

ABBREVIATIONS

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

UTILITIES

GAS
ALLIANT ENERGY CORPORATION
GARY OUADE
1000 MAIN STREET
DUBUQUE, IA. 52004-0769
319-584-7395

GAS
ALLIANT JANESVILLE DISTRICT OFFICE
RON ROHM
3730 KENNEDY ROAD
JANESVILLE, WI. 53545
608-757-7514

ELECTRIC
ROCK COUNTY ELECTRIC COOPERATIVE
DENNY SCHULTZ
2815 KENNEDY ROAD
P.O. BOX 1758
JANESVILLE, WI. 53547-1758
608-752-4550

ELECTRIC
AMERICAN TRANSMISSION CO. LLC
ANDY EBERHARDT
N19 W23993 RIDGEVIEW
P.O. BOX 47
WAUKESHA, WI. 53187-0047
262-506-6864

ORDER OF DETAIL SHEETS

- PROJECT OVERVIEW
- TYPICAL SECTIONS
- CONSTRUCTION DETAILS
- PLAN DETAILS
- BERMING & LANDSCAPING BUFFER PLAN
- BUILDING SITE PLAN/PLANTING PLAN
- EROSION CONTROL PLAN
- STORM SEWER PLAN
- UTILITY SERVICE CONNECTION PLAN
- SEPTIC PLAN
- ITS SYSTEM PLAN
- PERMANENT SIGNING AND MARKING
- LIGHTING PLAN
- LIGHTING PROTECTION AND GROUNDING SYSTEM PLAN
- WEIGH-IN-MOTION SYSTEM PLANS
- STATIC SCALE SYSTEM PLANS
- COMMUNICATIONS TOWER DETAILS
- BUILDING ARCHITECTURAL PLANS
- TRAFFIC CONTROL AND STAGING PLAN
- ALIGNMENT DETAIL
- CONTROL POINT DETAIL
- SOIL BORING DETAIL

TELEPHONE
AT&T
THOMAS KIEFER
316 W. WASHINGTON AVENUE
ROOM 607
MADISON, WI. 53703
608-282-7894

GENERAL NOTES

- ALL RADII DIMENSIONS WITH OR WITHOUT CURB AND GUTTER ARE MEASURED TO THE EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
- ALL GRADES PROVIDED ALONG RADII ARE ALONG EDGE OF PAVEMENT.
- EXPANSION JOINTS TO BE CONSTRUCTED AT ALL RADII POINTS IN THE CURB AND GUTTER.
- THE LOCATION OF EXISTING AND PROPOSED UTILITIES INSTALLATION AS SHOWN THE PLANS, ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.
- MISCELLANEOUS REMOVAL ITEMS REQUIRING RESTORATION OF CONCRETE OR ASPHALT SHALL BE REMOVED TO AN EXISTING JOINT OR SAWED AS DETERMINED BY THE ENGINEER.
- CONTRACTOR SHALL EXERCISE EXTREME CARE SO AS NOT TO DAMAGE MAINLINE PAVEMENT STRUCTURE WHEN REMOVING EXISTING SHOULDER MATERIAL. IF DAMAGE OCCURS DURING REMOVAL OF THE EXISTING SHOULDER MATERIAL, ALL REPAIRS WILL BE DONE AT THE CONTRACTORS EXPENSE.
- EROSION CONTROL FEATURES AS SHOWN IN THE PLANS ARE AT SUGGESTED LOCATIONS. THE ENGINEER MAY MODIFY LOCATIONS AS NEEDED. ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL SUCH TIME AS THE ENGINEER DETERMINES THE MEASURE IS NO LONGER NECESSARY.
- NO TREES AND/OR SHRUBS ARE TO BE REMOVED WITHOUT THE APPROVAL OF THE ENGINEER.
- PIPE ELEVATIONS, LENGTHS, AND LOCATIONS AS SHOWN ON THE PLANS, MAY BE ADJUSTED TO FIT EXISTING FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
- ALL CONCRETE PIPE SHALL HAVE THE APRON ENDWALL AND THE FIRST TWO PIPE JOINTS TIED AT THE JOINTS (3 JOINTS TOTAL). JOINT TIES SHALL BE INCIDENTAL TO THE PIPE ITEM.
- 3 1/2" HMA PAVEMENT, E-3, SHALL BE CONSTRUCTED WITH ONE 1 3/4" LOWER LAYER, AND ONE 1 3/4" UPPER LAYER.
- 4" HMA PAVEMENT, E-3, SHALL BE CONSTRUCTED WITH ONE 2 1/4" LOWER LAYER, AND ONE 1 3/4" UPPER LAYER.
- 5" HMA PAVEMENT, E-1, SHALL BE CONSTRUCTED WITH ONE 2 1/2" LOWER LAYER, AND ONE 2 1/2" UPPER LAYER.
- 7" HMA PAVEMENT, E-3, SHALL BE CONSTRUCTED WITH ONE 2 1/4" LOWER LAYER, ONE 2 1/4" UPPER LAYER AND ONE 2 1/2" UPPER LAYER.
- DISTURBED AREA WITHIN THE RIGHT-OF-WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS, SHALL BE FERTILIZED, SEEDED, AND MULCHED, WITHIN TEN DAYS AFTER TOPSOIL PLACEMENT. SUBGRADE SLOPES SHALL BE TOPSOILED AS WORK PROGRESSES.
- WHEN THE QUANTITY OF THE ITEMS OF BASE OR SURFACE COURSE IS MEASURED BY THE TON, THE DEPTH OR THICKNESS OF THE COURSE SHOWN ON THE PLANS IS APPROXIMATE, AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER.

DNR LIAISON

SOUTH CENTRAL DISTRICT HEADQUARTERS
ATTN. MIKE HALSTED
3911 FISH HATCHERY ROAD
FITCHBURG, WI 53711
(608) 275-3301

DESIGN CONTACT

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



Toll Free (800) 242-8511
Milwaukee Area (414) 259-1181
Hearing Impaired TDD (800) 542-2289
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• DENOTES UTILITIES THAT ARE NOT MEMBERS OF DIGGERS HOTLINE

2

2



LATHERS ROAD

J

J

TOWN OF LA PRAIRIE

TOWNLINE ROAD

TO
JANESVILLE
←



BEGIN PROJECT
STA. 468+30.00

RAMP R/L (ENTRANCE)

OPERATIONS
BUILDING

LOOP R/L

RAMP R/L (EXIT)

END PROJECT
STA. 536+19.36

SCALE R/L

RAMP R/L

IH 39/90 WESTBOUND R/L

IH 39/90 EASTBOUND R/L

MAINLINE
WIM LOCATION

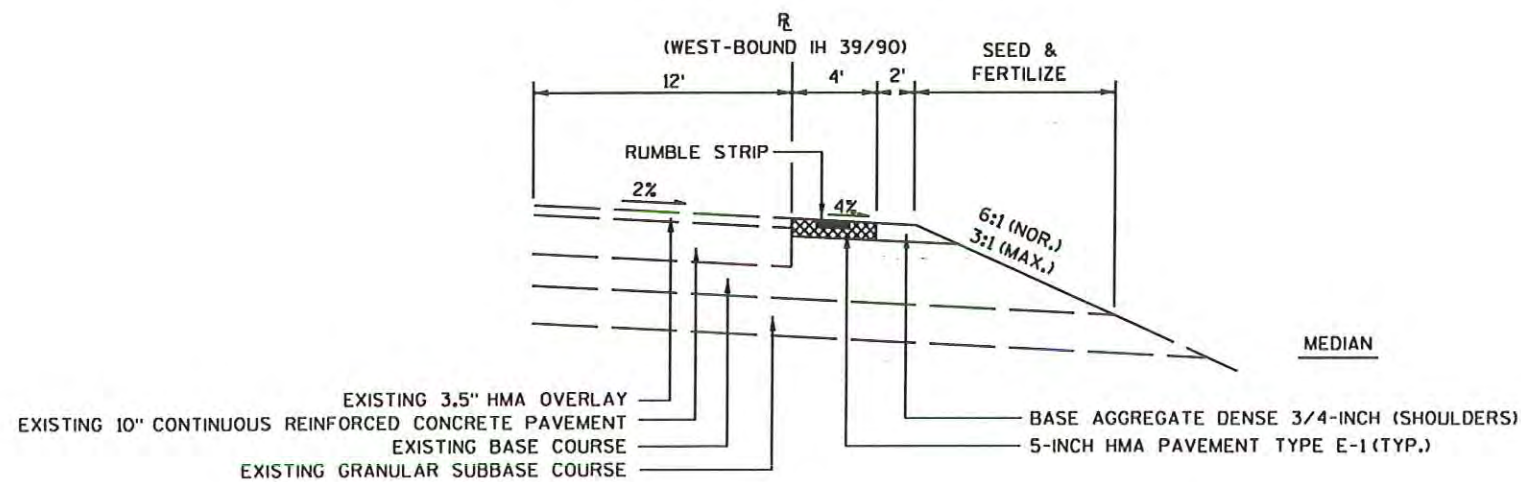
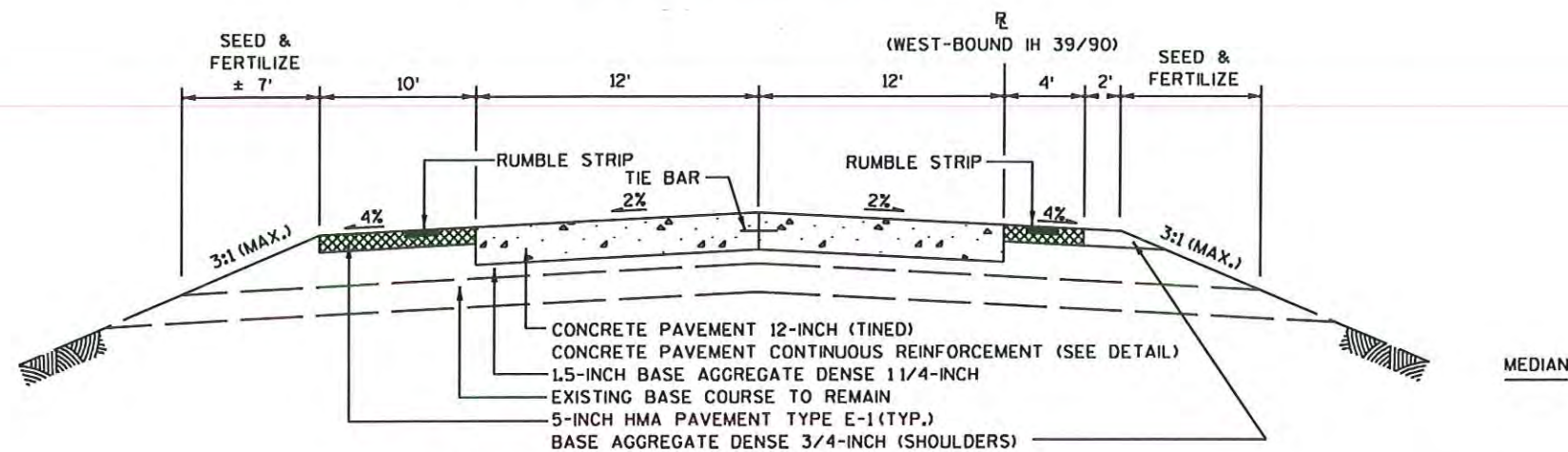
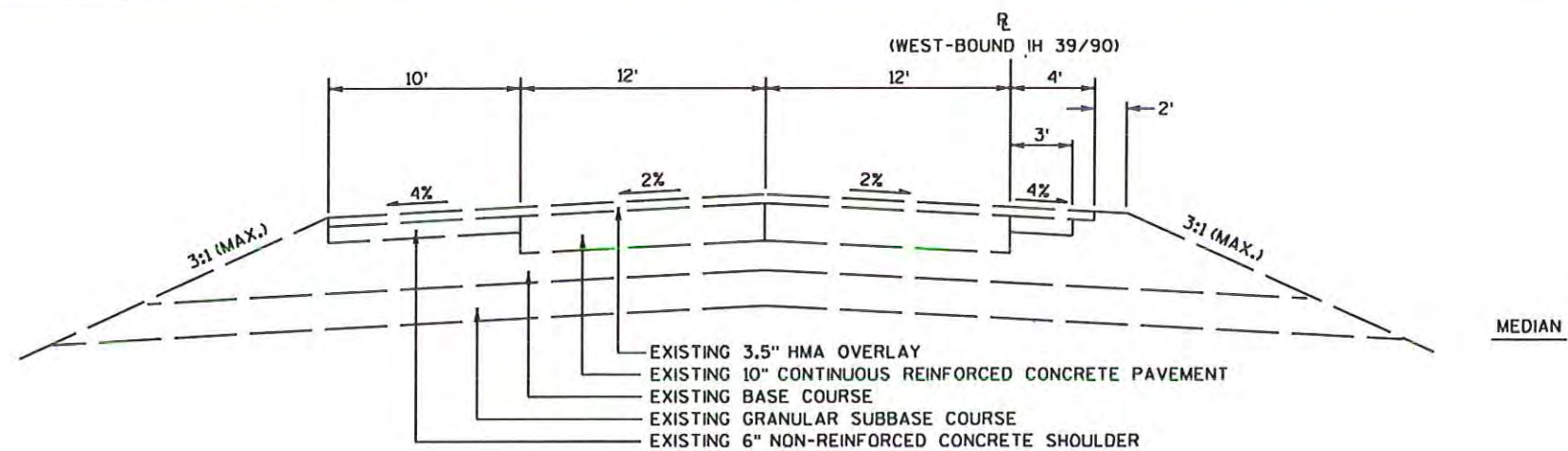
TO
BELOIT
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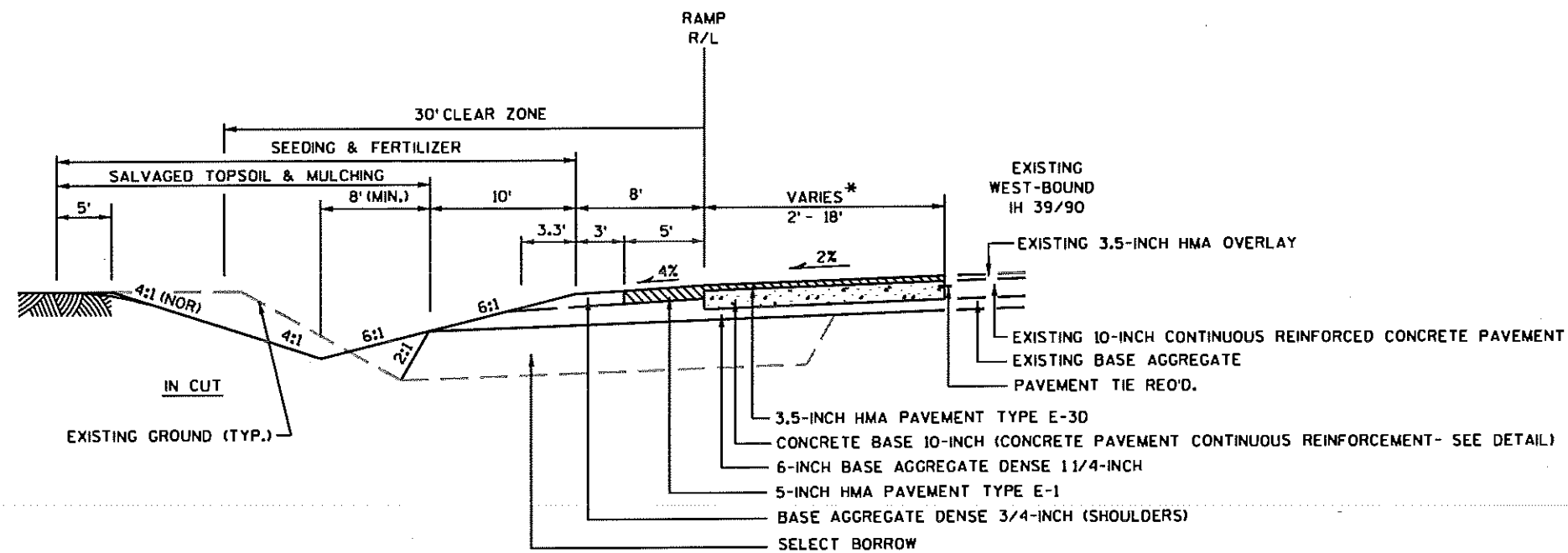


CREEK ROAD

READ ROAD

SUNNY LANE

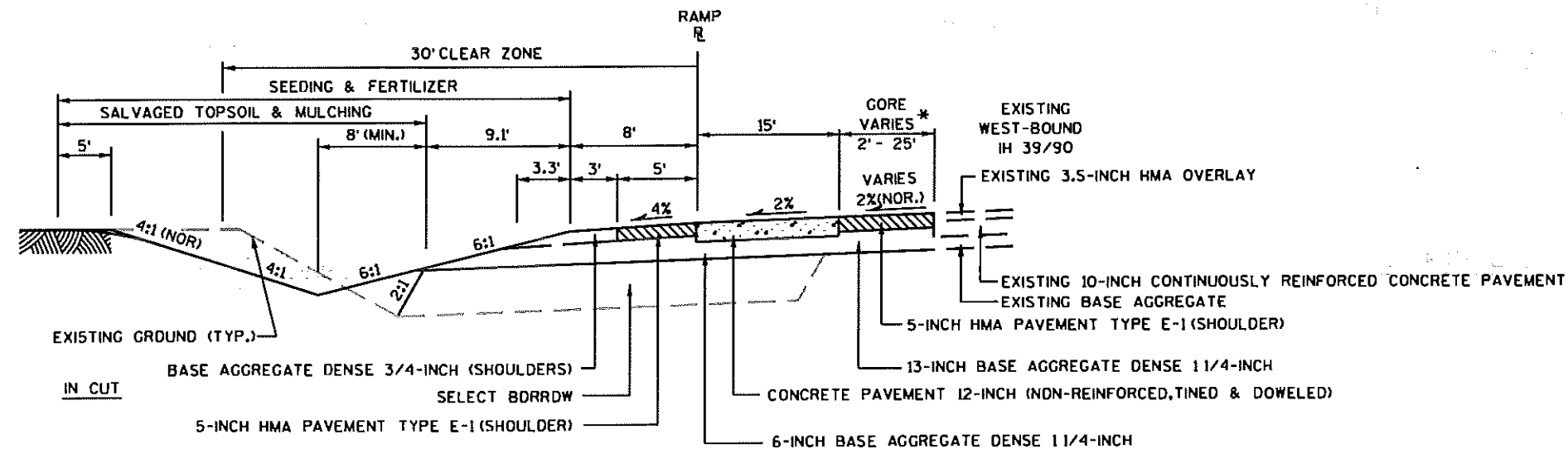




TYPICAL FINISHED SECTION, MAINLINE RAMP TAPER

STA 468+30.00 - STA 485+40.09
STA 534+06.78 - STA 536+19.36

* SEE PLAN DETAILS FOR LOCATIONS

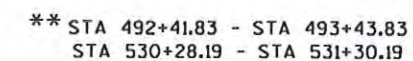
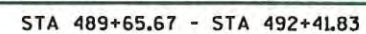


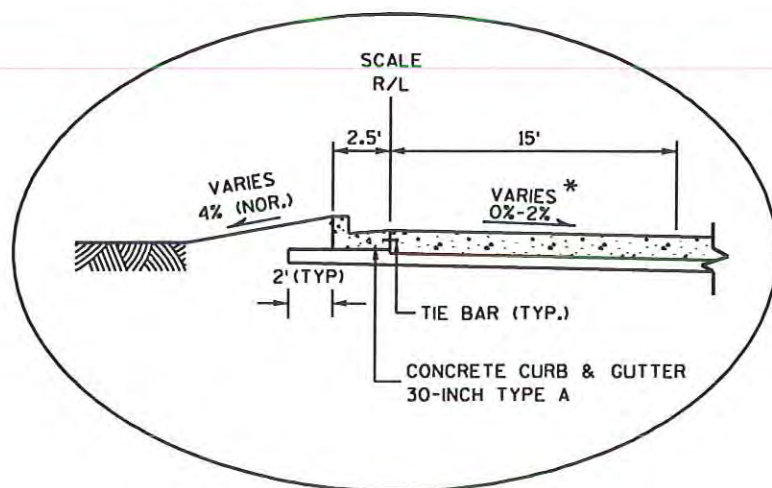
TYPICAL FINISHED SECTION, MAINLINE RAMPS

STA 485+40.09 - STA 489+65.67
STA 531+18.71 - STA 534+06.78

* SEE PLAN DETAILS FOR LOCATIONS

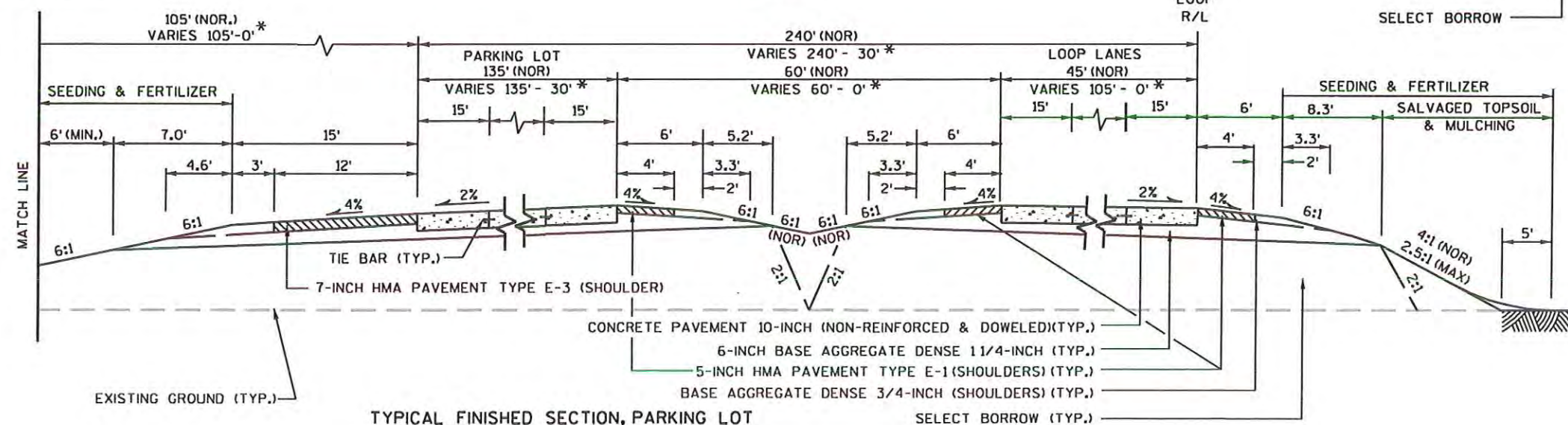
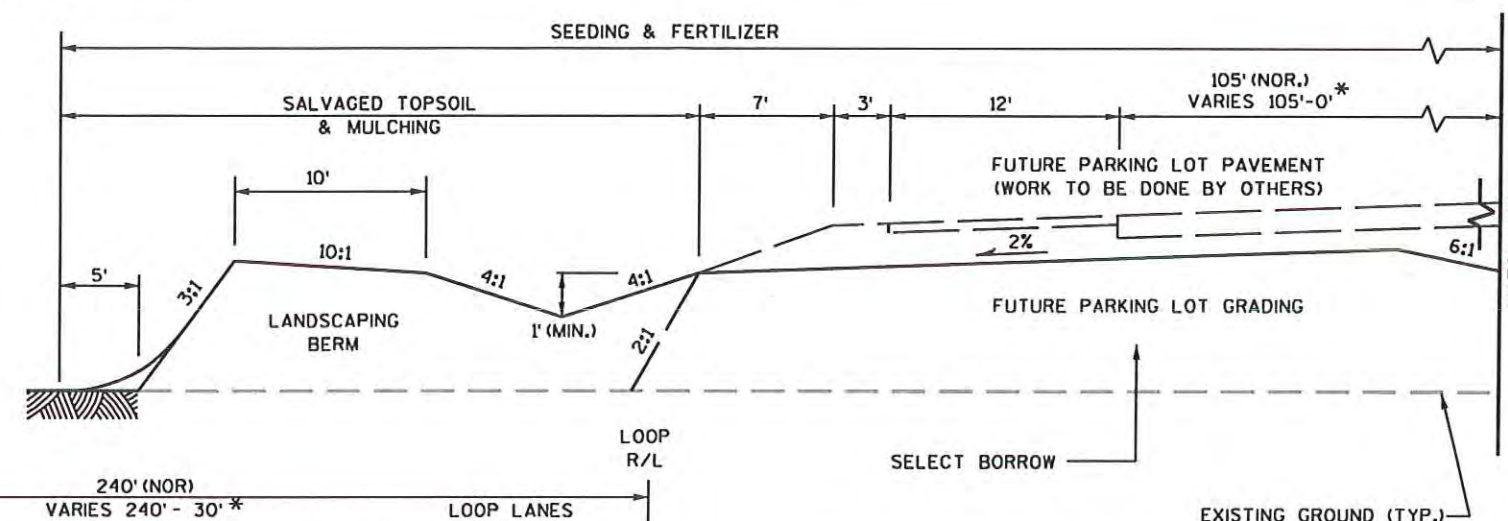
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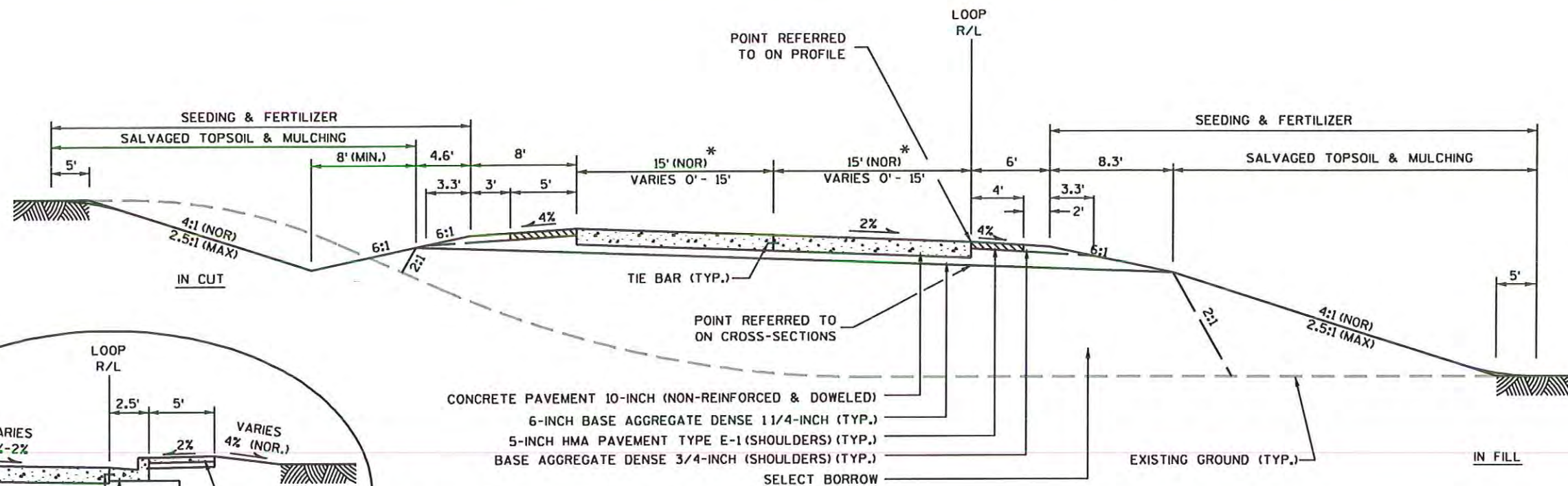


* SEE PLAN DETAILS FOR LOCATIONS

* SEE PLAN DETAILS FOR LOCATIONS



* SEE PLAN DETAILS FOR LOCATIONS



TYPICAL FINISHED SECTION, LOOP

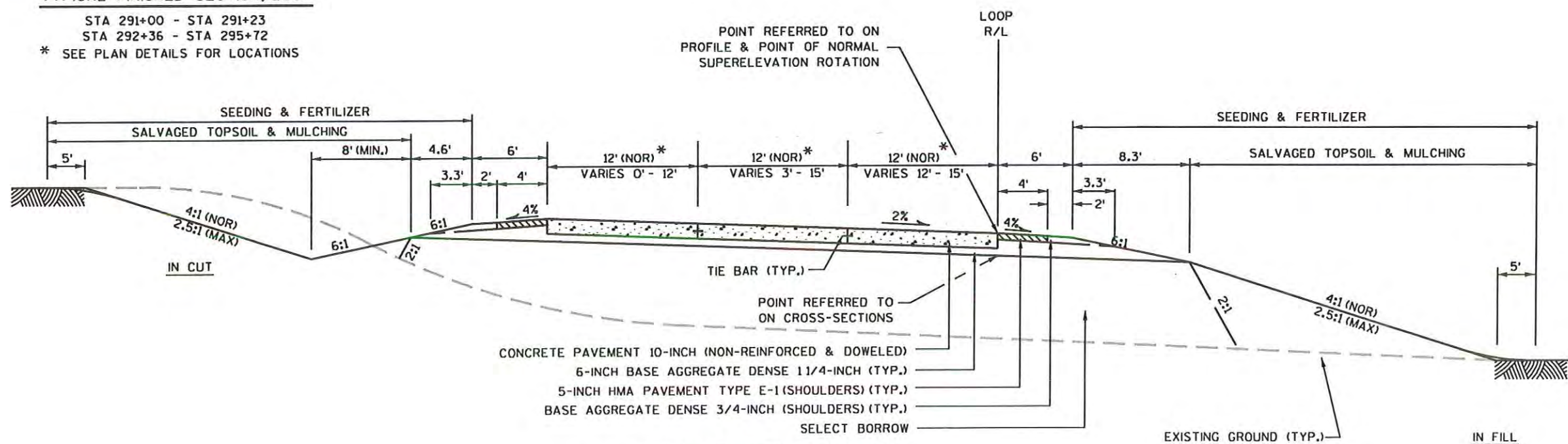
STA 282+73.33 - STA 288+81.70
STA 298+40.11 - STA 301+44.66

* SEE PLAN DETAILS FOR LOCATIONS

TYPICAL FINISHED SECTION, LOOP

STA 291+00 - STA 291+23
STA 292+36 - STA 295+72

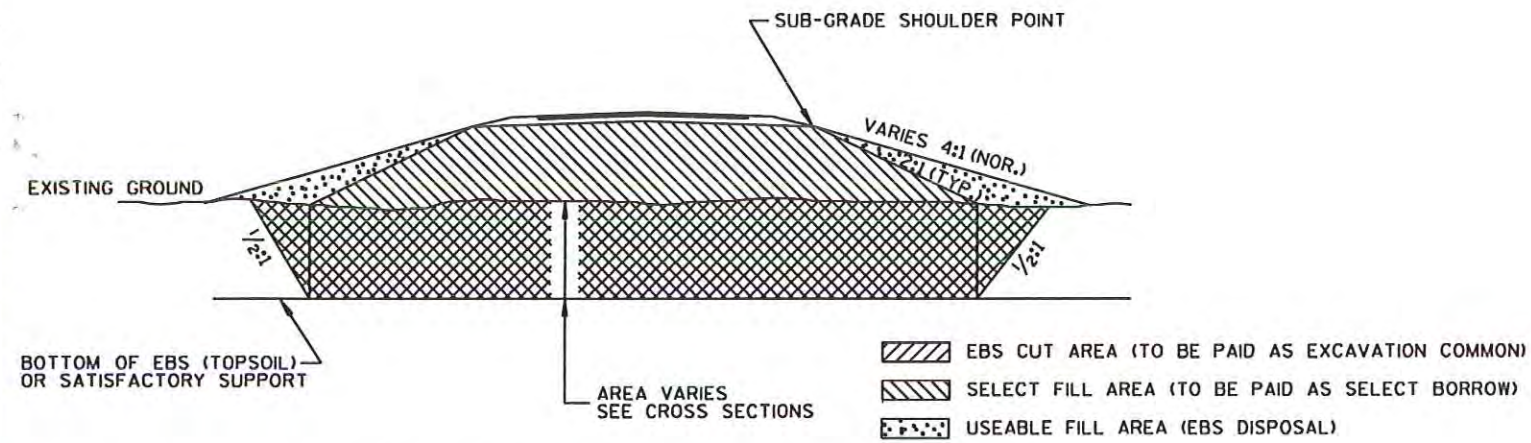
* SEE PLAN DETAILS FOR LOCATIONS



TYPICAL FINISHED SECTION, LOOP

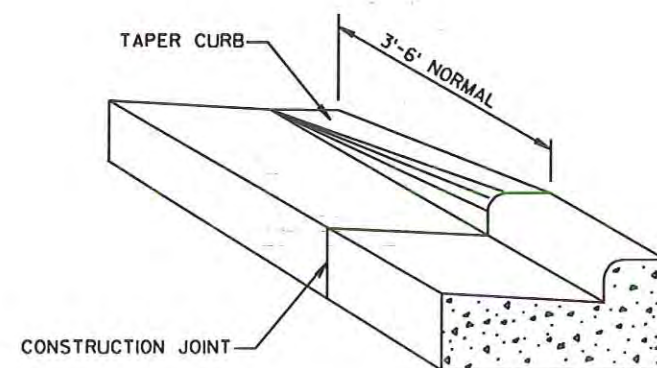
STA 288+81.70 - STA 291+16.29
STA 292+42.95 - STA 293+57.69

* SEE PLAN DETAILS FOR LOCATIONS



TYPICAL EXCAVATION BELOW SUBGRADE SECTION

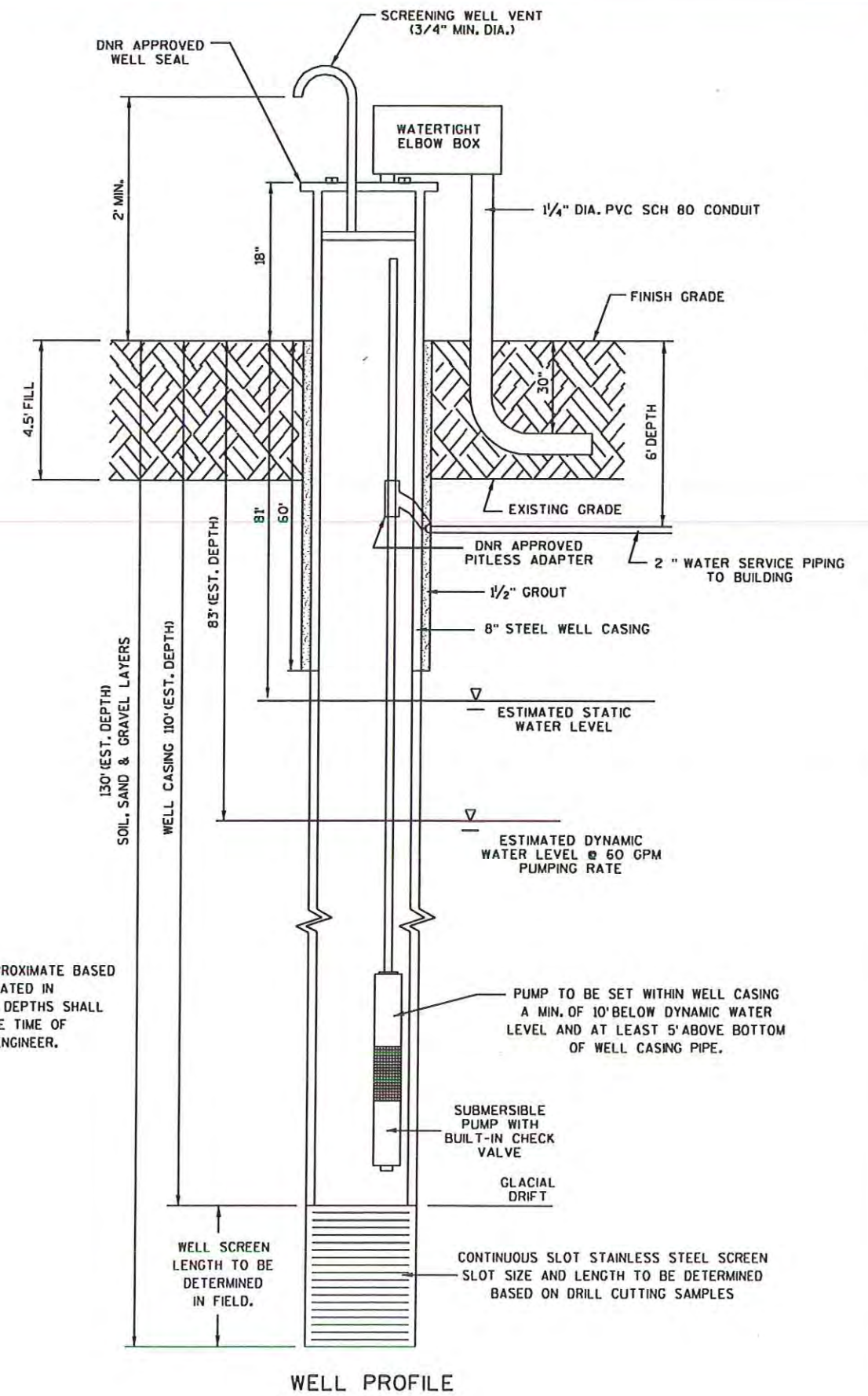
SEE CROSS SECTIONS FOR LOCATIONS



DETAIL OF CURB & GUTTER TERMINI

NOTE:

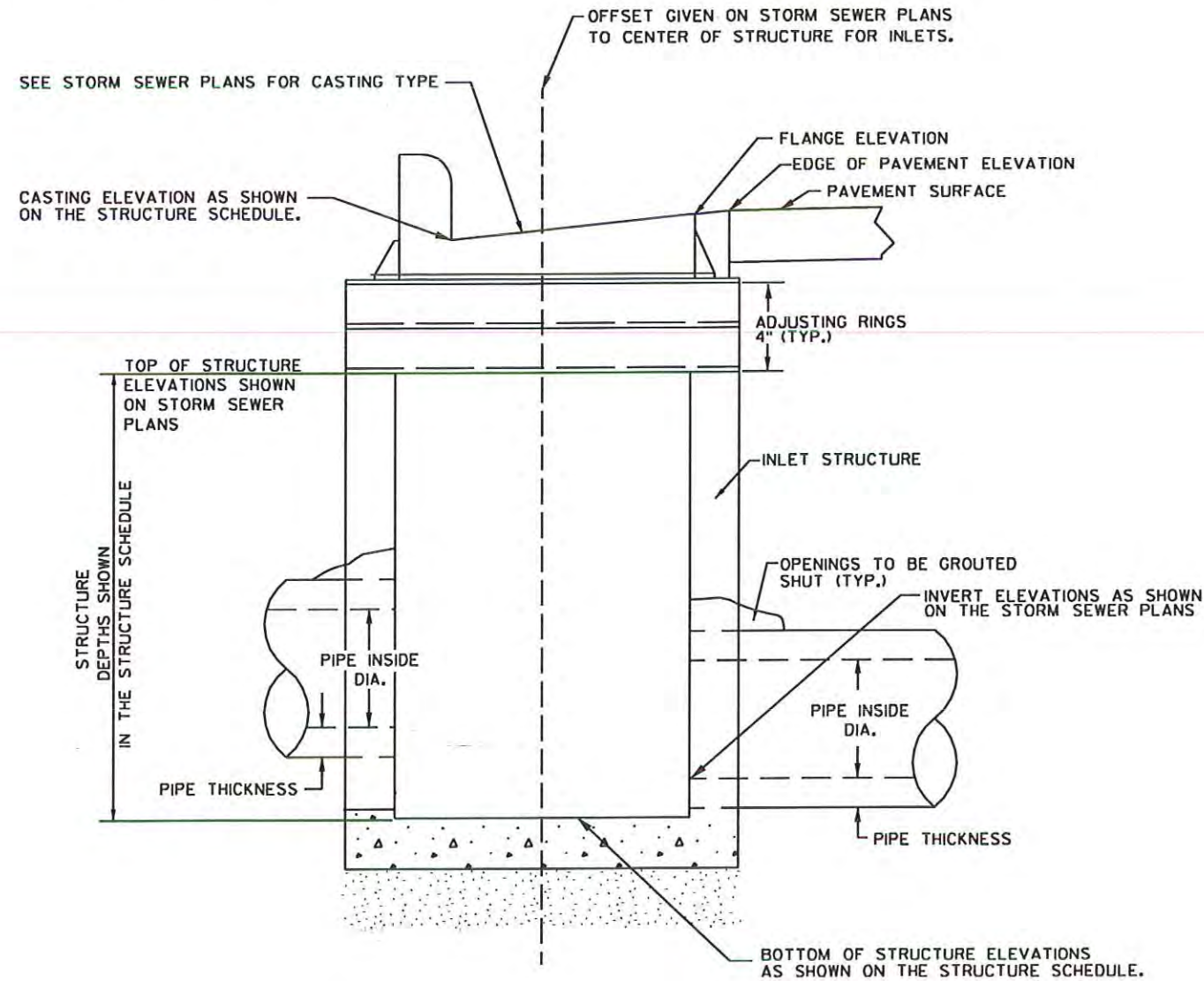
ALL DEPTHS ARE APPROXIMATE BASED ON INFORMATION INDICATED IN EXISTING WELL LOGS. DEPTHS SHALL BE CONFIRMED AT THE TIME OF CONSTRUCTION WITH ENGINEER.



GENERAL NOTES:

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

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

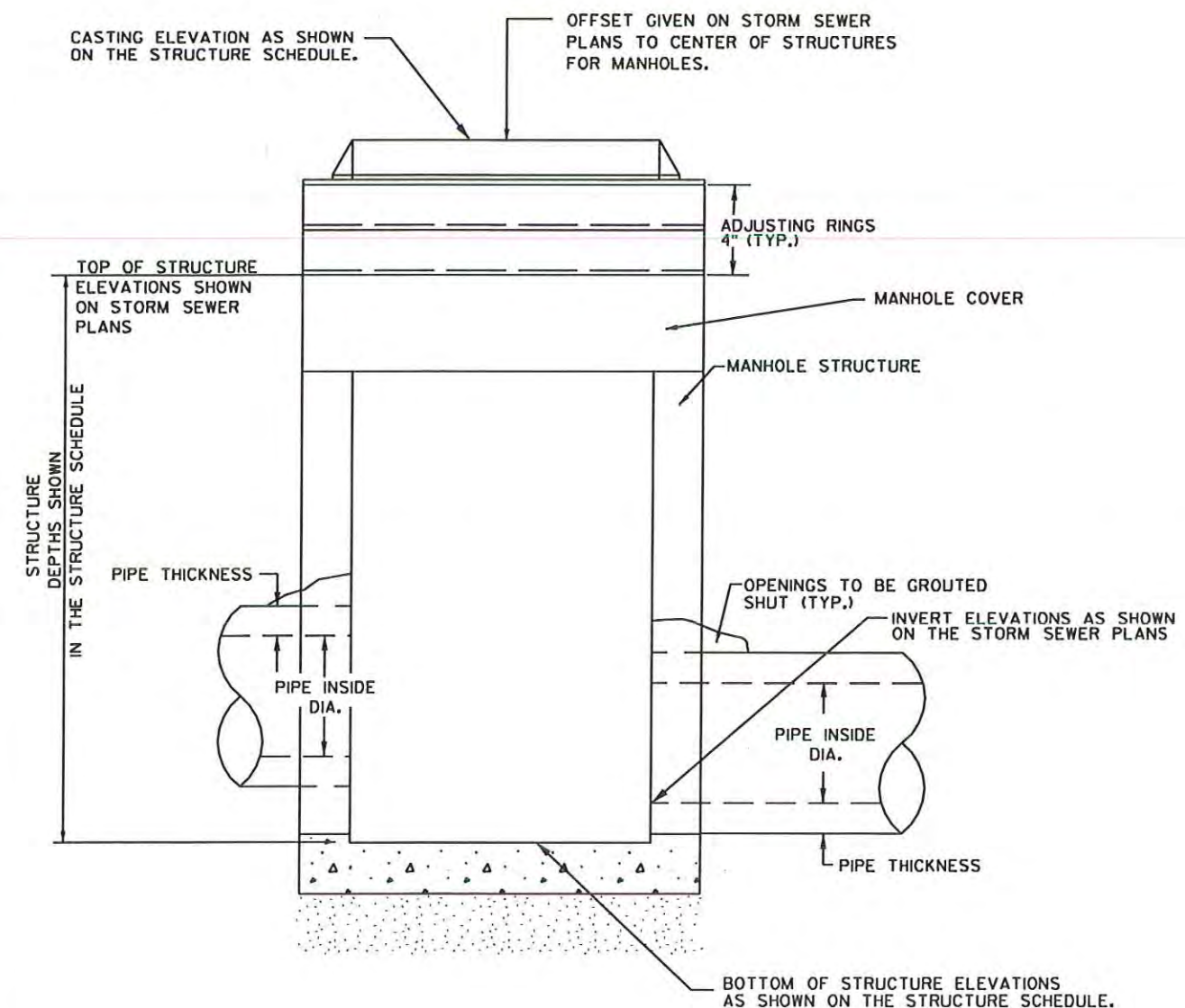


INLET W/CASTING DETAIL

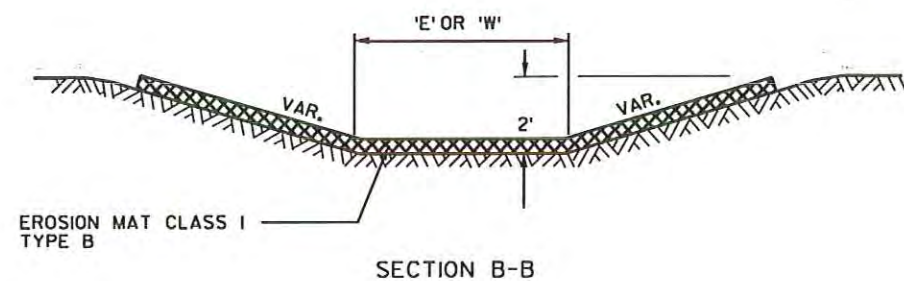
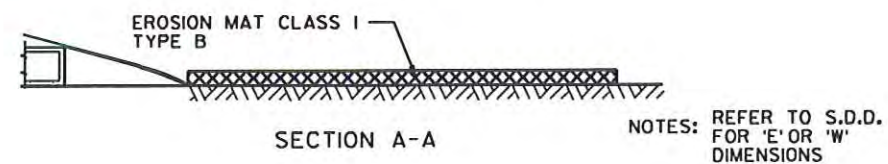
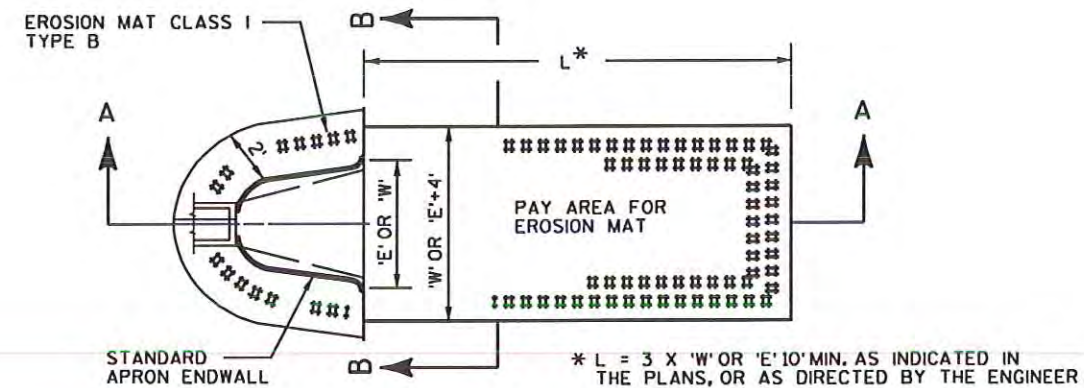
GENERAL NOTES:

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

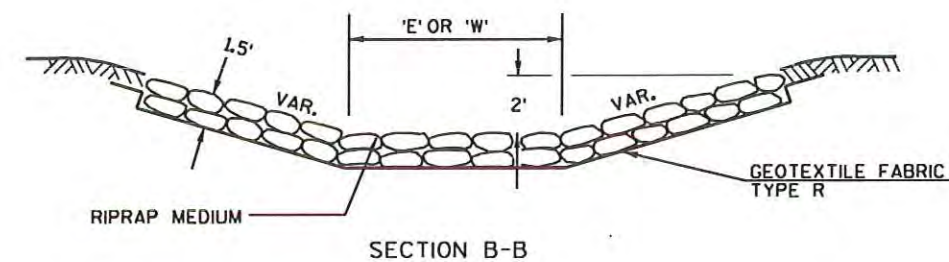
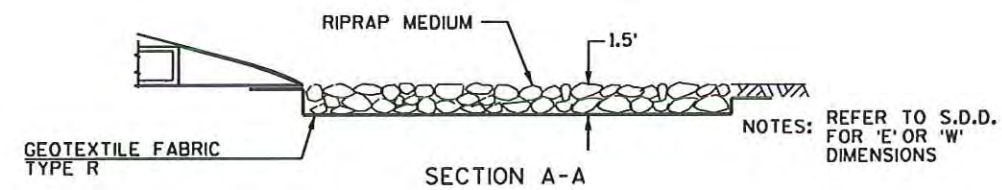
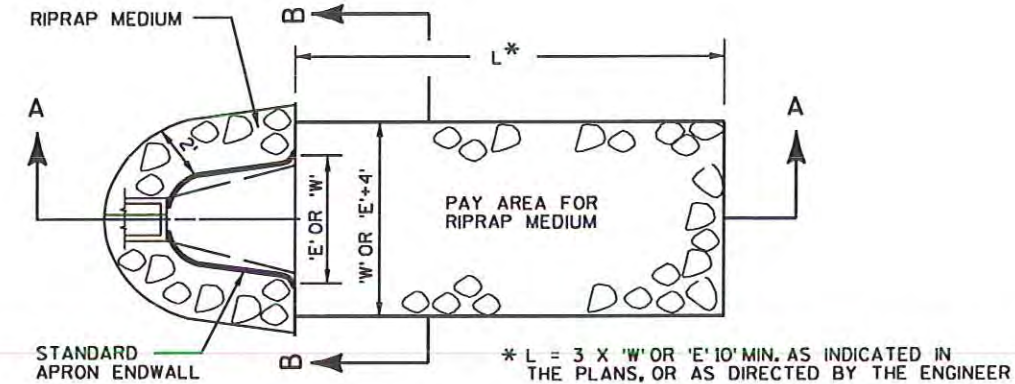
DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, APPLICABLE SPECIAL PROVISIONS, AND S.D.D. FOR MANHOLES.



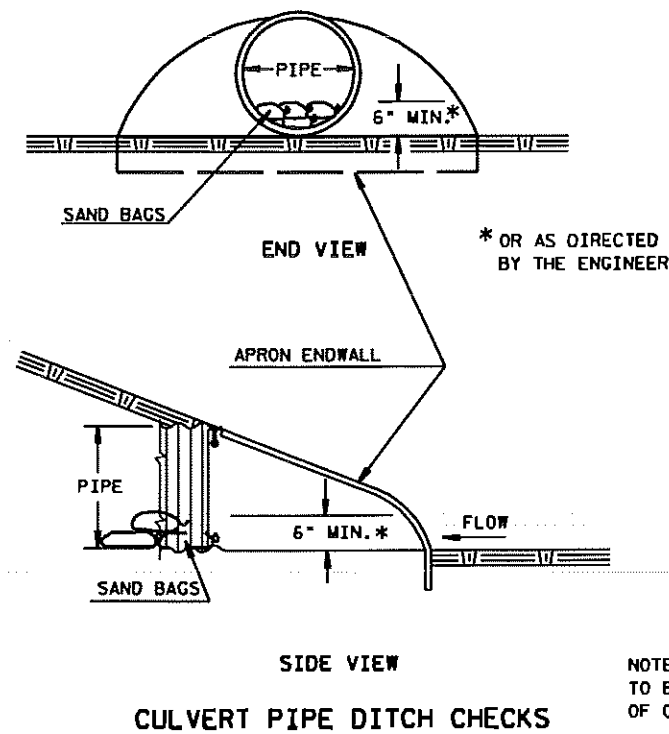
MANHOLE W/CASTING DETAIL



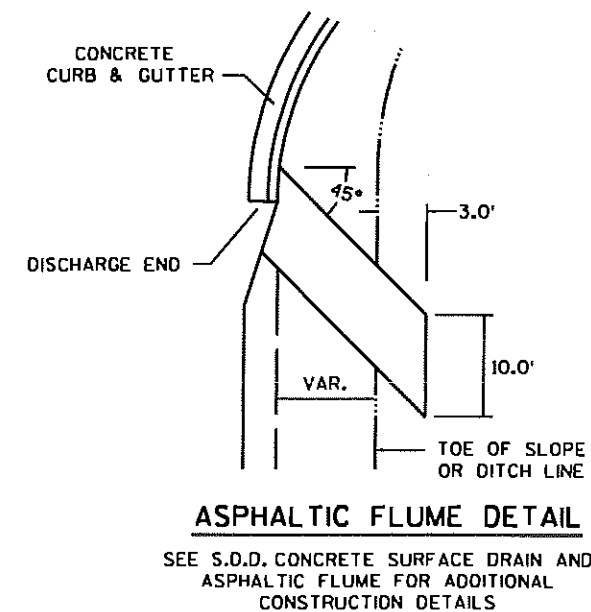
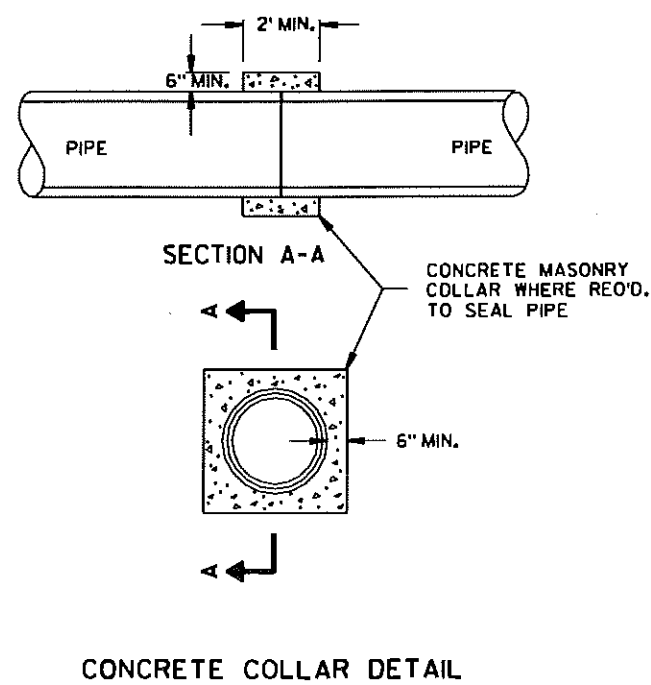
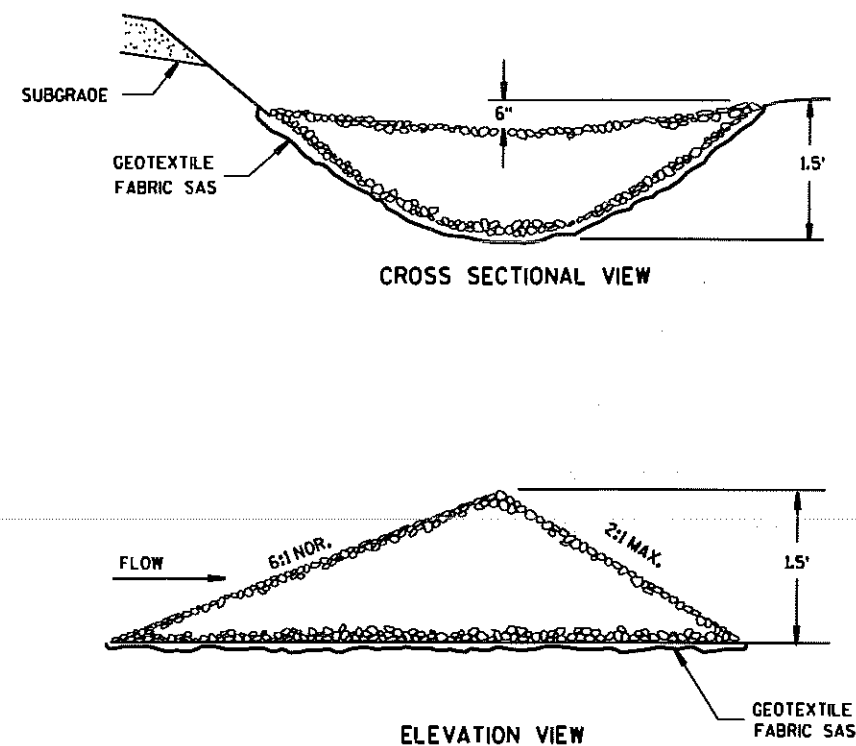
EROSION MAT TREATMENT AT PIPE ENDWALL
SEE EROSION CONTROL PLAN FOR LOCATIONS

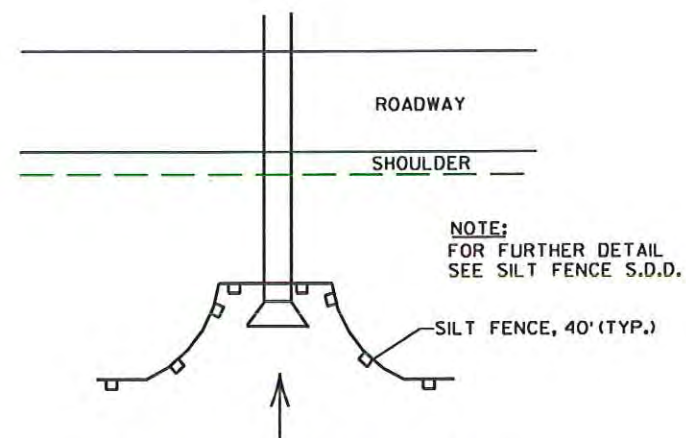


RIPRAP TREATMENT AT PIPE ENDWALL
SEE EROSION CONTROL PLAN FOR LOCATIONS



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

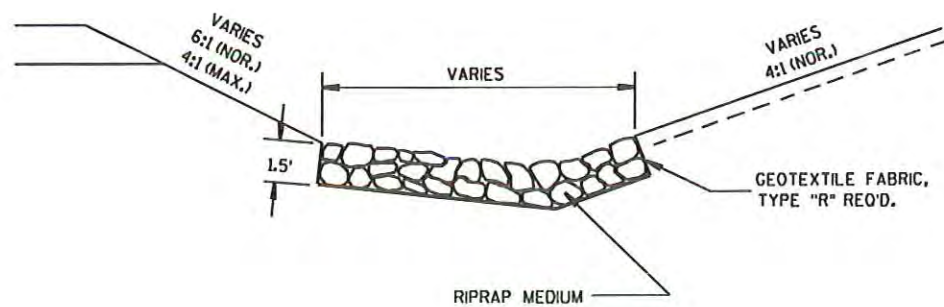




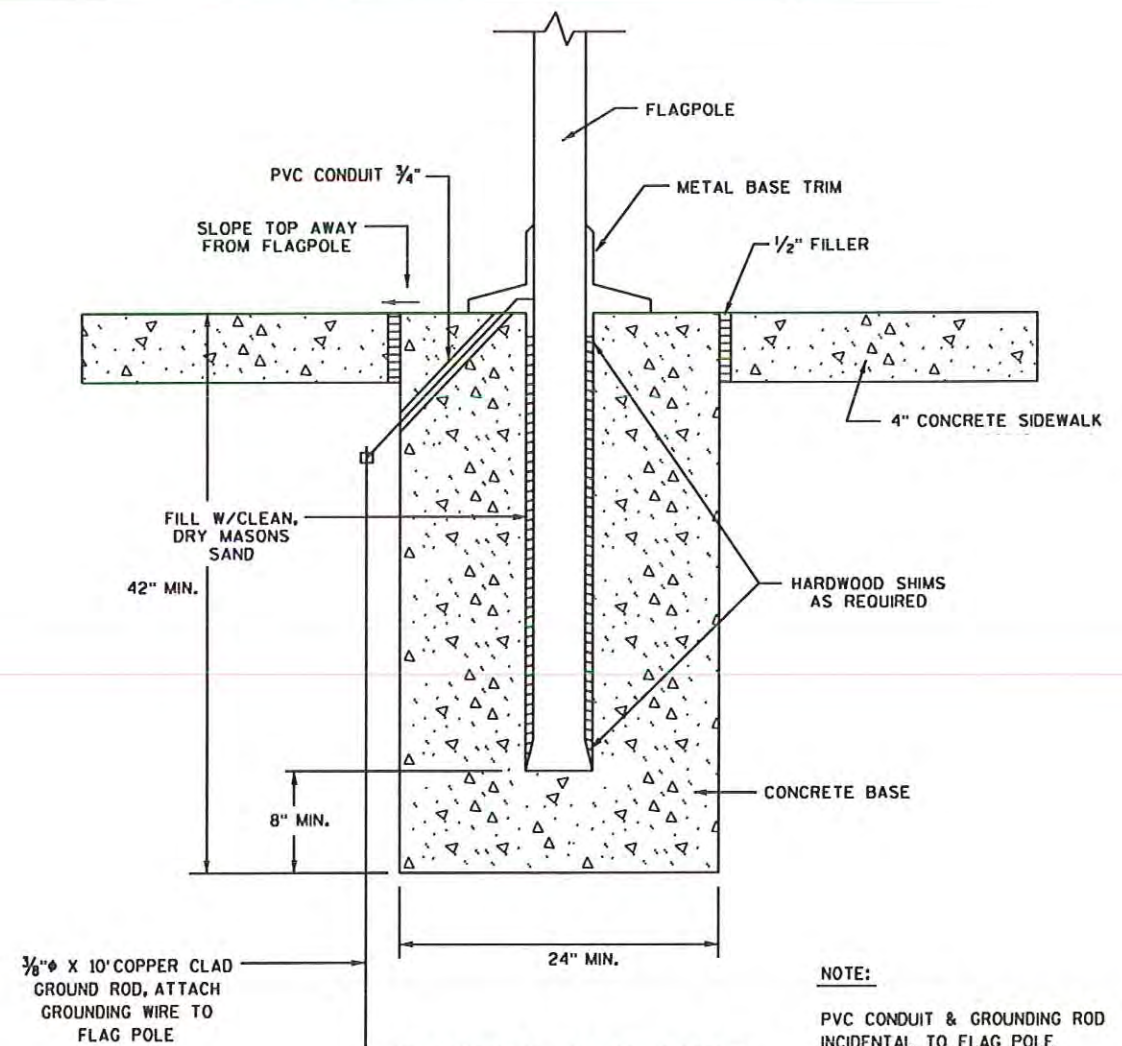
SILT FENCE AT PIPE INLET
SEE EROSION CONTROL PLAN FOR LOCATIONS



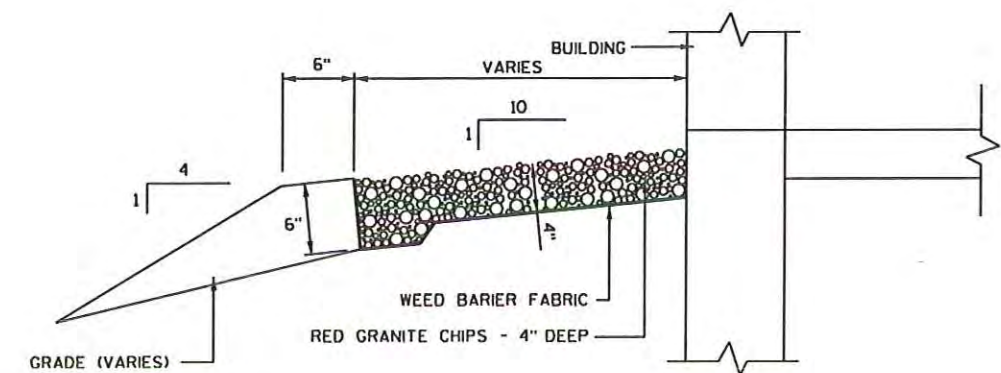
EROSION MAT DETAIL FOR DITCHES
(SEE EROSION CONTROL PLAN FOR LOCATIONS)
(REQ'D. IN ALL DITCHES)



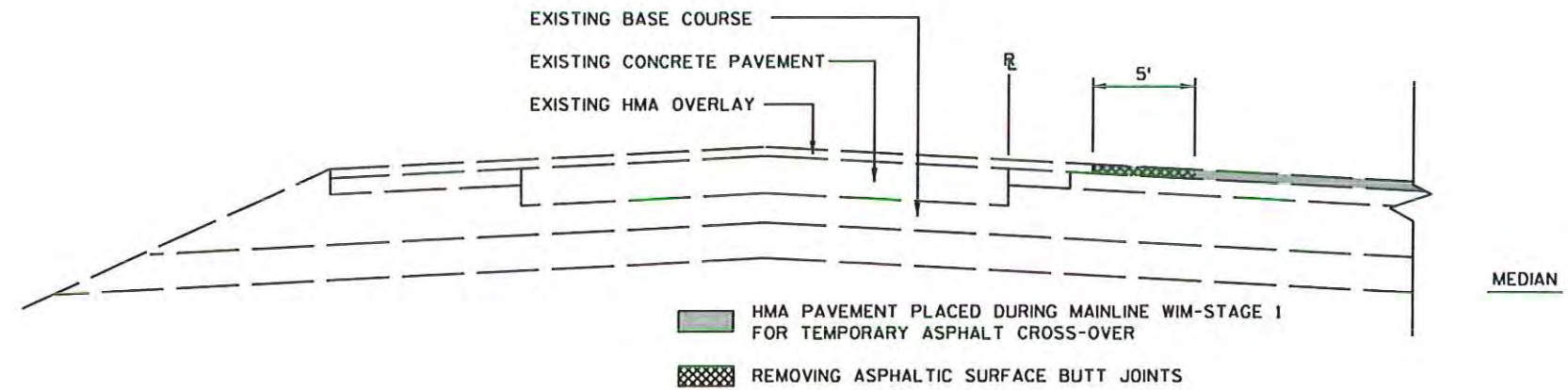
RIPRAP IN DITCH DETAIL
SEE EROSION CONTROL PLAN FOR LOCATIONS



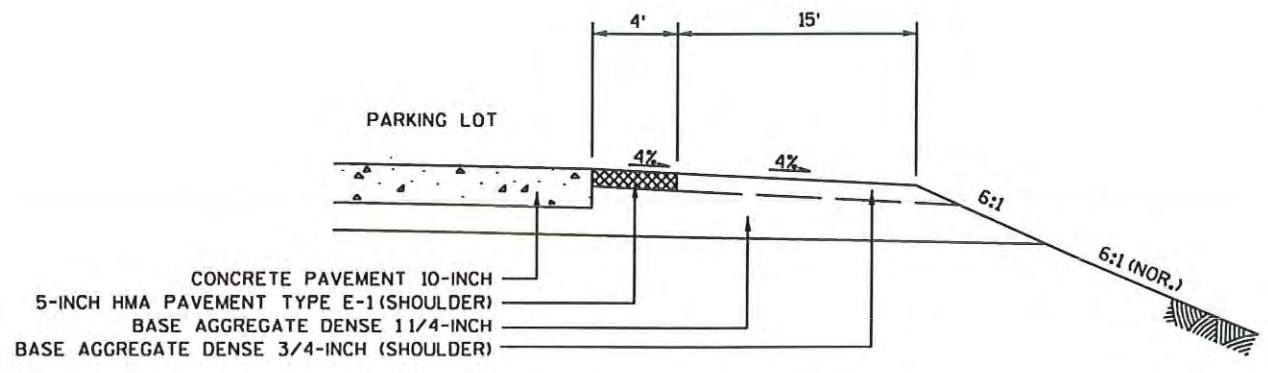
FLAGPOLE BASE DETAIL



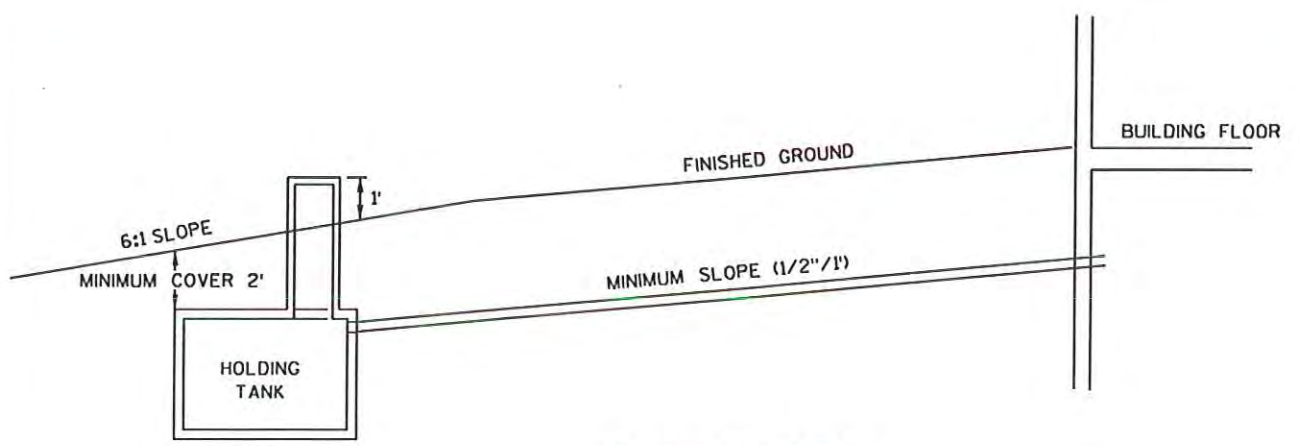
PLANTING BED DETAIL



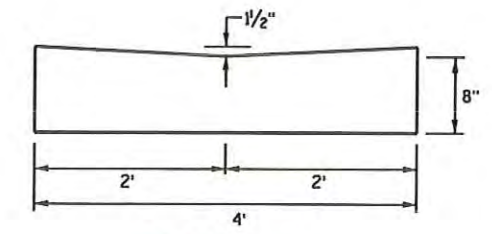
REMOVING ASPHALTIC SURFACE BUTT JOINTS DETAIL
SEE MISCELLANEOUS QUANTITIES FOR LOCATIONS



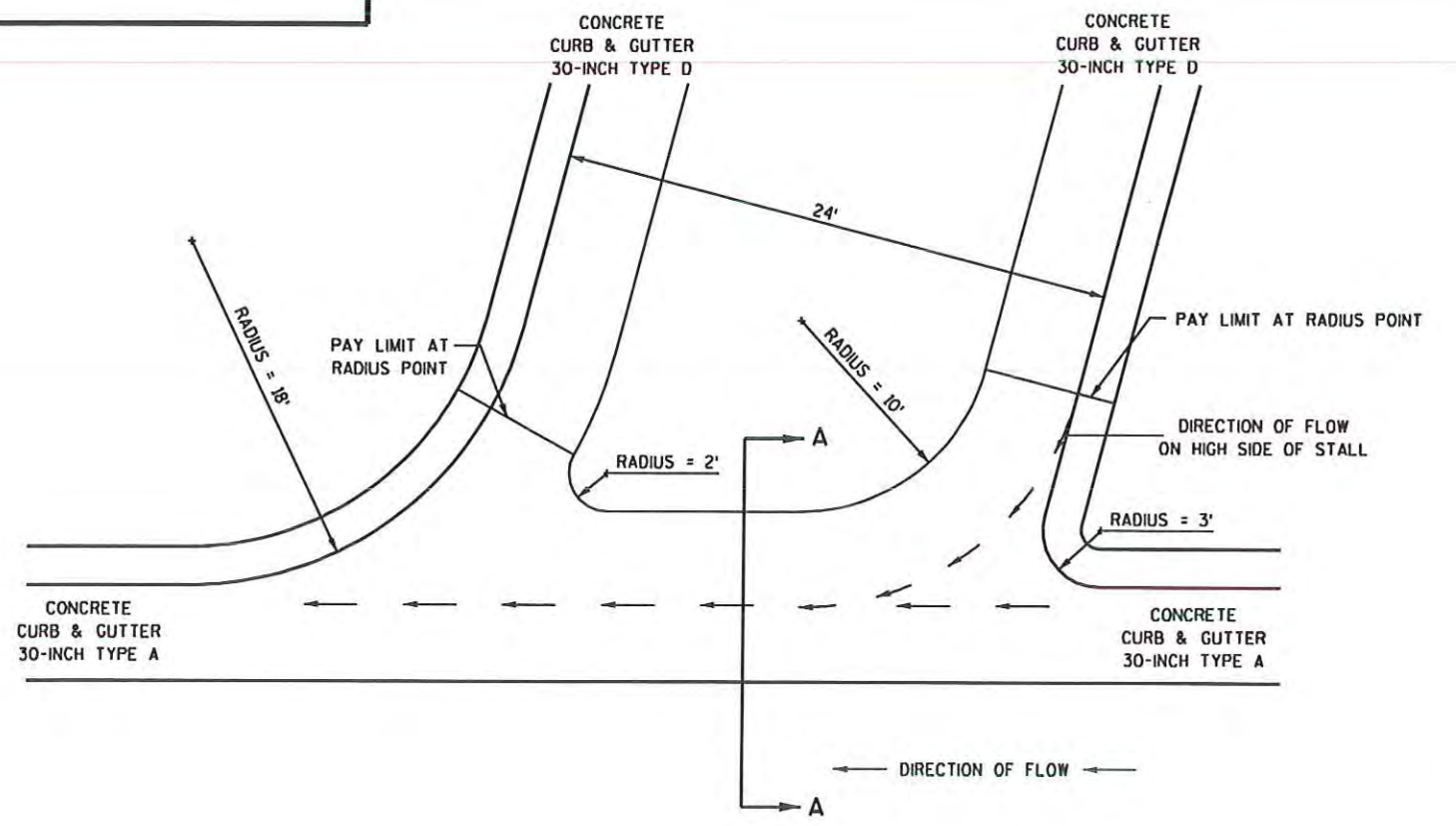
LEAKING TRUCK AREA DETAIL



HOLDING TANK DETAIL

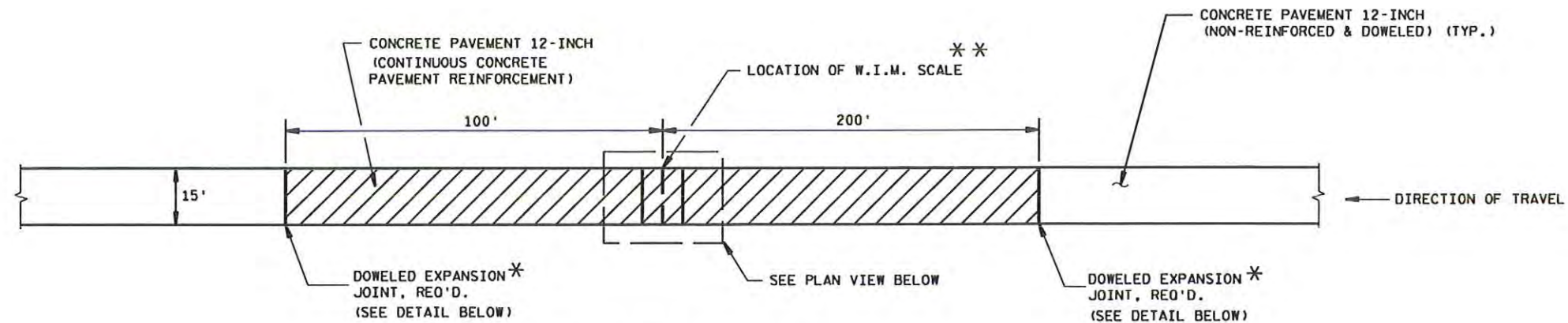


SECTION A-A

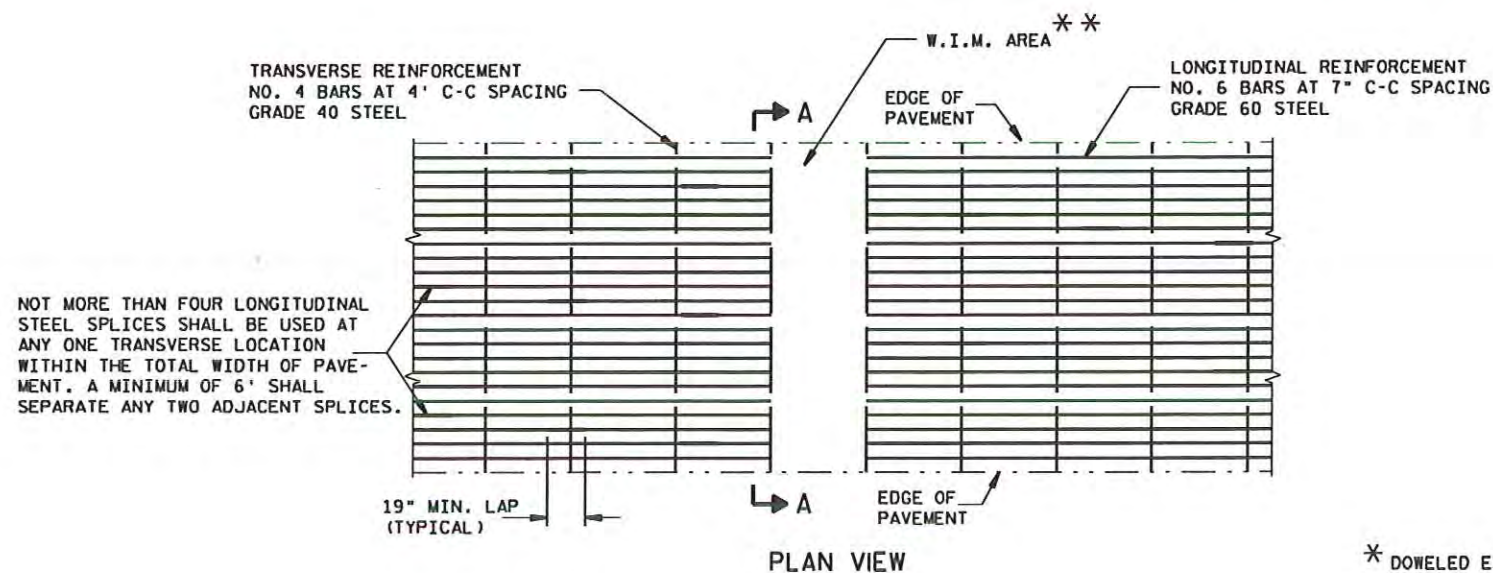


PURSUIT VEHICLE PARKING STALL CURB & GUTTER DETAIL

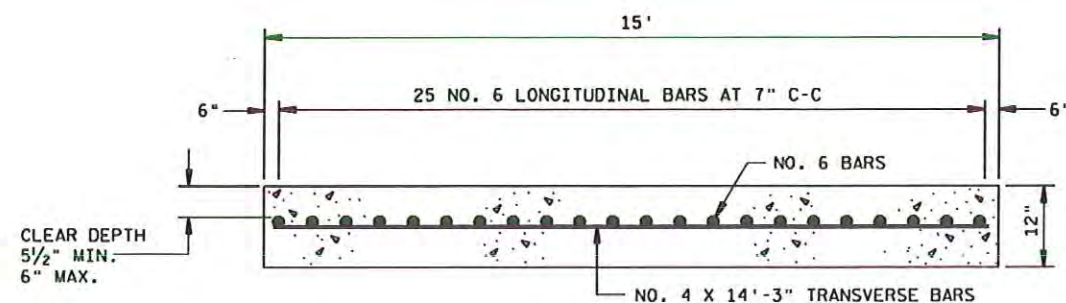
NOTE:
PURSUIT VEHICLE PARKING STALL CURB & GUTTER
INCIDENTAL TO CONCRETE CURB & GUTTER 30-INCH TYPE A.



TYPICAL PLAN AT RAMP W.I.M. SCALE



PLAN VIEW

SECTION A-A
REINFORCEMENT STEEL PLACEMENT

- * DOWELED EXPANSION JOINT SHALL CONFORM TO SECTION 415 OF THE STANDARD SPECIFICATIONS AND BE INCIDENTAL TO CONCRETE PAVEMENT 12-INCH
- * * 5' WIDTH FOR W.I.M. THIS AREA WILL NOT HAVE ANY REINFORCEMENT. CONTRACTOR SHALL ADEQUATELY LABEL WHERE BARS START AND STOP. AREA TO BE CUT AND REMOVED BY W.I.M. CONTRACTOR. SEE CONSTRUCTION DETAIL FOR REINFORCEMENT AND W.I.M. LAYOUT.

PAVEMENT SECTION AT RAMP WEIGH IN MOTION SCALE LOCATION

GENERAL NOTES

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

DOWEL BARS

DOWEL BARS ACROSS EXPANSION JOINTS SHALL BE CORROSION RESISTANT COATED CONFORMING TO THE REQUIREMENTS OF AASHTO DESIGNATION M 254.

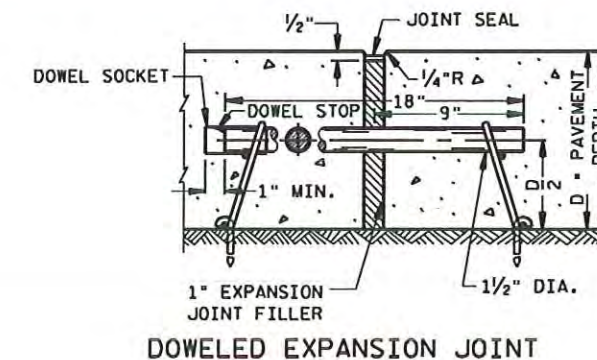
THE COATING TYPE SHALL BE, TYPE B - THERMOSETTING EPOXY.

JOINT SEALING

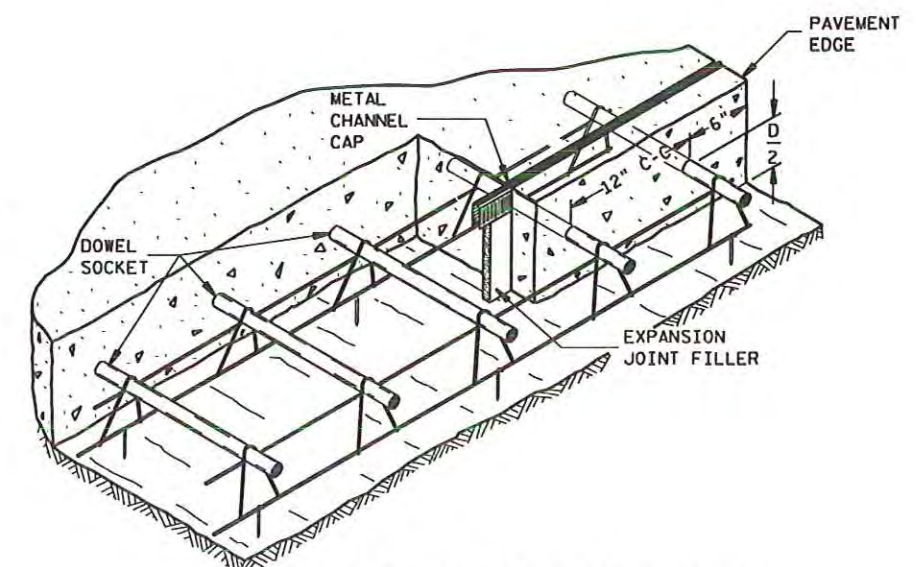
EXPANSION JOINTS SHALL BE SEALED AS FOLLOWS:

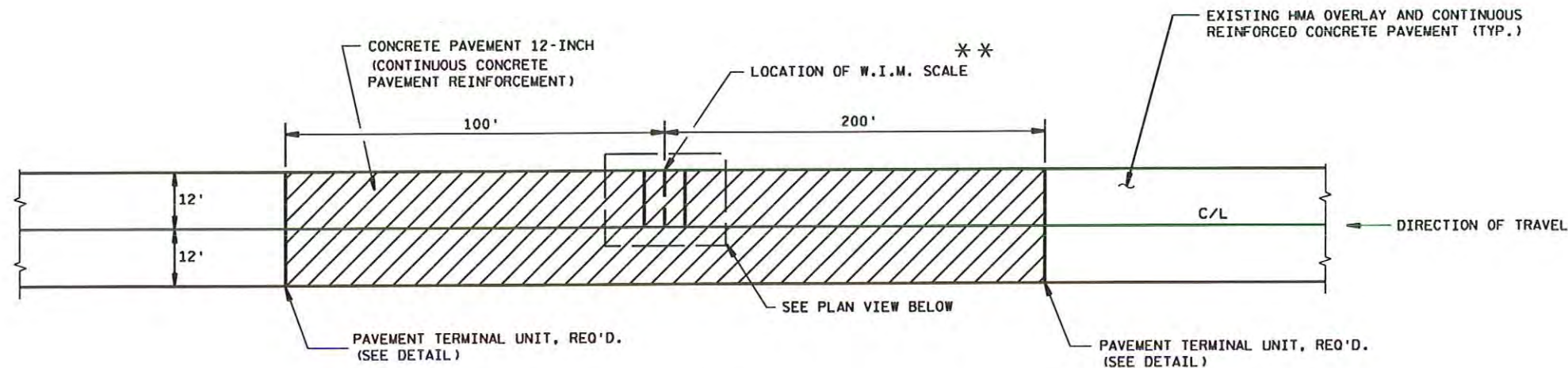
1. ON PAVEMENTS HAVING TRANSVERSE CONTRACTION JOINTS SEALED WITH A POURED TYPE SEALER, EXPANSION JOINTS SHALL BE SEALED WITH THE SAME TYPE SEALANT, $\frac{1}{4}$ " BELOW PAVEMENT SURFACE.
2. ON PAVEMENTS WITH NO CONTRACTION JOINTS, UNSEALED CONTRACTION OR CONTRACTION JOINTS SEALED WITH COMPRESSION TYPE SEALS, EXPANSION JOINTS SHALL BE SEALED WITH A POURED TYPE SEALER AS SPECIFIED IN THE PLANS OR SPECIAL PROVISIONS.

NOTE:
PROTECTIVE SURFACE TREATMENT REQUIRED ON CONTINUOUS REINFORCED CONCRETE PAVEMENT.



DOWELED EXPANSION JOINT

INSTALLING DEVICE FOR DOWEL BARS
AND EXPANSION JOINT ASSEMBLY



TYPICAL PLAN AT MAINLINE W.I.M. SCALE

GENERAL NOTES

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

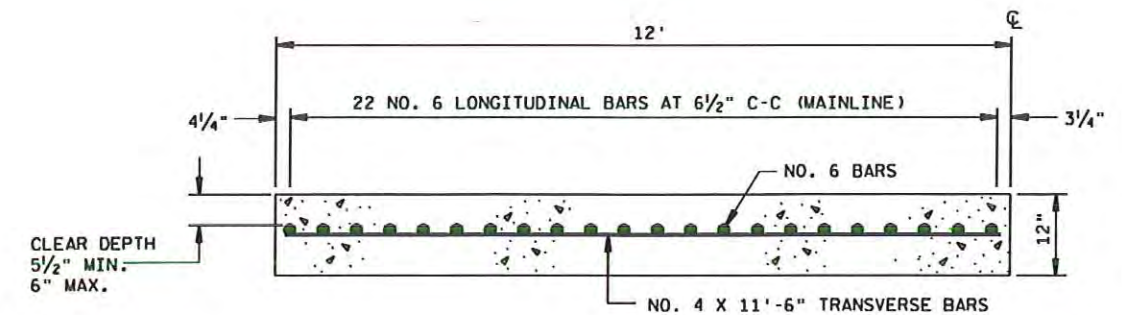
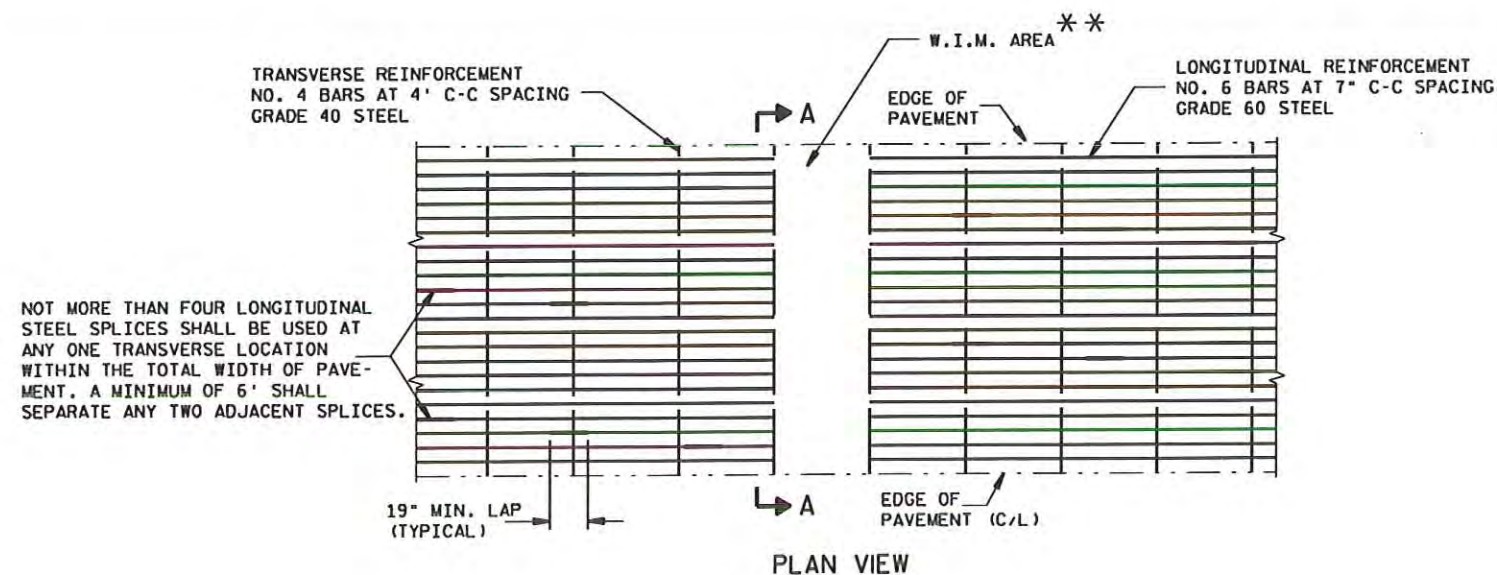
JOINT SEALING

EXPANSION JOINTS SHALL BE SEALED AS FOLLOWS:

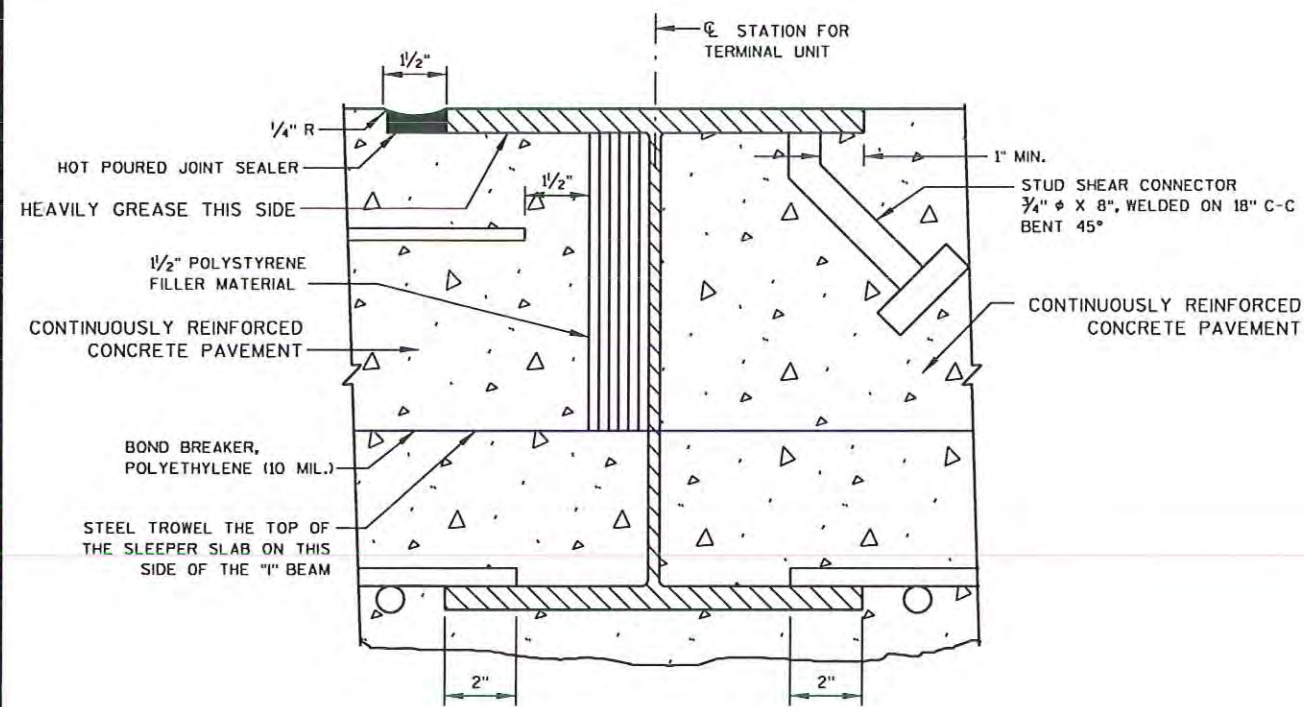
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2. ON PAVEMENTS WITH NO CONTRACTION JOINTS, UNSEALED CONTRACTION OR CONTRACTION JOINTS SEALED WITH COMPRESSION TYPE SEALS, EXPANSION JOINTS SHALL BE SEALED WITH A POURED TYPE SEALER AS SPECIFIED IN THE PLANS OR SPECIAL PROVISIONS.

NOTE:
PROTECTIVE SURFACE TREATMENT REQUIRED ON CONTINUOUS REINFORCED CONCRETE PAVEMENT.

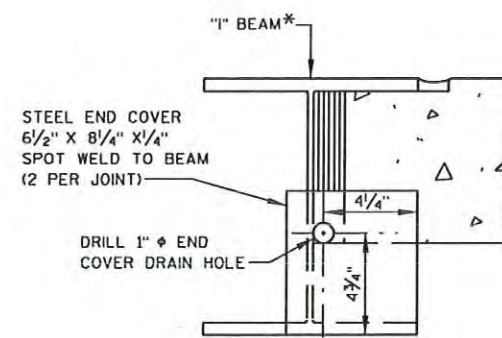
** 5' WIDTH FOR W.I.M. THIS AREA WILL NOT HAVE ANY REINFORCEMENT. CONTRACTOR SHALL ADEQUATELY LABEL WHERE BARS START AND STOP. AREA TO BE CUT AND REMOVED BY W.I.M. CONTRACTOR. SEE CONSTRUCTION DETAIL FOR REINFORCEMENT AND W.I.M. LAYOUT.

SECTION A-A
REINFORCEMENT STEEL PLACEMENT

PAVEMENT SECTION AT MAINLINE WEIGH IN MOTION SCALE LOCATION

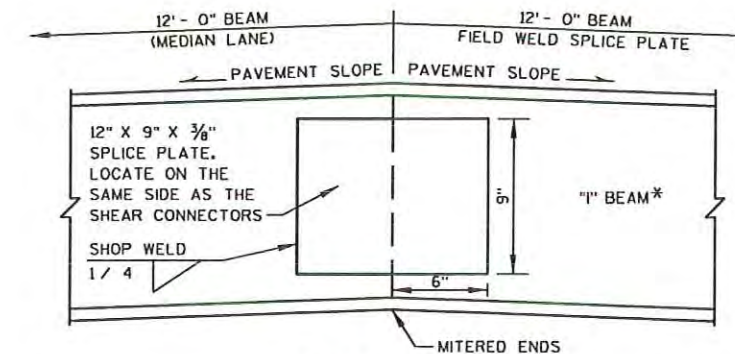


DETAIL "A"



END COVER DETAIL

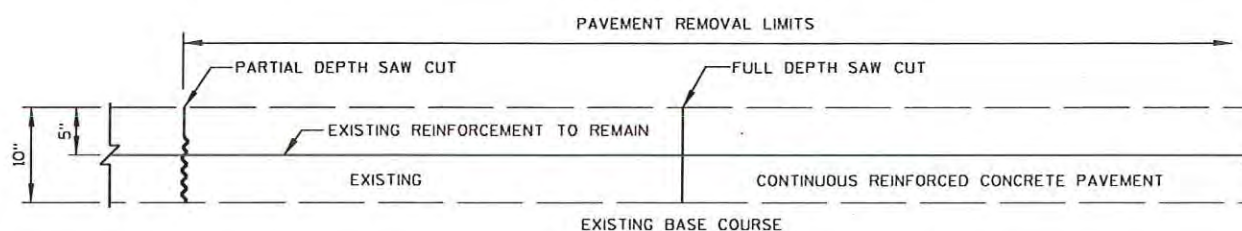
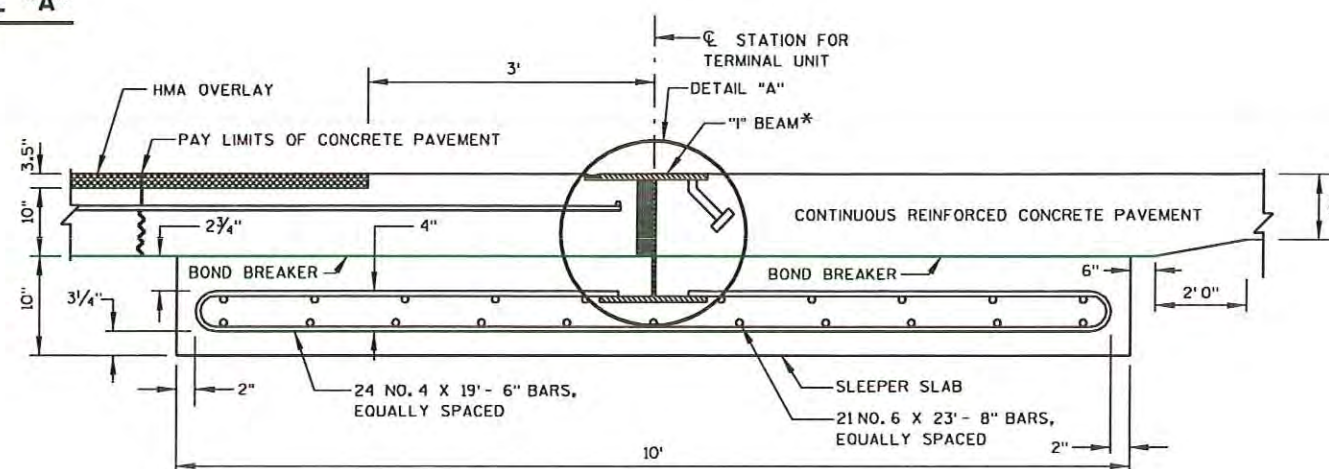
*"I" BEAM
W18 X 86,
12' LONG



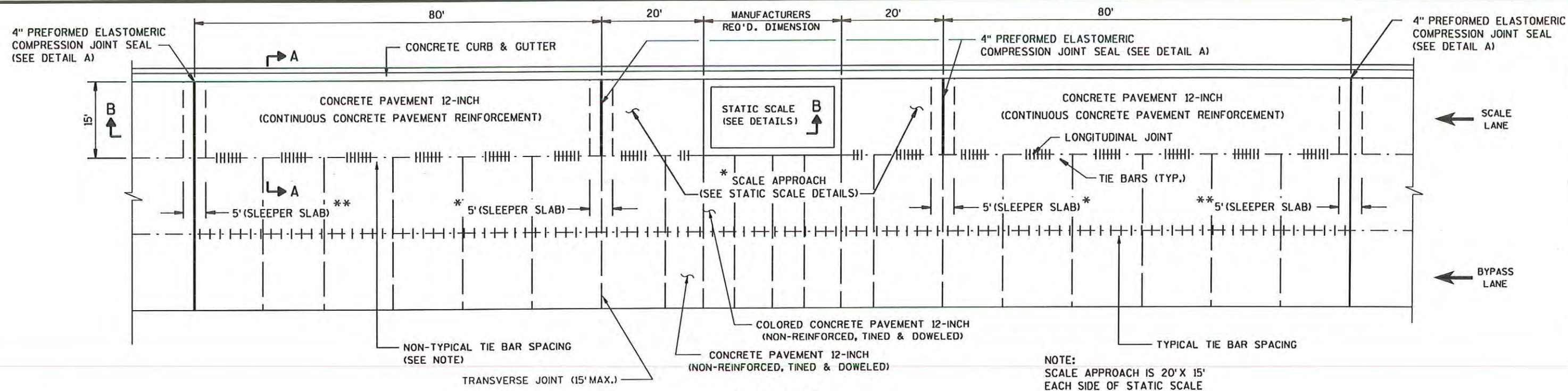
SPlice DETAIL

BIDDING INFORMATION FOR PAVEMENT TERMINAL UNIT (EACH)

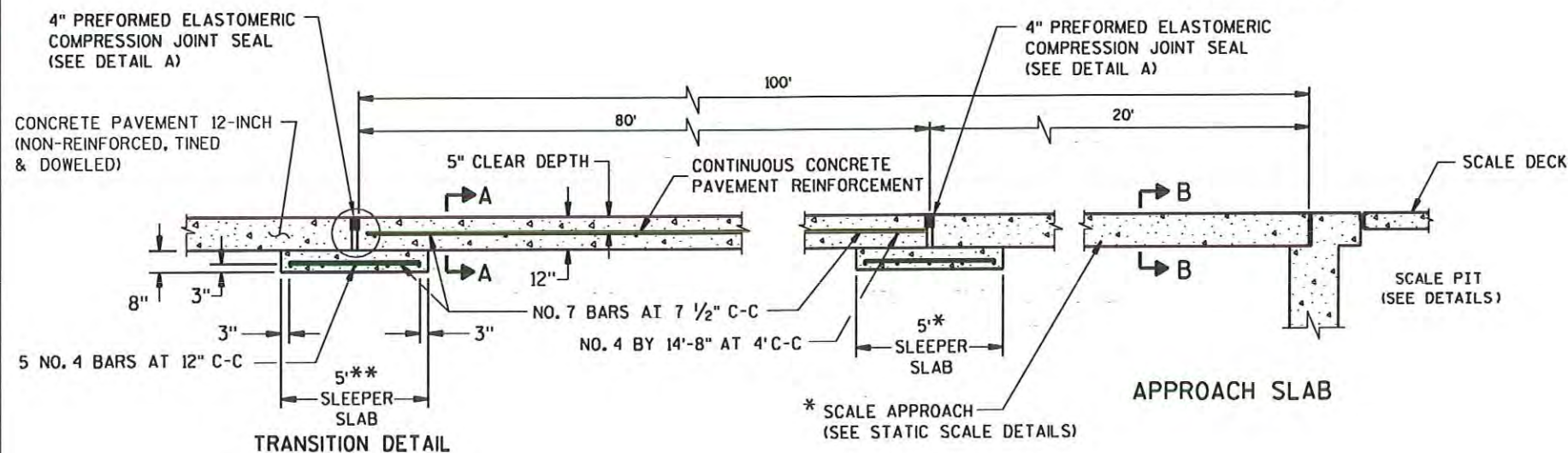
SLEEPER SLAB 10' X 24' SLAB		
REINFORCEMENT STEEL	NO. 4 BAR	313 LB.
REINFORCEMENT STEEL	NO. 6 BAR	750 LB.
STUD SHEAR CONNECTORS	3/4" ϕ X 8"	16 EACH
BOND BREAKER	10 MIL	13.3 S.Y.
CONCRETE		7.4 C.Y.
I-BEAM	*SEE NOTE	2 EACH
END COVER	6 1/8" X 8 1/4" X 12'	2 EACH
POLYSTYRENE FILLER	1/2" X 10 1/8" X 12'	2 EACH
SPlice PLATE	12' X 9" X 3/8"	1 EACH



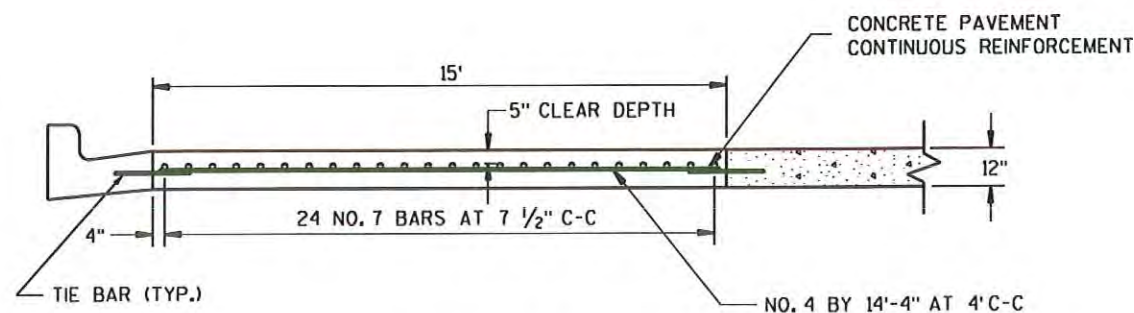
PAVEMENT TERMINAL UNIT DETAILS



PLAN VIEW



SECTION B-B



SECTION A-A

(CONTINUOUS REINFORCED CONCRETE APPROACH)

- * COSTS INCIDENTAL TO STATIC SCALE CONSTRUCTION
- ** COSTS INCIDENTAL TO CONCRETE PAVEMENT 12-INCH

PAVEMENT SECTION AT STATIC SCALE LOCATION

GENERAL NOTES

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

JOINT FILLER

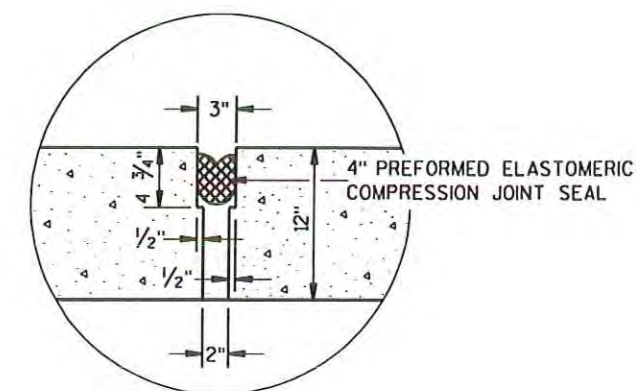
EXPANSION JOINT FILLER BETWEEN APPROACH SLAB AND ROADWAY PAVEMENT AT THE SLEEPER SLAB IS A 4 INCH PREFORMED ELASTOMERIC COMPRESSION SEAL.

STEEL REINFORCEMENT

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

TIE BARS

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



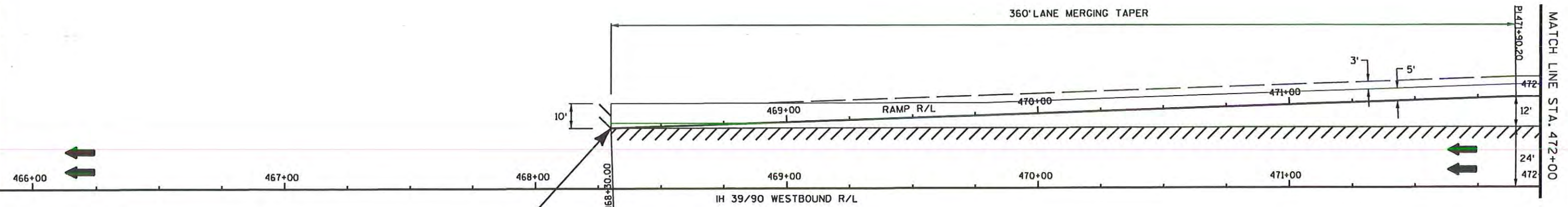
DETAIL A

NOTES

DOWEL BARS ARE REQUIRED AT ALL MAINLINE CONTRACTION JOINTS.

WHERE EXISTING AND PROPOSED CONCRETE PAVEMENT OR CONCRETE BASE ABUT, THESE PAVEMENTS SHALL BE TIED AND THE TRANSVERSE JOINTS SHALL MATCH.

ALL STATION AND OFFSET DIMENSIONS ARE GIVEN FROM RAMP R/L UNLESS OTHERWISE NOTED.



STA. 460+75
CONSTRUCT MAINTENANCE
CROSSOVER FOR FREEWAYS
(SEE S.D.D.)

STA. 468+30.00
BEGIN PROJECT
MATCH EXISTING
SAWCUT RED'D.

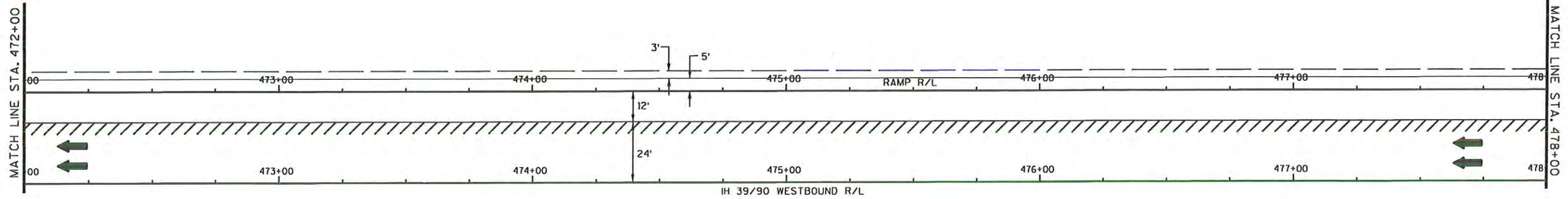
LEGEND

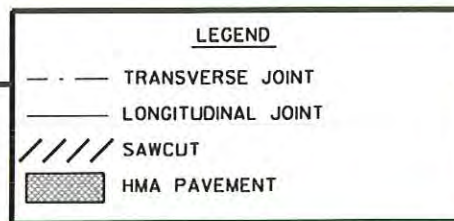
TRANSVERSE JOINT

LONGITUDINAL JOINT

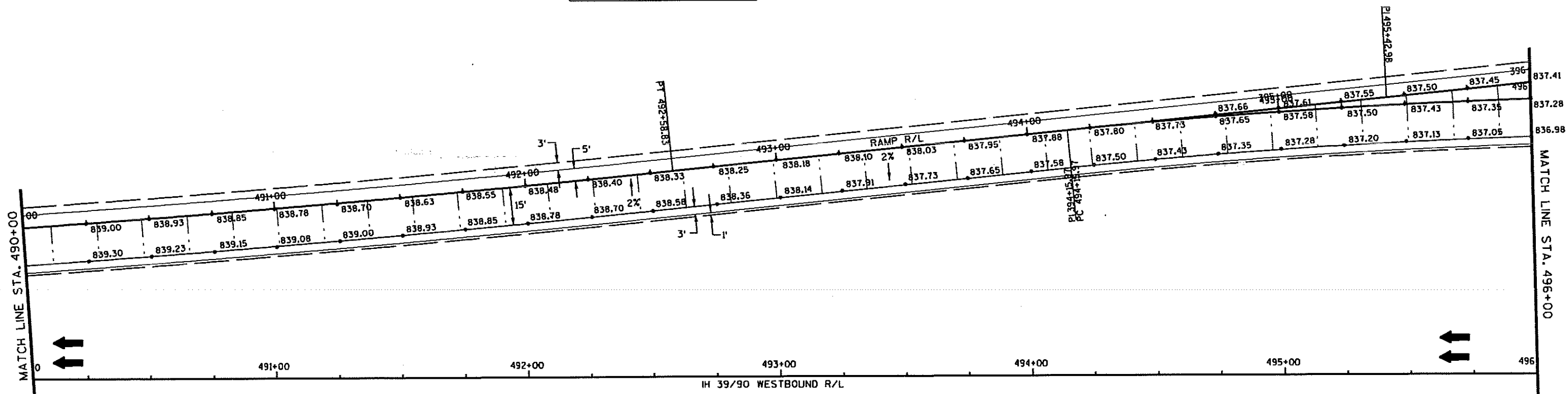
///

SAWCUT

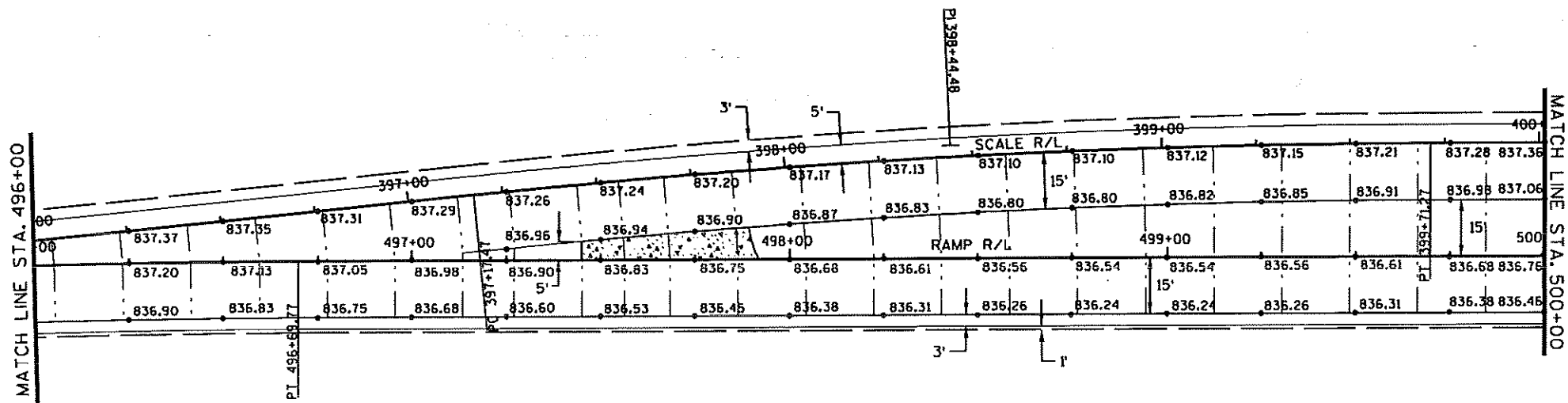


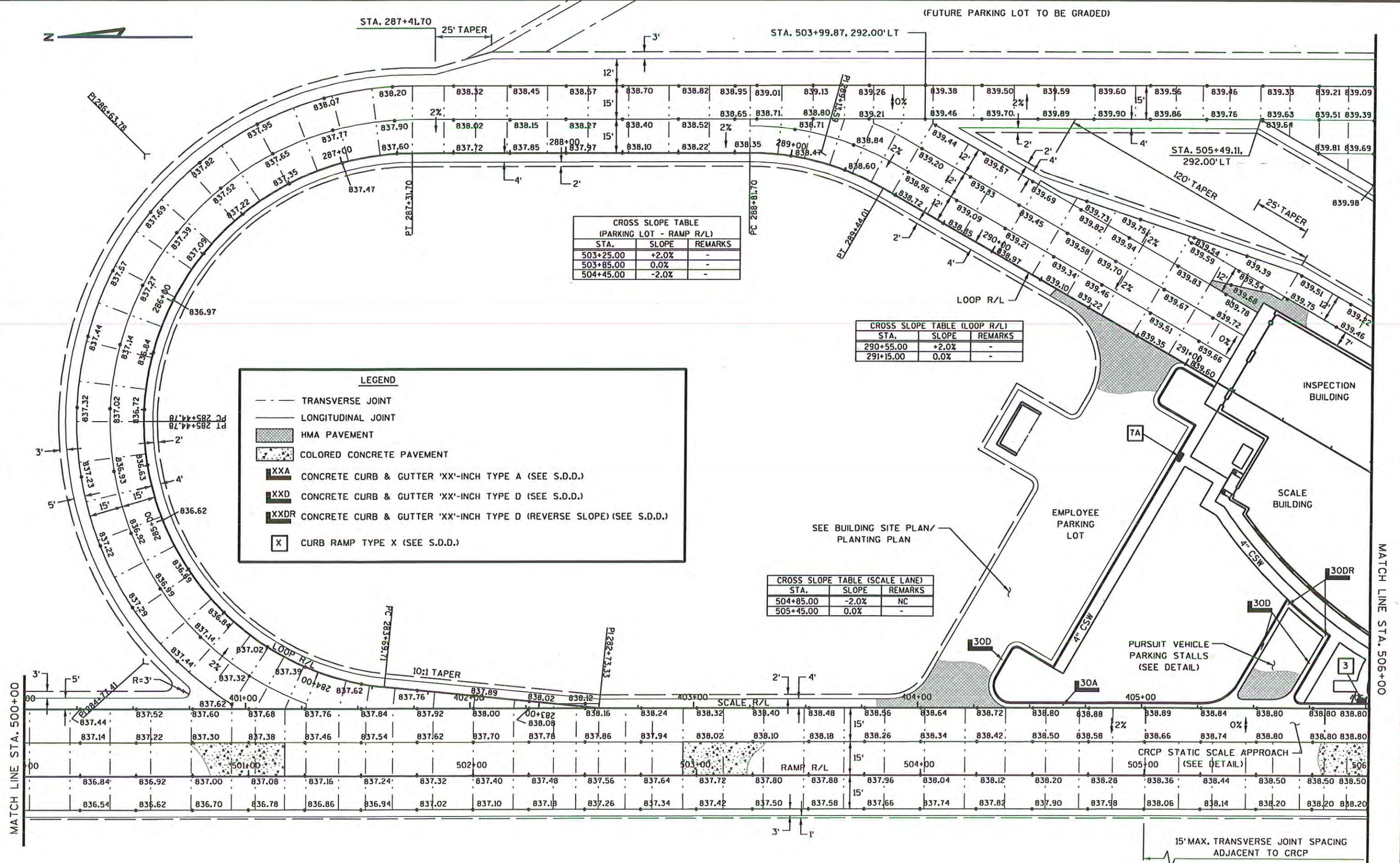


SUPER ELEVATION TABLE		
STA.	SLOPE	REMARKS
492+41.83	+2.0%	NC
492+92.83	0.0%	-
493+43.83	-2.0%	RC/FS



LEGEND	
---	TRANSVERSE JOINT
---	LONGITUDINAL JOINT
	COLORLED CONCRETE PAVEMENT





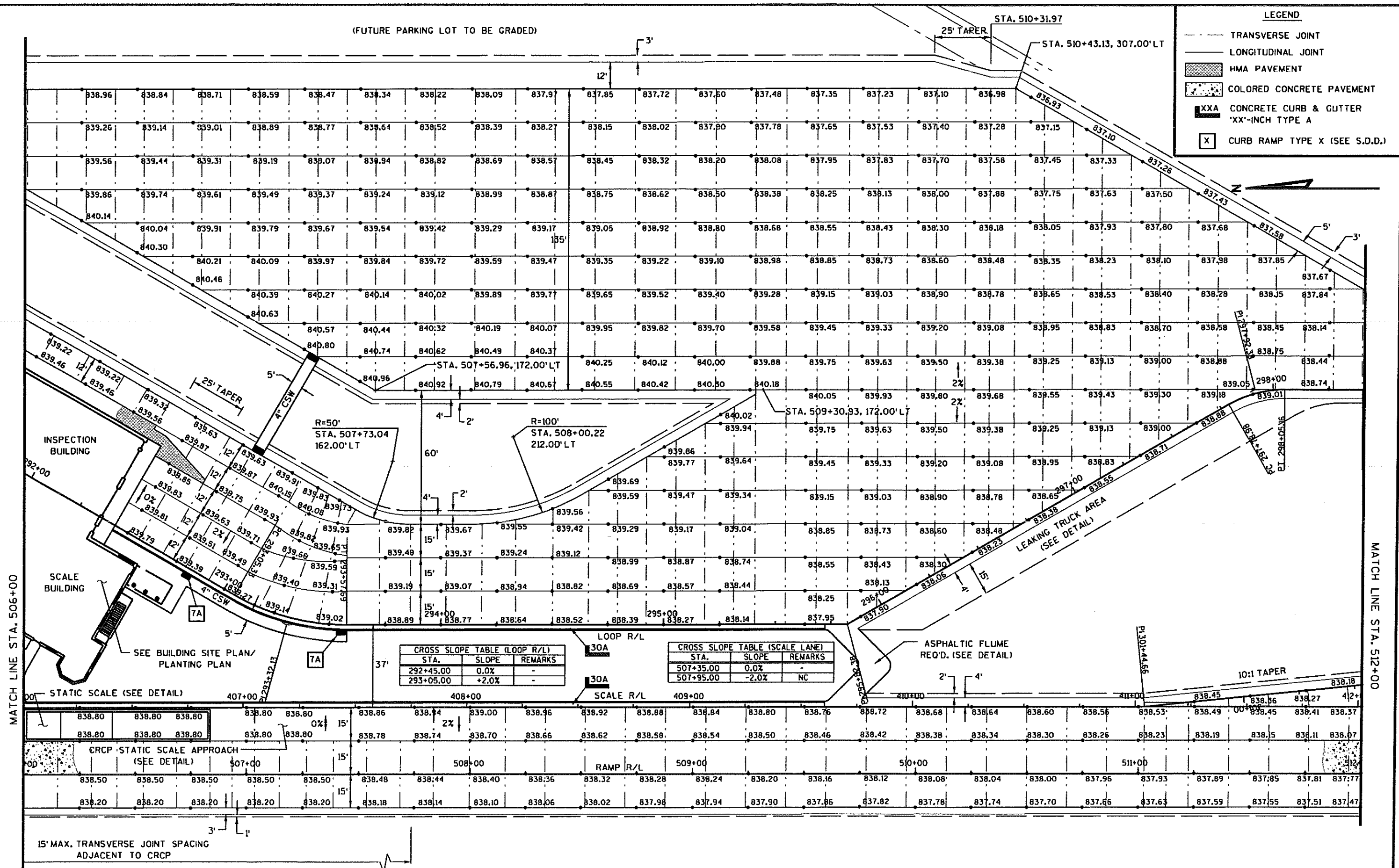
CROSS SLOPE TABLE (PARKING LOT - RAMP R/L)		
STA.	SLOPE	REMARKS
503+25.00	+2.0%	-
503+85.00	0.0%	-
504+45.00	-2.0%	-

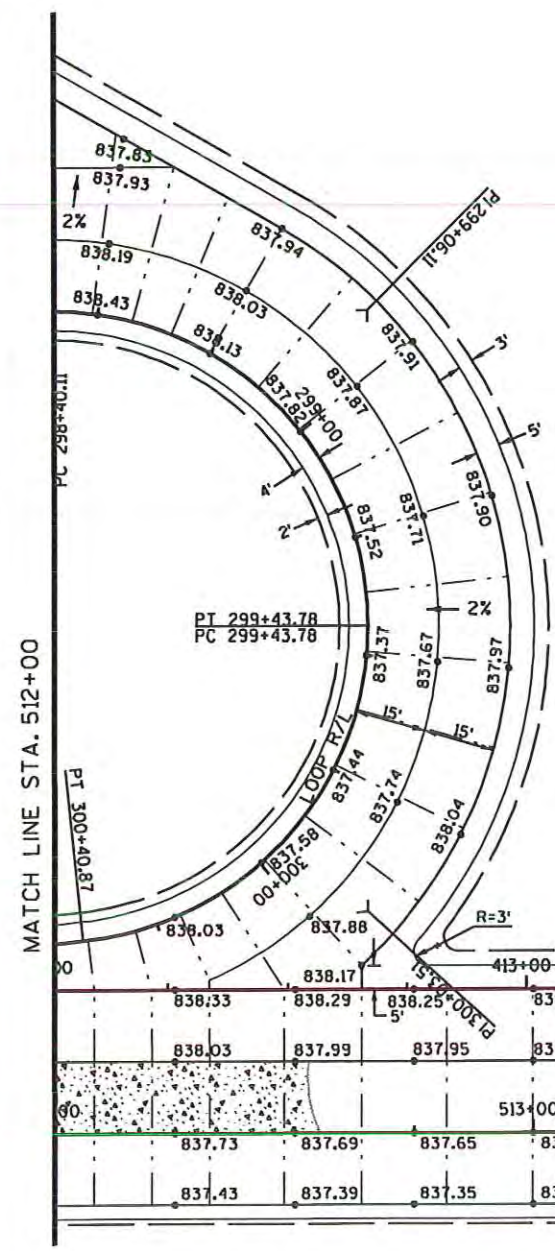
CROSS SLOPE TABLE (LOOP R/L)		
STA.	SLOPE	REMARKS
290+55.00	+2.0%	-
291+15.00	0.0%	-

CROSS SLOPE TABLE (SCALE LANE)		
STA.	SLOPE	REMARKS
504+85.00	-2.0%	NC
505+45.00	0.0%	-

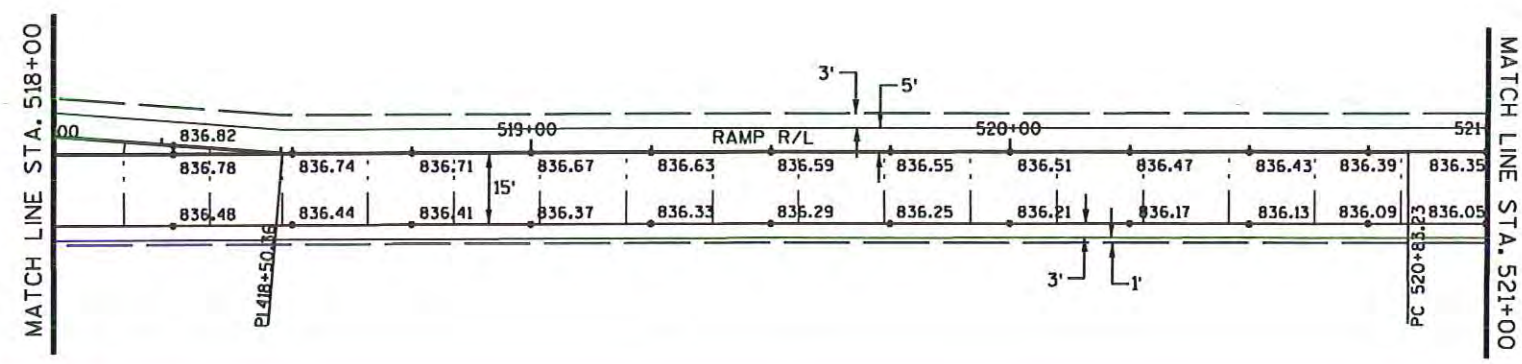
LEGEND

- TRANSVERSE JOINT
- LONGITUDINAL JOINT
- [Stippled] HMA PAVEMENT
- [Dotted] COLORED CONCRETE PAVEMENT
- [XXA] CONCRETE CURB & GUTTER 'XX'-INCH TYPE A (SEE S.D.D.)
- [XXD] CONCRETE CURB & GUTTER 'XX'-INCH TYPE D (SEE S.D.D.)
- [XXDR] CONCRETE CURB & GUTTER 'XX'-INCH TYPE D (REVERSE SLOPE) (SEE S.D.D.)
- [X] CURB RAMP TYPE X (SEE S.D.D.)





CROSS SLOPE TABLE (LOOP R/L)		
STA.	SLOPE	REMARKS
298+40.11	-2.0%	-
299+43.78	+2.0%	-



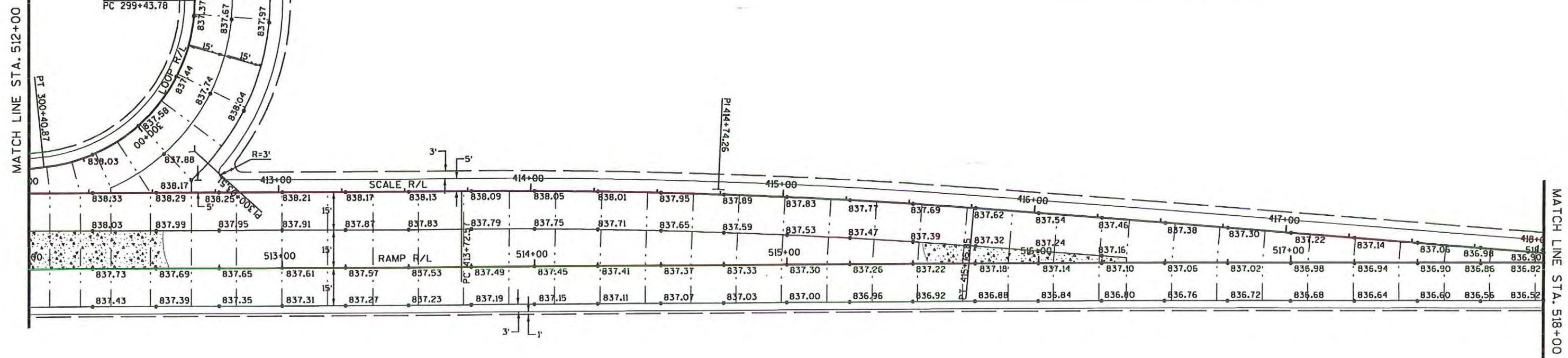
LEGEND

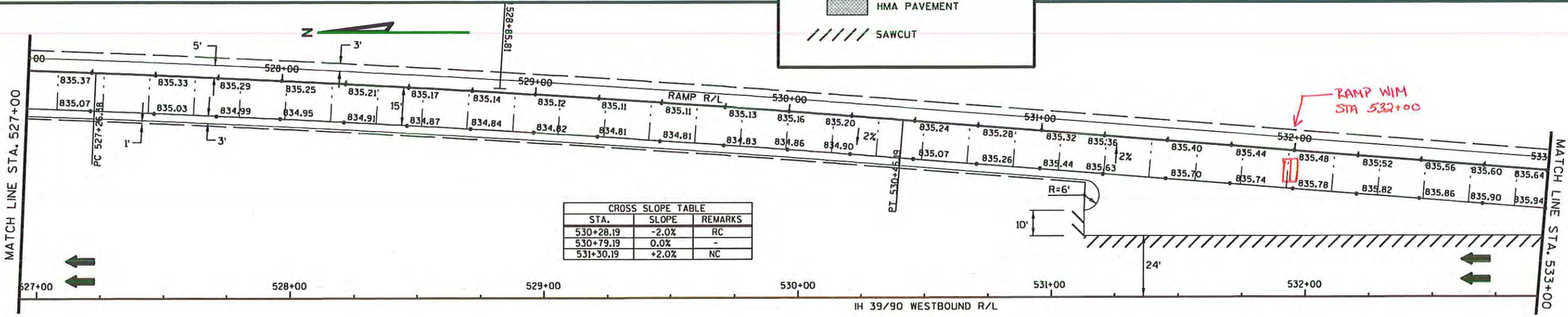
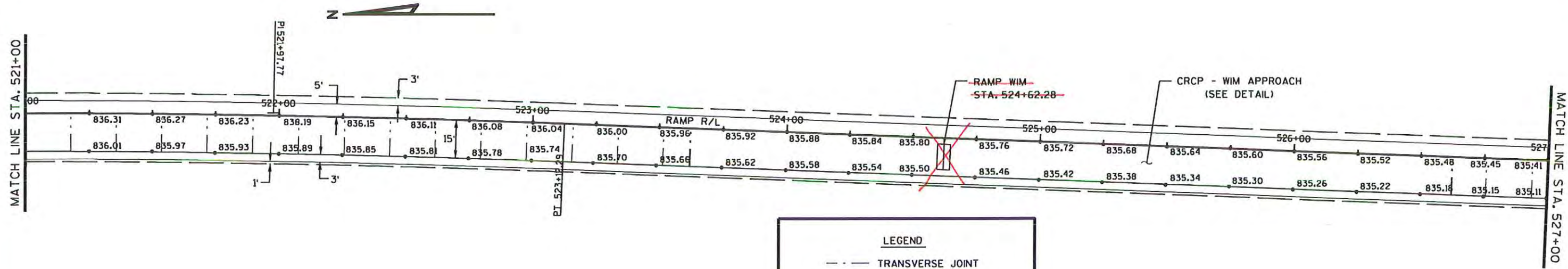
TRANSVERSE JOINT

LONGITUDINAL JOINT

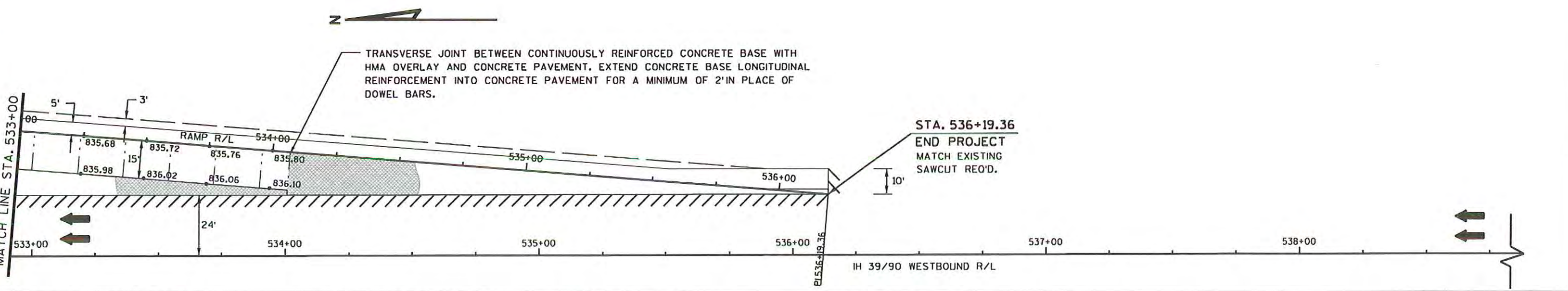
HMA PAVEMENT

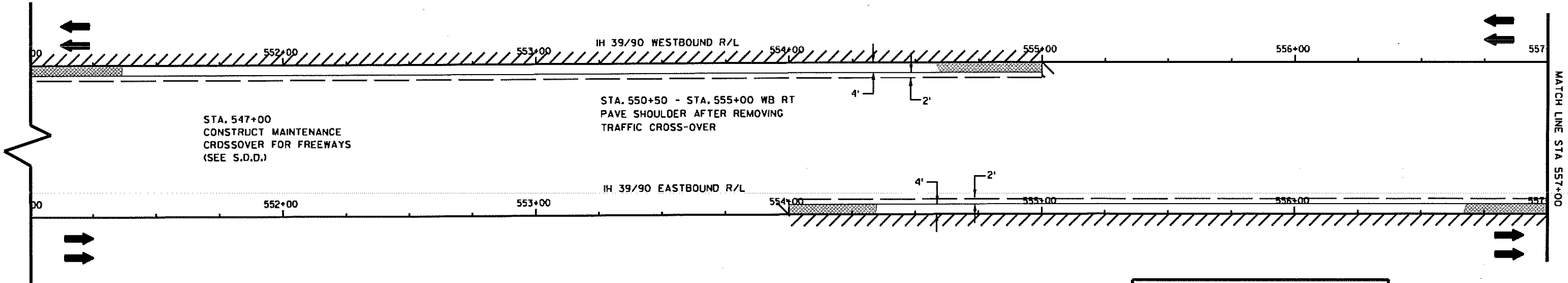
COLORED CONCRETE PAVEMENT





CROSS SLOPE TABLE		
STA.	SLOPE	REMARKS
530+28.19	-2.0%	RC
530+79.19	0.0%	-
531+30.19	+2.0%	NC



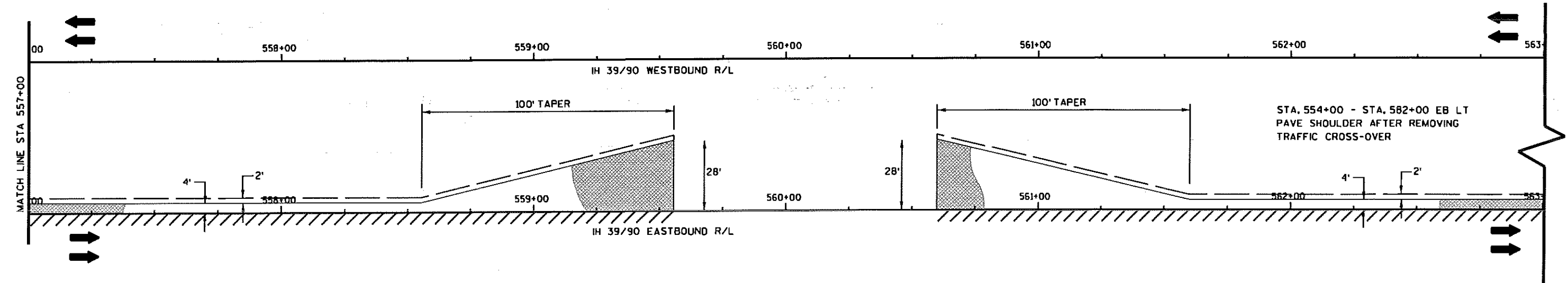


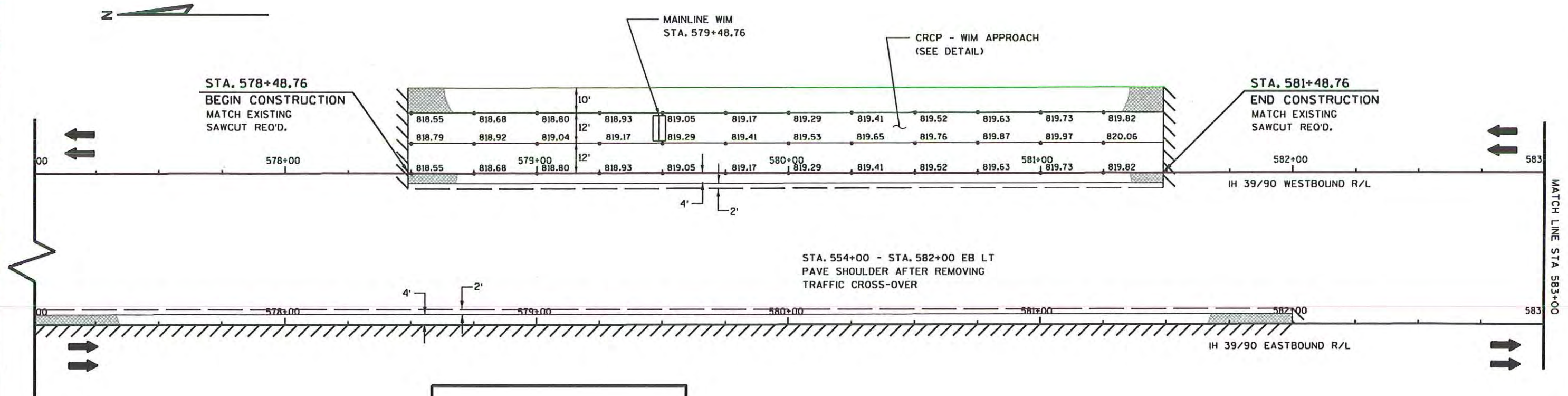
LEGEND

- TRANSVERSE JOINT
- LONGITUDINAL JOINT
- ▨ HMA PAVEMENT
- /// SAWCUT

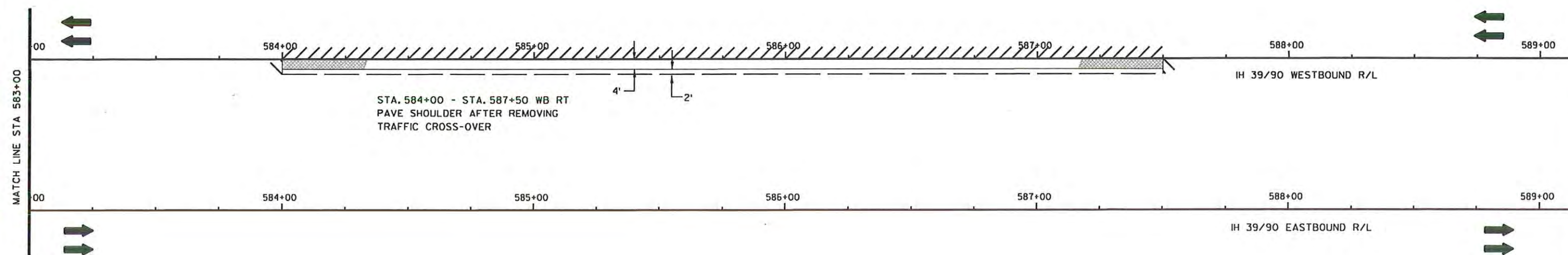


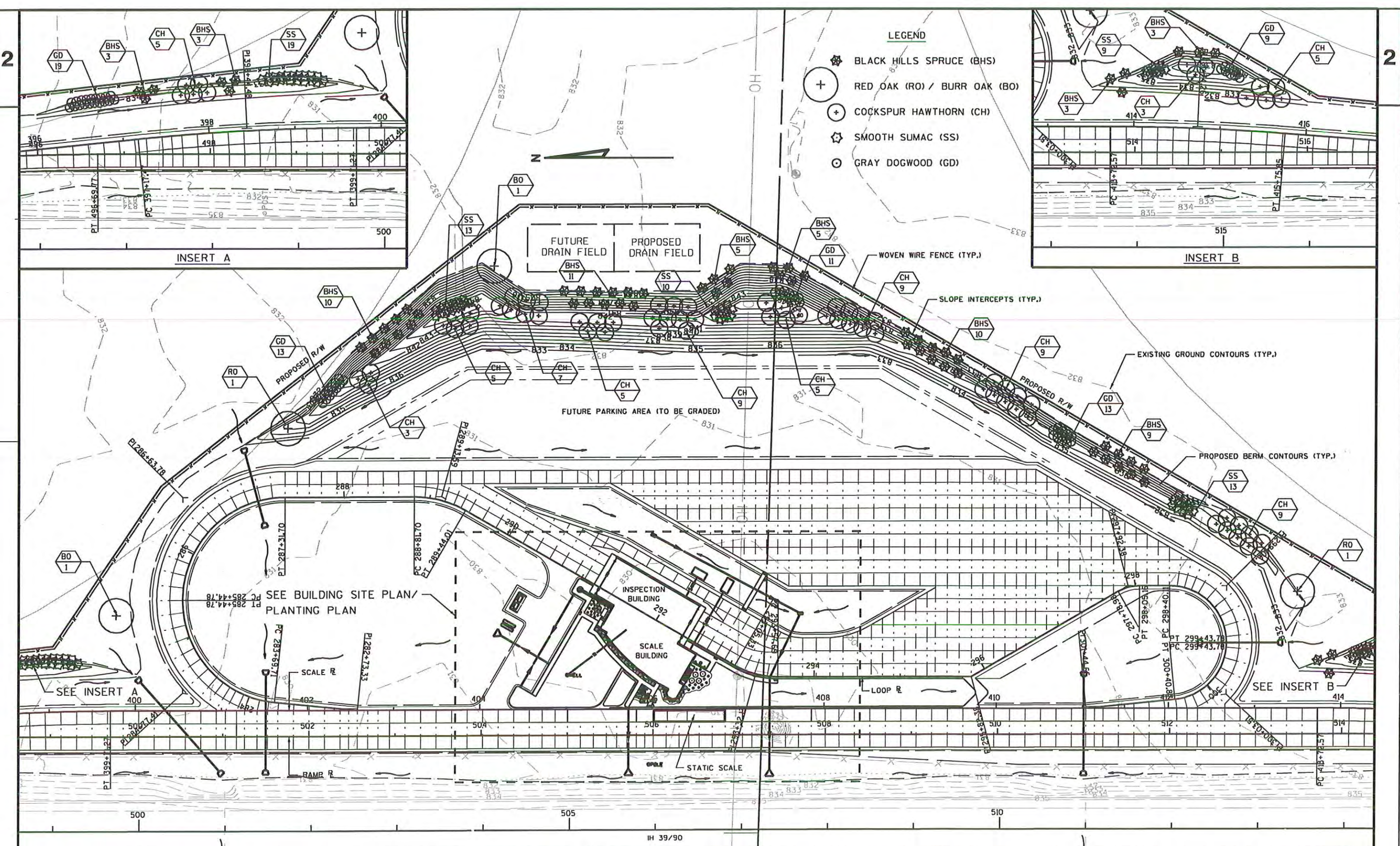
TOWNLINE ROAD





LEGEND	
---	TRANSVERSE JOINT
---	LONGITUDINAL JOINT
	HMA PAVEMENT
	SAWCUT

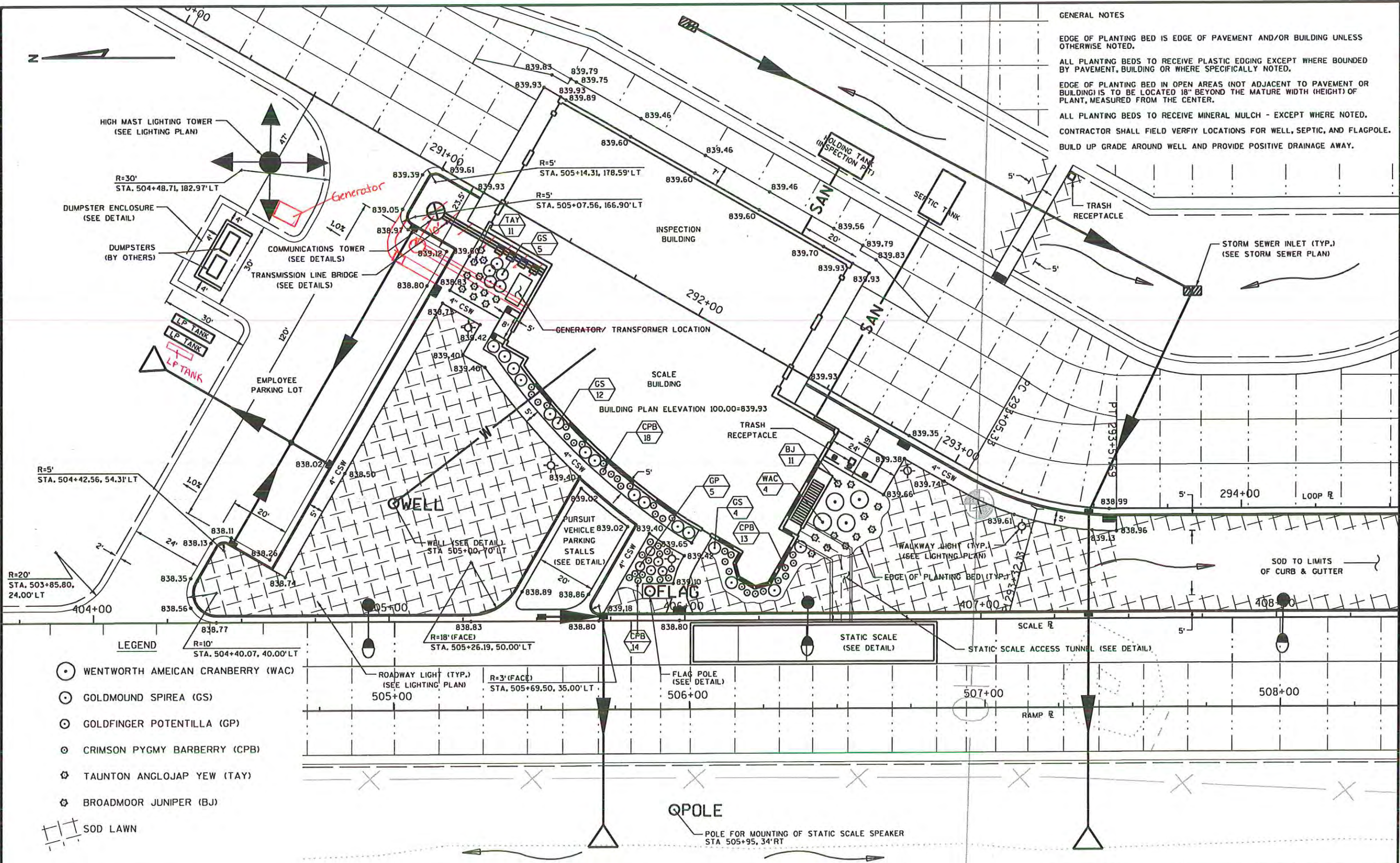




INSERT A

INSERT B

- LEGEND
- BLACK HILLS SPRUCE (BHS)
 - RED OAK (RO) / BURR OAK (BO)
 - COCKSPUR HAWTHORN (CH)
 - SMOOTH SUMAC (SS)
 - GRAY DOGWOOD (GD)



GENERAL NOTES

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

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

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

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

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

BUILD UP GRADE AROUND WELL AND PROVIDE POSITIVE DRAINAGE AWAY.

LEGEND

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

RUNOFF COEFFICIENT TABLE

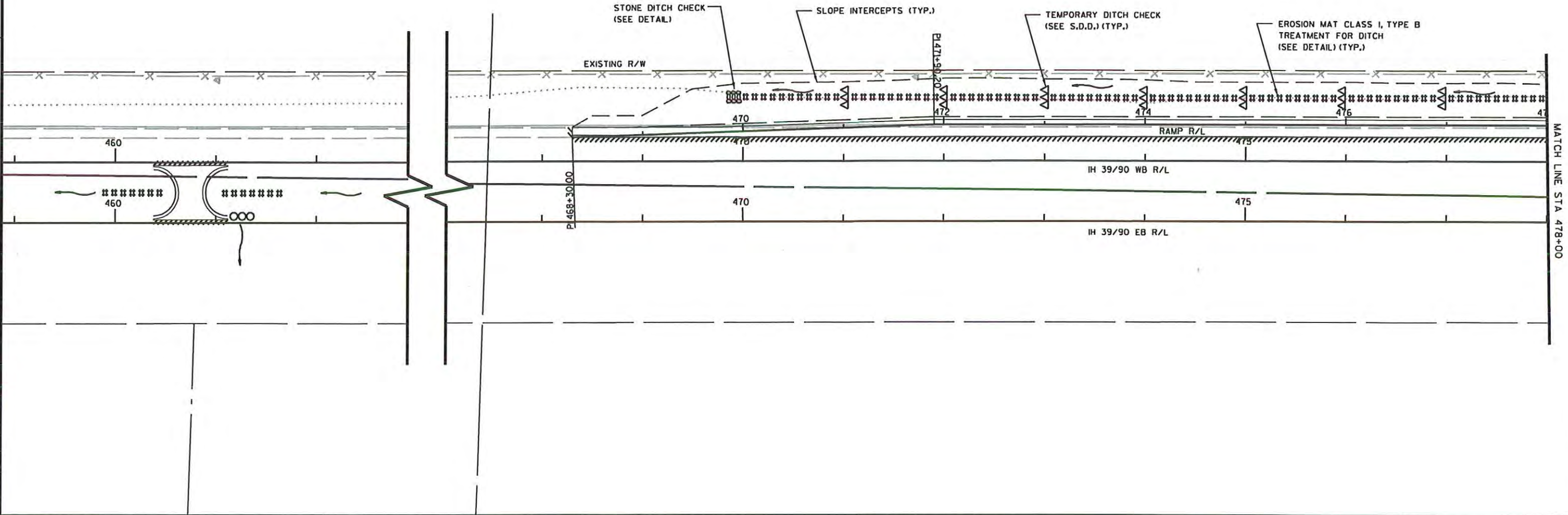
	HYDROLOGIC SOIL GROUP											
	A			B			C			D		
	SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)		
LAND USE:	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER
ROW CROPS	.08	.16	.22	.12	.20	.27	.15	.24	.33	.19	.28	.38
	.22	.30	.38	.26	.34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

LEGEND

- ##### EROSION MAT CLASS I, TYPE B
- SILT FENCE
- ⊞ RIP RAP OR STONE DITCH CHECK
- ⊙(AB) INLET PROTECTION TYPE A & B
- ⊙(AC) INLET PROTECTION TYPE A & C
- ⊠ INLET PROTECTION
- △△△ TEMPORARY DITCH CHECK
- ∞ CULVERT PIPE DITCH CHECK
- SURFACE WATER FLOW



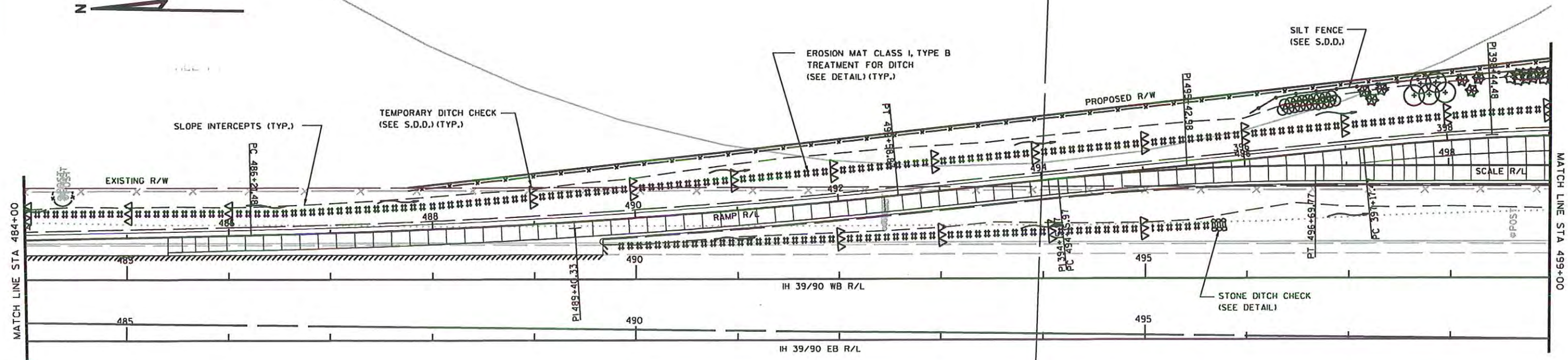
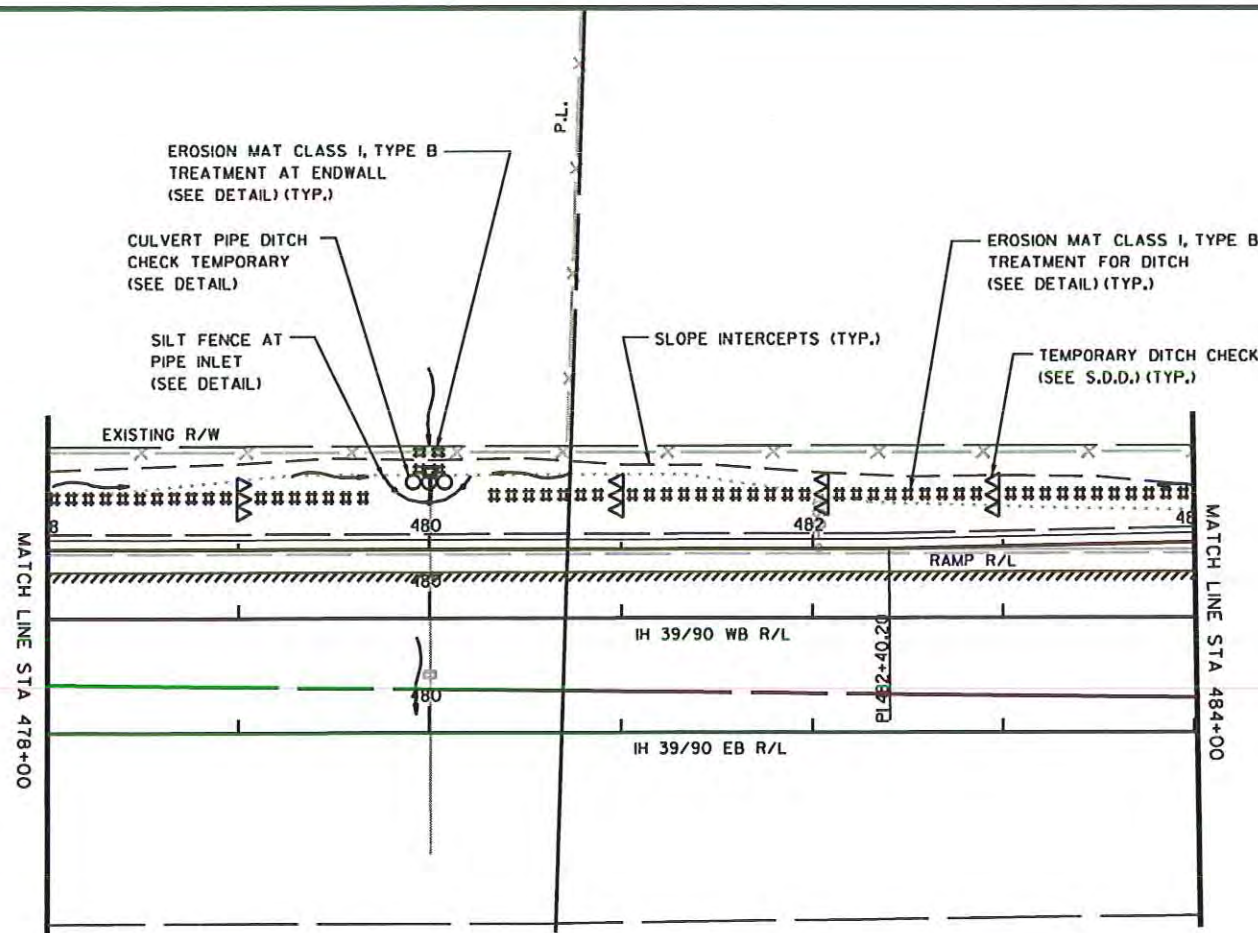
TOTAL PROJECT AREA = 57.92 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 23.75 ACRES

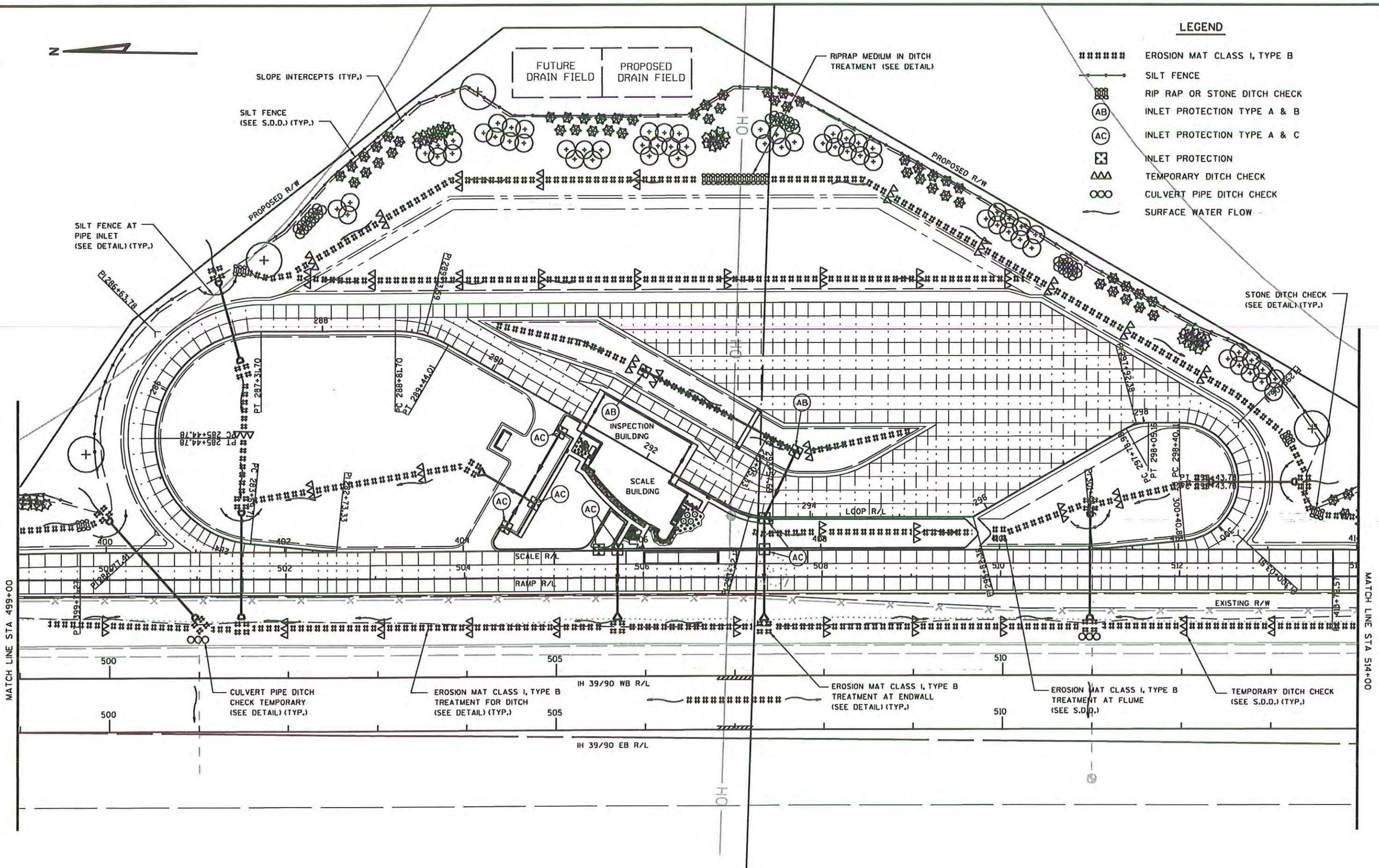




LEGEND

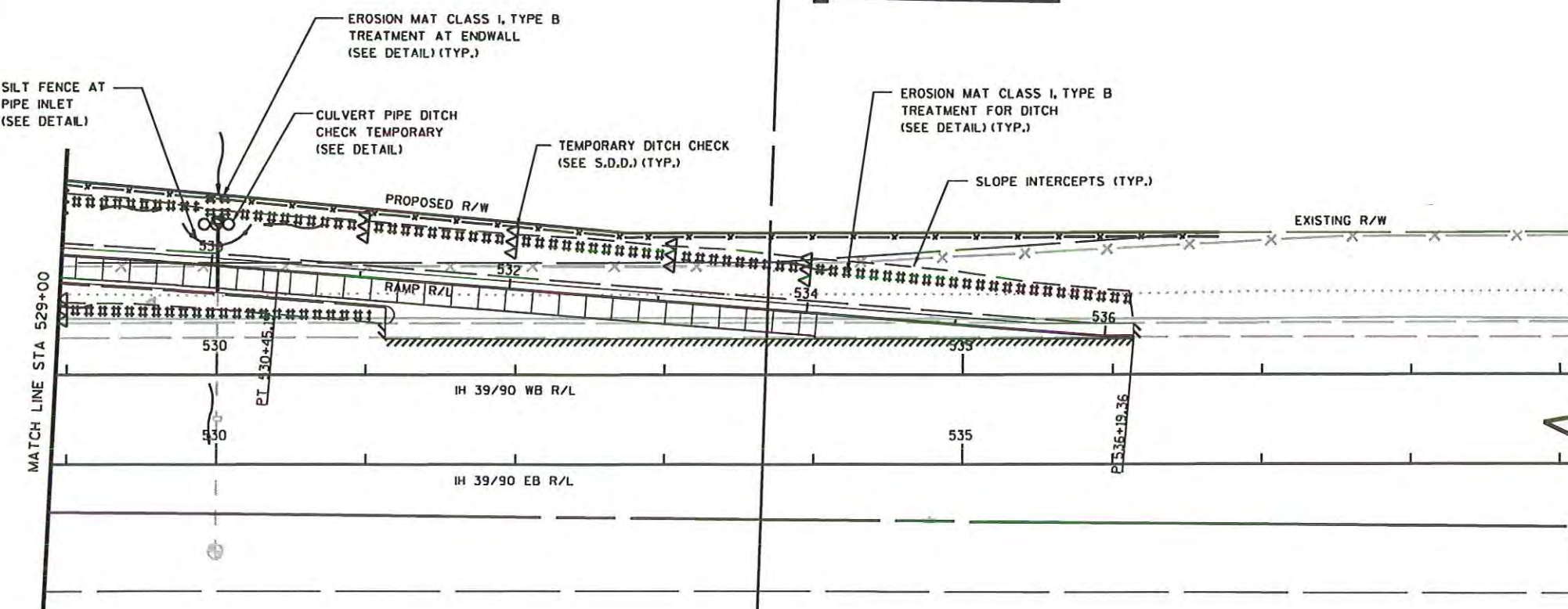
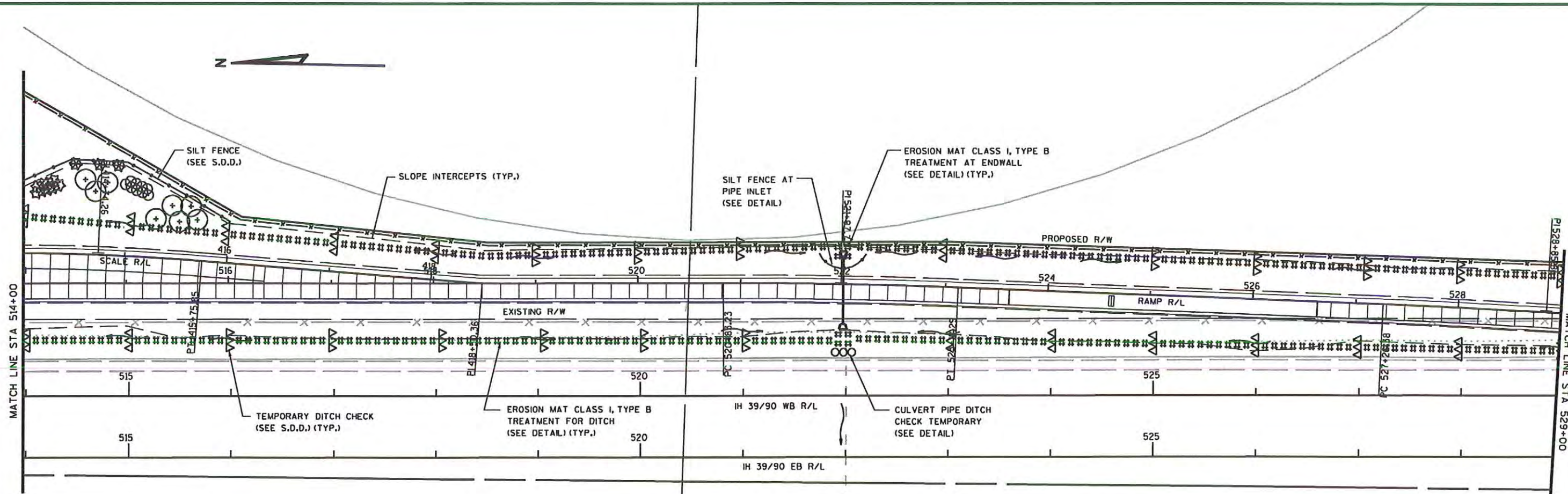
- ##### EROSION MAT CLASS I, TYPE B
- SILT FENCE
- ▤ RIP RAP OR STONE DITCH CHECK
- (AB) INLET PROTECTION TYPE A & B
- (AC) INLET PROTECTION TYPE A & C
- ⊗ INLET PROTECTION
- △△△ TEMPORARY DITCH CHECK
- CULVERT PIPE DITCH CHECK
- SURFACE WATER FLOW





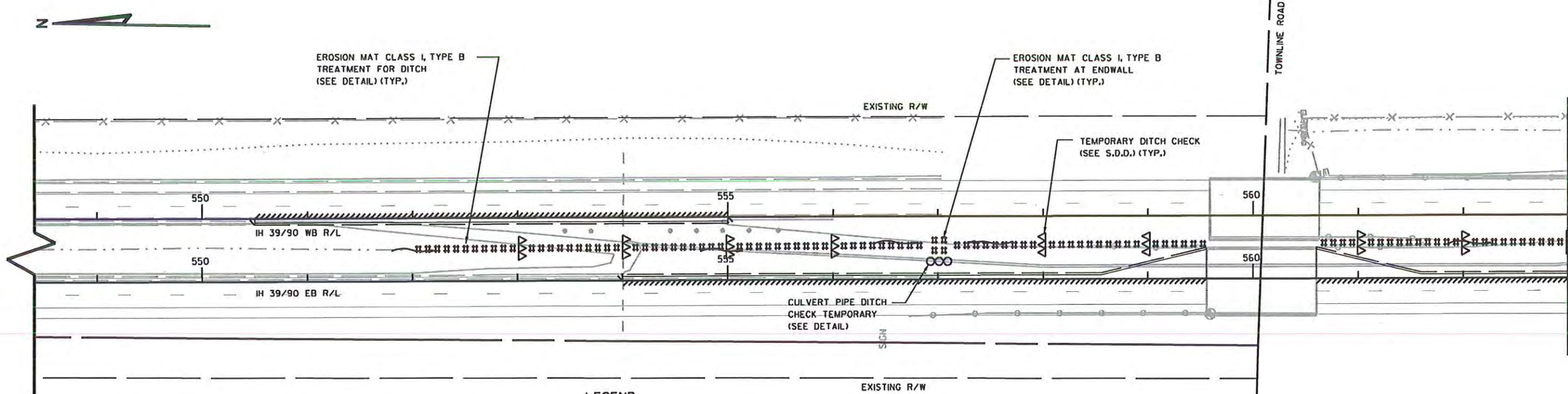
LEGEND

- ##### EROSION MAT CLASS I, TYPE B
- SILT FENCE
- ##### RIP RAP OR STONE DITCH CHECK
- (AB) INLET PROTECTION TYPE A & B
- (AC) INLET PROTECTION TYPE A & C
- ⊗ INLET PROTECTION
- ΔΔΔ TEMPORARY DITCH CHECK
- CULVERT PIPE DITCH CHECK
- SURFACE WATER FLOW



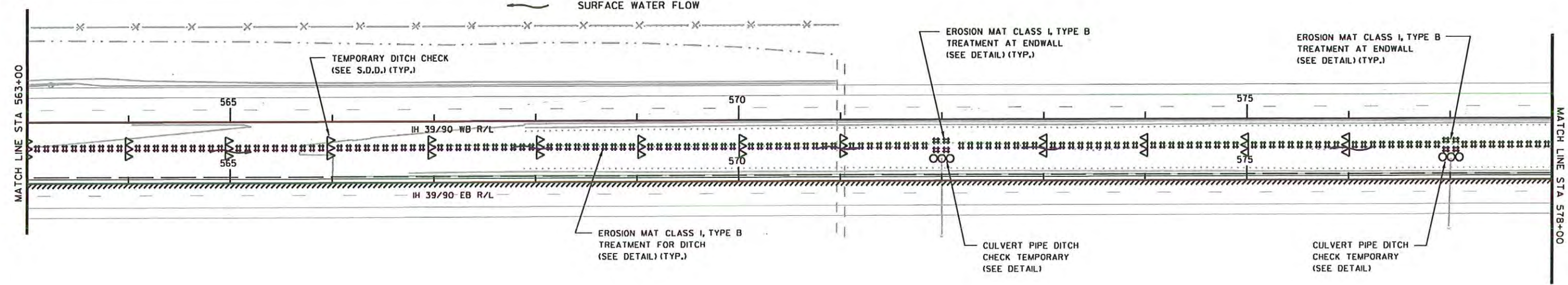
LEGEND

- ##### EROSION MAT CLASS I, TYPE B
- SILT FENCE
- ⊗ RIP RAP OR STONE DITCH CHECK
- ⊙(AB) INLET PROTECTION TYPE A & B
- ⊙(AC) INLET PROTECTION TYPE A & C
- ⊗ INLET PROTECTION
- △△△ TEMPORARY DITCH CHECK
- ∞∞∞ CULVERT PIPE DITCH CHECK
- >— SURFACE WATER FLOW



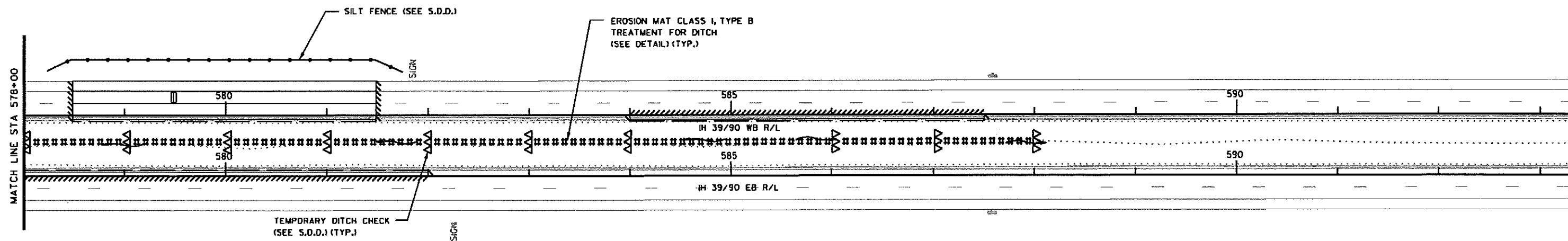
LEGEND

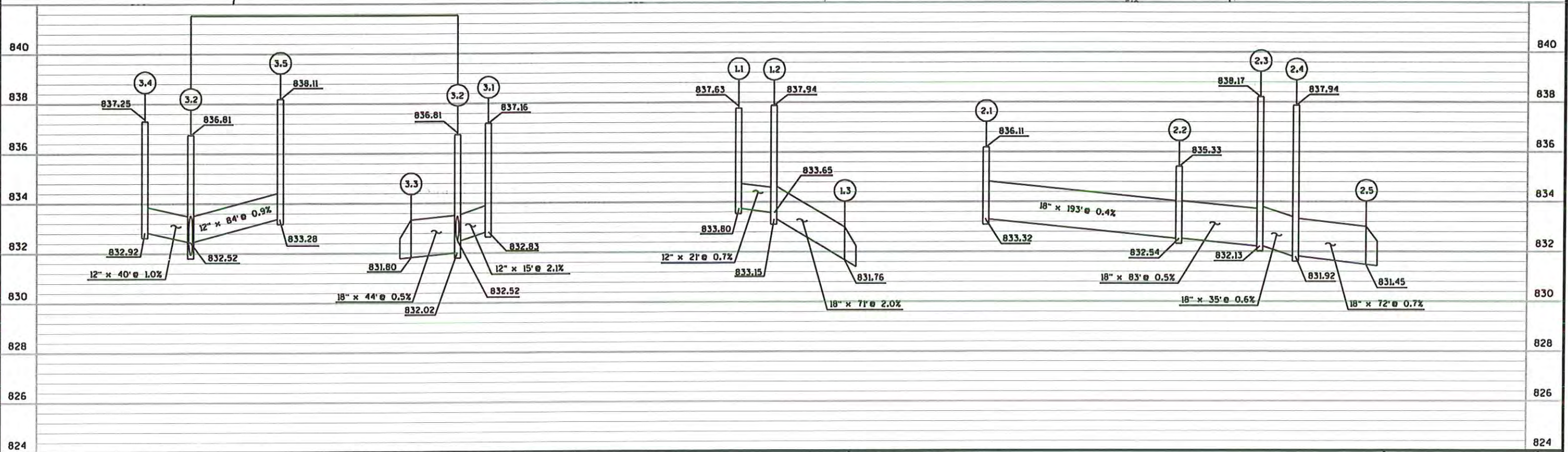
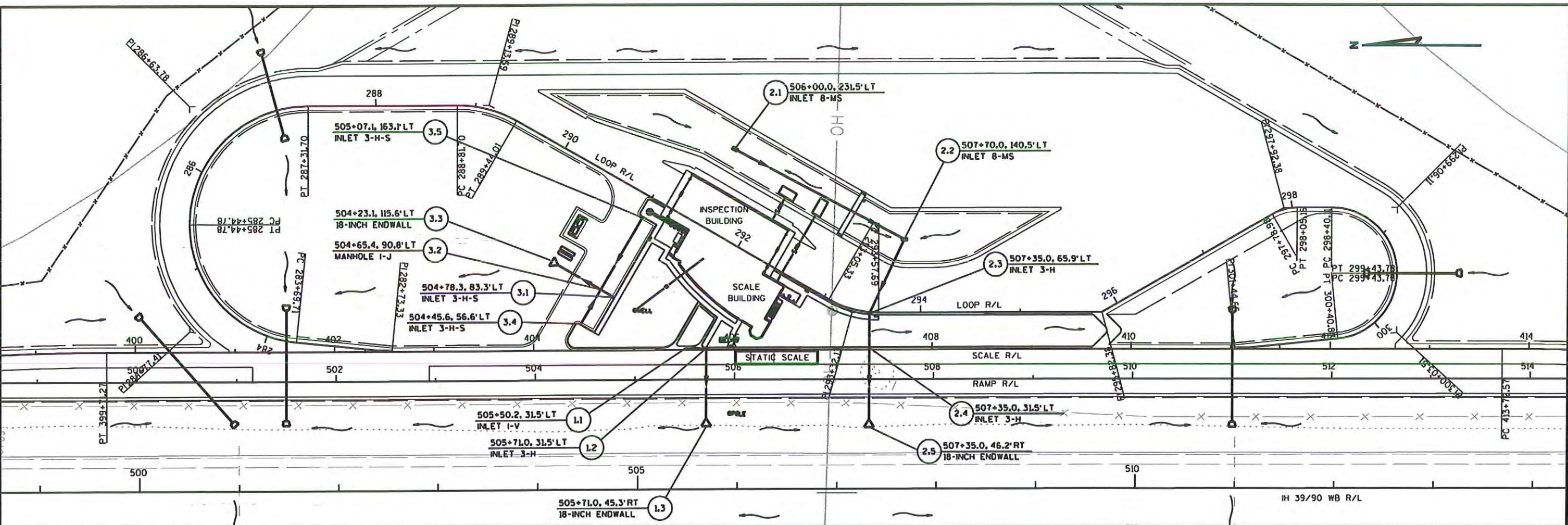
- ##### EROSION MAT CLASS I, TYPE B
- SILT FENCE
- ⊞ RIP RAP OR STONE DITCH CHECK
- ⊞(AB) INLET PROTECTION TYPE A & B
- ⊞(AC) INLET PROTECTION TYPE A & C
- ⊞ INLET PROTECTION
- ΔΔΔ TEMPORARY DITCH CHECK
- CULVERT PIPE DITCH CHECK
- ~— SURFACE WATER FLOW

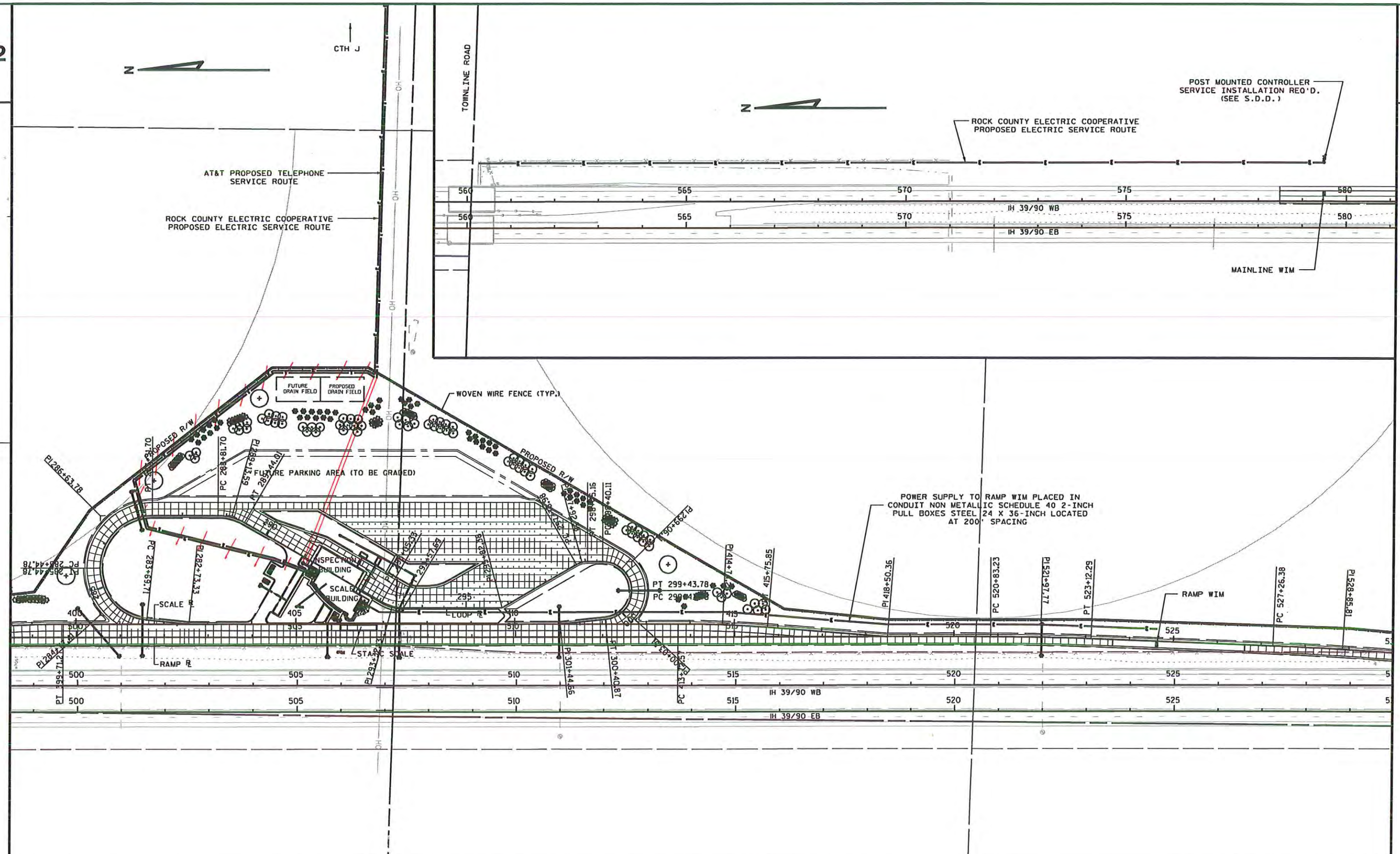


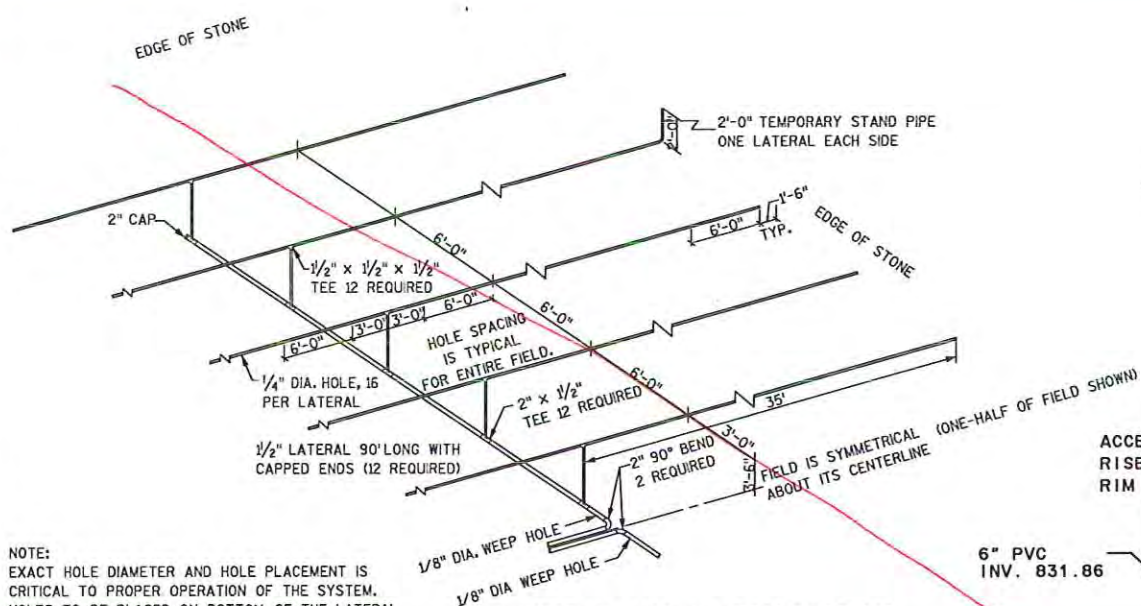
**LEGEND**

#####	EROSION MAT CLASS I, TYPE B
—●—●—●—	SILT FENCE
⊠	RIP RAP OR STONE DITCH CHECK
⊙ AB	INLET PROTECTION TYPE A & B
⊙ AC	INLET PROTECTION TYPE A & C
⊗	INLET PROTECTION
△△△	TEMPORARY DITCH CHECK
○○○	CULVERT PIPE DITCH CHECK
—>—	SURFACE WATER FLOW





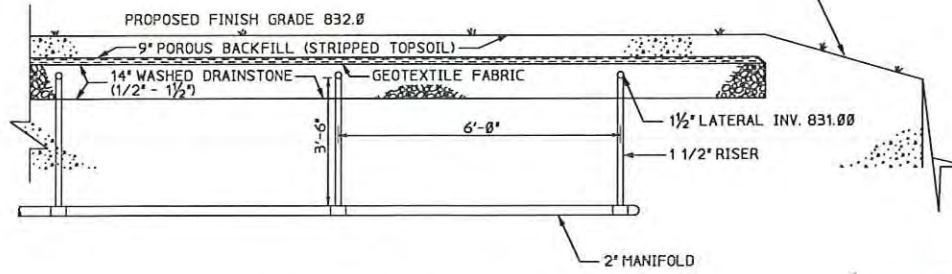




NOTE:
EXACT HOLE DIAMETER AND HOLE PLACEMENT IS CRITICAL TO PROPER OPERATION OF THE SYSTEM. HOLES TO BE PLACED ON BOTTOM OF THE LATERAL AT THE SPECIFIED SPACING. HOLES SHALL BE PROTECTED W/ STONE GUARDS TO PREVENT HOLES FROM PLUGGING. LATERAL & MANIFOLD PIPE SHALL BE DR 26 OR APPROVED EQUIVALENT.

LATERALS SHALL BE CONSTRUCTED LEVEL.

LATERAL AND MANIFOLD DETAIL
NOT TO SCALE

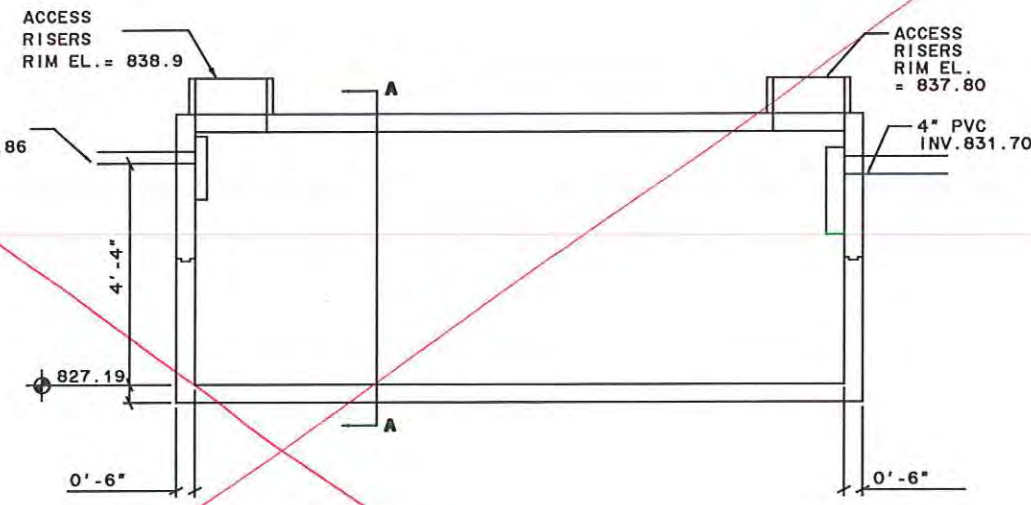
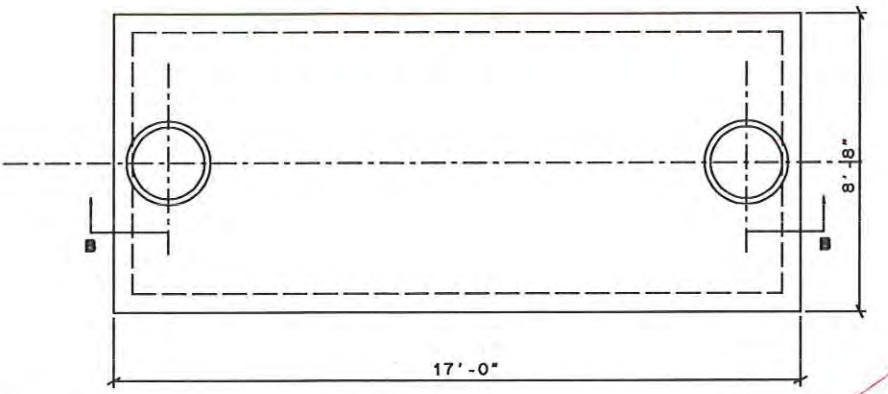


TILE FIELD SECTION
NOT TO SCALE

MANIFOLD DETAILS

GENERAL NOTES

ALL WORK ON SEPTIC TANK SHALL BE IN ACCORDANCE WITH THE STATE OF WISCONSIN SANITARY CODE
PRESSURE DISTRIBUTION IS TO OPERATE AT 2'-0" HEAD. VERIFY AND ADJUST DELIVERY HEAD AFTER SYSTEMS IS CONSTRUCTED BY ADJUSTING VALVE ON PUMP BY-PASS UNTIL LIQUID JUST FLOWS FROM TOP OF TEMPORARY STANDPIPE IN TILE FIELD. WHEN THIS ADJUSTMENT IS ACCOMPLISHED, REMOVE STANDPIPE AND PLUG LATERAL.
ALL TOPSOIL FOUND IN THE TILE FIELD AREA SHALL BE EXCAVATED, AND SALVAGED
FORCE MAIN WILL BE WATER PRESSURE TESTED AT 100 PSI FOR 2 HOURS. THE ALLOWABLE LOSS OF WATER SHALL NOT EXCEED 0.8 GALLONS / COUPLINGS / HOUR



SECTION B-B
SEPTIC TANK

REPLACEMENT SHEET 38A

BASIS OF DESIGN

INSPECTORS.....	160 GAL.
WEIGHT ENFORCEMENTS.....	725 GAL.
EMPLOYEES (4/ SHIFT & 2 SHIFTS/DAY).....	400 GAL.
CLEANING.....	140 GAL.
OVERNIGHT PARKING.....	675 GAL.
TOTAL.....	2,100 GAL.
DESIGN VOLUME (FACTOR 1.5).....	3,150 GAL.

SEPTIC TANK

VOLUME REQUIRED 3,500 GALLONS

BAFFLES FOR SEPTIC TANK:
INLETS 9" ABOVE LL AND 12" BELOW
OUTLETS 9" ABOVE LL AND 20" BELOW

TILE FIELD

ALTERNATE DOSE 1/2 OF TILE FIELD EACH 1/2 FIELD IS 30' x 75' OR 2,250 SFT. ENTIRE FIELD IS 4,500 SFT.

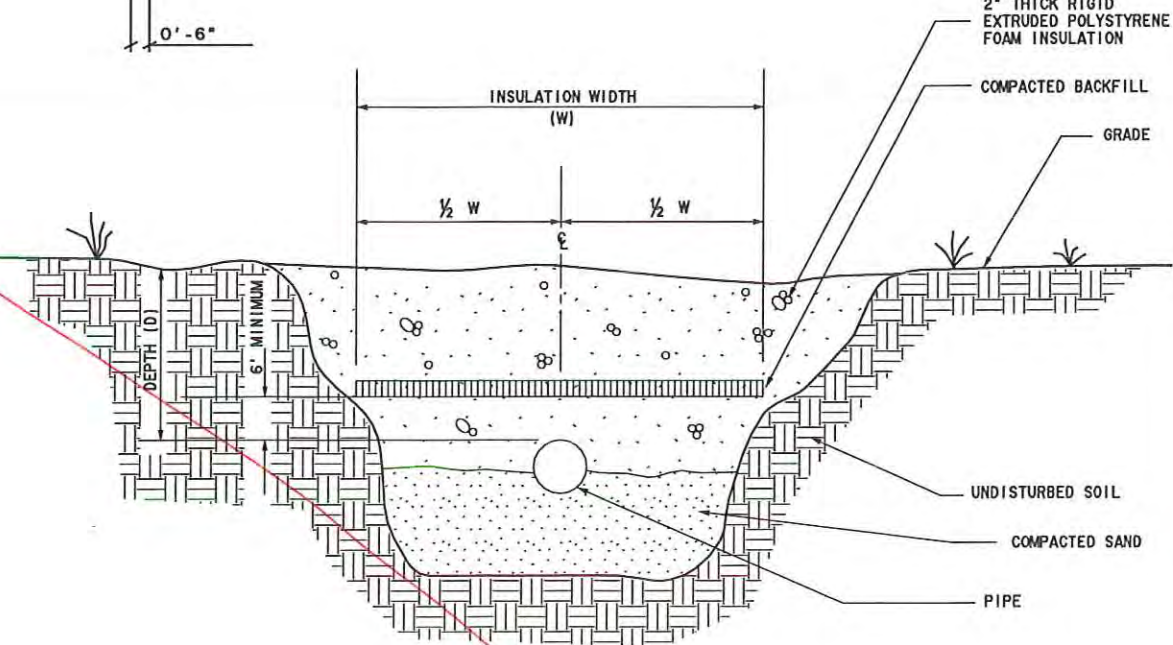
APPLICATION RATE: 3,150 GALLONS / 4,500 SFT. = 0.70 GAL./SFT./DAY

MANIFOLD IS 2" DR 26 PVC AND LATERALS ARE 1 1/2" DR 26 126 LB. CLASS PVC.

FORCE MAIN

FORCE MAIN SHALL BE 2" DR 26 CLASS PVC PIPE.

ALL ELECTRICAL COMPONENTS SHALL COMPLY WITH THE NATIONAL FIRE CODE CLASS S1, GROUP D, DIVISION I

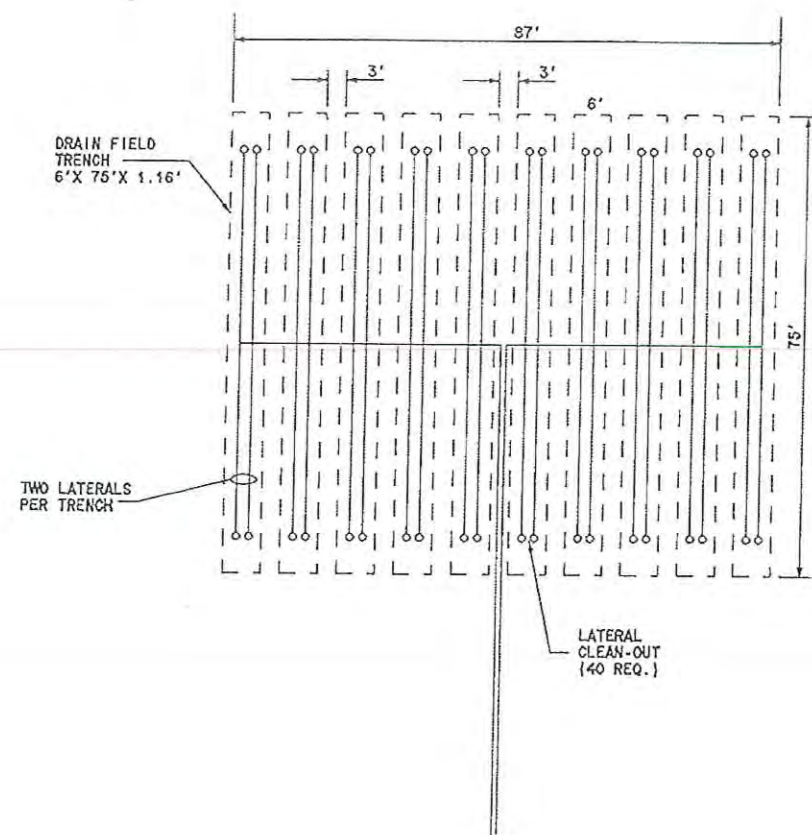
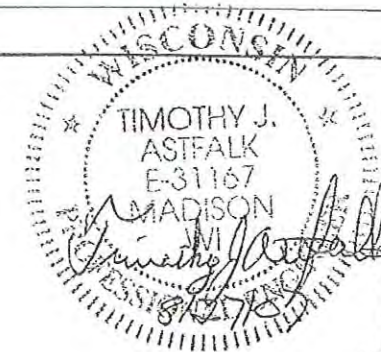


INSULATION DETAIL

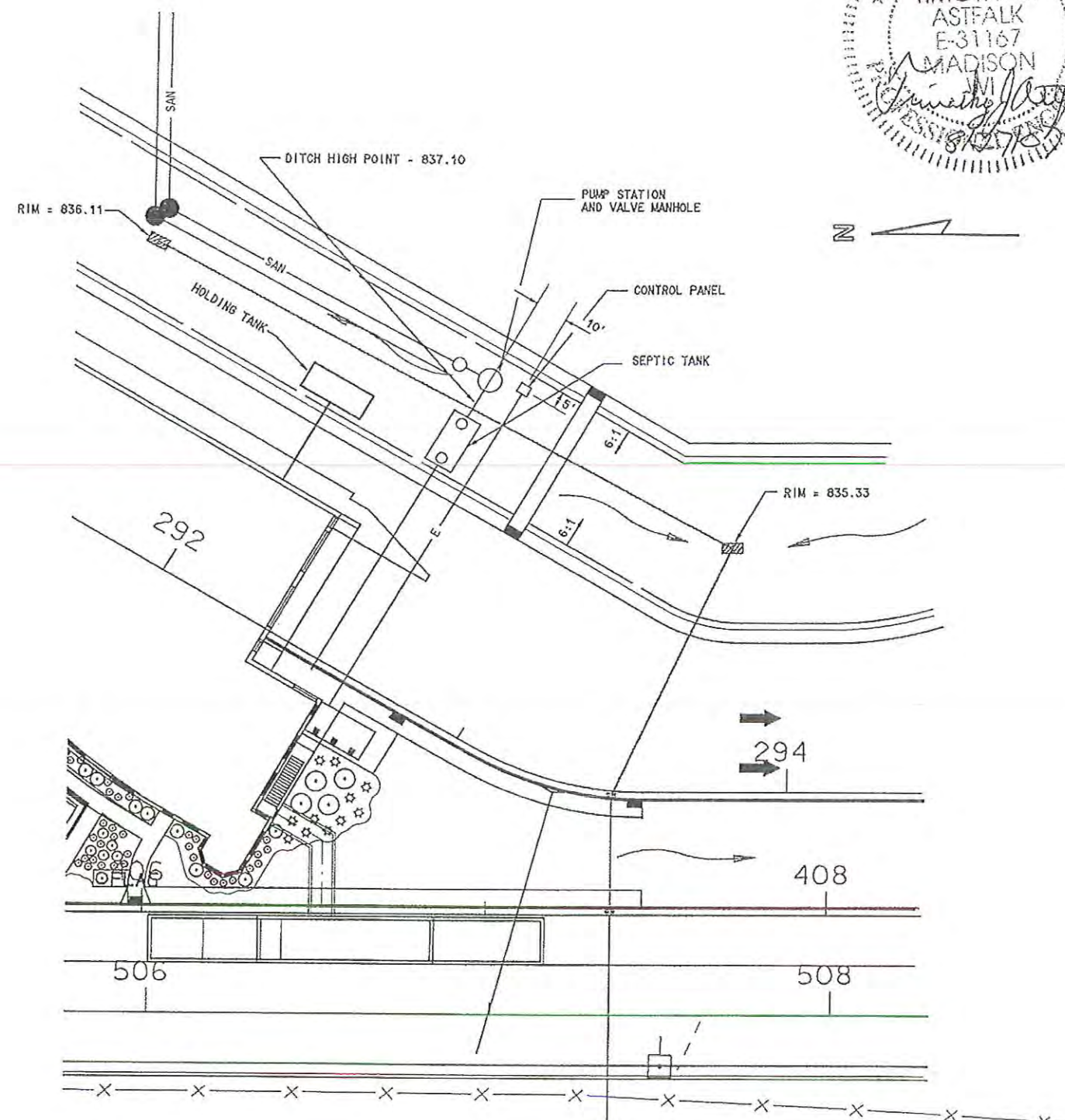
PIPE DEPTH (D)	2'-0"	2'-6"	3'-0"	3'-6"	4'-0" TO 6'-0"	MORE THAN 6'-0"
INSULATION WIDTH (W)	8'-0"	7'-0"	6'-0"	5'-0"	4'-0"	0'-0"

NOTE:

WHERE TOP OF WATER SERVICE PIPE IS LOCATED LESS THAN 6'-0" BELOW GROUND SURFACE, PROVIDE INSULATION AS SHOWN ON DETAIL AND BY SCHEDULE BELOW.



DRAIN FIELD PLAN VIEW



SITE GRADING PLAN

PROJECT NO: 1002-04-71

HWY: BELOIT, SWEWF #19

COUNTY: ROCK

SEPTIC SYSTEM DETAILS

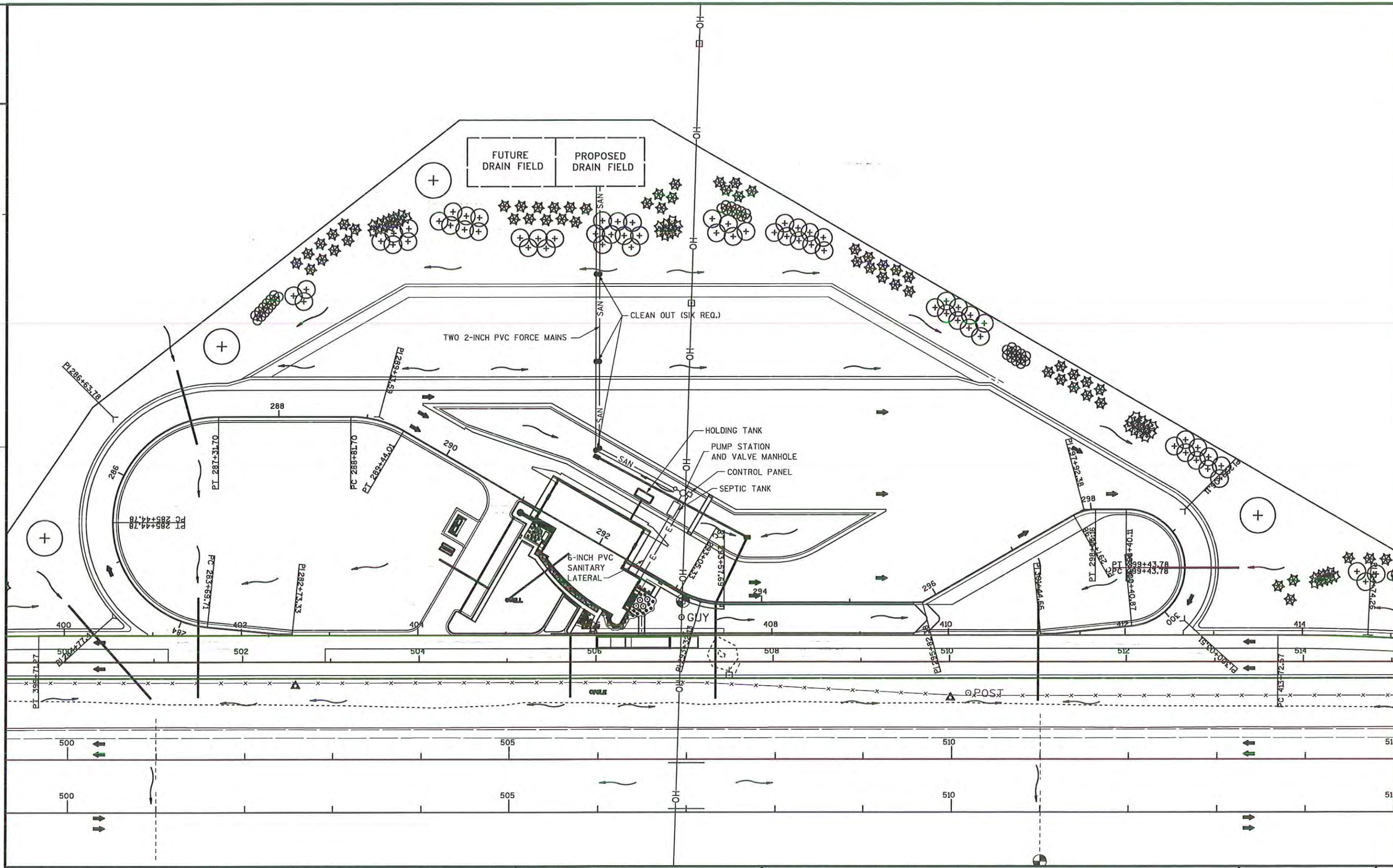
SHEET 38A

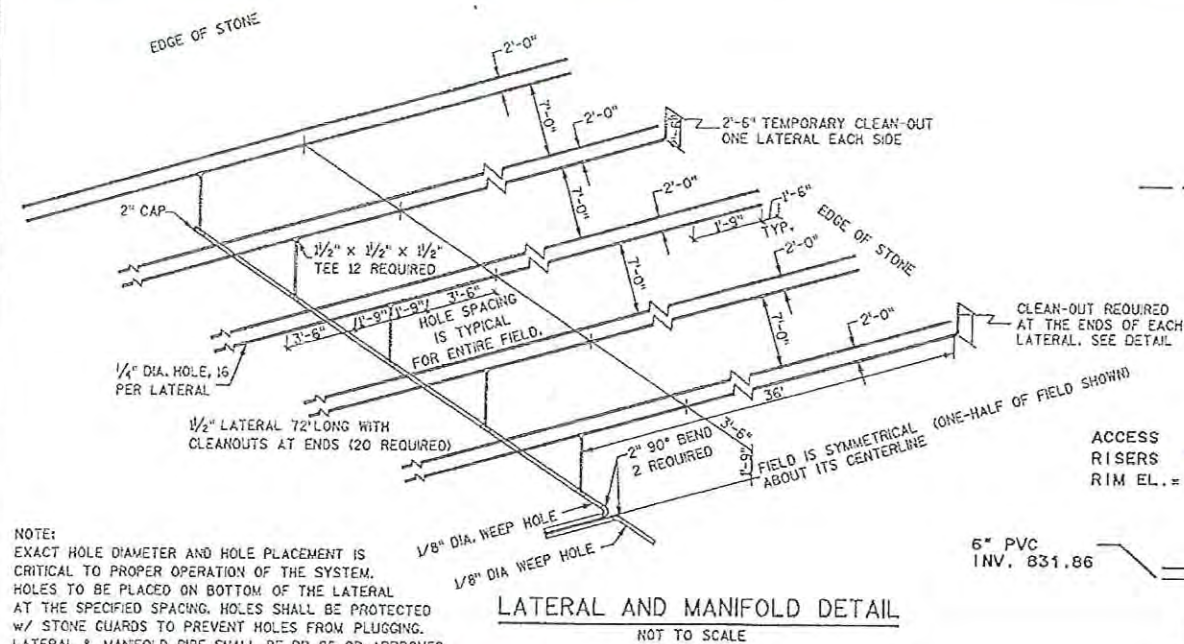
E

FILE NAME : \$\$....designfile....\$\$

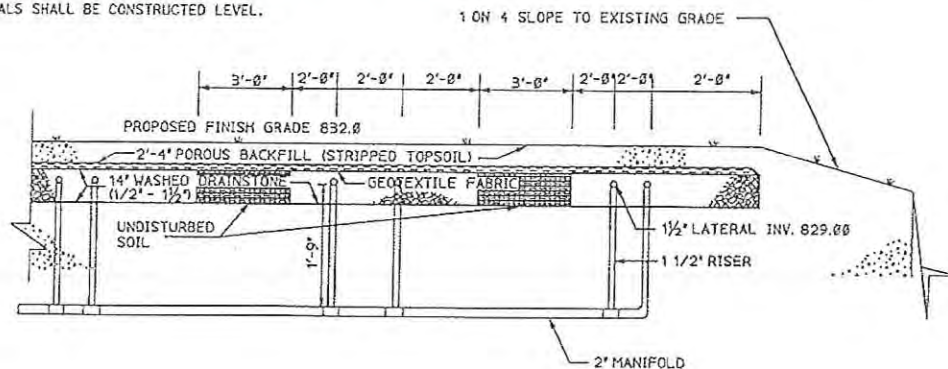
PLOT DATE : \$\$...plottingdate...\$\$ PLOT BY : \$\$...plotuser...\$\$ PLOT NAME :

PLOT SCALE : \$\$.....plotscale.....\$\$ WISDOT/CADDs SHEET 42





LATERALS SHALL BE CONSTRUCTED LEVEL.



MANIFOLD DETAILS

GENERAL NOTES

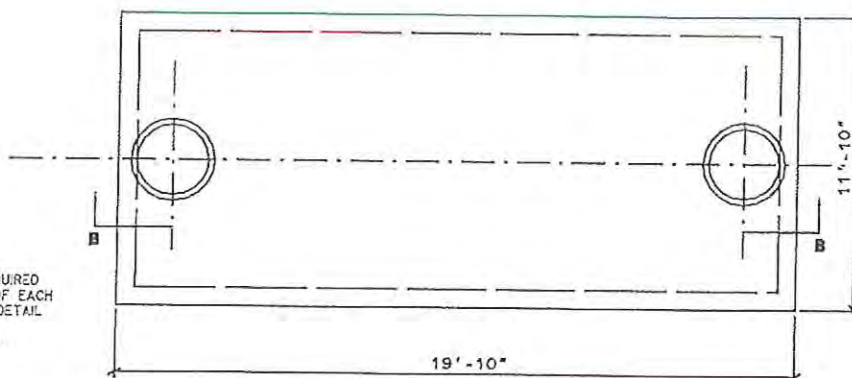
ALL WORK ON SEPTIC TANK SHALL BE IN ACCORDANCE WITH THE STATE OF WISCONSIN COMMERCE CODE 83

INSTALL CLEAN-OUTS AT THE ENDS OF ALL LATERALS.

PRESSURE DISTRIBUTION IS TO OPERATE AT 2'-6" HEAD. VERIFY AND ADJUST DELIVERY HEAD AFTER SYSTEM IS CONSTRUCTED BY ADJUSTING VALVE ON PUMP BY-PASS UNTIL LIQUID JUST FLOWS FROM TOP OF A 2'-6" CLEAN-OUT IN TILE FIELD. WHEN THIS ADJUSTMENT IS ACCOMPLISHED, COMPLETE CONSTRUCTION OF CLEAN-OUT.

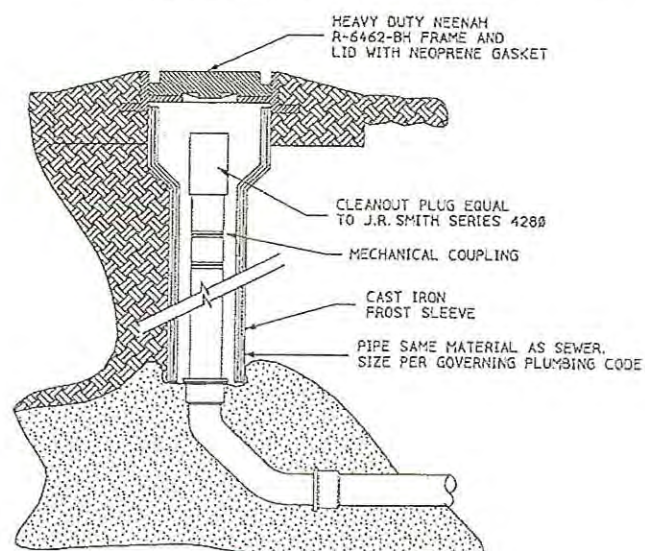
ALL TOPSOIL FOUND IN THE TILE FIELD AREA SHALL BE EXCAVATED, AND SALVAGED.

FORCE MAIN WILL BE WATER PRESSURE TESTED AT 100 PSI FOR 2 HOURS. THE ALLOWABLE LOSS OF WATER SHALL NOT EXCEED 0.8 GALLONS / COUPLINGS / HOUR



NOTES:

- 1) TANK SHALL BE A MODEL W7700 AS MANUFACTURED BY WIESER CONCRETE



LATERAL CLEANOUT DETAIL

NOT TO SCALE 0708 7/99

BASIS OF DESIGN

INSPECTORS.....	160 GAL
WEIGHT ENFORCEMENTS.....	725 GAL
EMPLOYEES (4/ SHIFT & 2 SHIFTS/DAY).....	400 GAL
CLEANING.....	140 GAL
OVERNIGHT PARKING.....	675 GAL
TOTAL.....	2,100 GAL
DESIGN VOLUME (FACTOR 1.5).....	3,150 GAL

SEPTIC TANK

VOLUME REQUIRED 6,600 GALLONS

BAFFLES FOR SEPTIC TANK:
INLETS 9" ABOVE LL AND 12" BELOW
OUTLETS 9" ABOVE LL AND 20" BELOW

EFFLUENT FILTERS SHALL BE INSTALLED AS PER SPECIFICATION 221353-213. NUMBER OF FILTERS SHALL BE AS RECOMMENDED BY FILTER MANUFACTURER FOR THE DESIGN FLOW.

TILE FIELD

ALTERNATE DOSE 1/2 OF TILE FIELD EACH 1/2 FIELD IS 30' x 75' OR 2,250 SFT. ENTIRE FIELD IS 4,500 SFT.

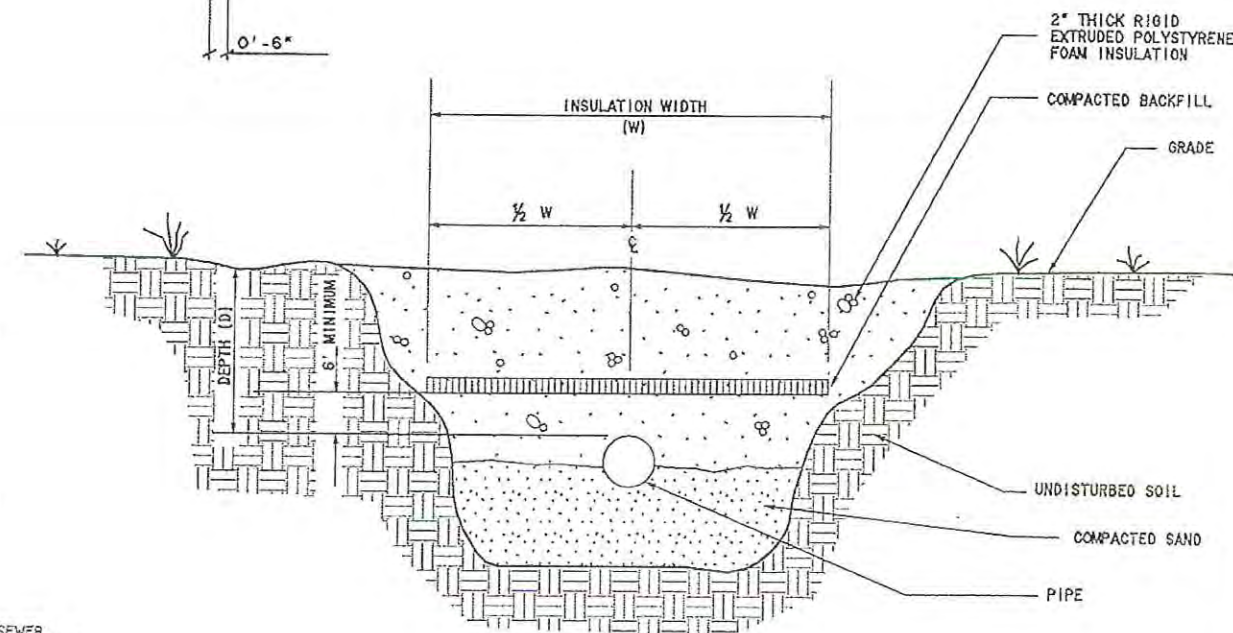
APPLICATION RATE: 3,150 GALLONS / 4,5000 SFT. = 0.70 GAL./SFT./DAY

MANIFOLD IS 2" DR 26 PVC AND LATERALS ARE 1/2" DR 26 126 LB. CLASS PVC.

FORCE MAIN

FORCE MAIN SHALL BE 2" DR 26 CLASS PVC PIPE.

ALL ELECTRICAL COMPONENTS SHALL COMPLY WITH THE NATIONAL FIRE CODE CLASS S1, GROUP D, DIVISION I

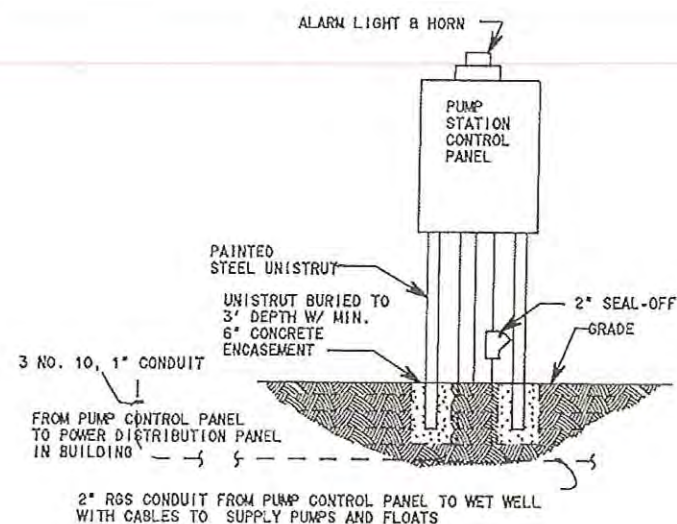


PIPE DEPTH (D)	2'-0"	2'-6"	3'-0"	3'-6"	4'-0" TO 6'-0"	MORE THAN 6'-0"
INSULATION WIDTH (W)	8'-0"	7'-0"	6'-0"	5'-0"	4'-0"	0'-0"

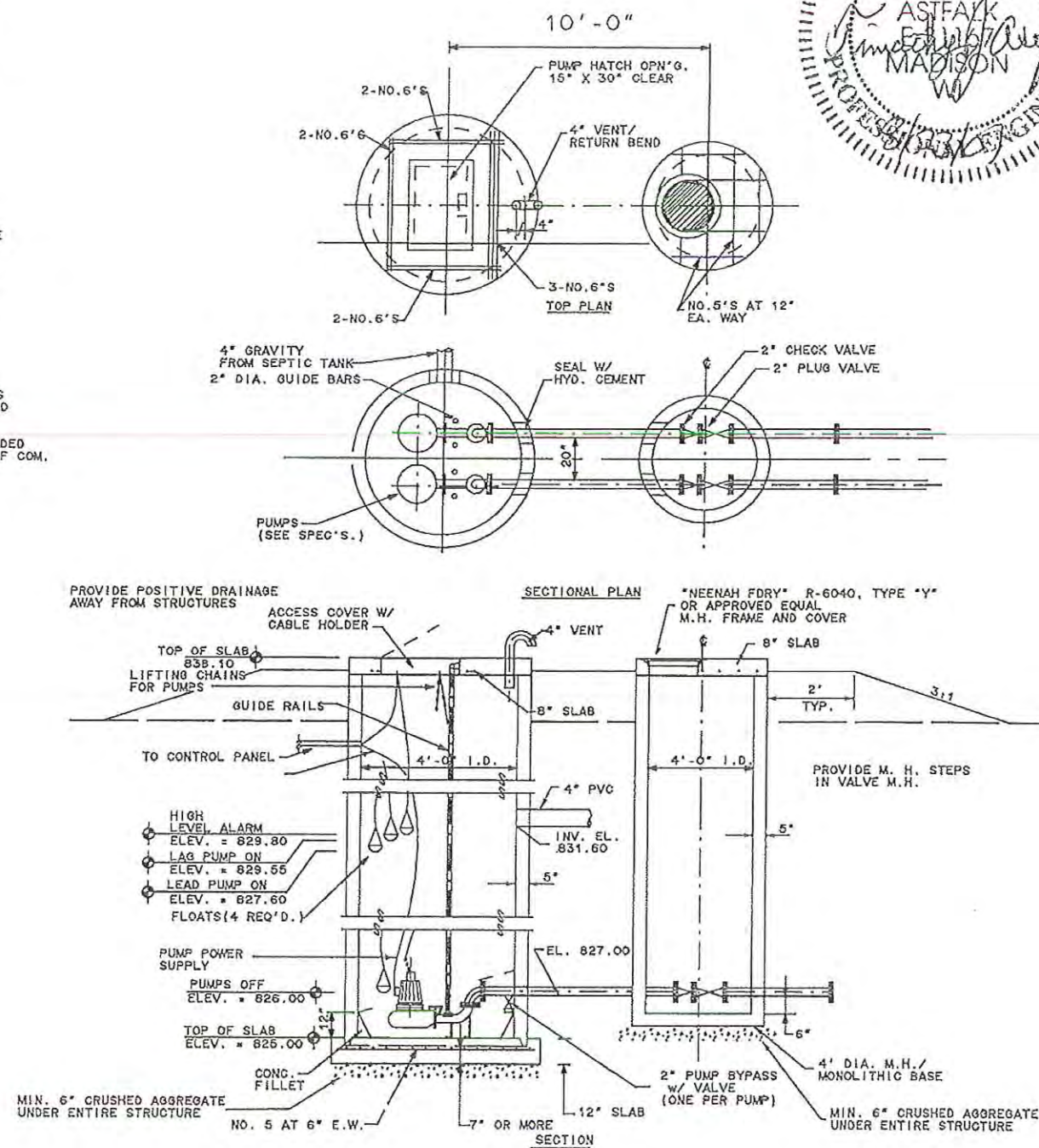
NOTE:

WHERE TOP OF WATER SERVICE PIPE IS LOCATED LESS THAN 6'-0" BELOW GROUND SURFACE, PROVIDE INSULATION AS SHOWN ON DETAIL AND BY SCHEDULE BELOW.

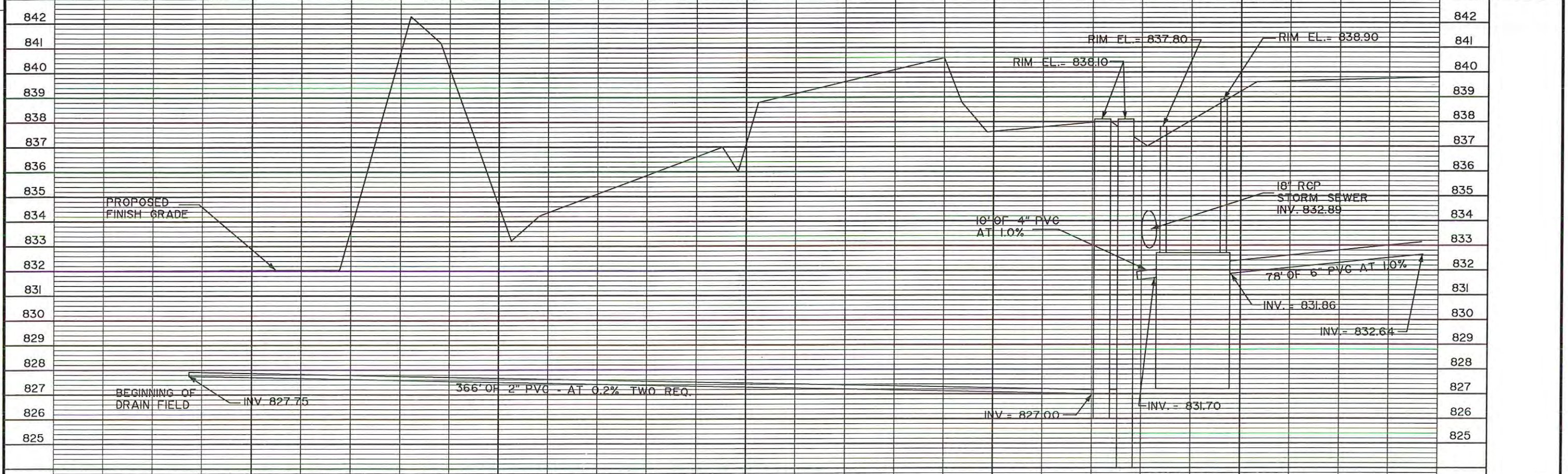
- 1) PUMP STATION AND VALVE MH SHALL COMPLY W/ASTM C913 AND WISCONSIN DEPT. OF COM. CODE 83 FOR PRECAST, REINFORCED CONCRETE TANK AND COVER.
- 2) PUMP HATCH SHALL BE LOCKABLE, FLUSH MOUNTED, AND LARGE ENOUGH TO REMOVE PUMPS FROM AT GRADE.
- 3) ALL PIPE CONNECTIONS TO THE PUMP STATION AND VALVE MH SHALL USE APPROPRIATELY SIZED RESILIENT CONNECTORS COMPLYING W/ASTM C923.
- 4) PUMPS SHALL BE A ZOELLER 6120 W/A CAPACITY OF 30GPM AT A TOTAL DYNAMIC HEAD OF 19 FEET. PUMPS SHALL BE DESIGNED TO BE RAISED AND LOWERED WITHOUT ENTERING THE PUMP STATION. PUMPS MUST ENGAGE W/THE DISCHARGE ELBOW W/A STRAIGHT DOWN MOTION ON THE GUIDE RAILS PROVIDING A LEAK PROOF SEAL.
- 5) PUMP STATION AND VALVE MH SHALL BE INSTALLED IN ACCORDANCE WITH ASTM C891.
- 6) SEPTIC TANK AND PUMP STATION SHALL BE HYDROSTATICALLY TESTED FOR WATER TIGHTNESS. FILL STRUCTURES WITH WATER AND LET THEM STAND 24 HOURS. IF WATER LEVEL RECEDES, LOCATE AND REPAIR LEAKS AND RETEST. REPEAT TESTS AND REPAIRS UNTIL NO LEAKS EXIST.
- 7) PUMP STATION BOTTOM SECTION SHALL BE PROVIDED W/INTEGRAL BASE. BOTTOM SECTION SHALL BE A MIN. HEIGHT OF 3'.
- 8) PUMP STATION JOINTS SHALL BE FORMED BY A BELL END $4\frac{1}{2}$ " OF ONE SECTION AND A $4\frac{1}{2}$ " TONGUE ON THE OTHER SECTION. JOINTS SHALL BE SEALED W/CONSEAL GS-202 OR OTHER ENGINEER APPROVED EQUAL BUTYL SEALANT.
- 9) PUMP STATION, VALVE MANHOLE AND SEPTIC TANK SHALL BE PROVIDED W/CONFINED SPACE WARNING SIGNS AS REQUIRED IN WIS. DEPT. OF COM. CODE 82 AND 83.



PUMP STATION CONTROL PANEL



PUMPING STATION & VALVE MANHOLE

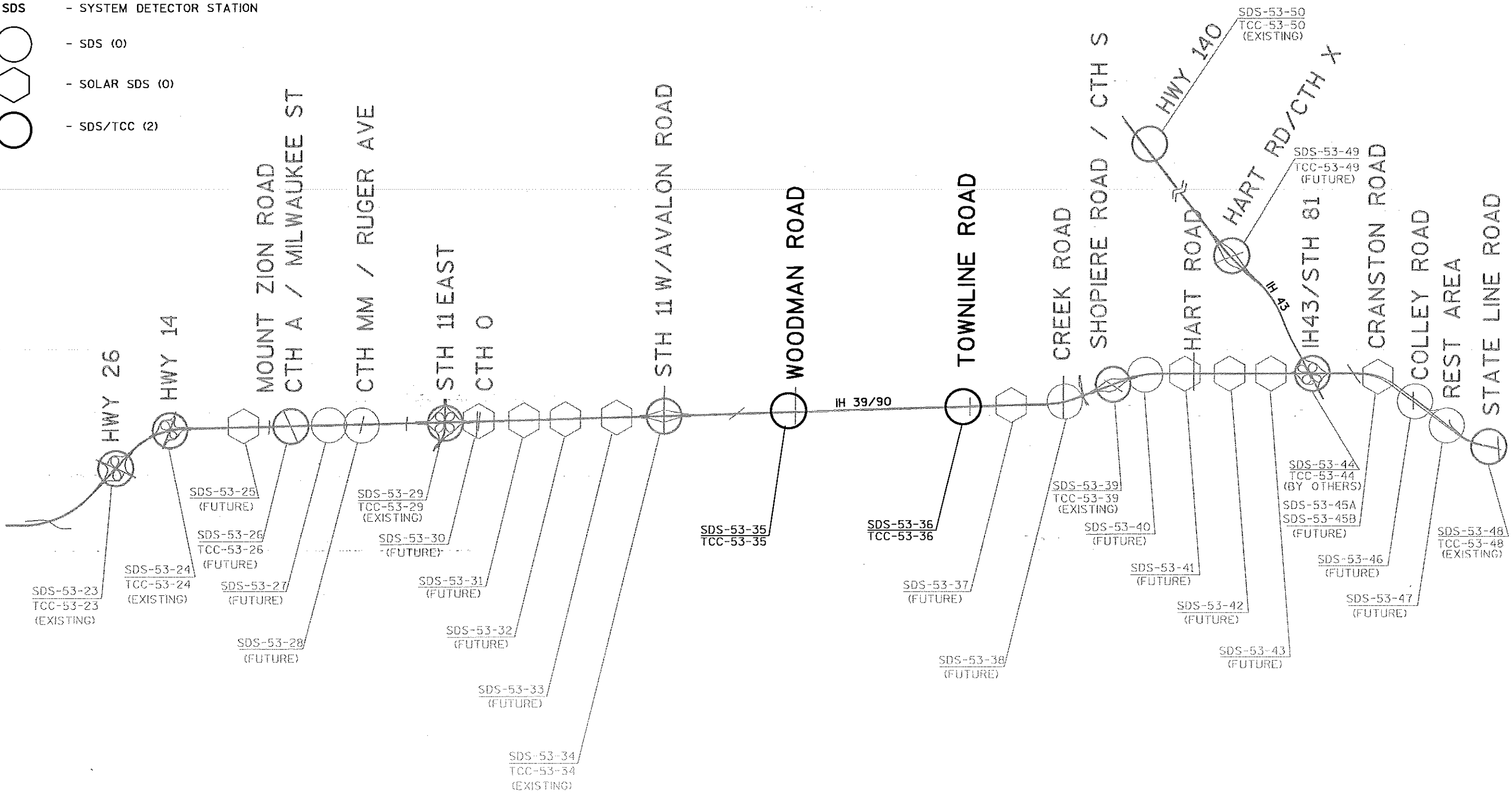


ILLINOIS STATE LINE - MADISON ROAD
BELOIT SWEF
LOCATION MAP

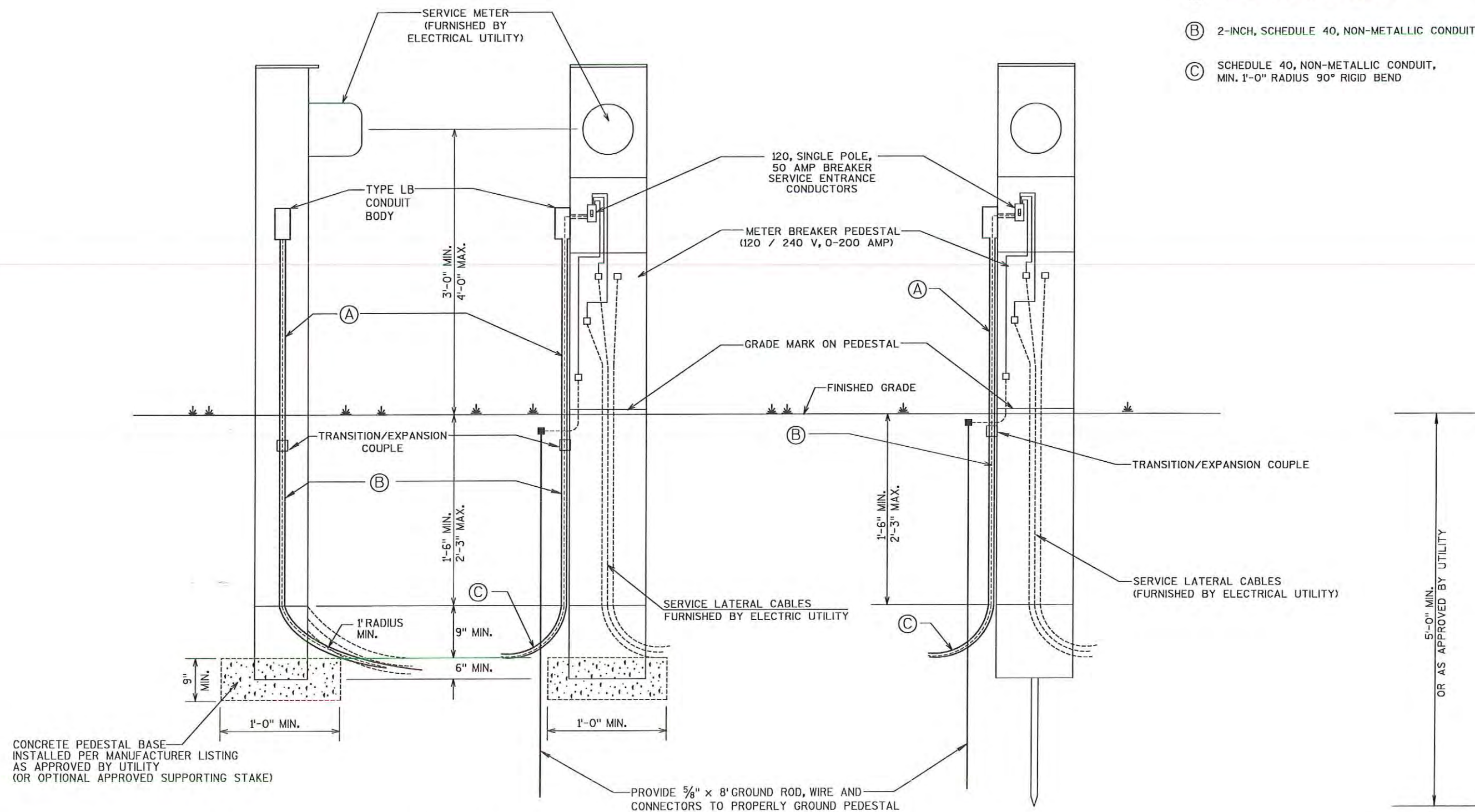


LEGEND

- TCC - TRAFFIC CONDITION CAMERA
- SDS - SYSTEM DETECTOR STATION
- SDS (0)
- SOLAR SDS (0)
- SDS/TCC (2)



- (A) 2-INCH RIGID METALLIC CONDUIT
- (B) 2-INCH, SCHEDULE 40, NON-METALLIC CONDUIT TO CABINET
- (C) SCHEDULE 40, NON-METALLIC CONDUIT, MIN. 1'-0" RADIUS 90° RIGID BEND



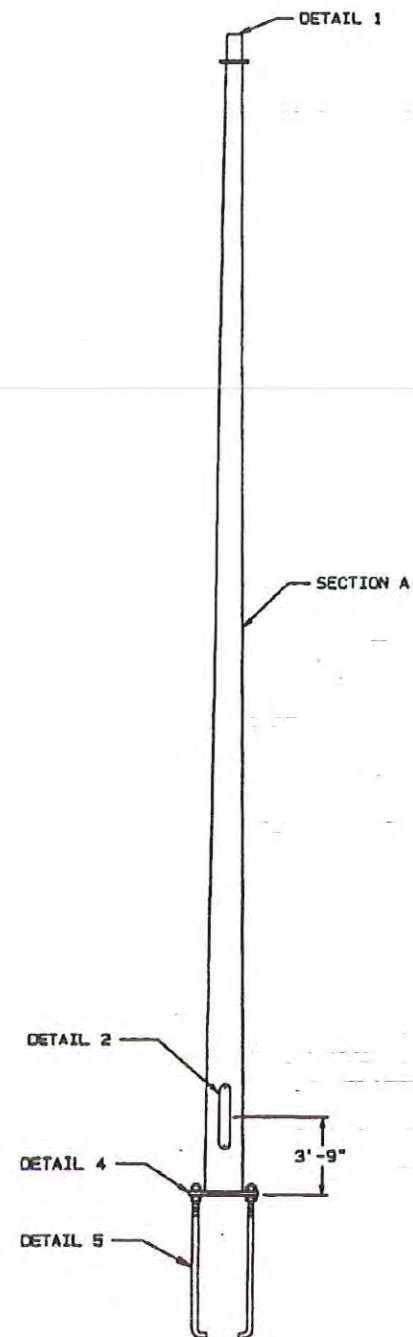
FREE STANDING METER BREAKER PEDESTAL

ALTERNATE SUPPORTING STAKE
(IF APPROVED BY UTILITY)

ALL ANGLES MEASURED
CLOCKWISE FROM HAND-
HOLE AS VIEWED FROM
SMALL END OF POLE

WIRE EYES — 90° — 270° — L.D. ARM #1
PARK STAND
HANDHOLE

ORIENTATION VIEW



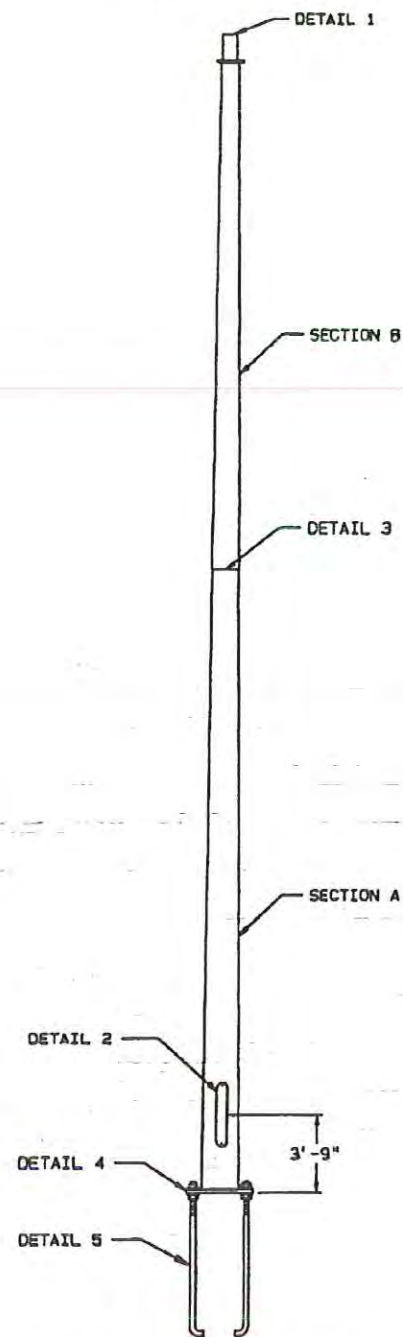
WIND VELOCITY: 30 MPH W/NO GUST
1" MAXIMUM POLE TOP DEFLECTION

LOADING AND ALLOWABLE STRESS CRITERIA:
1994 AASHTO "STANDARD SPECIFICATIONS FOR
STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS,
LUMINAIRES AND TRAFFIC SIGNALS".

ALL ANGLES MEASURED
CLOCKWISE FROM HAND-
HOLE AS VIEWED FROM
SMALL END OF POLE

WIRE EYES — 90° — 270° — L.D. ARM #1
PARK STAND
HANDHOLE

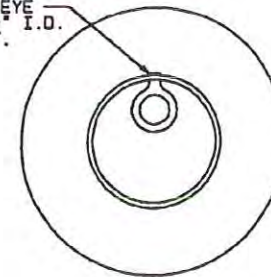
ORIENTATION VIEW



WIND VELOCITY: 30 MPH W/NO GUST
1" MAXIMUM POLE TOP DEFLECTION

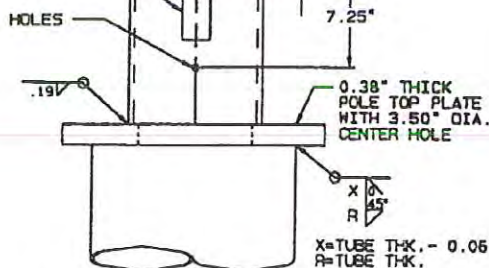
LOADING AND ALLOWABLE STRESS CRITERIA:
1994 AASHTO "STANDARD SPECIFICATIONS FOR
STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS,
LUMINAIRES AND TRAFFIC SIGNALS".

0.38" DIA. WIRE EYE
BOLT HAVING 1.00" I.D.
FOR WIRE TIE OFF.



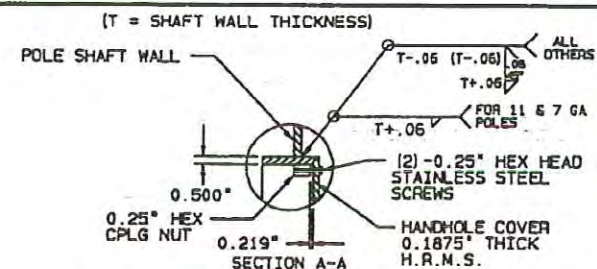
TOP OF TENON
1.00"
4.00" O.D. X .121" WALL
X 12.00" LONG TENON

5.25" X 1.75" SLOT
CUT IN POLE WALL
FOR CABLE AND PULLEY
ACCESS.
(2) 0.656" DIA. HOLES

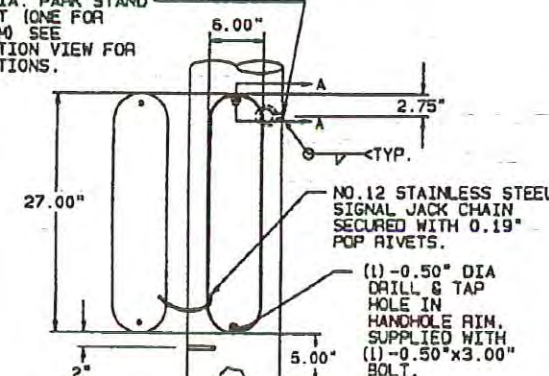


SEE POLE SCHEDULE & ORIENTATION VIEW
FOR QTY. REQ'D AND PROPER ORIENTATIONS

DETAIL 1 POLE TENON



0.38" DIA. PARK STAND
EYE BOLT (ONE FOR
EACH ARM) SEE
ORIENTATION VIEW FOR
ORIENTATIONS.



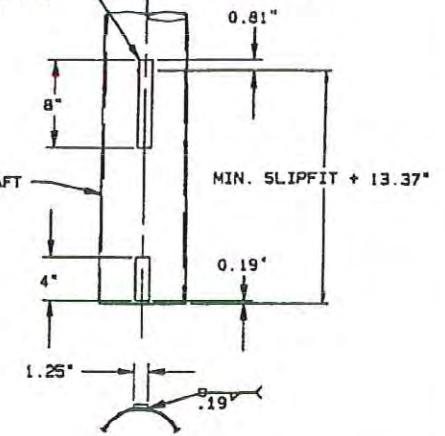
0.75" DIA. WIRE EYE
BOLT HAVING 1.50"
I.D. FOR WIRE TIE OFF

0.50" NUT HOLDER
WITH FASTENERS
FOR GROUNDING,
LOCATED AT 180°
FROM HANDHOLE.

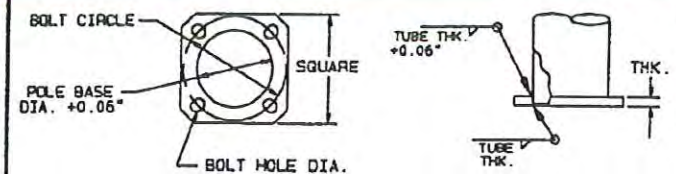
DETAIL 2 HANDHOLE

7 GA. HRMS
BAR (TYP.)

FEMALE SHAFT
SECTION

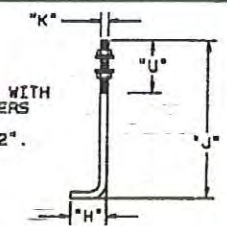


DETAIL 3 WELD REINFORCEMENT

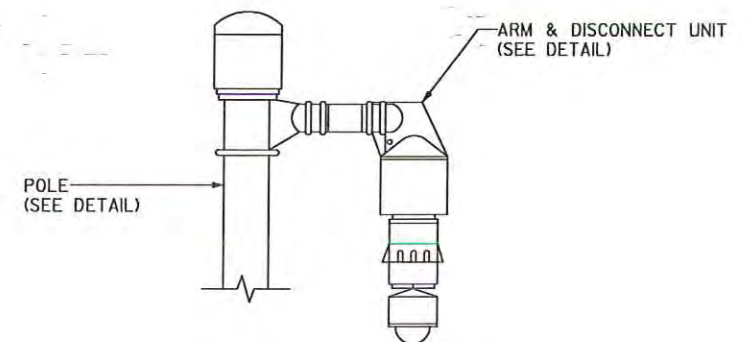


DETAIL 4 POLE BASE

EACH ANCHOR BOLT PROVIDED WITH
(2) HEX NUTS AND (2) WASHERS
PER BOLT WITH THREADED
END GALVANIZED AT LEAST 12".



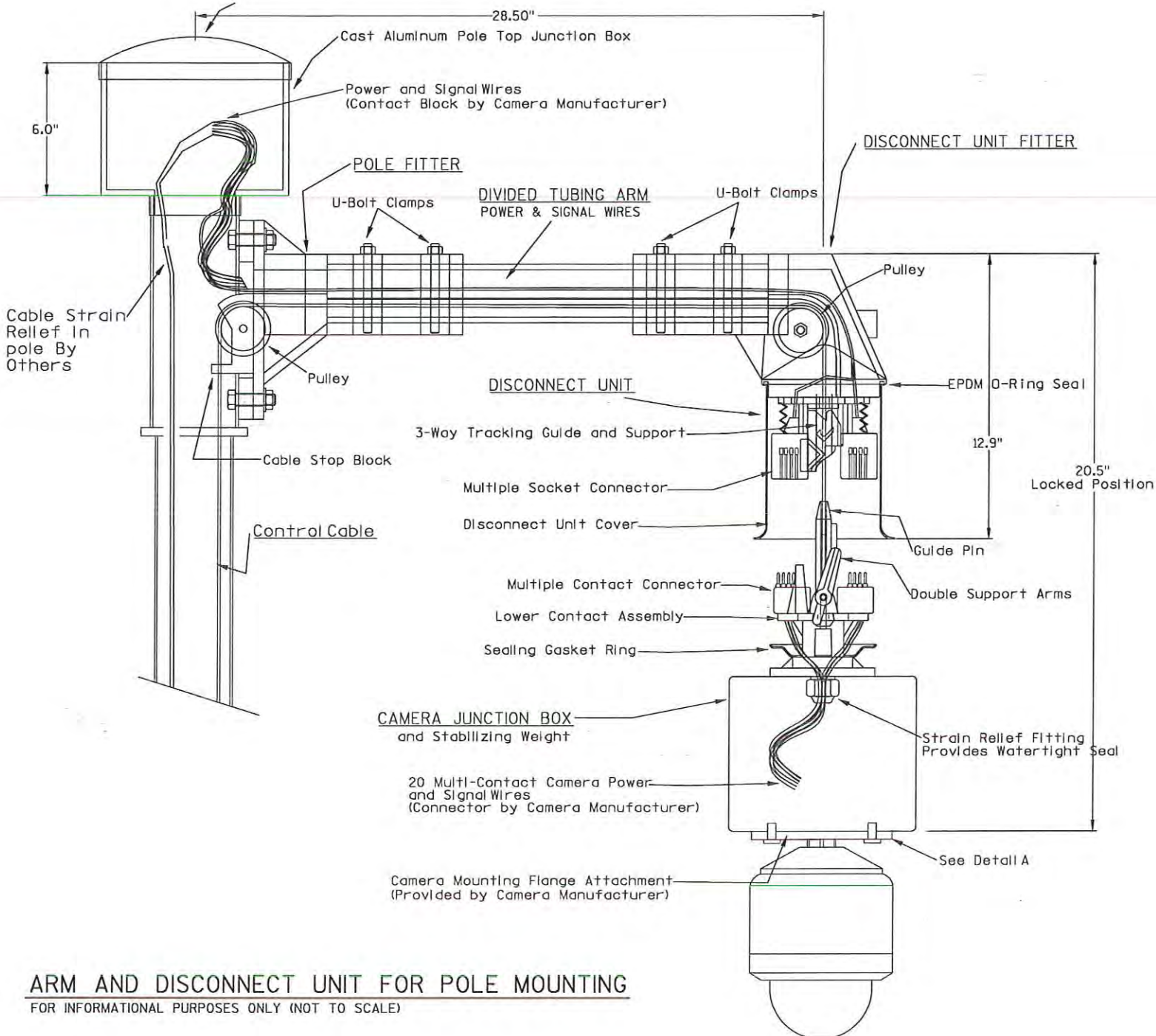
DETAIL 5 ANCHOR BOLT



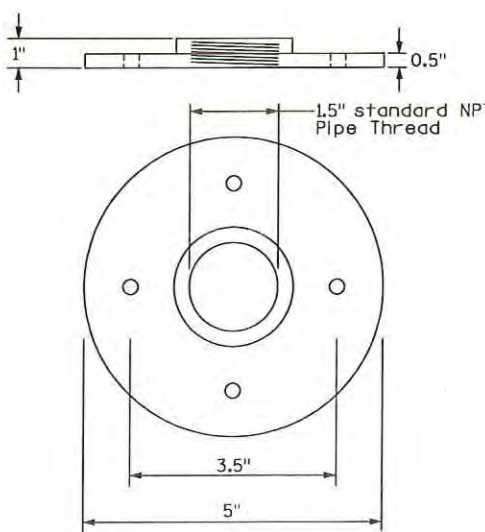
THE CONTENT ON THIS SHEET IS
FOR INFORMATIONAL PURPOSES ONLY

POLE DATA

ITEM NO.	QTY	DESIGNATION EPA/WT.	POLE HEIGHT (FT)	NO. L.D. ARMS REQ'D	TUBE (FOR INFORMATIONAL PURPOSES ONLY)						POLE BASE (INFORMATIONAL PURPOSES ONLY)				ANCHOR BOLT				
					SECTION	BASE DIA. (IN)	TOP DIA. (IN)	LENGTH (FT)	GAUGE OR THICK (IN)	MIN. SLIP LENGTH (IN)	SQUARE (IN)	BOLT CIRCLE DIA. (IN)	THICK (IN)	BOLT HOLE DIA. (IN)	DIA. "K" (IN)	LENGTH "J" (IN)	HOOK "H" (IN)	THREAD LENGTH "U" (IN)	NUMBER REQ'D
1		MG2ITS50-1(GV) 2.8/120 (MAX)	50.00	1	A	13.00	6.00	50	7	N/A	17.50	16.50	1.00	1.50	1.25	42.00	6.00	6.00	4



ARM AND DISCONNECT UNIT FOR POLE MOUNTING
FOR INFORMATIONAL PURPOSES ONLY (NOT TO SCALE)



DETAIL A
NOT TO SCALE

COMPONENT	ASTM DESIGNATION	MIN. YIELD (KSI)
POLE SHAFT - ALL OTHERS	A572 GR. 65	65
POLE SHAFT - 7 & 11 GAUGE	A595 GR. A	55
BASE PLATES	A36	36
POLE TOP PLATE	A36	36
TENON - C.D.S. TUBING	----	42
ANCHOR BOLTS	F1554 GR. 55	55
GALVANIZING - STRUCTURE	A123	--
GALVANIZING - HARDWARE	153	--

NOTES:

- * BOLT CIRCLE SHALL BE ALIGNED TO ACCOMODATE THE CAMERA ARM DIRECTION AS INDICATED ON THE PLANS.
- ** CONTRACTOR SHALL PROVIDE REQUIRED ANCHOR BOLTS, NUTS AND WASHERS

ALL METALLIC CONDUIT ENDS AT TOP OF CONCRETE BASES SHALL HAVE BUSHINGS. ALL NON-METALLIC CONDUIT ENDS AT TOP OF CONCRETE BASES SHALL HAVE END BELLS.

1" CHAMFER ALL AROUND

6" MIN.

24" MIN

2" MIN

10'-0"

5/8" O.D. x 8'-0" COPPER CLAD GROUNDING ELECTRODE WITH 6 AWG GROUNDING CONDUCTOR EXOTHERMALLY WELDED

28"

BASE PLATE (SEE DETAIL)

6-#6 BARS W/#3 SPIRAL AT 12" PITCH OR IN LIEU OF SPIRAL USE #3 BARS 12" C. TO C.

4-1.25" DIA. ANCHOR BOLTS 42" LONG WITH DOUBLE NUTS.

BASE PLATE (SEE DETAIL)

FORM TOP 12"

RAT SCREEN

CONDUIT(S) AS REQUIRED BY PLANS

6-#6 BARS W/#3 SPIRAL AT 12" PITCH OR IN LIEU OF SPIRAL USE #3 BARS 12" C. TO C.

BASE CAMERA POLE 50-FT
NOT TO SCALE



CENTERLINE OF CAMERA SUPPORT.
ALIGN BOLT CIRCLE TO
BE SQUARE TO THIS LINE.

WB IH 39/90

EB IH 39/90

SDS-53-36
TCC-53-36
INSTALL BASE CAMERA POLE 50-FT

INSTALL 1-2" CONDUIT AND 2-3" CONDUITS
WITH PULL WIRE

EXISTING 3" CONDUIT

CP36

EXPB36

EXMR36

MB36

EXISTING CONCRETE BASE TYPE 2

INSTALL 1-2" CONDUIT WITH PULL WIRE

INSTALL ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION)
ROCK COUNTY ELECTRIC TO PROVIDE FUTURE ELECTRICAL SERVICE INTO PEDESTAL

LEGEND

- EXISTING PULL BOX
- EXISTING CONCRETE BASE TYPE 2
- BASE CAMERA POLE 50-FT
- METER BREAKER PEDESTAL
- NON-METALLIC CONDUIT
- EXISTING NON-METALLIC CONDUIT

DETAIL #2



SEE DETAIL #2

WB IH 39/90

EB IH 39/90

TOWNLINE ROAD

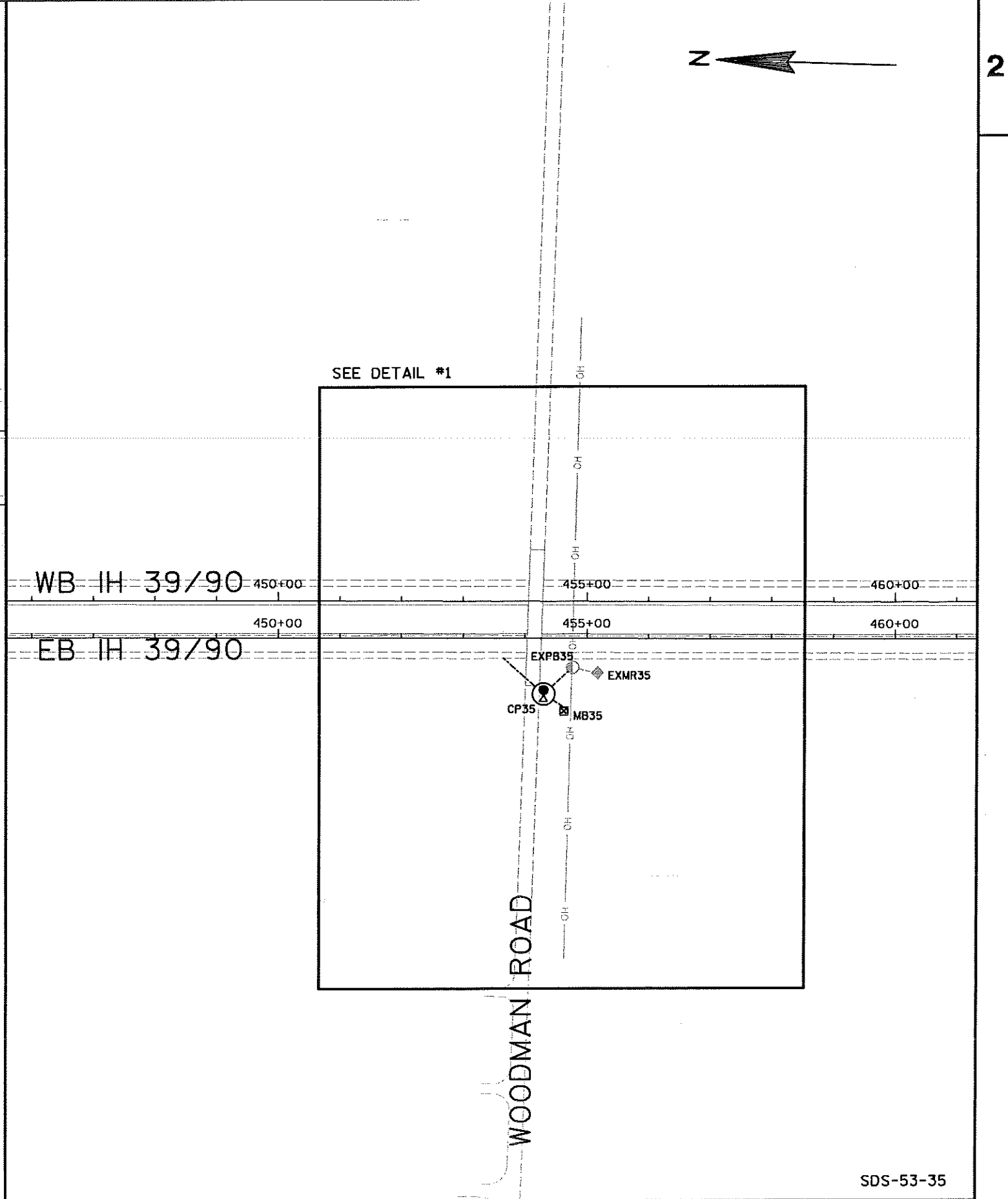
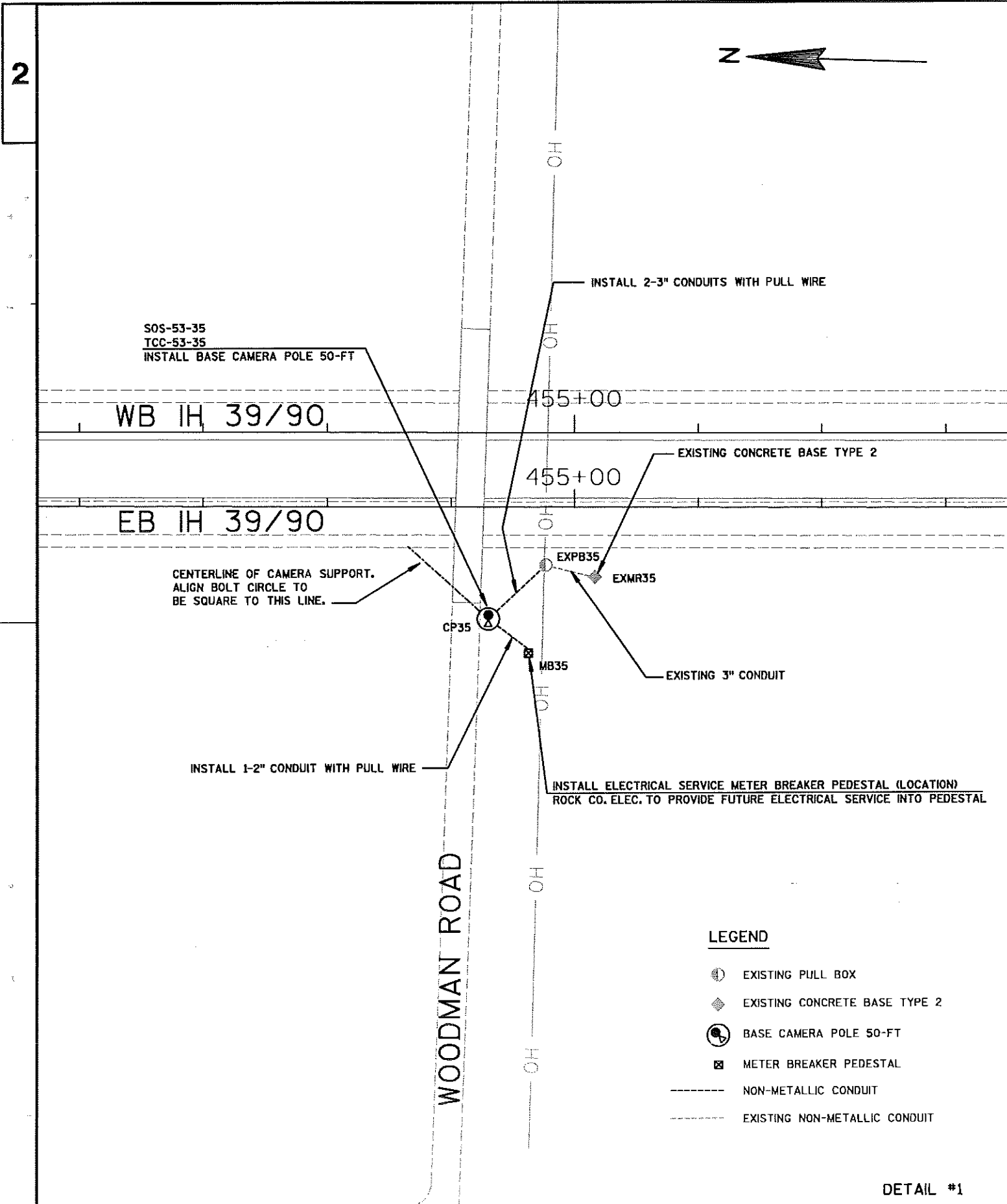
CP36

EXPB36

EXMR36

MB36

SDS-53-36



LEGEND

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

LEGEND

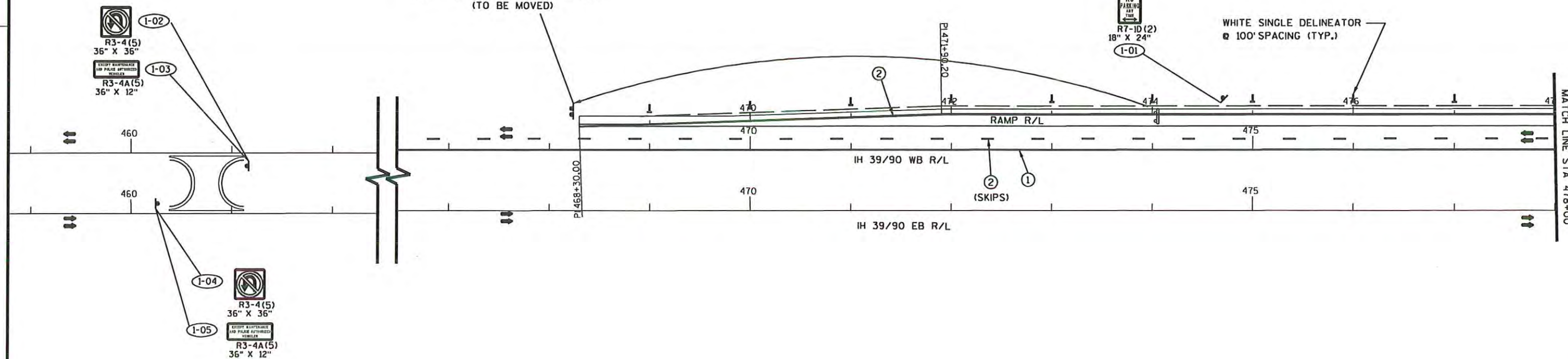
- ① PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
- ② PAVEMENT MARKING EPOXY 4-INCH (WHITE)
- ③ PAVEMENT MARKING EPOXY 8-INCH (YELLOW)
- ④ PAVEMENT MARKING EPOXY 8-INCH (WHITE)
- ⑤ PAVEMENT MARKING STOP LINE EPOXY 18-INCH (WHITE)
- ⑥ PAVEMENT MARKING PARKING STALL EPOXY (WHITE)
- ⑦ PAVEMENT MARKING DIAGONAL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



REMOVE EXISTING PAVEMENT MARKINGS
STA. 468+30 - STA. 490+16
(WB WHITE EDGELINE LT)



WHITE SINGLE DELINEATOR
@ 100' SPACING (TYP.)



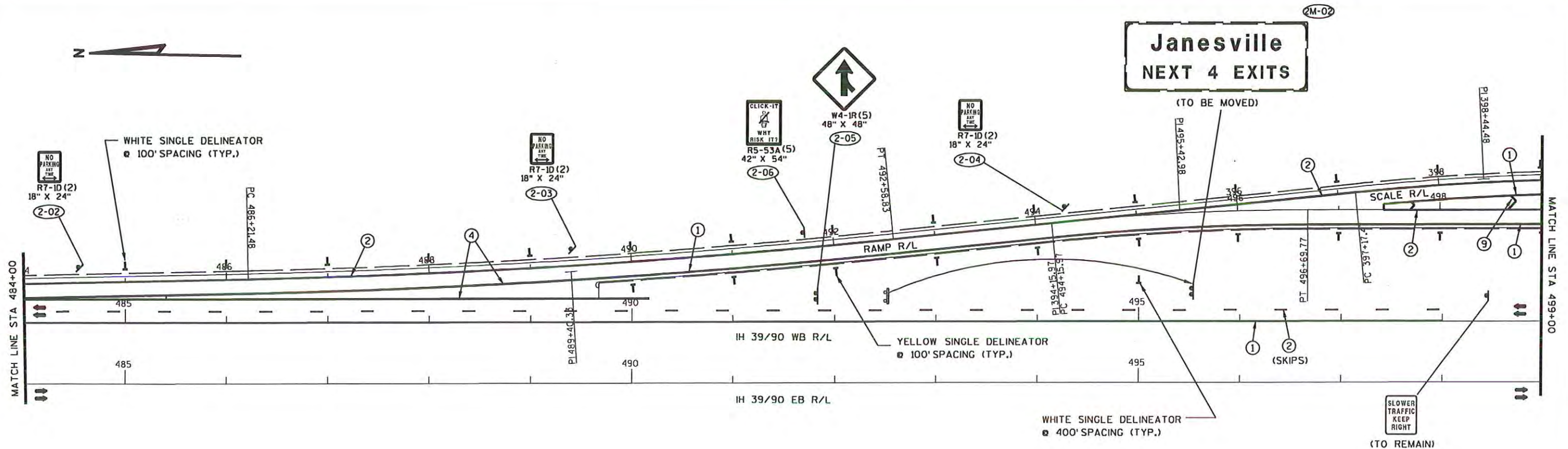
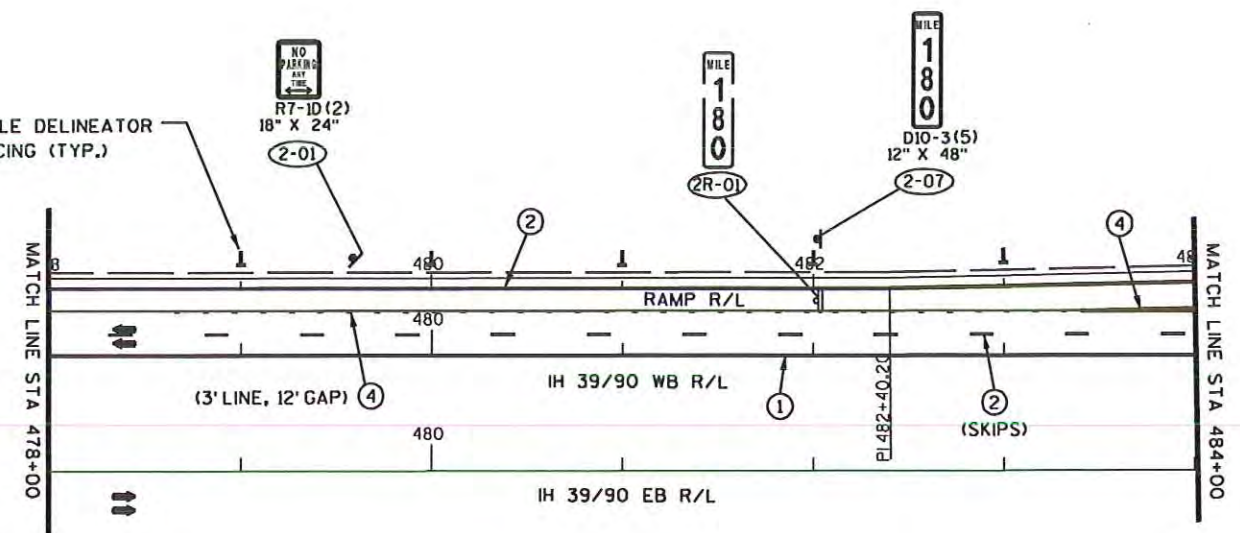
LEGEND

- P PROPOSED SIGN
 P PROPOSED SIGN (TWO POSTS)
 (X) SIGN SIZE
 I DELINEATOR
 > RAISED PAVEMENT MARKERS
 P EXISTING SIGN
 P EXISTING SIGN (TWO POSTS)
 (X-XX) SIGN NUMBER
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LEGEND

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 ⑨ PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (WHITE)

WHITE SINGLE DELINEATOR
@ 100' SPACING (TYP.)



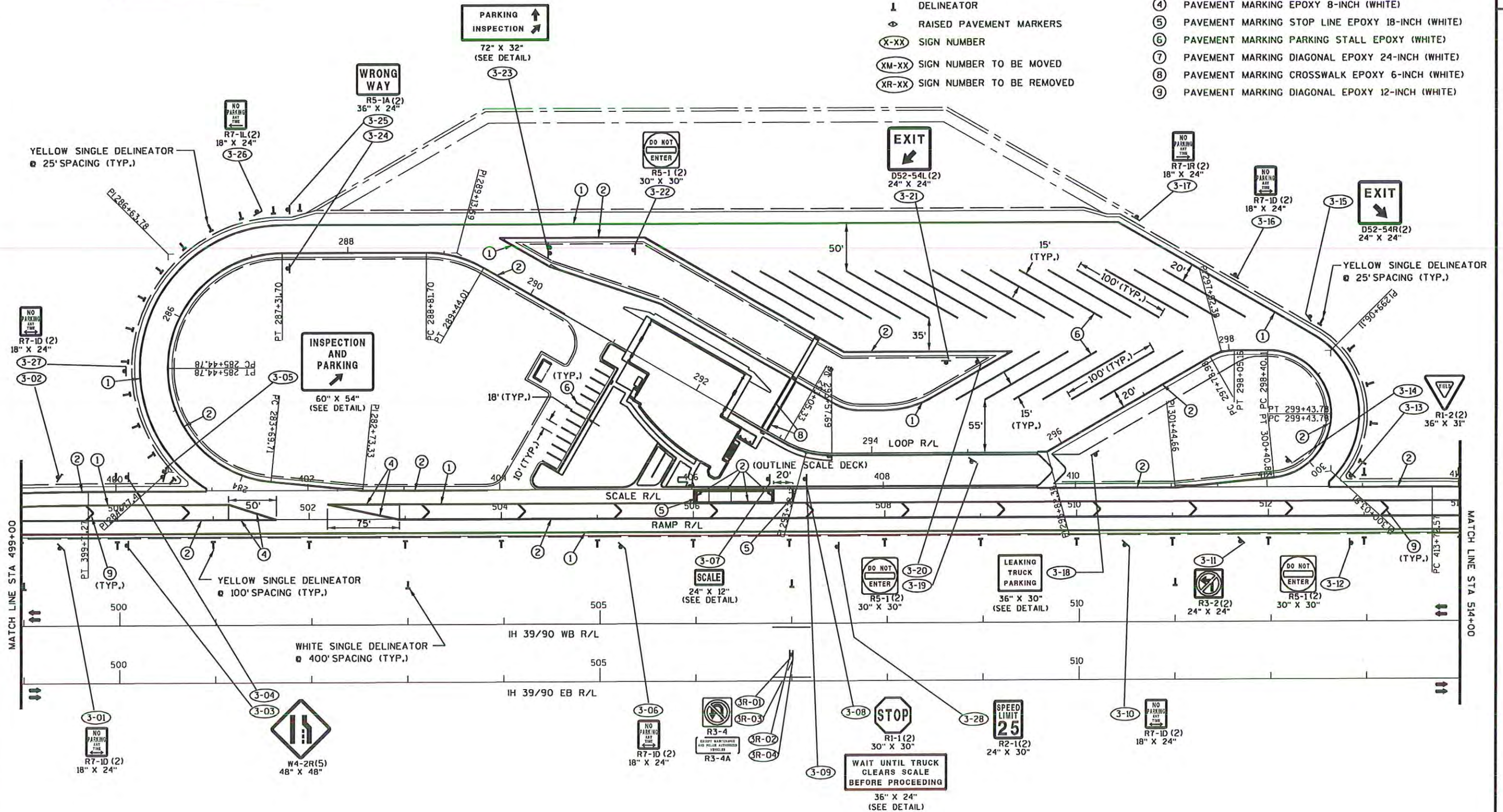


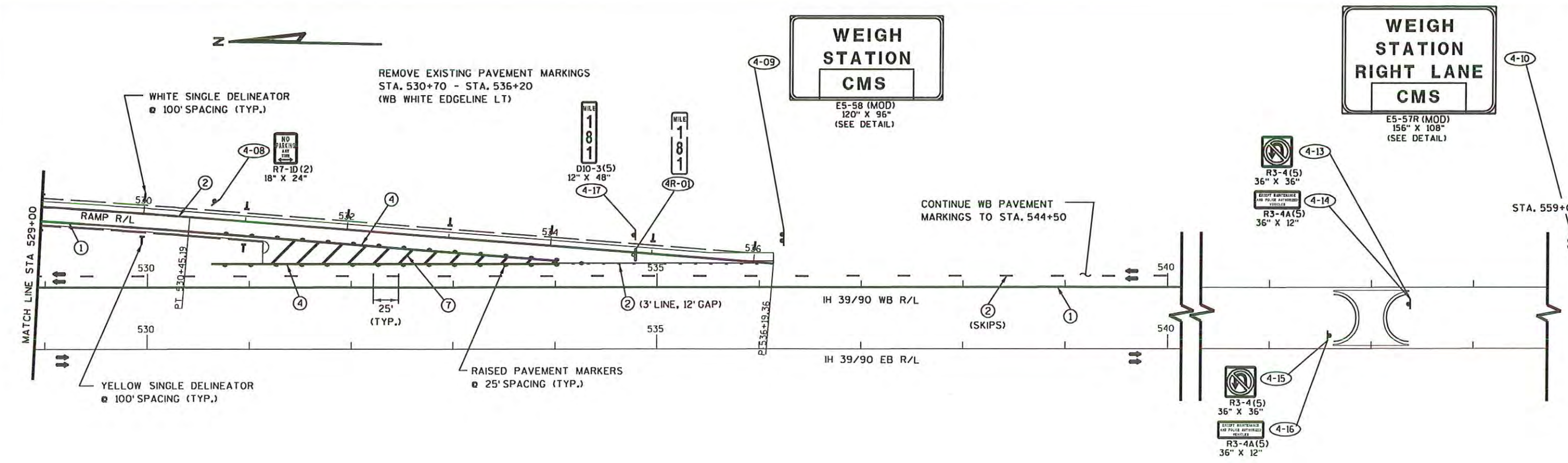
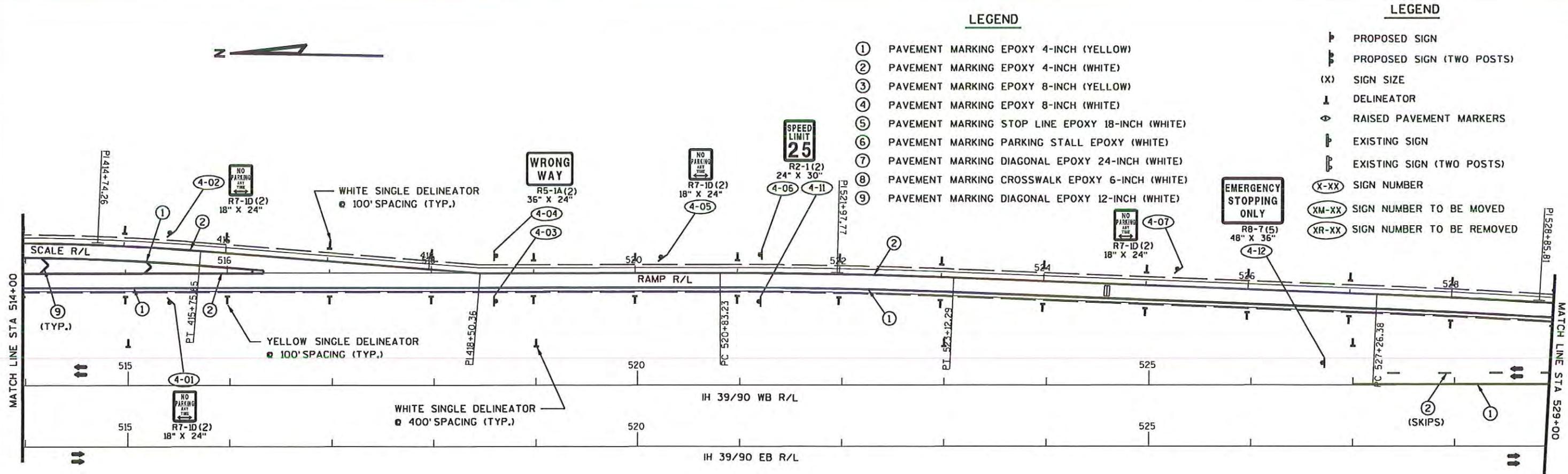
LEGEND

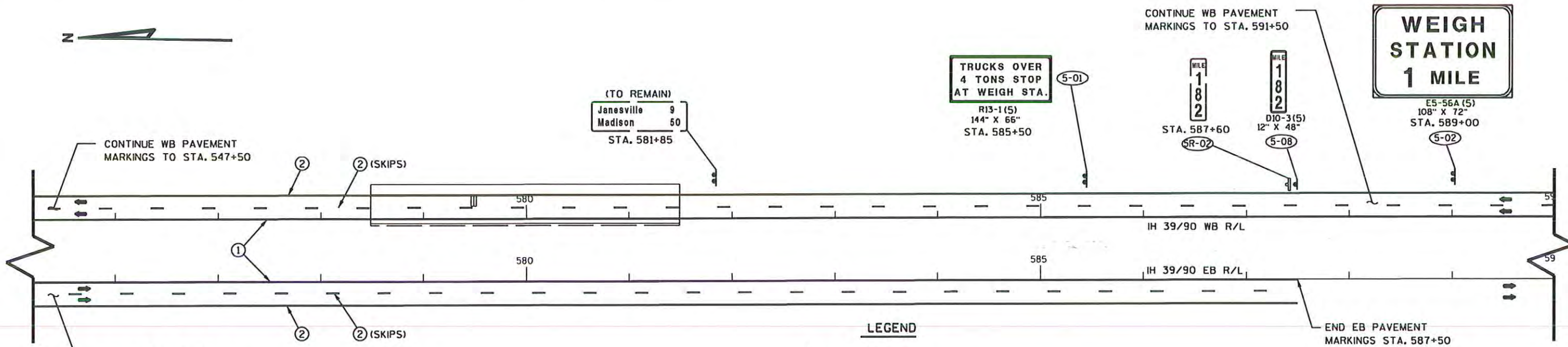
- PROPOSED SIGN
- PROPOSED SIGN (TWO POSTS)
- (X) SIGN SIZE
- DELINEATOR
- RAISED PAVEMENT MARKERS
- (X-XX) SIGN NUMBER
- (XM-XX) SIGN NUMBER TO BE MOVED
- (XR-XX) SIGN NUMBER TO BE REMOVED

LEGEND

- PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
- PAVEMENT MARKING EPOXY 4-INCH (WHITE)
- PAVEMENT MARKING EPOXY 8-INCH (YELLOW)
- PAVEMENT MARKING EPOXY 8-INCH (WHITE)
- PAVEMENT MARKING STOP LINE EPOXY 18-INCH (WHITE)
- PAVEMENT MARKING PARKING STALL EPOXY (WHITE)
- PAVEMENT MARKING DIAGONAL EPOXY 24-INCH (WHITE)
- PAVEMENT MARKING CROSSWALK EPOXY 6-INCH (WHITE)
- PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (WHITE)





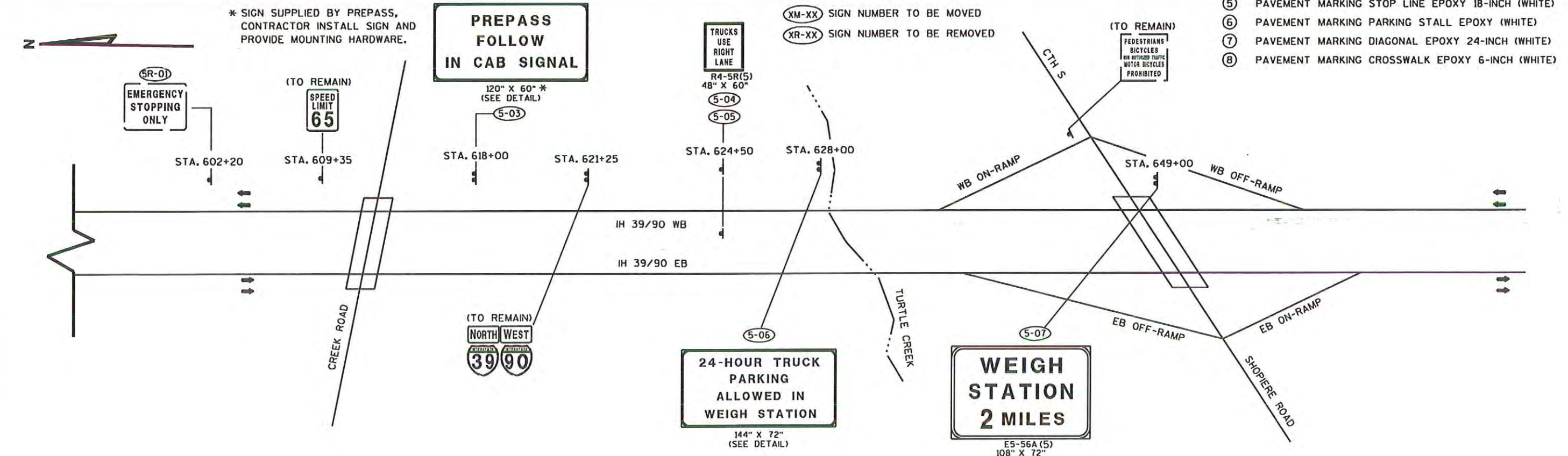


LEGEND

- PROPOSED SIGN
- PROPOSED SIGN (TWO POSTS)
- (X) SIGN SIZE
- DELINEATOR
- RAISED PAVEMENT MARKERS
- EXISTING SIGN
- (X-XX) SIGN NUMBER
- (XM-XX) SIGN NUMBER TO BE MOVED
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LEGEND

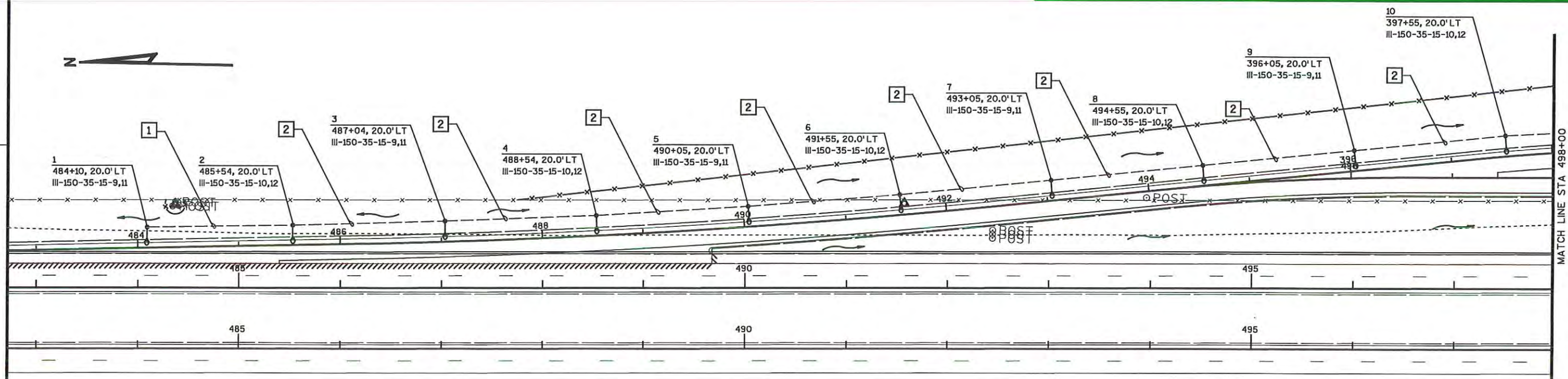
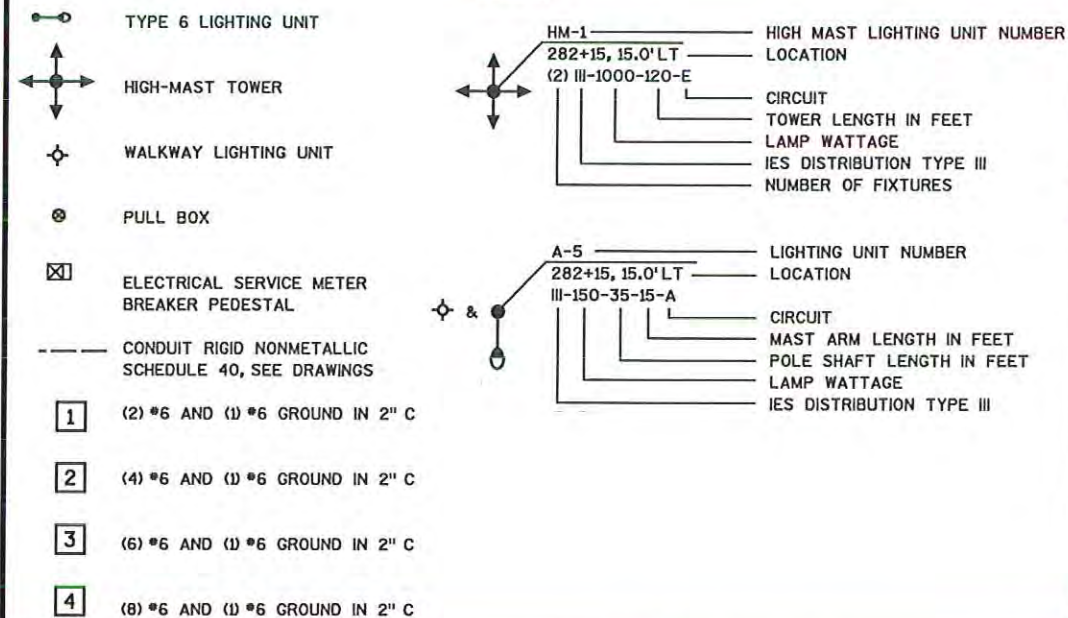
- 1 PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
- 2 PAVEMENT MARKING EPOXY 4-INCH (WHITE)
- 3 PAVEMENT MARKING EPOXY 8-INCH (YELLOW)
- 4 PAVEMENT MARKING EPOXY 8-INCH (WHITE)
- 5 PAVEMENT MARKING STOP LINE EPOXY 18-INCH (WHITE)
- 6 PAVEMENT MARKING PARKING STALL EPOXY (WHITE)
- 7 PAVEMENT MARKING DIAGONAL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



GENERAL NOTES

- 1.) REFER TO ALL OTHER SHEETS OF THE PLANS FOR UTILITY LOCATIONS.
- 2.) ALL STATIONING IS TAKEN FROM THE NEAREST REFERENCE LINE.
- 3.) PROVIDE 240V, 2-POLE FUSE HOLDER WITH FNQ5 FUSES AT ALL POLE BASES FOR LIGHTING FEEDS. FEED LIGHTS UP POLE WITH 3 #12 EACH, SPLICE AS REQUIRED IN POLE BASES.
- 4.) TYPE 6 POLES SHALL BE TAPERED ALUMINUM.
- 5.) CONDUIT BELOW PAVED AREAS SHALL BE SCHEDULE 80 PVC, SIZE AS NOTED. EXEND 5 FEET EITHER SIDE OF PAVEMENT.

LEGEND



HIGHWAY LIGHTING

139/90 WB - BELOIT SWEF #19

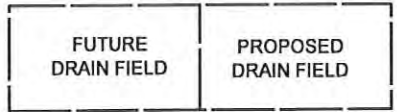
(T) L&PRAIRIE
LIGHTING NO. L647

ROCK COUNTY

SCALE, FEET 0 50 100

GENERAL NOTES

- 1.) REFER TO ALL OTHER SHEETS OF THE PLANS FOR UTILITY LOCATIONS.
- 2.) ALL STATIONING IS TAKEN FROM THE NEAREST REFERENCE LINE.
- 3.) PROVIDE 240V, 2-POLE FUSE HOLDER WITH FNQ5 FUSES AT ALL POLE BASES FOR LIGHTING FEEDS. FEED LIGHTS WITH 3 #12 EACH, SPLICE AS REQUIRED IN POLE BASES.
- 4.) TYPE 6 POLES SHALL BE TAPERED ALUMINUM.
- 5.) CONDUIT BELOW PAVED AREAS SHALL BE SCHEDULE 80 PVC, SIZE AS NOTED, EXEND 5 FEET EITHER SIDE OF PAVEMENT.



LEGEND

TYPE 6 LIGHTING UNIT

HIGH-MAST TOWER

WALKWAY LIGHTING UNIT

PULL BOX

ELECTRICAL SERVICE METER BREAKER PEDESTAL

CONDUIT RIGID NONMETALLIC SCHEDULE 40, SEE DRAWINGS

1 (2) #6 AND (1) #6 GROUND IN 2" C

2 (4) #6 AND (1) #6 GROUND IN 2" C

3 (6) #6 AND (1) #6 GROUND IN 2" C

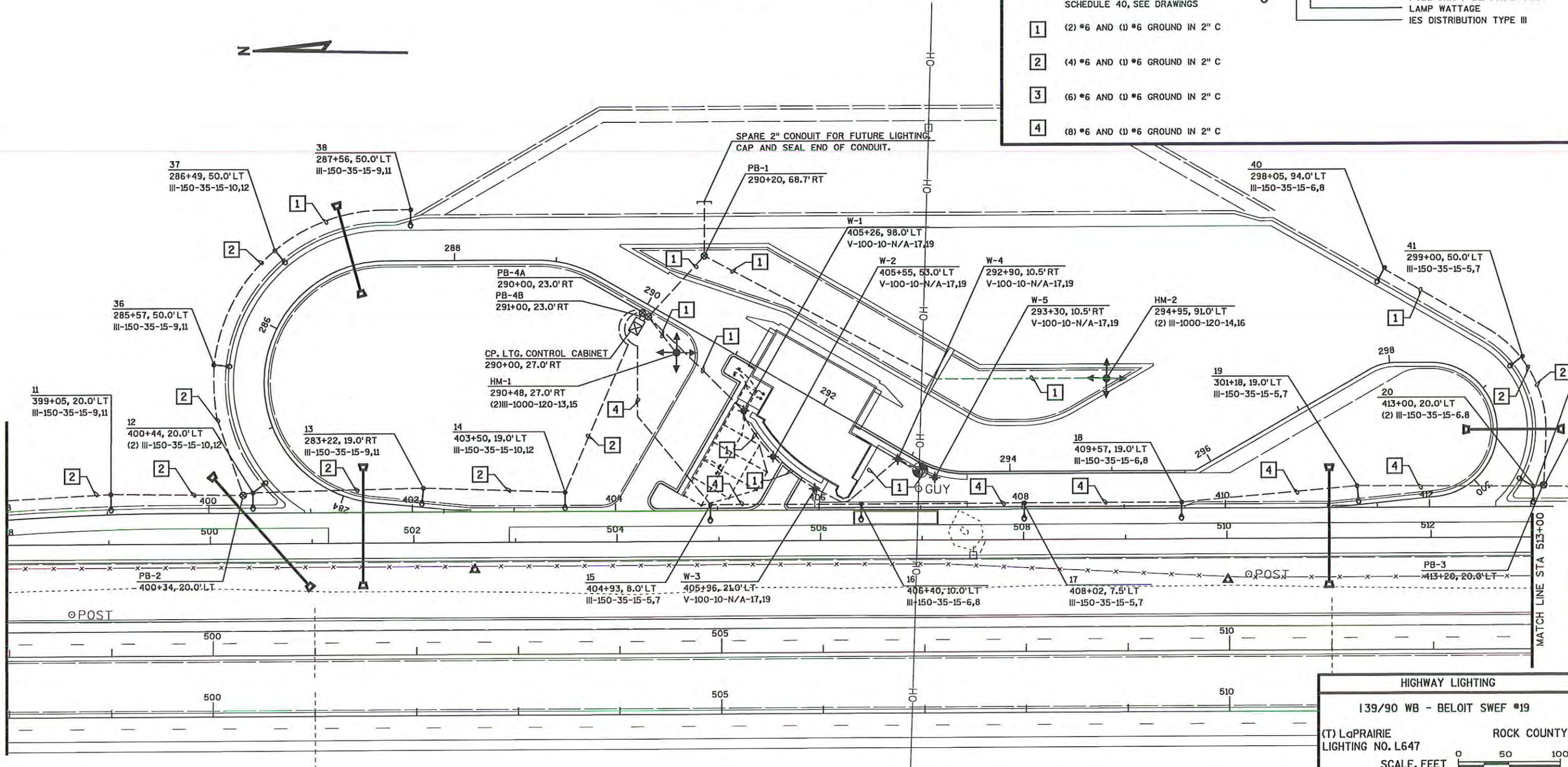
4 (8) #6 AND (1) #6 GROUND IN 2" C

HM-1
282+15, 15.0' LT
(2) III-1000-120-E

CIRCUIT
TOWER LENGTH IN FEET
LAMP WATTAGE
IES DISTRIBUTION TYPE III
NUMBER OF FIXTURES

A-5
282+15, 15.0' LT
III-150-35-15-A

LIGHTING UNIT NUMBER
LOCATION
CIRCUIT
MAST ARM LENGTH IN FEET
POLE SHAFT LENGTH IN FEET
LAMP WATTAGE
IES DISTRIBUTION TYPE III



HIGHWAY LIGHTING

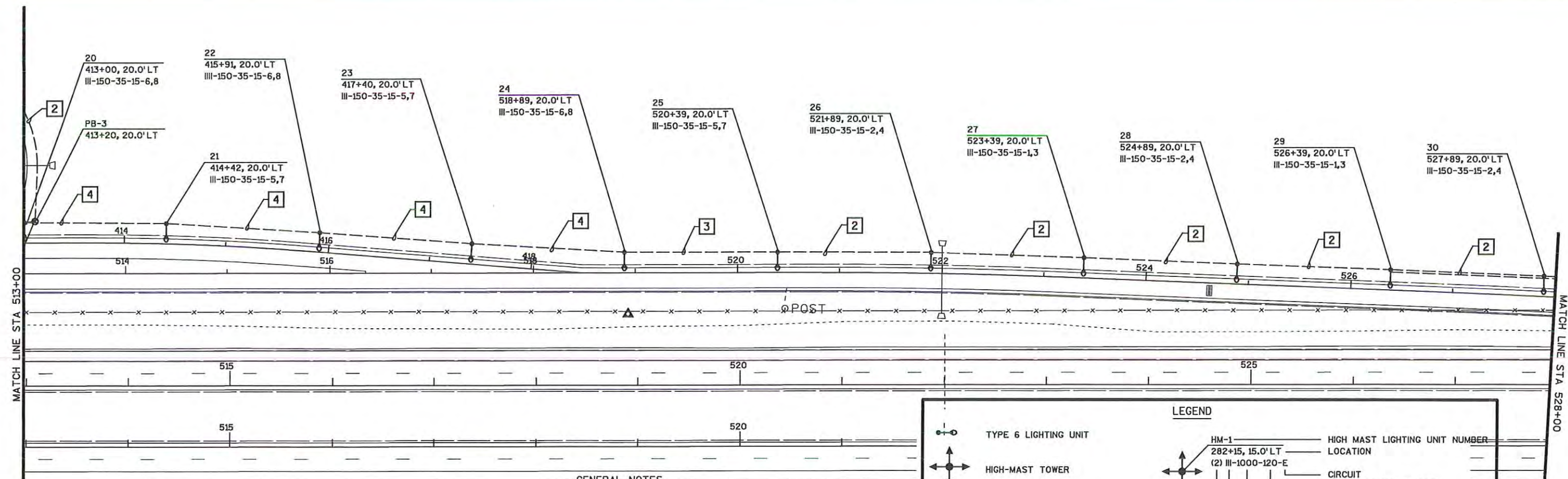
139/90 WB - BELOIT SWEF #19

(T) LaPRAIRIE LIGHTING NO. L647

ROCK COUNTY

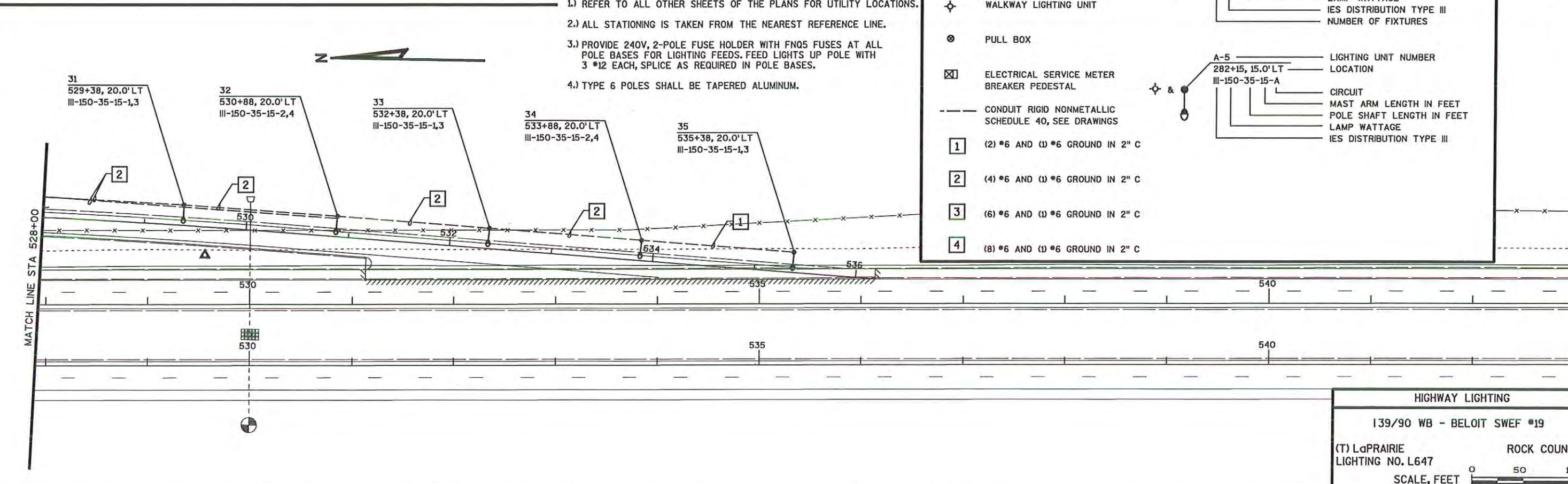
SCALE, FEET

0 50 100



GENERAL NOTES

- 1.) REFER TO ALL OTHER SHEETS OF THE PLANS FOR UTILITY LOCATIONS.
- 2.) ALL STATIONING IS TAKEN FROM THE NEAREST REFERENCE LINE.
- 3.) PROVIDE 240V, 2-POLE FUSE HOLDER WITH FNQ5 FUSES AT ALL POLE BASES FOR LIGHTING FEEDS. FEED LIGHTS UP POLE WITH 3 #12 EACH, SPLICE AS REQUIRED IN POLE BASES.
- 4.) TYPE 6 POLES SHALL BE TAPERED ALUMINUM.



LEGEND

	TYPE 6 LIGHTING UNIT		HIGH-MAST TOWER
	WALKWAY LIGHTING UNIT		PULL BOX
	ELECTRICAL SERVICE METER BREAKER PEDESTAL		CONDUIT RIGID NONMETALLIC SCHEDULE 40, SEE DRAWINGS
	(2) #6 AND (1) #6 GROUND IN 2" C		(4) #6 AND (1) #6 GROUND IN 2" C
	(6) #6 AND (1) #6 GROUND IN 2" C		(8) #6 AND (1) #6 GROUND IN 2" C

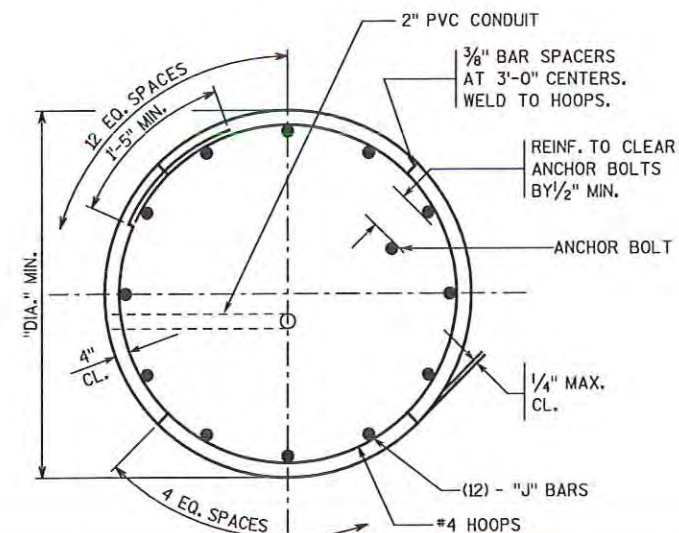
	HM-1	282+15, 15.0' LT	LOCATION
	A-5	282+15, 15.0' LT	LOCATION
	(2) III-1000-120-E		CIRCUIT
			TOWER LENGTH IN FEET
			LAMP WATTAGE
			IES DISTRIBUTION TYPE III
			NUMBER OF FIXTURES

	A-5		LIGHTING UNIT NUMBER
	282+15, 15.0' LT		LOCATION
	III-150-35-15-A		CIRCUIT
			MAST ARM LENGTH IN FEET
			POLE SHAFT LENGTH IN FEET
			LAMP WATTAGE
			IES DISTRIBUTION TYPE III

(2) HIGH MAST LUMINAIRES
1000W, IES TYPE III DISTRIBUTION

100FT NOMINAL
MOUNTING HEIGHT

HIGH MAST CONFIGURATION - 2 LUMINAIRES
NTS



CAISSON FOUNDATION PLAN

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

DESIGN SPECS:

STANDARD SPECS. FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS 2003

STANDARD SPECS. FOR HIGHWAY BRIDGES 2003

TOWER FABRICATOR TO SUPPLY ANCHOR BOLTS. VERIFY CIRCLE AND PROJECTION WITH TOWER FABRICATOR.

BAR STEEL REINFORCEMENT SHALL BE IMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN.

CONCRETE MAY BE DROPPED DIRECTLY INTO SHAFTS WITHOUT THE AID OF SHUTES IF IT CAN BE DONE WITH LITTLE DISTURBANCE OF THE REINFORCEMENT.

CONCRETE PLACED UNDER WATER MUST BE PLACED IN ACCORDANCE WITH THE STANDARD SPECS.

OUTSIDE DIA. OF CAISSON AT TOP IS DEPENDENT ON ANCHOR BOLT REQUIRED FOR POLE. MAINTAIN 4" MIN. COVER OF REINFORCEMENT.

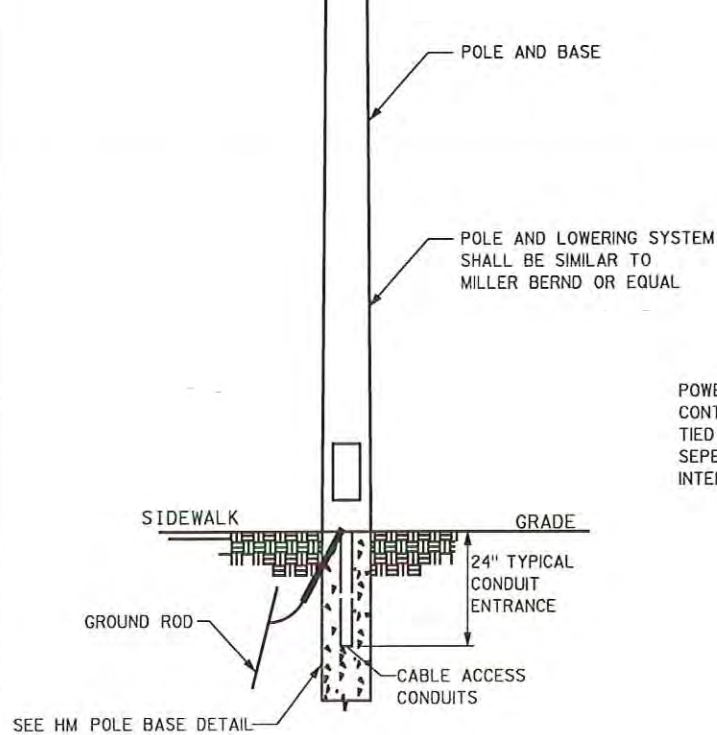
COST OF EXCAVATION, BACKFILL AND DISPOSAL OF SURPLUS MATERIALS SHALL BE INCLUDED IN BID PRICE PER C.Y. FOR CONCRETE MASONRY, HIGH MAST FOUNDATIONS.

CONTRACTOR TO VERIFY WITH ENGINEERING CALCULATIONS EXACT SIZE OF HIGH MAST FOUNDATION BASED ON POLE AND FIXTURES ACTUALLY SUPPLIED.

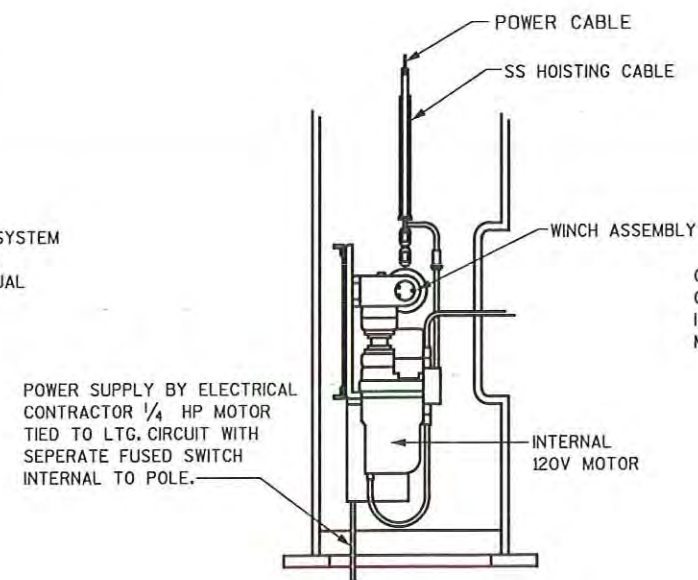
DESIGN DATA

UTIMATE DESIGN STRESSES:

CONCRETE MASONRY..... $f'_c = 3,500$ psi
BAR STEEL REINFORCEMENT..... $f_y = 60,000$ p.s.i.

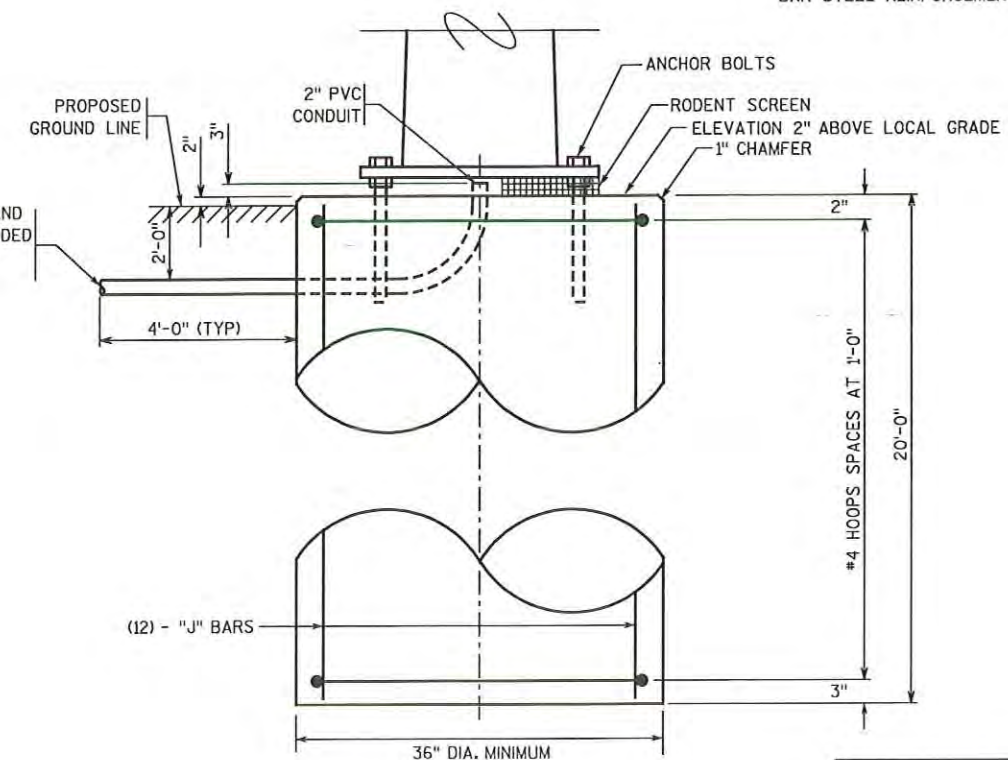


HIGH MAST TOWER AND LUMINAIRES
NTS



LOWERING DEVICE SYSTEM FOR POLES
NTS

COST OF 2" PVC CONDUIT, BUSHINGS AND CAPS AND/OR PLUGS SHALL BE INCLUDED IN BID PRICE PER C.Y. FOR CONCRETE MASONRY, HIGH MAST FOUNDATIONS.



PROPOSED HIGH MAST FOUNDATION ELEVATION

NOTE: SHAFT CASINGS, IF USED, SHALL BE REMOVED CONCURRENTLY WITH PLACING OF CONCRETE

HIGHWAY LIGHTING

139/90 WB - BELOIT SWEF #19

(T) LaPRAIRIE
LIGHTING NO. L647

ROCK COUNTY

SCALE, FEET 0 1 2 3 4 5 6 7 8 9 10 NTS

NOTES:

- 1. THE LIGHTING CONTROL CABINET CP SHALL BE SUPPLIED AND INSTALLED BY WIDOT. CONTROL CABINET BASE SUPPLIED BY CONTRACTOR.
- 2. 120 / 240V-SINGLE PHASE 200 AMP UNDERGROUND ELECTRICAL SERVICE TO THE LIGHTING CONTROL CABINET SHALL BE COORDINATED AND ELECTRICAL PROVISIONS FOR THE SAME SHALL BE BY WIDOT.
- 3. CONTRACTOR SHALL PROVIDE WIRING FROM SITE LIGHTING ON PLANS TO TERMINAL STRIPS IN LIGHTING CONTROL CABINET CP
- 4. PANEL SCHEDULE SHOWN FOR REFERENCE ONLY AND TO ASSEMBLE LOADING CALCULATIONS. EXACT CONFIGURATION TO BE DETERMINED BY WIDOT.

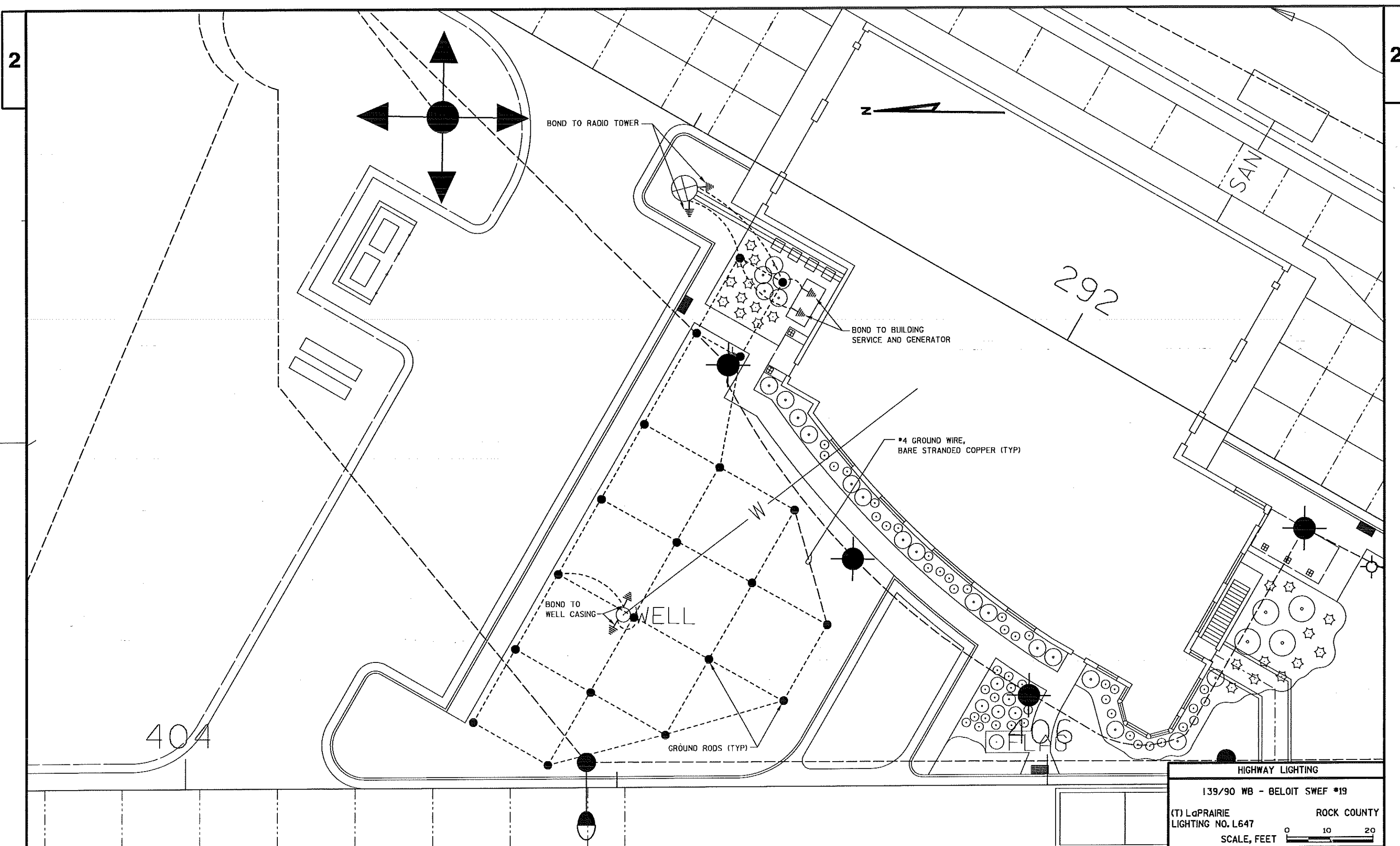
PANEL SCHEDULE: CP							1PHASE 3 WIRE					VOLTAGE LL: 240					VOLTAGE LG:120				
OC DEVICES: BREAKER			DEVICE FAMILY: NQO					MOUNTING: SURFACE					ENCLOSURE: NEMA 1								
COMMENTS:								BUS RATING: 225 AMP					AVAILABLE FAULT DUTY: 10,000 A								
CKT NO	DESCRIPTION/ LOCATION	LOAD TYPE	CRITERIA		DEM	TOTAL VA	REMARKS	DEVICE		P H	DEVICE		REMARKS	TOTAL VA	LOAD TYPE	CRITERIA		DEM	DESCRIPTION/ LOCATION	CKT NO	
			EA	QTY				AMPS	P		AMPS	P				EA	QTY				
1	LT-27,29,31,33,35	LTS	209	5	2	522.5		20	2	A	20	2		522.5	LTS	209	5	2	LT-26,28,30,32,34	2	
3	--	--	--	--	2	522.5		--	--	B	--	--		522.5	--	--	--	2	--	4	
5	LT-15,17,19,21,23,25,41	LTS	2506	1	2	1253		20	2	A	20	2		856.5	LTS	1713	1	2	LT-16,18,20,22,24,40	6	
7	--	--	--	--	2	1253		--	--	B	--	--		856.5	--	--	--	2	--	8	
9	LT-1,3,5,7,9,11,13,36,38	LTS	2006	1	2	1003		20	2	A	20	2		1003	LTS	2006	1	2	LT-2,4,6,8,10,12,14,37	10	
11	--	--	--	--	2	1003		--	--	B	--	--		1003	--	--	--	2	--	12	
13	HM-1	LTS	1212	2	2	1212		20	2	A	20	2		1212	LTS	1212	2	2	HM-2	14	
15	--	--	--	--	2	1212		--	--	B	--	--		1212	--	--	--	2	--	16	
17	W-1,2,3,4,5,6,7	LTS	145	7	2	507.5		20	2	A	20	2		0					SPARE	18	
19	--	--	--	--	2	507.5		--	--	B	--	--		0					--	20	
21	CONTROL CIRCUIT	CTL	180	1	6	180		20	1	A				0					SPACE	22	
23	SPACE					0				B				0					SPACE	24	
25	SPACE					0				A				0					SPACE	26	
27	SPACE	--	--	--		0				B				0					SPACE	28	
29	SPACE	--	--	--		0				A				0					SPACE	30	
31	SPACE	--	--	--		0				A				0					SPACE	32	
33	SPACE	--	--	--		0				A				0					SPACE	34	
35	SPACE	--	--	--		0				A				0					SPACE	36	
37	SPACE	--	--	--		0				A				0					SPACE	38	
39	SURGE ARRESTOR	--	--	--		0		30	2	A				0					SPACE	40	
41	--	--	--	--		0		--	--	A				0					SPACE	42	
ENDUSE LOADS: PHASE "A" KVA = 8 PHASE "B" KVA = 8																					
TOTAL LOADS: CONNECTED KVA = 16 DEMAND KVA = 16 DESIGN KVA = 20																					
CONNECTED FLA = 68 DEMAND FLA = 68 DESIGN FLA = 85																					
NOTES: PROVIDE 150 AMP, 2 POLE MAIN CIRCUIT BREAKER																					

HIGHWAY LIGHTING

139/90 WB - BELOIT SWEF #19

(T) LaPRAIRIE ROCK COUNTY
LIGHTING NO. L647





PROJECT NO: 1002-04-71

HWY: BELOIT, SWEF #19

COUNTY: ROCK

LIGHTING GROUNDING PLAN

SHEET

58

E

FILE NAME : x:\11125-00\02001\tech\cadd\drawings\1371\003a.dgn

PLOT DATE : 10/26/2006

PLOT BY : 905bJJ

PLOT NAME :

PLOT SCALE : **.....plotscale.....** WISDOT/CADD SHEET 42

HIGHWAY LIGHTING

139/90 WB - BELOIT SWEF #19

(T) L&P PRAIRIE LIGHTING NO. L647

ROCK COUNTY

SCALE, FEET

0 10 20

EXHIBIT 1

2

GENERAL NOTES

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

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

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

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

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

BUILD UP GRADE AROUND WELL AND PROVIDE POSITIVE DRAINAGE AWAY.

2

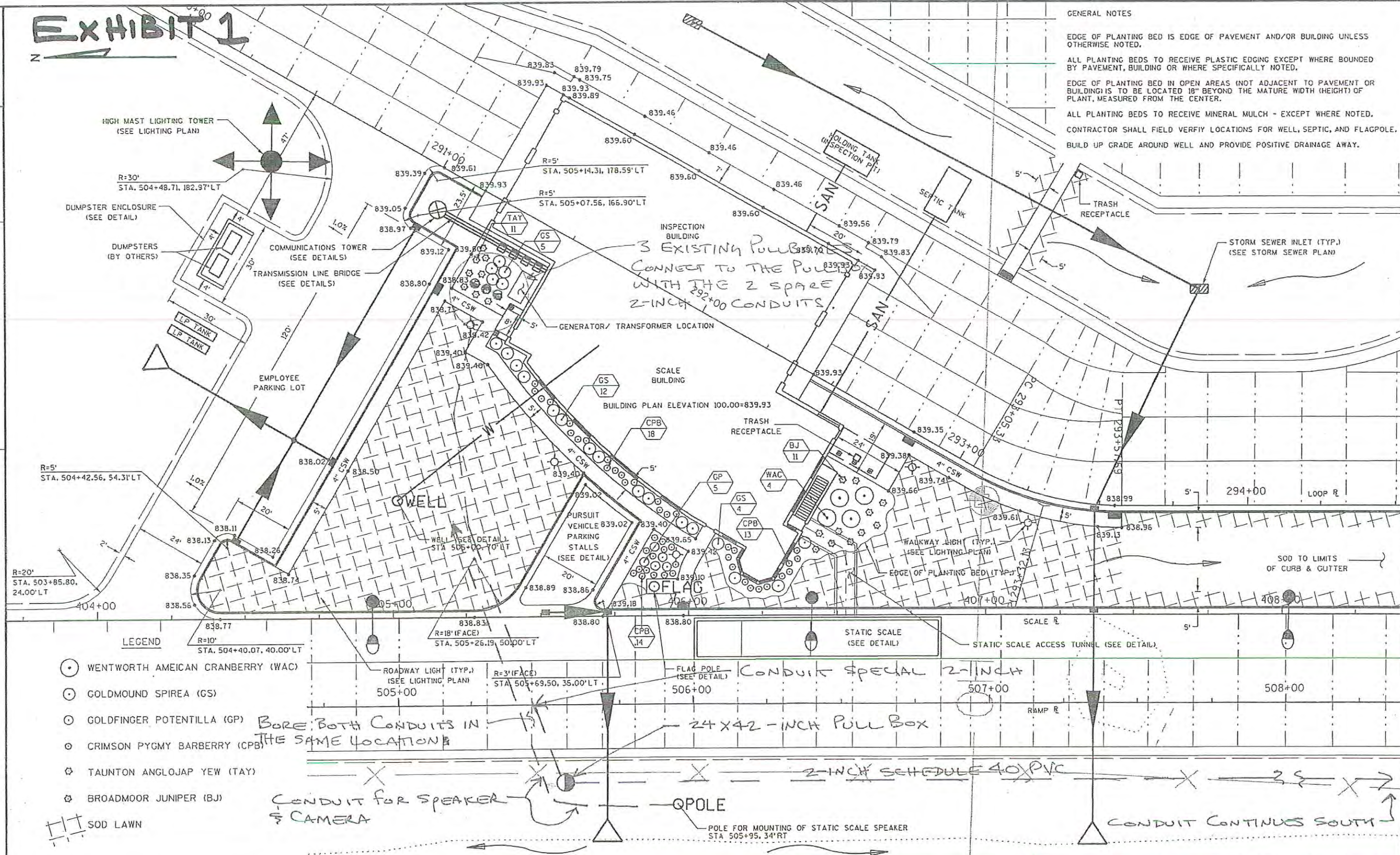


EXHIBIT 2

2

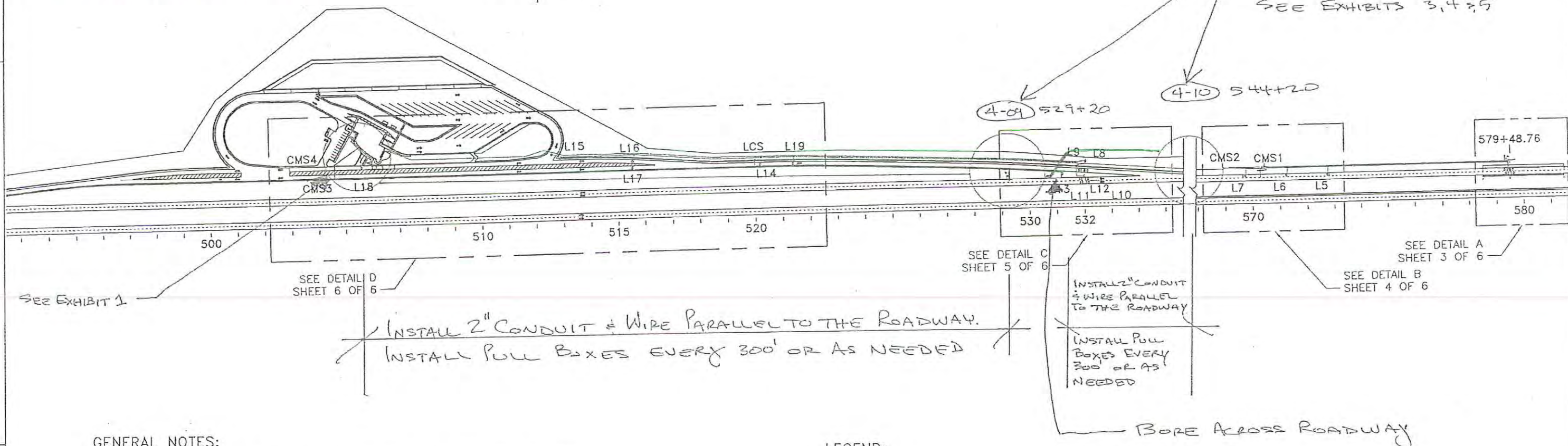
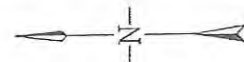


EXHIBIT 3

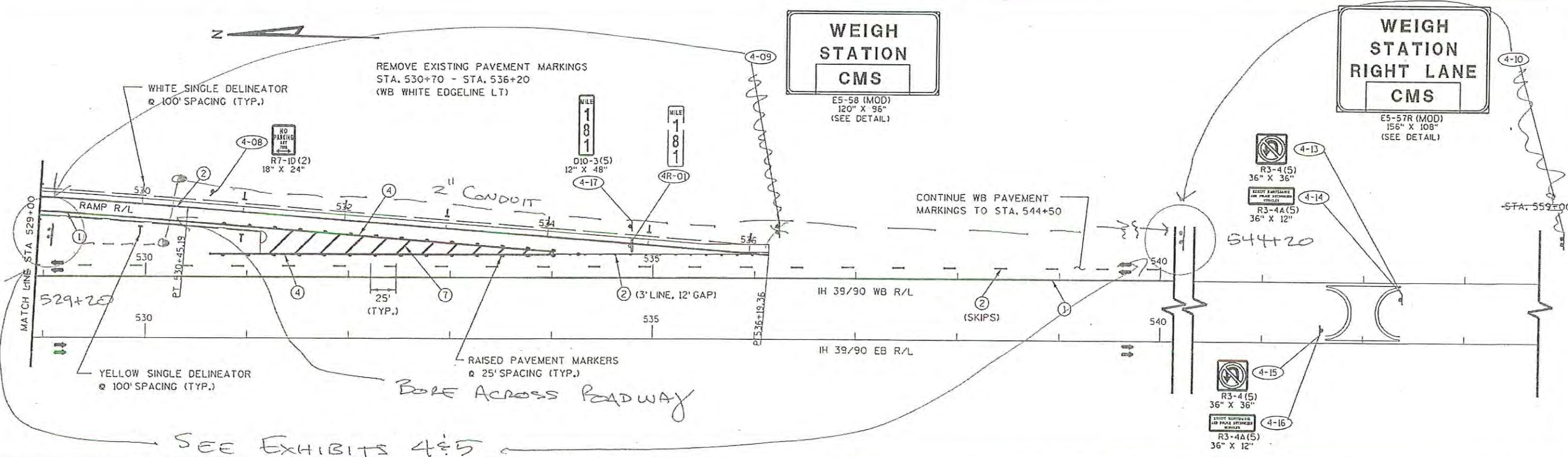
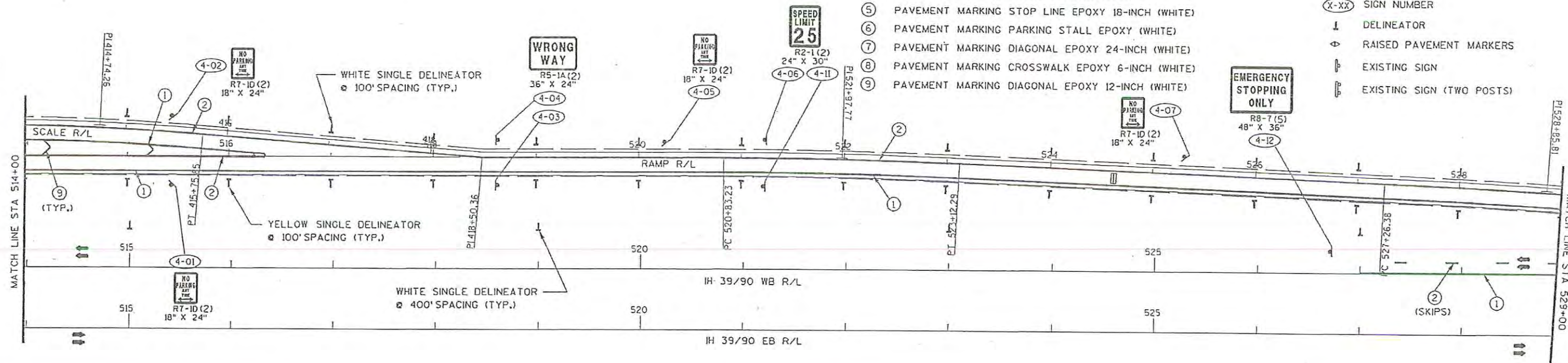


LEGEND

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

LEGEND

- P PROPOSED SIGN
- P PROPOSED SIGN (TWO POSTS)
- (X) SIGN SIZE
- (X-XX) SIGN NUMBER
- I DELINEATOR
- ◇ RAISED PAVEMENT MARKERS
- P EXISTING SIGN
- P EXISTING SIGN (TWO POSTS)



PROJECT NO: 1002-04-71

HWY: BELOIT, SWF #19

COUNTY: ROCK

PERMANENT SIGNING & MARKING / CMS Sign Electrical

SHEET 58C

E

FILE NAME : g:\wdotco\wdco-0137\dgn\137pm004.dgn

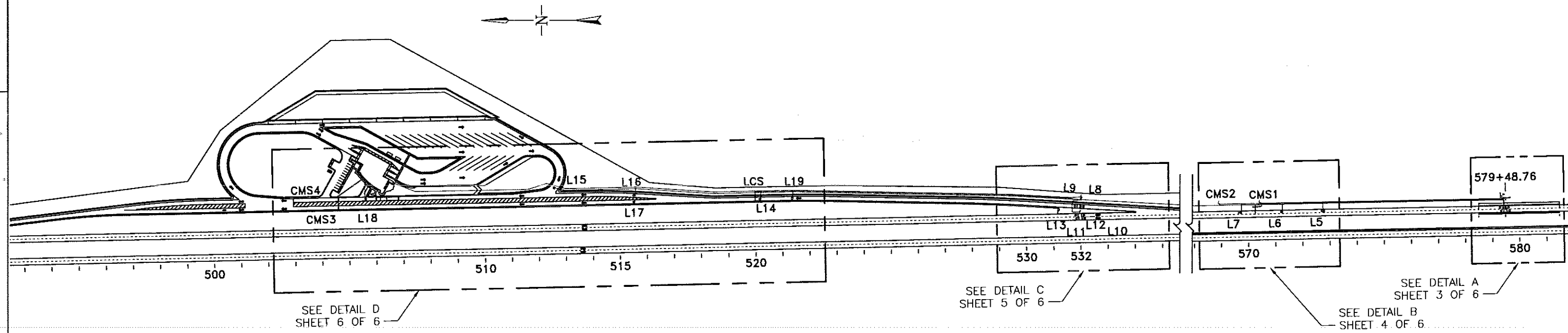
PLOT DATE : 10/25/2006

PLOT BY : KL Engineering

PLOT NAME :

PLOT SCALE :

WISDOT/CADDs SHEET 42



GENERAL NOTES:

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

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

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

ROAD SURFACE MUST MEET SPECIFICATIONS FOR PAVEMENT CONDITIONS TO ACHIEVE OPTIMAL SYSTEM PERFORMANCE.

PIEZO SENSORS MUST BE A MINIMUM OF 6' [1.83m] AWAY FROM CRACKS, JOINTS OR SAWCUTS WHEN POSSIBLE.

ADDITIONAL DRAINAGE MAY BE REQUIRED DEPENDING ON SLOPE OF ROADWAY. DRAINAGE CONSISTS OF 1-1/2" ABS PIPE SLOPED TO RIP RAP DRAINAGE PIT IN DITCH.

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

EXACT ROUTING OF CONDUIT TO BE DETERMINED ON SITE. CONDUITS ARE LABELED LEFT TO RIGHT, TOP TO BOTTOM.

DRAWING NOT TO SCALE.

LEGEND:

- L - INDUCTIVE LOOP
- P - PIEZOELECTRIC SENSOR
- O/H - OVERHEIGHT DETECTOR/EMITTER
- A - AVI MAST ARM/AVI ANTENNA
- LDS - LANE DIRECTIONAL SIGNAL
- C - CAMERA
- S - LOAD CELL SCALE
- LCS - LANE CONTROL SIGNAL
- CMS - CHANGEABLE MESSAGE SIGN
- TS - TRAFFIC SIGNAL
- 1 - SIGNAL CONDUIT
- 1 - POWER CONDUIT

LOOP DETAILS:

LOOP #	SIZE	NUMBER OF TURNS
L1-L4	6' x 6'	4
L5-L7	8' x 8'	7
L8-L13	6' x 6'	4
L14-L17	6' x 6'	6
L18-L19	6' x 6'	4

SIGNAL CONDUITS:

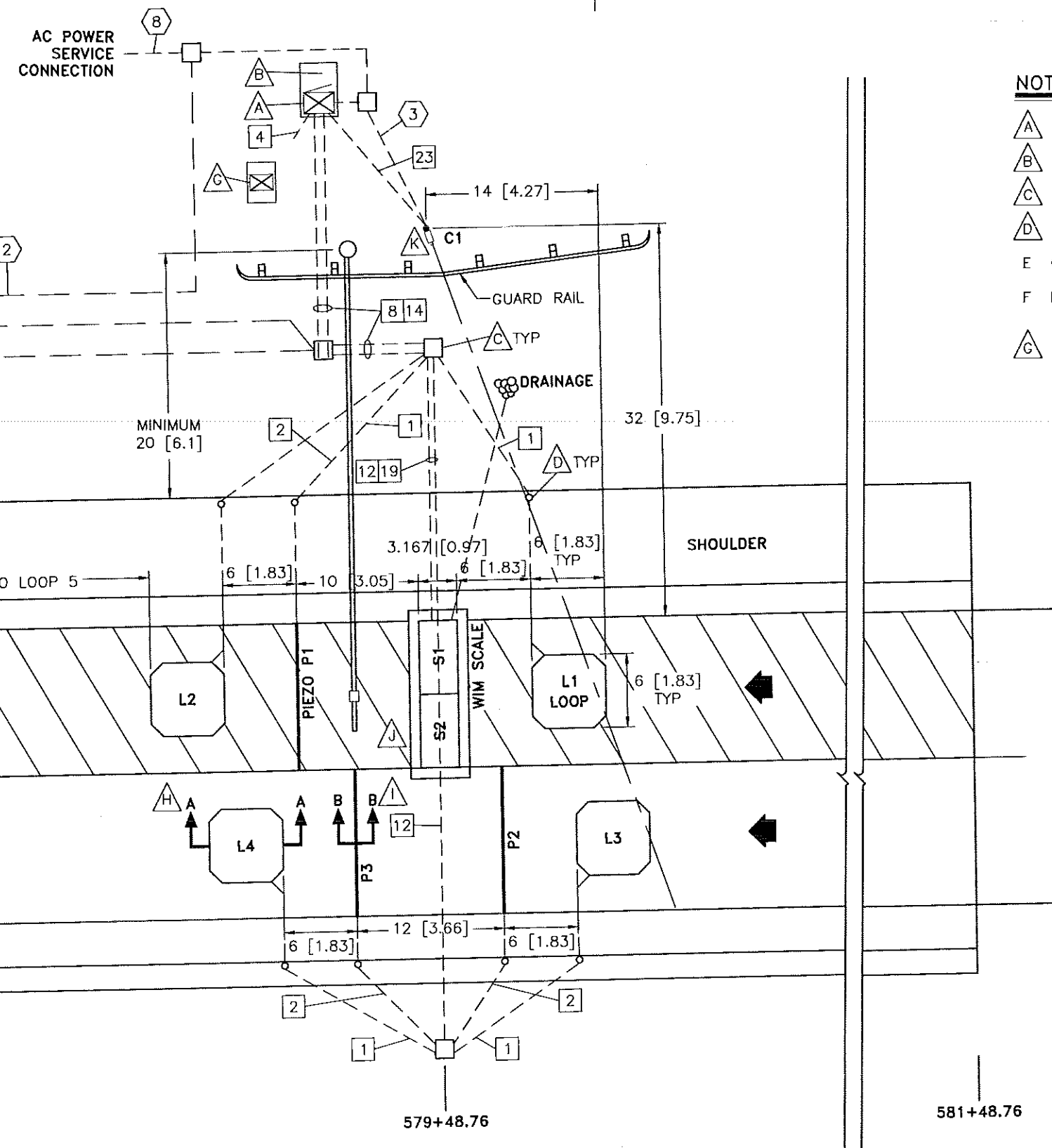
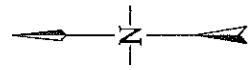
- 1 1" CONDUIT
1-2C 14AWG (LOOP LEAD)
- 2 1" CONDUIT
1- RG58 COAXIAL CABLE (PIEZO LEAD)
- 3 2" CONDUIT
SPARE
- 4 2" CONDUIT
STUB OUT FOR PREPASS
- 5 SPARE
- 6 2" CONDUIT
2-2C 14AWG (LOOP LEAD)
- 7 2" CONDUIT
3-2C 14AWG (LOOP LEAD)
- 8 2" CONDUIT
1-12 STRAND MULTIMODE FIBER OPTIC CABLE (COM)
- 9 SPARE
- 10 2" CONDUIT
4-2C 14AWG (LOOP LEAD)
- 11 SPARE
- 12 2" CONDUIT
2-2C 14AWG (LOOP LEAD)
2- RG58 COAXIAL CABLE (PIEZO LEAD)
- 13 2" CONDUIT
1- TBD (AVI COM)
- 14 2" CONDUIT
4-2C 14AWG (LOOP LEAD)
3- RG58 COAXIAL CABLE (PIEZO LEAD)
1-3PR 20AWG (SLC LEAD)
4-2C 18AWG (OFF-SCALE LEAD)
- 15 2" CONDUIT
5-2C 14AWG (LOOP LEAD)
- 16 2" CONDUIT
4-2C 14AWG (LOOP LEAD)
4- RG58 COAXIAL CABLE (PIEZO LEAD)
- 17 2" CONDUIT
10-2C 14AWG (LOOP LEAD)
5- RG58 COAXIAL CABLE (PIEZO LEAD)
- 18 1" CONDUIT
1-2C 18AWG (O/H SIGNAL)

- 19 2" CONDUIT
2-3PR 20AWG (SLC LEAD S1-S2)
4-2C 18AWG (OFF-SCALE LEAD)
- 20 SPARE
- 21 2-1/2" CONDUIT
2-3PR 20AWG (SLC LEAD S1-S2)
4-2C 18AWG (OFF-SCALE LEAD)
4-2C 18AWG (LOOP LEAD)
3- RG58 COAXIAL CABLE (PIEZO LEAD)
- 22 2" CONDUIT
2-12 STRAND MULTIMODE FIBER OPTIC CABLE (CMS)
- 23 1-1/2" CONDUIT
1-12 STRAND FIBER OPTIC CABLE (CAMERA)

POWER CONDUITS:

- 1 2" CONDUIT
1-2C + GND 12AWG (O/H)
- 2 2" CONDUIT
2-4C + GND 12AWG (CMS1 AND 2 POWER AND SIGNAL)
- 3 2" CONDUIT
1-2C + GND 10AWG (CAMERA AND ILLUMINATOR POWER)
- 4 2" CONDUIT
1-4C + GND 12AWG (CMS POWER AND SIGNAL)
- 5 SPARE
- 6 2" CONDUIT
TBD (RAMP CABINET)
- 7 2" CONDUIT
2-3C + GND (LCS POWER)
- 8 2" CONDUIT
TBD (MAINLINE CABINET POWER)

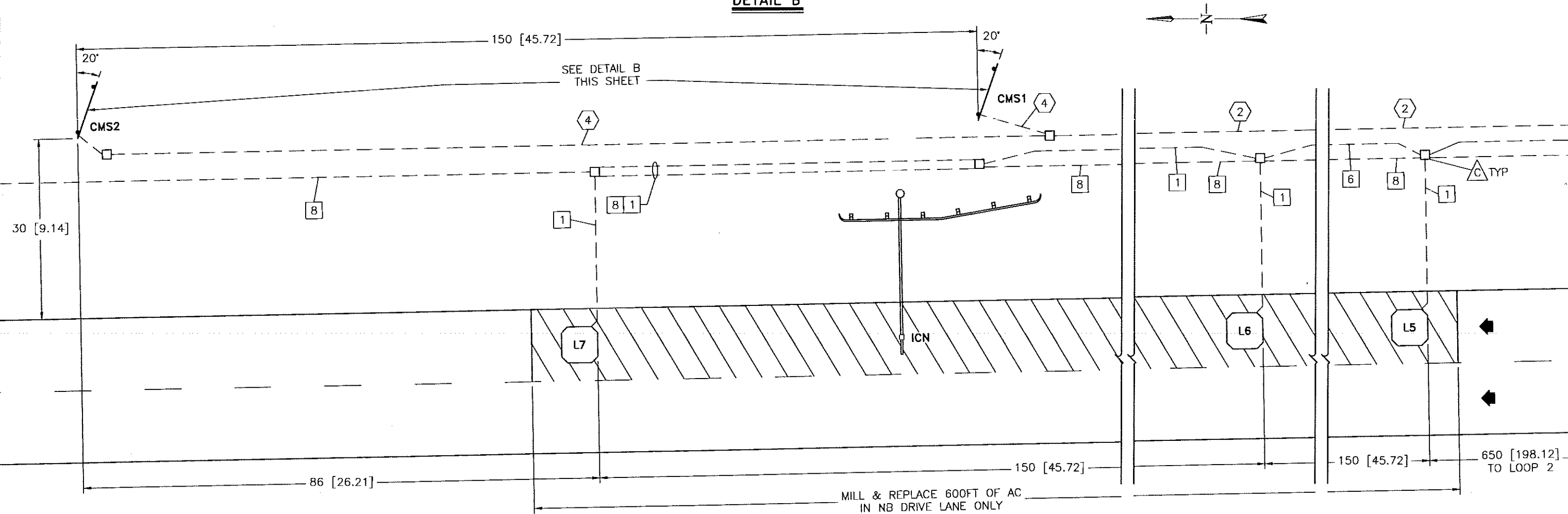
DETAIL A



NOTES: (THIS SHEET ONLY)

- A CABINET WITH WIM ELECTRONICS.
- B CABINET BASE.
- C PULL BOX.
- D DRILL THROUGH SHOULDER FOR CONDUIT.
- E CABINET IS PLACED SO THAT THE BACK OF THE CABINET IS FACING THE ROAD.
- F POWER CONDUITS EXIT THE CABINET ON THE SIDE CONSIDERED LEFT WHEN FACING THE CABINET DOOR.
- G CABINET, BASE, CORRESPONDING CONDUIT, AND ELECTRONICS FOR THE AVI TO BE SUPPLIED BY PRE-PASS.

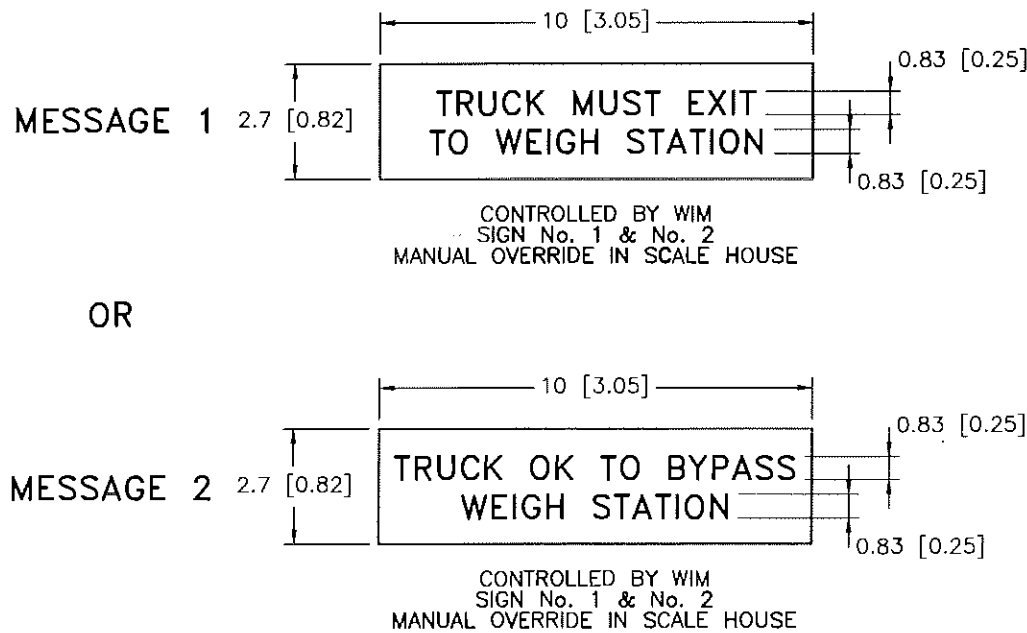
DETAIL B



NOTE:

- * INDICATE MILL & REPLACE 3-1/2" AC OVERLAY.
- * LOOPS ARE TO BE SAWCUT INTO PCC PRIOR TO AC OVERLAY.

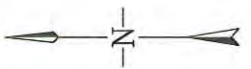
DETAIL B - SIGNS



NOTES: (THIS SHEET ONLY)

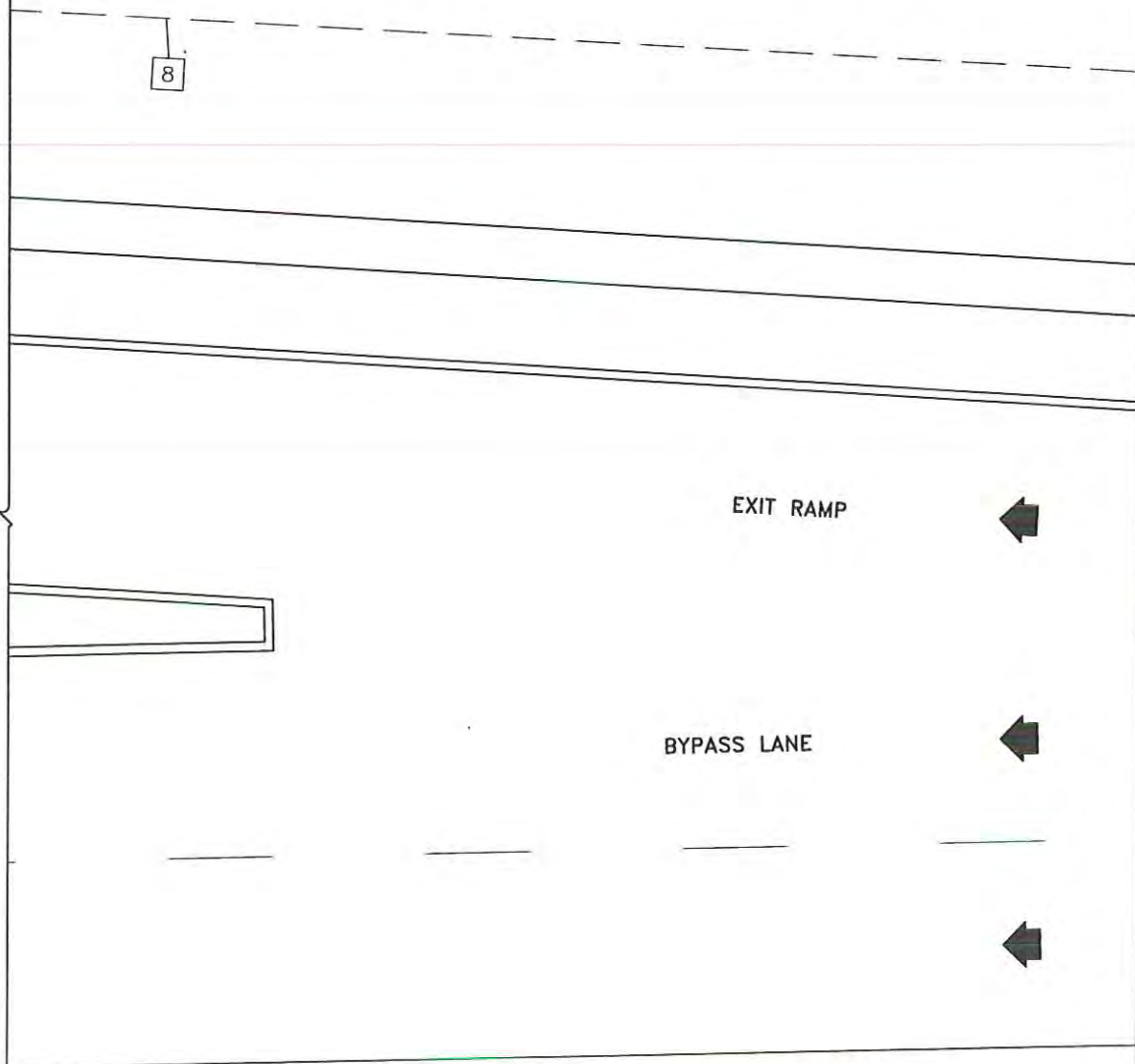
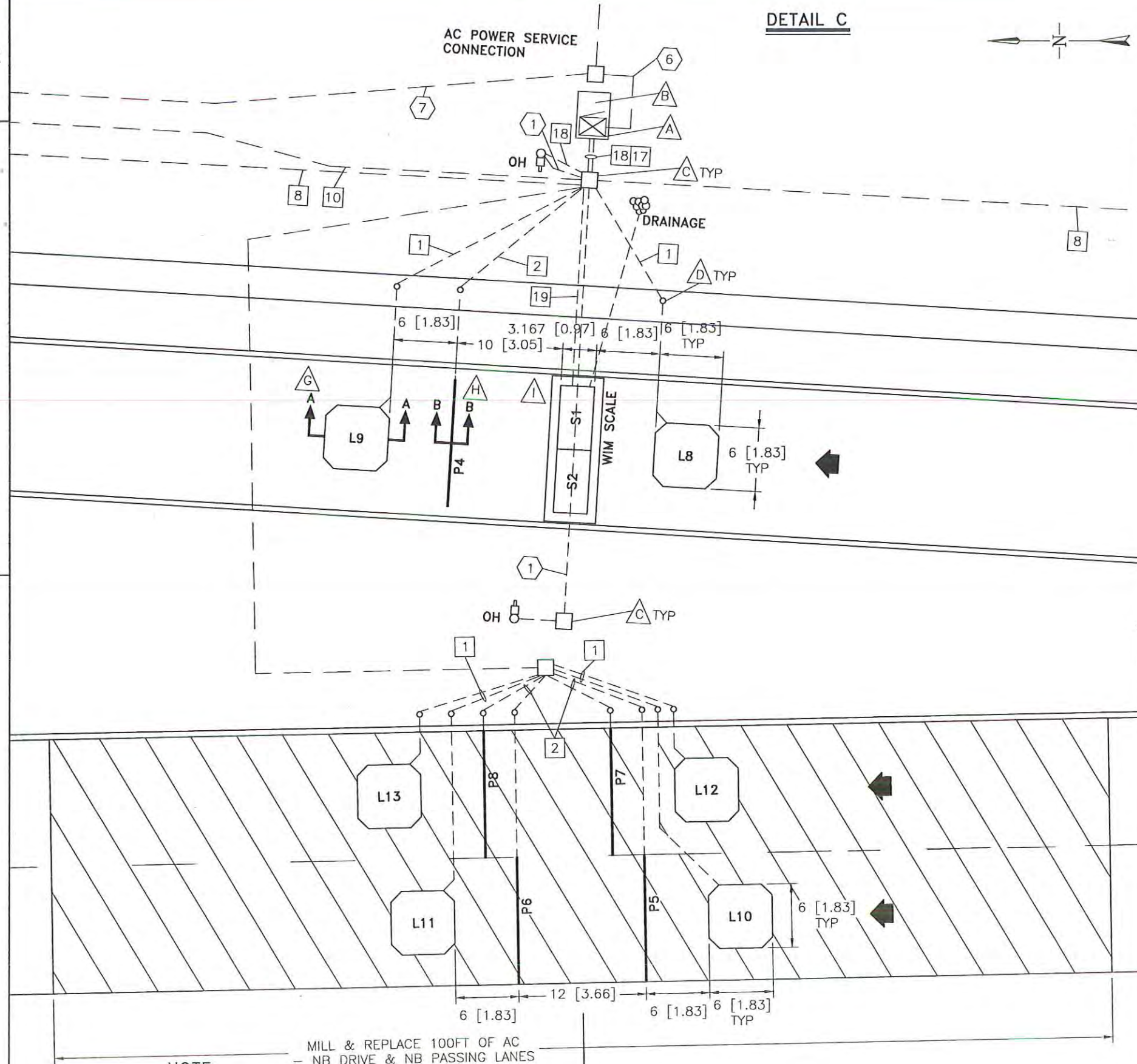
△ PULL BOX.

DETAIL C



NOTES: (THIS SHEET ONLY)

- CABINET WITH WIM ELECTRONICS.
- CABINET BASE.
- PULL BOX.
- DRILL THROUGH SHOULDER FOR CONDUIT.
- E CABINET IS PLACED SO THAT THE BACK OF THE CABINET IS FACING THE ROAD.
- F POWER CONDUITS EXIT THE CABINET ON THE SIDE CONSIDERED LEFT WHEN FACING THE CABINET DOOR.

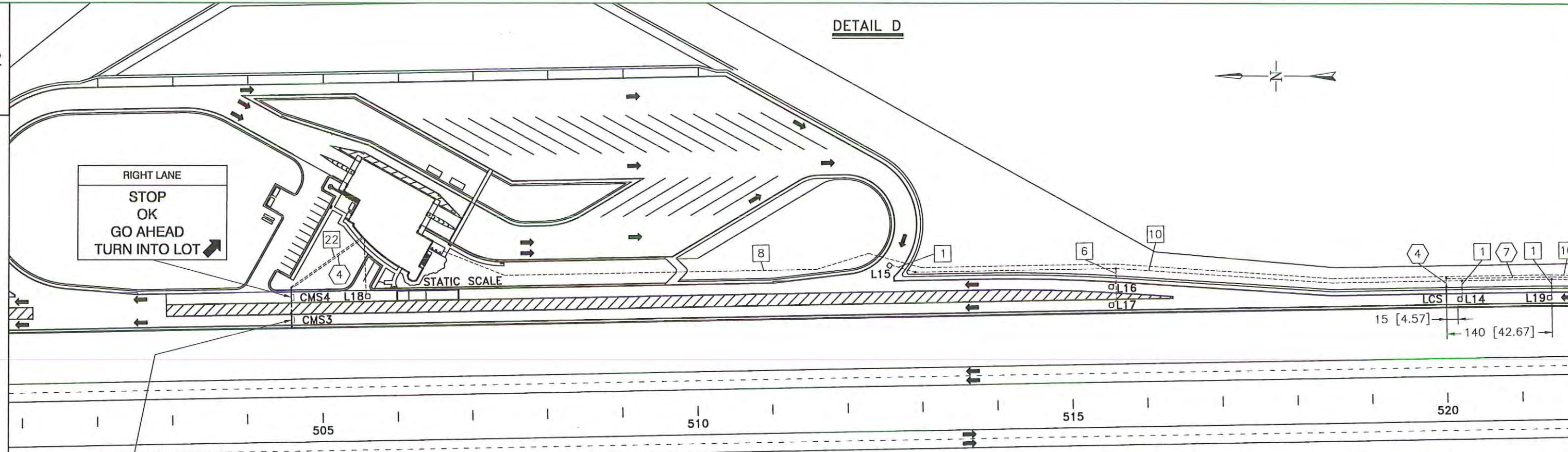


NOTE:

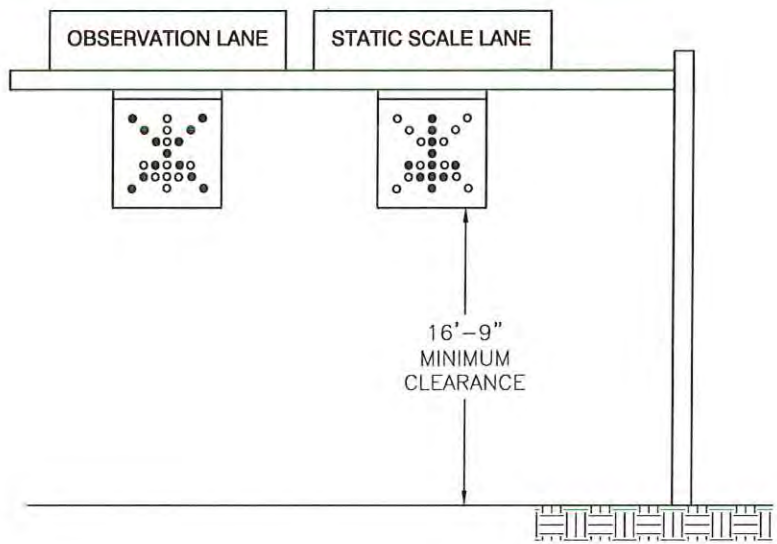
- * INDICATE MILL & REPLACE 3-1/2" AC OVERLAY.
- * LOOPS ARE TO BE SAWCUT INTO PCC PRIOR TO AC OVERLAY.

532

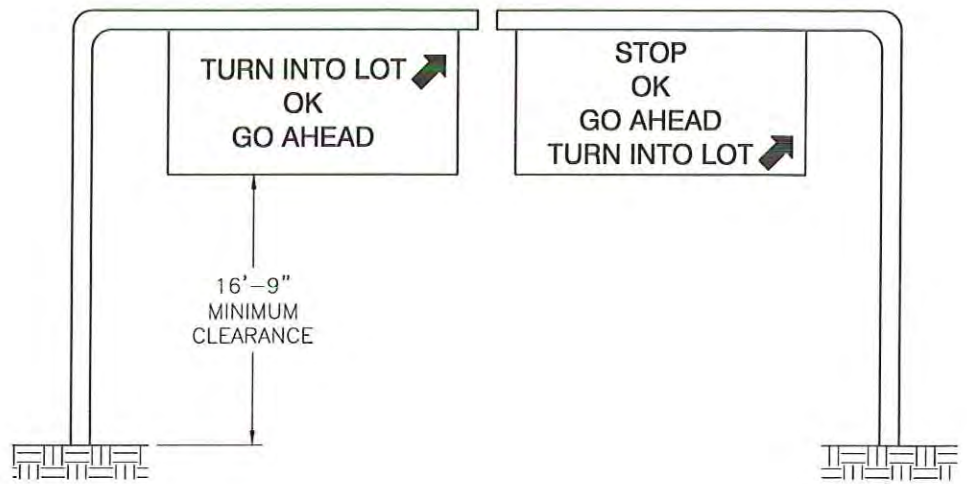
DETAIL D

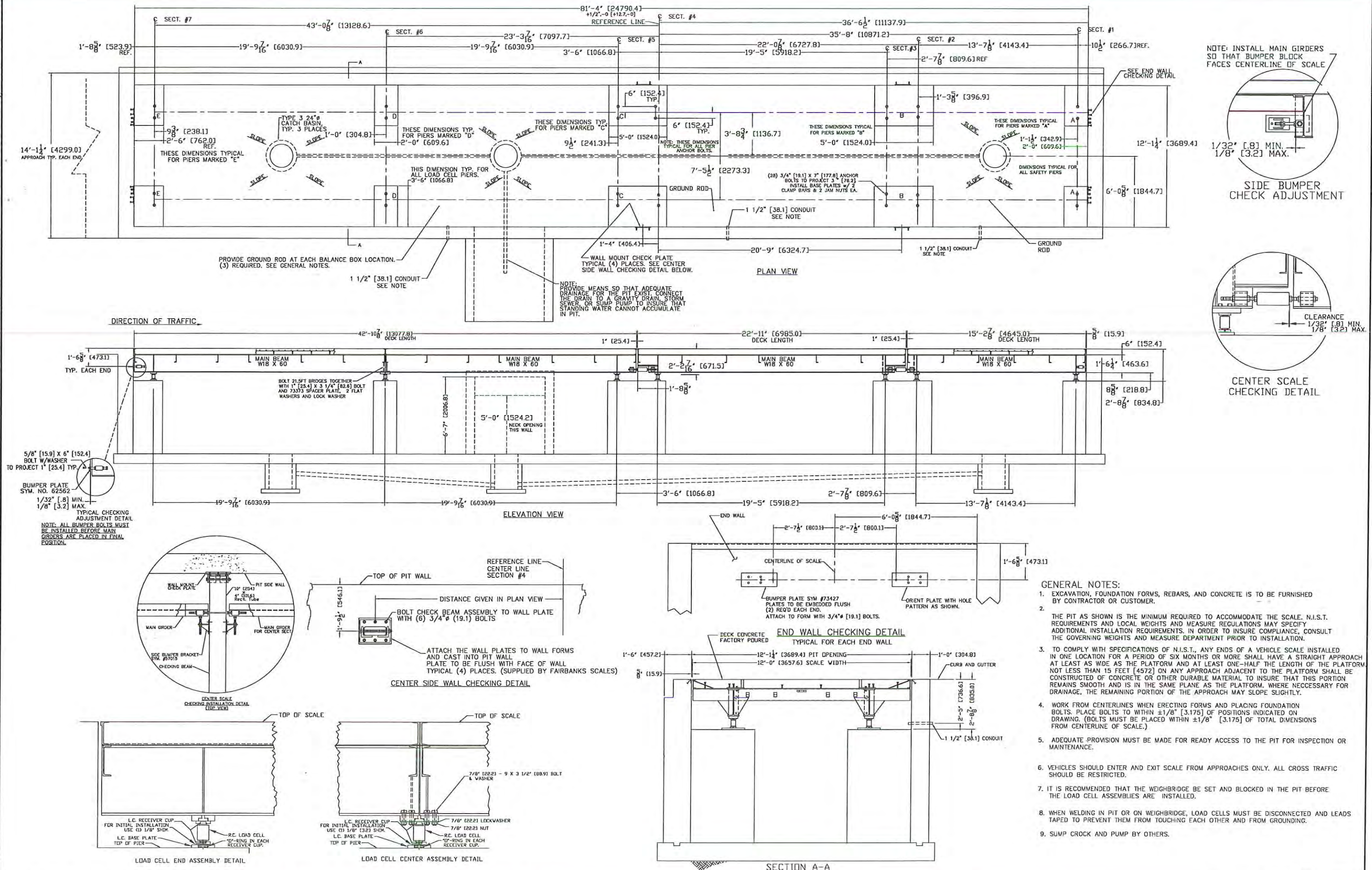


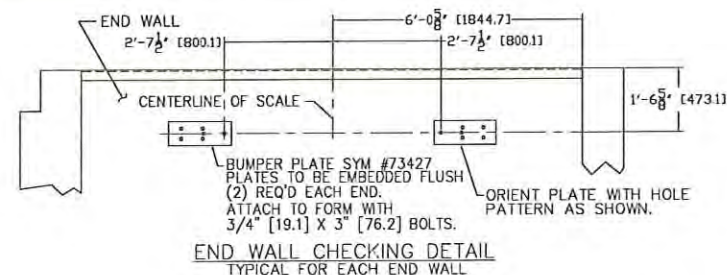
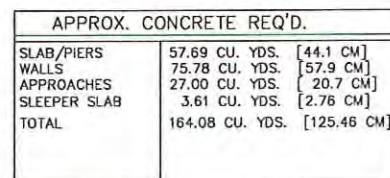
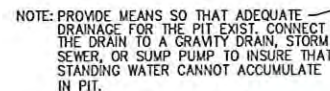
LANE CONTROL SIGNALS — ELEVATION VIEW



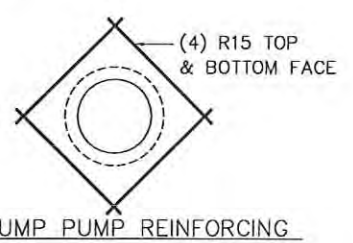
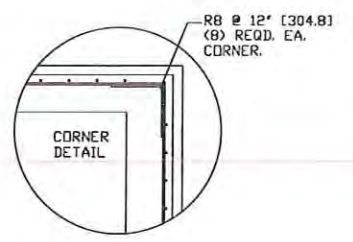
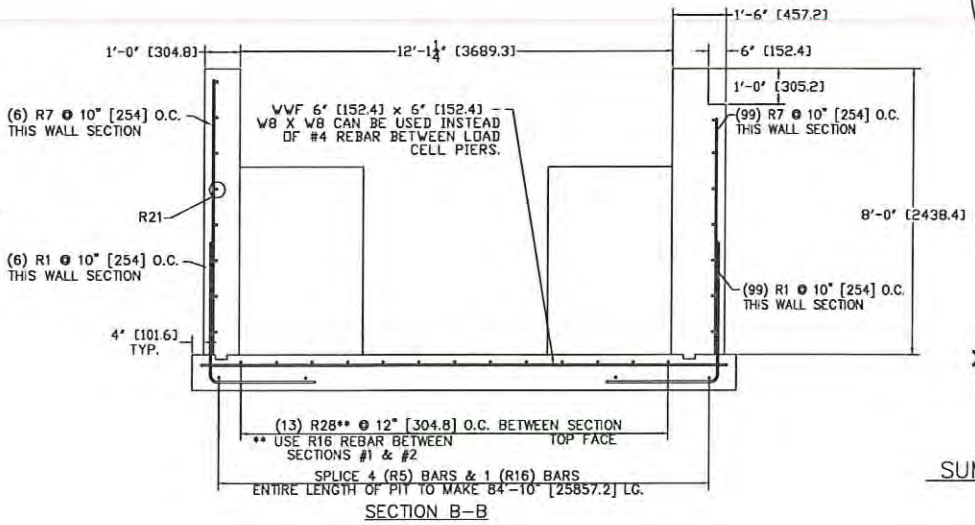
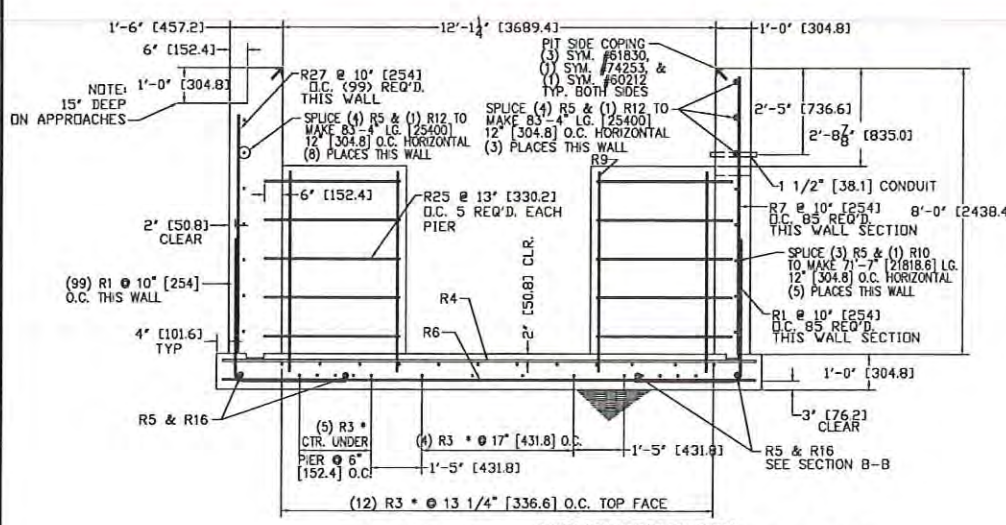
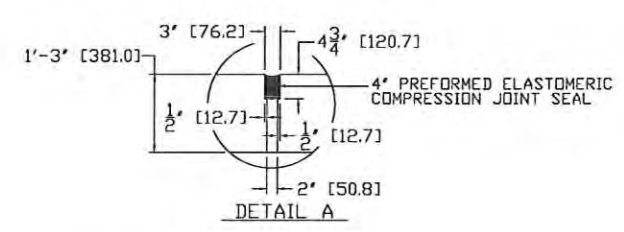
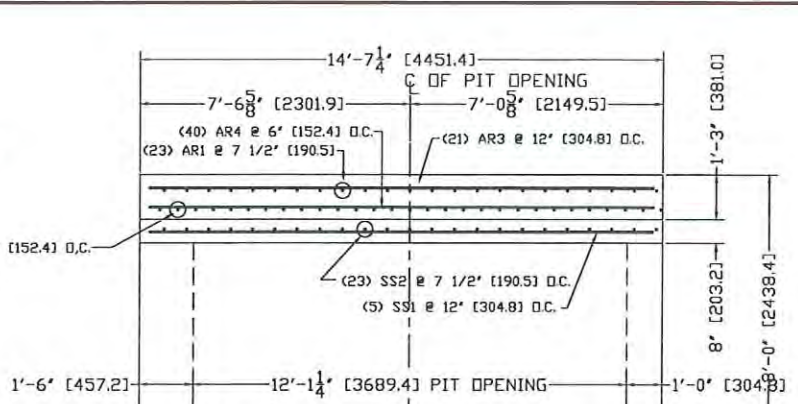
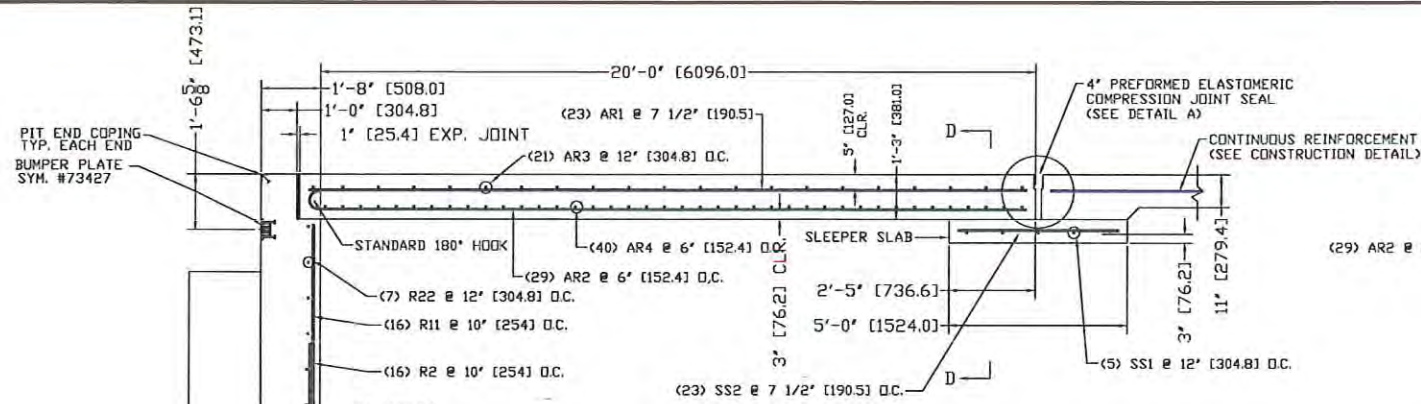
CHANGEABLE MESSAGE SIGN DETAIL — ELEVATION VIEW



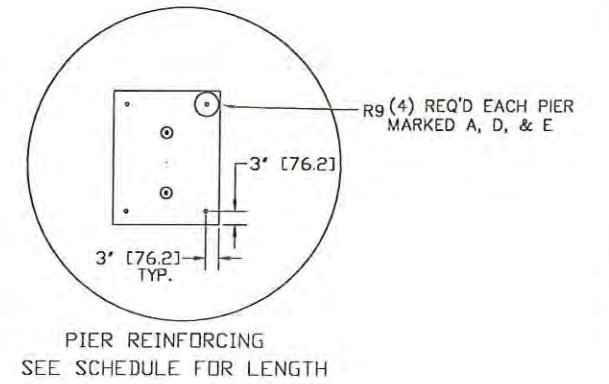
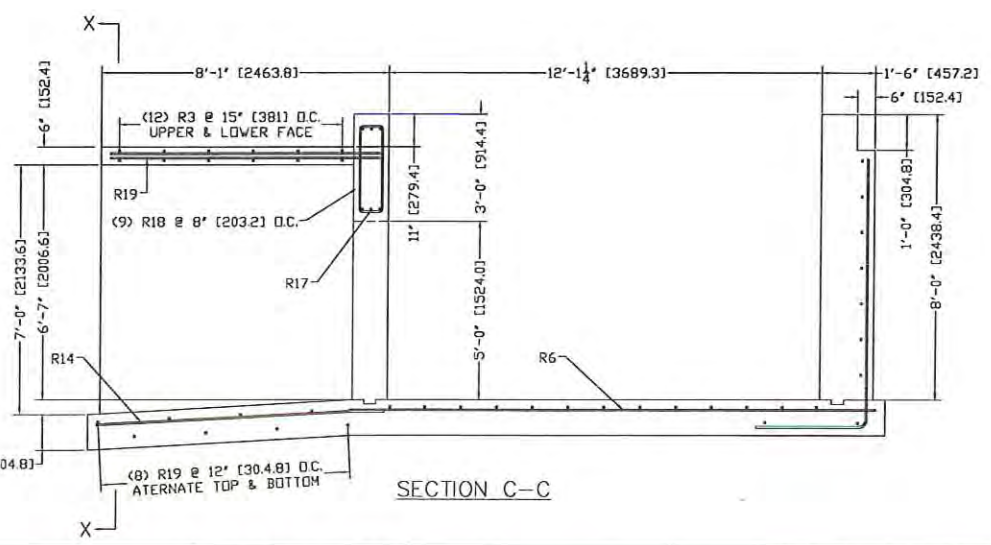
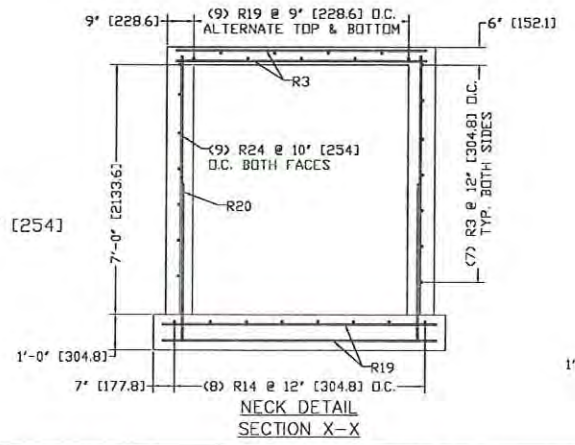
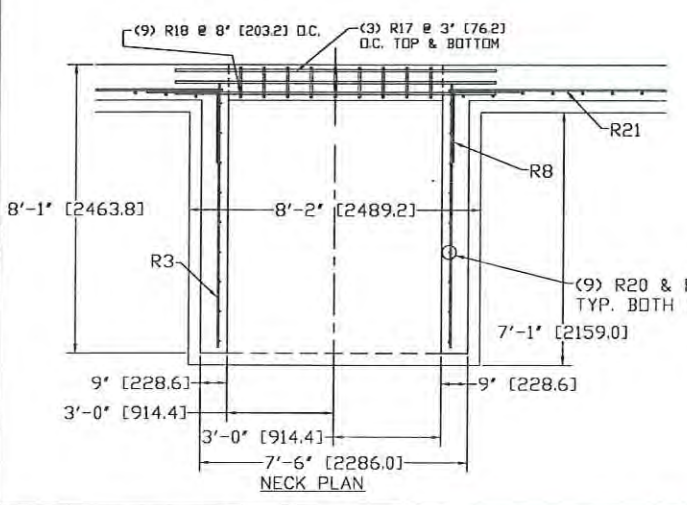




10. ALL BACK FILL SHOULD BE PLACED IN 8" [203.2] LIFTS & COMPACTED TO 95% OF MAXIMUM DENSITY PER ASTM 1557. ALL WORK TO BE IN ACCORDANCE WITH ACI 301.
11. PROVIDE MEANS SO THAT ADEQUATE DRAINAGE FOR THE PIT EXIST. CONNECT THE DRAIN TO A GRAVITY DRAIN, STORM SEWER, OR SUMP PUMP TO INSURE THAT STANDING WATER CANNOT ACCUMULATE IN PIT.



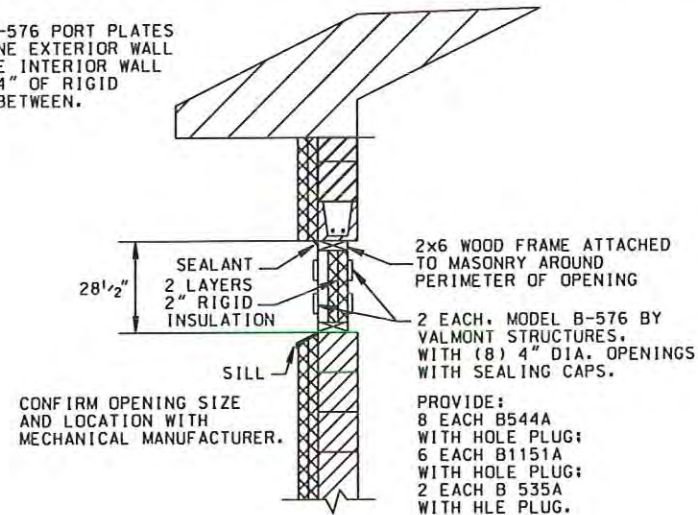
SECTION A-A
TYPICAL (3) PLACES
SECTION #1, #6, & #7
NOTE: END AND CENTER SECTIONS
IN ADDITION TO BARS SHOWN ON
SECTION B-B



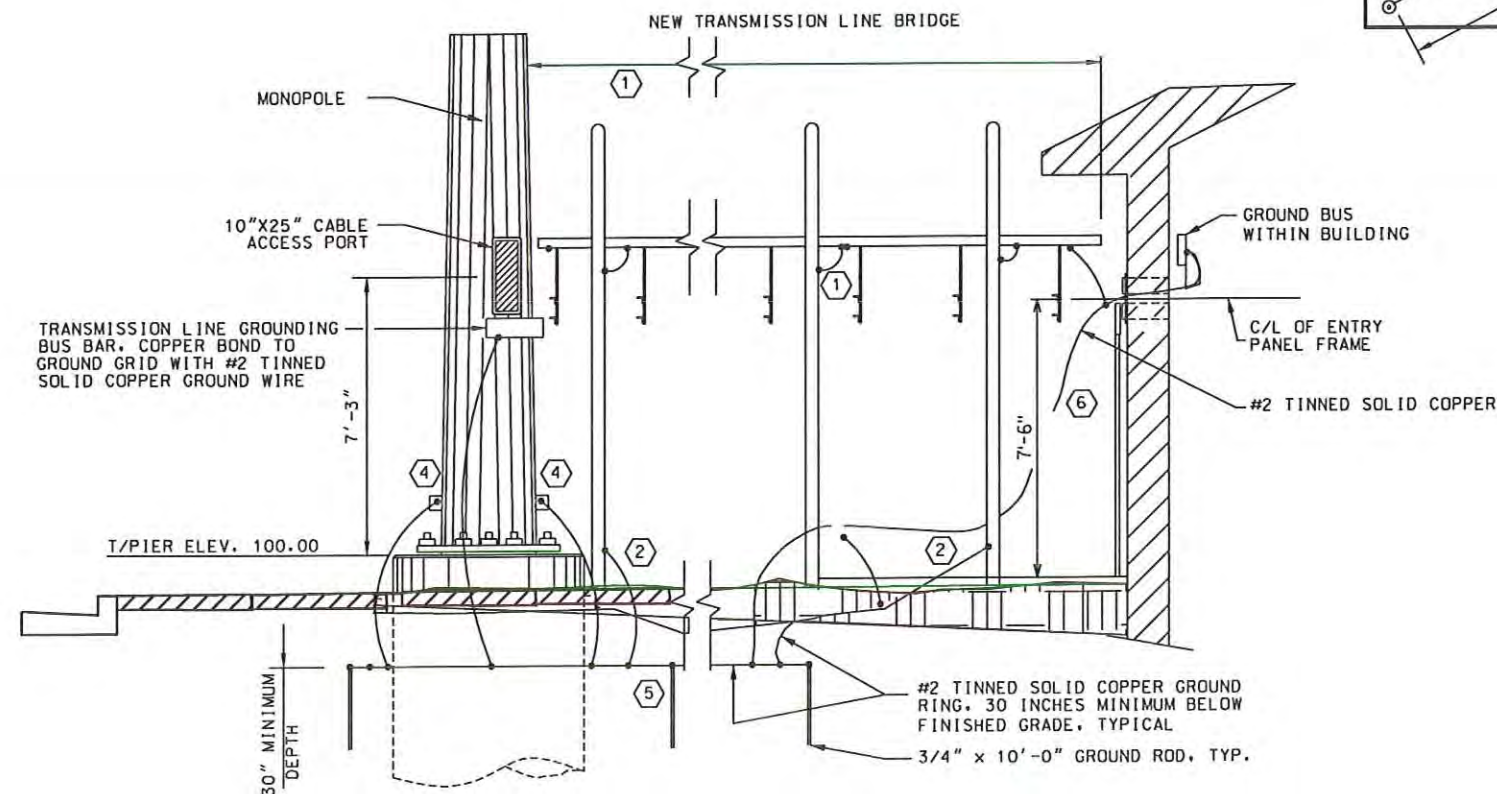
REINFORCING BAR SCHEDULE					
SYM.	QTY.	SIZE	LENGTH	BENDING	WEIGHT
R1	190	#6	6'-0" [914.4]	3'-0" [914.4] 3'-0" [914.4]	1712 [776.7 KG]
R2	32	#6	5'-0" [1524]	3'-0" [914.4] 2'-0" [609.6]	240 [109 KG]
R3	104	#4	7'-0" [2133.6]	7'-0" [2133.6]	486 [220.6 KG]
R4	61	#6	14'-8" [4470.4]	14'-8" [4470.4]	1343.8 [609.5 KG]
R5	75	#4	20'-0" [6096]	20'-0" [6096]	1002 [454 KG]
R6	84	#4	14'-8" [4470.4]	14'-8" [4470.4]	823 [373.3 KG]
R7	190	#4	7'-9" [2362.2]	7'-9" [2362.2]	1535.8 [696.6]
R8	46	#4	4'-0" [1219]	2'-0" [609.6] 2'-0" [609.6]	122.9 [55.8 KG]
R9	40	#4	5'-6" [1676.4]	5'-6" [1676.4]	147 [66.7 KG]
R10	5	#4	16'-7" [5054.6]	16'-7" [5054.6]	55.4 [25.1 KG]
R11	32	#4	6'-6" [1981.2]	6'-6" [1981.2]	141.1 [64 KG]
R12	63	#4	10'-0" [3048]	10'-0" [3048]	420.8 [190.9 KG]
R13	64	#4	6'-0" [1828.8]	6'-0" [1828.8]	256.5 [116.4 KG]
R14	8	#5	8'-9" [2667]	8'-9" [2667]	73 [33.1 KG]
R15	24	#4	4'-0" [1219.2]	4'-0" [1219.2]	64.1 [29.1 KG]
R16	17	#4	11'-0" [3352.8]	11'-0" [3352.8]	124.9 [56.7 KG]
R17	6	#4	9'-0" [2743.2]	9'-0" [2743.2]	36.1 [16.4 KG]
R18	9	#4	6'-4" [1930.4]	6'-4" [1930.4] 6'-4" [1930.4]	38.1 [17.2 KG]
R19	9	#4	7'-7" [2311.4]	7'-7" [2311.4]	45.6 [20.6 KG]
R20	18	#5	3'-0" [914.4]	3'-0" [914.4]	56.3 [25.5 KG]
R21	8	#4	5'-5" [1651]	5'-5" [1651]	29 [13.2 KG]
R22	20	#4	14'-1" [4292.6]	14'-1" [4292.6]	131.7 [59.7 KG]
R23	20	#4	4'-6" [1371.6]	4'-6" [1371.6]	60.1 [27.3 KG]
R24	18	#4	6'-3" [1905]	6'-3" [1905]	75.2 [34.1 KG]
R25	10	#4	2'-9" [838.2]	2'-9" [838.2]	18.4 [8.3 KG]
R26	10	#4	2'-10" [863.6]	2'-10" [863.6]	19 [8.6 KG]
R28	39	#4	16'-0" [4876.8]	16'-0" [4876.8]	416.8 [189.1 KG]
TOTAL					9,572.6 [4297.5 KG]

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

NOTE:
TWO MODEL B-576 PORT PLATES
REQUIRED, ONE EXTERIOR WALL
FACE AND ONE INTERIOR WALL
FACE, WITH 4" OF RIGID
INSULATION BETWEEN.

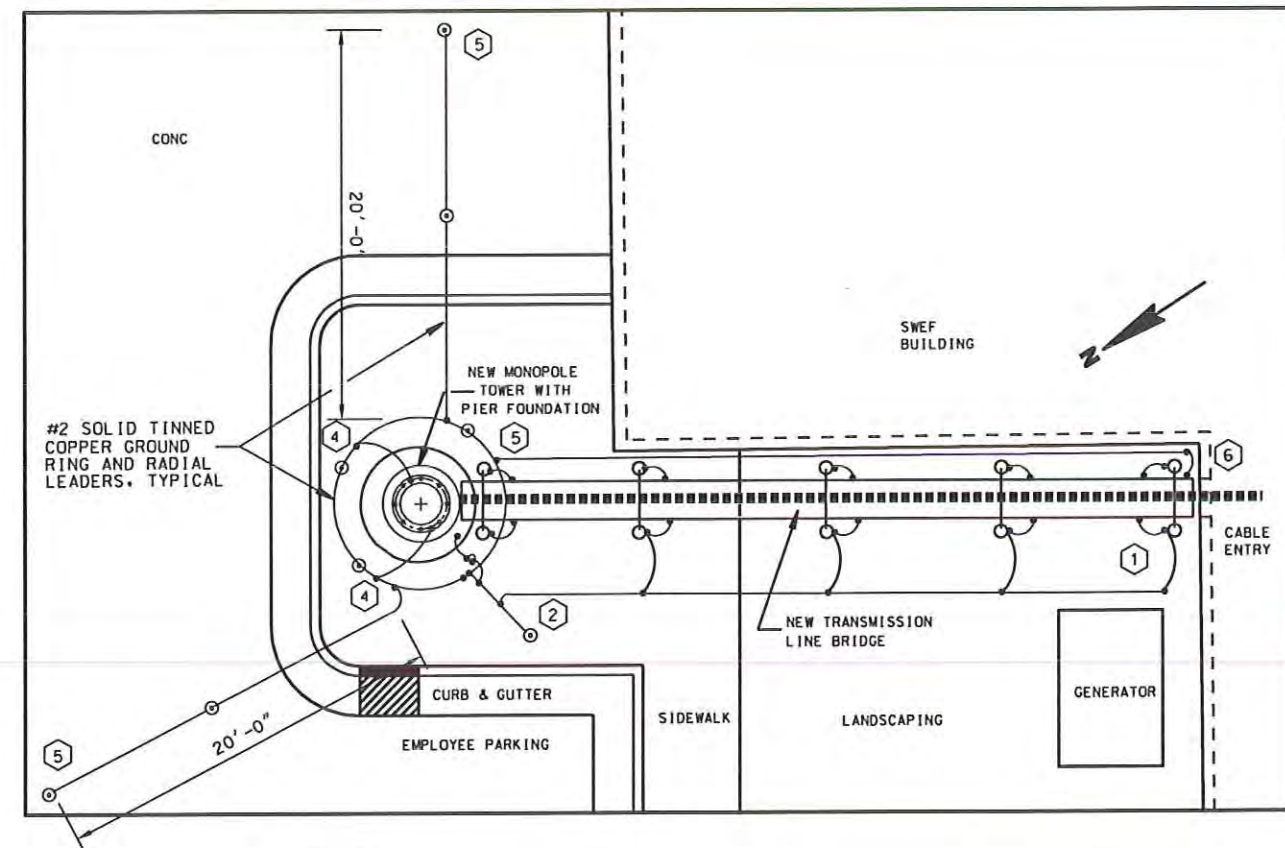


3 WAVEGUIDE ENTRY DETAIL
E-1



2 TOWER AND CABLE BRIDGE SUPPORT GROUND DETAIL
E-1

SCALE 1/2" = 1'-0"
0 2' 4'



1 SITE GROUNDING PLAN
E-1

SCALE 1/4" = 1'-0"
0 4' 8'

LEGEND

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

ELECTRICAL NOTES:

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

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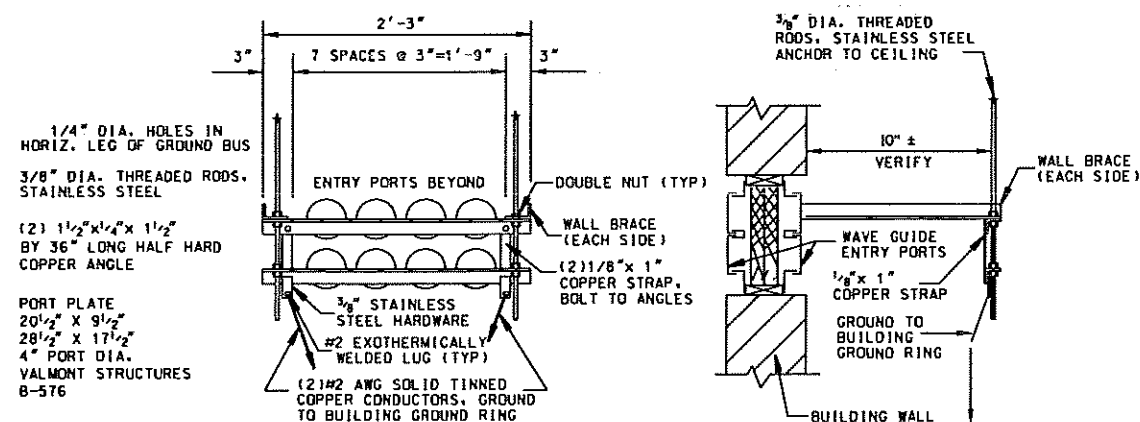
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Drawing Title

ELECTRICAL PLAN & DETAILS

Sheet No.

E-1



ELEVATION

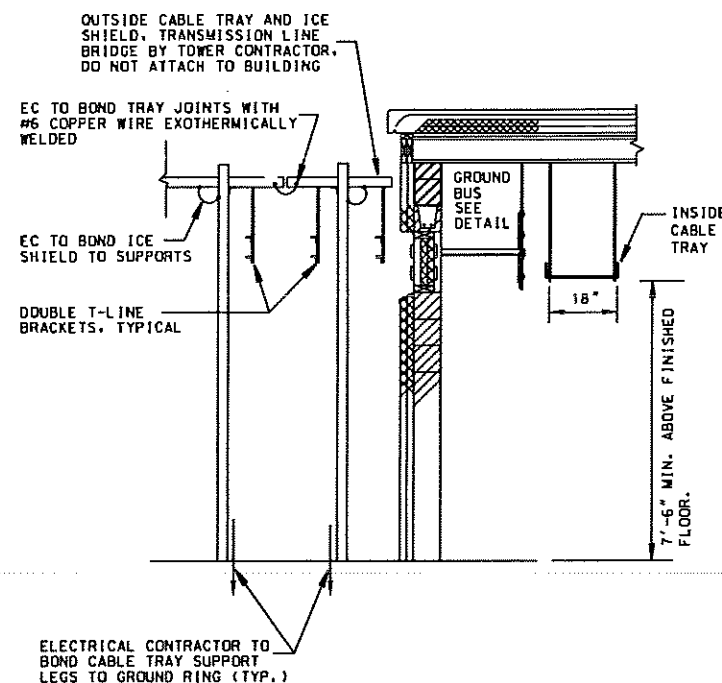
SECTION

MICROWAVE CABLE ENTRANCE

GROUND BUS DETAIL

1
E-2

NOT TO SCALE

2
E-2

CABLE ENTRANCE GROUND DETAIL

0' 2' 5'

NOTE:
ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL 18-INCH CABLE TRAY FROM CABLE ENTRY TO THE EQUIPMENT ROOM AND IN THE EQUIPMENT ROOM OVER TO THE LOCATION OF THE FUTURE EQUIPMENT RACKS.

LOCATION OF CABLE TRAY AND EQUIPMENT TO BE VERIFIED WITH OWNER PRIOR TO INSTALLATION. CABLE TRAY SHALL BE BONDED TO THE INTERIOR GROUND BUS AND HAVE ALL JOINTS BONDED.

MONOPOLE TOWER

(2) 1/4" x 4" x 4" GROUND LUG PLATES WELDED TO MONOPOLE

#2 SOLID TINNED COPPER WIRE, TYPICAL

6" TYP.

GRADE

18" MIN.

30" MIN.

GROUND RING

MONOPOLE FOUNDATION (CONCRETE PIER TYPE SHOWN)

NOTE:

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

CHAMFER EXPOSED CONCRETE EDGES, TYPICAL

3
E-2

MONOPOLE TOWER GROUND DETAIL

NOT TO SCALE

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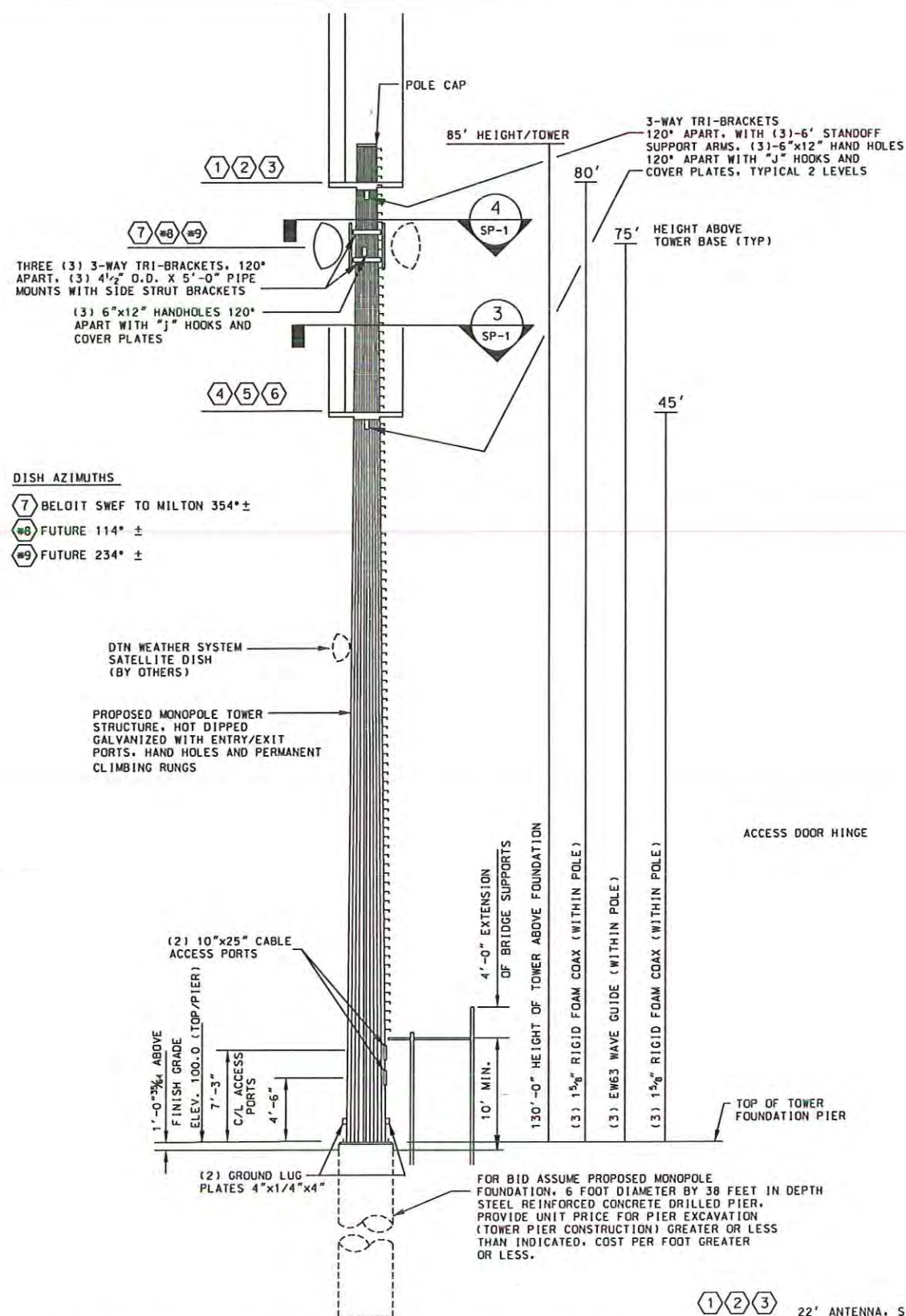
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Drawing Title

ELECTRICAL DETAILS

Sheet No.

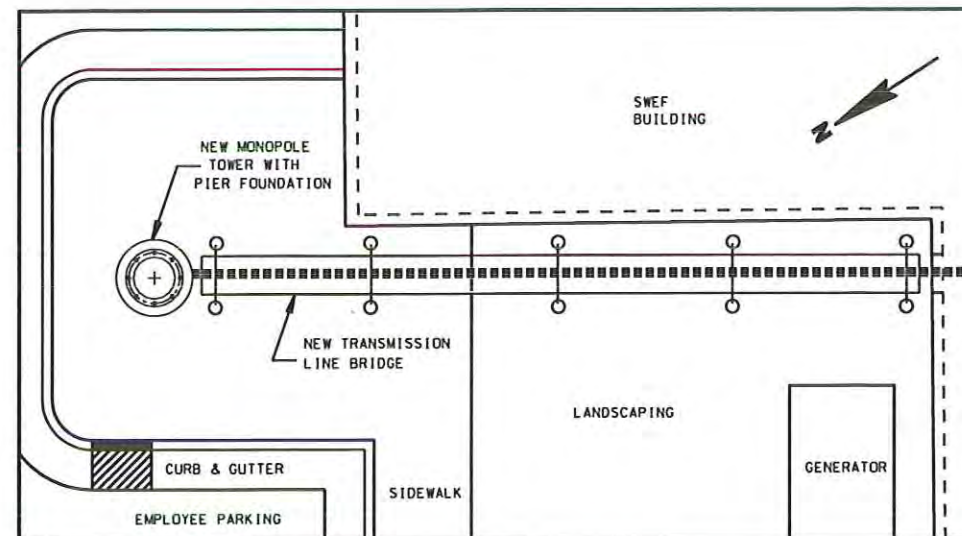
E-2



2 MONOPOLE/TOWER DESIGN LOAD INFORMATION

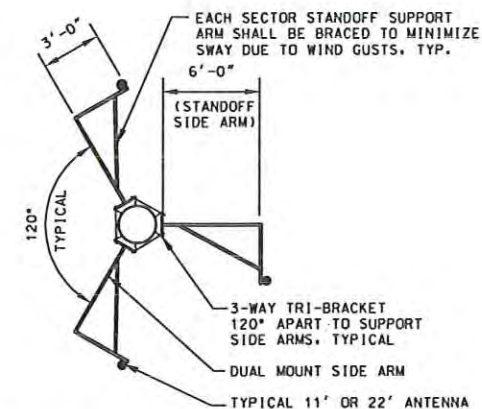
- INDICATES ANTENNA AND TRANSMISSION LINE TO BE INSTALLED AS PART OF THIS CONTRACT
- INDICATES ANTENNA AND TRANSMISSION LINE FOR FUTURE INSTALLATION

- 22' ANTENNA, SIMILAR TO MODEL SD284
- 8' DIA. DISH WITH RADOME AND NO ICE DEFLECTOR



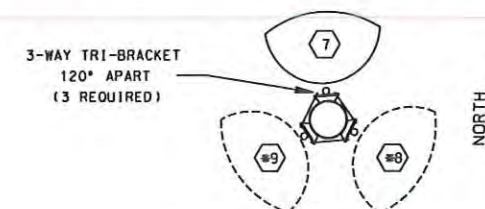
1 MONOPOLE/TOWER SITE PLAN

SCALE 1/4" = 1'-0"



3 LAYOUT-SIDE ARM ANTENNA SUPPORT

SCALE 1/4" = 1'-0"



4 PLAN - DISH ANTENNA

SCALE 1/4" = 1'-0"

NOTES FOR TOWER

- PROVIDE AND INSTALL A 6-FOOT SIDE ARM (STANDOFF), SIX (6) REQUIRED. EACH SIDE ARM FOR SUPPORT OF ONE (1) PD-440 DIPOLE ANTENNA. 3-WAY TRI-BRACKET 120° APART TO SUPPORT SIDE ARMS. SEE DETAIL 3 ON THIS SHEET.
- PROVIDE AND INSTALL A 4.5" O.D. x 5'-0" PIPE MOUNTS FOR EACH DISH ANTENNA INDICATED (PROPOSED AND FUTURE), THREE (3) REQUIRED. PROVIDE THREE (3) 3-WAY TRI-BRACKETS 120° APART TO SUPPORT PIPE MOUNTS. INSTALL PIPE MOUNTS BOTH FOR DISH ANTENNA INSTALLED AS PART OF THIS CONTRACT AND FUTURE ANTENNAS INSTALLED OUTSIDE OF THIS CONTRACT.

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Drawing Title
TOWER LOAD INFORMATION
AND SITE PLAN DETAILS

Sheet No.

SP-1