 11:45 PM PLOT BY : NATE MCLAUGHLIN PLOT NAME : PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 49







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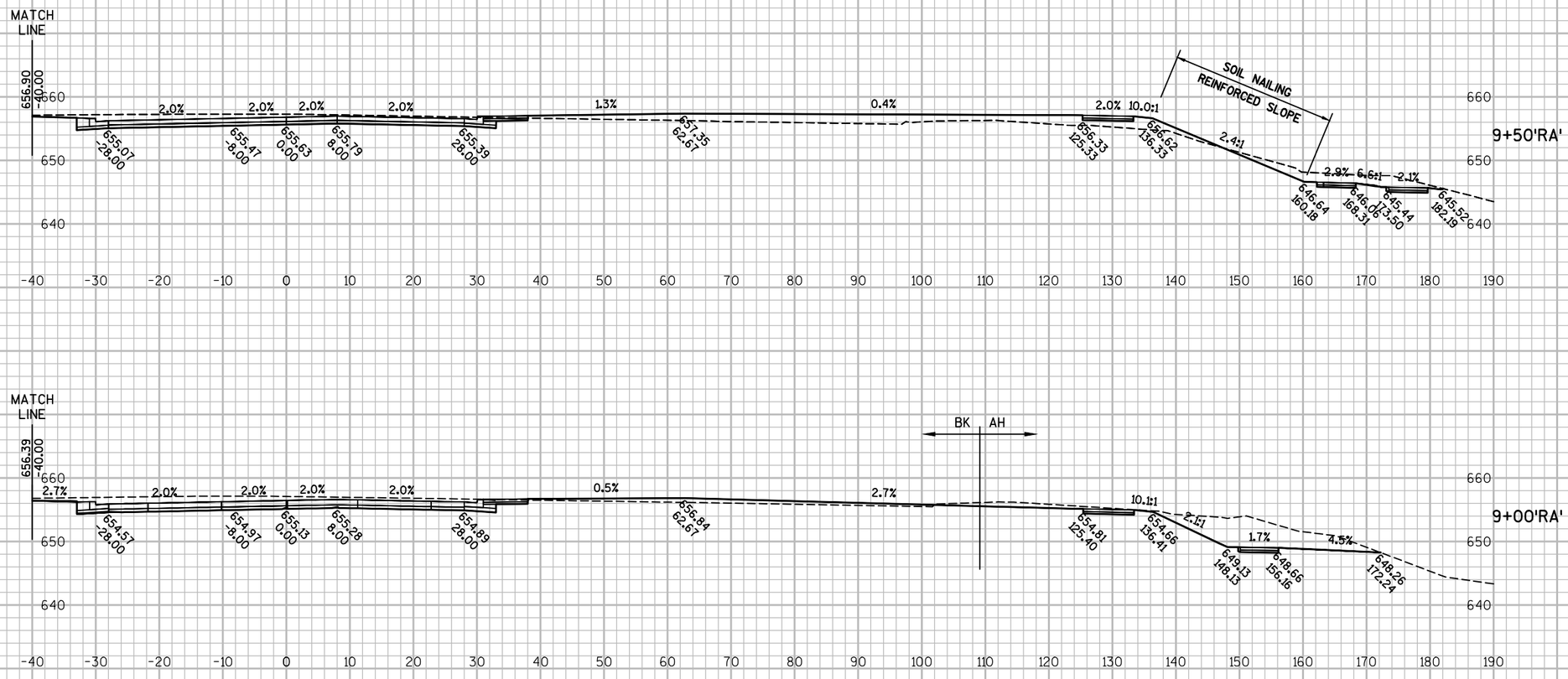
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PROJECT NO:1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	CROSS SECTIONS: XSECTIONS	SHEET 260	E

FILE NAME : P:\UZ\W\WITCO\131411\5-FINAL-DSGN\51-CONST-DWGS-CAD\40-TRANSHWY\PLN SHTS\090101-XS.DWG
LAYOUT NAME - SECTION SHEET

PLOT DATE : 12/17/2015 11:45 PM PLOT BY : NATE MCLAUGHLIN PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

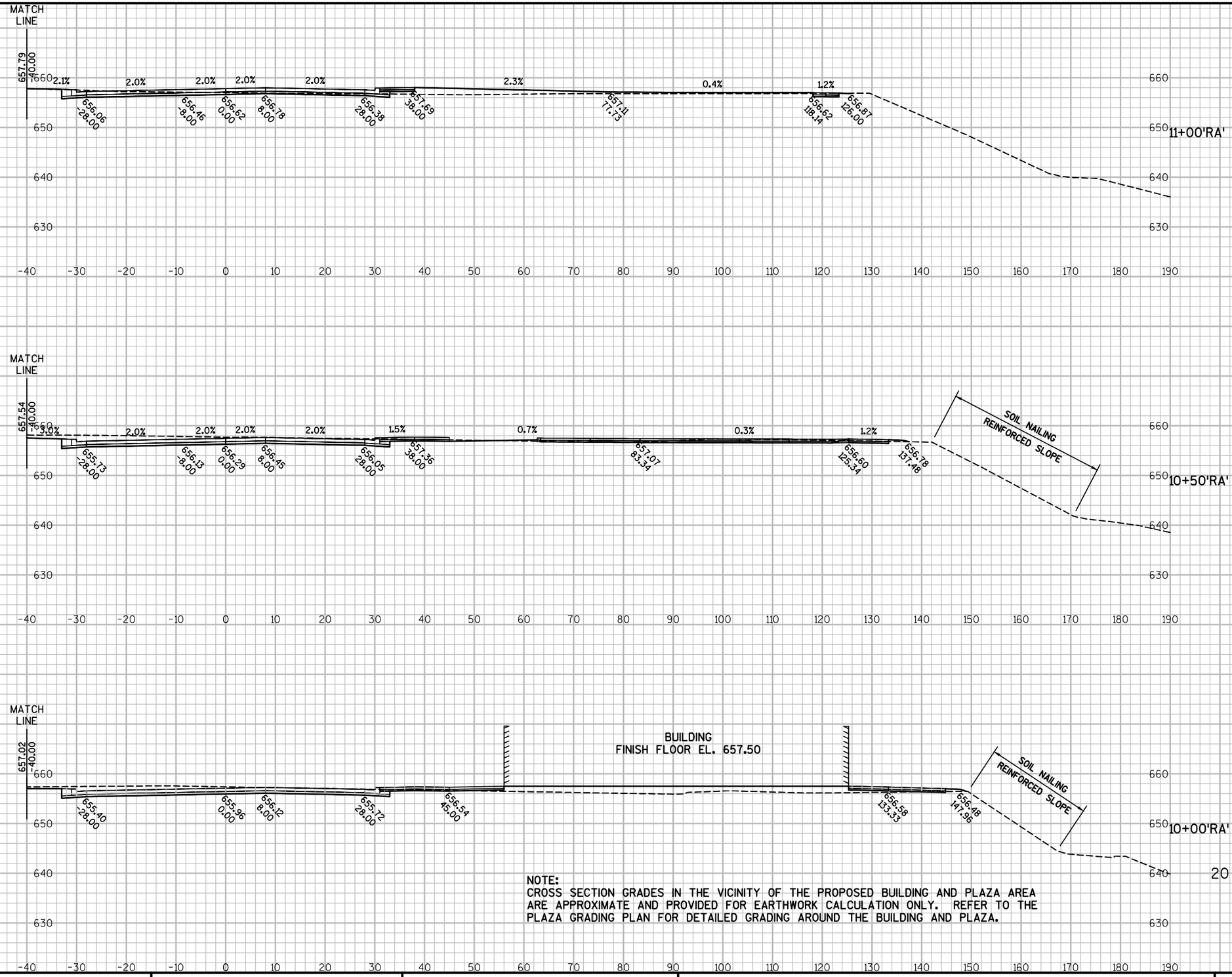


PROJECT NO:1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	CROSS SECTIONS: XSECTIONS	SHEET	E

FILE NAME : P:\UZW\WITCO\131411\5-FINAL-DSGN\51-CONST-DWGS-CAD\40-TRANSHWY\PLN SHTS\090101-XS.DWG
LAYOUT NAME - SECTION SHEET

PLOT DATE : 12/17/2015 11:45 PM PLOT BY : NATE MCLAUGHLIN PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



NOTE:
CROSS SECTION GRADES IN THE VICINITY OF THE PROPOSED BUILDING AND PLAZA AREA ARE APPROXIMATE AND PROVIDED FOR EARTHWORK CALCULATION ONLY. REFER TO THE PLAZA GRADING PLAN FOR DETAILED GRADING AROUND THE BUILDING AND PLAZA.

9

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PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	CROSS SECTIONS: XSECTIONS	SHEET	E

FILE NAME : P:\UZ\W\WITCO\131411\5-FINAL-DSGN\51-CONST-DWGS-CAD\40-TRANSHWY\PLN SHTS\090101-XS.DWG
LAYOUT NAME - SECTION SHEET

PLOT DATE : 12/17/2015 11:45 PM PLOT BY : NATE MCLAUGHLIN PLOT NAME : PLOT SCALE : 1 IN:20 FT

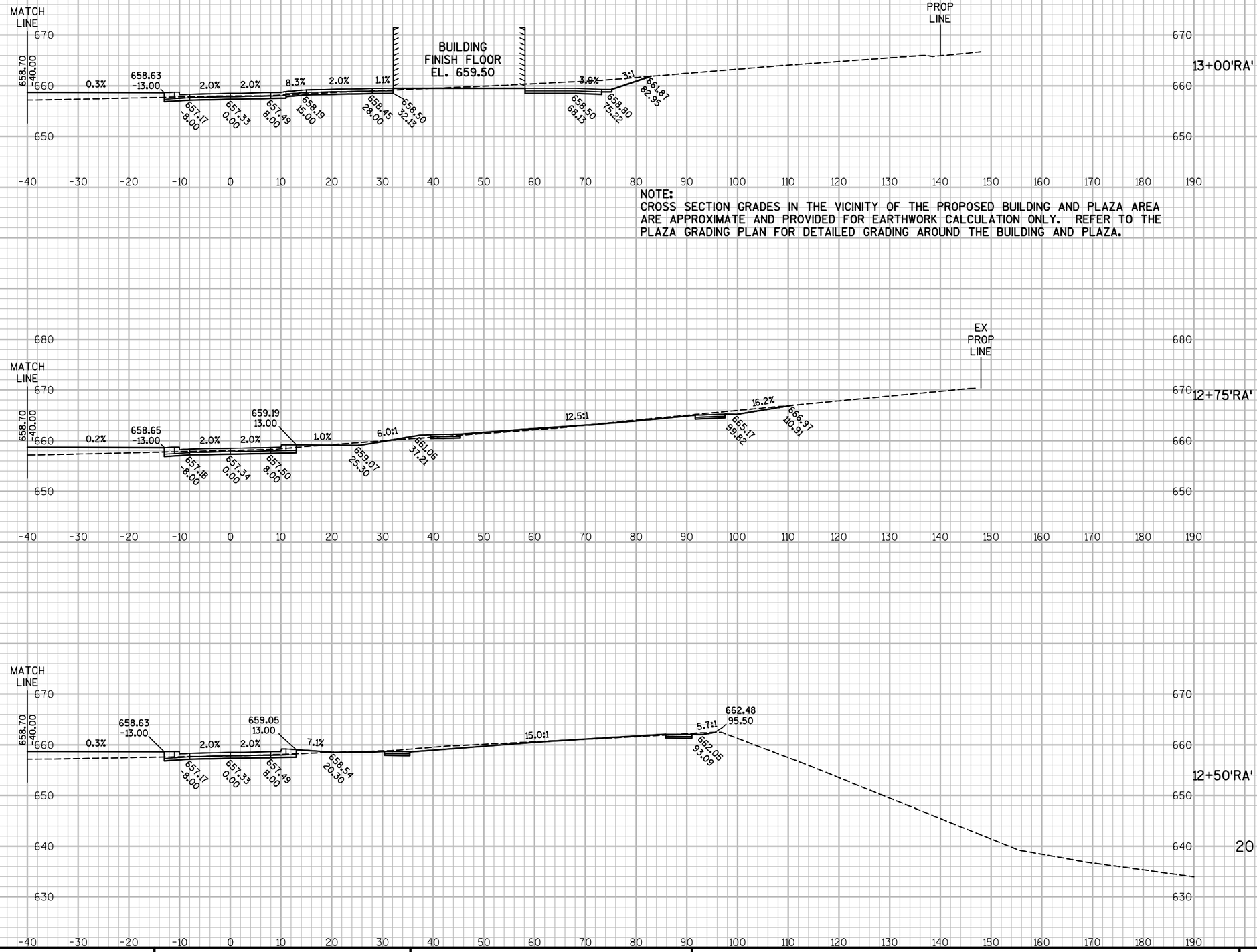
WISDOT/CADDS SHEET 49

PROJECT NO:1070-00-71	HWY: REST AREA NO. 31	COUNTY:LA CROSSE	CROSS SECTIONS: XSECTIONS	SHEET	E

FILE NAME : P:\UZ\W\WITCO\131411\5-FINAL-DSGN\51-CONST-DWGS-CAD\40-TRANSHWY\PLN SHTS\090101-XS.DWG
LAYOUT NAME - SECTION SHEET

PLOT DATE : 12/17/2015 11:45 PM PLOT BY : NATE MCLAUGHLIN PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



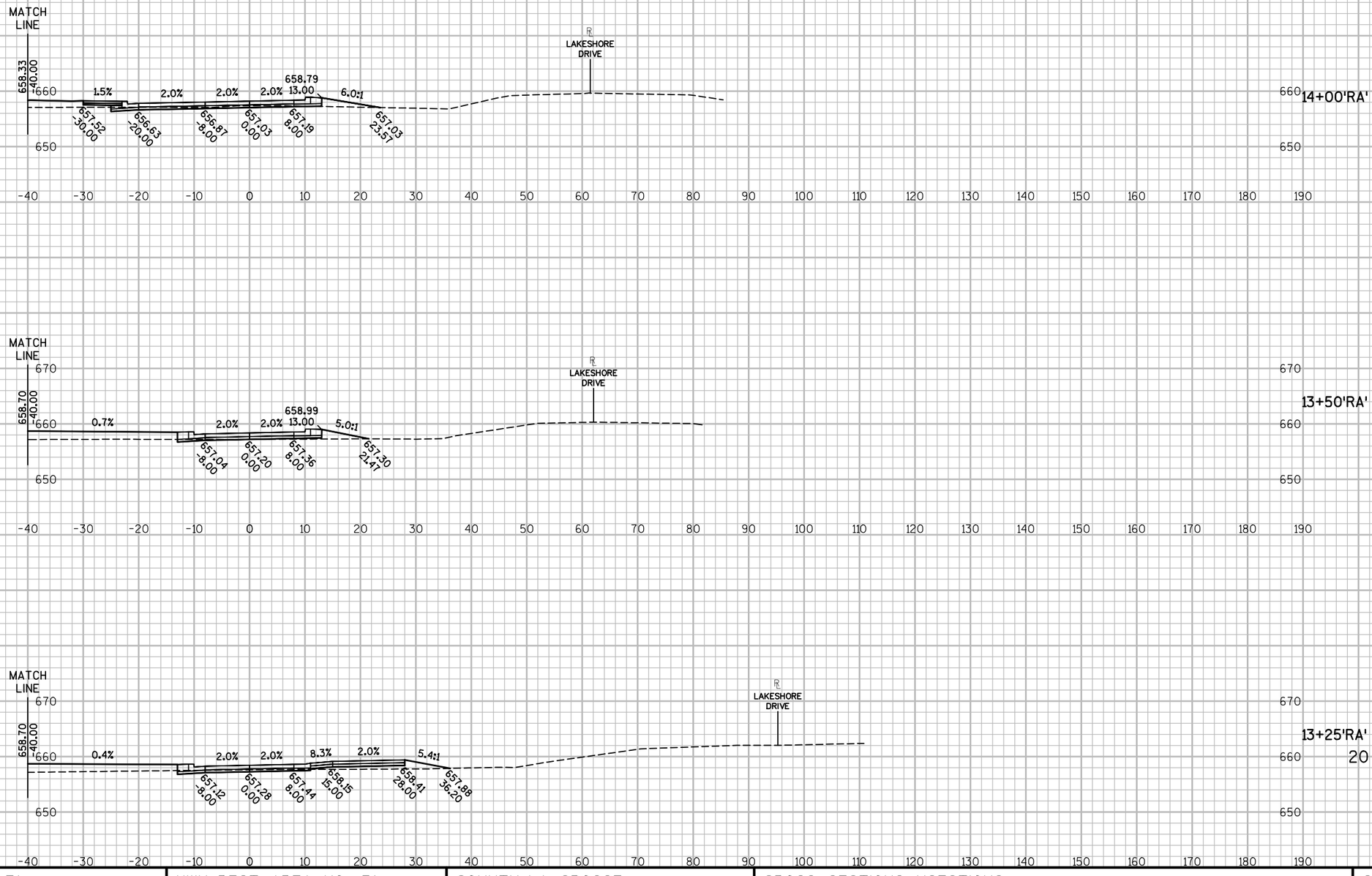
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PROJECT NO:1070-00-71	HWY:REST AREA NO. 31	COUNTY:LA CROSSE	CROSS SECTIONS: XSECTIONS	SHEET	E

FILE NAME : P:\UZ\W\WITCO\131411\5-FINAL-DSGN\51-CONST-DWGS-CAD\40-TRANSHWY\PLN SHTS\090101-XS.DWG
LAYOUT NAME - SECTION SHEET

PLOT DATE : 12/17/2015 11:46 PM PLOT BY : NATE MCLAUGHLIN PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



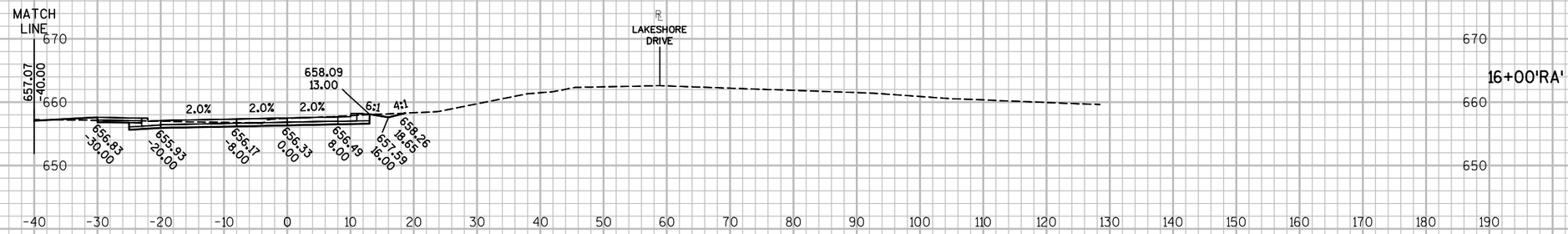
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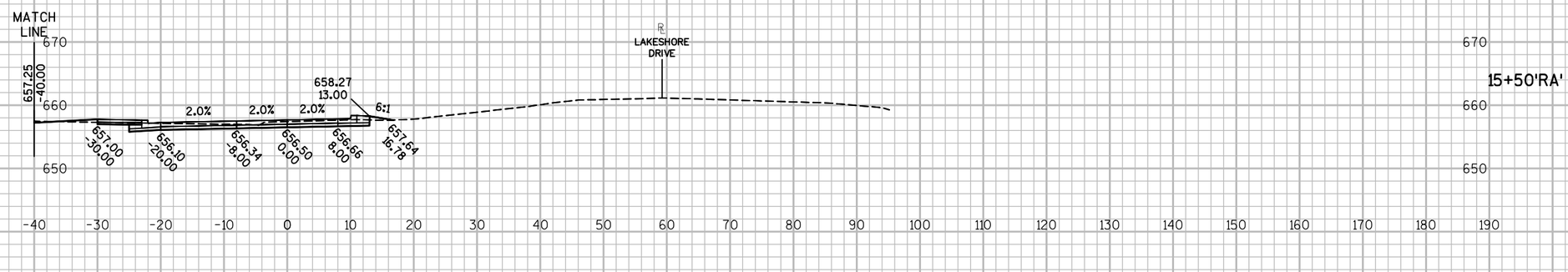
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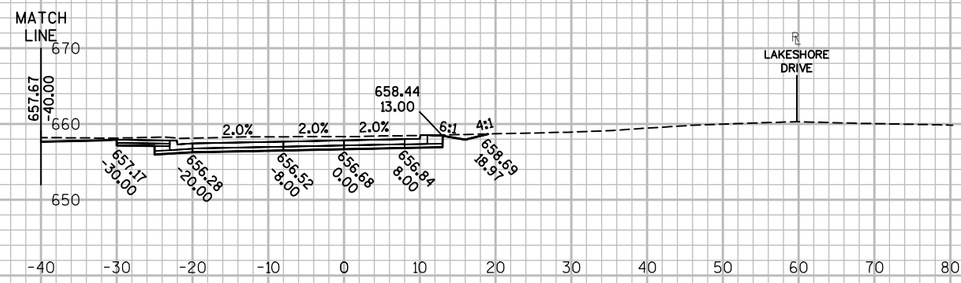
PROJECT NO:1070-00-71	HWY:REST AREA NO. 31	COUNTY:LA CROSSE	CROSS SECTIONS: XSECTIONS	SHEET 265	E

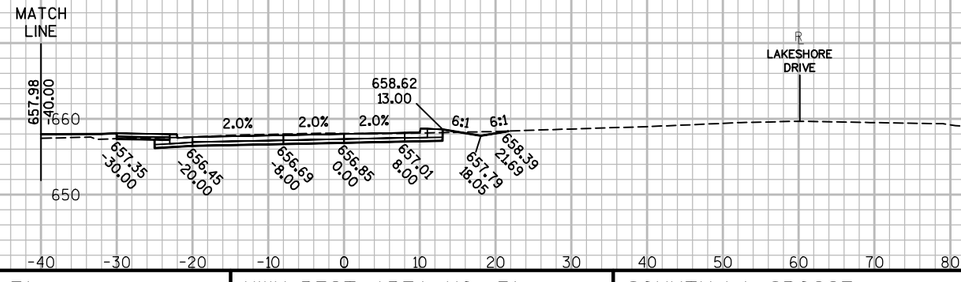
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LAYOUT NAME - SECTION SHEET

PLOT DATE : 12/17/2015 11:46 PM PLOT BY : NATE MCLAUGHLIN PLOT NAME : PLOT SCALE : 1 IN:20 FT









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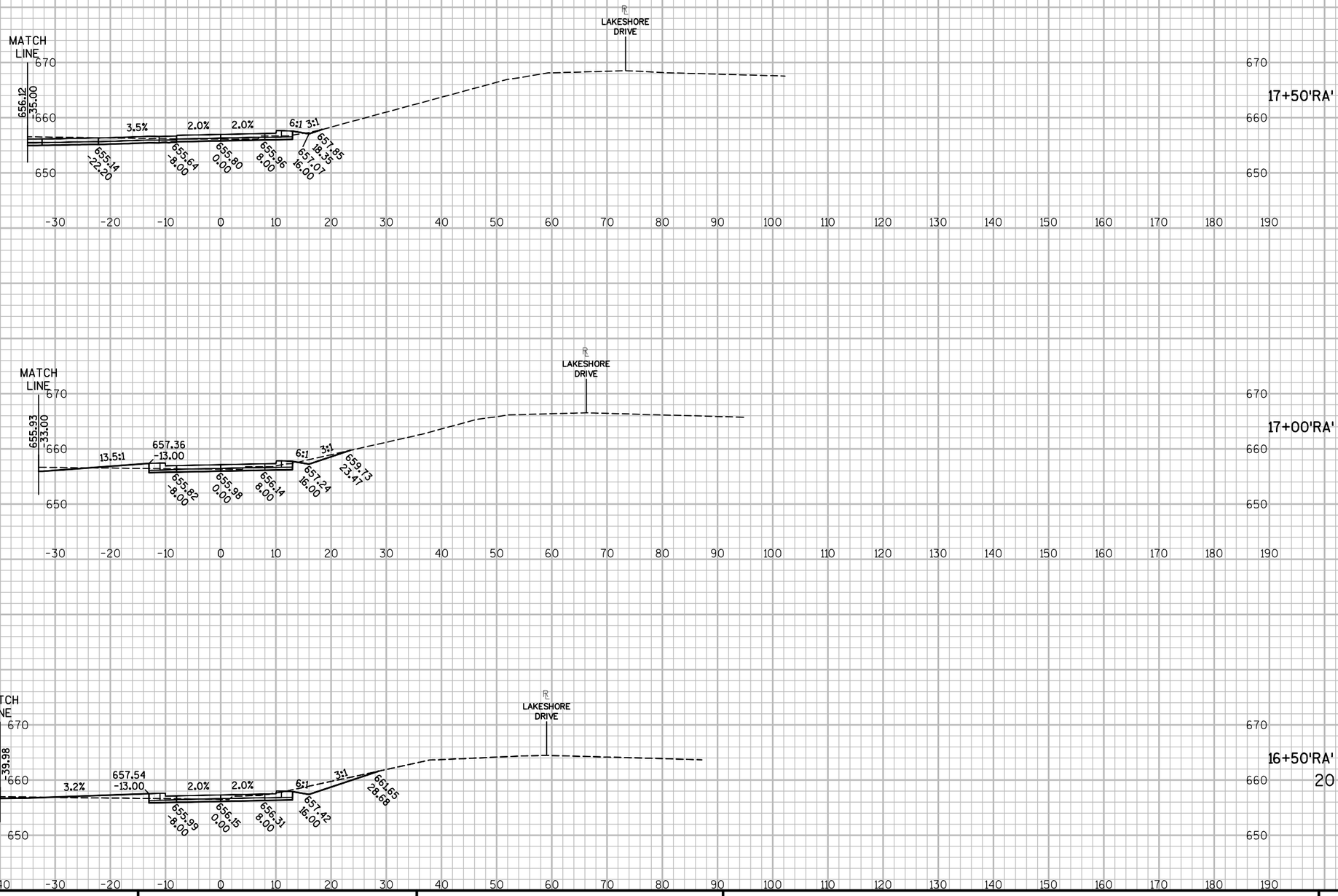
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PROJECT NO:1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	CROSS SECTIONS: XSECTIONS	SHEET	E

FILE NAME : P:\UZ\W\WITCO\131411\5-FINAL-DSGN\51-CONST-DWGS-CAD\40-TRANSHWY\PLN SHTS\090101-XS.DWG
LAYOUT NAME - SECTION SHEET

PLOT DATE : 12/17/2015 11:46 PM PLOT BY : NATE MCLAUGHLIN PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



9

PROJECT NO:1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	CROSS SECTIONS: XSECTIONS	SHEET	E

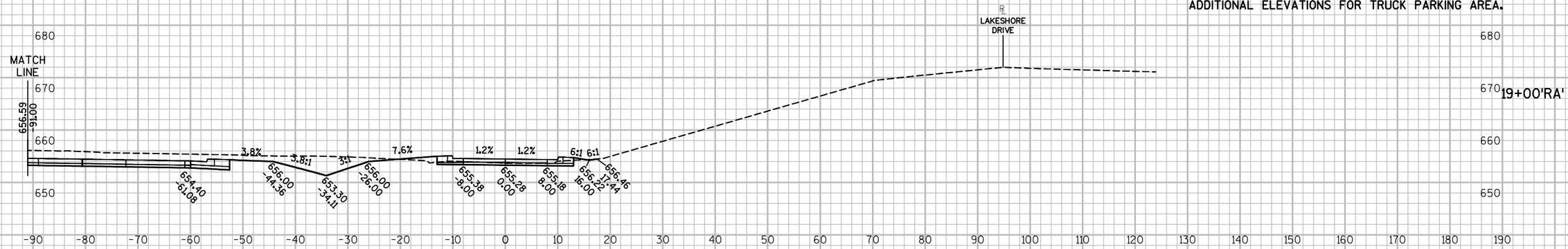
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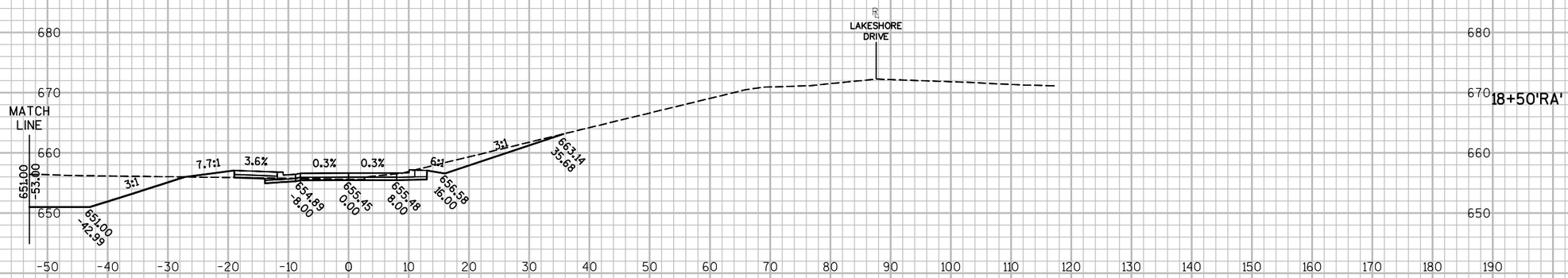
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LAYOUT NAME - SECTION SHEET

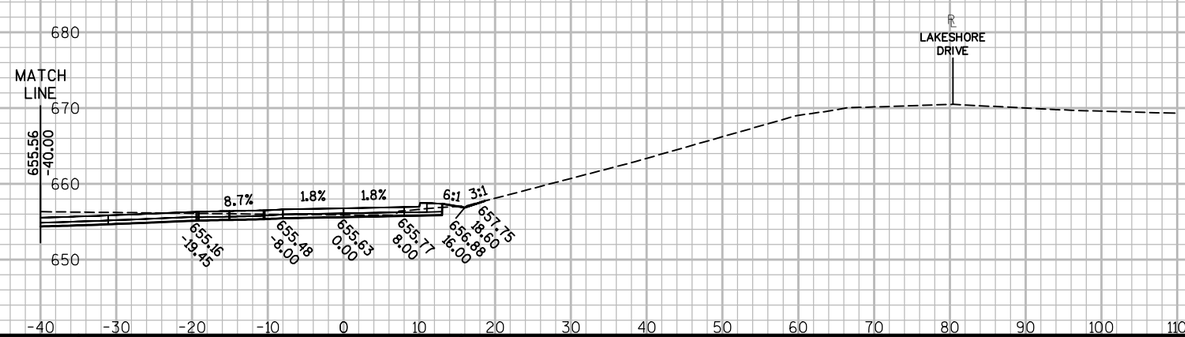
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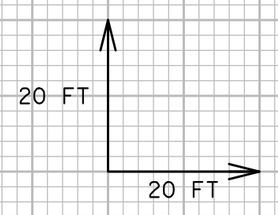
WISDOT/CADDS SHEET 49

NOTE:
SEE PAVEMENT GRADE AND JOINT LAYOUT FOR
ADDITIONAL ELEVATIONS FOR TRUCK PARKING AREA.







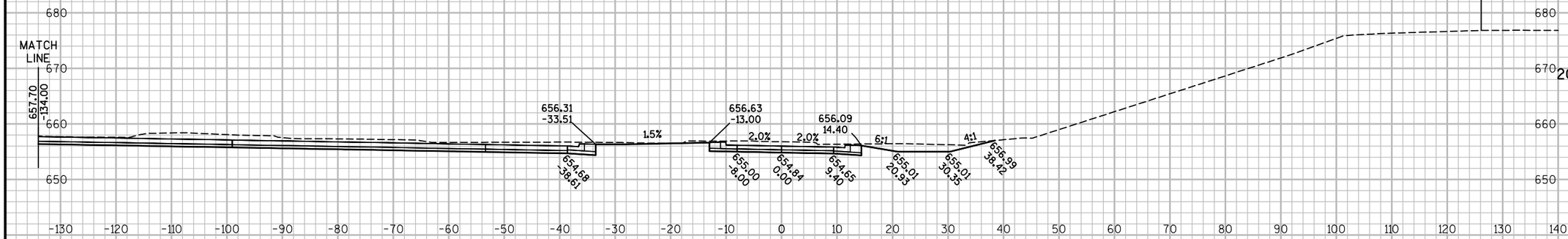


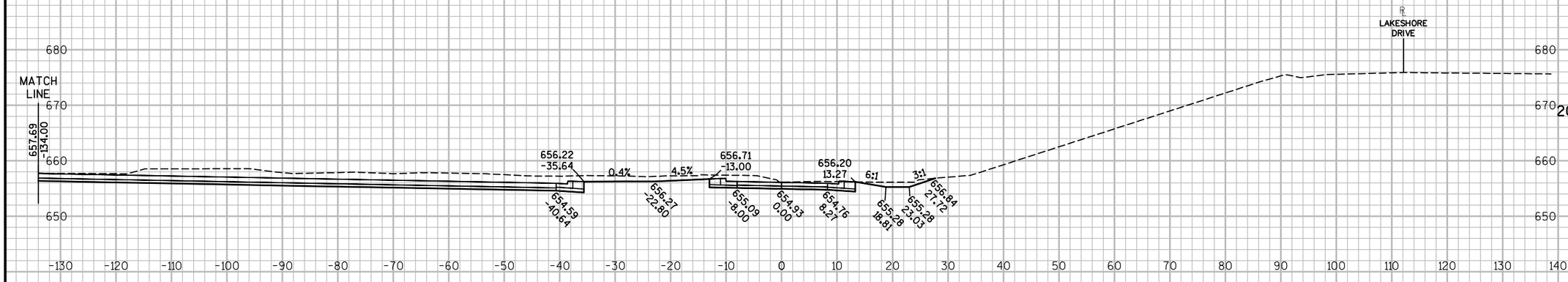
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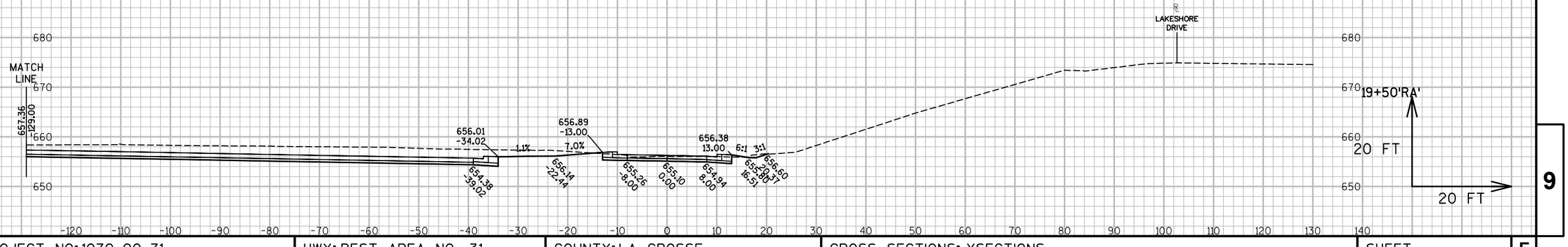
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PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	CROSS SECTIONS: XSECTIONS	SHEET 268	E

NOTE:
SEE PAVEMENT GRADE AND JOINT LAYOUT FOR
ADDITIONAL ELEVATIONS FOR TRUCK PARKING AREA.



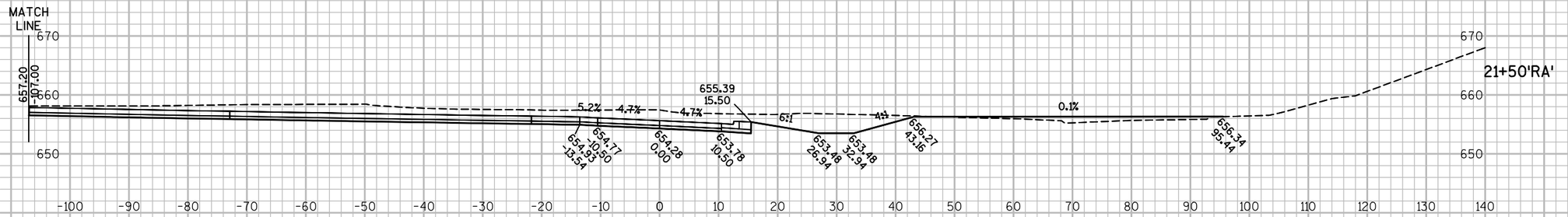


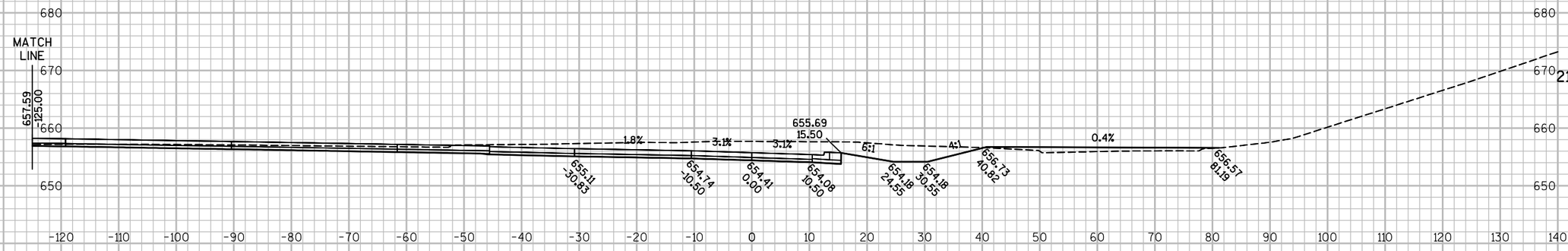


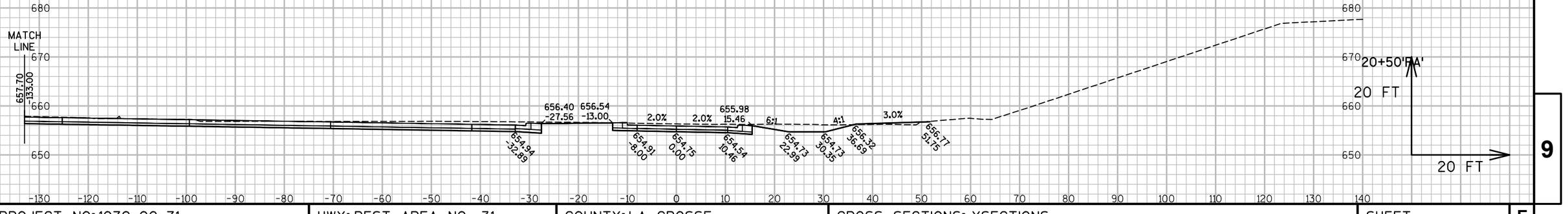
PROJECT NO: 1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	CROSS SECTIONS: XSECTIONS	SHEET	E

FILE NAME : P:\UZ\W\WITCO\131411\5-FINAL-DSGN\51-CONST-DWGS-CAD\40-TRANSHWY\PLN SHTS\090101-XS.DWG
LAYOUT NAME - SECTION SHEET
PLOT DATE : 12/17/2015 11:47 PM PLOT BY : NATE MCLAUGHLIN PLOT NAME : PLOT SCALE : 1 IN:20 FT

NOTE:
SEE PAVEMENT GRADE AND JOINT LAYOUT FOR
ADDITIONAL ELEVATIONS FOR TRUCK PARKING AREA.







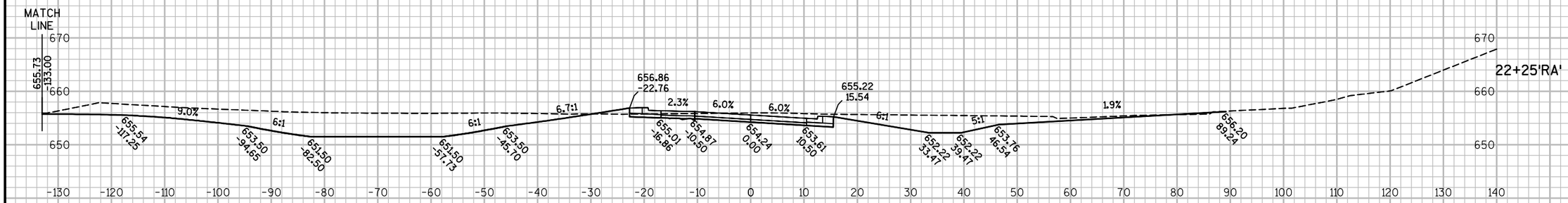
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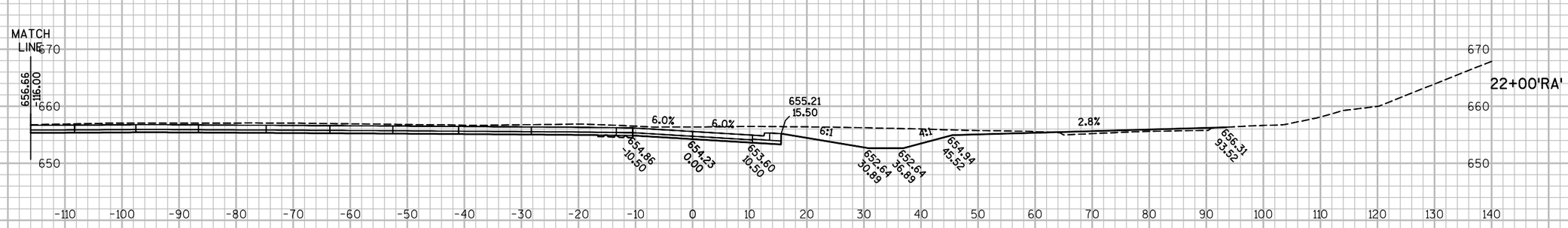
PROJECT NO:1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	CROSS SECTIONS: XSECTIONS	SHEET	E

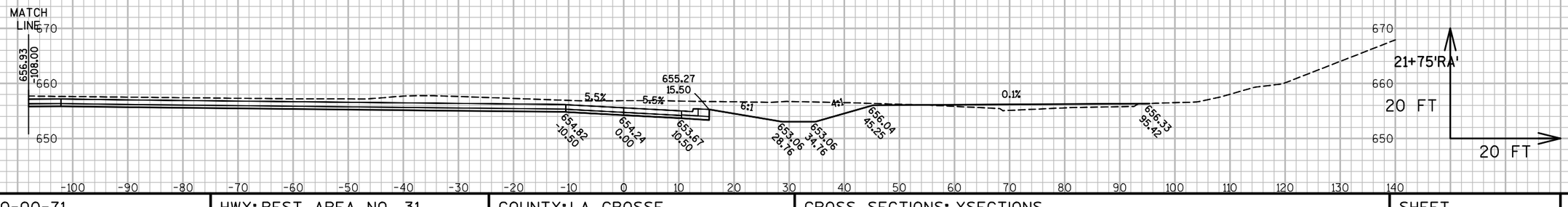
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LAYOUT NAME - SECTION SHEET

PLOT DATE : 12/17/2015 11:47 PM PLOT BY : NATE MCLAUGHLIN PLOT NAME : PLOT SCALE : 1 IN:20 FT

NOTE:
SEE PAVEMENT GRADE AND JOINT LAYOUT FOR
ADDITIONAL ELEVATIONS FOR TRUCK PARKING AREA.



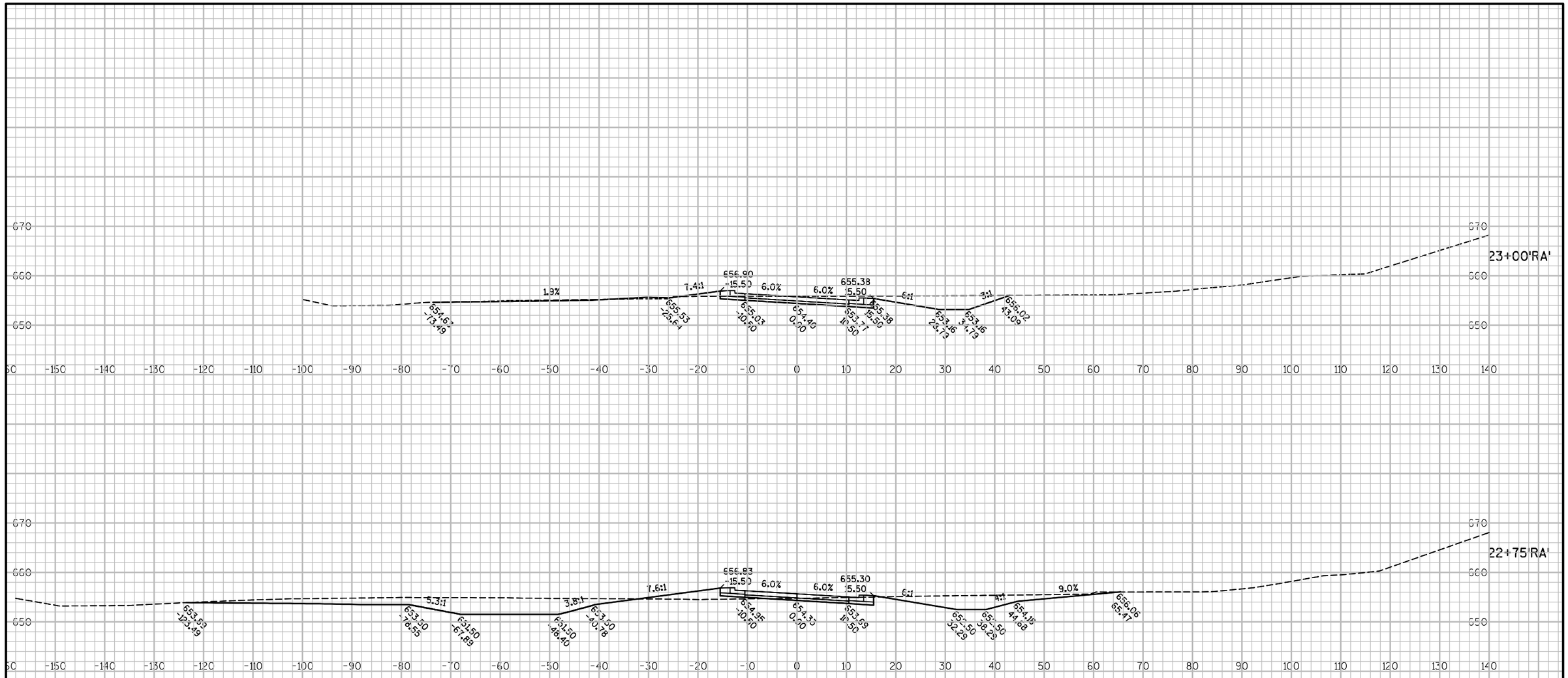




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PROJECT NO:1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	CROSS SECTIONS: XSECTIONS	SHEET	E

FILE NAME : P:\UZ\W\WITCO\131411\5-FINAL-DSGN\51-CONST-DWGS-CAD\40-TRANSHWY\PLN SHTS\090101-XS.DWG
LAYOUT NAME - SECTION SHEET
PLOT DATE : 12/17/2015 11:47 PM PLOT BY : NATE MCLAUGHLIN PLOT NAME : PLOT SCALE : 1 IN:20 FT



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PROJECT NO:1070-00-71	HWY: REST AREA NO. 31	COUNTY: LA CROSSE	CROSS SECTIONS: XSECTIONS	SHEET	E

FILE NAME : P:\UZ\W\WITCO\131411\5-FINAL-DSGN\51-CONST-DWGS-CAD\40-TRANSHWY\PLN SHTS\090101-XS.DWG
LAYOUT NAME - SECTION SHEET

PLOT DATE : 12/17/2015 11:47 PM PLOT BY : NATE MCLAUGHLIN PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

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PROJECT NO:1070-00-71	HWY:REST AREA NO. 31	COUNTY:LA CROSSE	CROSS SECTIONS: XSECTIONS	SHEET 273	E

FILE NAME : P:\UZ\W\WITCO\131411\5-FINAL-DSGN\51-CONST-DWGS-CAD\40-TRANSHWY\PLN SHTS\090101-XS.DWG
LAYOUT NAME - SECTION SHEET

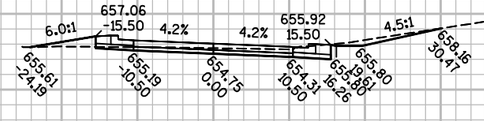
PLOT DATE : 12/17/2015 11:47 PM PLOT BY : NATE MCLAUGHLIN PLOT NAME : PLOT SCALE : 1 IN:20 FT

680 670 660 650

-150 -140 -130 -120 -110 -100 -90 -80 -70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

24+50'RA'

END PROJECT 1070-00-71
STA 24+05.55RA'



24+00'RA'

20 FT
20 FT

9 9

PROJECT NO:1070-00-71	HWY:REST AREA NO. 31	COUNTY:LA CROSSE	CROSS SECTIONS: XSECTIONS	SHEET 274	E

FILE NAME : P:\UZ\W\WITCO\131411\5-FINAL-DSGN\51-CONST-DWGS-CAD\40-TRANSHWY\PLN SHTS\090101-XS.DWG
LAYOUT NAME - SECTION SHEET

PLOT DATE : 12/17/2015 11:48 PM PLOT BY : NATE MCLAUGHLIN PLOT NAME : PLOT SCALE : 1 IN:20 FT

Notes

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
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