PROJECT ID: 6448-03-72
WITH: N/A

May 04

ORDER OF SHEETS

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

TOTAL SHEETS = 122

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

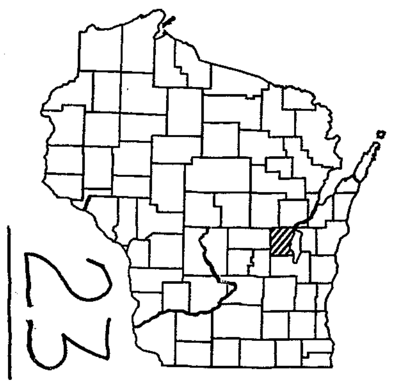
PLAN OF PROPOSED IMPROVEMENT

USH 45 - STH 76
OLD STH 150
CTH II
WINNEBAGO COUNTY

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
6448-03-72	STP 2004453	1

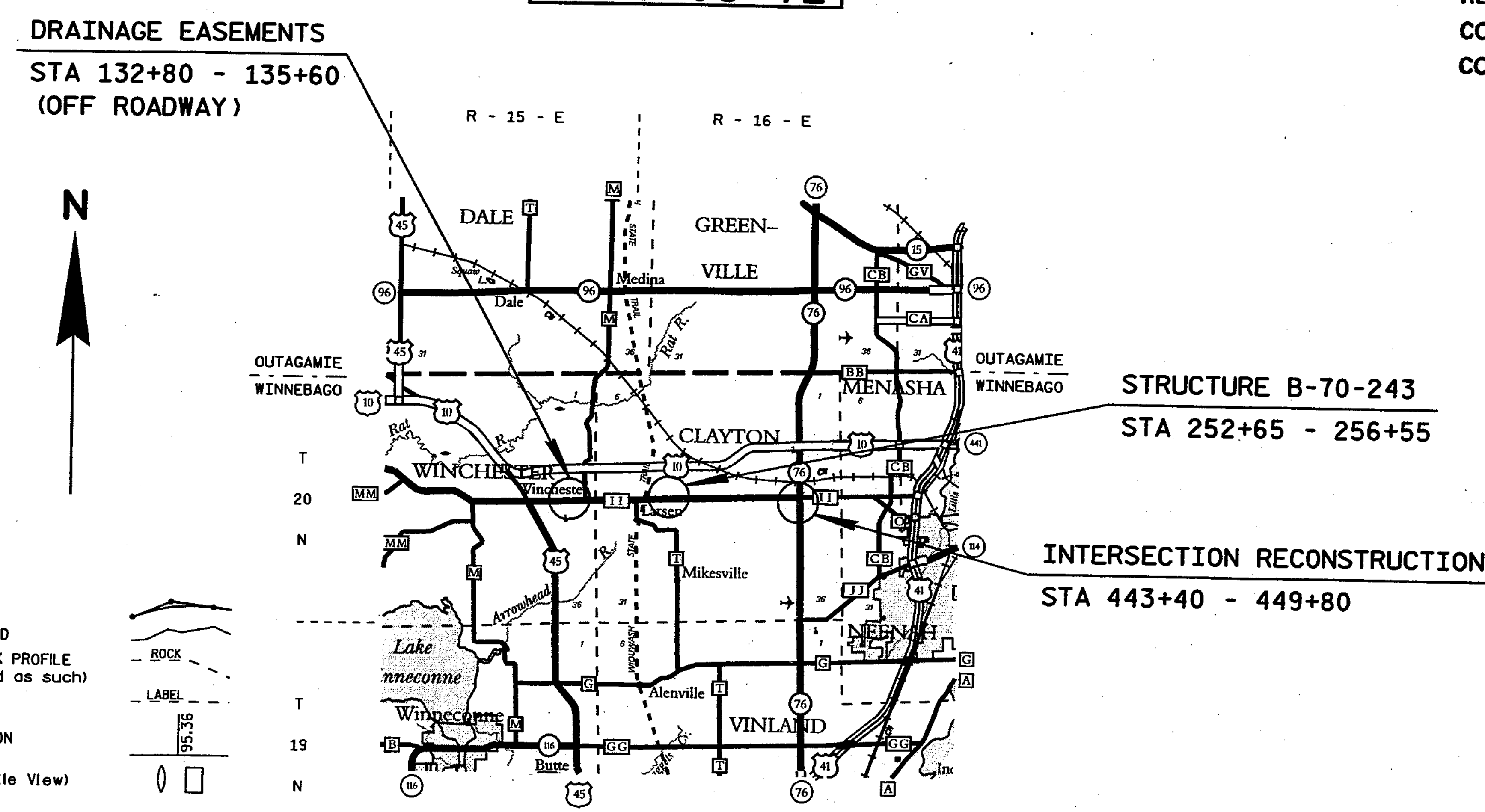
STATE PROJECT NUMBER
6448-03-72

AS BUILT PLAN NO.
SUPERVISOR Roger Rahlf
RESIDENT Ed Hoefferle
CONTRACTOR Ptaschinski
COMPLETED 11-10-04



23

DESIGN ID: 6448-03-01
+15 D + 1 FULL-SIZED



DESIGN DESIGNATION		CTH II		STH 76
A.D.T. 2004	=	3500	=	10500
A.D.T. 2024	=	4900	=	15400
D.H.V.	=	760	=	1770
D.D.	=	58/42	=	58/42
T.	=	9.5	=	8.4
DESIGN SPEED	=	55 MPH	=	55 MPH
ESALS	=	1,036,600	=	4,248,600

CONVENTIONAL SYMBOLS

PLAN
CORPORATE LIMITS
PROPERTY LINE (PL + 59.1)
LOT LINE
LIMITED HIGHWAY EASEMENT
EXISTING RIGHT OF WAY
PROPOSED OR NEW R/W LINE
SLOPE INTERCEPT
REFERENCE LINE
EXISTING CULVERT
PROPOSED CULVERT (Box or Pipe)
COMBUSTIBLE FLUIDS (CAUTION)
MARSH AREA
WOODED OR SHRUB AREA

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

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

LAYOUT
SCALE 0 — 5 MI.

TOTAL NET LENGTH OF CENTERLINE = 0.00 MI.

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), WINNEBAGO COUNTY, 83 (91) ADJUSTMENT.

ALL ELEVATIONS ON THIS PROJECT ARE REFERENCED TO THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (N.G.V.D.)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	M D VANDEHEI
Designer	E A DANKE / K L KOUGL
Project Manager	W R BERTRAND
District Examiner	W R BERTRAND
District Supervisor	R W RAHLF
C.O. Examiner	N.R. AFFELDT

APPROVED FOR DISTRICT OFFICE
DATE: 12/11/03 William R Bertrand (Signature)

COUNTY: WINNEBAGO

E

FILE NAME : d3_644803E:010101_+1.DGN PLOT DATE: 5-20-03 PLOT NAME : 010101 +1 ORG DATE : 5-20-03 Originator : Dist 3 PLOT SCALE :

WISDOT/CADDS SHEET

UTILITIES

AMERITECH
MARIE A. SCHWARM
221 W WASHINGTON STREET
PO BOX 2159
APPLETON WI 54913
920 735-3206; PAGER 920-556-2818;
FAX 920-735-3073

CENTURYTEL
DICK GRAMBSCH
2323 E CAPITOL DRIVE
APPLETON WI 54911
920-986-2014

~~LARSEN-WINCHESTER SANITARY DISTRICT~~
~~BETTY NELSON~~
~~6081 STATE ROAD 150~~
LARSEN WI 54947
~~920-836-2885~~

TIME WARNER CABLE
LARRY PIHLSTROM
1001 KENNEDY AVENUE
KIMBERLY WI 54136-0145
920-831-9211

WISCONSIN ELECTRIC POWER COMPANY
CARL LEMMER
333 W EVERETT ST - A279
WILWAUKEE WI 53203
262-544-7248

WISCONSIN PUBLIC SERVICE
LORI BUTRY
700 NORTH ADAMS STREET
PO BOX 19001
GREEN BAY WI 54307-9001
920-433-1703; FAX 920-433-1360

DIGGERS HOTLINE
Toll Free (800) 242-8511
Milwaukee Area (414) 259-1181
Hearing Impaired TDD (800) 542-2289
www.DiggersHotline.com

STANDARD DETAIL DRAWINGS

08A5-16C F, HM, HM-S, S, V, HM-GJ, + HM-GJ-S

08A5-16A	INLET COVERS TYPE ~~A, H, A-S, & H-S~~
08C1-5	INLETS TYPE 1, 2, 3 & 4
08D1-13	CONCRETE CURB, CONCRETE CURB AND GUTTER & PAVEMENT TIES
08D4-3	CONCRETE SURFACE DRAIN & ASPHALTIC FLUME
08E8-3	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E9-5	SILT FENCE
08E10-2	INLET PROTECTION TYPE A, B, C AND D
08F1-11	APRON ENDWALLS FOR CULVERT PIPE
8F4-5	JOINT TIES FOR CONCRETE PIPE
09B2-6	CONDUIT
09B4-5	PULL BOX
09C2-2	CONCRETE BASES, TYPES 1, 2 & 5
09C3-2	TRANSFORMER/PEDESTAL BASES
09C5-3	CONCRETE CONTROL CABINET BASES
09E1-4A	POLE MOUNTINGS FOR TRAFFIC SIGNALS TYPE 2
09E1-4B	POLE MOUNTINGS FOR TRAFFIC SIGNALS AND LIGHTING UNITS, TYPE 3 (HEAVY DUTY)
09E1-4G	HARDWARE DETAILS FOR POLE MOUNTINGS
09E3-2	NON-FREEWAY LIGHTING UNIT POLE WIRING
09E6-1	TRAFFIC SIGNAL STANDARD POLY BRACKET MOUNTINGS (TYPICAL) 13 FT. OR 15 FT.
09F9-2	LOOP DETECTOR PLACED IN CRUSHED AGGREGATE BASE (NEW CONCRETE PAVEMENT)
11B2-1	CONCRETE MEDIAN NOSE
12A3-7	NAME PLATE (STRUCTURES)
13C1-11	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND PAVEMENT TIES
13C11-7A	RURAL DOWELED CONCRETE PAVEMENT
13C11-7B	RURAL DOWELED CONCRETE PAVEMENT
13C16-1	CONCRETE JOINT DETAIL FOR TEE INTERSECTION BYPASS LANE AND RIGHT TURN LANE
14B15-4A	STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS
14B15-4B	STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS
14B18-4A	STEEL PLATE BEAM GUARD, CLASS "A" (AT BRIDGES, OBSTACLES AND SIDEROADS/DRIVEWAYS)
14B20-5A	STEEL THRIE BEAM STRUCTURE APPROACH
14B24-4A	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
14B24-4B	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
14B24-4C	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
15C2-4A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C2-4B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C3-1	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C7-6A	PAVEMENT MARKING SYMBOLS
15C8-9A	PAVEMENT MARKING (MAINLINE)
15C8-9B	PAVEMENT MARKING (INTERSECTIONS)
15C8-9D	PAVEMENT MARKING (LEFT TURN LANE)
15C8-10E	PAVEMENT MARKING (ISLANDS, STOP LINE & CROSS WALK)
15C18-1	MEDIAN ISLAND MARKING
15D28-1	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
15D29-1	TRAFFIC CONTROL, VEHICLE ENTRANCE/EXIT OR HAUL ROAD
16A1-6	LANDMARK REFERENCE MONUMENTS AND COVERS

DNR AREA LIAISON

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
BOBBY JO REISER 920-303-5442
JAMES P COUGHLIN CENTER
625 EAST COUNTY ROAD Y, SUITE 700
OSHKOSH, WISCONSIN 54901-9731

GENERAL NOTES

LIMITED EASEMENTS FOR P.E. AND DRAINAGE CONSTRUCTION HAVE BEEN OBTAINED AND THESE RIGHTS HAVE BEEN EXTENDED TO THE CONTRACTOR.

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

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

THE ELEVATIONS SHOWN ON THE ROADWAY CROSS SECTIONS ARE EARTH GRADE ELEVATIONS AT THE REFERENCE LINE OF THE ROADWAY.

INLET AND DISCHARGE ELEVATIONS FOR DRAINAGE STRUCTURES ARE APPROXIMATE AND SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

WHEN THE QUANITY OF BASE AGGREGATE DENSE IS MEASURED FOR PAYMENT BY THE TON, THE DEPTH OR THICKNESS AS SHOWN ON THE PLAN IS APPROXIMATE AND THE ACTUAL THICKNESS WILL DEPEND UPON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER IN THE FIELD.

ADDITIONAL DOWEL BARS AND CONTRACTION JOINT DOWEL ASSEMBLIES, REQUIRED TO MATCH MANHOLES AND INLETS, SHALL BE INCIDENTAL TO THE CONCRETE PAVEMENT BID ITEM.

ANY CONCRETE CURB AND GUTTER CONSTRUCTED PRIOR TO PLACEMENT OF ADJACENT CONCRETE PAVEMENT SHALL EITHER HAVE THE TIE BARS AUTOMATICALLY PLACED BY MECHANICAL MEANS AT THE TIME OF PLACEMENT. ALTERNATE METHODS MAY BE USED AS APPROVED BY THE ENGINEER.

CURB AND GUTTER RADII ARE SHOWN TO THE FRONT FACE OF CURB.

CURB HEIGHTS AT THE END OF CURB AND GUTTER SHALL BE TAPERED FROM 0-6 INCHES IN 6 FEET.

3" HMA PAVEMENT TYPE E-3, AT THE INTERSECTION SHOULDERS, SHALL BE PLACED IN ONE LIFT.

SHOULDERS SHALL BE PAVED FULL-WIDTH IN LOCATIONS THAT REQUIRE STEEL PLATE BEAM GUARD.

THE ENGINEER IN THE FIELD SHALL DETERMINE THE EXACT LOCATIONS AND LIWITS OF PRIVATE AND COMMERCIAL ENTRANCES.

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

THE D.O.T. BRIDGE BENCHMARK MONUMENT WILL BE FURNISHED BY THE STATE AND PLACED BY THE CONTRACTOR AS DIRECTED BY THE ENGINEER.

RUNOFF COEFFICIENT FOR THIS PROJECT: EXISTING PAVEMENT 0.9, EXISTING SLOPES 0.3, NEW PAVEMENT 0.9, NEW SLOPES 0.3. TOTAL PROJECT AREA 48 ACRES, TOTAL AREA DISTURBED 2.8 ACRES.

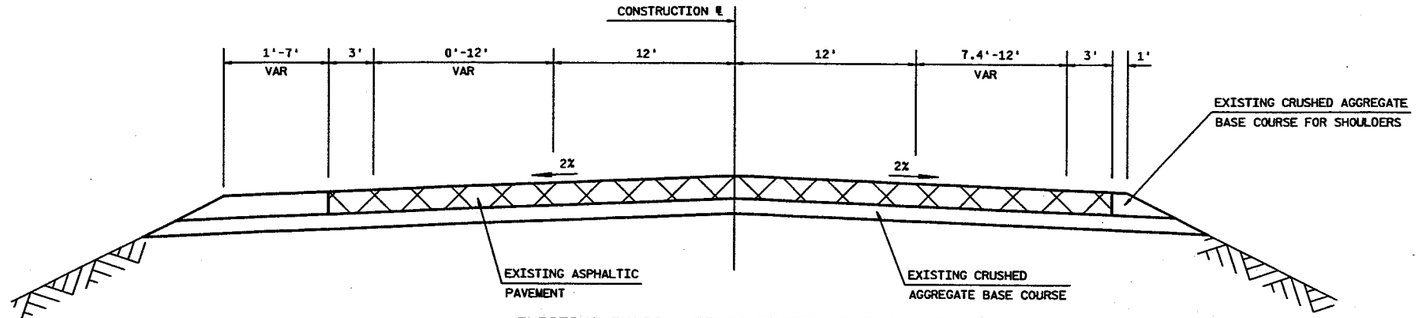
THE CONTRACTOR SHALL NOTIFY THE DISTRICT TRAFFIC UNIT. 920-492-3512 TWO WEEKS PRIOR TO PROJECT COMPLETION, TO ALLOW FOR THE PLACEMENT OF ANY PERMANENT SIGNING WHICH WAS REMOVED OR MOVED DURING CONSTRUCTION OPERATIONS.

AS BUILT PLAN
NO.
SUPERVISOR
RESIDENT
CONTRACTOR
COMPLETED

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

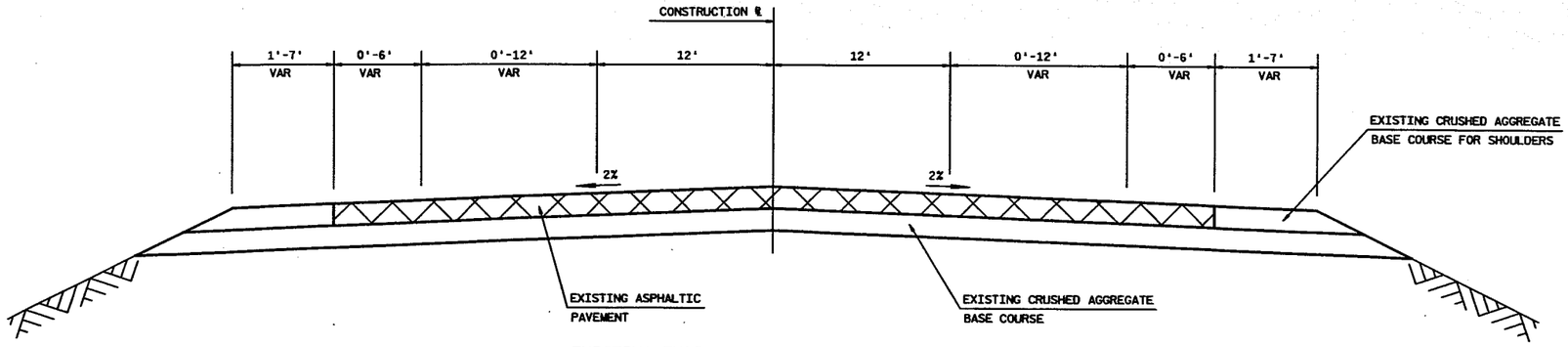
STATE PROJECT NUMBER:6448-03-72	HWY: CTH II	COUNTY: WINNEBAGO	GENERAL NOTES, SDD & UTILITIES	SCALE, FEET 0	SHEET NO: 2 E

FILE NAME : \\gre31fp1\FCSERVER\d3_644803E\020101_gn.dgn PLOT DATE : 10-MAR-2004 12:45 PLOT BY : DOTBRB PLOT NAME : 020101gn ORG DATE : Originator : d3 PLOT SCALE : 10.030303:1.000000 WISDOT/CADDS SHEET 42



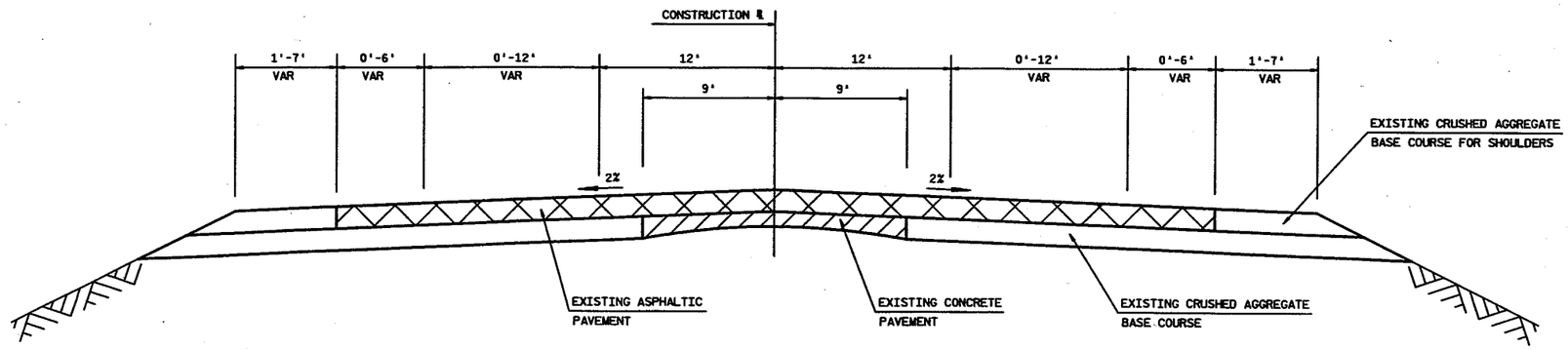
EXISTING TYPICAL CROSS SECTION FOR STH 76

STA 14+14.5 TO 26+23



EXISTING TYPICAL CROSS SECTION FOR CTH II

STA 445+38 TO 448+88



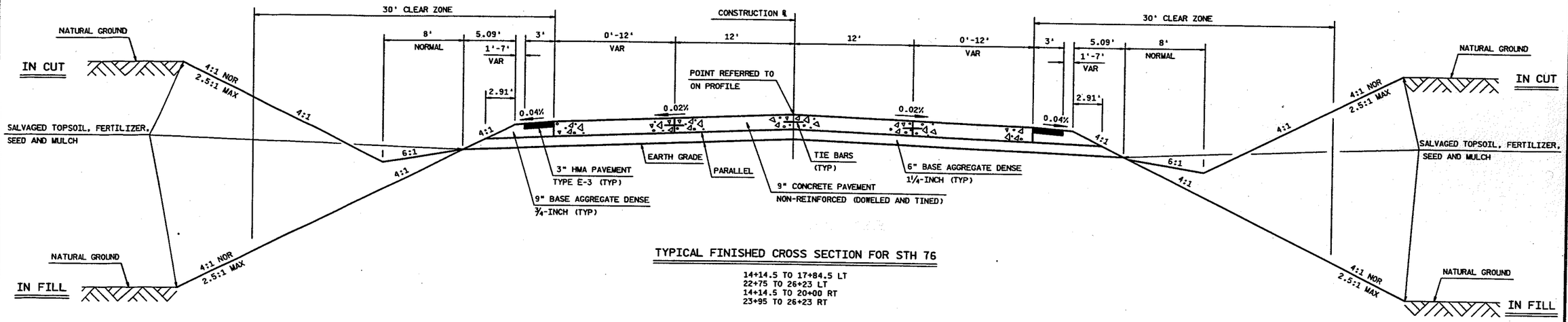
EXISTING TYPICAL CROSS SECTION FOR CTH II

STA 252+65 TO 256+55
STA 443+40 TO 445+38
STA 448+88 TO 449+80

STATE PROJECT NUMBER:6448-03-72	HWY: CTH II	COUNTY: WINNEBAGO	EXISTING TYPICAL SECTIONS	SCALE, FEET 0 5 10	SHEET NO: 3	E

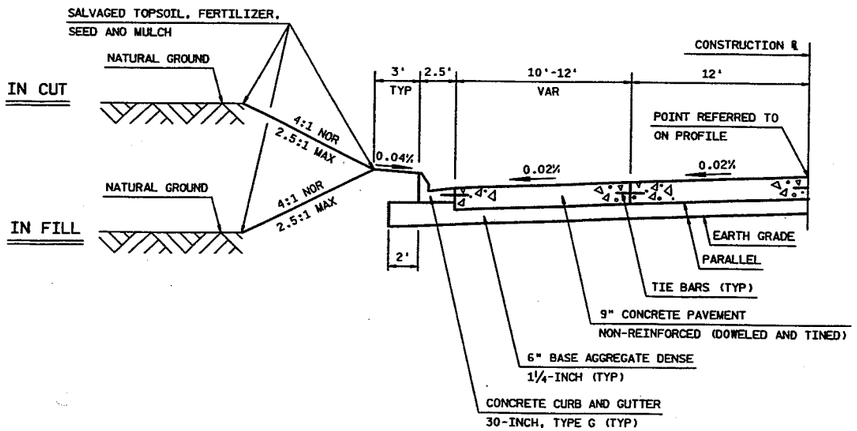
FILE NAME : \\gre31fp1\FCSERVER\d3_644803E\020301_ts.dgn PLOT DATE : 25-AUG-2003 15:10 PLOT BY : DOTMZC PLOT NAME : 020301ts3 ORG DATE : 3-3-03 Originator : d3 PLOT SCALE : 10.030303:1.000000

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



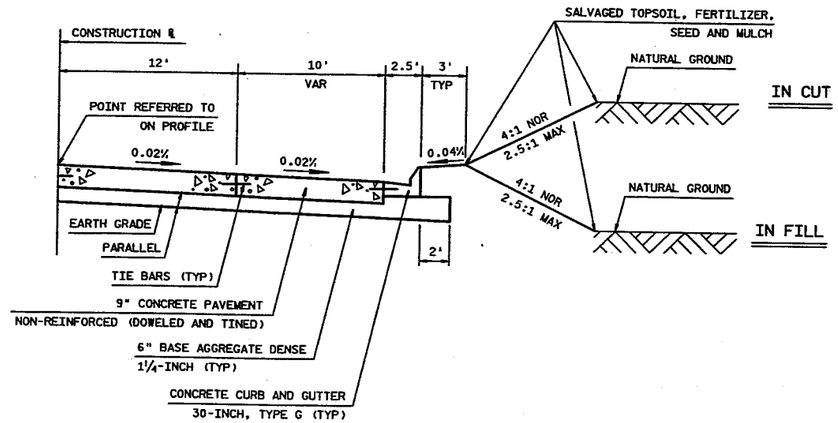
TYPICAL FINISHED CROSS SECTION FOR STH 76

14+14.5 TO 17+84.5 LT
22+75 TO 26+23 LT
14+14.5 TO 20+00 RT
23+95 TO 26+23 RT



TYPICAL FINISHED CROSS SECTION FOR STH 76

17+84.5 TO 22+75 LT



TYPICAL FINISHED CROSS SECTION FOR STH 76

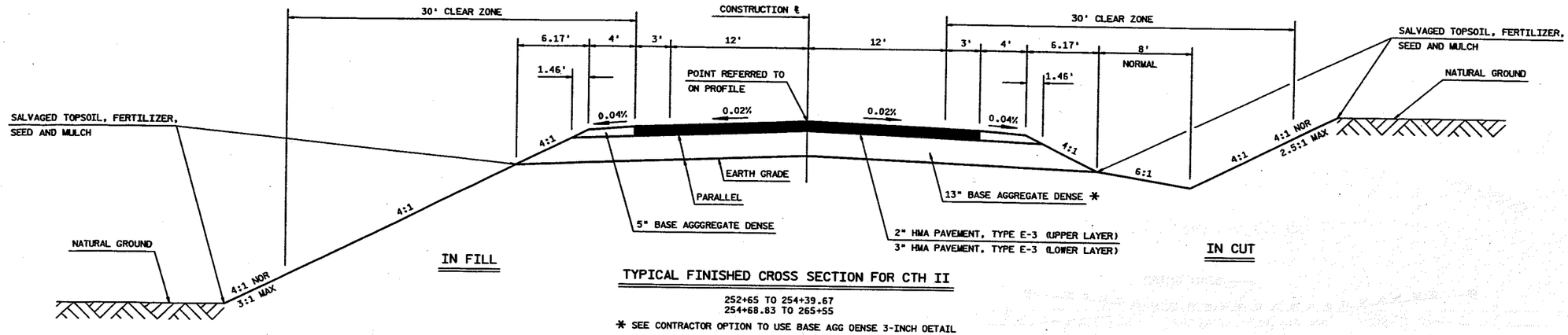
20+00 TO 23+95 RT

STATE PROJECT NUMBER:6448-03-72	HWY: CTH II	COUNTY: WINNEBAGO	TYPICAL SECTIONS	SCALE, FEET 0 5 10	SHEET NO: 4	E

FILE NAME : \\gre31fp1\FCSERVER\d3_644803E\020301_ts.dgn PLOT DATE : 10-MAR-2004 09:20 PLOT BY : DOTBRB PLOT NAME : 020301ts1 ORG DATE : 3-4-03 Originator : d3 PLOT SCALE : 10.030303:1.000000

WISDOT/CADDS SHEET 42

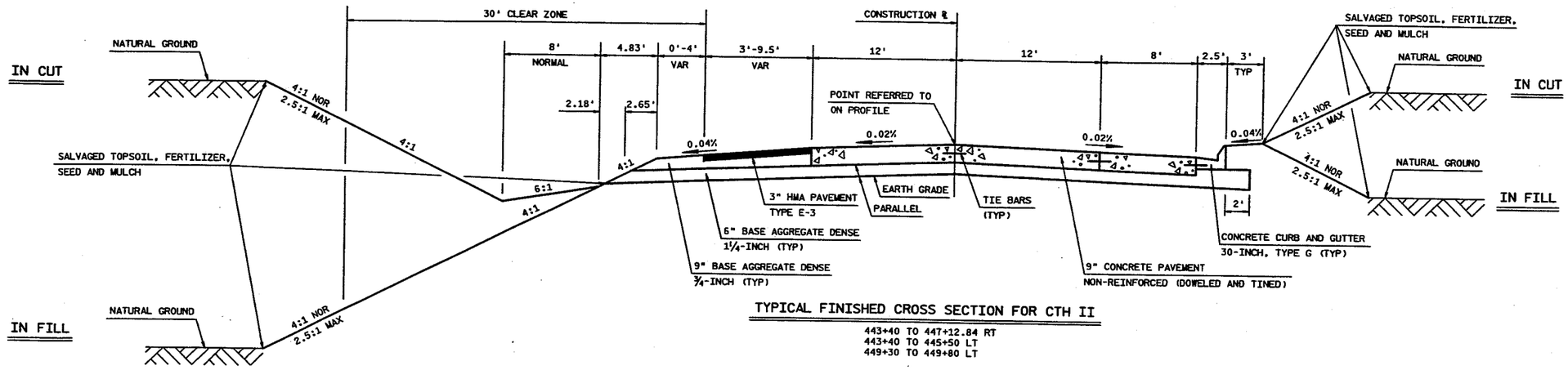
LEVELS ON • 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,59,60,61,62,63



TYPICAL FINISHED CROSS SECTION FOR CTH II

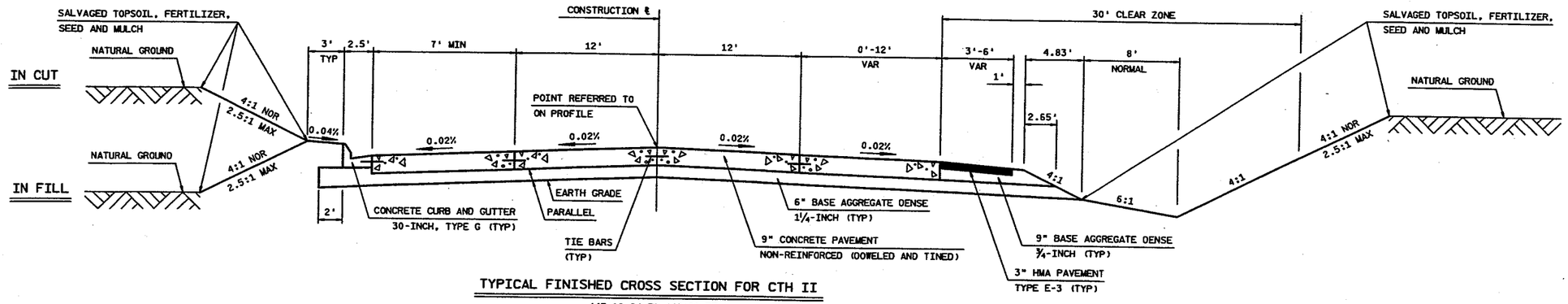
252+65 TO 254+39.67
254+68.83 TO 265+55

* SEE CONTRACTOR OPTION TO USE BASE AGG DENSE 3-INCH DETAIL



TYPICAL FINISHED CROSS SECTION FOR CTH II

443+40 TO 447+12.84 RT
443+40 TO 445+50 LT
449+30 TO 449+80 LT



TYPICAL FINISHED CROSS SECTION FOR CTH II

447+12.84 TO 449+80 RT
445+50 TO 449+30 LT

STATE PROJECT NUMBER:6448-03-72	HWY: CTH II	COUNTY: WINNEBAGO	TYPICAL SECTIONS	SCALE, FEET 0 5 10	SHEET NO: 5	E

FILE NAME : \\gre31fp1\FCSERVER\d3_644803E\020301_ts.dgn
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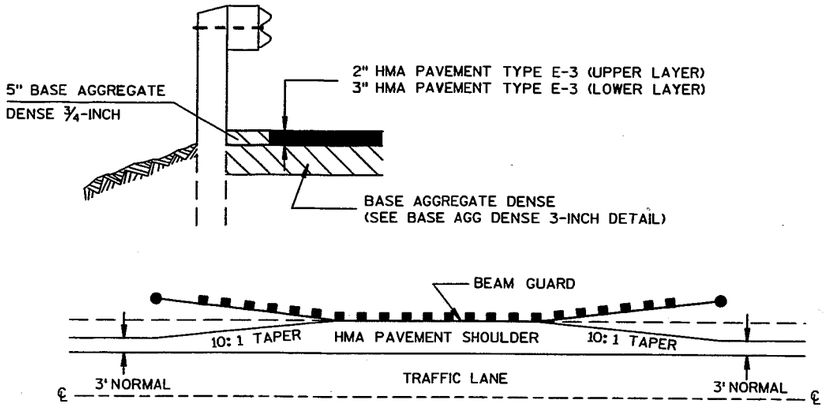
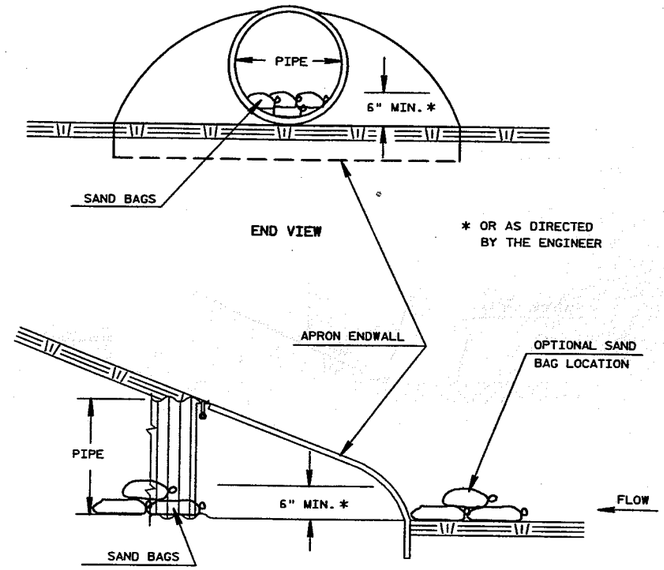
PLOT BY : DOTBRB
PLOT NAME : 020301TS2.I
ORG DATE :
Originator : d3
PLOT SCALE : 10.030303:1.000000
WISDOT/CADDS SHEET 42

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



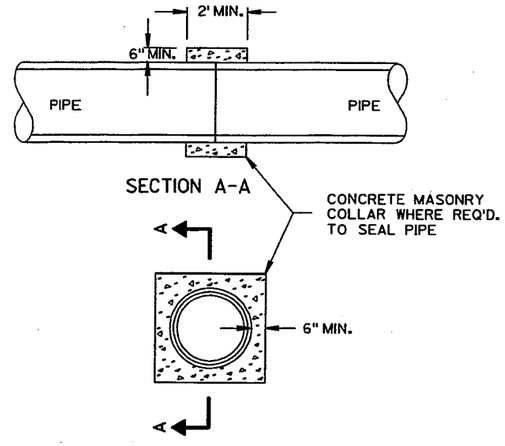
DETAIL FOR HMA PAVEMENT SHOULDER AT GUARDRAIL



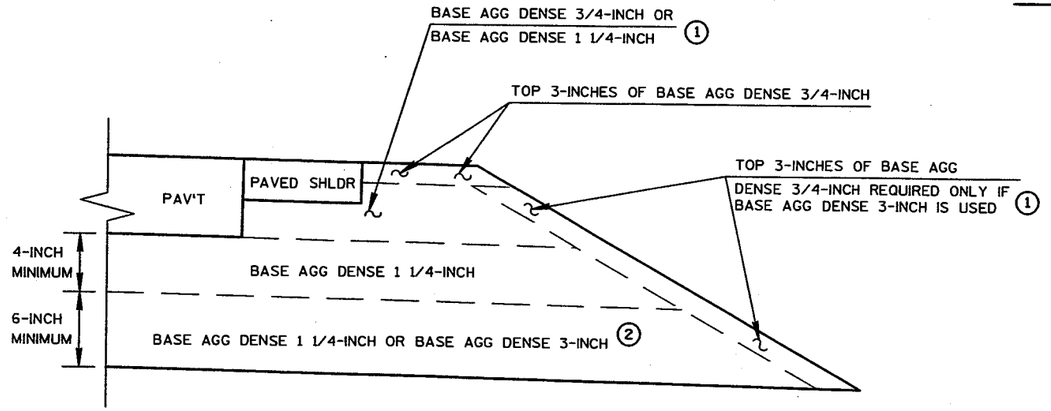
SIDE VIEW

CULVERT PIPE DITCH CHECK

(INSTALL ON INLET END ONLY)



CULVERT PIPE CONCRETE COLLAR DETAIL

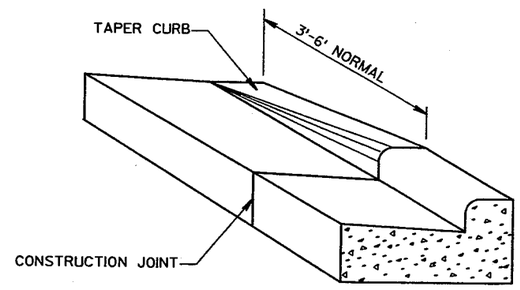


NOTES

(1) QUANTITY IS INCLUDED IN THE BID ITEM OF BASE AGG DENSE ¾-INCH

(2) QUANTITY IS INCLUDED IN THE BID ITEM OF BASE AGG DENSE 1¼-INCH

CONTRACTOR OPTION
TO USE BASE AGG DENSE 3-INCH



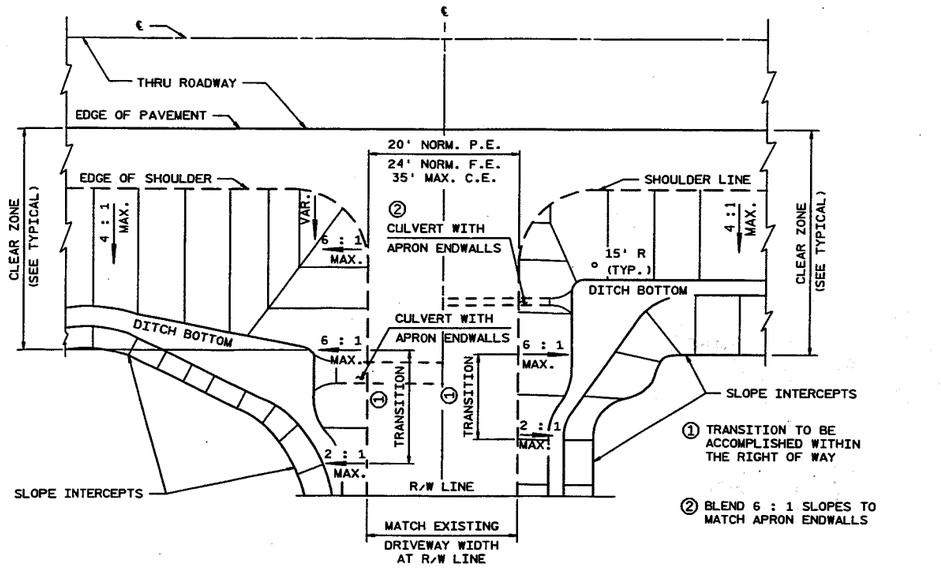
DETAIL OF CURB & GUTTER TERMINI

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

STATE PROJECT NUMBER:6448-03-72	HWY: CTH II	COUNTY: WINNEBAGO	CONSTRUCTION DETAILS	SCALE, FEET 0	SHEET NO: 6	E

FILE NAME : \\gre31fp1\FCSERVER\d3_6448D3E\021001_cd.dgn PLOT DATE : 10-MAR-2004 09:20 PLOT BY : DOTBRB PLOT NAME : 021001 cdD ORG DATE : Originator : d3 PLOT SCALE : 40.121576:1.000000

WISDOT/CADDS SHEET 42

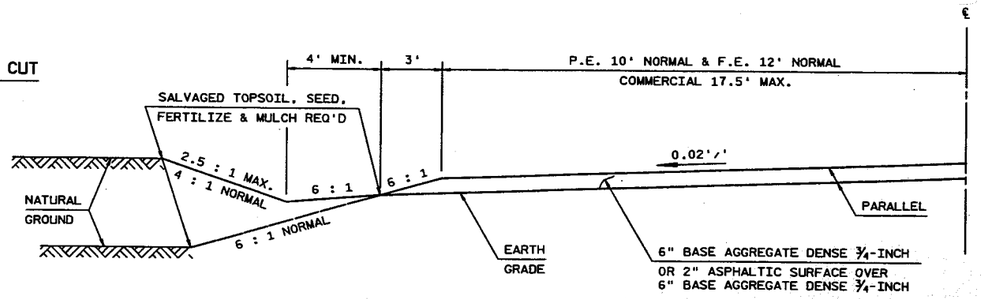


FOR CULVERTS OVER 24" DIAMETER

FOR CULVERTS 24" DIAMETER & LESS

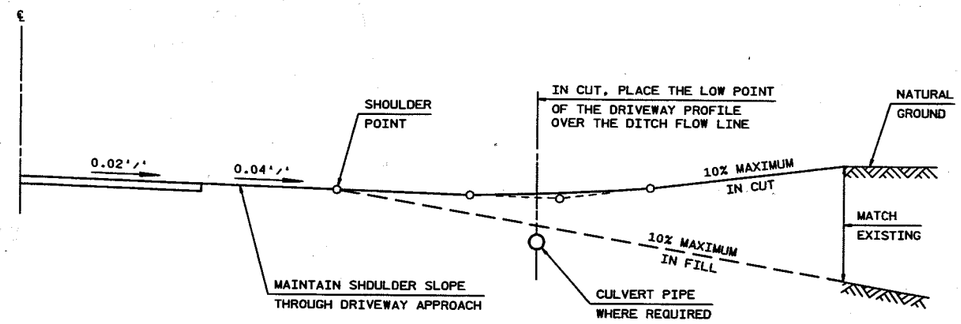
PLAN VIEW

IN CUT

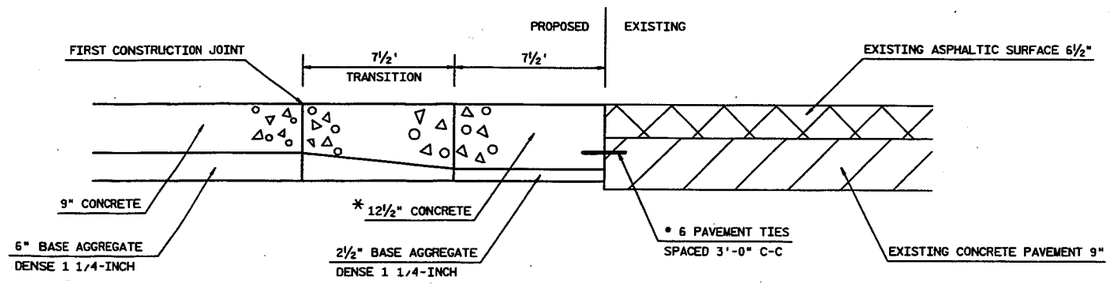


IN FILL

½ TYPICAL CROSS SECTION



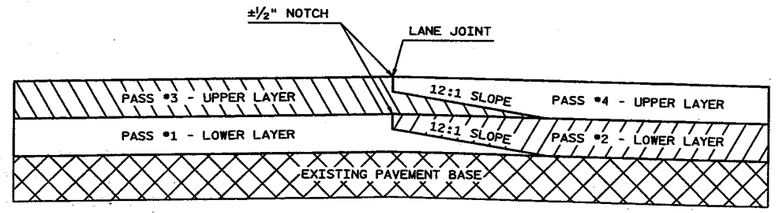
TYPICAL DRIVEWAY PROFILE



* EXTRA DEPTH OF PAVEMENT PER DETAIL IS INCIDENTAL TO 9" CONCRETE PAVEMENT ITEM

DETAIL OF CTH II, MATCH TO EXISTING

STATION 449+80, SHOWN
STATION 443+40, REVERSE

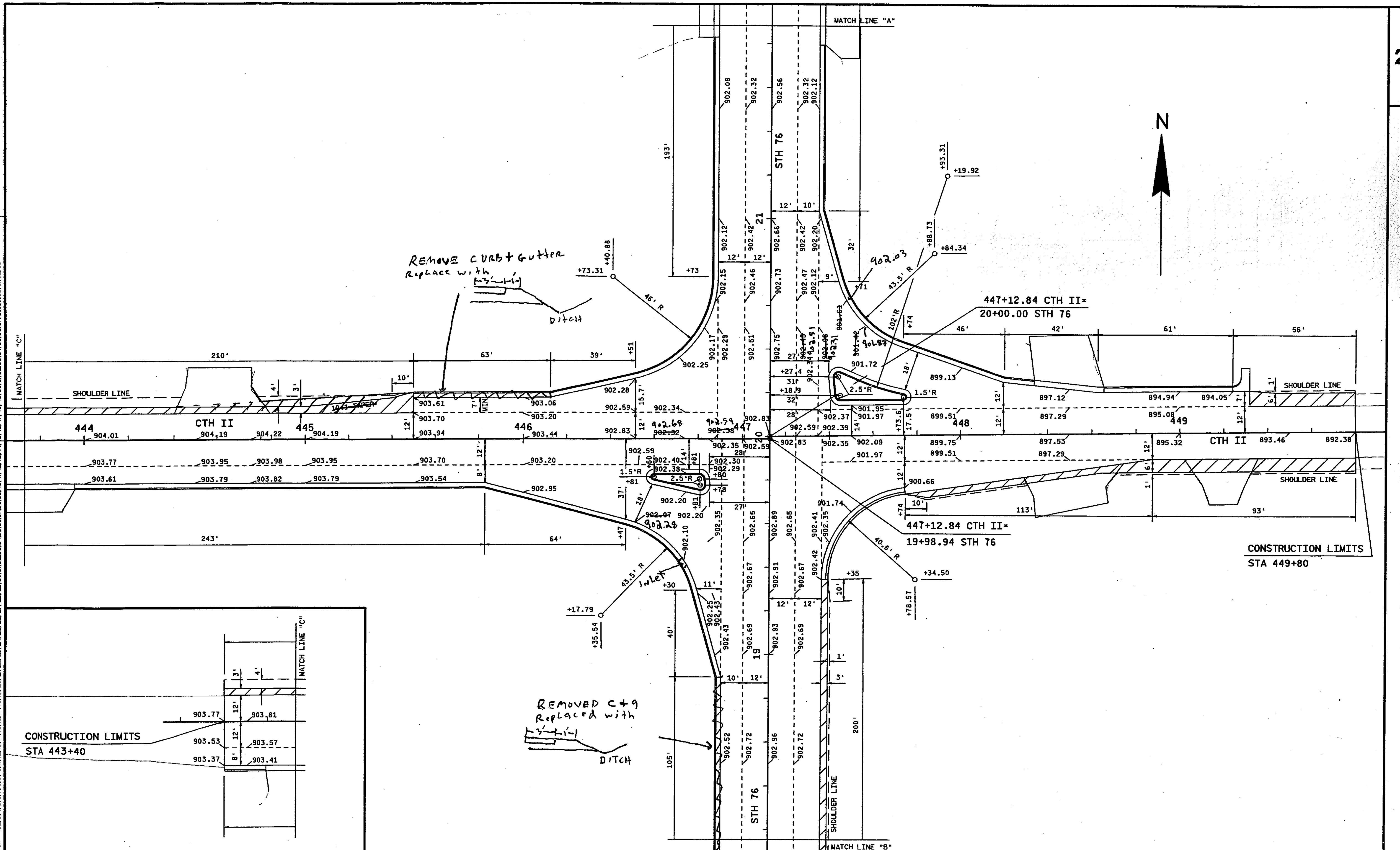


LOWER AND UPPER LAYERS

TYPICAL PAVEMENT CROSS SECTION OF TAPERED AND NOTCHED LONGITUDINAL JOINTS

STATE PROJECT NUMBER:6448-03-72	HWY: CTH II	COUNTY: WINNEBAGO	CONSTRUCTION DETAILS	SCALE, FEET 0	SHEET NO: 7	E

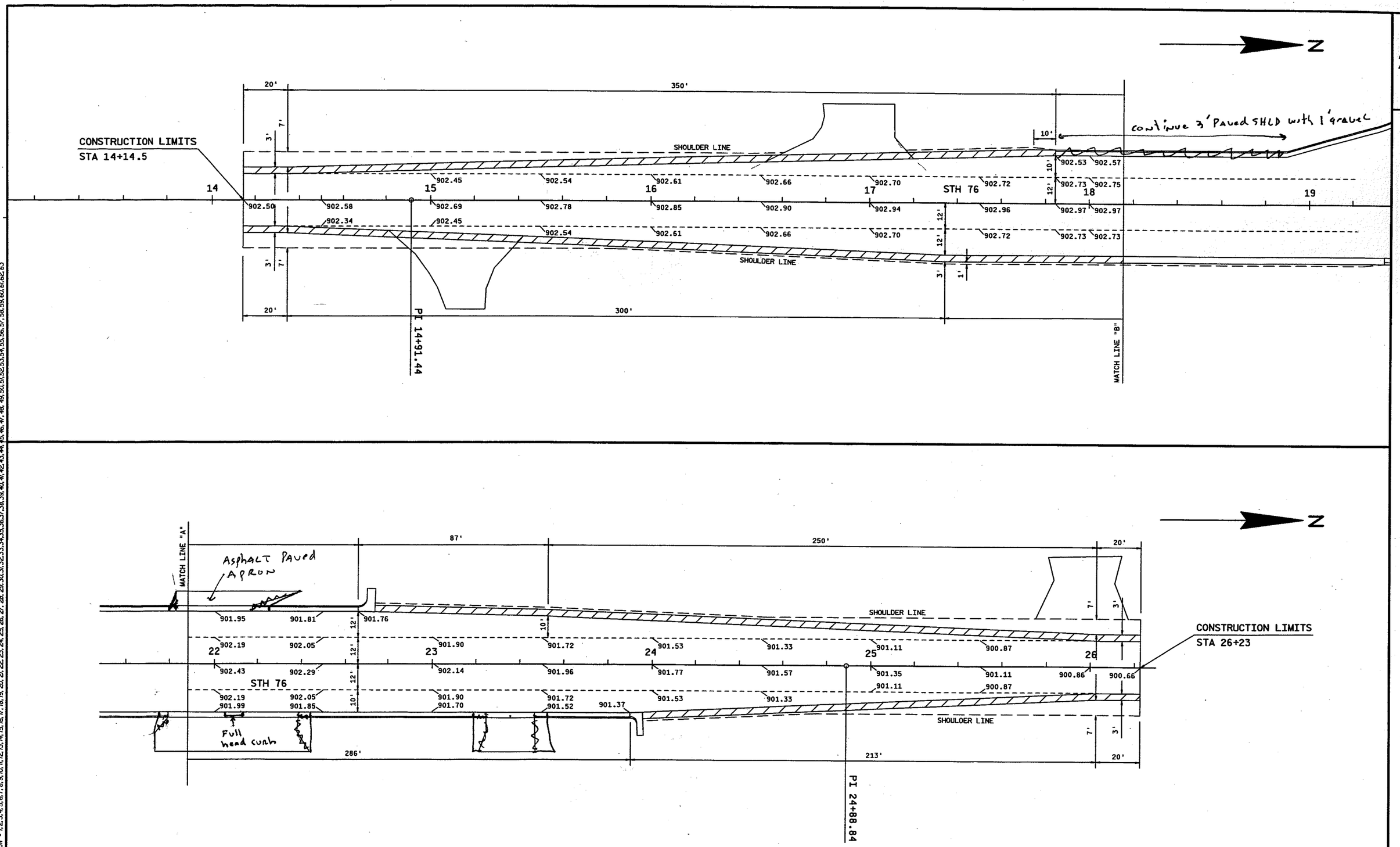
NAME : \\gre31fp1\FCSERVER\d3_644803E\021001_cd.dgn PLOT DATE : 08-DEC-2003 10:09 PLOT BY : DOTC3S PLOT NAME : 021001cdA ORG DATE : Originator : d3 PLOT SCALE : 40.121212:1.000000



STATE PROJECT NUMBER:6448-03-72	HWY: CTH II	COUNTY: WINNEBAGO	INTERSECTION DETAILS	SCALE, FEET 0 20 40	SHEET NO: 8	E

FILE NAME : \\gre31fp1\FCSERVER\d3_644803E\021201_pd.dgn PLOT DATE : 04-DEC-2003 13:06 PLOT BY : DOTMZC PLOT NAME : 021201pdA ORG DATE : 2-3-03 Originator : d3 PLOT SCALE : 39.879518:1.000000 WISDOT/CADDS SHEET 42

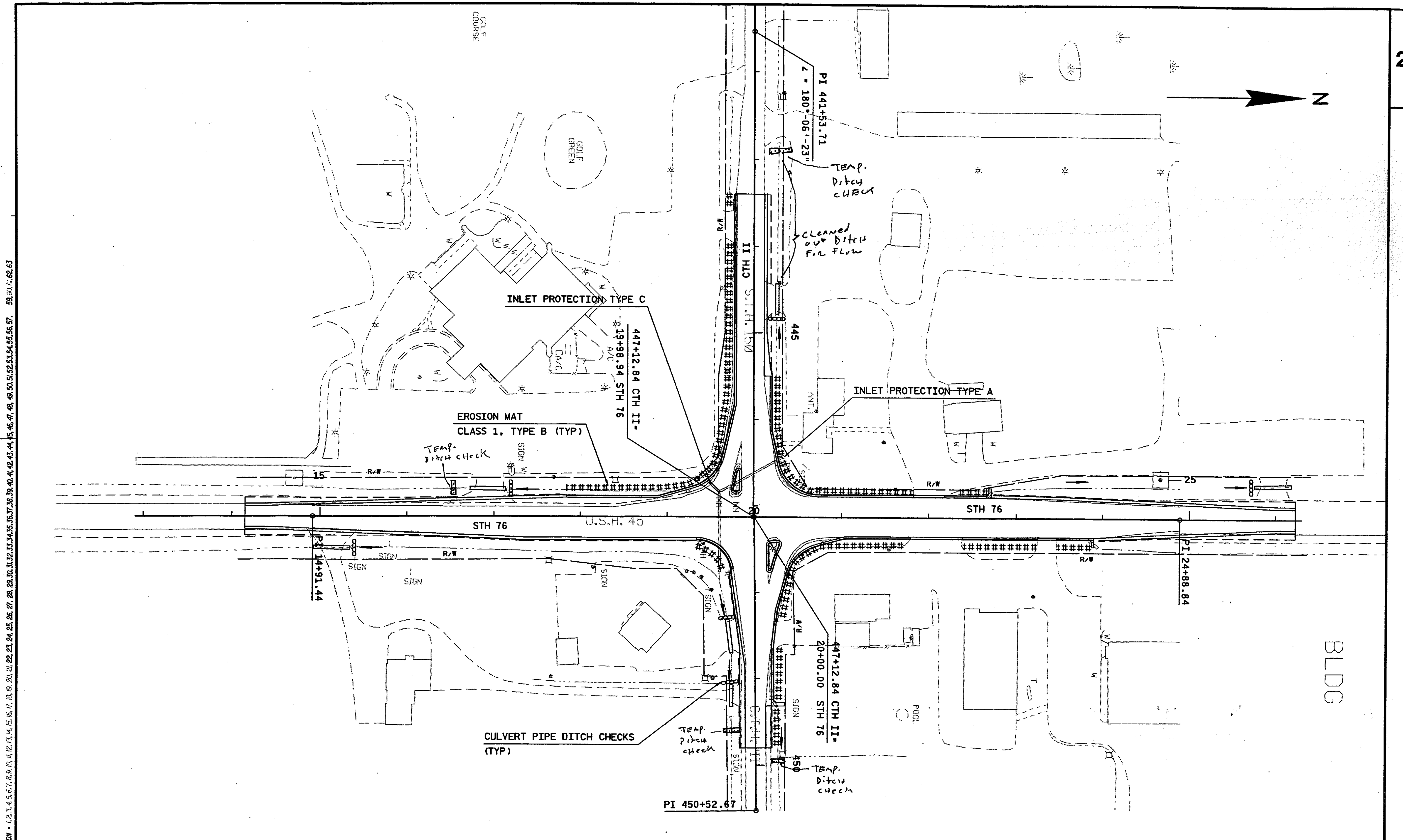
LEVELS ON • 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,61,62,63



STATE PROJECT NUMBER:6448-03-72	HWY: CTH II	COUNTY: WINNEBAGO	INTERSECTION DETAILS	SCALE, FEET 0 20 40	SHEET NO: 9	E

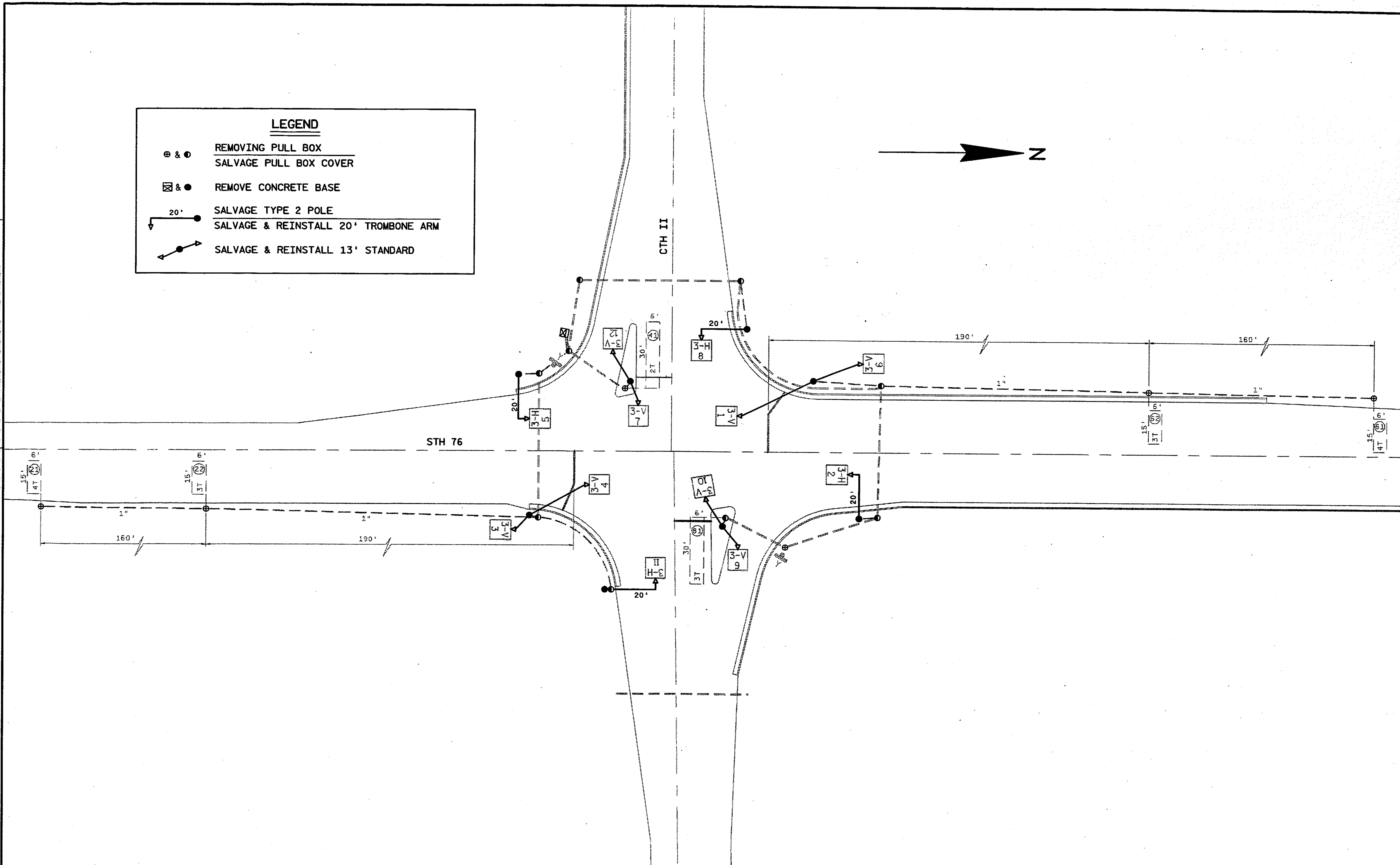
FILE NAME : \\gre31fp1\FCSERVER\d3_644803E\021201_pd.dgn PLOT DATE : 10-SEP-2003 11:23 PLOT BY : DOTMZC PLOT NAME : 021201pdB ORG DATE : 2-5-03 Originator : d3 PLOT SCALE : 39.879518:1.000000

WISDOT/CADDS SHEET 42


2
N
GOLF COURSE
GOLF GREEN
PI 441+53.71
Δ = 180°-06'-23"
TEMP. Ditch CHECK
Cleaned out Ditch For Flow
CTH II
S.T.H. 150
445
INLET PROTECTION TYPE C
447+12.84 CTH II=
19+98.94 STH 76
INLET PROTECTION TYPE A
EROSION MAT
CLASS 1, TYPE B (TYP)
TEMP. Ditch check
15
R/W
25
STH 76
U.S.H. 45
20
PI 14+91.44
SIGN
PI 24+88.84
447+12.84 CTH II=
20+00.00 STH 76
BLDG
POOL
CULVERT PIPE DITCH CHECKS
(TYP)
TEMP. Ditch check
450
PI 450+52.67
LEVELS ON • 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57, 59,60,61,62,63

STATE PROJECT NUMBER:6448-03-72	HWY: CTH II	COUNTY: WINNEBAGO	EROSION CONTROL	SCALE, FEET 0 50 100	SHEET NO: 10	E

FILE NAME : \\gre31fp1\FCSERVER\d3_644803E\022001_ec.dgn PLOT DATE : 09-SEP-2003 15:10 PLOT BY : DOTMZC PLOT NAME : 022001ec ORG DATE : 6-12-03 Originator : d3 PLOT SCALE : 99.698795:1.000000 WISDOT/CADDS SHEET 42



STATE PROJECT NUMBER:6448-03-72	HWY: CTH II	COUNTY: WINNEBAGO	SIGNAL REMOVALS, SALVAGE & REINSTALLATION	SCALE, FEET NA	SHEET NO: 11 E

FILE NAME : \\gre31fp1\FCSERVER\d3_644803E\021001_cd.dgn PLOT DATE : 05-SEP-2003 08:10 PLOT BY : DOTMZC PLOT NAME : 021001cdF ORG DATE : 8-27-03 Originator : d3 PLOT SCALE : 39.879518:1.000000 WISDOT/CADDS SHEET 42

2

NOTE:

WISCONSIN DOT DISTRICT 3 SHALL APPROVE FINAL LOCATIONS FOR ALL SIGNAL BASES, AND LOOP DETECTORS IN THE FIELD PRIOR TO CONSTRUCTION (920) 492-5654 OR 492-5628.

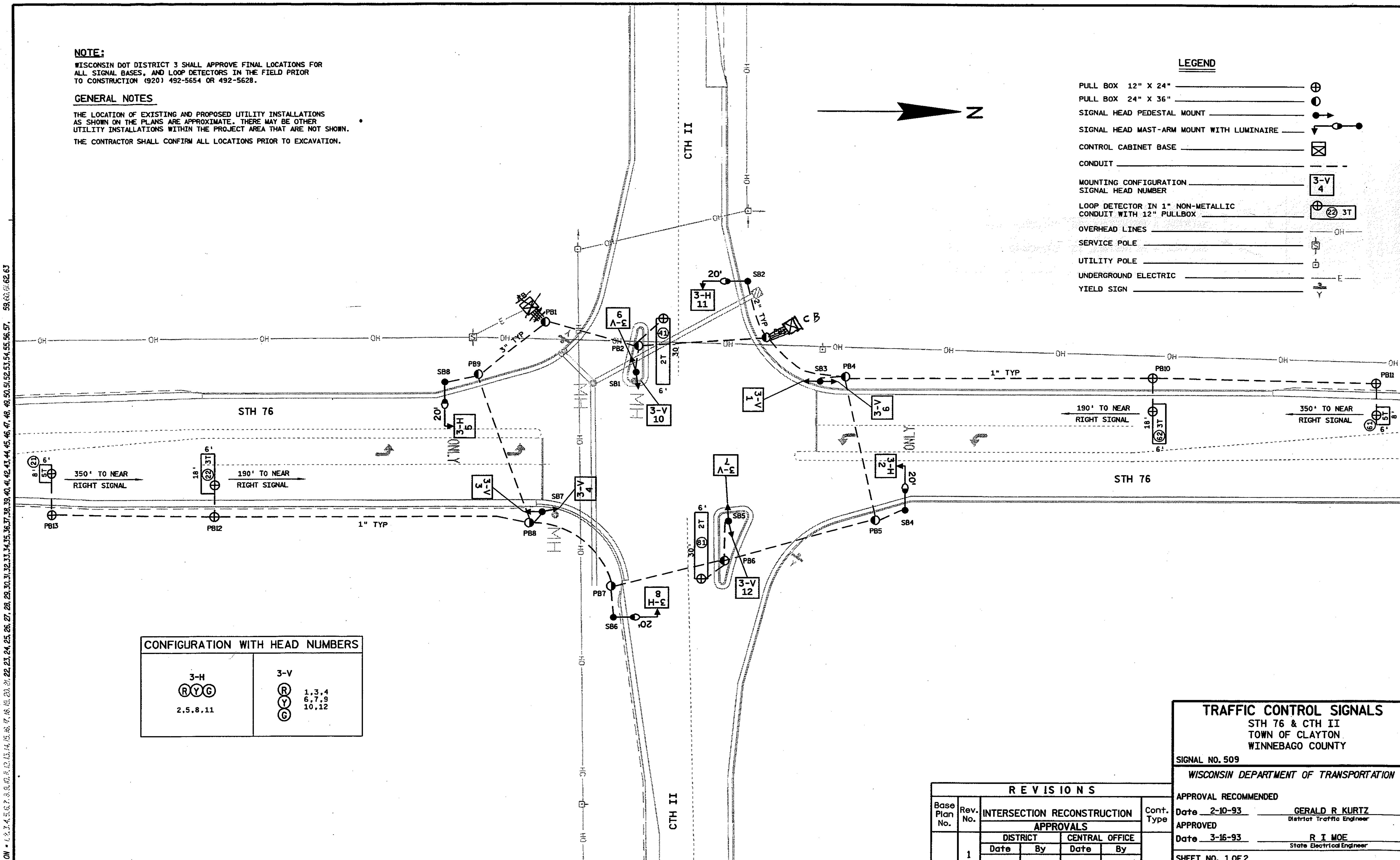
GENERAL NOTES

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

THE CONTRACTOR SHALL CONFIRM ALL LOCATIONS PRIOR TO EXCAVATION.

LEGEND

- PULL BOX 12" X 24"
- PULL BOX 24" X 36"
- SIGNAL HEAD PEDESTAL MOUNT
- SIGNAL HEAD MAST-ARM MOUNT WITH LUMINAIRE
- CONTROL CABINET BASE
- CONDUIT
- MOUNTING CONFIGURATION SIGNAL HEAD NUMBER — 3-V 4
- LOOP DETECTOR IN 1" NON-METALLIC CONDUIT WITH 12" PULLBOX — 22 3T
- OVERHEAD LINES — OH
- SERVICE POLE
- UTILITY POLE
- UNDERGROUND ELECTRIC — E
- YIELD SIGN — Y



CONFIGURATION WITH HEAD NUMBERS	
3-H (R)(Y)(G) 2,5,8,11	3-V (R)(Y)(G) 1,3,4 6,7,9 10,12

TRAFFIC CONTROL SIGNALS
STH 76 & CTH II
TOWN OF CLAYTON
WINNEBAGO COUNTY

SIGNAL NO. 509

WISCONSIN DEPARTMENT OF TRANSPORTATION

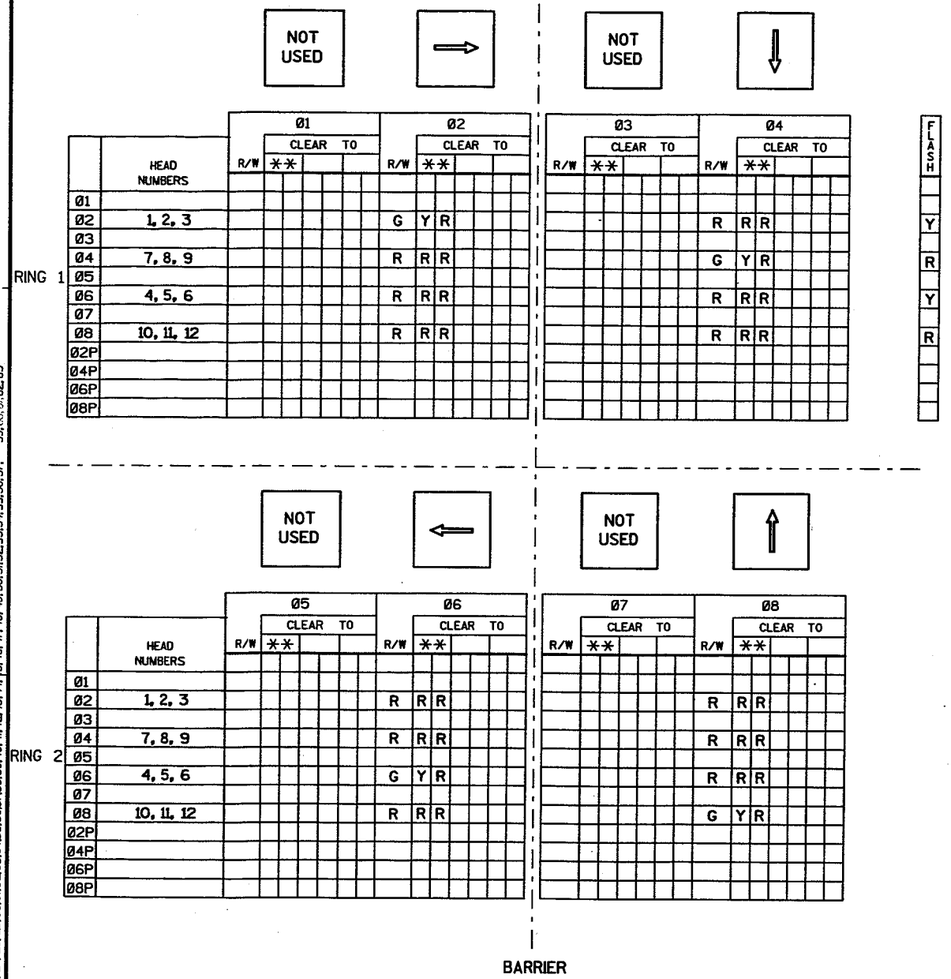
APPROVAL RECOMMENDED
Date 2-10-93 GERALD R KURTZ, District Traffic Engineer
APPROVED
Date 3-16-93 R I MOE, State Electrical Engineer
SHEET NO. 1 OF 2

REVISIONS						
Base Plan No.	Rev. No.	INTERSECTION RECONSTRUCTION APPROVALS				Cont. Type
		DISTRICT		CENTRAL OFFICE		
		Date	By	Date	By	
	1					

STATE PROJECT NUMBER:6448-03-72	HWY: CTH II	COUNTY: WINNEBAGO	TRAFFIC SIGNAL DETAIL S-509	SCALE, FEET 0 20 40	SHEET NO: 12	E

FILE NAME : \\gre31fp1\FCSERVER\d3_traffi\Tfsig56s.dgn PLOT DATE : 10-SEP-2003 11:23 PLOT BY : DOTMZC PLOT NAME : tfsig56s ORG DATE : 3-11-03 Originator : d3 PLOT SCALE : 39.879518:1.000000 WISDOT/CADDS SHEET 42

SEQUENCE OF OPERATION



** CLEARANCE TO A PHASE IN CONFLICT WITH THIS PHASE ON (SEE CHART 1 BELOW)

CHART 1

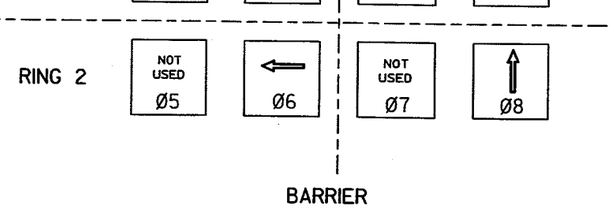
PHASE ON	NONCONFLICTING PHASE ALLOWED TO TIME CONCURRENTLY	PHASES IN CONFLICT WITH PHASE ON
Ø1		
Ø2	6	4,8
Ø3		
Ø4	8	2,6
Ø5		
Ø6	2	4,8
Ø7		
Ø8	4	2,6

DETECTOR LOGIC

DETECTOR NUMBER	AMPLIFIER CHANNEL NUMBER	DETECTOR OPERATION: CALLS AND EXTENDS	DETECTOR OPERATION: CALLS ONLY	DETECTOR OPERATION: EXTENDS ONLY	PHASE CALLED	PHASE EXTENDED	DETECTOR DISCONNECT PHASE	CALLING DELAY	EXTENSION STRETCH	SIZE	NUMBER OF TURNS
21	1	X			ϕ2	ϕ2			X	6X8	5
22	2	X			ϕ2	ϕ2				6X18	3
41	3	X			ϕ4	ϕ4				6X30	2
61	4	X			ϕ6	ϕ6			X	6X8	5
62	5	X			ϕ6	ϕ6				6X18	3
81	6	X			ϕ8	ϕ8				6X30	2

CONTROLLER LOGIC

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL
1			
2			MIN.
3			
4		W/ϕ8	
5			
6			MIN.
7			
8		W/ϕ4	



TYPE OF INTERCONNECT	
NONE	
TBC	X
CLOSED LOOP	
HARDWIRE	
TONE (FREQ)	

TYPE OF PRE-EMPT	
NONE	X
RAILROAD	
EMERGENCY VEHICLE	

TYPE OF LIGHTING	
NONE	
IN TRAFFIC CONTROL CABINET	X
IN SEPARATE CONTROL CABINET	

GENERAL NOTES:

1. WHEN OPPOSING THRU PHASES ARE TIMING CONCURRENTLY, THEY SHALL TERMINATE TOGETHER DUE TO PERMISSIVE LEFT TURN CONFLICT
2. ANY ACTUATED PHASE FOR WHICH THERE IS NO CALL SHALL BE SKIPPED.
3. WHEN ONE PHASE IS ON ALONE, ANY NON-CONFLICTING PHASE MAY START TIMING CONCURRENTLY WITHOUT A CLEARANCE INTERVAL. (SEE CHART 1 AT LEFT)
4. PROVIDE FOR HAND CONTROL

STH 76 & CTH II
TOWN OF CLAYTON
WINNEBAGO COUNTY

SIGNAL NO. 509

DATE

SHEET NO. 2 OF 2

STATE PROJECT NUMBER: 6448-03-72	HWY: CTH II	COUNTY: WINNEBAGO	SEQUENCE OF OPERATIONS S-509	SCALE, FEET 0 N/A	SHEET NO: 13	E

FILE NAME : \\gre31fp1\FCSERVER\d3_traffi\Tfslg56s.dgn PLOT DATE : 05-SEP-2003 14:02 PLOT BY : DOTMZC PLOT NAME : tfslg56ss ORG DATE : 2-11-03 Originator : d3 PLOT SCALE : 39.879518:1.000000
WISDOT/CADDS SHEET 42

MATCH LINE "A"

STH 76

ONLY

21

N

4-INCH
CENTERLINE

4-INCH
EDGELINE
WHITE

MATCH LINE "C"

444 CTH II 445 446 447 448 449

20

447+12.84 CTH II=
20+00.00 STH 76

8-INCH
CHANNELIZING

4-INCH
NO PASSING

CTH II

4-INCH
NO PASSING

8-INCH
CHANNELIZING (TYP)

447+12.84 CTH II=
19+98.94 STH 76

4-INCH
EDGELINE
WHITE

4-INCH
CENTERLINE

MATCH LINE "C"

STH 76

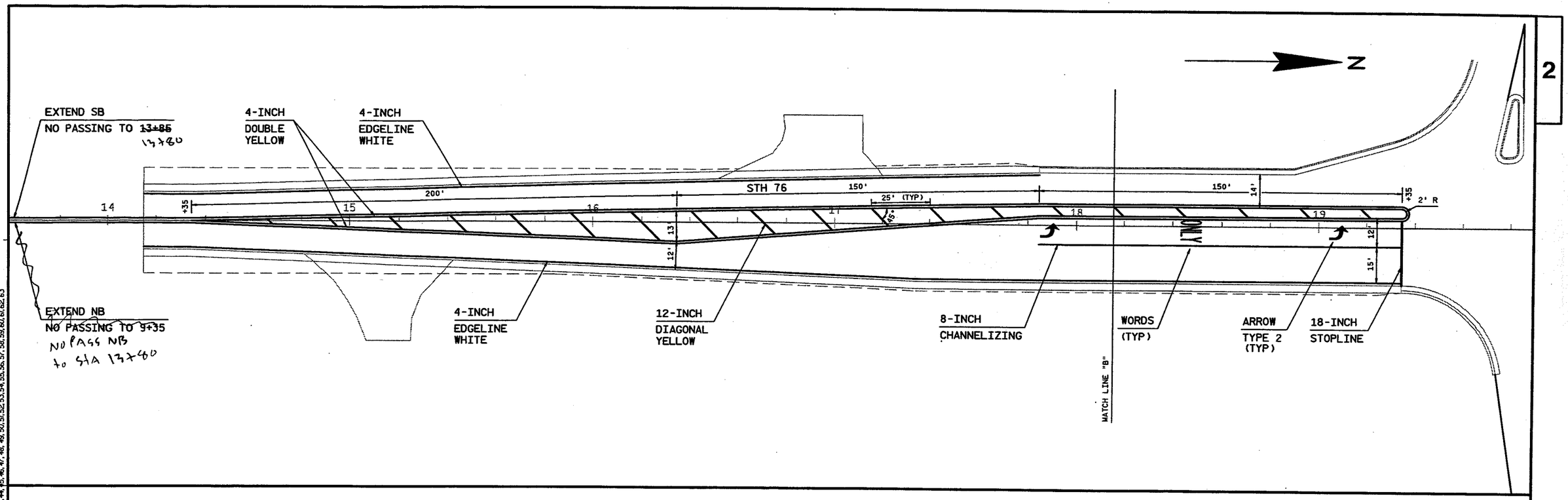
ONLY

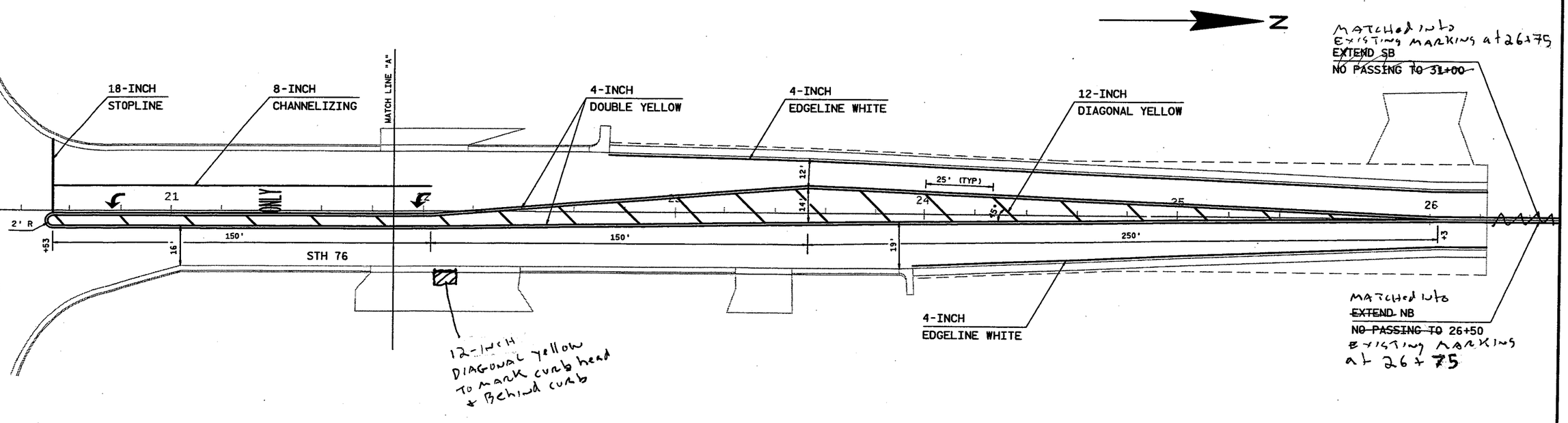
MATCH LINE "B"

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

STATE PROJECT NUMBER:6448-03-72	HWY: CTH II	COUNTY: WINNEBAGO	EPOXY PAVEMENT MARKING	SCALE, FEET 0 20 40	SHEET NO: 14	E

FILE NAME : \\gre31fp1\FCSERVER\d3_644803E\024502_pm.dgn PLOT DATE : 10-MAR-2004 09:20 PLOT BY : DOTBRB PLOT NAME : 024502 pmA ORG DATE : 8-27-03 Originator : d3 PLOT SCALE : 39.879518:1.000000





STATE PROJECT NUMBER: 6448-03-72	HWY: CTH II	COUNTY: WINNEBAGO	EPOXY PAVEMENT MARKING	SCALE, FEET 0 20 40	SHEET NO: 15	E

FILE NAME : \\gre31fp1\FCSERVER\d3_644803E\024502_pm.dgn PLOT DATE : 10-MAR-2004 09:20 PLOT BY : DOTBRB PLOT NAME : 024502 pmB ORG DATE : 8-27-03 Originator : d3 PLOT SCALE : 39.879518:1.000000
WISDOT/CADDS SHEET 42
LEVELS ON = 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,61,62,63

AT BRIDGE OR CULVERT REPLACEMENTS, USE ADDITIONAL SET OF BARRICADES AND SIGN

BRIDGE OUT
R11-2M
48" X 30"

ROAD CLOSED
R11-2
48" X 30"

OR

ROAD CLOSED TO THRU TRAFFIC
R11-4
60" X 30"

INTERSECTION

TYPE III BARRICADE WITH TYPE A WARNING LIGHTS

TYPE III BARRICADE WITH TYPE A WARNING LIGHTS

TYPE III BARRICADE WITH TYPE A WARNING LIGHTS

SEE CLOSURE BARRICADE DETAIL SDD 15C 2-4B DETAIL D

WORK ZONE

50'

BUFFER

(500' OR AS APPROVED FOR FIELD CONDITIONS)

N

USH 10

SDD 15C3-1
DETAIL 3

SDD 15C2-4A

CTH II

USH 45

HANSEN ROAD

SOUTH LOOP ROAD

STEEPLE HILL DRIVE

OAK LANE

PARK WAY

OLDE MARKET DRIVE

DRAINAGE AREA #1

DRAINAGE AREA #2

CTH M

HICKORY AVE

CTH T

WIOUWASH STATE TRAIL

SDD 15D28-1

SDD 15C2-4A
DETAIL C

STRUCTURE REPLACEMENT

PIONEER ROAD

BLUEBIRD LANE

CENTER ROAD

BABCOCK LANE

OAKWOOD AVE

SDD 15C3-1
DETAIL 4

INTERSECTION RECONSTRUCTION

CTH II

CTH CB

STH 76

CTH JJ

ROAD CLOSED 2 MILE
W20-3

SIGN ON POST

STATE PROJECT NUMBER:6448-03-72	HWY: CTH II	COUNTY: WINNEBAGO	TRAFFIC CONTROL	SCALE, FEET 0 100 200	SHEET NO: 16	E

FILE NAME : \\gre31fp1\FCSERVER\d3_644803E\025001_tc.dgn PLOT DATE : 04-DEC-2003 13:07 PLOT BY : DOTMZC PLOT NAME : 025001tc ORG DATE : 9-4-03 Originator : d3 PLOT SCALE : 199.397590:1.000000

WISDOT/CADDS SHEET 42

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

HORTONIA
Hortonville
Greenville
Mackville
GRAND CHUTE
VANDEN–BROEK
Little Chute
Kaukauna
Kimberly
Combined Locks
Darboy
BUCHANAN
OUTAGAMIE COUNTY
WINNEBAGO COUNTY
DALE
GREEN–VILLE
Medina
Dale
WINCHESTER
CLAYTON
MENASHA
Appleton
Menasha
Neenah
NEENAH
Mansur Bay
Payne Pt.
Perkins Pt.
Winnebago
Larsen
Mikesville
Alenville
Winneconne
VINLAND
Butte des Morts
OSHKOSH
WINNECONNE
Lake Winneconne
Lake Butte des Morts
Black Otter L.
Rat R.
Arrowhead R.
Fox R.
Apple Cr.
Duggets Cr.
Little Butte des Morts
Winnebago

N

DETOUR AFFECTED ROADS
(SEE DETAIL FOR EXACT SIGN PLACEMENT)

PROJECT AREA

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

STATE PROJECT NUMBER:6448-03-72	HWY: CTH II	COUNTY: WINNEBAGO	DETOUR SIGNING DETAILS	SCALE, FEET 0 NTS	SHEET NO: 17	E

FILE NAME : F:\d3_644803E:027002dt.dgn | PLOT DATE : 4-22-03 | PLOT BY : | PLOT NAME : 027002dt | ORG DATE : 4-22-03 | Originator : DIST 3 | PLOT SCALE :

WISDOT/CADDS SHEET 42

N

USH 41

STH 76

COVER
NORTH
76

COVER
Greenville 13
Shiocton 24

ROAD CLOSED
7 MILES AHEAD
LOCAL TRAFFIC ONLY
R11-3
60" X 30"

DETOUR
M4-8
30" X 15"
NORTH
M3-1
30" X 15"
76
M1-6
36" X 36"
M06-1
30" X 30"

76
M1-6
36" X 36"
DETOUR AHEAD
W20-2A
48" X 48"

COVER
Shiocton

DETOUR
M4-8
24" X 12"
NORTH
M3-1
24" X 12"
76
M1-6
24" X 24"
M05-2R
21" X 21"

END
M4-6
30" X 15"
DETOUR
M4-8
30" X 15"
76
M1-6
36" X 36"

COVER
NORTH
76

COVER
Shiocton

DETOUR
M4-8
30" X 15"
NORTH
M3-1
30" X 15"
76
M1-6
36" X 36"

DETOUR
M4-8
24" X 12"
NORTH
M3-1
24" X 12"
76
M1-6
24" X 24"
M06-2R
21" X 21"

COVER
Shiocton

COVER
NORTH
76

DETOUR AHEAD
W20-2A
48" X 48"

STATE PROJECT NUMBER:6448-03-72	HWY: CTH II	COUNTY: WINNEBAGO	DETOUR SIGNING DETAILS	SCALE, FEET 0 NTS	SHEET NO: 18	E

FILE NAME : \\gre31fp1\FCSERVER\d3_644803E\027001_DT.DGN PLOT DATE : 06-NOV-2003 13:34 PLOT BY : DOTMZC PLOT NAME : 027001DTA ORG DATE : 4-1-03 Originator : d3 PLOT SCALE : 200.606061:1.000000
WISDOT/CADDS SHEET 42

N

STH 96

STH 125

WINCHESTER RD

STH 114

BELL STREET

USH 41

CTH CA

CTH BB

USH 10

CTH II

CTH JJ

BREEZEWOOD DRIVE

CTH GV

CTH CB

STH 76

OUTAGAMIE COUNTY

WINNEBAGO COUNTY

DETOUR M4-8 24" X 12"
NORTH M3-1 24" X 12"
76 M1-6 24" X 24"
M06-1 21" X 21"
34
35

DETOUR M4-8 30" X 15"
NORTH M3-1 30" X 15"
76 M1-6 36" X 36"
M06-2R 30" X 30"
33

DETOUR M4-8 30" X 15"
NORTH M3-1 30" X 15"
76 M1-6 36" X 36"
M05-2R 30" X 30"
31
32

DETOUR M4-8 30" X 15"
76 M1-6 36" X 36"
29

DETOUR M4-8 30" X 15"
76 M1-6 36" X 36"
27

DETOUR M4-8 30" X 15"
76 M1-6 36" X 36"
25

DETOUR M4-8 30" X 15"
76 M1-6 36" X 36"
23

DETOUR M4-8 30" X 15"
76 M1-6 36" X 36"
21

DETOUR M4-8 24" X 12"
NORTH M3-1 24" X 12"
76 M1-6 24" X 24"
36

DETOUR M4-8 24" X 12"
76 M1-6 24" X 24"
41

MOD JCT
TO END M 4-6 24" X 12"
DETOUR M4-8 24" X 12"
76 M1-6 24" X 24"
42

26
DETOUR M4-8 30" X 15"
76 M1-6 36" X 36"

24
DETOUR M4-8 30" X 15"
76 M1-6 36" X 36"

22
DETOUR M4-8 30" X 15"
76 M1-6 36" X 36"

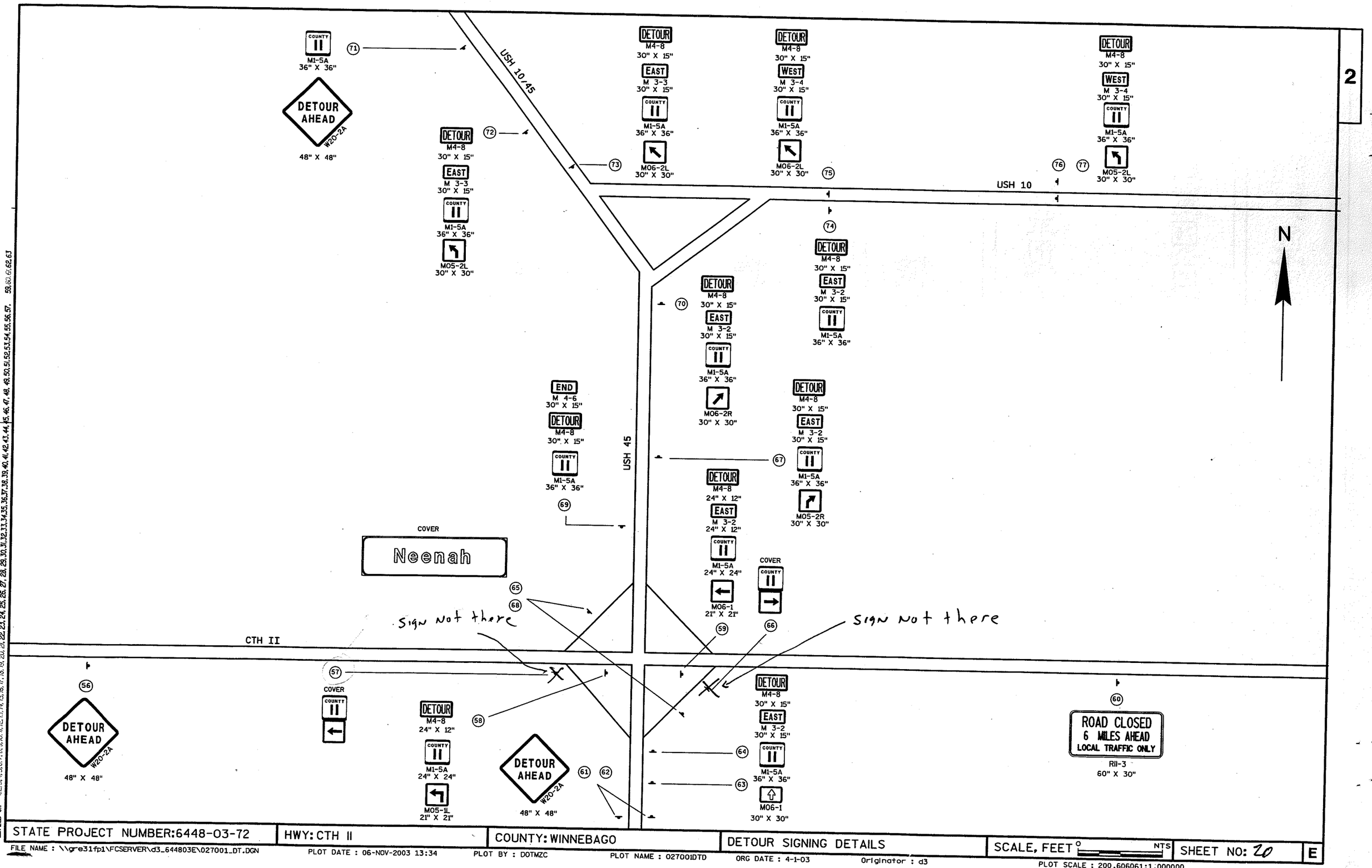
20
DETOUR M4-8 30" X 15"
76 M1-6 36" X 36"

40
DETOUR M4-8 30" X 15"
SOUTH M 3-3 30" X 15"
76 M1-6 36" X 36"
M06-2R 30" X 30"

38
39
DETOUR M4-8 30" X 15"
SOUTH M 3-3 30" X 15"
76 M1-6 36" X 36"
M05-2R 30" X 30"

STATE PROJECT NUMBER:6448-03-72	HWY: CTH II	COUNTY: WINNEBAGO	DETOUR SIGNING DETAILS	SCALE, FEET 0 NTS	SHEET NO: 19	E

FILE NAME : \\gre31fp1\FCSERVER\d3_644803E\027001_DT.DGN PLOT DATE : 06-NOV-2003 13:34 PLOT BY : DOTMZC PLOT NAME : 027001DTB ORG DATE : 4-1-03 Originator : d3 PLOT SCALE : 200.606061:1.000000 WISDOT/CADDS SHEET 42



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

STATE PROJECT NUMBER:6448-03-72	HWY: CTH II	COUNTY: WINNEBAGO	DETOUR SIGNING DETAILS	SCALE, FEET 0 NTS	SHEET NO: 20	E

FILE NAME : \\gre31fp1\FCSERVER\d3_644803E\027001_DT.DGN
PLOT DATE : 06-NOV-2003 13:34
PLOT BY : DOTMZC
PLOT NAME : 027001DTD
ORG DATE : 4-1-03
Originator : d3
PLOT SCALE : 200.606061:1.000000

WISDOT/CADDS SHEET 42

N

DETOUR AHEAD W20-2A 48" X 48" (100)

76 M1-6 24" X 24"

DETOUR AHEAD W20-2A 48" X 48" (44) (45)

DETOUR M4-8 30" X 15" / SOUTH M3-3 30" X 15" / 76 M1-6 36" X 36" / M06-1 30" X 30" (48)

DETOUR M4-8 24" X 12" / SOUTH M3-3 24" X 12" / 76 M1-6 24" X 24" / M05-1L 21" X 21" (101)

DETOUR M4-8 30" X 15" / COUNTY II M1-5A 36" X 36" (78)

COVER Oshkosh ⇧ (43)

COVER Oshkosh ⇦ (81)

USH 10

DETOUR M4-8 30" X 15" / EAST M 3-2 30" X 15" / COUNTY II M1-5A 36" X 36" / M05-2R 21" X 21" (83)

DETOUR M4-8 30" X 15" / SOUTH M3-3 30" X 15" / 76 M1-6 36" X 36" / M06-1 30" X 30" (84)

DETOUR M4-8 30" X 15" / EAST M 3-2 30" X 15" / COUNTY II M1-5A 36" X 36" / M06-2R 30" X 30" (85)

DETOUR M4-8 30" X 15" / SOUTH M3-3 30" X 15" / 76 M1-6 36" X 36" / M06-1 30" X 30" (37)

DETOUR M4-8 30" X 15" / WEST M 3-4 30" X 15" / COUNTY II M1-5A 36" X 36" (86)

DETOUR M4-8 24" X 12" / EAST M 3-2 24" X 12" / COUNTY II M1-5A 24" X 24" / M05-1R 21" X 21" (87)

DETOUR M4-8 24" X 12" / WEST M 3-4 24" X 12" / COUNTY II M1-5A 24" X 24" / M06-1 21" X 21" (90)

(46) (47)

DETOUR M4-8 30" X 15" / SOUTH M3-3 30" X 15" / 76 M1-6 36" X 36" / M06-1 30" X 30"

(80) ROAD CLOSED 1 MILES AHEAD LOCAL TRAFFIC ONLY R11-3 60" X 30"

COVER Oshkosh ⇨ (79)

STH 76

COVER SOUTH 76 (103)

(102) DETOUR M4-8 24" X 12" / SOUTH M 3-3 24" X 12" / 76 M1-6 24" X 24" / M06-1 21" X 21"

(82) DETOUR M4-8 30" X 15" / COUNTY II M1-5A 36" X 36"

DETOUR M4-8 30" X 15" / 76 M1-6 36" X 36"

DETOUR M4-8 24" X 12" / EAST M 3-2 24" X 12" / COUNTY II M1-5A 24" X 24" / M06-1 21" X 21" (88)

DETOUR M4-8 24" X 12" / EAST M 3-2 24" X 12" / COUNTY II M1-5A 24" X 24" (89)

CTH CB

ROAD CLOSED 2½ MILES AHEAD LOCAL TRAFFIC ONLY R11-3 60" X 30" (93)

MODIFY COUNTY JCT II / TO END M 4-6 24" X 12" / EAST M 3-2 24" X 12" / COUNTY II (94)

COVER TO COUNTY 150 ⇧ (96)

CTH II

MODIFY COUNTY II ↔ / TO COUNTY II ← M 6-1 21" X 21" (95)

(91) DETOUR M4-8 24" X 12" / WEST M 3-4 24" X 12" / COUNTY II M1-5A 24" X 24" / M05-1L 21" X 21"

(92) DETOUR M4-8 24" X 12" / WEST M 3-4 24" X 12" / COUNTY II M1-5A 24" X 24"

DETOUR M4-8 24" X 12" / WEST M 3-4 24" X 12" / COUNTY II M1-5A 24" X 24" / M06-1 21" X 21" (99)

VERA AVE

DETOUR AHEAD W20-2A 48" X 48" (97)

(98) DETOUR M4-8 24" X 12" / WEST M 3-4 24" X 12" / COUNTY II M1-5A 24" X 24" / M05-1R 21" X 21"

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

STATE PROJECT NUMBER:6448-03-72	HWY: CTH II	COUNTY: WINNEBAGO	DETOUR SIGNING DETAILS	SCALE, FEET 0 NTS	SHEET NO: 21	E

FILE NAME : \\gre31fp1\FCSERVER\d3_644803E\027001_DT.DGN PLOT DATE : 06-NOV-2003 13:54 PLOT BY : DOTMZC PLOT NAME : 027001DTE ORG DATE : 4-1-03 Originator : d3 PLOT SCALE : 200.606061:1.000000

DATE 10MAR04

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	6448-03-72 QUANTITY
0010	203.0100	REMOVING SMALL PIPE CULVERTS	EACH	6.000	6.000
0020	203.0200	REMOVING OLD STRUCTURE (STATION) 01. 254+53	LS	1.000	1.000
0030	204.0100	REMOVING PAVEMENT	SY	838.000	838.000
0040	204.0130	REMOVING CURB	LF	168.000	168.000
0050	204.0150	REMOVING CURB & GUTTER	LF	1,160.000	1,160.000
0060	204.0165	REMOVING GUARDRAIL	LF	508.000	508.000
0070	204.0190	REMOVING SURFACE DRAINS	EACH	3.000	3.000
0080	204.0195	REMOVING CONCRETE BASES	EACH	9.000	9.000
0090	204.0220	REMOVING INLETS	EACH	1.000	1.000
0100	205.0100	EXCAVATION COMMON	CY	6,731.000	6,731.000
0110	205.9005.S	GRADING SHAPING & FINISHING FOR BEAM GUARD TERMINALS & ANCHORAGES	EACH	4.000	4.000
0120	206.1000	EXCAVATION FOR STRUCTURES BRIDGES (STRUCTURE) 01. B-70-243	LS	1.000	1.000
0130	210.0100	BACKFILL STRUCTURE	CY	580.000	580.000
0140	213.0100	FINISHING ROADWAY (PROJECT) 01. 6448-03-72	EACH	1.000	1.000
0150	305.0110	BASE AGGREGATE DENSE 3/4-INCH	TON	1,115.000	1,115.000
0160	305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON	4,841.000	4,841.000
0170	311.0110	BREAKER RUN	TON	146.000	146.000
0180	415.0090	CONCRETE PAVEMENT 9-INCH	SY	8,773.000	8,773.000
0190	416.0610	PAVEMENT TIES	EACH	32.000	32.000
0200	416.0805	CONCRETE PAVEMENT GAPS	EACH	1.000	1.000
0210	416.1010	CONCRETE SURFACE DRAINS	CY	6.000	6.000
0220	455.0105	ASPHALTIC MATERIAL PG58-28	TON	28.900	28.900
0230	455.0605	TACK COAT	GAL	26.700	26.700
0240	460.1103	HMA PAVEMENT TYPE E-3	TON	429.000	429.000
0250	460.3000	QMP HMA MIXTURE	TON	429.000	429.000
0260	465.0120	ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES	TON	93.000	93.000
0270	465.0305	ASPHALTIC SURFACE SAFETY ISLANDS	TON	4.000	4.000
0280	502.0100	CONCRETE MASONRY BRIDGES	CY	188.000	188.000
0290	502.0300.S	QMP CONCRETE STRUCTURES 5-CYLINDER	CY	188.000	188.000
0300	502.0400.S	INCENTIVE STRENGTH CONCRETE STRUCTURES	DOL	1,880.000	1,880.000
0310	502.3200	PROTECTIVE SURFACE TREATMENT	SY	170.000	170.000
0320	505.0405	BAR STEEL REINFORCEMENT HS BRIDGES	LB	6,820.000	6,820.000
0330	505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	14,840.000	14,840.000
0340	511.2105	PILING STEEL DELIVERED AND DRIVEN HP 10-INCH X 42 LB	LF	560.000	560.000
0350	511.3000	PILE POINTS	EACH	16.000	16.000
0360	513.4060	RAILING TUBULAR TYPE M (STRUCTURE) 01. B-70-243	LS	1.000	1.000
0370	516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	20.000	20.000
0380	520.0112	CULVERT PIPE CLASS III 12-INCH	LF	78.000	78.000
0390	520.0118	CULVERT PIPE CLASS III 18-INCH	LF	166.000	166.000
0400	520.1012	APRON ENDWALLS FOR CULVERT PIPE 12-INCH	EACH	4.000	4.000
0410	520.1018	APRON ENDWALLS FOR CULVERT PIPE 18-INCH	EACH	8.000	8.000
0420	520.8000.S	CULVERT PIPE CONCRETE COLLAR	EACH	1.000	1.000
0430	601.0413	CONCRETE CURB & GUTTER 30-INCH TYPE G	LF	1,487.000	1,487.000
0440	601.0421	CONCRETE CURB & GUTTER 36-INCH TYPE A	LF	60.000	60.000
0450	606.0200	RIPRAP MEDIUM	CY	36.000	36.000
0460	606.0300	RIPRAP HEAVY	CY	72.000	72.000

22

DATE 10MAR04 — 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	6448-03-72 QUANTITY
0470	608.0312	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 12-INCH	LF	2.000	2.000
0480	611.0303	INLETS TYPE 3	EACH	1.000	1.000
0490	611.0639	INLET COVERS TYPE H-S	EACH	1.000	1.000
0500	611.8110	ADJUSTING MANHOLE COVERS	EACH	1.000	1.000
0510	611.8115	ADJUSTING INLET COVERS	EACH	1.000	1.000
0520	614.0200	STEEL THRIE BEAM STRUCTURE APPROACH	LF	132.000	132.000
0530	614.0305	STEEL PLATE BEAM GUARD CLASS A	LF	187.500	187.500
0540	614.0370	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL	EACH	4.000	4.000
0550	618.0100	MAINTENANCE AND REPAIR OF HAUL ROADS (PROJECT) 01. 6448-03-72	EACH	1.000	1.000
0560	619.1000	MOBILIZATION	EACH	1.000	1.000
0570	620.0300	CONCRETE MEDIAN SLOPED NOSE	SF	93.000	93.000
0580	621.0100	LANDMARK REFERENCE MONUMENTS	EACH	4.000	4.000
0590	624.0100	WATER	MGAL	83.400	83.400
0600	625.0500	SALVAGED TOPSOIL	SY	6,005.000	6,005.000
0610	627.0200	MULCHING	SY	5,555.000	5,555.000
0620	628.1505	SILT FENCE DELIVERED	LF	1,575.000	1,575.000
0630	628.1510	SILT FENCE INSTALLED	LF	1,575.000	1,575.000
0640	628.1520	SILT FENCE MAINTENANCE	LF	1,575.000	1,575.000
0650	628.1905	MOBILIZATIONS EROSION CONTROL	EACH	2.000	2.000
0660	628.1910	MOBILIZATIONS EMERGENCY EROSION CONTROL	EACH	2.000	2.000
0670	628.2010	EROSION MAT DELIVERED CLASS I TYPE B	SY	1,986.000	1,986.000
0680	628.3010	EROSION MAT INSTALLED CLASS I TYPE B	SY	1,986.000	1,986.000
0690	628.7005	INLET PROTECTION TYPE A	EACH	1.000	1.000
0700	628.7015	INLET PROTECTION TYPE C	EACH	1.000	1.000
0710	628.7505	TEMPORARY DITCH CHECKS DELIVERED	LF	134.000	134.000
0720	628.7510	TEMPORARY DITCH CHECKS INSTALLED	LF	134.000	134.000
0730	628.7550	CULVERT PIPE DITCH CHECKS	EACH	6.000	6.000
0740	629.0210	FERTILIZER TYPE B	CWT	5.000	5.000
0750	630.0110	SEEDING MIXTURE NO. 10	LB	45.000	45.000
0760	630.0130	SEEDING MIXTURE NO. 30	LB	65.000	65.000
0770	630.0140	SEEDING MIXTURE NO. 40	LB	12.500	12.500
0780	630.0200	SEEDING TEMPORARY	LB	201.300	201.300
0790	642.5200	FIELD OFFICE TYPE C (PROJECT) 01. 6448-03-72	EACH	1.000	1.000
0800	643.0100	TRAFFIC CONTROL (PROJECT) 01. 6448-03-72	EACH	1.000	1.000
0810	643.0300	TRAFFIC CONTROL DRUMS	DAYS	60.000	60.000
0820	643.0420	TRAFFIC CONTROL BARRICADES TYPE III	DAYS	3,328.000	3,328.000
0830	643.0705	TRAFFIC CONTROL WARNING LIGHTS TYPE A	DAYS	5,408.000	5,408.000
0840	643.0900	TRAFFIC CONTROL SIGNS	DAYS	2,407.000	2,407.000
0850	643.0905.S	TRAFFIC CONTROL COVERING SIGNS	EACH	19.000	19.000
0860	643.2000	TRAFFIC CONTROL DETOUR (PROJECT) 01. 6448-03-72	EACH	1.000	1.000
0870	643.3000	TRAFFIC CONTROL DETOUR SIGNS	DAYS	12,428.000	12,428.000
0880	645.0120	GEOTEXTILE FABRIC TYPE HR	SY	140.000	140.000
0890	645.0130	GEOTEXTILE FABRIC TYPE R	SY	1,048.000	1,048.000
0900	646.0106	PAVEMENT MARKING EPOXY 4-INCH	LF	8,459.000	8,459.000
0910	646.0226	PAVEMENT MARKING CHANNELIZING EPOXY 8-INCH	LF	440.000	440.000
0920	647.0166	PAVEMENT MARKING ARROWS EPOXY TYPE 2	EACH	4.000	4.000
0930	647.0356	PAVEMENT MARKING WORDS EPOXY	EACH	2.000	2.000
0940	647.0566	PAVEMENT MARKING STOP LINE EPOXY 18-INCH	LF	56.000	56.000
0950	647.0606	PAVEMENT MARKING ISLAND NOSE EPOXY	EACH	2.000	2.000

23

DATE 10MAR04

ESTIMATE OF QUANTITIES

6448-03-72

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY
0960	647.0726	PAVEMENT MARKING DIAGONAL EPOXY 12-INCH	LF	374.000	374.000
0970	650.4500	CONSTRUCTION STAKING SUBGRADE	LF	2,210.000	2,210.000
0980	650.5000	CONSTRUCTION STAKING BASE	LF	361.000	361.000
0990	650.6500	CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) 01. B-70-243	LS	1.000	1.000
1000	650.7000	CONSTRUCTION STAKING CONCRETE PAVEMENT	LF	1,849.000	1,849.000
1010	650.9900	CONSTRUCTION STAKING INITIAL LAYOUT	LF	2,210.000	2,210.000
1020	652.0210	CONDUIT RIGID NONMETALLIC SCHEDULE 40 1-INCH	LF	680.000	680.000
1030	652.0225	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	LF	140.000	140.000
1040	652.0235	CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH	LF	540.000	540.000
1050	652.0800	CONDUIT LOOP DETECTOR	LF	380.000	380.000
1060	653.0105	PULL BOXES STEEL 12X24-INCH	EACH	10.000	10.000
1070	653.0135	PULL BOXES STEEL 24X36-INCH	EACH	9.000	9.000
1080	654.0101	CONCRETE BASES TYPE 1	EACH	4.000	4.000
1090	654.0102	CONCRETE BASES TYPE 2	EACH	4.000	4.000
1100	654.0109	CONCRETE BASES TYPE 9	EACH	1.000	1.000
1110	655.0230	CABLE TRAFFIC SIGNAL 5-14 AWG	LF	180.000	180.000
1120	655.0240	CABLE TRAFFIC SIGNAL 7-14 AWG	LF	125.000	125.000
1130	655.0260	CABLE TRAFFIC SIGNAL 12-14 AWG	LF	980.000	980.000
1140	655.0305	CABLE TYPE UF 2-12 AWG GROUNDED	LF	650.000	650.000
1150	655.0515	ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG	LF	2,180.000	2,180.000
1160	655.0610	ELECTRICAL WIRE LIGHTING 12 AWG	LF	600.000	600.000
1170	655.0700	LOOP DETECTOR LEAD IN CABLE	LF	2,010.000	2,010.000
1180	655.0800	LOOP DETECTOR WIRE	LF	1,080.000	1,080.000
1190	657.0255	TRANSFORMER BASES STANDARD 11 1/2-INCH BOLT CIRCLE	EACH	4.000	4.000
1200	657.0395.S	POLES (TYPE) 01. 3	EACH	4.000	4.000
1210	657.0710	LUMINAIRE ARMS TRUSS TYPE 4 1/2-INCH CLAMP 12-FT	EACH	4.000	4.000
1220	658.5069	SIGNAL MOUNTING HARDWARE (LOCATION) 01. CTH II & STH 76	LS	1.000	1.000
1230	659.0115	LUMINAIRES UTILITY HPS 150 WATTS	EACH	4.000	4.000
1240	690.0100	SAWING EXISTING PAVEMENT	LF	819.000	819.000
1250	690.0200	SAWING CONCRETE PAVEMENT FULL DEPTH	LF	72.000	72.000
1260	SPV.0060	SPECIAL 01. REMOVING PULL BOX	EACH	15.000	15.000
1270	SPV.0060	SPECIAL 02. SALVAGE PULL BOX COVER	EACH	15.000	15.000
1280	SPV.0060	SPECIAL 03. SALVAGE TYPE 2 POLE	EACH	4.000	4.000
1290	SPV.0060	SPECIAL 04. SALVAGE & REINSTALL 13' STANDARD	EACH	4.000	4.000
1300	SPV.0060	SPECIAL 05. SALVAGE & REINSTALL 20' TROMBONE ARM	EACH	4.000	4.000
1310	SPV.0060	SPECIAL 06. SECTION CORNER MONUMENTS	EACH	1.000	1.000

24

3

3

REMOVAL SUMMARY

LOCATION/AREA	STATION	203.0100 *REMOVING SMALL PIPE CULVERTS EACH	204.0100 REMOVING PAVEMENT SY	204.0130 REMOVING CURB LF	204.0150 REMOVING CURB & GUTTER LF	204.0165 REMOVING GUARDRAIL LF	204.0190 REMOVING SURFACE DRAINS EACH	204.0220 REMOVING INLETS EACH	REMARKS
CTH II STRUCTURE	252+65-256+55		80			254			
	254+69-255+58		178			254			
CTH II DRIVEWAYS	444+60 LT	1							*12-INCH CP, 36'
	448+50 RT	1							*18-INCH CP, 40'
	449+22 RT	1							*18-INCH CP, 40'
CTH II & STH 76	INTERSECTION		580	168	1,160		3	1	
STH 76 DRIVEWAYS	15+15 RT	1							*18-INCH CP, 32'
	16+95 LT	1							*12-INCH CP, 42'
	25+97 LT	1							*18-INCH CP, 40'
	TOTAL	6	838	168	1,160	508	3	1	

EARTHWORK SUMMARY

STATION TO STATION	LOCATION	205.0100 EXCAVATION COMMON CY	*FILL CY	*EXPANDED FILL CY	*WASTE CY
0+00.00 - 0+85.00	DRAINAGE AREA 1	61	0	0	61
0+00.00 - 2+05.00	DRAINAGE AREA 2	56	11	15	41
252+65.00 - 256+55.00	CTH II AT STRUCTURE	585	259	344	241
0+00.00 - 3+05.00	DIVERSION CHANNEL	1,759	32	43	1,716
443+40.00 - 446+75.00	CTH II, INT. WEST	731	70	93	638
447+50.00 - 449+80.00	CTH II, INT. EAST	718	3	4	714
14+14.50 - 26+23.00	STH 76	2,821	138	184	2,637
	TOTAL	6,731	513	683	6,048

FILL EXPANSION FACTOR = 1.33

*FOR INFORMATION ONLY

GRADING, SHAPING AND FINISHING FOR BEAM GUARD TERMINAL & ANCHORAGES

STATION LOCATION (POST #1)	*FILL CY	*SALVAGED TOPSOIL CY	*FERTILIZER TYPE B CWT	*SEEDING #10 LB	*MULCHING SY	205.9005.S EACH
253+18 LT	17	78	0.05	1	78	1
256+15 LT	19	79	0.05	1	79	1
253+06 RT	17	36	0.02	0.5	36	1
255+90 RT	11	67	0.04	0.9	67	1
TOTALS	64	260	0.16	3.4	260	4

*ITEMS AND QUANTITIES LISTED FOR BID INFORMATION ONLY

BASE AGGREGATE SUMMARY

LOCATION/AREA	STATION-STATION	305.0110 BASE AGGREGATE DENSE 3/4 INCH TON	305.0120 BASE AGGREGATE DENSE 1-1/4 INCH TON	624.0100 WATER MGAL
CTH II, STRUCTURE MAINLINE	254+00-254+40		78	1.1
	254+69-255+58		174	2.4
CTH II, STRUCTURE SHOULDERS	252+65-254+39	34	363	5.6
	254+69-256+55	34	378	5.8
CTH II, INTERSECTION	443+40-446+70	70	631	9.8
	447+72-449+80	102	504	8.5
CTH II, ISLANDS	WEST & EAST		7	0.1
CTH II DRIVEWAYS	443+80 RT	16		0.2
	444+60 LT	16		0.2
	448+50 RT	49		0.7
	448+50 LT	23		0.3
	449+20 RT	12		0.2
STH 76, INTERSECTION	14+14.5-26+23	593	2,706	46.2
STH 76 DRIVEWAYS	15+15 RT	38		0.5
	16+90 LT	51		0.7
	22+00 LT	13		0.2
	22+08 RT	40		0.6
	23+35 RT	14		0.2
	25+97 LT	10		0.1
	TOTAL	1,115	4,841	83.4

CONCRETE SUMMARY

LOCATION/AREA	415.0090 CONCRETE PAVEMENT 9-INCH SY	416.0610 *PAVEMENT TIES EACH	416.0805 CONCRETE PAVEMENT GAPS EACH	601.0413 CONCRETE CURB & GUTTER 30-INCH TYPE G LF	601.0421 CONCRETE CURB & GUTTER 36-INCH TYPE A LF	620.0300 CONCRETE MEDIAN SLOPED NOSE SF
CTH II, INTERSECTION	2,812	32		661	30	
STH 76, INTERSECTION	5,961			708	30	
STH 76, 15+15 RT			1			
ISLANDS AT INTERSECTION				118		93
TOTAL	8,773	32	1	1,487	60	93

*SEE DETAIL

SURFACE DRAIN SUMMARY

LOCATION	STATION	416.1010 **CONCRETE SURFACE DRAIN CY	606.0200 *RIPRAP MEDIUM CY	645.0130 *GEOTEXTILE FABRIC TYPE R SY
CTH II	449+24	2	1	5
STH 76	22+66	2	1	5
	23+90	2	1	5
	SUBTOTAL	6	3	15
	TOTAL	6		

*QUANTITIES INCLUDED IN EROSION CONTROL SUMMARY

**CURB & GUTTER FLUME TYPE

3

ASPHALT SUMMARY

LOCATION/AREA	STATION	455.0105 ASPHALTIC MATERIAL PG58-28 TON	455.0605 TACK COAT GAL	460.1103 HMA PAVEMENT TYPE E-3 TON	460.3000 QMP HMA MIXTURE TON	465.0120 ASPHALTIC SURFACE DRIVEWAYS & FIELD ENTRANCES TON	465.0305 ASPHALTIC SURFACE SAFETY ISLANDS TON	REMARKS
CTH II, STRUCTURE	254+00-254+40	1.7	2.7	30	30			MAINLINE
	254+69-255+58	3.6	5.8	66	66			MAINLINE
	252+65-254+39	5.6	8.9	101	101			WEST SHOULDERS
	254+69-256+55	5.8	9.3	106	106			EAST SHOULDERS
CTH II, INTERSECTION	443+40-447+00	0.8		15	15			WEST SHOULDER
	447+00-449+80	1.4		25	25			EAST SHOULDER
CTH II, DRIVEWAYS	443+80 RT	0.3				6		C.E.
	444+60 LT	0.3				6		P.E.
	448+50 RT	1.0				18		C.E.
	448+50 LT	0.4				8		C.E.
	449+20 RT	0.2				4		P.E.
STH 76, INTERSECTION	14+14.5-20+00	1.9		34	34			SOUTH SHOULDER
	20+00-26+23	2.9		52	52			NORTH SHOULDER
STH 76, DRIVEWAYS	15+15 RT	0.8				14		C.E.
	16+90 LT	1.0				18		C.E.
	22+08 RT	0.8				14		C.E.
	23+35 RT	0.3				5		C.E.
ISLANDS AT INTERSECTION		0.2					4	
	TOTAL	28.9	26.7	429	429	93	4	

CULVERT PIPE SUMMARY

MINOR SIDE ROAD, PRIVATE ENTRANCE AND SLOPE DRAINS

STATION	LOCATION	CULVERT PIPE DIAMETER 520.0112 12" LF	CULVERT PIPE DIAMETER 520.0118 18" LF	APRON ENDWALLS FOR CULVERT PIPE 520.1012 12" EACH	APRON ENDWALLS FOR CULVERT PIPE 520.1018 18" EACH	R.C.C.P. CLASS	THICKNESS (INCHES) STEEL	THICKNESS (INCHES) ALUMINUM	*JOINT TIES EACH (IF CONC.)	INLET ELEVATION	DISCHARGE ELEVATION	628.7550 **CULVERT PIPE DITCH CHECKS EACH
444+60	CTH II, PE LT	36		2		III	0.064	0.060	8	902.08	902.00	1
448+50	CTH II, CE RT		40		2	III	0.064	0.060	8	896.04	894.38	1
449+22	CTH II, PE RT		40		2	III	0.064	0.060	8	893.12	891.70	1
15+15	STH 76, CE RT		42		2	III	0.064	0.060	8	899.19	898.77	1
16+95	STH 76, CE LT	42		2		III	0.064	0.060	8	901.21	901.13	1
25+97	STH 76, CE LT		44		2	III	0.064	0.060	8	896.92	896.72	1
	TOTAL	78	166	4	8							6

*NON-BID ITEM (FOR INFORMATION ONLY)

**INLET END ONLY

3

STATE PROJECT NO: 6448-03-72	HWY: CTH II	COUNTY: WINNEBAGO	MISCELLANEOUS QUANTITIES	SHEET NO: 27	E

FILE NAME : Q:\MISC QUANTITIES\6448-03-72\QUANTS PLOT DATE : _____ PLOT BY : K.L. KOUGL PLOT NAME : _____ REV. DATE : 3/10/2004 ORIGINATOR : DIST. 3 PLOT SCALE : 1:1

STORM SEWER SUMMARY

LOCATION/AREA	STATION	520.8000.S CULVERT PIPE CONCRETE COLLAR EACH	608.0312 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 12-INCH LF	611.0303 INLETS TYPE 3 LF	611.0639 INLET COVERS TYPE H-S EACH	GRATE ELEVATION	DEPTH	REMARKS
CTH II	446+70, 50' RT	1	2					
INTERSECTION	446+68.8, 52.1' RT			1	1	901.85	3.24	EXTEND EXISTING SS PIPE
	TOTAL	1	2	1	1			

ADJUSTMENT SUMMARY

LOCATION	STATION	611.8110 ADJUSTING MANHOLE COVERS EACH	611.8115 ADJUSTING INLET COVERS EACH
CTH II	446+44, 36'LT		1
STH 76	19+60, 28'LT	1	
	TOTAL	1	1

BEAM GUARD SUMMARY

LOCATION/AREA	STATION TO STATION	614.0200 STEEL THRIE BEAM STRUCTURE APPROACH LF	614.0305 STEEL PLATE BEAM GUARD CLASS A LF	614.0370 STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL EACH
CTH II STRUCTURE	253+18.35 - 254+39 LT	33	37.5	1
	254+69.5 - 256+15.15 LT	33	62.5	1
	253+05.85 - 254+39 RT	33	50	1
	254+69.5 - 255+90.15 RT	33	37.5	1
	TOTAL	132	187.5	4

EROSION CONTROL SUMMARY

LOCATION/AREA	STATION TO STATION	311.0110 BREAKER RUN TON	606.0200 RIPRAP MEDIUM CY	628.1505 SILT FENCE DELIVERED LF	628.1510 SILT FENCE INSTALLED LF	628.1520 SILT FENCE MAINT. LF	628.2010 EROSION MAT CLASS I TYPE B DELIVERED SY	628.3010 EROSION MAT CLASS I TYPE B INSTALLED SY	628.7005 INLET PROTECTION TYPE A EACH	628.7015 INLET PROTECTION TYPE C EACH	628.7505 TEMPORARY DITCH CHECKS DELIVERED LF	628.7510 TEMPORARY DITCH CHECKS INSTALLED LF	645.0130 GEOTEXTILE FABRIC TYPE R SY	REMARKS
DRAINAGE AREA #1	0+00 - 0+95			210	210	210	84	84			45	45		
DRAINAGE AREA #2	0+00 - 2+05			430	430	430	182	182			62	62		
DIVERSION CHANNEL	0+00 - 3+00	146	33	620	620	620	28	28					1,033	
CTH II & STH 76 INTERSECTION	NE QUAD						471	471						BEHIND C & G
	SE QUAD						53	53						
	SW QUAD						447	447						
	NW QUAD						324	324						
CTH II	446+44, 36' LT								1					
	446+68, 52' RT									1				
	449+24 LT		1										5	SURFACE DRAIN
STH 76	22+66 LT		1										5	SURFACE DRAIN
	23+90 RT		1										5	SURFACE DRAIN
	SUBTOTAL	146	36	1260	1260	1260	1,589	1,589	1	1	107	107	1,048	
	UNDISTRIBUTED-25% OF SUBTOTAL	-	-	315	315	315	397	397	-	-	27	27	-	
	TOTAL	146	36	1,575	1,575	1,575	1,986	1,986	1	1	134	134	1,048	

STATE PROJECT NO: 6448-03-72 | **HWY:CTH II** | **COUNTY: WINNEBAGO** | **MISCELLANEOUS QUANTITIES** | **SHEET NO: 28** | **E**

FILE NAME : Q:\MISC QUANTITIES\6448-03-72\QUANTS PLOT DATE : _____ PLOT BY : K.L. KOUGL PLOT NAME : _____ REV. DATE : 3/10/2004 ORIGINATOR : DIST. 3 PLOT SCALE : 1:1

LANDSCAPING SUMMARY

LOCATION	STATION TO STATION	625.0500 SALVAGED TOPSOIL SY	627.0200 MULCHING SY	629.0210 FERTILIZER TYPE B CWT	630.0110 SEEDING **MIXTURE #10 LB	630.0130 SEEDING ***MIXTURE #30 LB	630.0140 SEEDING ***MIXTURE #40 LB	630.0200 SEEDING *TEMPORARY LB
DRAINAGE AREA #1	0+00 - 0+95	265	181	0.2			5	7
DRAINAGE AREA #2	0+00 - 2+05	262	80	0.2			5	7
CTH II, STRUCTURE	252+65 - 256+55	2,661	2,661	1.7	36			72
CTH II & STH 76 INTERSECTION	NE QUAD	642	171	0.4		12		17
	SE QUAD	590	537	0.4		11		16
	SW QUAD	1,047	600	0.7		19		28
	NW QUAD	538	214	0.4		10		14
	SUBTOTAL	6,005	4,444	4.0	36	52	10	161
	UNDISTRIBUTED-25% OF SUBTOTAL	-	1,111	1.0	9	13	2.5	40.3
	TOTAL	6,005	5,555	5.0	45	65	12.5	201.3

* APPLICATION RATE 3 LBS/1000 SF
** APPLICATION RATE 1.5 LBS/1000 SF
*** APPLICATION RATE 2 LBS/1000 SF

TRAFFIC CONTROL

LOCATION	APPROXIMATE SERVICE PERIOD DAYS	643.0300 DRUMS QUANTITY	643.0300 DRUMS DAYS	643.0420 BARRICADES TYPE III QUANTITY	643.0420 BARRICADES TYPE III DAYS	643.0705 WARNING LIGHTS TYPE A QUANTITY	643.0705 WARNING LIGHTS TYPE A DAYS	643.0900 SIGNS QUANTITY	643.0900 SIGNS DAYS
PROJECT AREA	52	0	0	64	3,328	104	5,408	46	2,392
SHOULDER CLOSURE	3	20	60	0	0	0	0	5	15
TOTAL			60		3,328		5,408		2,407

EPOXY PAVEMENT MARKING SUMMARY

LOCATION/AREA	STATION TO STATION	646.0106 4-INCH NO PASSING LF	646.0106 4-INCH CENTERLINE LF	646.0106 4-INCH DOUBLE NO PASSING LF	646.0106 4-INCH MEDIAN ISLAND DOUBLE YELLOW LF	646.0106 4-INCH EDGELINE WHITE LF	646.0226 CHANNELIZING 8-INCH LF	647.0166 ARROWS TYPE 2 EACH	647.0356 WORDS "ONLY" EACH	647.0566 STOP LINE 18-INCH LF	647.0606 ISLAND NOSE EACH	647.0726 DIAGONALS 12-INCH LF	REMARKS
CTH II, STRUCTURE	254+00 - 255+58		40			316							MATCH EXISTING
CTH II, INTERSECTION	443+40 - 446+80	340	85			273	70				1		
	447+46 - 449+80	234	59			324	70				1		
STH 76, INTERSECTION	9+35 - 19+35			550	2,015	892	150	2	1	28		187	
	20+53 - 31+00			550	2,203	578	150	2	1	28		187	
	SUBTOTAL	574	184	1,100	4,218	2,383							
	TOTAL			8,459			440	4	2	56	2	374	

STATE PROJECT NO: 6448-03-72	HWY: CTH II	COUNTY: WINNEBAGO	MISCELLANEOUS QUANTITIES	SHEET NO: 29	E

FILE NAME : Q:\MISC QUANTITIES\6448-03-72\QUANTS | PLOT DATE : _____ | PLOT BY : K.L. KOUGL | PLOT NAME : _____ | REV. DATE : 3/10/2004 | ORIGINATOR : DIST. 3 | PLOT SCALE : 1:1

3

MONUMENT SUMMARY

LOCATION	621.0100 LANDMARK REFERENCE MONUMENTS EACH	SPV.0060.06 SECTION CORNER MONUMENTS EACH
NE CORNER SECTION 23 T20N, R16E	4	1
TOTAL	4	1

CONSTRUCTION STAKING SUMMARY

LOCATION/AREA	STATION TO STATION	650.4500 SUBGRADE LF	650.5000 BASE LF	650.6500 *STRUCTURE LAYOUT B-70-243 LS	650.7000 CONCRETE PAVEMENT LF	650.9900 INITIAL LAYOUT LF
CTH II, STRUCTURE	252+65 - 256+55	361	361	1		361
CTH II, INTERSECTION	14+14 - 26+23	1,209			1,209	1,209
STH 76, INTERSECTION	443+40 - 449+80	640			640	640
	TOTAL	2,210	361	1	1,849	2,210

*CATEGORY 0020

SAWCUT SUMMARY

LOCATION/AREA	STATION	690.0100 SAWING EXISTING PAVEMENT LF	690.0200 SAWING CONCRETE PAVEMENT FULL DEPTH LF
CTH II, STRUCTURE MAINLINE & SHOULDER	252+65-254+00	288	18
	255+58-256+55	197	18
CTH II, INTERSECTION MAINLINE	443+40	19	18
	449+80	18	18
STH 76, MAINLINE	14+14.5	30	-
	26+23	30	-
CTH II, DRIVEWAYS	443+80 RT	35	-
	444+60 LT	22	-
	448+50 RT	20	
	448+50 LT	28	-
	449+22 RT	20	-
STH 76, DRIVEWAYS	15+15 RT	20	
	17+00 LT	35	-
	22+10 RT	35	-
	23+35 RT	22	-
	TOTAL	819	72

*ITEM SUBTOTALS INCLUDED ELSEWHERE

3

DETOUR SIGNING SUMMARY

SIGN NO.	LOCATION	SIGN CODE	SIZE WIDTH X HEIGHT	*NUMBER IN SERVICE	APPROXIMATE SERVICE PERIOD DAYS	643.3000 TRAFFIC CONTROL DETOUR SIGNS DAYS	643.0905.S COVERING SIGNS EACH	REMARKS
1	1/2 MI. SOUTH OF STH 76 EXIT RAMP	M 1-6	36"x36"					
		W 20-2A	48"x48"	2	52	104		MOUNT W/ #1
2	ACROSS FROM #1 IN MEDIAN	M 1-6	36"x36"					
		W 20-2A	48"x48"	2	52	104		MOUNT W/ #2
3	1000' SOUTH OF STH 76 EXIT RAMP	M 4-8	30"x15"					
		M 3-1	30"x15"					MOUNT W/ #3
		M 1-6	36"x36"					"
		MO 6-1	30"x30"	4	52	208		"
4	ACROSS FROM #3 IN MEDIAN	M 4-8	30"x15"					
		M 3-1	30"x15"					MOUNT W/ #4
		M 1-6	36"x36"					"
		MO 6-1	30"x30"	4	52	208		"
5	AT STH 76 EXIT RAMP TAPER	M 4-8	30"x15"					
		M 3-1	30"x15"					MOUNT W/ #5
		M 1-6	36"x36"					"
		MO 6-1	30"x30"	4	52	208		"
6	EXISTING D1 SIGN						1	
7	EXISTING J3 SIGN						1	
8	1/2 MI SOUTH OF USH 41	W 20-2A	48"x48"	1	52	52		
9	EXISTING J2 SIGN						1	
10	EXISTING D1 SIGN						1	
11	SOUTH END OF GRASS MEDIAN	M 4-8	24"x12"					
		M 3-1	24"x12"					MOUNT W/ #11
		M 1-6	24"x24"					"
		MO 5-2R	21"x21"	4	52	208		"
12	RIGHT OF EXISTING J3 SIGN	M 4-8	24"x12"					
		M 3-1	24"x12"					MOUNT W/ #12
		M 1-6	24"x24"					"
		MO 6-2R	21"x21"	4	52	208		"
13	RIGHT OF EXISTING J3 SIGN ON ISLAND	M 4-8	24"x12"					
		M 3-1	24"x12"					MOUNT W/ #13
		M 1-6	24"x24"					"
		*MO 6-2R	21"x21"	4	52	208		"
14	WEST OF USH 41	R 11-3	60"x30"	1	52	52		
15	EXISTING J4 & D2 SIGN						2	
16	EXISTING J3 SIGN						1	
17	EXISTNG D1 SIGN						1	
18	NORTH OF STH 76 ENTRANCE RAMP	M 4-8	30"x15"					
		M 3-1	30"x15"					MOUNT W/ #18
		M 1-6	36"x36"	3	52	156		"
19	300' NORTH OF STH 76 EXIT RAMP	M 4-6	30"x15"					
		M 4-8	30"x15"					MOUNT W/ #19
		M 1-6	36"x36"	3	52	156		"
20	SOUTH OF BREEZEWOOD	M 4-8	30"x15"					
		M 1-6	36"x36"	2	52	104		MOUNT W/ #20
SUBTOTAL SIGNS 1-20				38		1,976	8	

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3

DETOUR SIGNING SUMMARY CONTINUED

*ITEM SUBTOTALS INCLUDED ELSEWHERE

SIGN NO.	LOCATION	SIGN CODE	SIZE WIDTH X HEIGHT	*NUMBER IN SERVICE	APPROXIMATE SERVICE PERIOD DAYS	643.3000 TRAFFIC CONTROL DETOUR SIGNS DAYS	643.0905.S COVERING SIGNS EACH	REMARKS
21	NORTH OF BREEZEWOOD	M 4-8	30"x15"					
		M 1-6	36"x36"	2	52	104		MOUNT W/ #21
22	SOUTH OF STH 114	M 4-8	30"x15"					
		M 1-6	36"x36"	2	52	104		MOUNT W/ #22
23	NORTH OF STH 114	M 4-8	30"x15"					
		M 1-6	36"x36"	2	52	104		MOUNT W/ #23
24	SOUTH OF CTH II	M 4-8	30"x15"					
		M 1-6	36"x36"	2	52	104		MOUNT W/ #24
25	NORTH OF CTH II	M 4-8	30"x15"					
		M 1-6	36"x36"	2	52	104		MOUNT W/ #25
26	SOUTH OF USH 10	M 4-8	30"x15"					
		M 1-6	36"x36"	2	52	104		MOUNT W/ #26
27	NORTH OF USH 10	M 4-8	30"x15"					
		M 1-6	36"x36"	2	52	104		MOUNT W/ #27
29	NORTH OF CTH BB	M 4-8	30"x15"					
		M 1-6	36"x36"	2	52	104		MOUNT W/ #29
31	SOUTH OF STH 96	M 4-8	30"x15"					
		M 3-1	30"x15"					MOUNT W/ #31
		M 1-6	36"x36"					"
		MO 5-2R	30"x30"	4	52	208		"
32	ACROSS FROM #31 IN MEDIAN	M 4-8	30"x15"					
		M 3-1	30"x15"					MOUNT W/ #32
		M 1-6	36"x36"					"
		MO 5-2R	30"x30"	4	52	208		"
33	AT STH 96 EXIT RAMP TAPER	M 4-8	30"x15"					
		M 3-1	30"x15"					MOUNT W/ #33
		M 1-6	36"x36"					"
		MO 6-2R	30"x30"	4	52	208		"
34	ON STH 96 EXIT RAMP, LT SIDE	M 4-8	24"x12"					
		M 3-1	24"x12"					MOUNT W/ #34
		M 1-6	24"x24"					"
		MO 6-1	21"x21"	4	52	208		"
35	ON STH 96 EXIT RAMP, LT SIDE	M 4-8	24"x12"					
		M 3-1	24"x12"					MOUNT W/ #35
		M 1-6	24"x24"					"
		MO 6-1	21"x21"	4	52	208		"
36	WEST OF USH 41	M 4-8	24"x12"					
		M 3-1	24"x12"					MOUNT W/ #36
		M 1-6	24"x24"	3	52	156		"
37	ACROSS FROM #85 IN MEDIAN	M 4-8	30"x15"					
		M 3-3	30"x15"					MOUNT W/ #37
		M 1-6	36"x36"					"
		MO 6-1	30"x30"	4	52	208		"
38	AT WEST END OF COLD STREAM RD. STRUCTURE	M 4-8	30"x15"					
		M 3-3	30"x15"					MOUNT W/ #38
		M 1-6	36"x36"					"
		MO 5-2R	30"x30"	4	52	208		"
SUBTOTAL SIGNS 21-38				47		2,444	0	

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3

*ITEM SUBTOTALS INCLUDED ELSEWHERE

3

3

DETOUR SIGNING SUMMARY CONTINUED

SIGN NO.	LOCATION	SIGN CODE	SIZE WIDTH X HEIGHT	*NUMBER IN SERVICE	APPROXIMATE SERVICE PERIOD DAYS	643.3000 TRAFFIC CONTROL DETOUR SIGNS DAYS	643.0905.S COVERING SIGNS EACH	REMARKS
39	ACROSS FROM #38 IN MEDIAN	M 4-8	30"x15"					
		M 3-3	30"x15"					MOUNT W/ #39
		M 1-6	36"x36"					"
		MO 5-2R	30"x30"	4	52	208		"
40	AT EXIT RAMP TO USH 41 SOUTH	M 4-8	30"x15"					
		M 3-3	30"x15"					
		M 1-6	36"x36"					
		MO 6-2R	30"x30"	4	52	208		MOUNT W/ #40
41	WEST OF CTH CB	M 4-8	24"x12"					
		M 1-6	24"x24"	2	52	104		MOUNT W/ #41
42	EXISTING J1 SIGN	M 4-6	24"x12"					
		M 4-8	24"x12"	2	52	104		MOUNT W/ #42
43	EXISTING D1 SIGN						1	
44	2000' WEST OF STH 76	M 1-6	24"X24"					
		W 20-2A	48"x48"	2	52	104		MOUNT W/ #44
45	ACROSS FROM #44 IN MEDIAN	M 1-6	24"X24"					
		W 20-2A	48"x48"	2	52	104		MOUNT W/ #45
46	750' WEST OF STH 76 EXIT RAMP	M 4-8	30"x15"					
		M 3-3	30"x15"					MOUNT W/ #46
		M 1-6	36"x36"					"
		MO 6-1	30"X30"	4	52	208		"
47	EXISTING J2 SIGN	M 4-8	24"x12"					
		MO 6-1	21"x21"	2	52	104		MOUNT W/ #47
48	AT EXIT RAMP TO STH 76 IN MEDIAN	M 4-8	30"x15"					
		M 3-3	30"x15"					MOUNT W/ #48
		M 1-6	36"x36"					"
		MO 6-1	30"X30"	4	52	208		"
49	EXISTING J3 SIGN	M 4-8	24"x12"					
		MO 6-1	21"x21"	2	52	104		MOUNT W/ #49
50	EXISTING J4 SIGN						1	
51	AT #50 LOCATION	R 11-3	60"x30"	1	52	52		"4 MILES"
52	EXISTING J3 SIGN	M 4-8	24"x12"					
		MO 6-1	21"x21"	2	52	104		MOUNT W/ #52
53	EXISTING D1 SIGN						1	
54	EXISTING J2 SIGN	M 4-8	24"x12"					
		MO 5-1L	21"x21"	2	52	104		MOUNT W/ #54
55	300' NORTH OF J1 SIGN	W 20-2A	48"x48"	1	52	52		
56	WEST OF J1 SIGN	W 20-2A	48"x48"	1	52	52		
	SUBTOTAL SIGNS 39-56			35		1,820	3	

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Not shown on plan sheets did not install

STATE PROJECT NO: 6448-03-72	HWY: CTH II	COUNTY: WINNEBAGO	MISCELLANEOUS QUANTITIES	SHEET NO: 33	E

FILE NAME : Q:\MISC QUANTITIES\6448-03-72\QUANTS PLOT DATE : _____ PLOT BY : K.L. KOUGL PLOT NAME : _____ REV. DATE : 3/9/2004 ORIGINATOR : DIST. 3 PLOT SCALE : 1:1

*ITEM SUBTOTALS INCLUDED ELSEWHERE

DETOUR SIGNING SUMMARY CONTINUED

SIGN NO.	LOCATION	SIGN CODE	SIZE WIDTH X HEIGHT	*NUMBER IN SERVICE	APPROXIMATE SERVICE PERIOD DAYS	643.3000 TRAFFIC CONTROL DETOUR SIGNS DAYS	643.0905.S COVERING SIGNS EACH	REMARKS
57	EXISTING J13 SIGN						1	
58	EAST OF WEST RAMPS FOR STH 76	M 4-8	24"x12"					
		M 1-5A	24"x24"					MOUNT W/ #58
		MO 5-1L	21"x21"	3	52	156		"
59	WEST OF EAST RAMPS FOR STH 76	M 4-8	24"x12"					
		M 3-2	24"x12"					MOUNT W/ #59
		M 1-5A	24"x24"					"
		MO 6-1	21"x21"	4	52	208		"
60	EAST OF EAST RAMPS FOR STH 76	R 11-3	60"x30"	1	52	52		
61	1500' SOUTH OF EXIT RAMP FOR CTH II	W 20-2A	48"x48"	1	52	52		
62	ACROSS FROM #61 IN MEDIAN	W 20-2A	48"x48"	1	52	52		
63	750' SOUTH OF EXIT RAMP FOR CTH II	M 4-8	30"x15"					
		M 3-2	30"x15"					MOUNT W/ #63
		M 1-5A	36"x36"					"
		MO 6-1	30"x30"	4	52	208		"
64	AT EXIT RAMP FOR CTH II	M 4-8	30"x15"					
		M 3-3	30"x15"					MOUNT W/ #64
		M 1-5A	36"x36"					"
		MO 6-1	30"x30"	4	52	208		"
65	EXISTING D1 SIGN						1	
66	EXISTING J13 SIGN						1	
67	750' SOUTH OF EXIT RAMP TO USH 10 EAST	M 4-8	30"x15"					
		M 3-2	30"x15"					MOUNT W/ #67
		M 1-5A	36"x36"					"
		MO5-2R	30"x30"	4	52	208		"
68	EXISTING D1 SIGN						1	
69	500'NORTH OF EXIT RAMP FOR CTH II	M 4-6	30"x15"					
		M 4-8	30"x15"					MOUNT W/ #69
		M 1-5A	36"x36"	3	52	156		
70	AT EXIT RAMP TO USH 10 EAST	M 4-8	30"x15"					
		M 3-2	30"x15"					MOUNT W/ #70
		M 1-5A	36"x36"					"
		MO6-2R	30"x30"	4	52	208		"
71	1500' WEST OF EXIT RAMP TO STH 76 SOUTH	M 1-5A	36"x36"					
		W 20-2A	48"x48"	2	52	104		MOUNT W/ #71
72	750' WEST OF EXIT RAMP TO STH 76 SOUTH	M 4-8	30"x15"					
		M 3-3	30"x15"					MOUNTW/ #72
		M 1-5A	36"x36"					"
		MO 5-2L	30"x30"	4	52	208		"
73	AT EXIT RAMP FOR STH 76 SOUTH IN MEDIAN	M 4-8	30"x15"					
		M 3-3	30"x15"					MOUNTW/ #73
		M 12-5A	36"x36"					"
		MO 6-2L	30"x30"	4	52	208		"
74	EAST OF ENTRANCE RAMP FROM STH 76	M 4-8	30"x15"					
		M 3-2	30"x15"					MOUNT W/ #74
		M 1-5A	36"x36"	3	52	156		"
	SUBTOTAL SIGNS 57-74			42		2,184	4	

CONTINUED ON NEXT PAGE

3

DETOUR SIGNING SUMMARY CONTINUED

SIGN NO.	LOCATION	SIGN CODE	SIZE WIDTH X HEIGHT	*NUMBER IN SERVICE	APPROXIMATE SERVICE PERIOD DAYS	643.3000 TRAFFIC CONTROL DETOUR SIGNS DAYS	643.0905.S COVERING SIGNS EACH	REMARKS
75	AT EXIT RAMP TO STH 76 SOUTH	M 4-8	30"x15"					
		M 3-4	30"x15"					MOUNT W/ #75
		M 1-5A	36"x36"					"
		MO 6-2L	30"x30"	4	52	208		"
76	750' EAST OF EXIT RAMP TO STH 76 SOUTH	M 4-8	30"x15"					
		M 3-4	30"x15"					MOUNT W/ #76
		M 1-5A	36"x36"					"
		MO 5-2L	30"x30"	4	52	208		"
77	ACROSS FROM #76 IN MEDIAN	M 4-8	30"x15"					
		M 3-4	30"x15"					MOUNT W/ #77
		M 1-5A	36"x36"					"
		MO 5-2L	30"x30"	4	52	208		"
78	WEST OF ENTRANCE RAMP FROM STH 76	M 4-8	30"x15"					
		M 1-5A	36"x36"	2	52	104		MOUNT W/ #78
79	EXISTING D1 SIGN						1	
80	SOUTH OF EXIT RAMP FROM USH 10	R 11-3	60"x30"	1	52	52		"1 MILE"
81	EXISTING D1 SIGN						1	
82	EAST OF ENTRANCE RAMP FROM STH 76	M 4-8	30"x15"					
		M 1-6	36"x36"					
		M 1-5A	36"x36"	3	52	156		MOUNT W/ #82
83	1000' WEST OF THE CTH CB EXIT RAMP	M 4-8	30"x15"					
		M 3-2	30"x15"					MOUNT W/ #83
		M 1-5A	36"x36"					"
		MO 5-2R	30"x30"	4	52	208		"
84	ACROSS FROM #83 IN MEDIAN	M 4-8	30"x15"					
		M 3-2	30"x15"					MOUNT W/ #84
		M 1-6	36"x36"					"
		MO 5-2R	30"x30"	4	52	208		"
85	AT THE CTH CB EXIT RAMP	M 4-8	30"x15"					
		M 3-2	30"x15"					MOUNT W/ #85
		M 1-5A	36"x36"					"
		MO 6-2R	30"x30"	4	52	208		"
86	WEST OF ENTRANCE RAMP FROM CTH CB	M 4-8	30"x15"					
		M 3-4	30"x15"					MOUNT W/ #86
		M 1-5A	36"x36"	3	52	156		"
87	EAST OF "SIGNAL AHEAD" SIGN	M 4-8	24"x12"					
		M 3-2	24"x12"					MOUNT W/ #87
		M 1-5A	24"x24"					"
		MO 5-1R	21"x21"	4	52	208		"
88	AT BOTTOM OF EXIT RAMP TO CTH CB	M 4-8	24"x12"					
		M 3-2	24"x12"					MOUNT W/ #88
		M 1-5A	24"x24"					"
		MO 6-1	21"x21"	4	52	208		"
89	SOUTH OF EXIT RAMP ON CTH CB	M 4-8	24"x12"					
		M 3-2	24"x12"					MOUNT W/ #89
		M 1-5A	24"x24"	3	52	156		"
90	SOUTH OF EXIT RAMP FROM USH 10 WEST	M 4-8	24"x12"					
		M 3-4	24"x12"					MOUNT W/ #90
		M 1-5A	24"x24"					"
		MO 6-1	21"x21"	4	52	208		"
	SUBTOTAL SIGNS 75-90			48		2,496	2	

CONTINUED ON NEXT PAGE

*ITEM SUBTOTALS INCLUDED ELSEWHERE

3

DETOUR SIGNING SUMMARY CONTINUED

SIGN NO.	LOCATION	SIGN CODE	SIZE WIDTH X HEIGHT	*NUMBER IN SERVICE	APPROXIMATE SERVICE PERIOD DAYS	643.3000 TRAFFIC CONTROL DETOUR SIGNS DAYS	643.0905.S COVERING SIGNS EACH	REMARKS
91	NORTH OF ENTRANCE RAMP TO USH 10 EAST	M 4-8	24"x12"					
		M 3-4	24"x12"					MOUNT W/ #91
		M 1-5A	24"x24"					"
		MO 5-1L	21"x21"	4	52	208		"
92	NORTH OF CTH II	M 4-8	24"x12"					
		M 3-4	24"x12"					MOUNT W/ #92
		M 1-5A	24"x24"	3	52	156		
93	WEST OF CTH CB	R 11-3	60"x30"	1	52	52		"2-1/2 MILES"
94	EXISTING J1 SIGN	M 4-6	24"x12"					
		M 3-2	24"x12"	2	52	104		MOUNT W/ #94
95	EXISTING J12 SIGN	M 6-1	21"x21"	1	52	52		
96	EXISTING J23 SIGN						1	
97	WEST OF VERA AVENUE	W 20-2A	48"x48"	1	52	52		
98	WEST OF VERA AVE. IN GRASS MEDIAN	M 4-8	24"X 12"					
		M 3-4	24"x12"					MOUNT W/ #98
		M 1-5A	24"x24"					"
		MO 5-1R	21"x21"	4	52	208		"
99	AT INTERSECTION OF CTH CB	M 4-8	24"x12"					
		M 3-4	24"x12"					MOUNT W/ #99
		M 1-5A	24"x24"					"
		MO 6-1	21"x21"	4	52	208		"
100	NORTH OF AMERICAN DRIVE	W 20-2A	48"x48"	1	52	52		
101	SOUTH OF NORTH RAMPS	M 4-8	24"x12"					
		M 3-2	24"x12"					MOUNT W/ #101
		M 1-6A	24"x24"					"
		MO 5-1L	21"x21"	4	52	208		"
102	NORTH OF SOUTH RAMPS	M 4-8	24"x12"					
		M 3-2	24"x12"					MOUNT W/ #102
		M 1-6	24"x24"					"
		MO 6-1	21"x21"	4	52	208		"
103	EXISTING J4 SIGN						1	
	SUBTOTAL SIGNS 91-103			29		1,508	2	
	75-90			48		2,496	2	
	57-74			42		2,184	4	
	39-56			35		1,820	3	
	21-38			47		2,444	0	
	1-20			38		1,976	8	
	TOTAL			239		12,428	19	

*FOR INFORMATION ONLY

CONDUIT SUMMARY

LOCATION	FROM	TO	652.0210 CONDUIT RIGID NONMETALLIC SCHEDULE 40 1-INCH LF	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF	652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH LF
CTH II & STH 76	CB	PB1		10	10
	CB	PB1		10	10
	PB1	PB2			45
	PB2	SB1		15	
	PB2	PB3			60
	PB3	SB2		30	
	PB3	PB4			50
	PB4	SB3		10	
	PB4	PB10	180		
	PB10	PB11	160		
	PB4	PB5			70
	PB5	SB4		10	
	PB5	PB6			75
	PB6	SB5		15	
	PB6	PB7			55
	PB7	SB6		15	
	PB7	PB8			50
	PB8	SB7		10	
	PB8	PB12	180		
	PB12	PB13	160		
	PB8	PB9			75
	PB9	SB8		15	
	PB9	PB1			40
		TOTAL	680	140	540

PULL BOX SUMMARY

LOCATION	SPV.0060.01 REMOVING PULL BOX EACH	SPV.0060.02 SALVAGE PULL BOX COVER EACH	653.0105 PULL BOXES STEEL 12x24-INCH EACH	653.0135 PULL BOXES STEEL 24x36-INCH EACH
CTH II & STH 76	15	15	10	9
TOTAL	15	15	10	9

CONCRETE BASE SUMMARY

LOCATION	204.0195 REMOVING CONCRETE BASES EACH	654.0101 CONCRETE BASE TYPE 1 EACH	654.0102 CONCRETE BASE TYPE 2 EACH	654.0109 CONCRETE BASE TYPE 9 EACH
CTH II & STH 76	9	4	4	1
TOTAL	9	4	4	1

SIGNAL CABLE SUMMARY

LOCATION	FROM	TO	655.0260 CABLE TRAFFIC SIGNAL 12-14 AWG LF	655.0240 CABLE TRAFFIC SIGNAL 7-14 AWG LF	HEAD NO.	655.0230 CABLE TRAFFIC SIGNAL 5-14 AWG (BASE TO HEAD) LF
STH 76 NORTHSIDE	CB	SB3	215		1	USE EXISTING
					6	USE EXISTING
	SB3	SB4		125	2	45
STH 76 SOUTHSIDE	CB	SB8	90		5	45
	SB8	SB7	120		3	USE EXISTING
					4	USE EXISTING
CTH II EASTSIDE	CB	SB6	225		8	45
	SB6	SB5	110		7	USE EXISTING
					12	USE EXISTING
CTH II WESTSIDE	CB	SB1	90		9	USE EXISTING
					10	USE EXISTING
	SB1	SB2	130		11	45
		TOTAL	980	125		180

NB & EB			SB & WB		
RED	=	RED	RED	=	RED W/BLACK
YELLOW	=	ORANGE	YELLOW	=	ORANGE W/ BLACK
GREEN	=	GREEN	GREEN	=	GREEN W/ BLACK
LT. YELLOW	=	BLACK	LT. YELLOW	=	BLACK W/ WHITE
LT. GREEN	=	BLUE	LT. GREEN	=	BLUE W/ BLACK

3

CABLE TYPE UF 2-12 AWG GROUNDED

LOCATION	FROM	TO	655.0305 LF
CTH II & STH 76	CB	SB2	180
	SB2	SB4	190
	CB	SB8	90
	SB8	SB6	190
		TOTAL	650

ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG

LOCATION	FROM	TO	655.0515 EQUIPMENT GROUNDED CONDUCTOR (WHITE) LF	(GREEN) LF
CTH II & STH 76	CB	PB1		15
	CB	SB1	90	90
	SB1	PB2		20
	SB1	SB2	130	130
	SB2	PB3		35
	SB2	SB3	115	115
	SB3	PB4		20
	SB3	SB4	125	125
	SB4	PB5		15
	SB4	SB5	125	125
	SB5	PB6		20
	SB5	SB6	110	110
	SB6	PB7		20
	SB6	SB7	95	95
	SB7	PB8		15
	SB7	SB8	120	120
	SB8	PB9		20
	SB8	CB	90	90
		SUBTOTAL	1,000	1,180
		TOTAL	2,180	

ELECTRICAL WIRE LIGHTING 12 AWG

LOCATION	FROM	TO	655.0610 LF
CTH II & STH 76	SB2	LUMINAIRE	150
	SB4	LUMINAIRE	150
	SB6	LUMINAIRE	150
	SB8	LUMINAIRE	150
		TOTAL	600

3

LOOP SUMMARY

LOCATION	LOOP NO.	# OF TURNS	652.0800 LOOP DETECTOR CONDUIT LF	655.0800 WIRE LF	655.0700 LEAD-IN CABLE LF
CTH II & STH 76	21	5	40	170	490
	22	3	60	180	330
	41	2	90	190	70
	61	5	40	170	520
	62	3	60	180	360
	81	2	90	190	240
		TOTAL	380	1,080	2,010

LIGHTING SUMMARY

LOCATION	659.0115 LUMINAIRES UTILITY HPS 150 WATTS EACH	657.0710 LUMINAIRE ARMS TRUSS TYPE 4-1/2 INCH CLAMP 12-FT EACH
CTH II & STH 76	4	4
TOTAL	4	4

TRAFFIC SIGNAL SUMMARY

LOCATION	SPV.0060.03 SALVAGE TYPE 2 POLE EACH	SPV.0060.04 SALVAGE & REINSTALL 13' STANDARD EACH	SPV.0060.05 SALVAGE & REINSTALL 20' TROMBONE ARM EACH	657.0255 TRANSFORMER BASES STANDARD 11-1/2 INCH BOLT CIRCLE EACH	657.0395.S POLES TYPE 3 EACH	658.5069 SIGNAL MOUNTING HARDWARE LS
CTH II & STH 76	4	4	4	4	4	1
TOTAL	4	4	4	4	4	1

R/W PROJECT NUMBER	SHEET NUMBER	TOTAL SHEETS
6448-03-22		
FEDERAL PROJECT NUMBER	4.1	4

PLAT OF RIGHT OF WAY REQUIRED FOR

STH 110 - USH 45

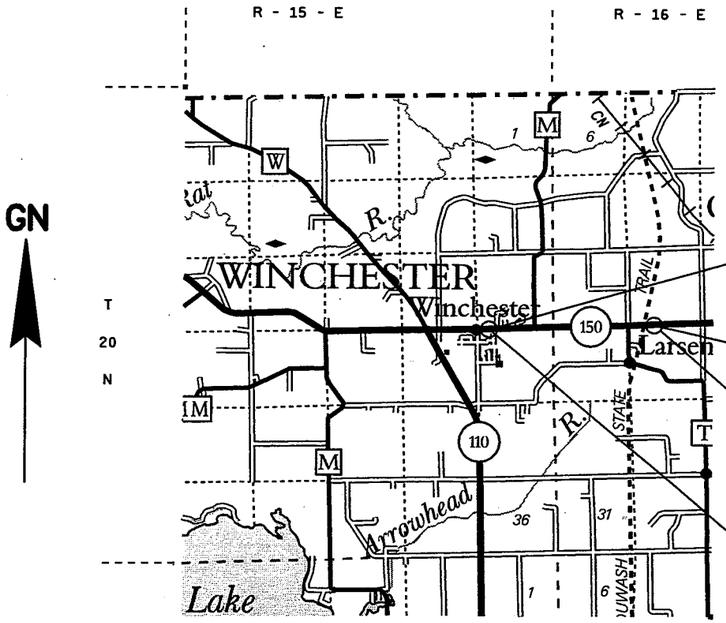
STH 150 — WINNEBAGO COUNTY

4

CONVENTIONAL ABBREVIATIONS AND SYMBOLS

ACCESS POINT	AP	SET R/W MONUMENT	○
ACCESS RIGHTS	AR	(1-1/4" OUTSIDE DIA. IRON PIPE)	
ACRES	AC		
AND OTHERS	ET AL	EXISTING R/W POINT	△
CENTERLINE	℄		
CENTRAL ANGLE OR DELTA	Δ	PROPOSED R/W BOUNDARY POINT	PRW0001
CHORD BEARING	CH BRG		
CHORD DISTANCE	CH DIS		
DEED	(D)	CORPORATE LIMITS	//////////
DOCUMENT	DOC	EXISTING R/W	
EAST BOUND	EB	SECTION LINE	
ENVELOPE DESCRIPTION	ENVL	QUARTER LINE	
ESTATE	EST	SIXTEENTH LINE	
GAS VALVE	GV	OLD CENTERLINE	
LAND CONTRACT	LC	PROPOSED OR NEW R/W LINE	
LENGTH OF CURVE	L	EASEMENT LINE	
MONUMENT	MON		
NORTH BOUND	NB	PARCEL NUMBER	(01)
OUTLOT	OL		
PAGE	PG		
PERMANENT	PERM	UTILITY PARCEL NUMBER	100
PERMANENT LIMITED EASEMENT	PLE		
PRIVATE DRIVEWAY	PD	PROPERTY LINE	PL
PROPERTY LINE	PL	LOT, TIE AND OTHER MINOR DASHED LINES	
QUIT CLAIM DEED	QCD		
RADIUS	R		
REFERENCE LINE	ℚ	NO ACCESS (By Previous Acquisition or Covenant)	
REMAINING	REM		
RIGHT OF WAY	R/W		
SPECIAL CROSSING	SC	NO ACCESS (By Acquisition)	
SECTION	SEC		
SECTION LINE	S	NO ACCESS (By Statutory Authority)	
FOUND IRON PIPE	IP●		
STATION	STA	LIMITED EASEMENT (Temporary or Permanent)	
TANGENT	TAN		
TEMPORARY INTEREST	TI		
TEMPORARY LIMITED EASEMENT	TLE	BURIED FIBER OPTICS CABLE	FO
TIE POINT	DBL	BURIED TELEPHONE CABLE	T
VOLUME	VOL	BURIED GAS LINE	G
ADJOINING LANDS WITH SAME OWNER PARALLEL TO LINE	40'	BUILDING TO BE RAZED	
		FEE ACQUISITION	VARIOUS HATCHING

	COMPENSABLE	NON-COMPENSABLE
POWER POLE		
TELEPHONE POLE		
SIGN		
TELEPHONE PEDESTAL		



BEGIN RELOCATION ORDER

PROJECT 6448-03-22
STATION 132+00.00

131.21 FEET S 88°-59'-34" E OF THE SOUTHWEST CORNER OF SECTION 13, TOWNSHIP 20 NORTH, RANGE 15 EAST.
Y 539253.571
X 759908.683

SECTION B

END RELOCATION ORDER

PROJECT 6448-03-22
STATION 257+00.00

419.69 FEET S 88°-44'-03" W OF THE SOUTH QUARTER CORNER OF SECTION 17, TOWNSHIP 20 NORTH, RANGE 16 EAST.
Y 539330.776
X 772408.170

SECTION A

LAYOUT
0 1 MI.
SCALE

TOTAL NET LENGTH OF CENTERLINE = 2.37 MI.

NOTE (S):

COORDINATES AND BEARINGS ON THIS PLAT ARE ORIENTED TO THE WINNEBAGO COORDINATE SYSTEM. ALL PLAT DISTANCES ARE GROUND LENGTH.

RIGHT OF WAY MONUMENTS ARE TYPE 2 AND ARE PLACED PRIOR TO OR AT THE TIME OF LAND TITLE TRANSFER.

RIGHT OF WAY BOUNDARIES ARE DEFINED WITH COURSES OF THE PERIMETER OF THE HIGHWAY LANDS REFERENCED TO THE U.S. PUBLIC LAND SURVEY OR OTHER SURVEYS OF PUBLIC RECORD.

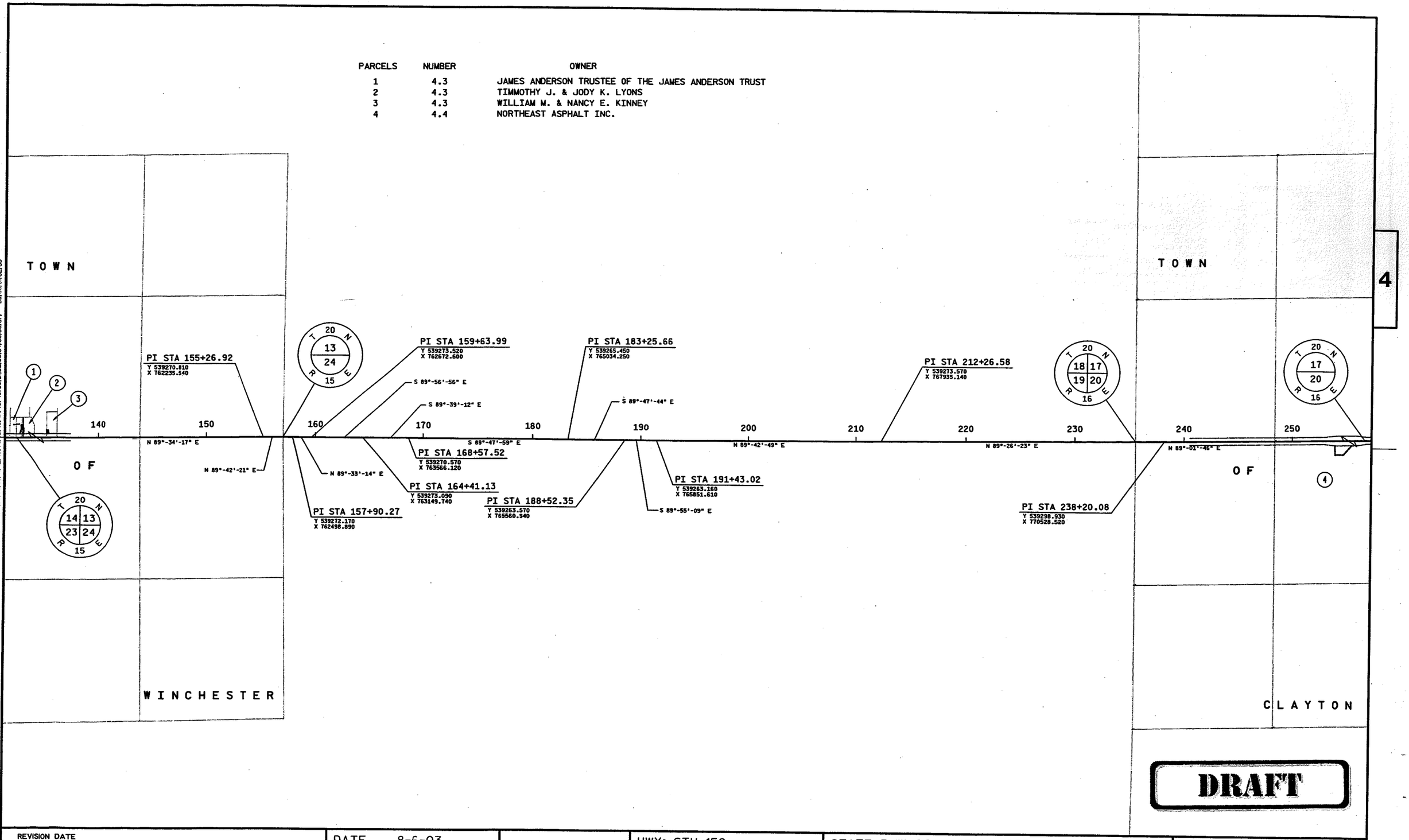
EXISTING RIGHT OF WAY AND PROPERTY LINES SHOWN ON THIS PLAT ARE DRAWN FROM DATA DERIVED FROM MAPS AND DOCUMENTS OF PUBLIC RECORD AND/OR EXISTING OCCUPATION LINES. THIS PLAT MAY NOT BE A TRUE REPRESENTATION OF EXISTING PROPERTY LINES AND SHOULD NOT BE USED AS A SUBSTITUTE FOR AN ACCURATE FIELD SURVEY.

DRAFT

REVISION DATE	STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION
39	APPROVED:
	DATE: _____ DISTRICT DIRECTOR

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

PARCELS	NUMBER	OWNER
1	4.3	JAMES ANDERSON TRUSTEE OF THE JAMES ANDERSON TRUST
2	4.3	TIMMOTHY J. & JODY K. LYONS
3	4.3	WILLIAM M. & NANCY E. KINNEY
4	4.4	NORTHEAST ASPHALT INC.



DRAFT

REVISION DATE	DATE 8-6-03	NOT TO SCALE	HWY: STH 150	STATE R/W PROJECT NUMBER 6448-03-22	PLAT SHEET NO: 4.2	
			COUNTY: WINNEBAGO	CONSTRUCTION PROJECT NUMBER 6448-03-71	PS&E SHEET NO: 40	E

FILE NAME : \\gre31fp1\FCSERVER\d3_644803E\040104_rw.dgn PLOT DATE : 03-NOV-2003 13:28 PLOT BY : DITJYM PLOT NAME : ORG DATE : Originator : Dist3 PLOT SCALE : 800.000000:1.000000

WISDOT/CADDS SHEET 70C

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

Parcel 1 & 2

	DISTANCE	BEARING	GRID COORDINATES
SEC89			Y 539255.88 X 759777.49
DB12	246.17'	N 89°39'44" E	Y 539257.33 X 760023.65
PLE9	33.00'	N 0°25'43" W	Y 539290.33 X 760023.41
PLE5	49.10'	N 0°25'43" W	Y 539339.43 X 760023.04
PLE4	36.40'	N 16°22'26" W	Y 539374.35 X 760012.78
PLE3	10.00'	S 89°34'17" W	Y 539374.28 X 760002.78
PLE6	40.00'	S 0°25'43" E	Y 539334.28 X 760003.08
PLE7	35.11'	S 19°33'17" W	Y 539301.19 X 759991.33
PLE8	11.45'	S 14°45'55" W	Y 539290.12 X 759988.41
PLE9	35.00'	N 89°39'44" E	Y 539290.33 X 760023.41

Parcel 3

	DISTANCE	BEARING	GRID COORDINATES
SEC89			Y 539255.88 X 759777.49
DB13	471.17'	N 89°39'44" E	Y 539258.66 X 760248.65
PLE10	33.00'	N 0°25'43" W	Y 539291.66 X 760248.41
PLE1	34.46'	N 0°25'43" W	Y 539326.11 X 760248.15
PLE2	10.00'	N 89°34'17" E	Y 539326.19 X 760258.15
PLE11	35.19'	S 11°54'10" E	Y 539291.76 X 760265.41
PLE10	17.00'	S 89°39'44" W	Y 539291.66 X 760248.41

SCHEDULE OF LANDS & INTERESTS REQUIRED

PARCEL NUMBER	SHEET NUMBER	OWNER	INTEREST REQUIRED	TOTAL ACRES	R/W ACRES REQUIRED NEW	EXISTING	TOTAL	TOTAL ACRES REM.	P.L.E. ACRES
1	4.3	JAMES ANDERSON TRUSTEE OF THE JAMES ANDERSON TRUST	PLE	0.49					0.02
2	4.3	TIMOTHY J. & JODY K. LYONS	PLE	0.45					0.02
3	4.3	WILLIAM M. & NANCY E. KINNEY	PLE	0.54					0.01
100	4.3	WPS (40)	RELEASE OF RIGHTS						
101	4.3 & 4.4	CENTURYTEL (41)	RELEASE OF RIGHTS						

GN

TOWN

WALLS

W

SW-SW

O F

PL

100

101

10' UTILITY EASEMENT AS PER VOL 1348 PG 269

132+95.00 120.00' 133+05.00 120.00'

132+95.00 80.00' 133+15.00 85.00'

PLE FOR DRAINAGE

132+80.00 35.95' 132+83.00 47.00' 133+15.00 35.90'

135+40.00 70.00' 135+50.00 70.00'

PLE FOR DRAINAGE

135+40.00 35.54' 135+57.00 35.51'

1 2 3

BERNTSEN MONUMENT SEC89 Y 539255.878 X 759777.490

BERNTSEN MONUMENT QTR90 Y 539271.448 X 762418.010

T 20 N R 15 E — 14 13 23 24

T 20 N R 13 24 15 E

EXISTING R/W

33'

132 133 134 135 136 137

DB12 DB13

N 89°-39'-44" E ℄

N 89°-34'-17" E ℄ STH 150

CONSTRUCTION & RW ℄

NL

FILLER CAPS

SIGN

CANOPY

ANT

NW-NW

MH

X

W

BEGIN RELOCATION ORDER
PROJECT 6448-03-22
STATION 132+00
Y 539253.571
X 759908.683

NOTE(S):
AREAS SHOWN IN THE TOTAL ACRES COLUMN OF THE SCHEDULE OF LANDS & INTEREST TABLE MAY BE APPROXIMATE AND ARE DERIVED FROM TAX ROLLS OR OTHER AVAILABLE SOURCES AND MAY NOT INCLUDE LANDS OF THE OWNER WHICH ARE NOT CONTIGUOUS TO THE AREA TO BE ACQUIRED.
EXISTING R/W WAS ACQUIRED FROM PROJECT(S):
6448-01-21

WINCHESTER

DRAFT

SECTION A

4

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

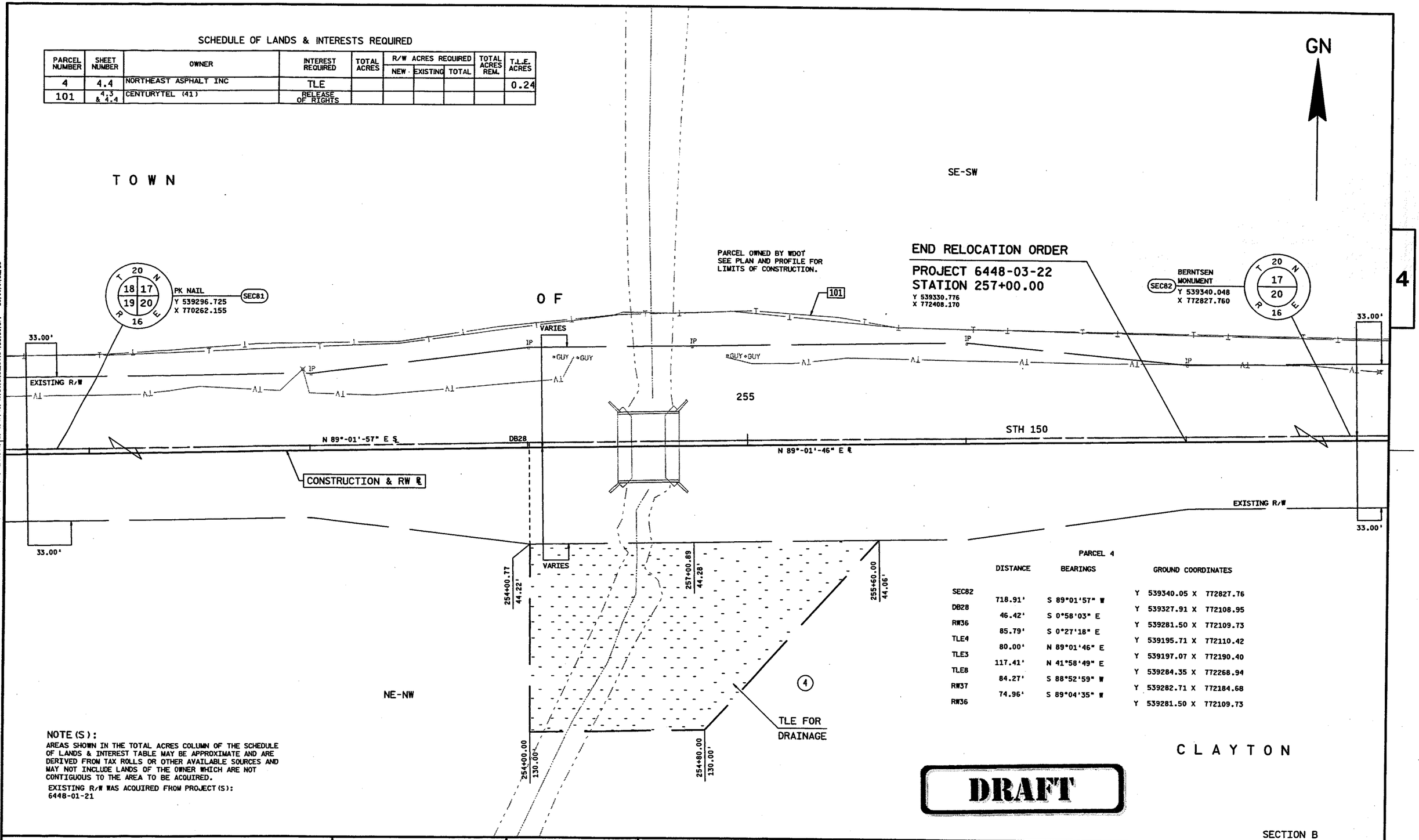
REVISION DATE	DATE 8-6-03	SCALE, FEET 0 20 40	HWY: STH 150	STATE R/W PROJECT NUMBER 6448-03-22	PLAT SHEET NO: 4.3	
	GRID FACTOR N/A		COUNTY: WINNEBAGO	CONSTRUCTION PROJECT NUMBER 6448-03-71	PS&E SHEET NO: 41	E

FILE NAME : \\gre31fp1\FCSERVER\d3_644803E\040102_rw.dgn PLOT DATE : 03-NOV-2003 13:28 PLOT BY : DITJYM PLOT NAME : 040102 rw.i ORG DATE : 05-14-03 Originator : Dist3Jmm PLOT SCALE : 40.000000:1.000000

WISDOT/CADDS SHEET 75C

SCHEDULE OF LANDS & INTERESTS REQUIRED

PARCEL NUMBER	SHEET NUMBER	OWNER	INTEREST REQUIRED	TOTAL ACRES	R/W ACRES REQUIRED			TOTAL ACRES REM.	T.L.E. ACRES
					NEW	EXISTING	TOTAL		
4	4.4	NORTHEAST ASPHALT INC	TLE						0.24
101	4.3 & 4.4	CENTURYTEL (41)	RELEASE OF RIGHTS						



PARCEL 4

	DISTANCE	BEARINGS	GROUND COORDINATES
SEC82			Y 539340.05 X 772827.76
	718.91'	S 89°01'57" W	
DB28			Y 539327.91 X 772108.95
	46.42'	S 0°58'03" E	
RW36			Y 539281.50 X 772109.73
	85.79'	S 0°27'18" E	
TLE4			Y 539195.71 X 772110.42
	80.00'	N 89°01'46" E	
TLE3			Y 539197.07 X 772190.40
	117.41'	N 41°58'49" E	
TLE8			Y 539284.35 X 772268.94
	84.27'	S 88°52'59" W	
RW37			Y 539282.71 X 772184.68
	74.96'	S 89°04'35" W	
RW36			Y 539281.50 X 772109.73

NOTE(S):

AREAS SHOWN IN THE TOTAL ACRES COLUMN OF THE SCHEDULE OF LANDS & INTEREST TABLE MAY BE APPROXIMATE AND ARE DERIVED FROM TAX ROLLS OR OTHER AVAILABLE SOURCES AND MAY NOT INCLUDE LANDS OF THE OWNER WHICH ARE NOT CONTIGUOUS TO THE AREA TO BE ACQUIRED.

EXISTING R/W WAS ACQUIRED FROM PROJECT(S):
6448-01-21

DRAFT

SECTION B

REVISION DATE	DATE 8-6-03	SCALE, FEET 0 20 40	HWY: STH 150	STATE R/W PROJECT NUMBER 6448-03-22	PLAT SHEET NO: 4.4	
	GRID FACTOR N/A		COUNTY: WINNEBAGO	CONSTRUCTION PROJECT NUMBER 6448-03-71	PS&E SHEET NO: 42	E

FILE NAME : \\gre31fp1\FCSERVER\d3_644803E\040103_rw.dgn PLOT DATE : 18-NOV-2003 11:13 PLOT BY : DITJYM PLOT NAME : 040103 rw.i ORG DATE : 07-24-03 Originator : Dist3jmm PLOT SCALE : 40.000000:1.000000

WISDOT/CADDS SHEET 75C

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

N

DRAINAGE AREA #1

PI 1+60.74

PI 1+69.92

PI 1+44.09

PI 1+07.50

EROSION MAT
CLASS 1 TYPE B

PI 0+84.28

PI 0+85.30

SILT FENCE

PI 0+54.29

TEMPORARY DITCH
CHECKS

SALVAGE TOPSOIL, FERTILIZE,
SEED AND MULCH

PI 0+29.31

PI 0+04.50

PI 0+00.00

CAUTION
GAS
MAIN

EXISTING R/W

PI 131+11.77

DRAINAGE AREA #2

PI 1+93.90

PC 1+94.92

PT 2+14.92

PI 2+27.42

PI 2+53.78

PI 2+76.30

PI 2+86.32

PI 1+69.35

PI 1+45.23

DID NOT
GRADE THIS
AREA PER
PROPERTY OWNERS
REQUEST

CONSTRUCTION PERMIT AREA

TEMPORARY DITCH
CHECKS

PI 0+86.29

PI 0+57.35

EROSION MAT
CLASS 1 TYPE B

SILT FENCE

PI 0+39.10

PI 0+30.26

LIMITS OF DRAINAGE
CLEAN OUT

PI 0+10.01

PI 0+00.00

CAUTION
GAS
MAIN

EXISTING R/W

OFF-ROADWAY CONSTRUCTION
LIMITS STA 135+60

131 132 133 134 135 136 137

OFF-ROADWAY CONSTRUCTION
LIMITS STA 132+80

CLEAN OUT OF
CULVERT C.C.O. #2 CTH II

CLEAN OUT OF CULVERT
CONTRACT MOD. #2

INL

FILLER
CAPS

SIGN

CANOPY

ANT

MH

EXISTING R/W

EXISTING R/W

DRAINAGE AREA #1		
STATION	X	Y
0+00.00	760002.018	539280.050
0+04.50	760003.721	539284.210
0+29.31	760008.912	539308.478
0+54.29	760010.725	539333.390
0+84.28	760007.608	539363.216
0+85.30	760007.481	539364.231
1+07.50	760009.510	539386.340

DRAINAGE AREA #2		
STATION	X	Y
0+00.00	760258.602	539287.594
0+10.01	760255.714	539297.180
0+30.26	760253.611	539317.320
0+39.10	760253.154	539326.150
0+57.35	760254.251	539344.360
0+86.29	760255.949	539373.253
1+45.23	760254.824	539432.187
1+69.35	760254.276	539456.297
1+93.90	760254.805	539480.839
1+94.92	760254.916	539481.854
2+14.92	760268.247	539494.540

PROJECT NO: 6448-03-72	HWY: CTH II	COUNTY: WINNEBAGO	PLAN - DRAINAGE EASEMENTS	SHEET 43	E

FILE NAME : \\gre31fp1\FCSERVER\d3_644803E\050201_pn.dgn PLOT DATE : 05-MAR-2004 08:12 PLOT BY : DOTC3S PLOT NAME : 050201PN.I PLOT SCALE : 40.000000:1.000000

WISDOT/CADDS SHEET 44

LEGEND

RIPRAP MEDIUM

EROSION MAT CLASS I TYPE B

STEEL PLATE BEAM GUARD

SILT FENCE

N

BEAM GUARD
STA 253+18 - 254+39
STA 254+70 - 256+15 LT
(SEE MISCELLANEOUS QUANTITIES)

5" HMA PAVED SHOULDER (TYP)
(SEE DETAIL)

CONSTRUCT TEMPORARY DIVERSION DAM

Limit of Pavement Removal

CONSTRUCTION LIMITS
STA 252+65

CONSTRUCTION LIMITS

~~SALVAGED TOPSOIL, FERTILIZER, SEED AND MULCH~~ (Not Needed)

~~LIMITS OF TEMPORARY CHANNEL BOTTOM~~ Not Needed

Milled Butt Joint AT Sta. 257+53

Limit of Pavement Removal

CONSTRUCTION LIMITS
STA 256+55

TEMP. SHEET PILING

EXISTING R/W

251 CTH II 252 253 254 255 256 257

B-70-243

48'

Milled Butt Joint

SAWCUT

SAWCUT

EXISTING R/W

EXISTING R/W

OVERLAY of 2 - 9.5" INCHES HMA PAVEMENT TYPE E-3

REMOVE GUARDRAIL (TYPICAL)

EXTENDED To Protect Steep Slope at culvert END DIAL

5" HMA PAVEMENT (TYP)

REMOVE OLD STRUCTURE C-70-UNKNOWN

SIGN

CONSTRUCT TEMPORARY DIVERSION DAM (Not Needed)

35'

OVERLAY 2-INCHES OF HMA PAVEMENT

BEAM GUARD
STA 253+06 - 254+39
STA 254+70 - 255+90 RT
(SEE MISCELLANEOUS QUANTITIES)

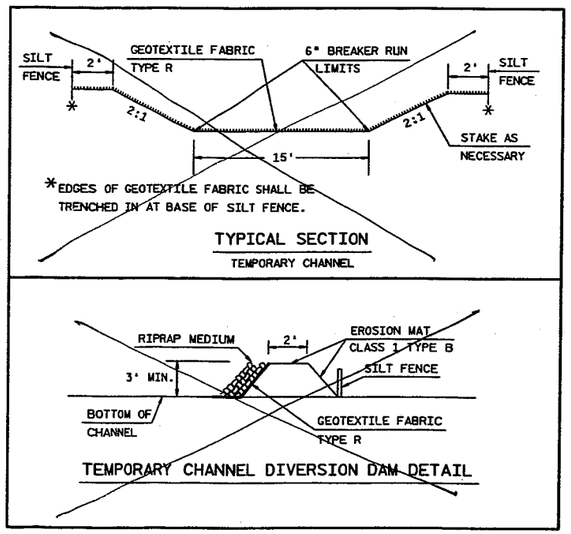
NEW STRUCTURE B-70-243 REQ'D.
SINGLE SPAN - FLAT SLAB BRIDGE
(SEE STR. DWGS., SHEETS 1 THRU 8)

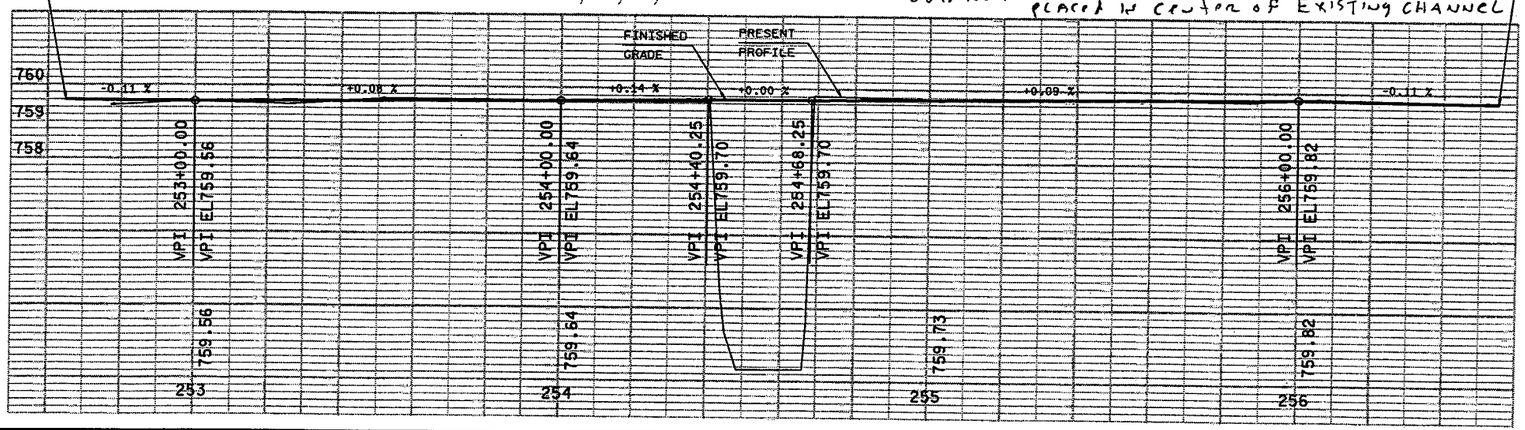
~~SALVAGED TOPSOIL, FERTILIZER, SEED AND MULCH~~ (Not Needed)

CONSTRUCT TEMPORARY CHANNEL
CDID Not construct - USED Temp. Sheet Piling placed in center of Existing CHANNEL

TEMPORARY EASEMENT LIMITS

(Not Needed see C.C.O. #1)





PROJECT NO: 6448-03-72	HWY: CTH II	COUNTY: WINNEBAGO	PLAN - STRUCTURE DIVERSION CHANNEL	SHEET 44	E

FILE NAME : \\gre31fp1\FCSERVER\d3_644803E\021204_pd.dgn
PLOT DATE : 10-MAR-2004 09:20
PLOT BY : DOTBRB
PLOT NAME :
PLOT SCALE : 40.000000:1.000000
WISDOT/CADDS SHEET 44

CONSTRUCTION LIMITS
STA. 443+40
MATCH EXISTING

SAWCUT

ASPHALTIC CE

REMOVE & REPLACE
CONCRETE CURB & GUTTER
30-INCH TYPE G

EXISTING MANHOLE (TO REMAIN)
ADJUST MANHOLE COVER

EXTEND ~~1.6'~~ 5' 0"
SS PIPE RC
CLASS III 12-INCH

REMOVE & REPLACE
INLET TYPE 3 ~~W3~~ W

REMOVE & REPLACE
42' CP CLASS III
12-INCH

ASPHALTIC CE

SAWCUT

GAS MAIN

CAUTION

CONSTRUCTION LIMITS
STA. 14+14.5
MATCH EXISTING

SAWCUT

STH 76

U.S.H. 45

PI 14+91.44

REMOVE & REPLACE
42' CP CLASS III
18-INCH

ASPHALTIC CE

SAWCUT

EXISTING 18" STORM
SEWER PIPE (TO REMAIN)

REMOVE & REPLACE
CONCRETE CURB & GUTTER
36-INCH TYPE A

ASPHALTIC SURFACE
SAFETY ISLANDS

CONCRETE MEDIAN
SLOPED NOSE

ASPHALTIC CE

REMOVE & REPLACE
40' CP CLASS III
18-INCH

SAWCUT

ASPHALTIC PE

PI 450+52.67

19+98.94 STH 76
447+12.84 CTH II-

CTH II
S.T.H. 150

PI 441+53.71
= 180° 06' 23"

ASPHALTIC PE

REMOVE & REPLACE
36' CP CLASS III
12-INCH

SAWCUT

CONCRETE MEDIAN
SLOPED NOSE

EXISTING 12" STORM
SEWER PIPE (TO REMAIN)

EXISTING INLET
(TO REMAIN)

REMOVE & REPLACE
CONCRETE CURB & GUTTER
30-INCH TYPE G

RESTORE CE

REMOVE & REPLACE
CONCRETE SURFACE DRAIN

REMOVE & REPLACE
44' CP CLASS III
18-INCH

RESTORE CE

PARKING LOT

CONSTRUCTION LIMITS
STA. 26+23
MATCH EXISTING

STH 76

SAWCUT

PI 24+88.84

GAS MAIN

CAUTION

SAWCUT

ASPHALTIC CE

REMOVE & REPLACE
CONCRETE SURFACE DRAIN

SAWCUT

ASPHALTIC CE

REMOVE & REPLACE
CONCRETE CURB & GUTTER
30-INCH TYPE G

20+00.00 STH 76
447+12.84 CTH II-

REMOVE CONCRETE CURB
REPLACE WITH CONCRETE CURB & GUTTER
30-INCH TYPE G

ASPHALTIC CE

REMOVE & REPLACE
CONCRETE SURFACE DRAIN

SAWCUT

CONSTRUCTION LIMITS
STA. 449+80
MATCH EXISTING

BLDG

N

5

E

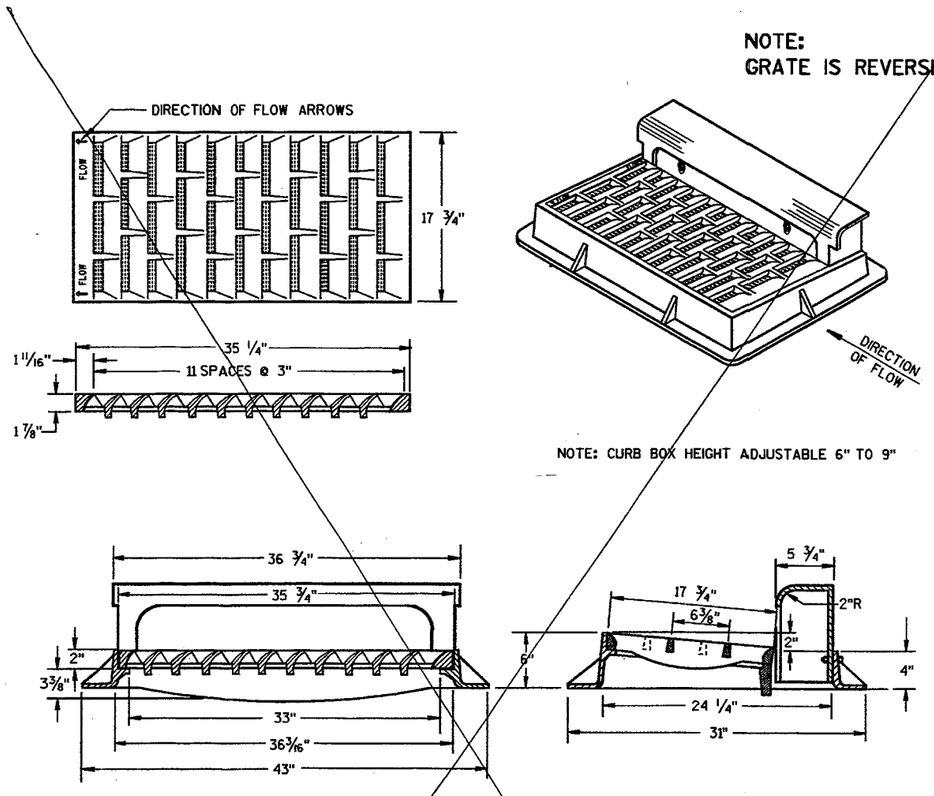
STATE PROJECT NUMBER:6448-03-72	HWY: CTH II	COUNTY: WINNEBAGO	PLAN - INTERSECTION RECONSTRUCTION	SCALE, FEET 0 50 100	SHEET NO:45	E

FILE NAME : \\gre31fp1\FCSERVER\d3_644803E\021202_pd.dgn PLOT DATE : 04-DEC-2003 13:07 PLOT BY : DOTMZC PLOT NAME : 021202 pd ORG DATE : 3-3-03 Originator : d3 PLOT SCALE : 99.698795:1.000000

WISDOT/CADDS SHEET 44

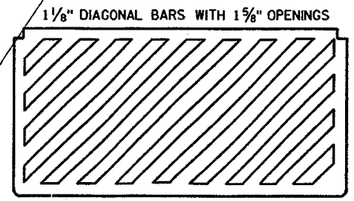
LEVELS ON • 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,59,60,61,62,63

NOTE:
GRATE IS REVERSIBLE.



TYPE "H"

(APPROXIMATE WEIGHT 422 LBS.)
FRAME..... 175 LBS.
GRATE..... 138 LBS.
CURB BOX..... 109 LBS.



SPECIAL GRATE FOR TYPE "H" COVER

(MEASURES 35 1/4" X 17 3/4" X 2")
(APPROXIMATE WEIGHT 172 LBS.)
GRATE..... 172 LBS.

(NOTED AS TYPE H-S ON DRAINAGE TABLE)

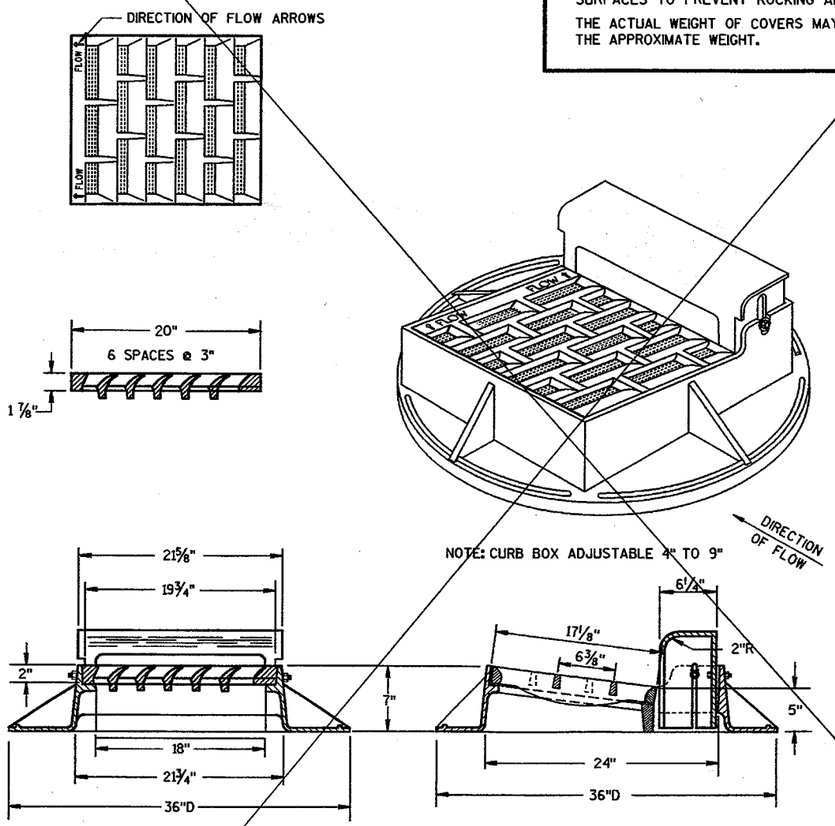
GENERAL NOTES

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 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.

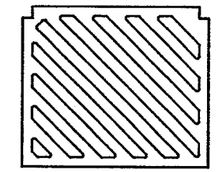
THE ACTUAL WEIGHT OF COVERS MAY VARY WITHIN 5 PERCENT, PLUS OR MINUS, OF THE APPROXIMATE WEIGHT.



NOTE:
GRATE IS REVERSIBLE.

TYPE "A"

(APPROXIMATE WEIGHT 325 LBS.)
FRAME..... 157 LBS.
GRATE..... 84 LBS.
CURB BOX..... 84 LBS.



SPECIAL GRATE FOR TYPE "A" COVER

(MEASURES 19 3/4" X 17" X 1 7/8"
GRATE..... 84 LBS.

(NOTED AS TYPE A-S ON DRAINAGE TABLE)

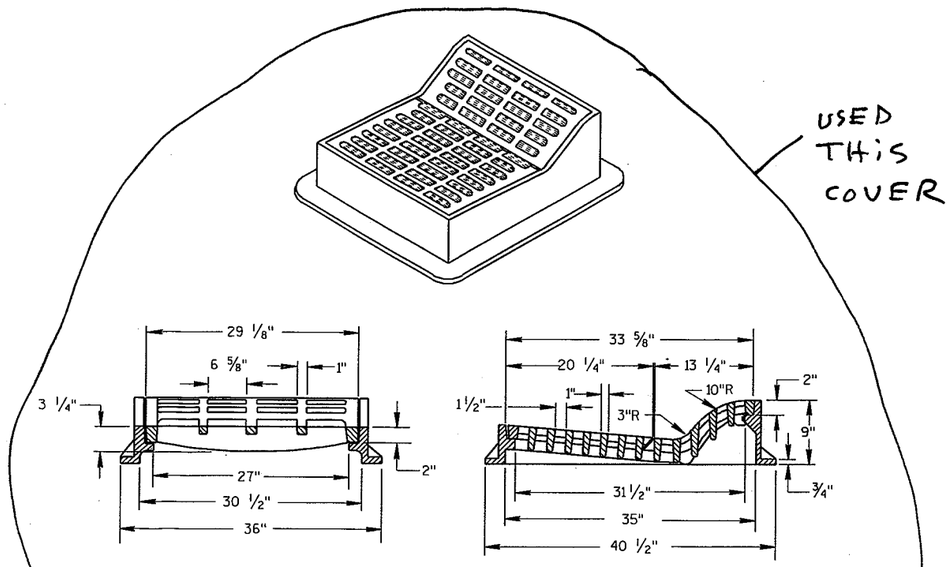
INLET COVERS
TYPE A, H, A-S, & H-S

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED 10/04/99
DATE
Roy K. Huntsman
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

S.D.D. 8 A 5-16d

~~S.D.D. 8 A 5-16c~~
8A 5-16C

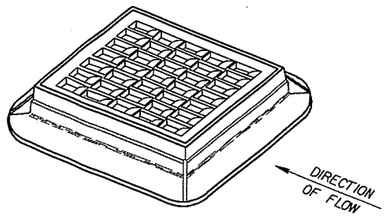


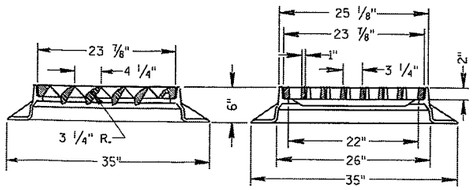
TYPE "F"

(APPROXIMATE WEIGHT 645 LBS.)

FRAME.....300 LBS.
GRATE.....165 LBS.
GRATE.....180 LBS.

USE WITH CONCRETE CURB & GUTTER, 36 INCH.

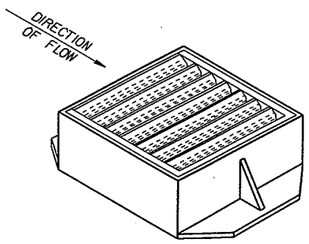


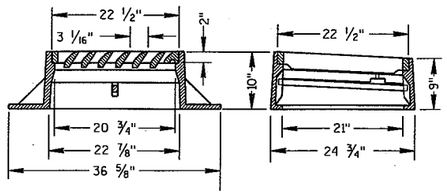


TYPE "S"

(APPROXIMATE WEIGHT 334 LBS.)

FRAME.....165 LBS.
GRATE.....169 LBS.

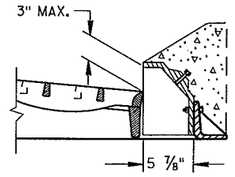




TYPE "V"

(APPROXIMATE WEIGHT 405 LBS.)

FRAME.....270 LBS.
GRATE.....130 LBS.
SAFETY BAR.....5 LBS.



ALTERNATIVE CURB BOX FOR TYPE "HM" COVER

(APPROXIMATE WEIGHT 79 LBS.)
CURB BOX.....79 LBS.

USE WITH TYPES G & J CONCRETE CURB & GUTTER, 30 INCH
NOTED AS TYPE HM-GJ ON DRAINAGE TABLE

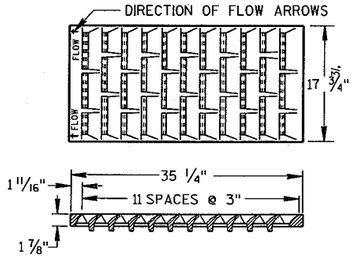
NOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM-GJ" COVER
NOTED AS TYPE HM-GJ-S ON DRAINAGE TABLE

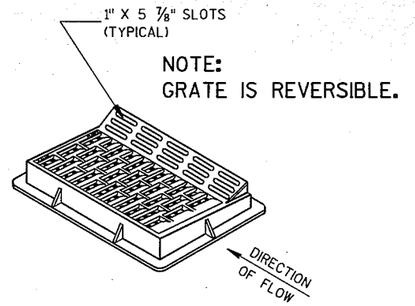
GENERAL NOTES

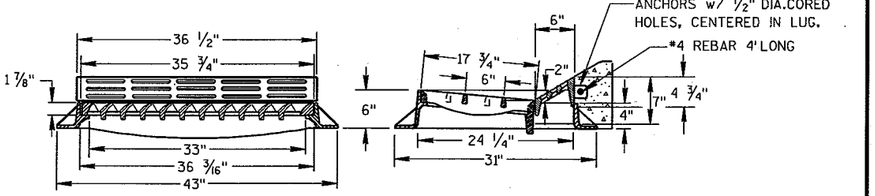
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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.

THE ACTUAL WEIGHT OF COVERS MAY VARY WITHIN 5 PERCENT, PLUS OR MINUS, OF THE APPROXIMATE WEIGHT.







TYPE "HM"

(APPROXIMATE WEIGHT 375 LBS.)
FRAME.....175 LBS.
GRATE.....138 LBS.
CURB BOX.....62 LBS.

USE WITH 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

INLET COVERS
TYPE F, HM, HM-S, S, V, HM-GJ, & HM-GJ-S

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

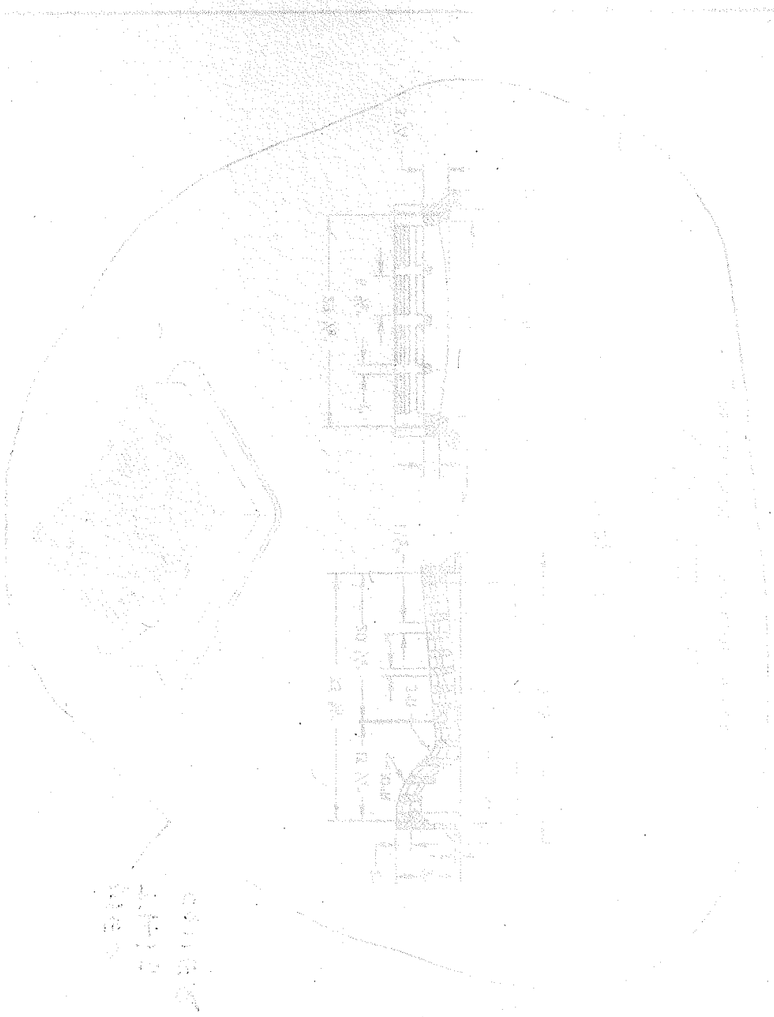
APPROVED

DATE _____ CHIEF ROADWAY DEVELOPMENT ENGINEER

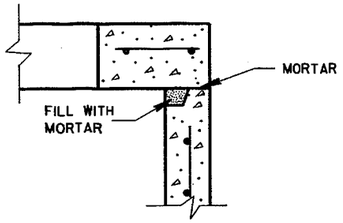
FHWA

S.D.D. 8 A 5-16c

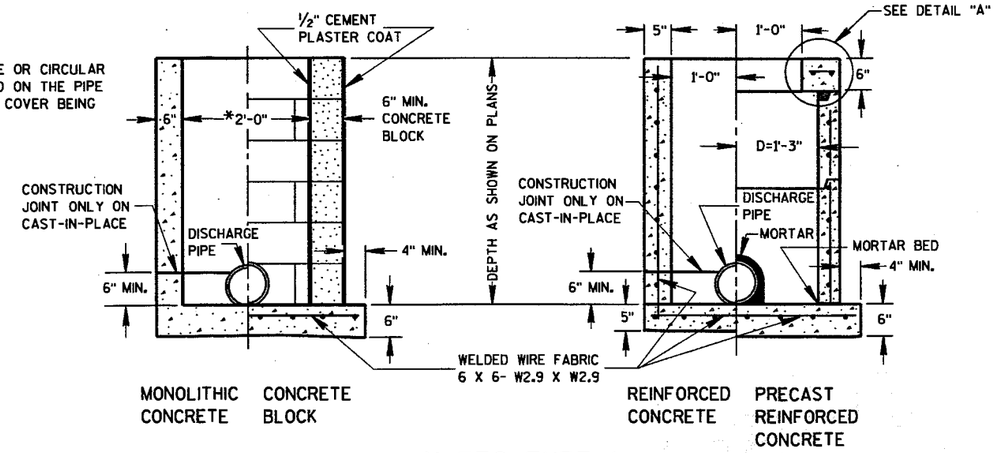
S.D.D. 8 A 5-16c



*SELECTION OF SQUARE OR CIRCULAR DESIGN WILL BE BASED ON THE PIPE SIZES AND THE INLET COVER BEING UTILIZED



DETAIL "A"



INLETS TYPE 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.

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 AASHTO DESIGNATION M 199.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 1-C", "CATCH BASINS 1-B", "INLETS 3-H", ETC. THE FIRST DIGIT DESIGNATES THE MASONRY PORTION OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

PRECAST REINFORCED 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.

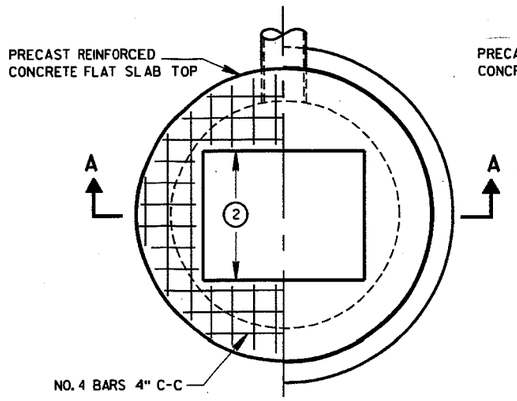
PRECAST REINFORCED CONCRETE FLAT SLAB TOPS MAY BE USED ON THE STRUCTURES. THE TOPS SHALL BE INSTALLED ON A BED OF MORTAR.

ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

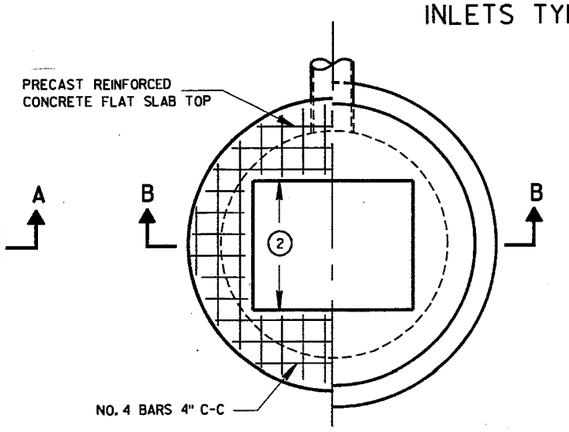
PRECAST REINFORCED CONCRETE RISERS SHALL BE PLACED WITH TONGUE DOWN.

(1) USE 2'-6" OPENING FOR TYPE 2 INLETS, 3'-0" OPENING FOR TYPE 3 INLETS, AND 2'-11" FOR TYPE 4 INLETS.

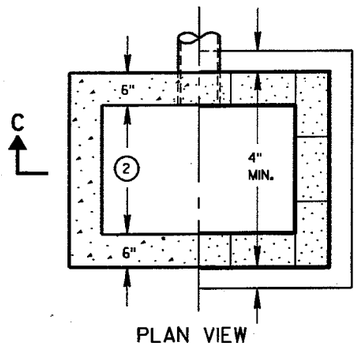
(2) USE 2'-0" OPENING FOR TYPE 1, 2 & 3 INLETS, 2'-6½" OPENING FOR TYPE 4 INLETS.



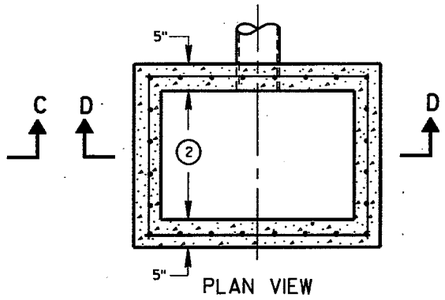
PLAN VIEW



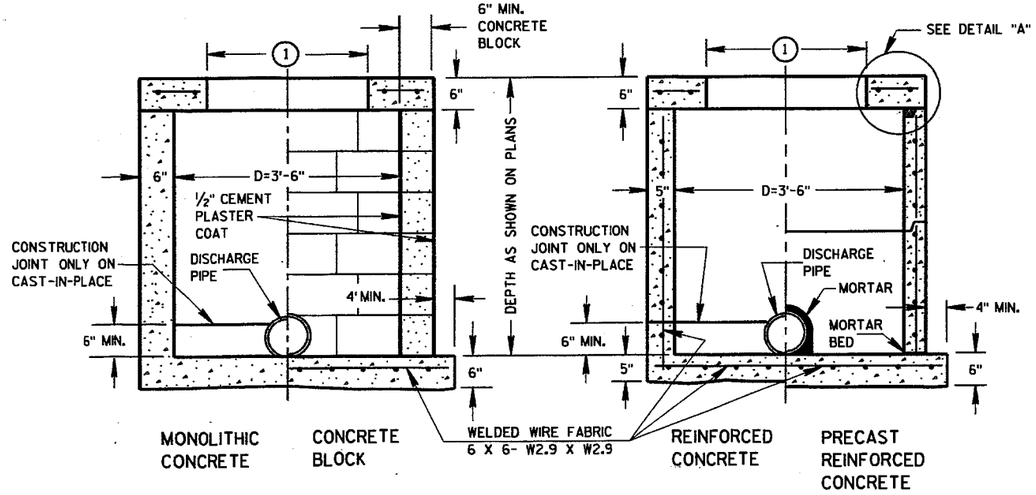
PLAN VIEW



PLAN VIEW

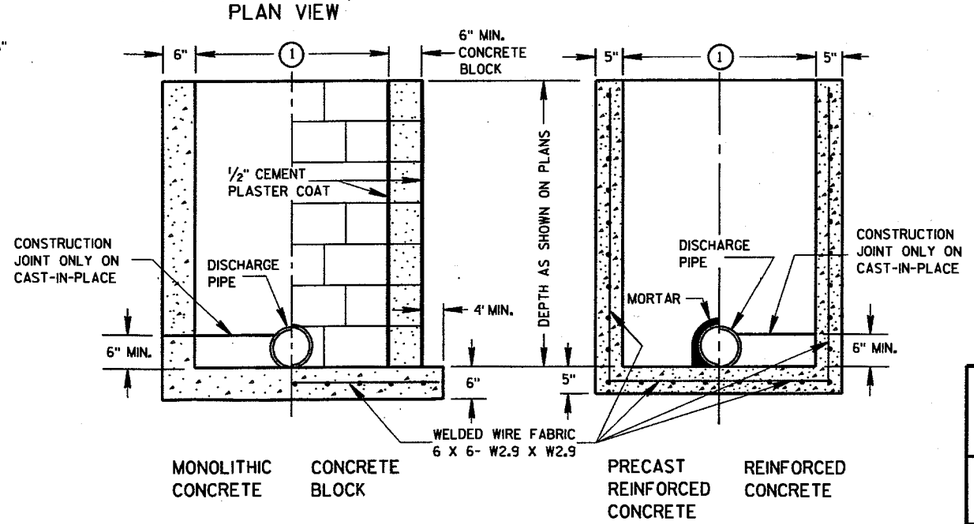


PLAN VIEW



SECTION A-A

SECTION B-B



SECTION C-C

SECTION D-D

INLETS TYPE 2, 3 & 4

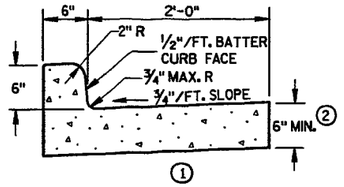
INLETS TYPE 1, 2, 3 & 4

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/26/94
DATE
Roy L. Thiessen
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

S.D.D. 8 C 1-5

S.D.D. 8 C 1-5



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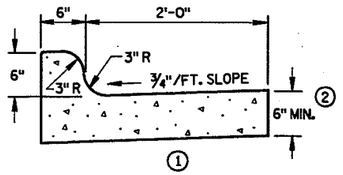
TYPES A & D



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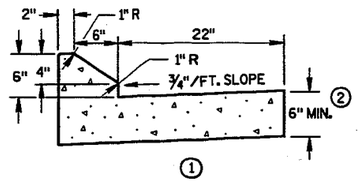
TYPES K & L



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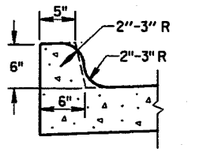
TYPES G & J

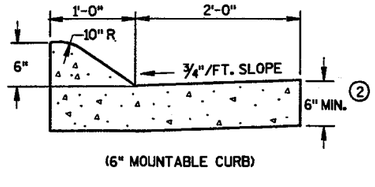


OPTIONAL CURB SHAPE

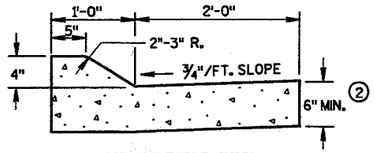
1

FOR TYPES K & L

CONCRETE CURB & GUTTER 30"



(6" MOUNTABLE CURB)



(4" MOUNTABLE CURB)

1

TYPES A & D

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.

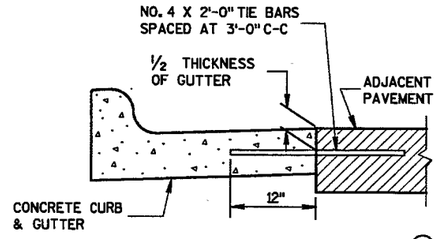
WHERE THE TRANSVERSE JOINTS IN THE PAVEMENT ARE REQUIRED TO BE SEALED, THE JOINTS IN THE INTEGRAL CURB AND GUTTER SHALL BE SEALED TO THE FACE OF CURB WITH THE SAME TYPE OF SEALANT. THE COST OF FURNISHING AND INSTALLING THIS SEALANT SHALL BE INCIDENTAL TO THE ITEM CONCRETE CURB AND GUTTER.

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

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

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

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



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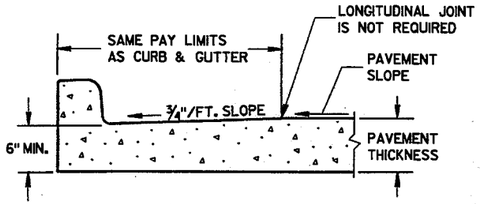
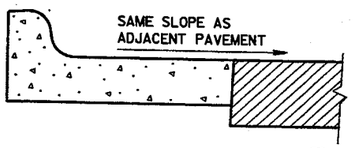
TYPICAL TIE BAR LOCATION



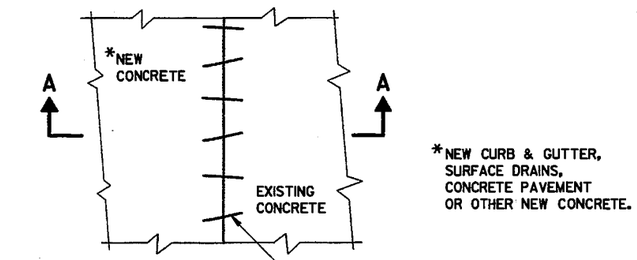
PARTIAL SECTION OF PAVEMENT WITH INTEGRAL CURB & GUTTER



3

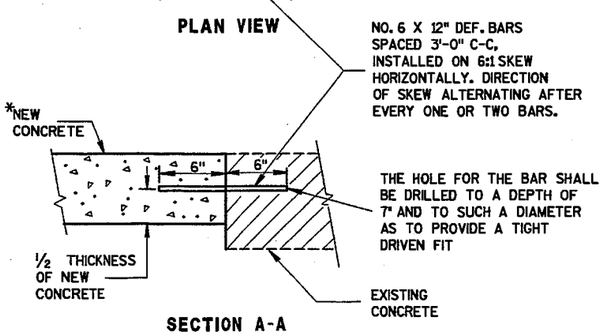
REVERSE SLOPE GUTTER

(TYPICAL FOR ALL CURB & GUTTER TYPES)



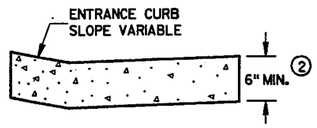
PLAN VIEW

*NEW CURB & GUTTER, SURFACE DRAINS, CONCRETE PAVEMENT OR OTHER NEW CONCRETE.



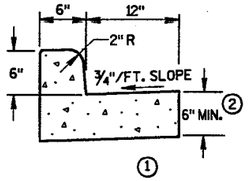
SECTION A-A

PAVEMENT TIES



DRIVEWAY ENTRANCE CURB

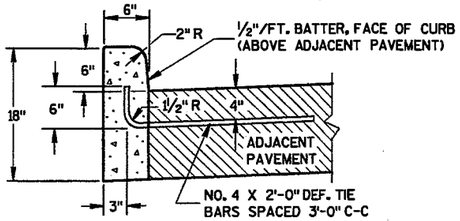
(WHEN DIRECTED BY THE ENGINEER)



1

TYPES A & D

CONCRETE CURB & GUTTER 18"



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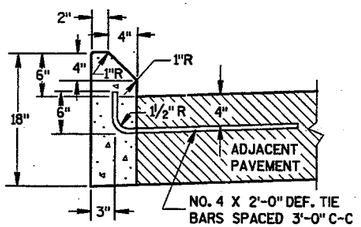
TYPES A & D



1

TYPES G & J

CONCRETE CURB

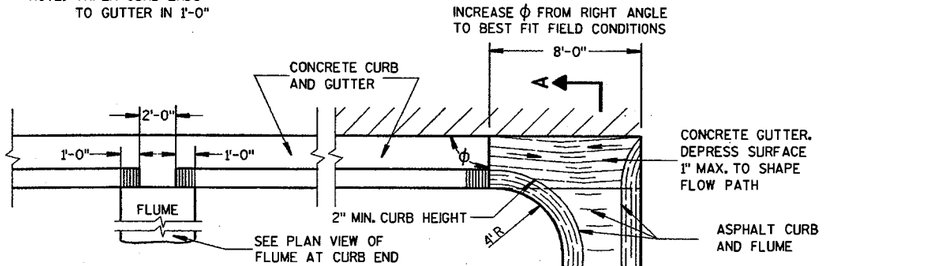
CONCRETE CURB, CONCRETE CURB & GUTTER AND PAVEMENT TIES	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 04/16/99 DATE	Roy L. Ramerman CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA	

S.D.D. 8 D 1-13

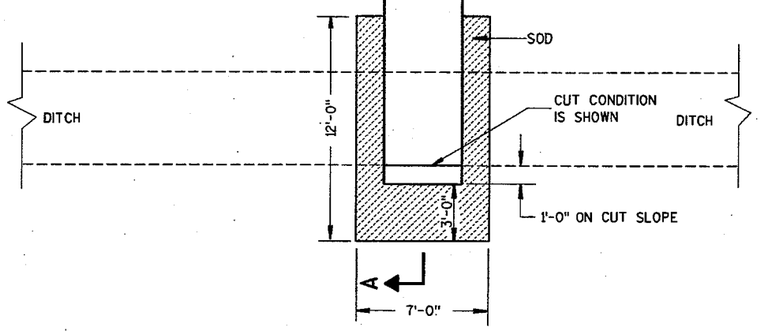
S.D.D. 8 D 1-13

ASPHALTIC FLUME

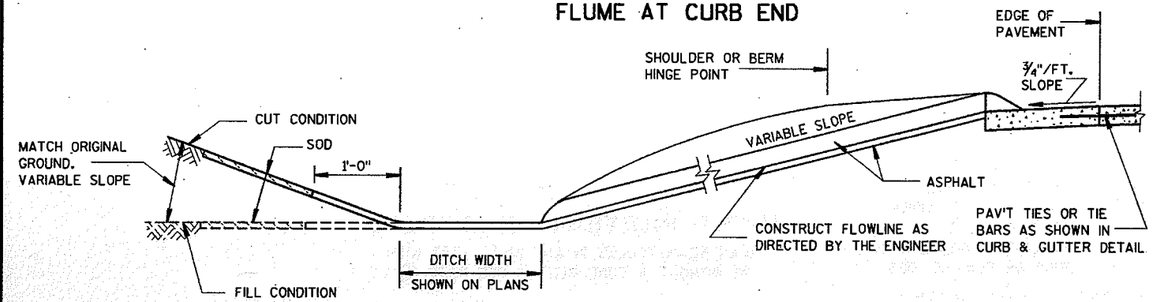
NOTE: TAPER CURB ENDS TO GUTTER IN 1'-0"



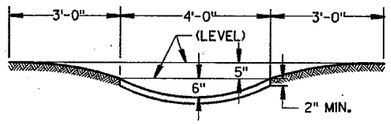
PLAN VIEW
CURB OPENING FOR FLUME



PLAN VIEW
FLUME AT CURB END



SECTION A-A



SECTION B-B

GENERAL NOTES

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

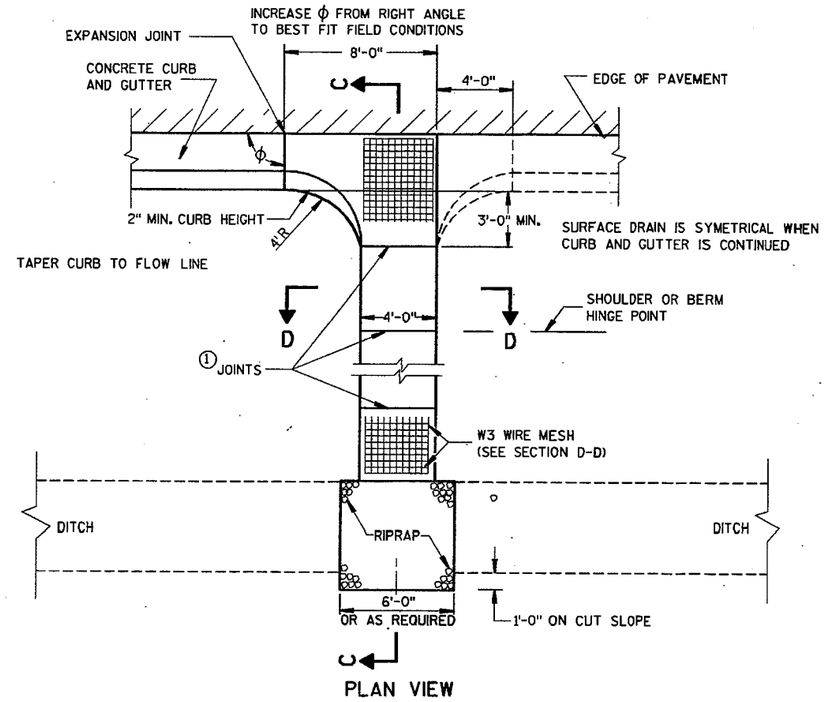
WELDED STEEL WIRE FABRIC SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

① JOINTS SHALL BE ⅛ TO ¼ INCH WIDE BY 1½ INCHES DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.

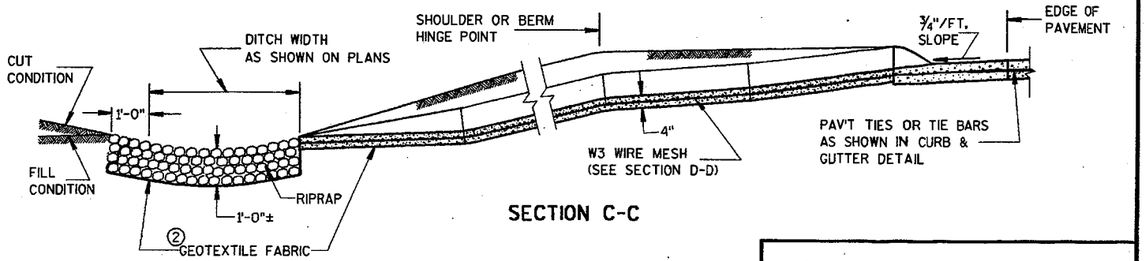
② GEOTEXTILE FABRIC TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.

③ CONCRETE SURFACE DRAIN WITHOUT CURB AND GUTTER MAY BE USED ON BACKSLOPES WHEN SPECIFIED

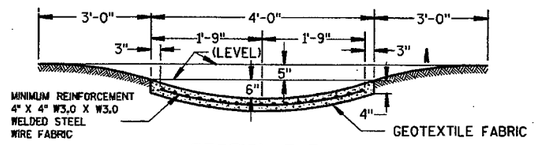
③ CONCRETE SURFACE DRAIN



PLAN VIEW



SECTION C-C



SECTION D-D

CONCRETE SURFACE DRAIN & ASPHALTIC FLUME

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

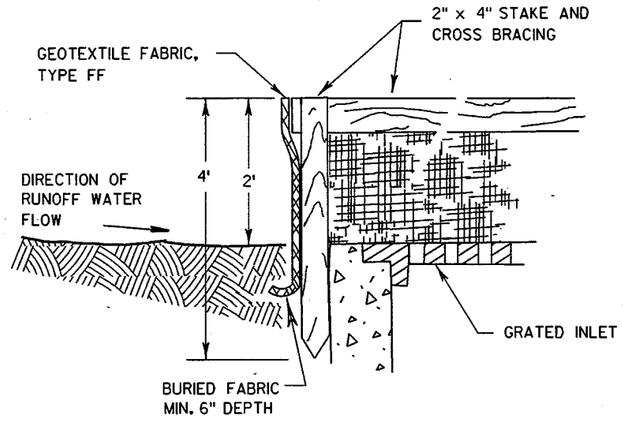
APPROVED 10/23/09
DATE

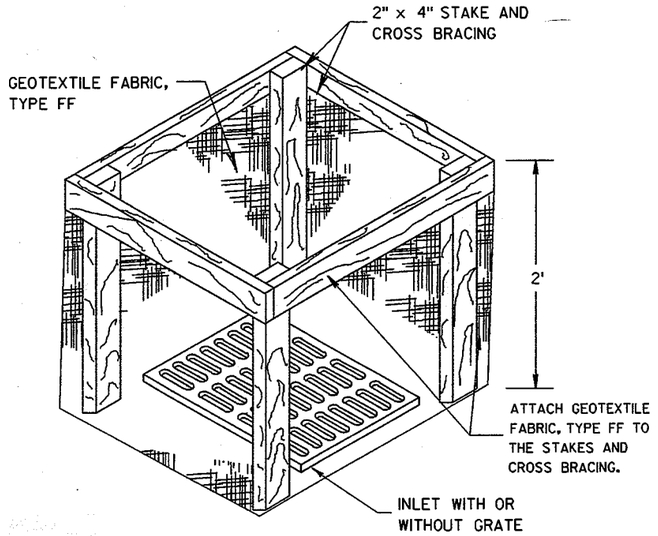
STATE DESIGN ENGINEER FOR HWYS

FHWA

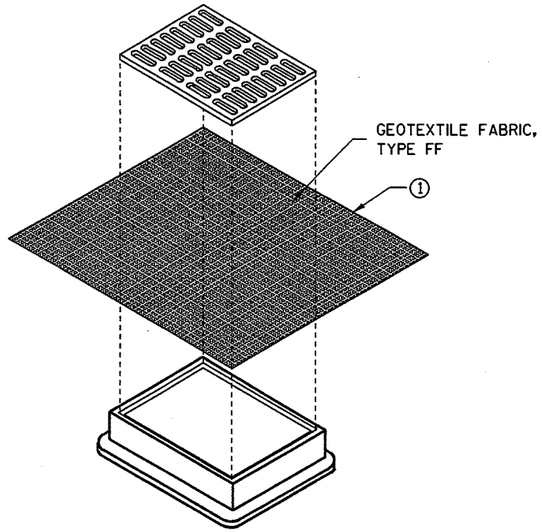
S.D.D. 8 D 4-3

S.D.D. 8 D 4-3



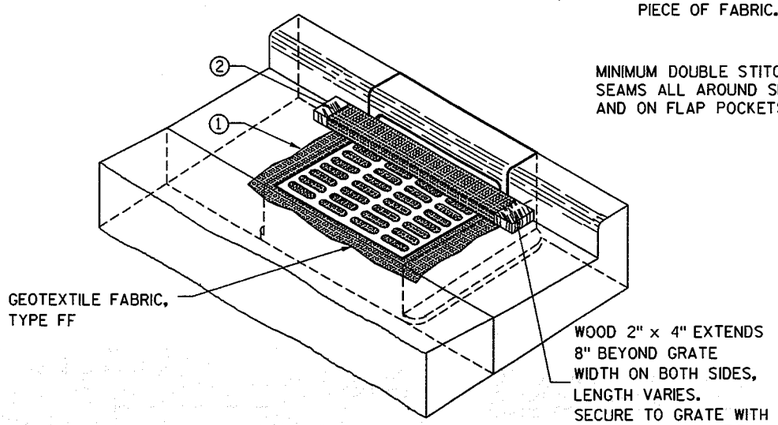


INLET PROTECTION, TYPE A

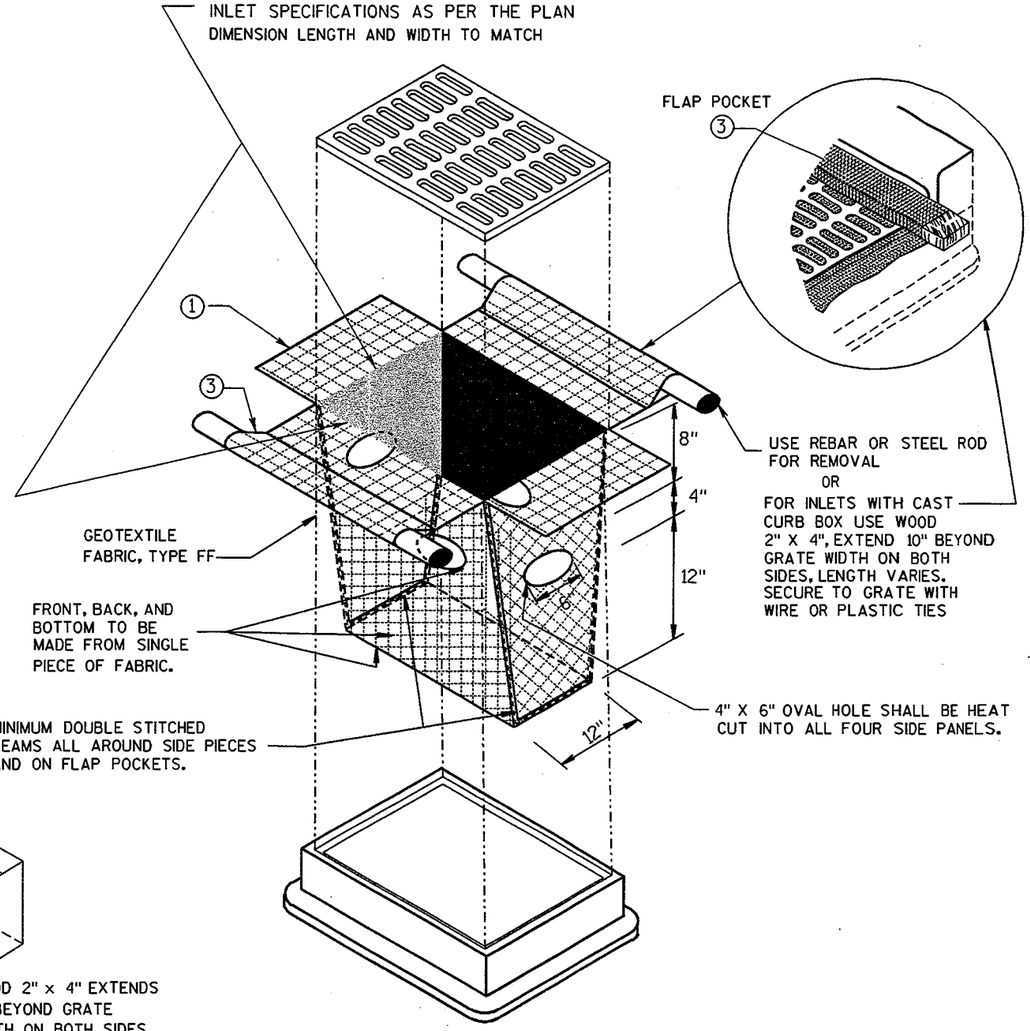


INLET PROTECTION, TYPE B (WITHOUT CURB BOX)

(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

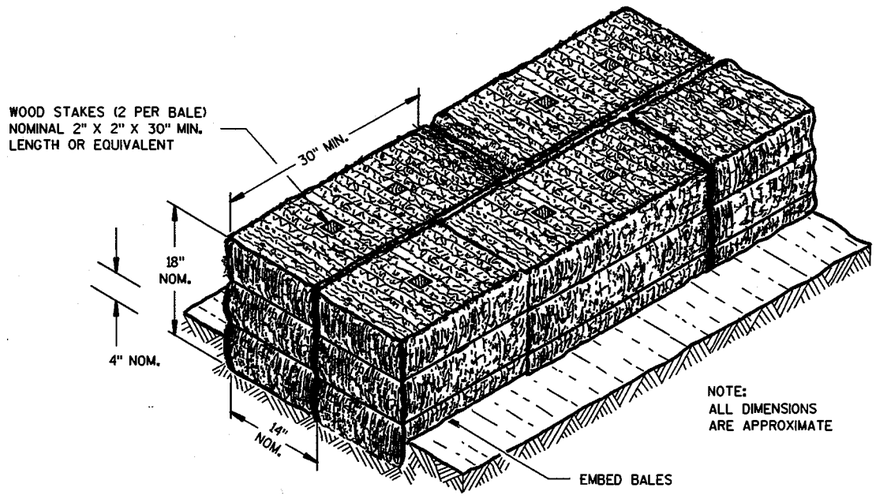
CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

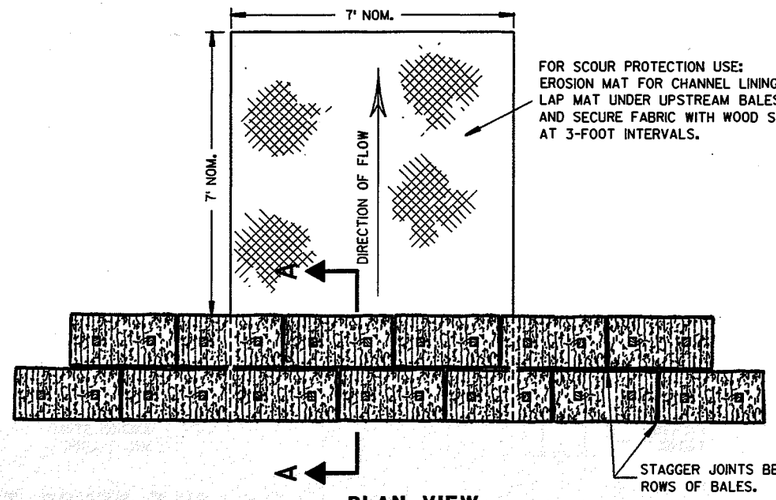
6

S.D.D. 8 E 10-2

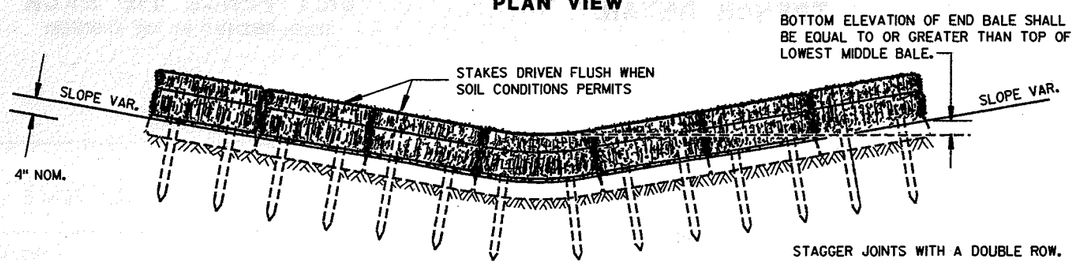
S.D.D. 8 E 10-2



SECTION A-A



PLAN VIEW



FRONT ELEVATION

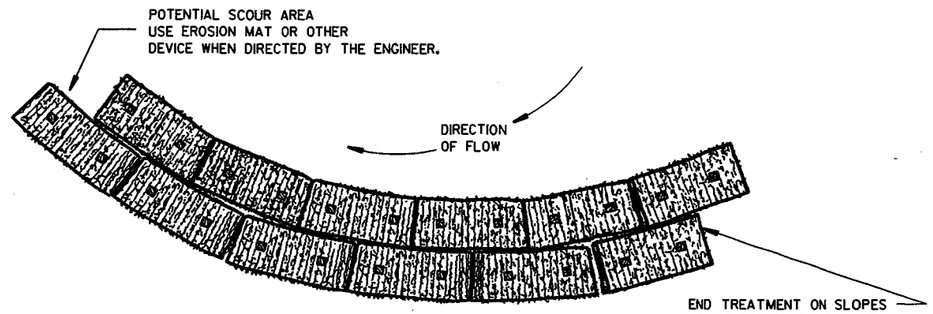
TEMPORARY DITCH CHECK USING EROSION BALES ①

S.D.D. 8 E 8-3

GENERAL NOTES

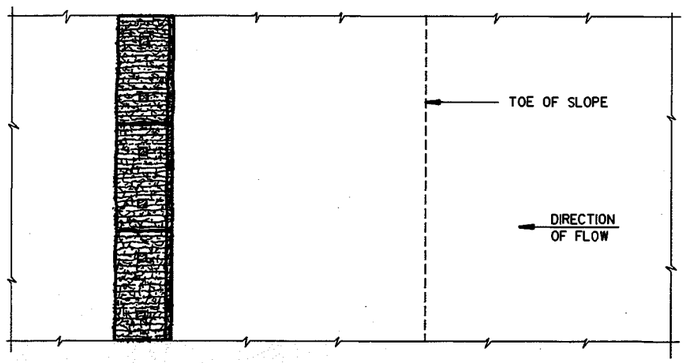
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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.

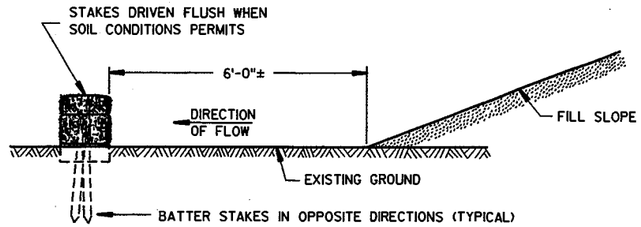


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

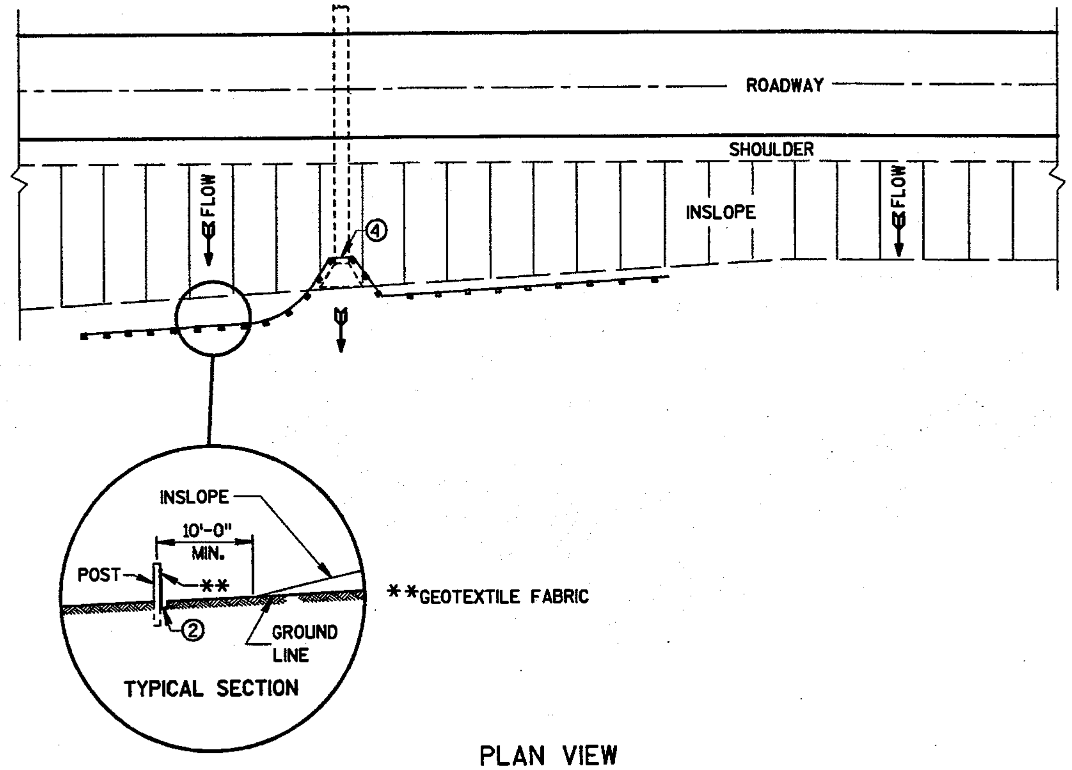
EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

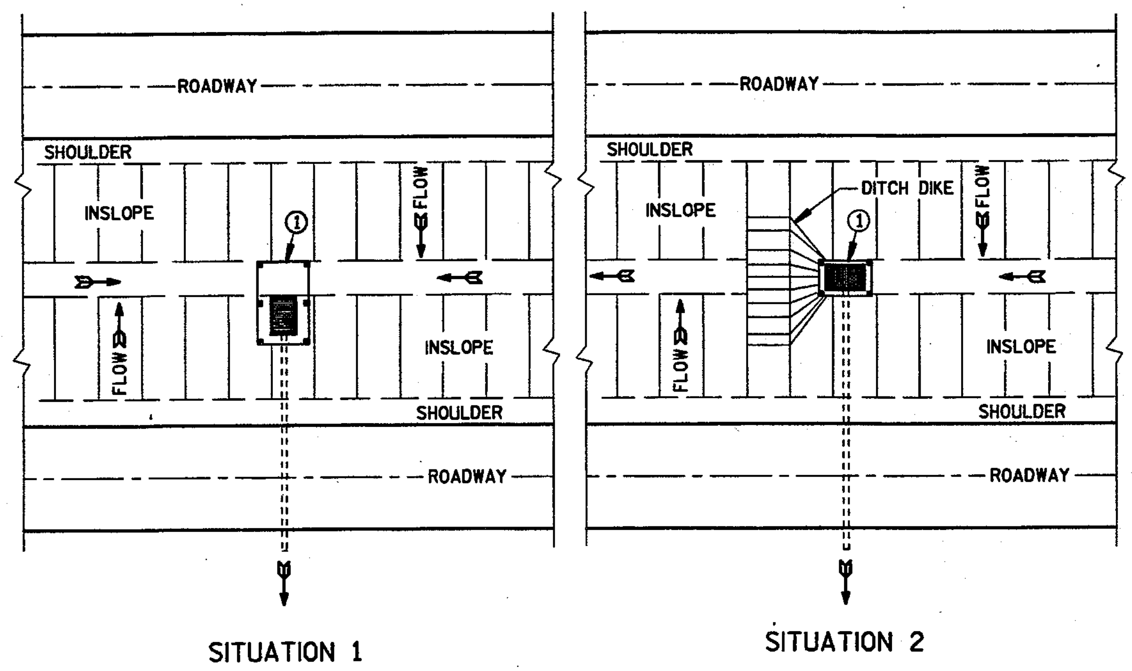
APPROVED 6/4/02
DATE
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

S.D.D. 8 E 8-3



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

GENERAL NOTES

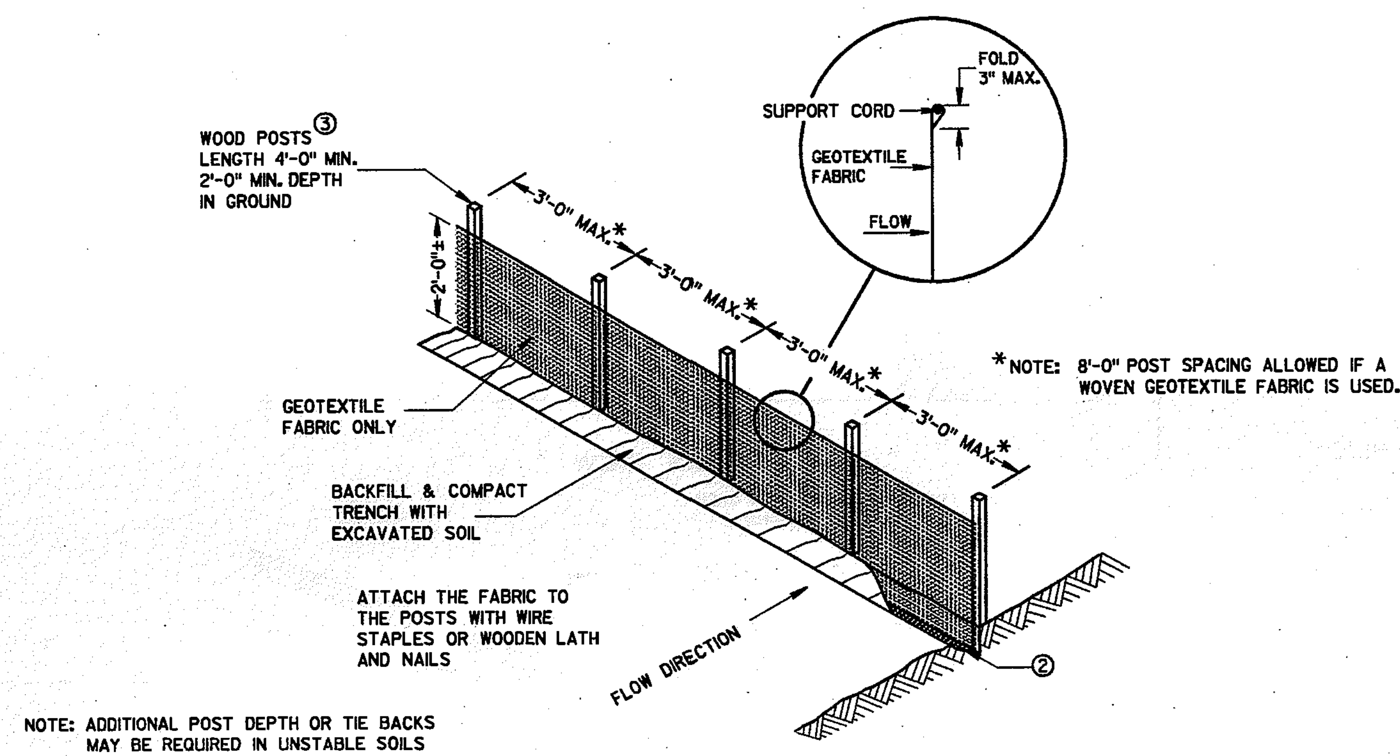
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

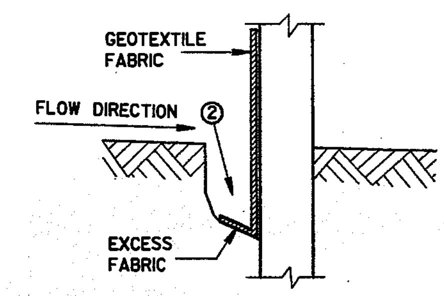
② TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.

③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.

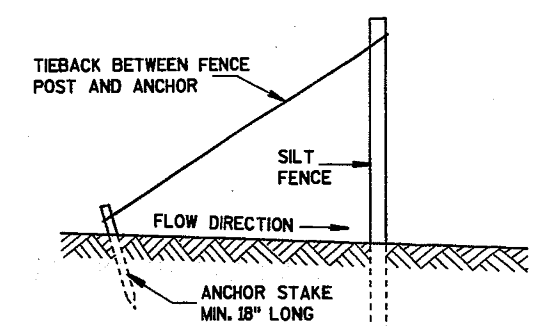
④ SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.



SILT FENCE



TRENCH DETAIL



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION
APPROVED 03/06/00 DATE — CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

S.D.D. 8 E 9-5

METAL APRON ENDWALLS

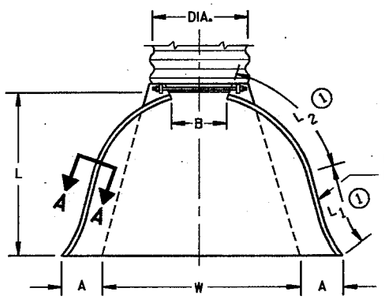
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1½")	L_1 ①	L_2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17½	24	2½ to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21¾	30	2½ to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28¼	36	2½ to 1	1 Pc.
21	.064	.060	9	12	6	36	18	29⅝	42	2½ to 1	1 Pc.
24	.064	.075	10	13	6	41	18	37¼	48	2½ to 1	1 Pc.
30	.079	.075	12	16	8	51	18	52¼	60	2½ to 1	1 Pc.
36	.079	.105	14	19	9	60	24	59¾	72	2½ to 1	2 Pc.
42	.109	.105	16	22	11	69	24	75⅝	84	2½ to 1	2 Pc.
48	.109	.105	18	27	12	78	24	81	90	2¼ to 1	3 Pc.
54	.109	.105	18	30	12	84	30	85½	102	2¼ 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	1½ to 1	3 Pc.
84	.109×	.105×	18	45	12	87	—	—	138	1½ to 1	3 Pc.
90	.109×	.105×	18	37	12	87	—	—	144	1½ to 1	3 Pc.
96	.109×	.105×	18	35	12	87	—	—	150	1½ to 1	3 Pc.

× EXCEPT CENTER PANEL SEE GENERAL NOTES

REINFORCED CONCRETE APRON ENDWALLS

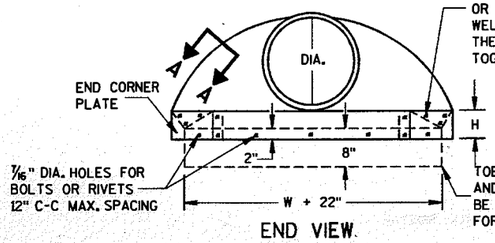
PIPE DIA. (IN.)	DIMENSIONS (Inches) T	A	B	C	D	E	G	APPROX. SLOPE
12	2	4	24	48⅛	72⅛	24	2	3 to 1
15	2¼	6	27	46	73	30	2¼	3 to 1
18	2½	9	27	46	73	36	2½	3 to 1
21	2¾	9	36	37½	73½	42	2¾	3 to 1
24	3	9½	43½	30	73½	48	3	3 to 1
27	3¼	10½	49½	24	73½	54	3¼	3 to 1
30	3½	12	54	19¾	73½	60	3½	3 to 1
36	4	15	63	34¾	97¾	72	4	3 to 1
42	4½	21	63	35	98	78	4½	3 to 1
48	5	24	72	26	98	84	5	3 to 1
54	5½	27	65	*33¼-**35	*98¼-**100	90	5½	2⅔ to 1
60	6	*30-**35	60	39	99	96	5	2 to 1
66	6½	*24-**30	*72-**78	*21-**27	99	102	5½	2 to 1
72	7	*24-**36	78	21	99	108	6	2 to 1
78	7½	*24-**36	78	21	99	114	6½	2 to 1
84	8	36	90½	21	111½	120	6½	1½ to 1
90	8½	41	87½	24	111½	132	6½	1½ to 1

*MINIMUM
**MAXIMUM



PLAN VIEW

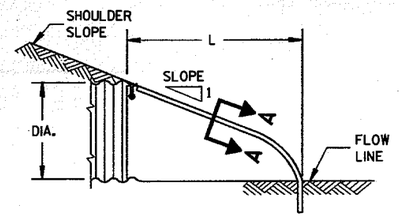
REINFORCED EDGE (SEE SECTION A-A)



END VIEW

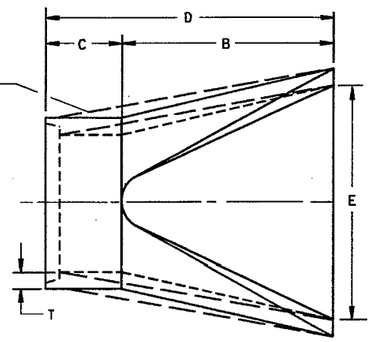
END CORNER PLATES MAY BE FASTENED TO APRON PROPER BY BOLTS, RIVETS, OR RESISTANCE SPOT WELDS WHICH WILL HOLD THE SURFACES TIGHTLY TOGETHER

TOE PLATE (SAME THICKNESS AND METAL AS APRON) SHALL BE FURNISHED WHEN CALLED FOR ON THE PLANS

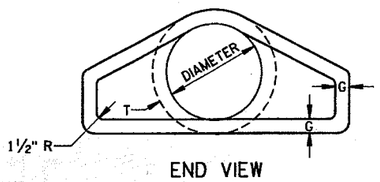


SIDE ELEVATION

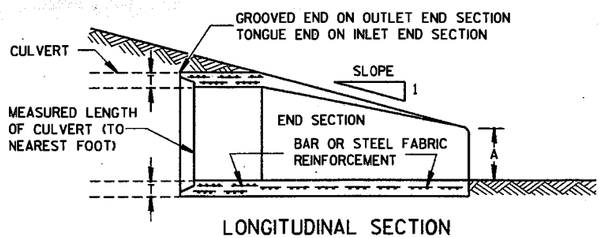
METAL ENDWALLS



PLAN

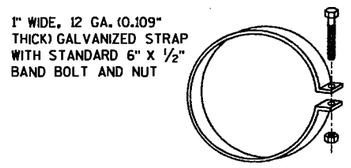


END VIEW



LONGITUDINAL SECTION

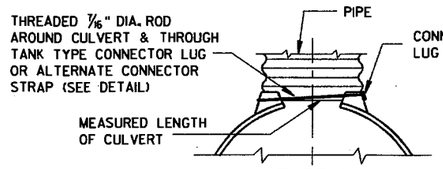
CONCRETE ENDWALLS



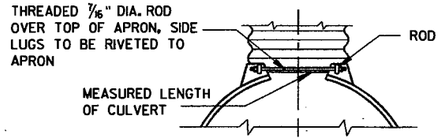
1" WIDE, 12 GA. (0.109" THICK) GALVANIZED STRAP WITH STANDARD 6" X ½" BAND BOLT AND NUT

ALTERNATE FOR TYPE 1 CONNECTION

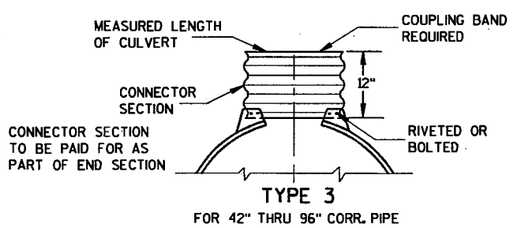
END SECTION CONNECTOR STRAP



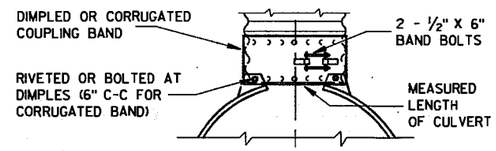
TYPE 1
FOR 12" THRU 24" CORR. PIPE



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

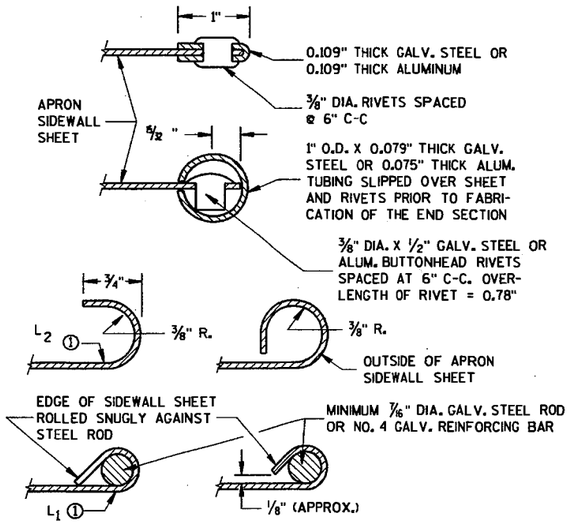
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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.

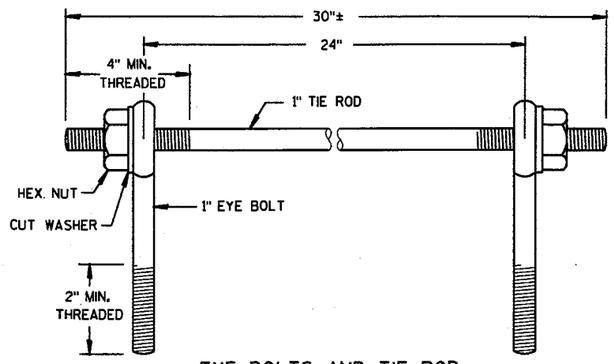
APRON ENDWALLS FOR CULVERT PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

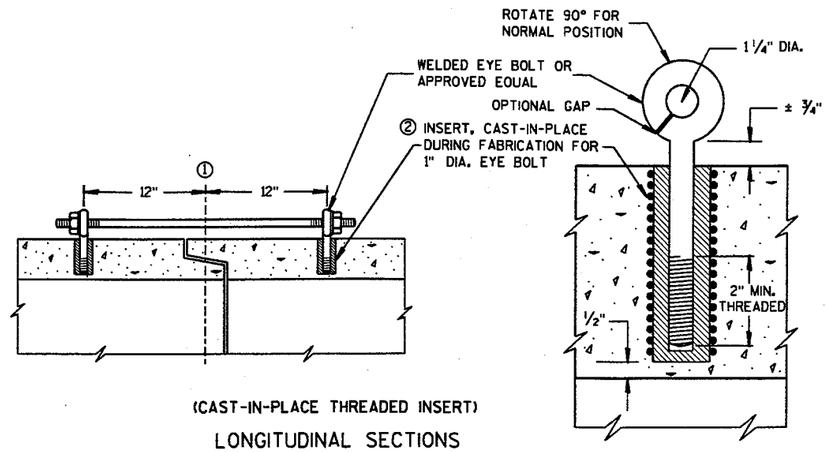
APPROVED
11/30/94
DATE
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

S.D.D. 8 F 1-11

S.D.D. 8 F 1-11



EYE BOLTS AND TIE ROD



(CAST-IN-PLACE THREADED INSERT)

LONGITUDINAL SECTIONS

GENERAL NOTES

CONCRETE CULVERT PIPE SHALL BE TIED TOGETHER IN THE MANNER ILLUSTRATED BY THIS DETAIL AT LOCATIONS DESIGNATED ON 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 CULVERT PIPE AS INDICTED ON THE PLANS AND BY THIS DETAIL WILL BE CONSIDERED INCIDENTAL TO CILVERT PIPE, REINFORCED CONCRETE CULVERT PIPE, OR REINFORCED CONCRETE PIPE CATTLE PASS.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR JOINT TIES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

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.

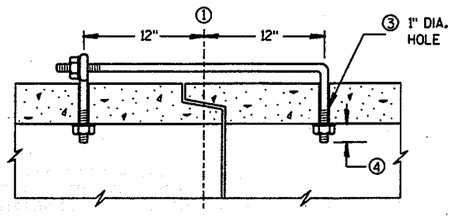
③ HOLES SHALL BE CAST-IN-PLACE OR DRILLED 12" FROM ℄ OF TONGUE AND GROOVE.

④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2".

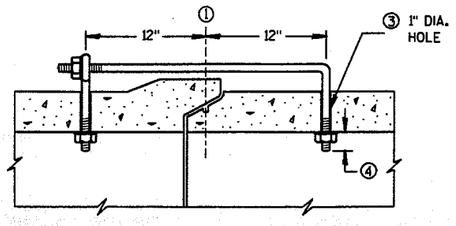
⑤ ROD DIAMETER + 1 INCH.

⑥ LENGTH ADEQUATE TO EXTEND TO WITHIN 1/2 INCH OF THE INNER SURFACE OF THE PIPE.

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 1)



(TONGUE & GROOVE PIPE)



(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

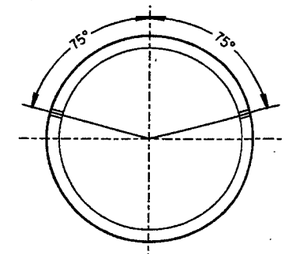
EYE BOLT DIMENSION TABLE

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"	

ADJUSTABLE TIE ROD TABLE

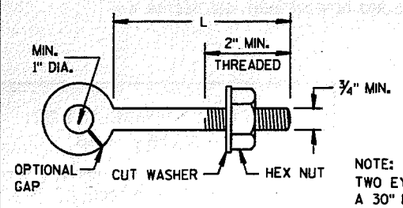
PIPE DIAMETER	TIE ROD DIAMETER	D	L_1	N
12-60	5/8	5/8	5	1/2
66-84	3/4	3/4	5	1/2
90-108	1	1	7	1 1/16

DIMENSIONS SHOWN ARE IN INCHES



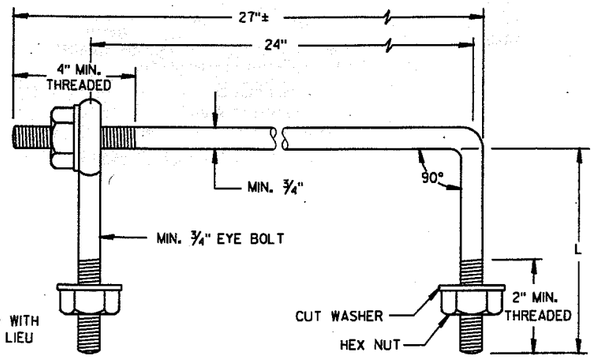
PLACEMENT OF (2) CAST-IN-PLACE INSERTS OR HOLES DURING FABRICATION FOR PIPE SECTIONS REQUIRING TIE RODS

TRANSVERSE SECTION



EYE BOLT

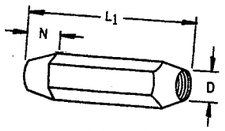
NOTE:
TWO EYE BOLTS MAY BE USED WITH A 30" LONG THREADED ROD IN LIEU OF THE 90° BENT TIE ROD.



EYE BOLT AND TIE ROD

(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 2)



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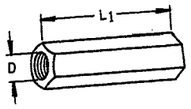
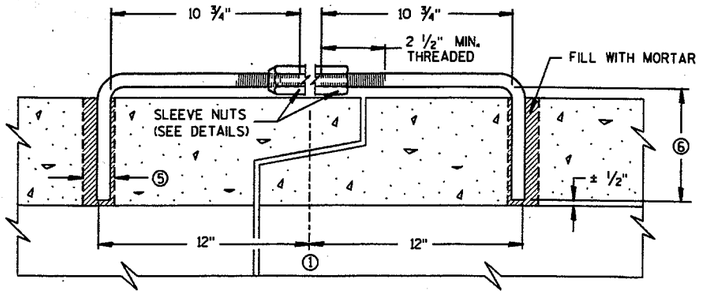


PLAIN

RIGHT AND LEFT THREADS

SLEEVE NUTS



LONGITUDINAL SECTION

(JOINT TIES FOR 12" TO 108" DIA. CONCRETE PIPE)

ADJUSTABLE TIE ROD (ALTERNATE NO. 3)

JOINT TIES FOR CONCRETE PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

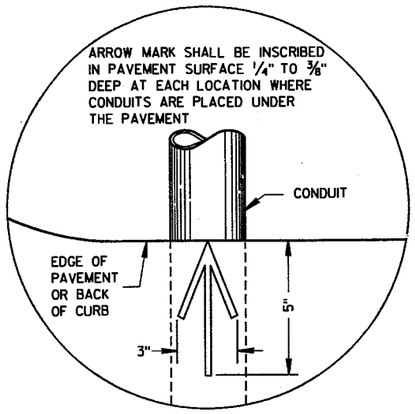
APPROVED 9/19/92 DATE

STATE DESIGN ENGINEER FOR HWYS

FHWA

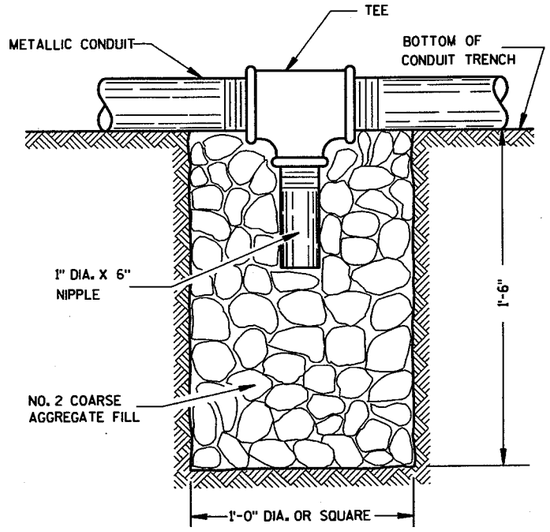
S.D.D. 8 F 4-5

S.D.D. 8 F 4-5



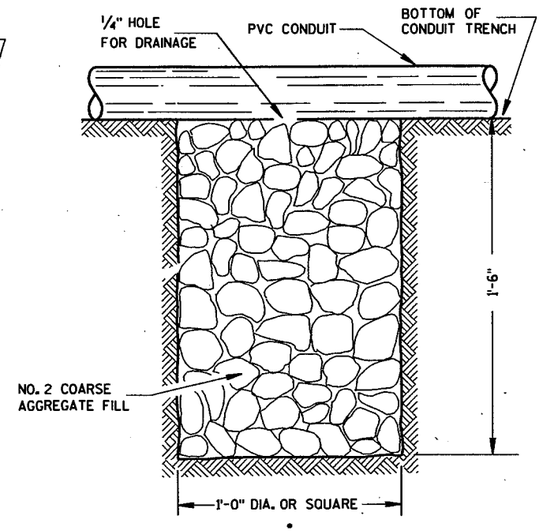
PLAN VIEW

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.

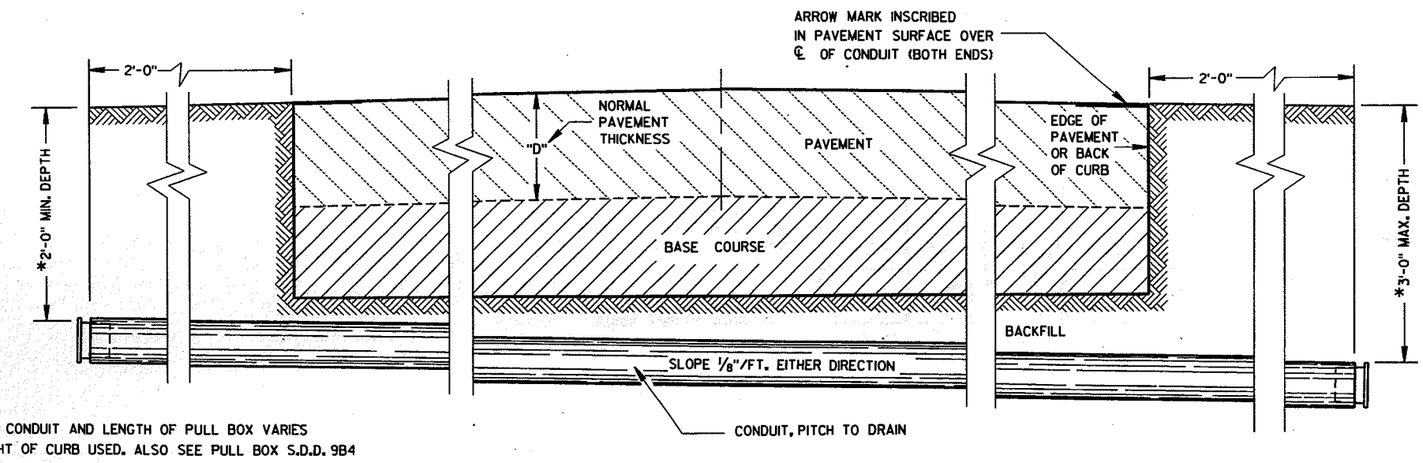
PRIOR TO CONDUIT ACCEPTANCE, CONDUIT CAPS OR PLUGS SHALL BE REMOVED, AND THE CAPS, PLUGS AND CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND THEN THE CAPS OR PLUGS REINSTALLED TO ENSURE THAT THE CAPS OR PLUGS CAN BE EASILY REMOVED IN THE FUTURE.

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.).

POLY ROPE OR A PULL 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 UNLESS OTHERWISE APPROVED BY THE PROJECT ENGINEER.



*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 10/21/96 DATE
FHWA

STATE ELECTRICAL ENGINEER FOR HIGHWAYS

S.D.D. 9 B 2-6

S.D.D. 9 B 2-6

TABLE OF NOMINAL DIMENSIONS AND WEIGHTS

DIMENSION IN INCHES		TYPE OF PIPE									
		CORRUGATED STEEL									POLYETHYLENE SDR 32.5
PIPE DIAMETER (INSIDE)	A	12	12	12	18	18	18	24	24	24	12
PIPE LENGTH **	B	24	30	36	24	30	36	36	42	48	24
WALL THICKNESS	C	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.4
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	10 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	14 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	8 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	11 1/2
WEIGHT IN POUNDS *											
FRAME AND COVER		60	60	60	110	110	110	155	155	155	60

* 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.

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. THE MECHANICAL CONNECTION (INSIDE AND OUTSIDE) TO THE PULL BOX, SHALL BE TOTALLY AND PERMANENTLY SEALED WITH A SILICONE OR RUBBERIZED CAULKING COMPOUND AS APPROVED BY THE ENGINEER.

GROUNDING LUGS ARE NOT REQUIRED IN PULL BOXES WHEN VOLTAGES OF LESS THAN 50 VOLTS AC ARE THE ONLY VOLTAGES ENCOUNTERED IN THE BOXES.

DRAIN DUCT SHALL BE MEASURED AND PAID FOR SEPARATELY.

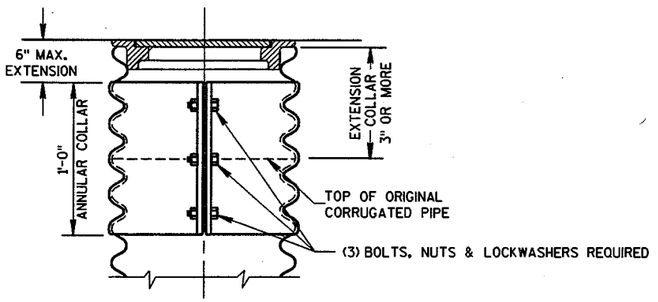
RODENT WIRE SCREEN SHALL BE 1/8" STAINLESS STEEL MESH AND BE INSTALLED WITH A STAINLESS STEEL HOSE CLAMP OF SUFFICIENT SIZE.

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

S.D.D. 9B2, "CONDUIT", APPLIES TO THIS DRAWING.

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.

IF PULL BOX EQUIPMENT GROUNDING IS REQUIRED USING AN EQUIPMENT GROUNDING ELECTRODE IN EACH PULL BOX, THE EQUIPMENT GROUNDING ELECTRODE SHALL BE 5/8" X 8'-0", COPPERCLAD AND BE EXOTHERMICALLY WELDED TO A #4 AWG, COPPER, STRANDED WIRE (BARE OR GREEN INSULATED). THE #4 AWG WIRE SHALL BE 4 FEET IN LENGTH, NEATLY COILED, TAPED AND AVAILABLE FOR USE WHEN REQUIRED.



CORRUGATED PIPE EXTENDER

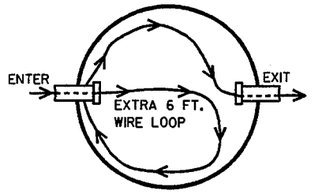
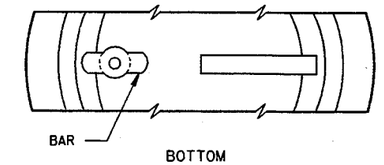
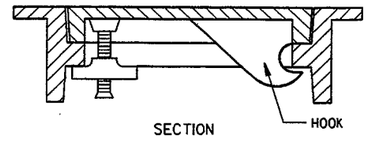


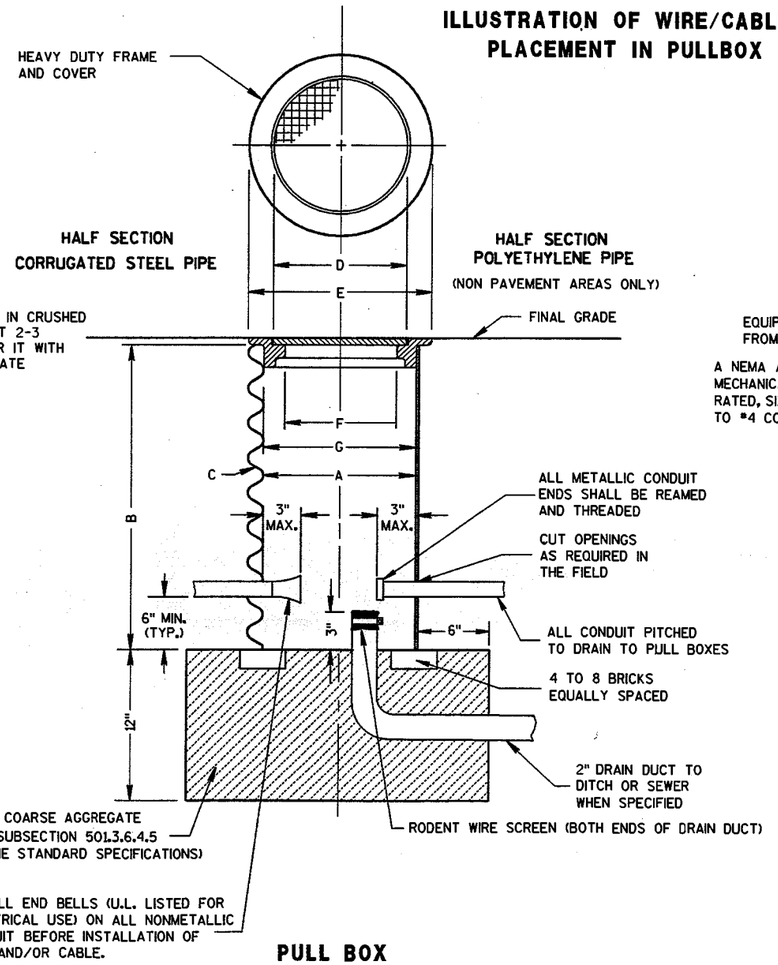
ILLUSTRATION OF WIRE/CABLE PLACEMENT IN PULLBOX



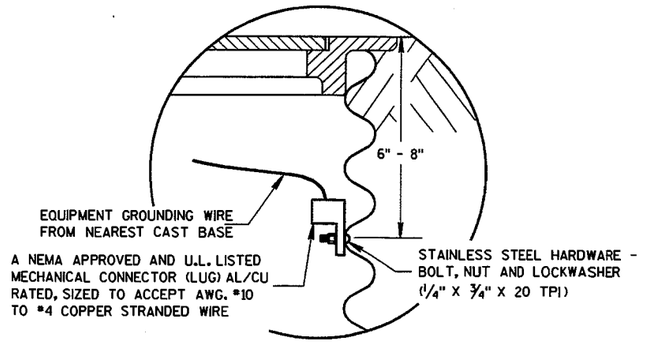


ALTERNATE COVER (LOCKING)

TIGHTENING BAR TYPE



PULL BOX



EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES

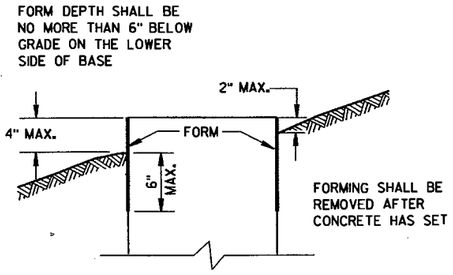
PULL BOX

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
2/11/02
DATE
STATE ELECTRICAL ENGINEER FOR HIGHWAYS
FHWA

S.D.D. 9 B 4-5

S.D.D. 9 B 4-5



FORMING DETAIL

QUANTITY REQUIREMENTS	CONCRETE BASE TYPE		
	1	2	5
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 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 2 AND TYPE 5 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 AND 641.2.2 OF THE STANDARD SPECIFICATIONS, ASTM A-449, OR ASTM A-687 (GRADE 105).

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.

WELDING OF THE ANCHOR RODS TO THE CAGE IS UNACCEPTABLE. TIE WIRES SHALL BE USED.

BAR STEEL REINFORCEMENT SHALL BE COATED WITH POWERED EPOXY RESIN IN ACCORDANCE WITH SECTION 505 OF THE STANDARD SPECIFICATIONS (LATEST EDITION).

(1) THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES EXCEPT WITH WRITTEN APPROVAL BY THE ENGINEER.

(2) (4) 1" DIA. X 3'-6" ANCHOR RODS.

(3) (4) 1" DIA. X 5'-0" ANCHOR RODS.

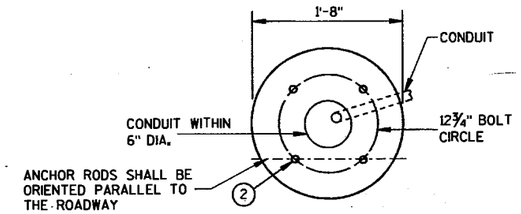
(4) (6) NO. 6 X 6'-8" BAR STEEL REINFORCEMENT.

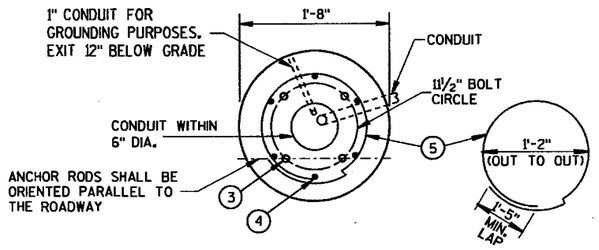
(5) (7) NO. 4 X 5'-1" BAR STEEL REINFORCEMENT @ 1'-0" C-C.

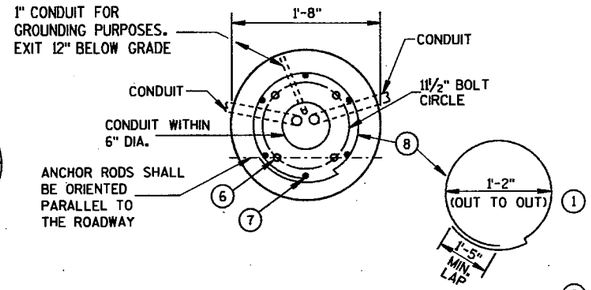
(6) (4) 1" DIA. X 3'-6" ANCHOR RODS.

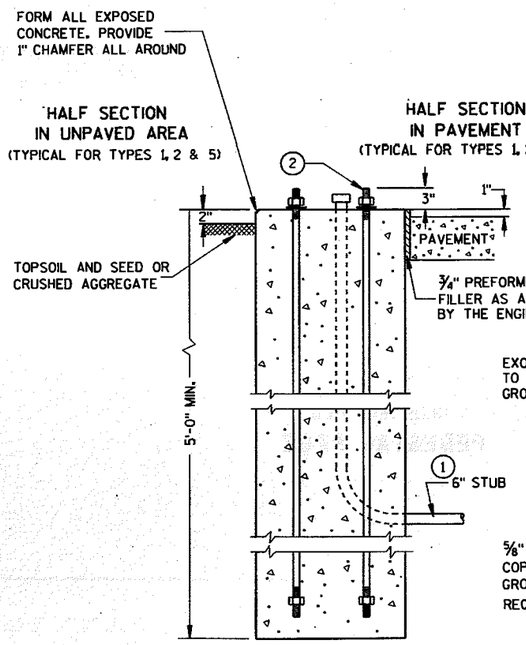
(7) (6) NO.4 X 4'-8" BAR STEEL REINFORCEMENT

(8) (5) NO. 4 X 5'-1" BAR STEEL REINFORCEMENT @ 1'-0" C-C.

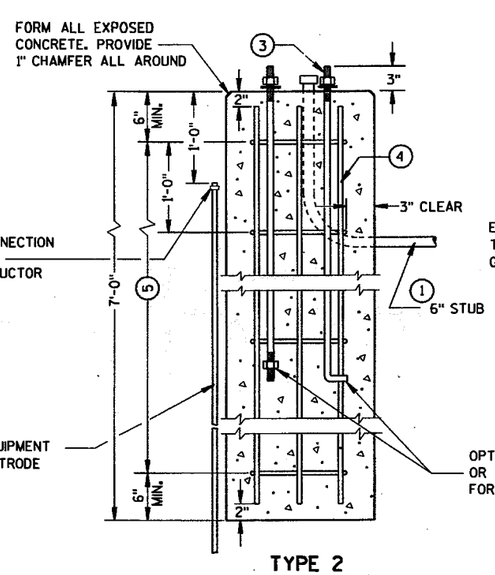




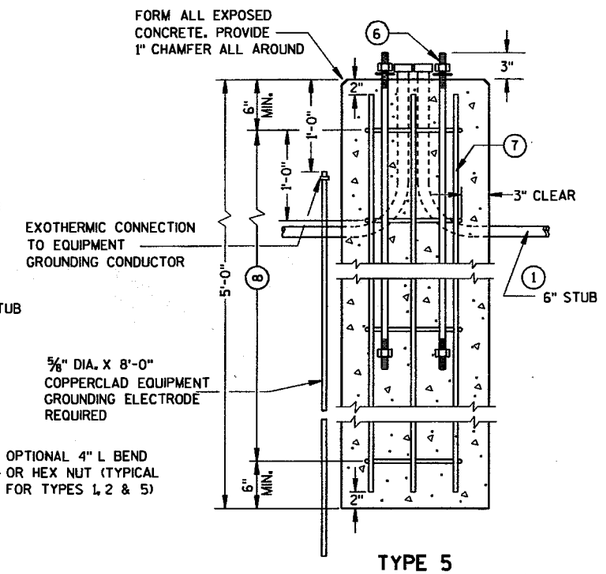




TYPE 1



TYPE 2



TYPE 5

CONCRETE BASES

CONCRETE BASES, TYPES 1, 2 & 5
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION
APPROVED 10/21/96 DATE — STATE ELECTRICAL ENGINEER FOR HIGHWAYS — FHWA

S.D.D. 9 C 2-2

S.D.D. 9 C 2-2

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, ASTM A-325, (92,000 YIELD) HEAVY HEX NUT AND BE GALVANIZED IN ACCORDANCE WITH ASTM A-153, CLASS C.

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 AND U.L. LISTED MECHANICAL CONNECTOR (LUG) AL/CU RATED AND SIZED TO ACCEPT #10 AWG STRANDED WIRE, SHALL BE FURNISHED AND INSTALLED IN THE PEDESTAL AND TRANSFORMER BASES.

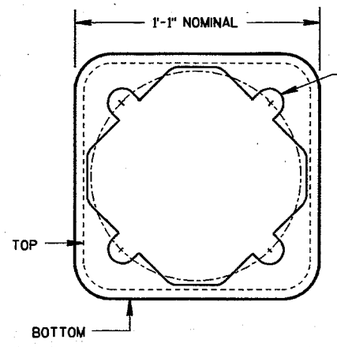
THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

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.

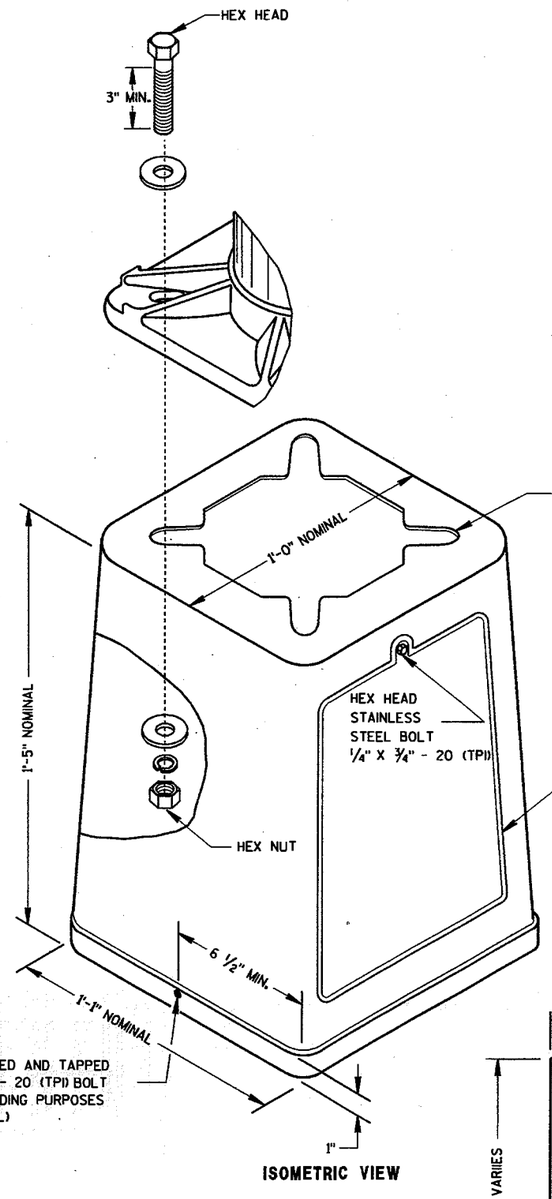
PEDESTAL BASE COLLAR THREADING SHALL BE TAPERED AND IN ACCORDANCE WITH NATIONAL PIPE THREADING DIMENSIONS.

BASE COLLAR THREADING SHALL EXTEND INTO THE BASE COLLAR WITH SUFFICIENT DEPTH TO ACCEPT THE INSTALLATION OF TRAFFIC SIGNAL STANDARDS TO A DEPTH OF 1½", THEN TIGHTENING TO A POINT OF BEING IMMOVABLE.

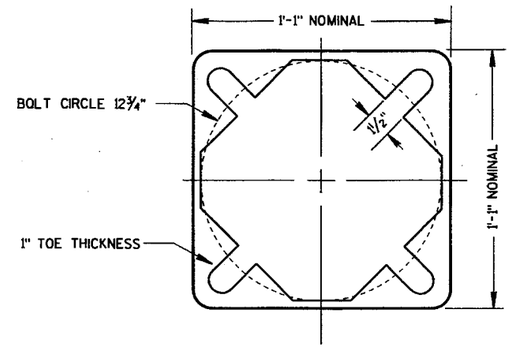
THE ACCESS DOOR SHALL BE OF THE SAME MATERIAL AS THE BASE.



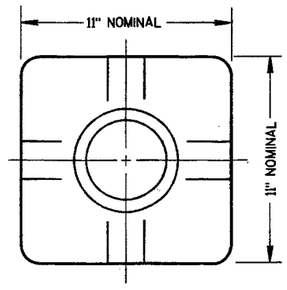
BOTTOM VIEW
(TRANSFORMER BASE)



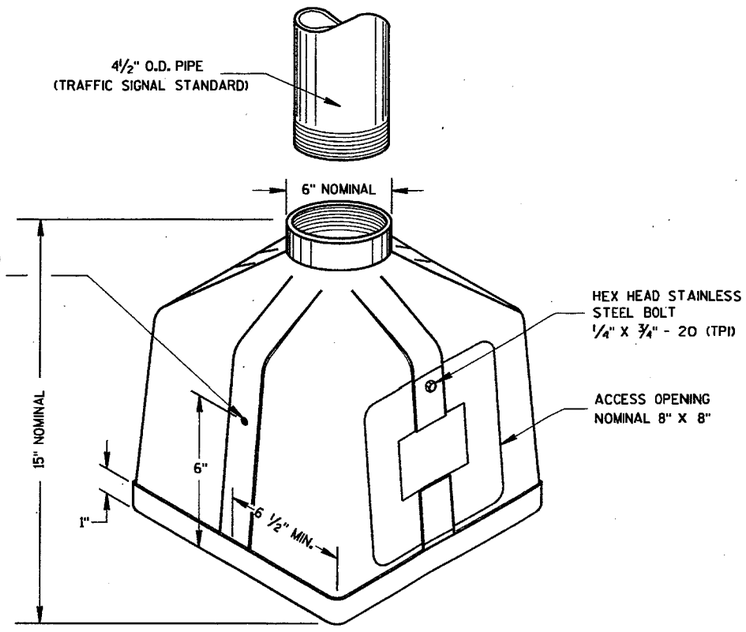
ISOMETRIC VIEW



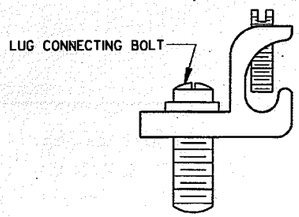
BOTTOM VIEW
(PEDESTAL BASE)



TOP VIEW
(PEDESTAL BASE)

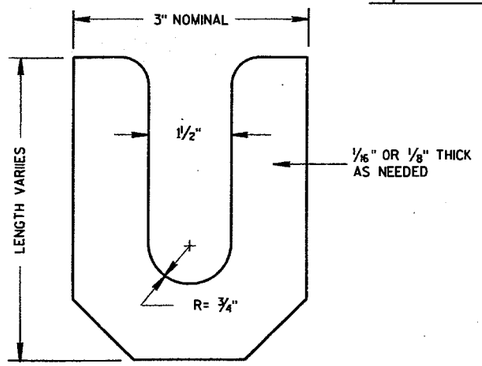


ISOMETRIC VIEW
PEDESTAL BASE



TYPICAL MECHANICAL CONNECTOR LUG
TO BE FURNISHED WITH EACH BASE

TRANSFORMER BASE
INTENDED FOR USE WITH TYPE 2, 3, 4, 5 & 6 POLES



LEVELING SHIM

TRANSFORMER/PEDESTAL BASES

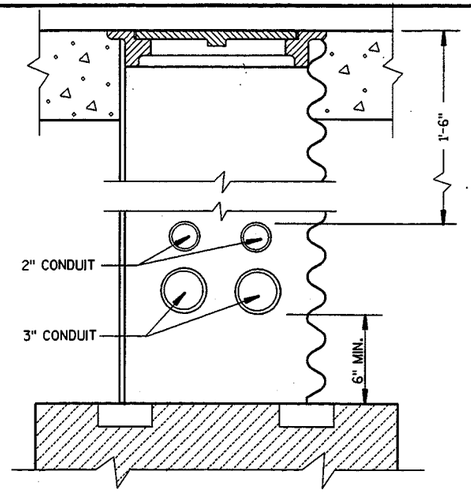
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED 10/21/96 DATE — STATE ELECTRICAL ENGINEER FOR HIGHWAYS
FHWA

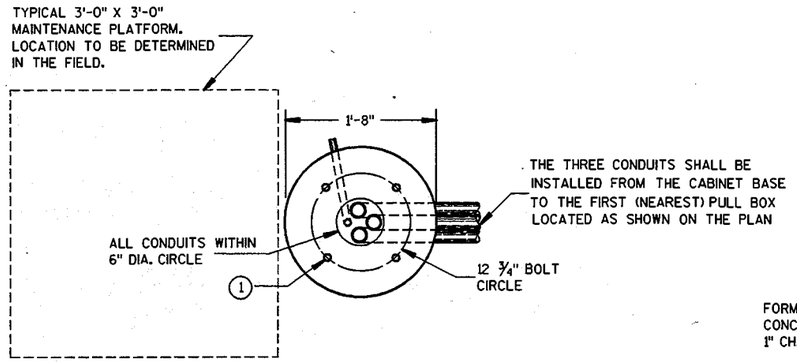
S.D.D. 9 C 3-2

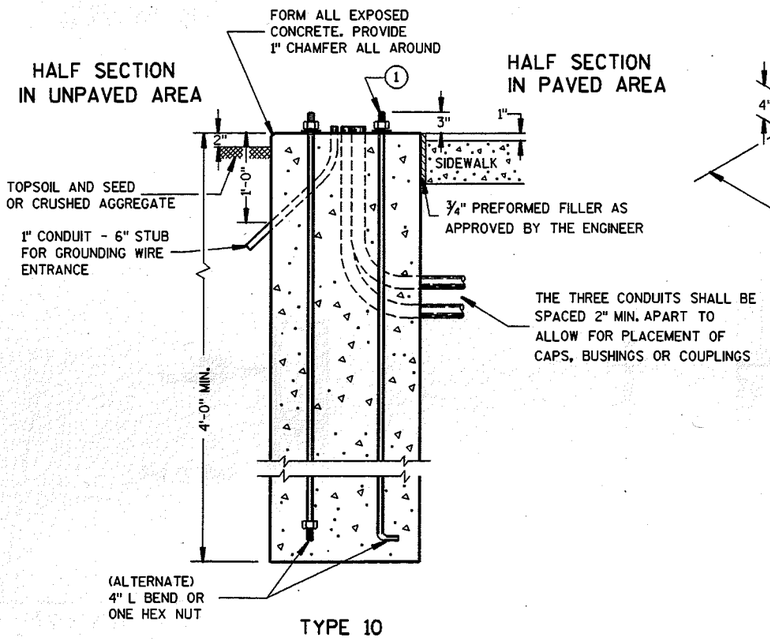
S.D.D. 9 C 3-2

CONTROL CABINET BASE TYPE	DIMENSIONS				C.Y. CONCRETE (APPROX.)
	H	I	J	K	
TYPE 6 - 30" CABINET	34"	60"	10"	17"	.64
TYPE 7 - 38" CABINET	42"	60"	10"	21"	.93
TYPE 8 - 38" CABINET	42"	72"	12"	21"	1.29
TYPE 9 - VARIABLE	54"	72"	14"	27"	1.56
TYPE 10 - POST MOUNT	AS SHOWN				.32

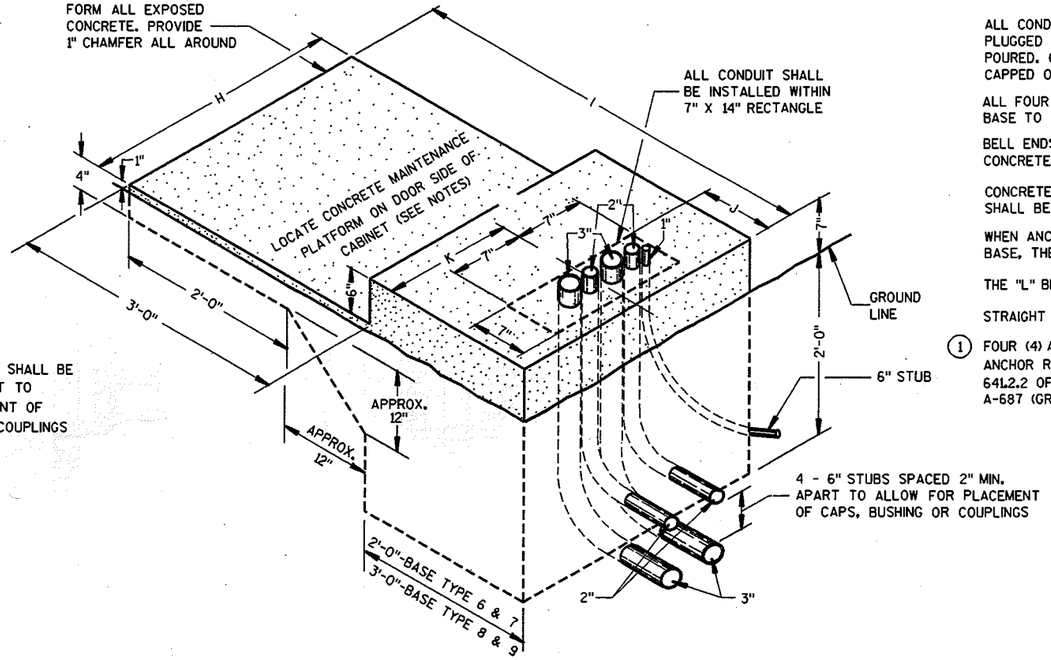


CONDUIT LOCATIONS IN 24" X 36" PULL BOX
(LEADING TO CONTROLLER CABINET BASE TYPE 6, 7, 8 AND 9)





TYPE 10



TYPE 6,7,8 AND 9
(ISOMETRIC VIEW)

GENERAL NOTES

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

INSTALL FOUR 1/2 INCH MINIMUM DIAMETER X 4 INCH MINIMUM LENGTH APPROVED CONCRETE MASONRY ANCHORS TO ANCHOR THE CABINET TO TYPE 6, 7, 8, AND 9 BASES. THE ANCHOR STUDS SHALL BE LOCATED AS DIRECTED BY THE ENGINEER TO PROPERLY ANCHOR THE CONTROL CABINET TO THE BASE.

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U.L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

CONDUIT HEIGHT ABOVE THE CONCRETE BASE SHALL BE 1 INCH.

DEPTH OF CONDUIT INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES MINIMUM AND 36 INCHES MAXIMUM.

DEPTH OF CONDUIT INSTALLED THAT IS NOT BELOW THE TRAVELED WAY SHALL BE 18 INCHES MINIMUM AND 36 INCHES MAXIMUM.

ANY EXCEPTION TO THE MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE ENGINEER.

CONTROL CABINET BASE TOP SURFACES SHALL BE TROWEL FINISHED AND LEVEL.

WHEN A TYPE 10 CONTROL CABINET BASE IS USED TO POST MOUNT A CONTROL CABINET, A 36" SQUARE 4" THICK CONCRETE MAINTENANCE PLATFORM SHALL BE REQUIRED ON THE DOOR SIDE OF THE CABINET. THE TOP 1 INCH SHALL BE ABOVE FINISHED GRADE AND BE BROOM FINISHED AND LEVEL.

MAINTENANCE PLATFORMS ARE NOT REQUIRED WHEN THE SURROUNDING AREA IS PAVED.

MINIMUM BENDING RADIUS OF CONDUIT = 6 X THE DIAMETER.

ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

ALL FOUR (TWO INCH AND THREE INCH) CONDUIT SHALL BE INSTALLED FROM THE CABINET BASE TO THE FIRST (NEAREST PULL BOX LOCATED AS SHOWN ON THE PLANS.

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF THE CONCRETE BASE BEFORE INSTALLATION OF CABLE OR WIRE.

CONCRETE FORM DEPTH BELOW FINISHED GRADE SHALL BE 6" MAXIMUM. CONCRETE FORMS SHALL BE REMOVED AFTER CONCRETE HAS SET.

WHEN ANCHOR RODS USING THE ALTERNATE L BEND ARE FURNISHED FOR THE TYPE 10 BASE, THE 4" L BEND SHALL BE IN ADDITION TO THE SPECIFIED ANCHOR ROD BAR LENGTH.

THE "L" BEND SHALL NOT BE THREADED.

STRAIGHT ANCHOR RODS SHALL BE THREADED 12" IN LENGTH ON EACH END OF THE ROD.

(1) FOUR (4) ANCHOR RODS, 1" DIA. X 3'-6"
ANCHOR RODS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 654.2.1 AND 641.2.2 OF THE STANDARD SPECIFICATIONS AND IN ACCORDANCE WITH A-449, OR ASTM. A-687 (GRADE 105).

CONCRETE CONTROL CABINET BASES

CONCRETE CONTROL CABINET BASES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

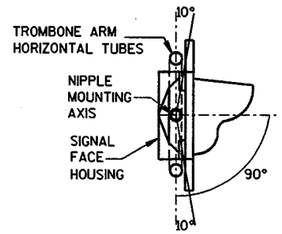
APPROVED
3/24/03
DATE
STATE ELECTRICAL ENGINEER FOR HIGHWAYS

FHWA

6

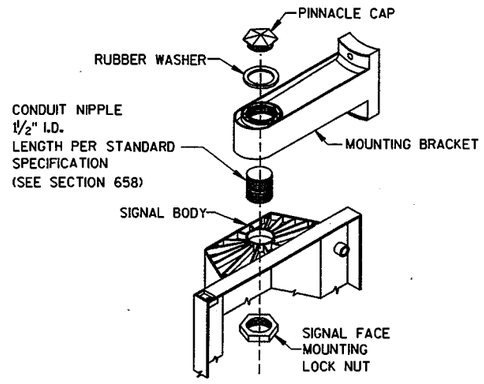
S.D.D. 9 C 5-3

S.D.D. 9 C 5-3



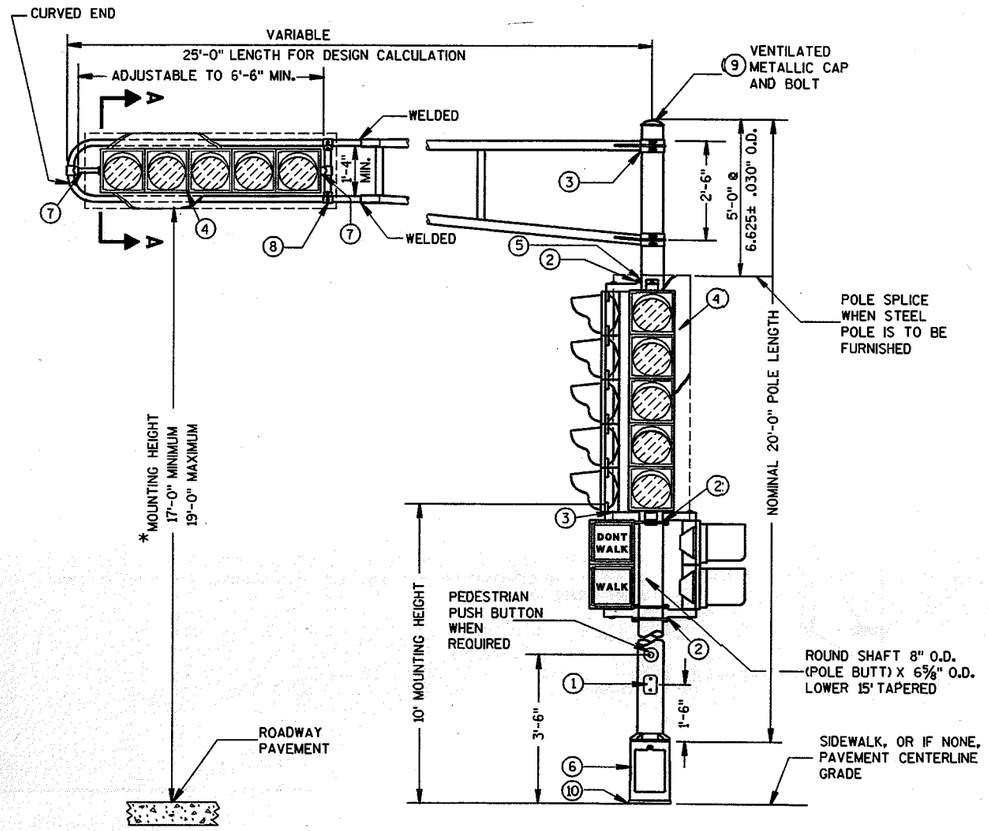
SECTION A-A

(10 DEGREES TILT REQUIREMENT OF FACE(S) IN THE TROMBONE MOUNTING)

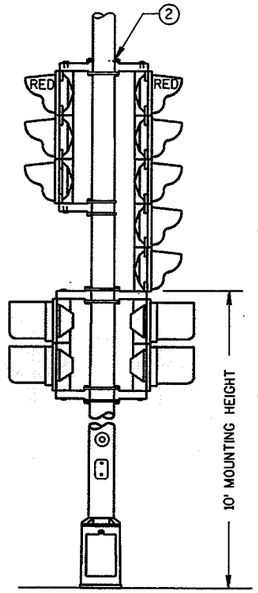


SIGNAL FACE MOUNTING DETAIL

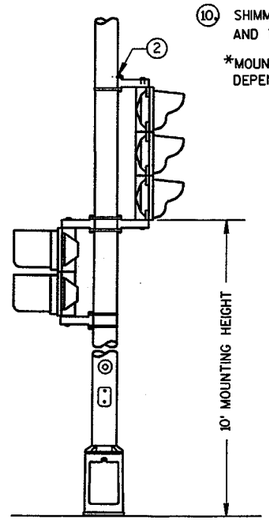
(BANDED)



(MAXIMUM LOAD)



TYPICAL MOUNTING OF BACK TO BACK 3 AND 5 SECTION SIGNAL FACES



TYPICAL MOUNTING OF 3 SECTION SIGNAL FACE

TYPE 2 POLE MOUNTING CONFIGURATION

GENERAL NOTES

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

POLES SHALL BE EITHER ALUMINUM OR GALVANIZED STEEL AS CALLED FOR IN THE CONTRACT.

SECTION 657, POLES, OF THE STANDARD SPECIFICATIONS SHALL APPLY TO THIS DRAWING.

A PULL WIRE/ROPE IN ACCORDANCE WITH STANDARD SPECIFICATION 652 SHALL BE INSTALLED IN EACH TROMBONE ARM RACEWAY DURING THE MANUFACTURING PROCESS.

TYPE 2 ALUMINUM POLES SHALL BE CONSTRUCTED OF 6063-T6 ALUMINUM ALLOY. SLEEVING INSIDE THE POLE IS NOT ACCEPTABLE.

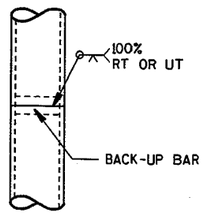
WHEN TRANSFORMER BASES ARE USED, WIRE CONNECTIONS SHALL BE MADE IN THE TRANSFORMER BASE.

1. 4" X 6" REINFORCED HANDHOLE & COVER ASSEMBLY WITH 2 (TWO) ¼" X ¾" - 20 TPI HEX HEAD STAINLESS STEEL BOLTS.
2. SIGNAL FACE MOUNTING BRACKETS. MOUNT WITH CAP SCREWS AND BANDING. (SEE STANDARD SPECIFICATIONS - SEC. 658)
3. GROMMETS, 1" CHASE NIPPLES OR 1" CLOSE CONDUIT NIPPLES WITH BUSHINGS SHALL BE PROVIDED FOR 1⅜" HOLE IN POLE SHAFT FOR WIRING.
4. SECURELY MOUNT DULL BLACK POLYCARBONATE BACKPLATES, PROJECTING 5" BEYOND ALL SIDES OF THE SIGNAL FACE HOUSING, WITH SELF-TAPPING STAINLESS STEEL SCREWS.
5. POLE MOUNTED SIGNAL FACES SHALL REQUIRE 1 OR MORE MOUNTING SPACERS UNDER THE TOP MOUNTING BRACKET(S) AS REQUIRED, TO PLUMB THE SIGNAL FACES.
6. CAST ALUMINUM TRANSFORMER BASE, WHEN REQUIRED.
7. MOUNTING BRACKET NIPPLES FOR THE SIGNAL FACE(S) SHALL BE 2 INCHES IN LENGTH AND 1½ INCHES IN DIAMETER. (SEE STANDARD SPECIFICATION - SECTION 658).
8. VERTICAL STRUT (ADJUSTABLE). ONE (1) SET SCREW (¼" X ¾" LONG-20 TPI, STAINLESS STEEL, HEX HEAD) INTO EACH ARM MEMBER IF STRUT IS THE SLIDING TYPE.
9. FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) ¼" X ¾" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.
10. SHIMMING, IF NEEDED, SHALL BE LOCATED BETWEEN THE CONCRETE FOUNDATION AND THE TRANSFORMER BASE.

*MOUNTING HEIGHT LIMITATION DIMENSIONS OF THE TROMBONE MAST ARM WILL BE DEPENDENT UPON THE USE/NON-USE OF A TRANSFORMER BASE.

FOR MANUFACTURERS USE ONLY

WELD TO BE 100% R.T. OR U.T. TESTED AS PER THE REQUIREMENTS OF AWS D 1.5-88. RECORDS OF COMPLIANCE OF SUCH TESTING SHALL BE FURNISHED TO THE OFFICE OF DESIGN/BRIDGE FOR VERIFICATION AND APPROVAL.



POLE SPLICE DETAIL

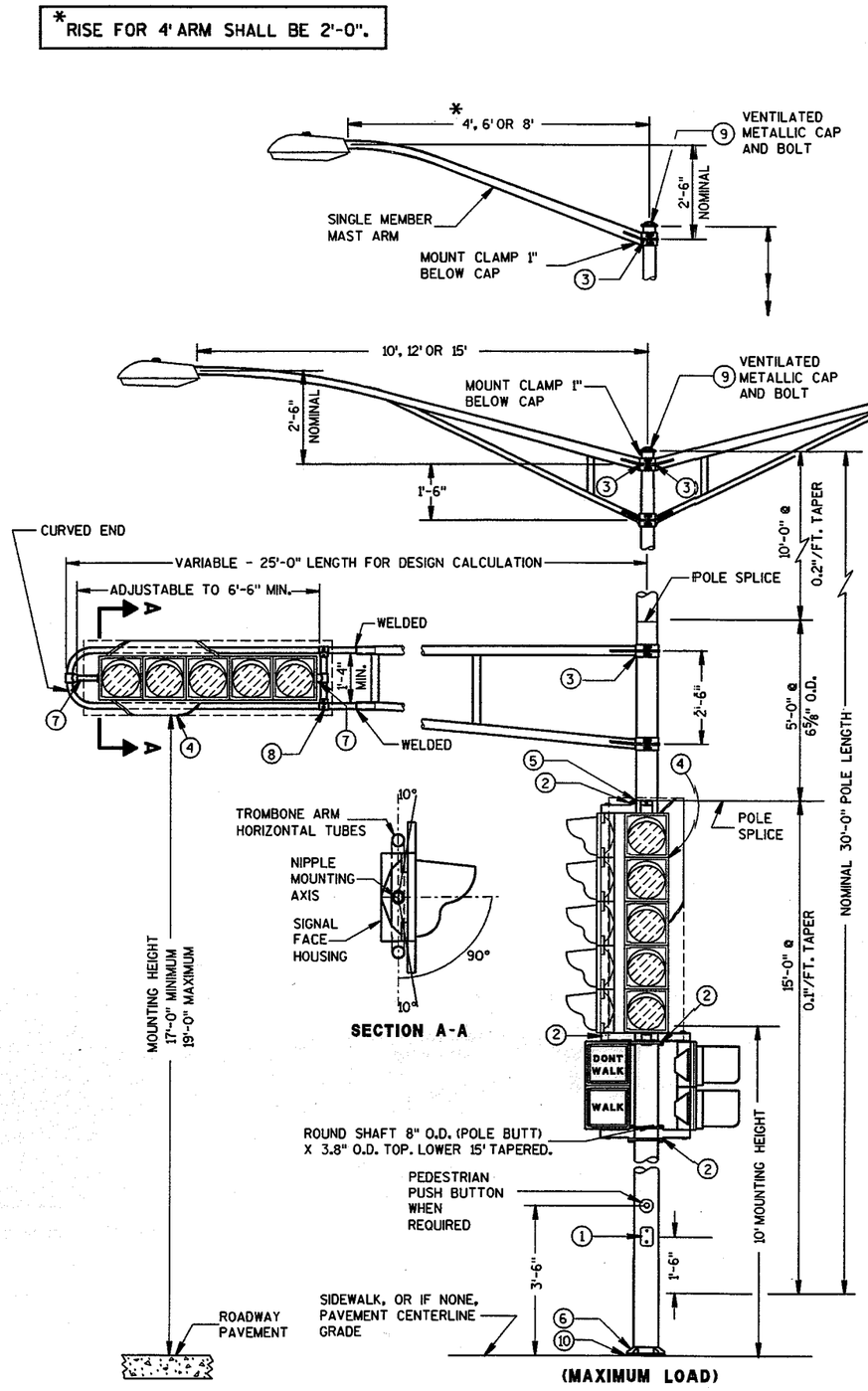
POLE MOUNTINGS FOR TRAFFIC SIGNALS TYPE 2

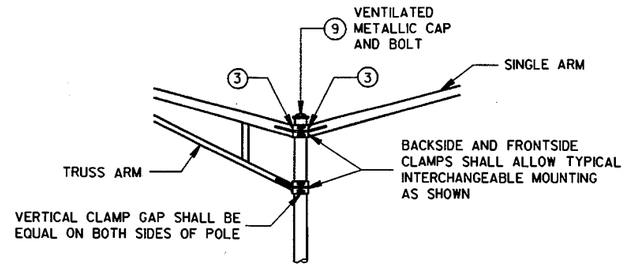
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

S.D.D. 9 E 1-4a

S.D.D. 9 E 1-4a

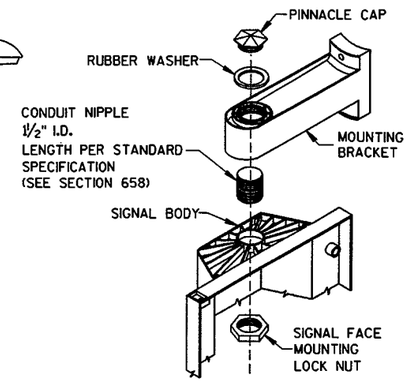
*RISE FOR 4' ARM SHALL BE 2'-0".



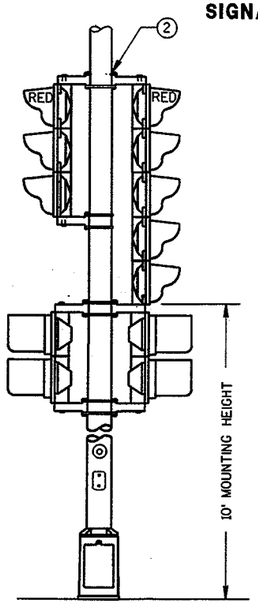


INTERCHANGEABLE MOUNTING DETAIL

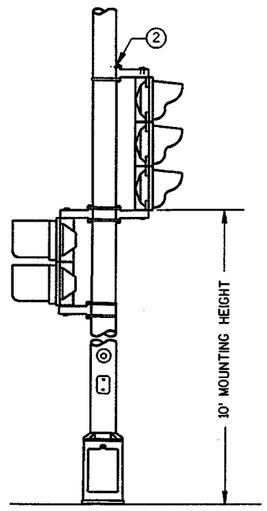
LUMINAIRE
WT. - 50 LBS.
EFFECTIVE PROJECTED AREA FOR WIND LOADING = 1.5 SQ. FT.



SIGNAL FACE MOUNTING DETAIL (BANDED)



TYPICAL MOUNTING OF BACK TO BACK 3 AND 5 SECTION SIGNAL FACES



TYPICAL MOUNTING OF 3 SECTION SIGNAL FACE

TYPE 3 POLE MOUNTING CONFIGURATION

GENERAL NOTES

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

ALL TYPE 3 POLE MOUNTINGS SHALL BE DESIGNED TO INCLUDE TWIN 15' ARMS WITH LUMINAIRES.

POLES SHALL BE GALVANIZED STEEL.

SECTION 657, POLES, OF THE STANDARD SPECIFICATIONS SHALL APPLY TO THIS DRAWING.

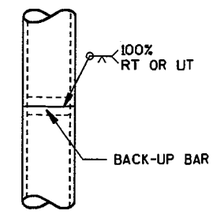
A PULL WIRE/ROPE IN ACCORDANCE WITH STANDARD SPECIFICATION 652, SHALL BE INSTALLED IN EACH TROMBONE ARM RACEWAY DURING THE MANUFACTURING PROCESS.

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 MAST 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. SIGNAL FACE MOUNTING BRACKETS, MOUNT WITH CAP SCREWS AND BANDING. (SEE STANDARD SPECIFICATIONS - SEC. 658)
3. GROMMETS, 1" CHASE NIPPLES OR 1" CLOSE CONDUIT NIPPLES WITH BUSHINGS SHALL BE PROVIDED FOR 1⅜" HOLE IN POLE SHAFT FOR WIRING.
4. SECURELY MOUNT DULL BLACK POLYCARBONATE BACKPLATES, PROJECTING 5" BEYOND ALL SIDES OF THE SIGNAL FACE HOUSING, WITH SELF-TAPPING STAINLESS STEEL SCREWS.
5. POLE MOUNTED SIGNAL FACES SHALL REQUIRE 1 OR MORE MOUNTING SPACERS UNDER THE TOP MOUNTING BRACKET(S) AS REQUIRED, TO PLUMB THE SIGNAL FACE.
6. TYPE 3 POLE CONFIGURATIONS SHALL BE MOUNTED DIRECTLY TO THEIR CONCRETE BASES.
7. MOUNTING BRACKET NIPPLES FOR THE SIGNAL FACE(S) SHALL BE 2 INCHES IN LENGTH AND 1½ INCHES IN DIAMETER. (SEE STANDARD SPECIFICATION - SECTION 658)
8. VERTICAL STRUT (ADJUSTABLE). ONE (1) SET SCREW (1/4 " X ¾" -20 TPI, STAINLESS STEEL, HEX HEAD) INTO EACH ARM MEMBER IF STRUT IS THE SLIDING TYPE.
9. FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) ¼" X ¾" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.
10. SHIMMING, IF NEEDED, SHALL BE LOCATED BETWEEN THE CONCRETE FOUNDATION AND POLE.

WELD TO BE 100% R.T. OR U.T. TESTED AS PER THE REQUIREMENTS OF AWS D 1.5-88. RECORDS OF COMPLIANCE OF SUCH TESTING SHALL BE FURNISHED TO THE OFFICE OF DESIGN/BRIDGE FOR VERIFICATION AND APPROVAL.



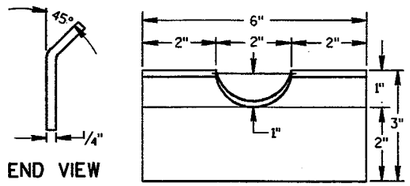
POLE SPLICE DETAIL

POLE MOUNTINGS FOR TRAFFIC SIGNALS AND LIGHTING UNITS, TYPE 3 (HEAVY DUTY)

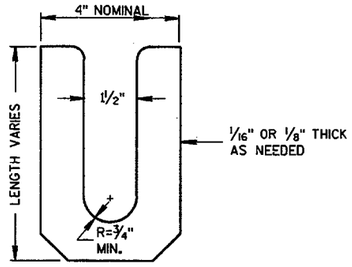
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

S.D.D. 9 E 1-4b

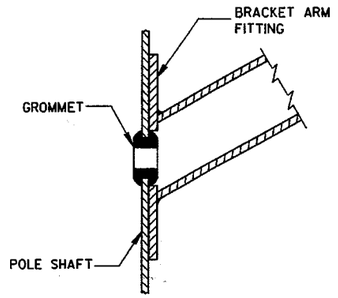
S.D.D. 9 E 1-4b



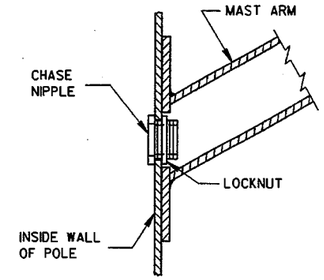
RECTANGULAR CLAMP SHIM
(4 TO A SET)



LEVELING SHIM (15)
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.) OUTSIDE SHIM DIAMETER - (4.5" O.D. FOR LUMINAIRE MAST ARM)
(6.625" O.D. FOR TROMBONE MAST ARM)

(14.) VARIABLE SHIM THICKNESS - (0.10", 0.25", 0.35", 0.53" OR 0.70")

SHIM THICKNESS FOR TROMBONE MAST ARMS MAY BE TYPICALLY 0.25", 0.35", 0.53" OR 0.70".

SHIM THICKNESS FOR LUMINAIRE MAST ARMS MAY BE TYPICALLY 0.10", 0.25" OR 0.35".

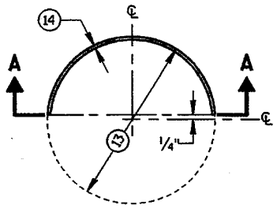
SHIM MATERIAL SHALL BE ALUMINUM ALLOY.

SHIM THICKNESS SHALL BE IMPRESSED INTO EACH SHIM. NUMERALS SHALL BE 1/4" HIGH AND LEGIBLE.

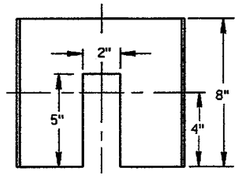
THE CONTRACTOR SHALL SUBMIT TWO COPIES OF ALL SHIM SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL.

(15.) 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.

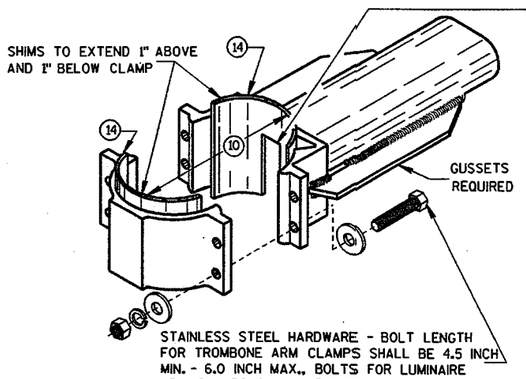
SHIMS SHALL BE LONG ENOUGH AND WIDE ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.



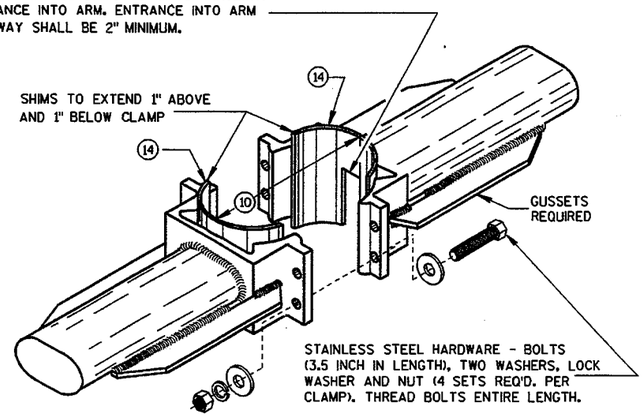
PLAN VIEW



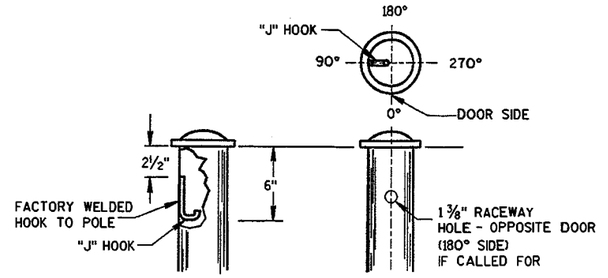
SECTION A-A
CIRCULAR CLAMP SHIM
(2 TO A SET)



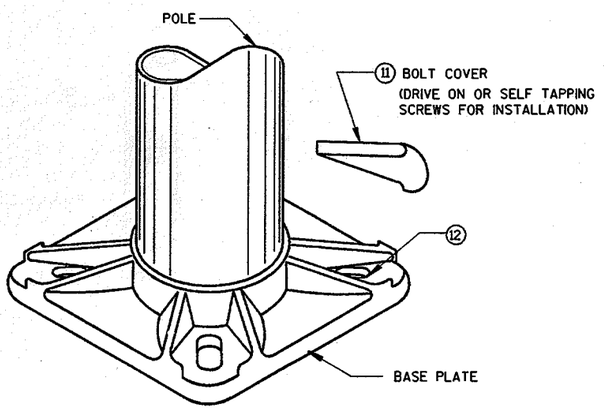
TYPICAL TROMBONE MAST ARM AND SINGLE LUMINAIRE MAST ARM MOUNTING CLAMP



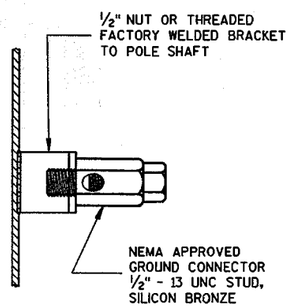
TYPICAL LUMINAIRE MAST ARM (DOUBLE) MOUNTING BRACKETS

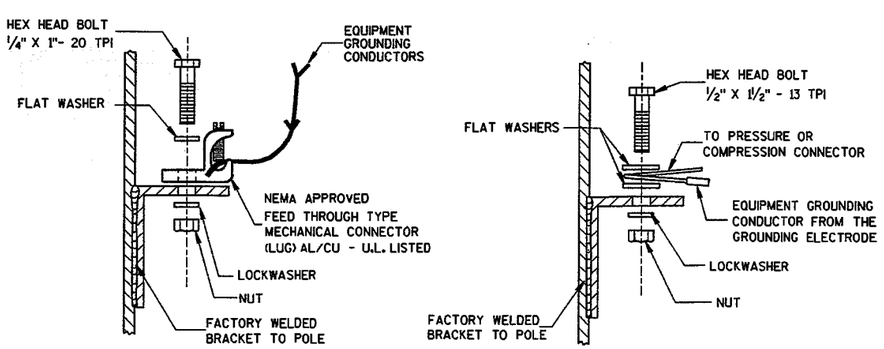


TYPICAL "J" HOOK LOCATION



BASE PLATE





TYPICAL GROUNDING CONNECTIONS
NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL

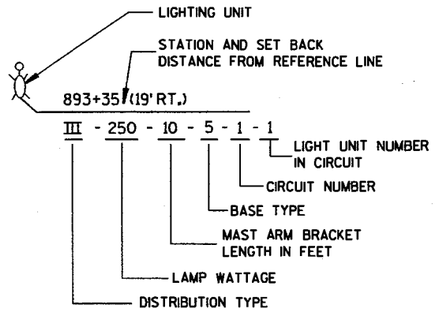
HARDWARE DETAILS FOR POLE MOUNTINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

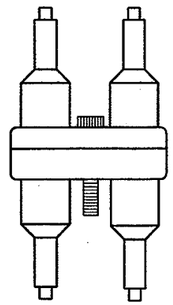
APPROVED
3/05/01
DATE
STATE ELECTRICAL ENGINEER FOR HIGHWAYS
FHWA

S.D.D. 9 E 1-4g

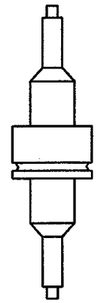
S.D.D. 9 E 1-4g



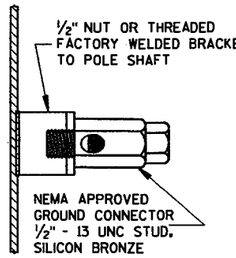
LIGHTING UNIT CODE
(TYPICAL)

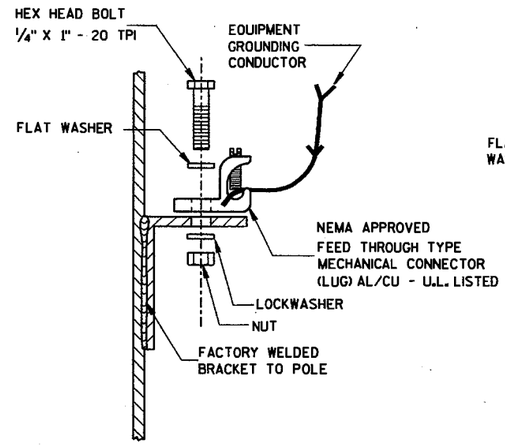


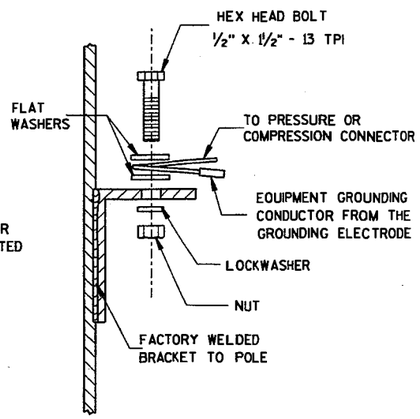
DETAIL "A"
DOUBLE POLE



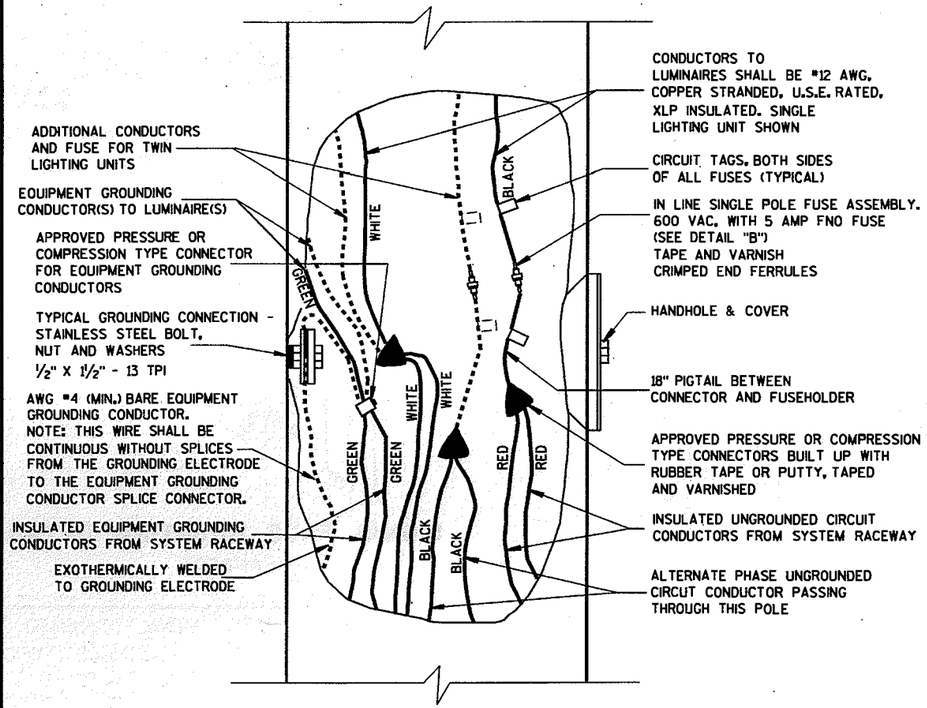
DETAIL "B"
SINGLE POLE



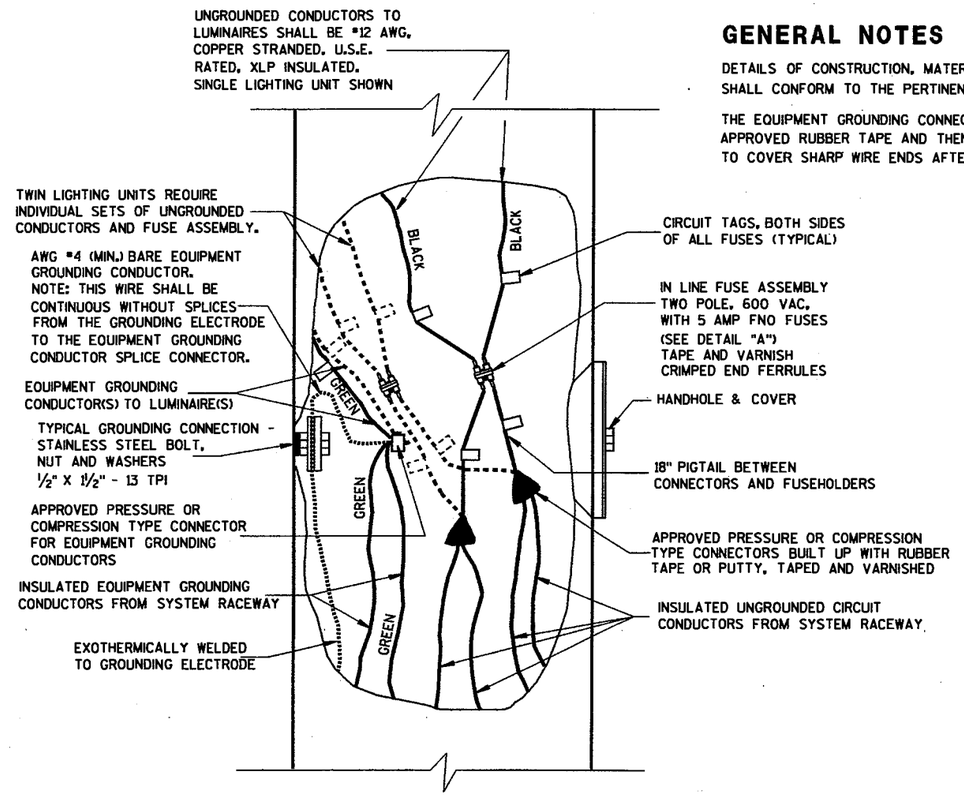




TYPICAL GROUNDING CONNECTIONS
NUT, BOLT, WASHERS AND LOCKWASHERS SHALL BE STAINLESS STEEL



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.

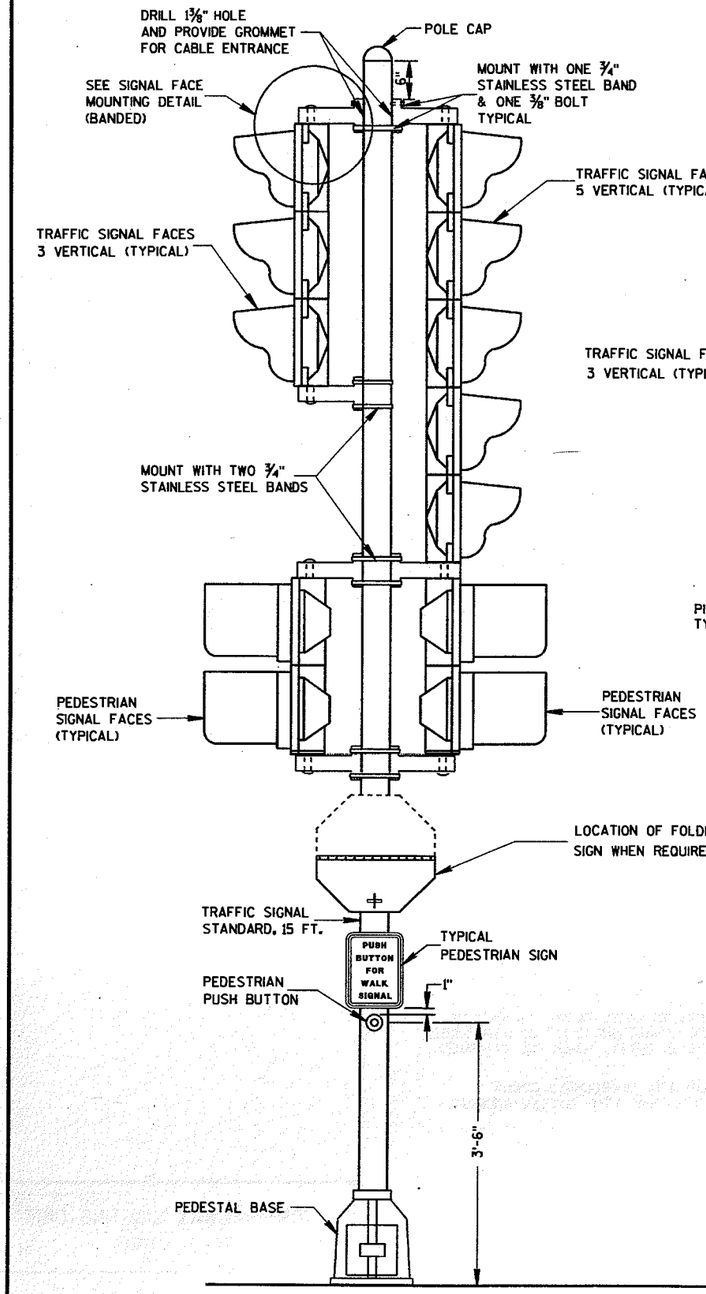
NON-FREEWAY LIGHTING UNIT POLE WIRING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

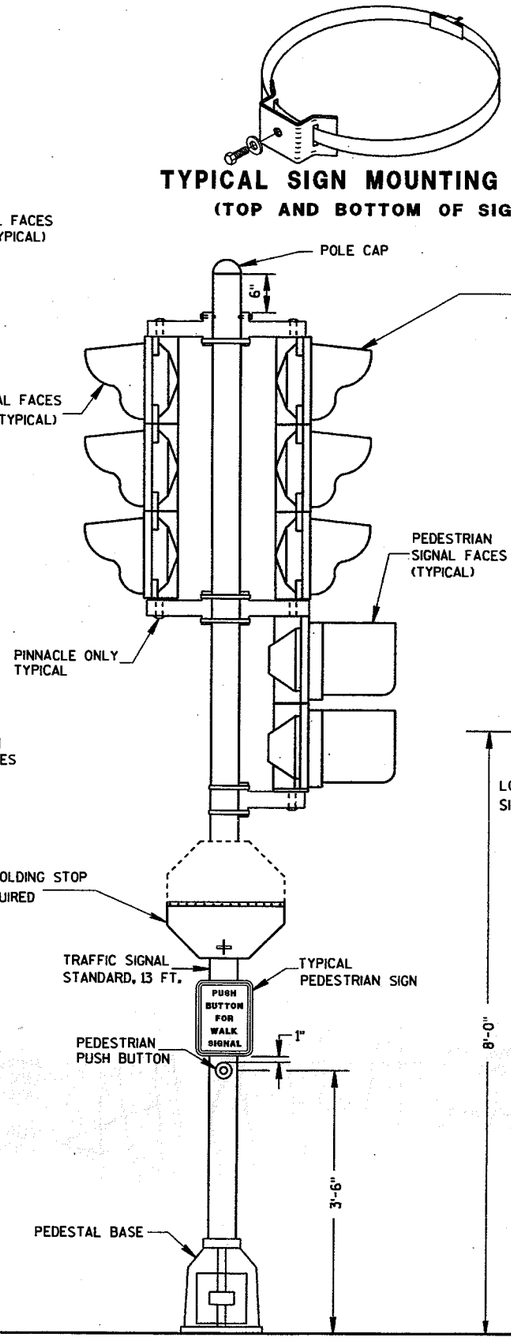
APPROVED
10/21/96
DATE
STATE ELECTRICAL ENGINEER FOR HIGHWAYS
FHWA

S.D.D. 9 E 3-2

S.D.D. 9 E 3-2

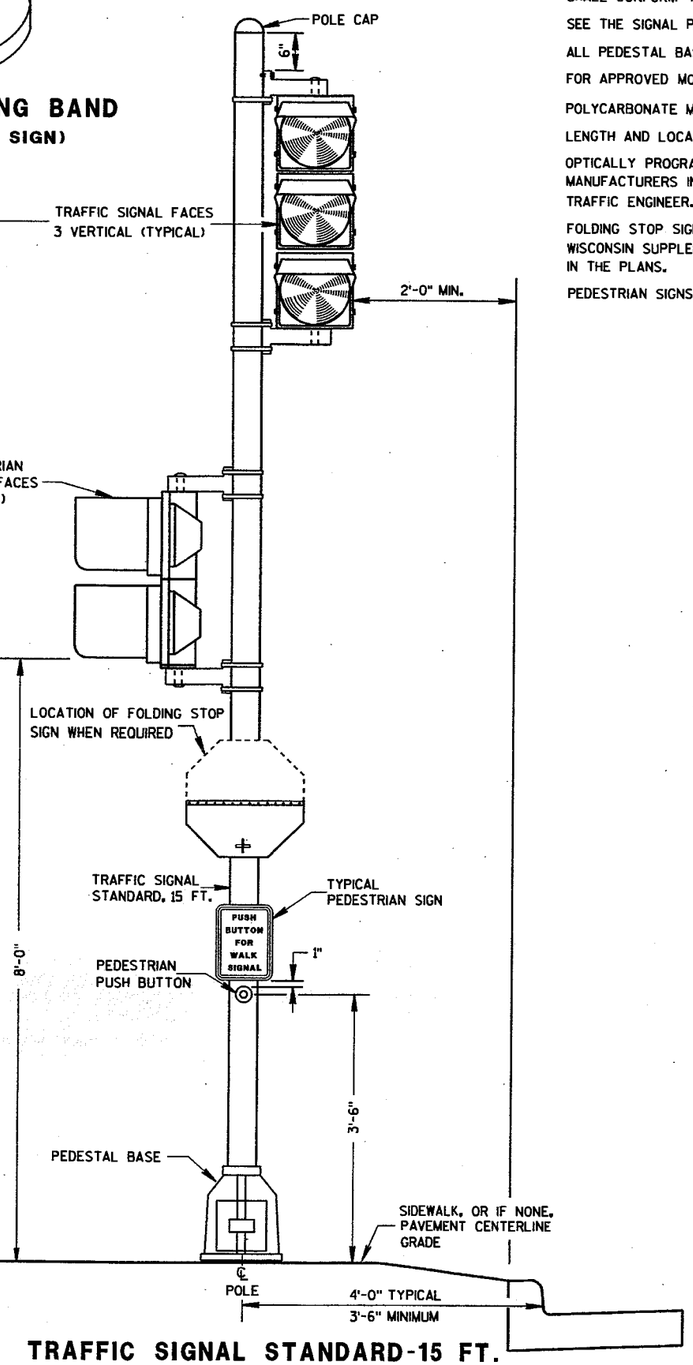


TRAFFIC SIGNAL STANDARD-15 FT.



TRAFFIC SIGNAL STANDARD-13 FT.

TYPICAL SIGN MOUNTING BAND
(TOP AND BOTTOM OF SIGN)



TRAFFIC SIGNAL STANDARD-15 FT.
3M MOUNTING (TYPICAL)

GENERAL NOTES

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

SEE THE SIGNAL PLAN FOR REQUIRED SIGNAL FACE SIZES.

ALL PEDESTAL BASES SHALL BE MOUNTED ON CONCRETE BASE - TYPE 1.

FOR APPROVED MOUNTING HARDWARE, SEE THE CONTRACT SPECIAL PROVISIONS.

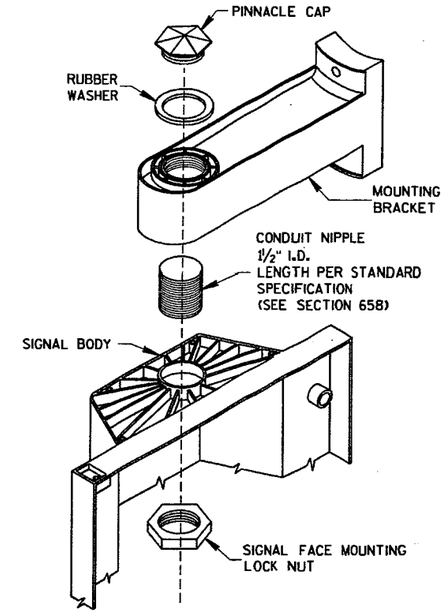
POLYCARBONATE MOUNTING BRACKETS SHALL BE USED.

LENGTH AND LOCATION OF TRAFFIC SIGNAL STANDARDS SHALL BE AS SHOWN ON THE PLANS.

OPTICALLY PROGRAMMED SIGNAL FACES SHALL BE MASKED IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS, AND UNDER THE DIRECTIONS OF THE DISTRICT TRAFFIC ENGINEER.

FOLDING STOP SIGNS SHALL BE IN ACCORDANCE WITH THE MUTCD AND/OR THE LATEST WISCONSIN SUPPLEMENT. THE SIGNS SHALL BE SIZED AND LOCATED AS CALLED FOR IN IN THE PLANS.

PEDESTRIAN SIGNS SHALL BE AS DESIGNATED IN THE PLANS.

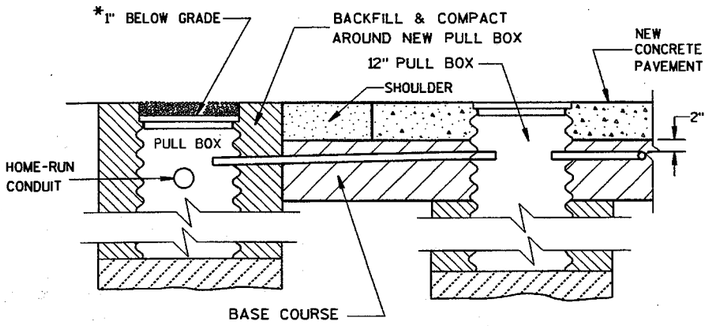


SIGNAL FACE MOUNTING DETAIL
(BANDED)

TRAFFIC SIGNAL STANDARD POLY BRACKET MOUNTINGS (TYPICAL) 13 FT. OR 15 FT.
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION
APPROVED 10/21/96 DATE — STATE ELECTRICAL ENGINEER FOR HIGHWAYS FHWA

S.D.D. 9 E 6-1

S.D.D. 9 E 6-1



SECTION A-A

NO CURB & GUTTER

LOOP DETECTOR INSTALLATION DETAILS

*RECESS PULL BOX SO THAT THE COVER IS 3" BELOW GRADE IN SHOULDER AREAS OF CRUSHED AGGREGATE. BACKFILL OVER COVER WITH THE CRUSHED AGGREGATE TO BRING THE AREA TO GRADE LEVEL.

GENERAL NOTES

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

LOOP SIZE, LOCATION, NUMBER OF TURNS OF WIRE AND ASSOCIATED SIGNAL PHASE SHALL BE AS SHOWN ON THE PLANS.

PITCH LEAD OUT CONDUIT TO DRAIN TO ROADSIDE PULL BOX.

SPLICES SHALL BE INSTALLED BY USING CAST IN PLACE SPLICE KITS SUCH AS 3M TYPE 82A1 OR 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.

THE GROUND RESISTANCE READING OF THE LOOP SHALL READ "INFININTY" TO GROUND ON AN OHMMETER USING A MULTIPLIER SCALE OF 1 MEGOHM AND AN INPUT RESISTANCE OF 11 MEGOHMS MINIMUM BEFORE SPLICING THE LOOP TO THE LEAD-IN CABLE.

AFTER SPLICING THE LOOP WIRE TO THE LOOP LEAD-IN CABLE, THE CONTRACTOR SHALL MEASURE INDUCTANCE, GROUND RESISTANCE AND WIRE RESISTANCE AT THE CABINET END OF THE LEAD-IN CABLE AND FURNISH A COPY OF THE READINGS TO THE PROJECT ENGINEER FOR EVALUATION.

ANTI-SIEZE LUBRICATING MATERIAL SHALL BE USED ON ALL THREADS OF THREADED ASSEMBLIES BEFORE INSTALLATION.

LOOP DETECTOR LEADS SHALL BE IDENTIFIED WITH THEIR ASSOCIATED LOOP BY USE OF WATERPROOF TAGS AT BOTH ENDS OF THE CABLE. A LISTING OF THE CABLE IDENTIFICATION PER INDIVIDUAL LOOP LEAD-IN SHALL BE PLACED IN THE CABINET.

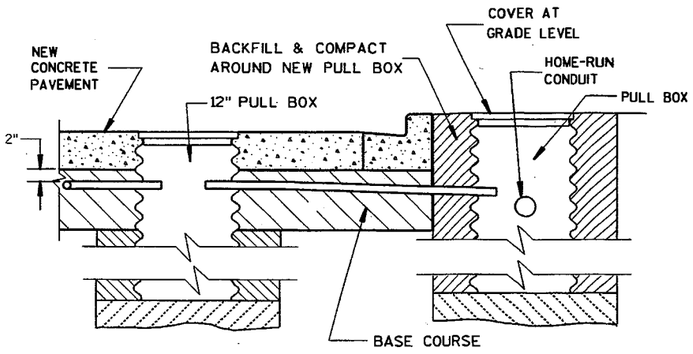
THE #12 AWG LOOP WIRE FROM THE LOOP TO THE ROADSIDE PULL BOX, SHALL BE HAND TWISTED AT LEAST 3 TWISTS PER FOOT BEFORE INSTALLATION.

SPLICES OF LOOP WIRE TO LEAD-IN CABLE SHALL BE MADE ONLY IN PULL BOXES AT THE SIDE OF THE ROAD.

THE #12 AWG LOOP WIRE SHALL BE INSTALLED FROM THE ROADSIDE PULL BOX, THROUGH THE LOOP DUCT, BACK TO THE ROADSIDE PULL BOX, AND BE INSTALLED IN ONE, NON-SPLICED, CONTINUOUS LENGTH.

PROTECTION OF THE CONDUIT, CONDULET AND PULL BOX SHALL BE REQUIRED AFTER INSTALLATION AND BEFORE THE NEW CONCRETE PAVEMENT IS PLACED.

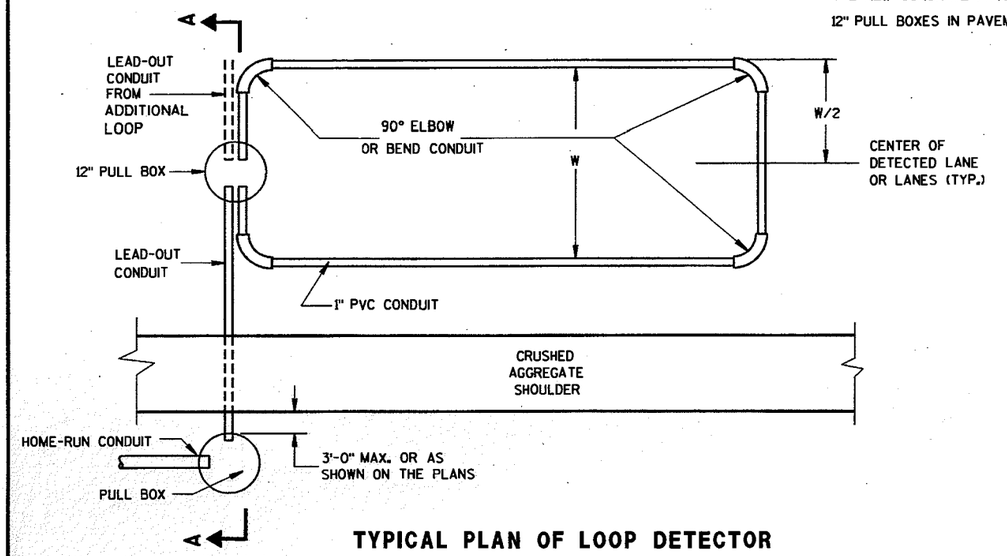
12" PULL BOXES IN PAVEMENT SHALL BE CORRUGATED STEEL ONLY.



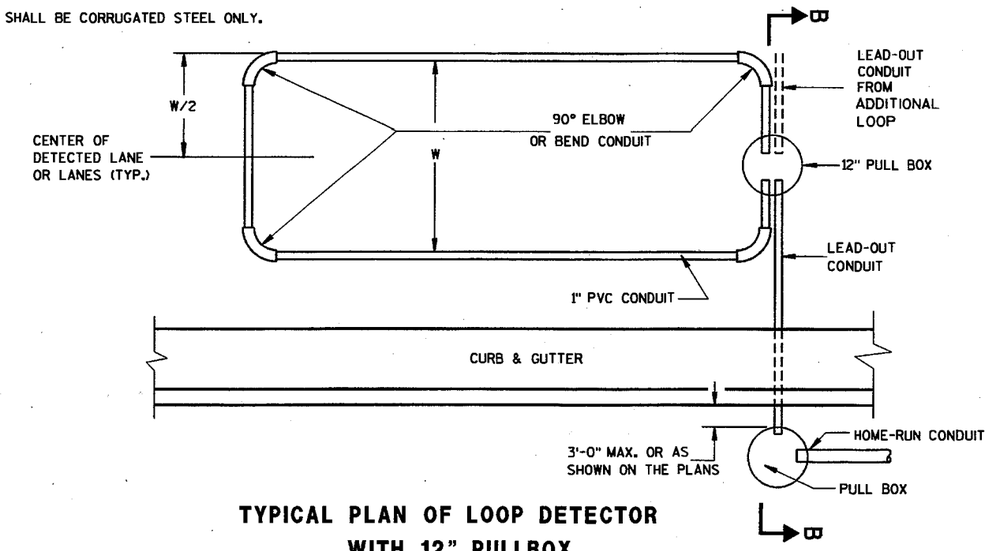
SECTION B-B

CURB & GUTTER

LOOP DETECTOR INSTALLATION DETAILS



TYPICAL PLAN OF LOOP DETECTOR WITH 12" PULLBOX



TYPICAL PLAN OF LOOP DETECTOR WITH 12" PULLBOX

LOOP DETECTOR PLACED IN CRUSHED AGGREGATE BASE (NEW CONCRETE PAVEMENT)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

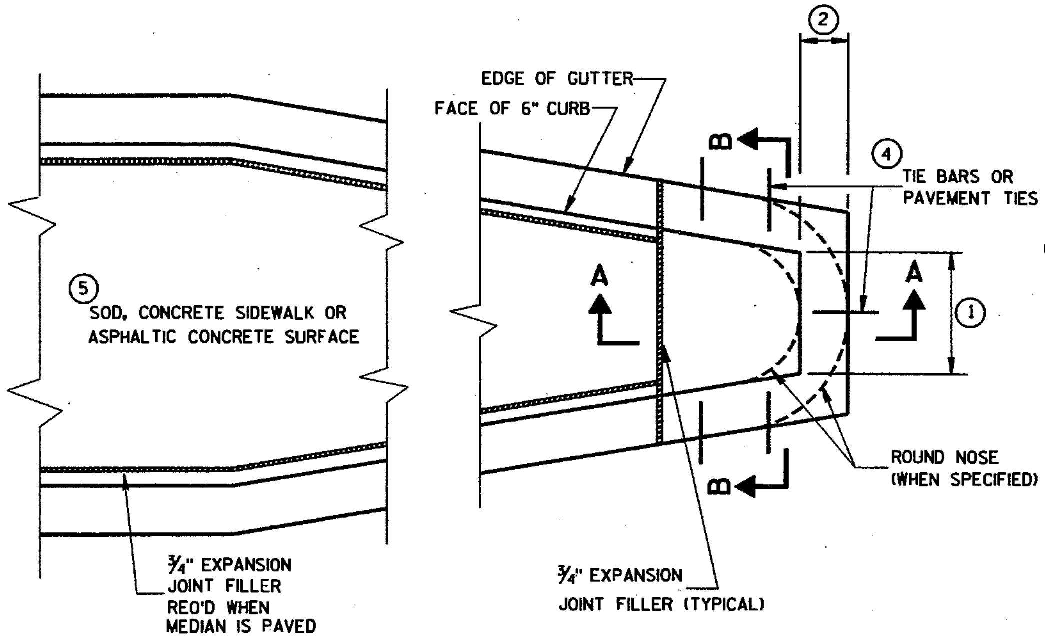
10/21/96
DATE

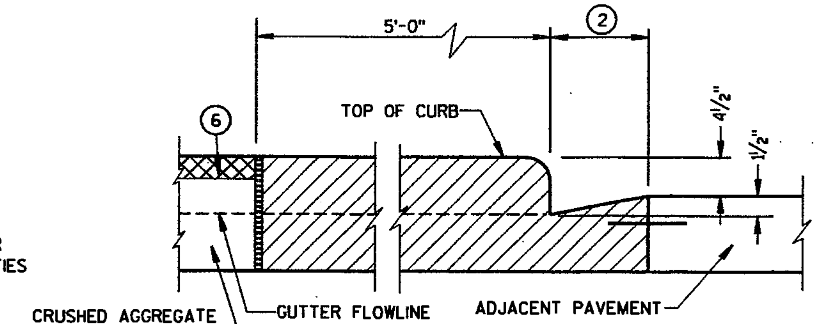
STATE ELECTRICAL ENGINEER FOR HIGHWAYS

FHWA

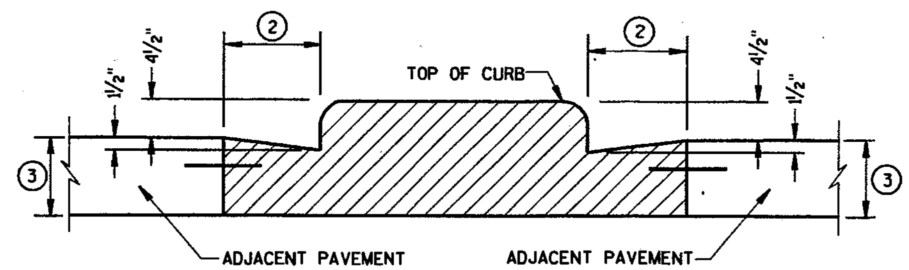
S.D.D. 9 F 9-2

S.D.D. 9 F 9-2



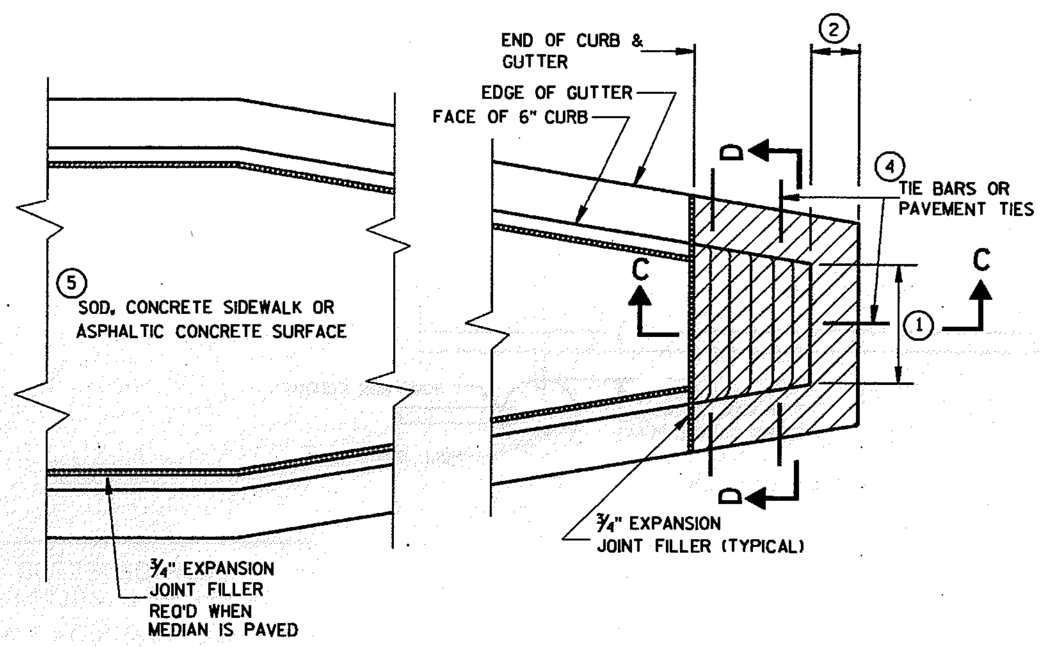


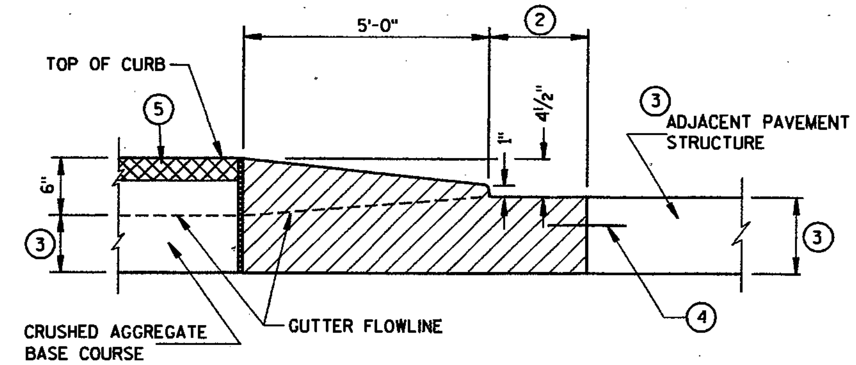
SECTION A-A



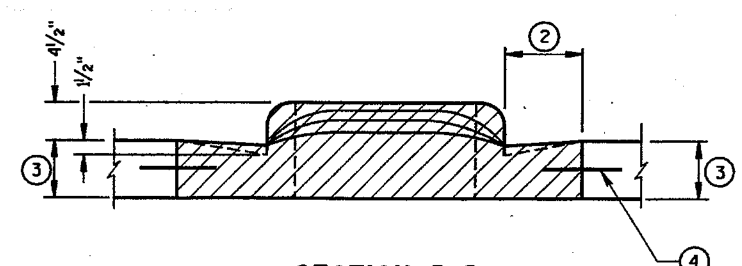
SECTION B-B

CONCRETE MEDIAN BLUNT NOSE DETAIL





SECTION C-C



SECTION D-D

CONCRETE MEDIAN SLOPED 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.

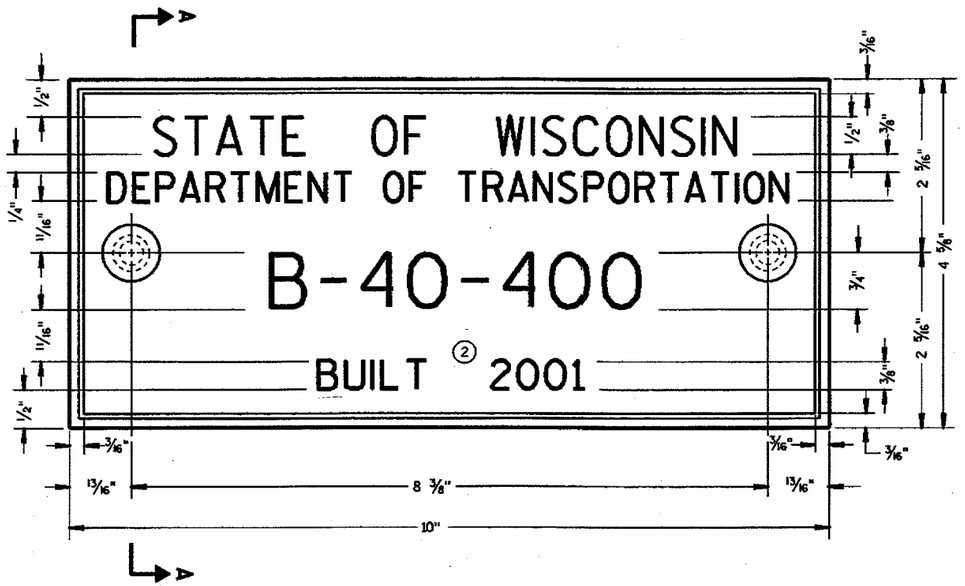
(5) SURFACE TYPE AND DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.

CONCRETE MEDIAN NOSE

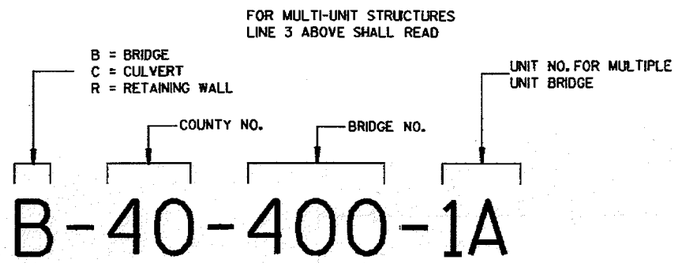
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
07/30/96 [signature]
DATE — CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

S.D.D. 11 B 2-1



TYPICAL NAME PLATE
(BRIDGES, CULVERTS, AND RETAINING WALLS)



NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES

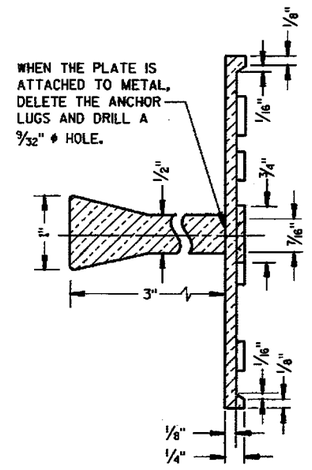
GENERAL NOTES

NAME PLATES TO BE INSTALLED ON BRIDGES, CULVERTS, AND RETAINING WALLS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 506.2.4 OF THE STANDARD SPECIFICATIONS.

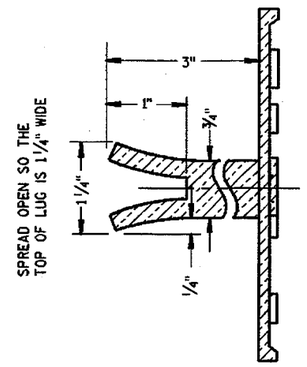
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

① EPOXY RESIN SHALL BE FROM AN APPROVED MANUFACTURER AND USED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

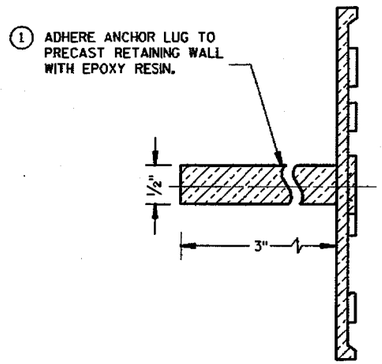
② REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A



ALTERNATE LUG



ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

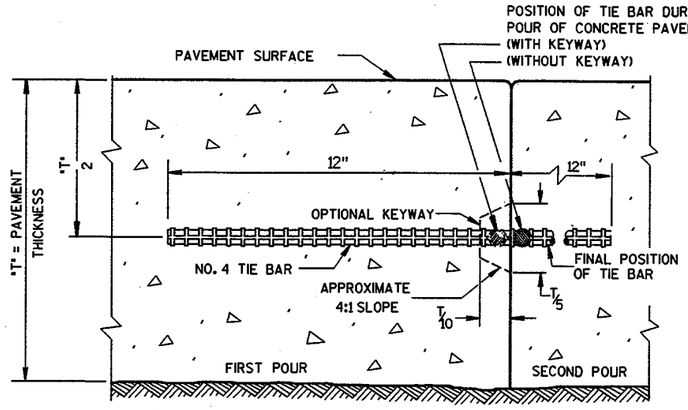
NAME PLATE
(STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

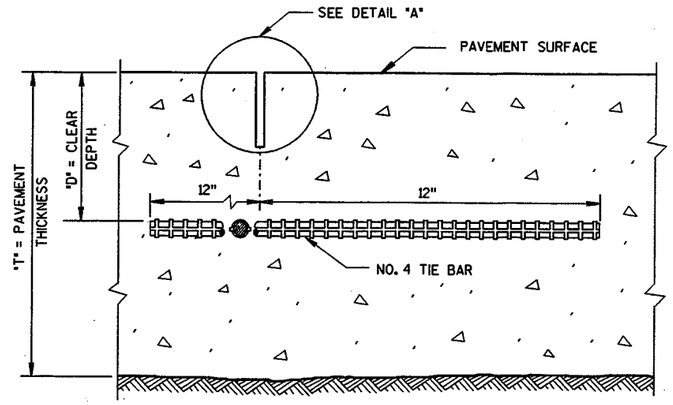
APPROVED
11/29/00
DATE
CHIEF STRUCTURAL DEVELOPMENT ENGINEER
FHWA

S.D.D. 12 A 3-7

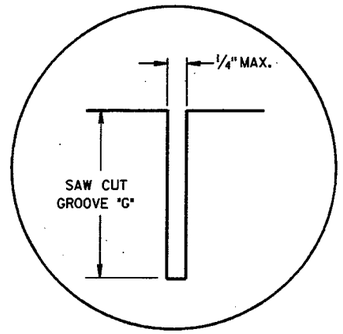
S.D.D. 12 A 3-7



CONSTRUCTION JOINT



SAWED JOINT



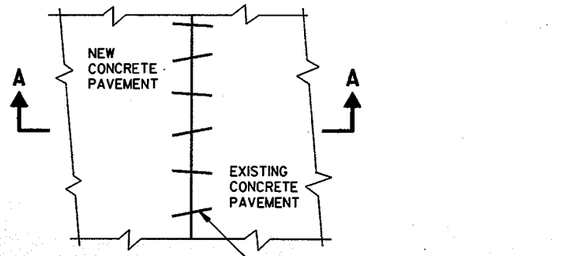
DETAIL "A"

GENERAL NOTES

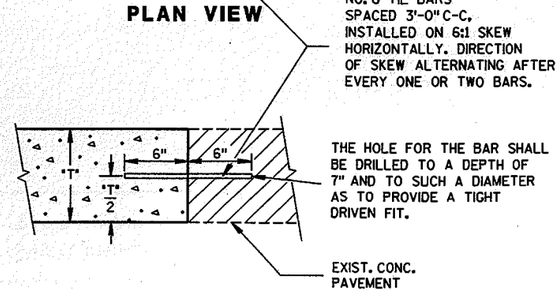
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPL ICABLE SPECIAL PROVISIONS.

LONGITUDINAL JOINTS SHALL NOT BE SEALED OR FILLED.

TIE BAR SPACINGS ARE VALID ONLY FOR PAVEMENT WIDTHS IN THE TABLE. FOR WIDER PAVEMENTS, TIED CONCRETE SHOULDERS OR RAMPS. THE TIE BAR SPACING SHALL BE AS SHOWN ON THE PLANS.

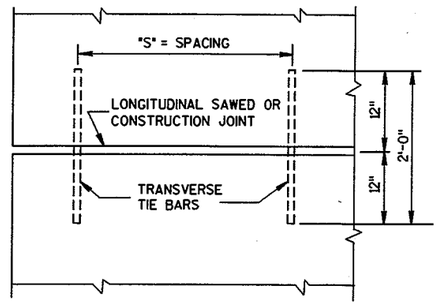


PLAN VIEW



SECTION A-A
PAVEMENT TIES

PAVEMENT THICKNESS "T"	CLEAR DEPTH "D"	SAW CUT GROOVE "G"	MAXIMUM TIE BAR SPACING "S"	
			PAVEMENT WIDTH	
			24' OR 26'	30'
6, 6 ½"	3"±½"	2"	48"	42"
7, 7 ½"	3 ¼"±1"	2 ¼"	45"	36"
8, 8 ½"	3 ¾"±1"	2 ½"	39"	30"
9, 9 ½"	4 ¼"±1"	3"	33"	27"
10, 10 ½"	4 ¾"±1"	3 ¼"	30"	24"
11, 11½"	5 ¼"±1"	3 ¾"	27"	21"
12"	5 ¾"±1"	4	24"	21"



PLAN VIEW
SHOWING LOCATION OF TIE BARS

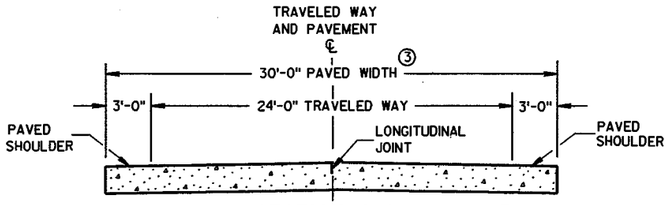
CONCRETE PAVEMENT LONGITUDINAL JOINTS AND PAVEMENT TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/6/02 DATE
Bill Duckett PAVEMENT ENGINEER
FHWA

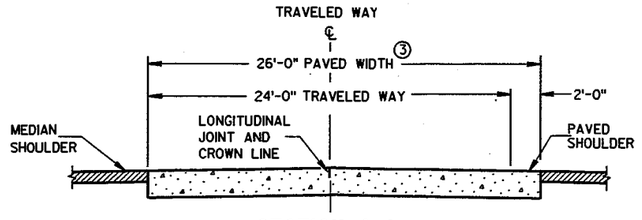
S.D.D. 13 C 1-11

S.D.D. 13 C 1-11

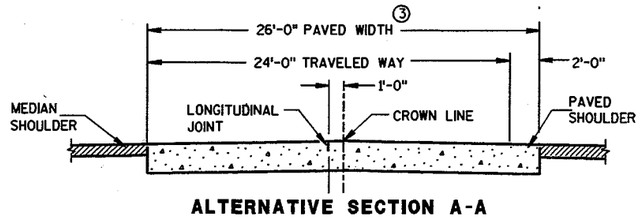


SECTION A-A

TWO-LANE TWO-WAY HIGHWAY ②



SECTION A-A



ALTERNATIVE SECTION A-A

② **DIVIDED HIGHWAY**

GENERAL NOTES

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

CONTRACTION JOINTS

CONTRACTION JOINTS SHALL BE NORMAL TO THE CENTERLINE. THE LOCATION OF CONTRACTION JOINTS THROUGH INTERSECTIONS SHALL BE AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

CONTRACTION JOINTS SHALL NOT BE SEALED OR FILLED.

DOWEL BARS SHALL BE PARALLEL TO THE PAVEMENT CENTERLINE AND SURFACE.

CONSTRUCTION JOINTS

CONSTRUCTION JOINTS SHALL BE A MINIMUM OF 4 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGNED EITHER PARALLEL TO THE CONTRACTION JOINTS OR AT 90° TO THE CENTERLINE.

TIE BARS MAY BE INSERTED THROUGH THE HEADER BOARD AFTER THE CONCRETE HAS BEEN PLACED.

① ALTERNATIVE DESIGNS OF THE DOWEL ASSEMBLY MAY BE USED WHEN APPROVED BY THE ENGINEER. MECHANICAL DOWEL BAR IMPLANTERS MAY BE USED INSTEAD OF DOWEL ASSEMBLIES.

② REFER TO TYPICAL CROSS SECTIONS FOR ADDITIONAL DETAILS.

③ THE ENTIRE PAVED WIDTH INCLUDING THE PORTION(S) LABELED PAVED SHOULDER WILL BE MEASURED AS CONCRETE PAVEMENT.

④ 2'-0" DIVIDED HIGHWAYS
3'-0" TWO-LANE TWO-WAY HIGHWAYS
SEE SECTION A-A

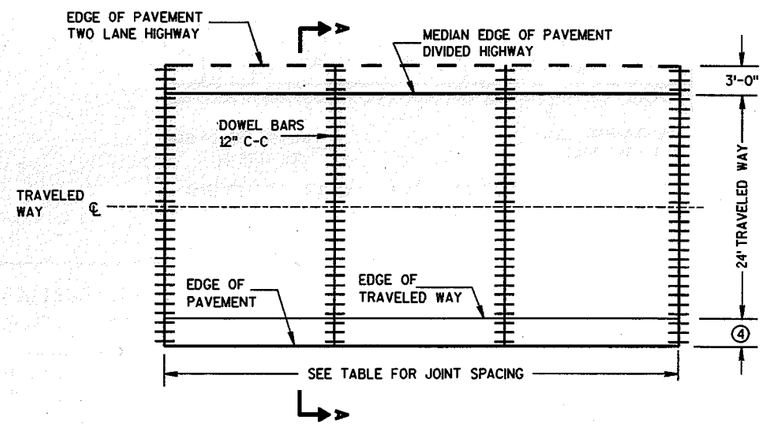
⑤ DOWEL BARS SHALL BE ANCHORED INTO DRILL HOLES WITH AN APPROVED EPOXY GROUT.

⑥ THE FREE END OF DOWEL BARS SHALL RECEIVE A THIN UNIFORM COATING OF BOND BREAKING GREASE.

⑦ DOWEL BARS INSTALLED BY DRILLING SHALL BE SPACED 1'-3" ON CENTER. THE GROUPING OF DOWEL BARS SHALL BE CENTERED INSIDE THE SLAB BASED ON ALL THE FOLLOWING SITUATIONS:

BETWEEN THE EDGES OF PAVEMENTS WITHOUT LONGITUDINAL JOINTS OR
BETWEEN THE EDGE OF PAVEMENT AND NEAREST LONGITUDINAL JOINT OR
BETWEEN TWO ADJACENT LONGITUDINAL JOINTS.

THE CLEAR DISTANCE FROM THE EDGE OF PAVEMENT OR LONGITUDINAL JOINT TO THE NEAR EDGE OF DOWEL BAR NEAREST THAT EDGE OR JOINT SHALL BE A MINIMUM OF 6 INCHES AND A MAXIMUM OF 14 INCHES.



CONTRACTION JOINT LOCATIONS

DOWEL BAR SIZE & JOINT SPACING TABLE

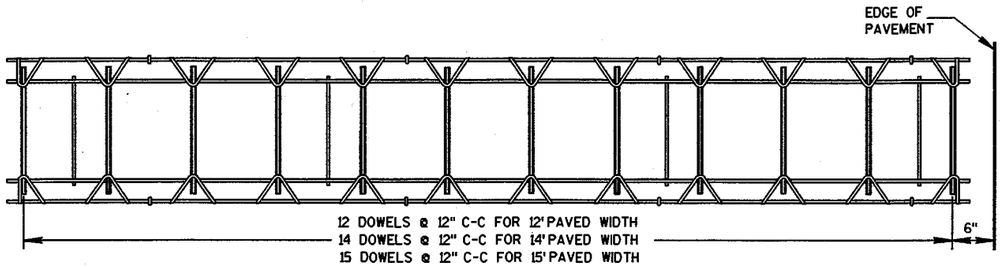
PAVEMENT DEPTH	DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
9 ½" OR LESS	1¼"	15'
MORE THAN 9 ½"	1½"	18'

RURAL DOWELED
CONCRETE PAVEMENT

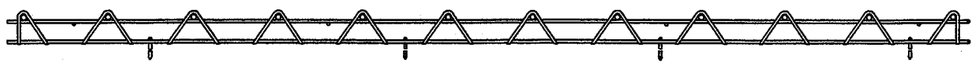
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

S.D.D. 13 C 11-7a

S.D.D. 13 C 11-7a



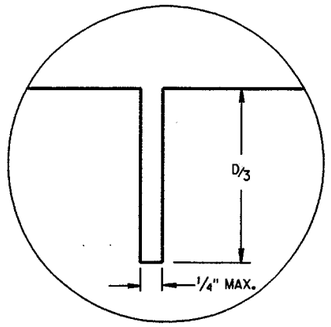
PLAN VIEW



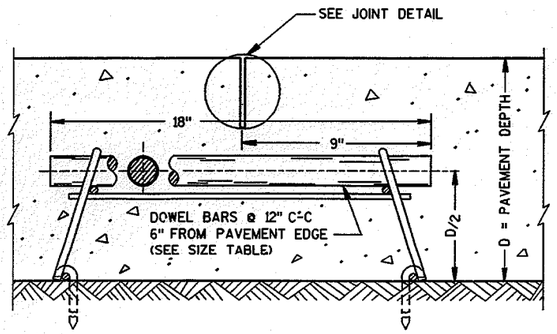
SIDE VIEW

(NORMAL TO CENTERLINE)

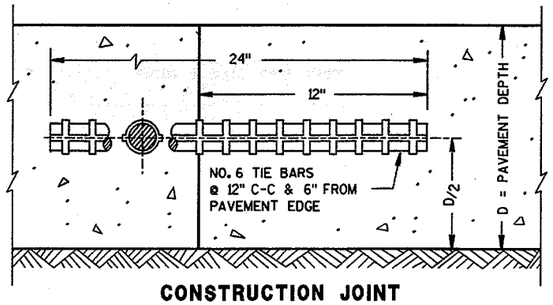
CONTRACTION JOINT DOWEL ASSEMBLY ①



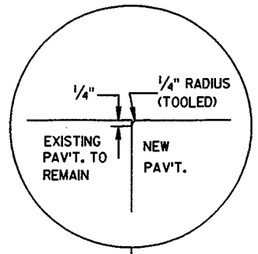
JOINT DETAIL

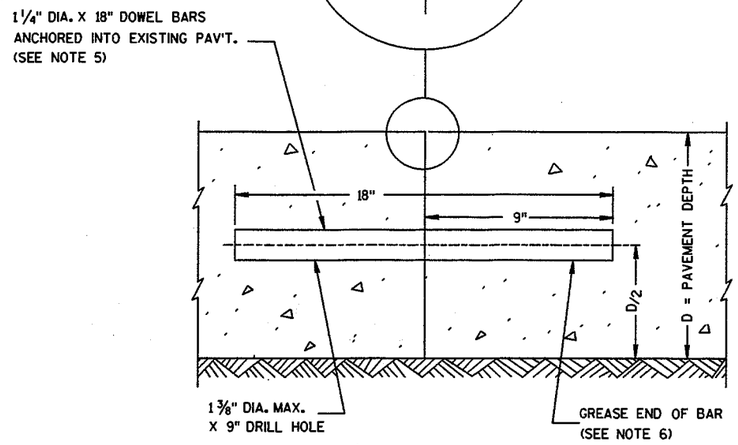


DOWELED CONTRACTION JOINT



CONSTRUCTION JOINT





TRANSVERSE CONTRACTION JOINTS ABUTTING EXISTING PAVEMENT

⑦ **DOWEL BAR DETAIL**

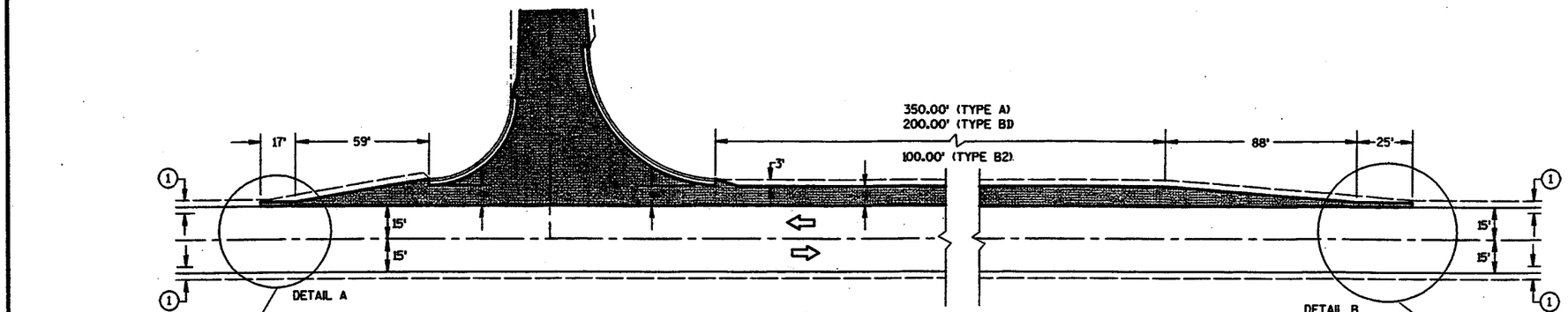
RURAL DOWELED CONCRETE PAVEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

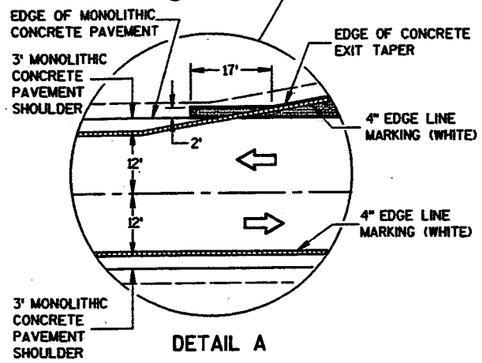
APPROVED
6/6/02 DATE
Bill Duckert PAVEMENT ENGINEER
FHWA

S.D.D. 13 C 11-7b

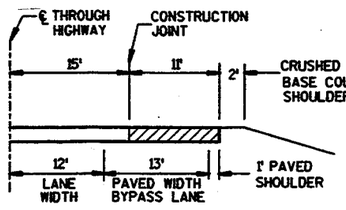
S.D.D. 13 C 11-7b



RIGHT TURN LANE AND EXIT TAPER

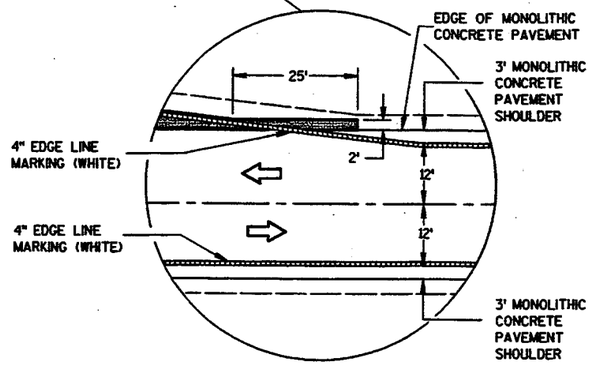


DETAIL A



SECTION A-A

(SHOWING BYPASS LANE AND SHOULDER)



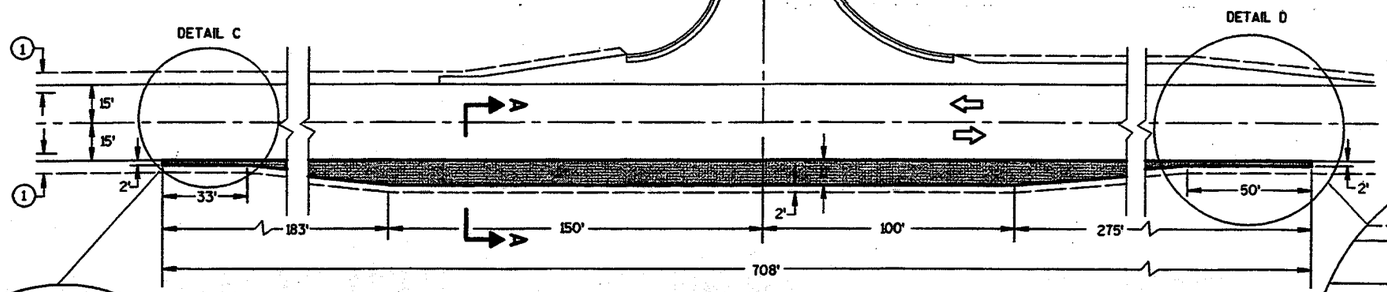
DETAIL B

GENERAL NOTES

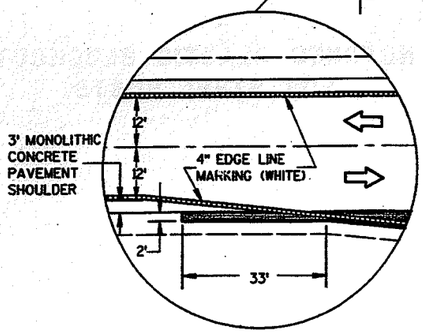
CONTINUE SAW CUT CONTRACTION JOINT ACROSS TURN LANE, EXIT TAPER AND PASSING LANE.

PAVEMENT MARKING DETAILS AND SPECIFICATIONS ARE PROVIDED ELSEWHERE IN THE CONTRACT.

SHOULDER WIDTH TABLE (1)		
DESIGN CLASS	PAVED	TOTAL
A1	3 ft.	6 ft.
C3, L4	3 ft.	6 ft.
A2	3 ft.	10 ft.
C4, L5	3 ft.	8 ft.

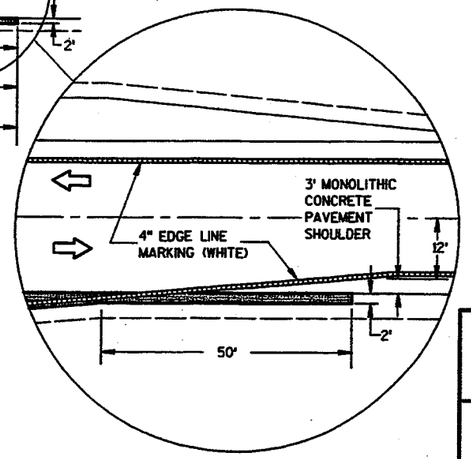


TWO LANE UNDIVIDED HIGHWAY TEE INTERSECTION BYPASS LANE



DETAIL C

CONCRETE PAVEMENT JOINT DETAILS



DETAIL D

CONCRETE JOINT DETAIL FOR TEE INTERSECTION BYPASS LANE AND RIGHT TURN LANE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED 05/27/98 DATE

Roy L. Thomsen
CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

S.D.D. 13 C 16-1

S.D.D. 13 C 16-1

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) W6 X 9 OR W6 X 8.5 STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS ARE ACCEPTABLE ALTERNATIVES FOR 6" X 8" WOOD POSTS WITH WOOD OR PLASTIC BLOCKOUTS. USE APPROVED NOTCHED PLASTIC BLOCKOUTS WITH STEEL POSTS.

DO NOT MIX STEEL POSTS AND WOOD POSTS IN A SINGLE INSTALLATION.

(2) USE STRUCTURAL STEEL POSTS CONFORMING TO AASHTO M183. GALVANIZE ACCORDING TO AASHTO M 111. EITHER SET THE POSTS IN DRILLED HOLES OR DRIVE TO GRADE. REMOVE MUSHROOMING CAUSED BY DRIVING AND REPAIR DAMAGED SPELTER COATING ON GALVANIZED POSTS.

(3) INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.

(4) USE EITHER WOOD OR APPROVED PLASTIC BLOCKOUTS ON WOOD POSTS.

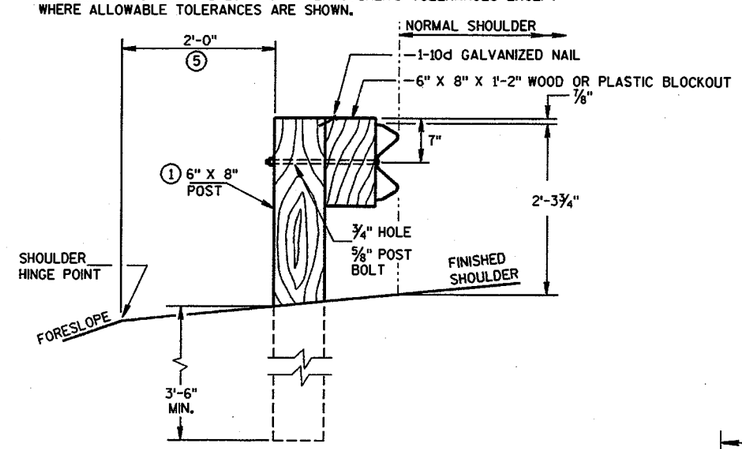
(5) WHEN SPECIFIED IN THE PLANS, THE 2-FOOT MINIMUM TO HINGE POINT MAY BE REDUCED OR ELIMINATED IF EXISTING CONDITIONS DO NOT PERMIT THE DESIRABLE EARTHWORK.

INCREASE POST LENGTH TO PROVIDE A MINIMUM EMBEDMENT OF 3'-6" IF THE SHOULDER HINGE POINT IS LOCATED IN FRONT OF THE POST.

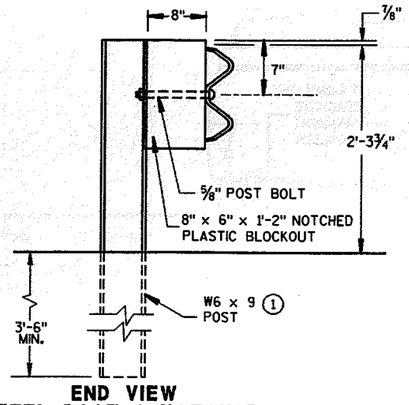
(6) IF ROCK IS ENCOUNTERED DURING EXCAVATION, THE ENGINEER MAY APPROVE USING A 12 INCH DIAMETER POST HOLE EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE APPROXIMATELY 2½ INCHES DEEP. CUT THE POSTS TO LENGTH AND PLACE IN YHE HOLE. BACKFILL WITH MATERIAL EXCAVATED FROM THE HOLE AND COMPACT ADEQUATEY.

INSTALL BEAM GUARD SECTIONS AND ALL NECESSARY HARDWARE ACCORDING TO THE APPLICABLE PLAN AND CURRENT STANDARD AND SUPPLEMENTAL SPECIFICATIONS.

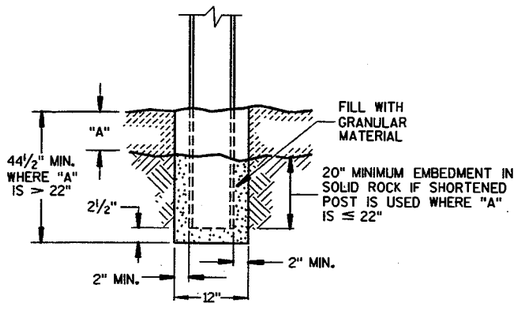
ALL DIMENSIONS ARE SUBJECT TO MANUFACTURER'S TOLERANCES EXCEPT WHERE ALLOWABLE TOLERANCES ARE SHOWN.



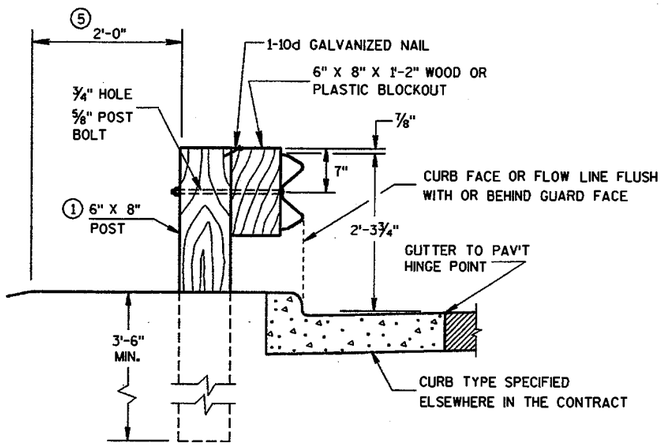
END VIEW
LOCATED ALONG A ROADWAY SHOULDER



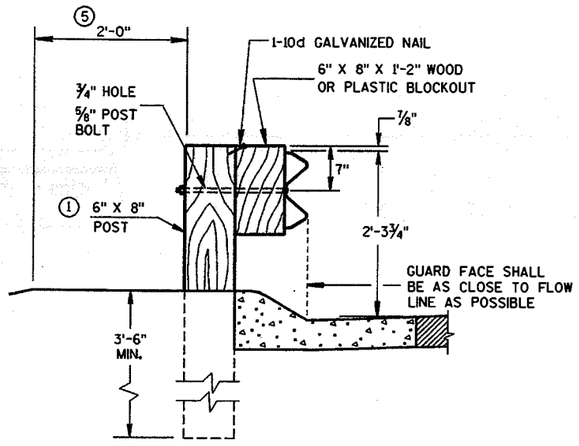
END VIEW
STEEL POST & NOTCHED
PLASTIC BLOCKOUT ALTERNATIVE



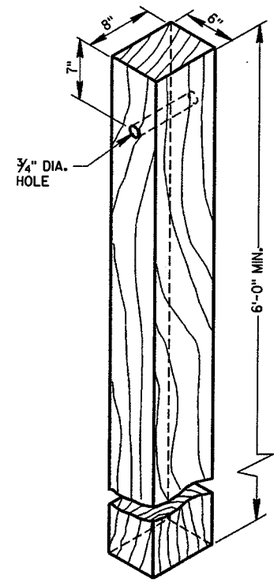
END VIEW
SETTING STEEL OR WOOD POST IN ROCK (6)



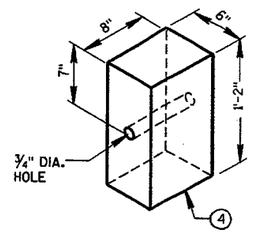
END VIEW
LOCATED ALONG A CURBED ROADWAY



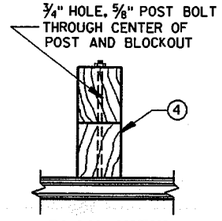
END VIEW
LOCATED ALONG A
MOUNTABLE CURBED ROADWAY



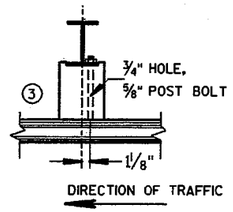
WOOD POST
(6"X8") NOMINAL



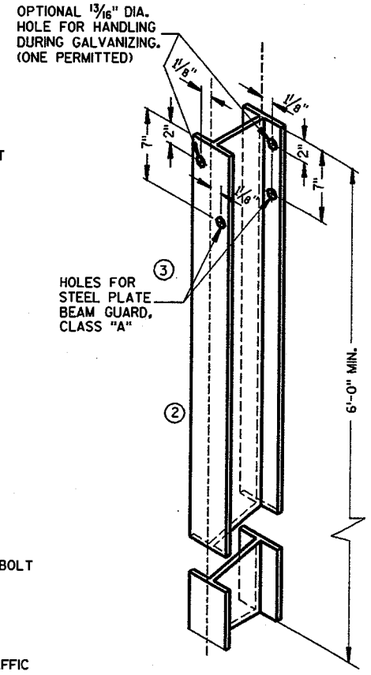
WOOD OR PLASTIC
BLOCKOUT FOR WOOD POSTS



PLAN VIEW
WOOD POST,
BLOCKOUT & BEAM

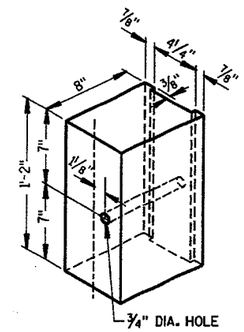


PLAN VIEW
STEEL POST, NOTCHED
PLASTIC BLOCKOUT & BEAM



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

ALL HOLES 13/16" DIAMETER EXCEPT AS NOTED



NOTCHED PLASTIC BLOCKOUT
FOR STEEL POSTS

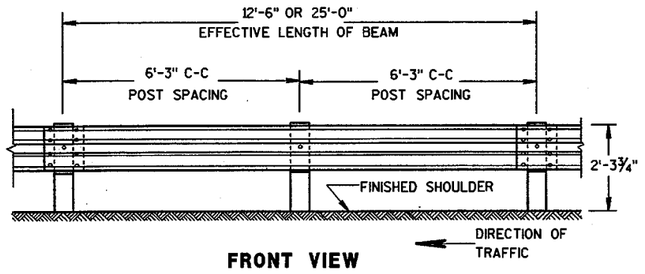
S.D.D. 14 B 15-4a

TYPICAL INSTALLATION OF STEEL PLATE BEAM GUARD

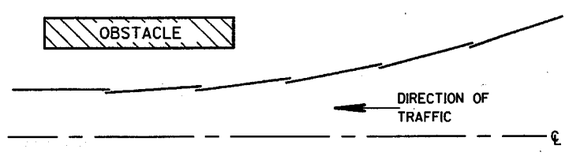
STEEL PLATE BEAM GUARD,
CLASS 'A'
INSTALLATION & ELEMENTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

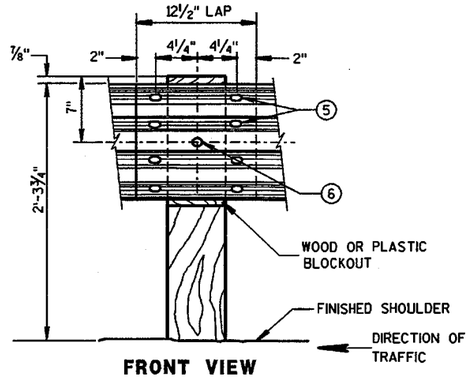
S.D.D. 14 B 15-4a



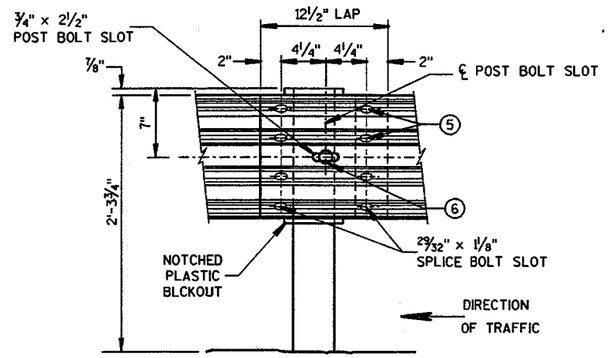
FRONT VIEW



PLAN VIEW
BEAM LAPPING DETAIL



FRONT VIEW
BEAM SPLICE AT WOOD POST
AND POST MOUNTING DETAIL



FRONT VIEW
BEAM SPLICE AT STEEL POST

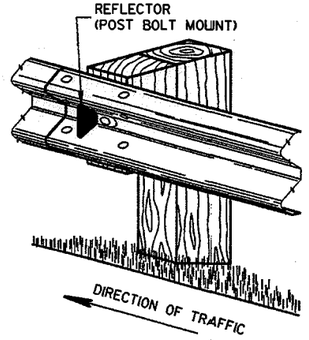
TYPICAL SPLICING DETAILS OF STEEL PLATE BEAM GUARD

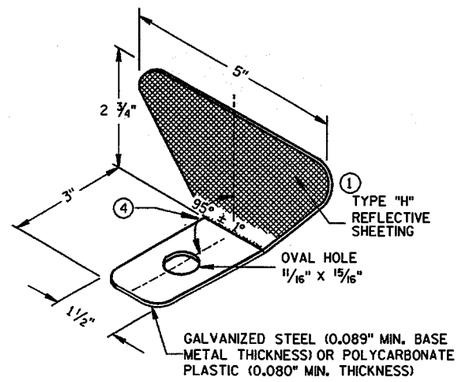
GENERAL NOTES

1. PROVIDE TYPE "H" SILVER REFLECTIVE SHEETING ON ALL REFLECTORS EXCEPT THOSE LOCATED ALONG THE LEFT EDGE OF ONE-WAY ROADWAYS, WHICH SHALL BE PROVIDED WITH TYPE "H" YELLOW REFLECTIVE SHEETING.
2. DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.
3. REVERSE EVERY OTHER REFLECTOR FOR 2-WAY VISIBILITY. THE CONTRACTOR MAY FURNISH TWO-SIDED REFLECTORS IN LIEU OF ONE-SIDED REFLECTORS.
4. PROVIDE AN ANGLE OF BEND OF 90° ± 1° FOR TWO-SIDED REFLECTORS.
5. 8 -⅝" ϕ X 1¼" BUTTON HEAD BOLTS WITH OVAL SHOULDERS & RECESS NUTS.
6. ⅝" ϕ X 1'-6" BUTTON HEAD BOLT AND AND RECESS NUT WITH ROUND WASHER UNDER NUT.

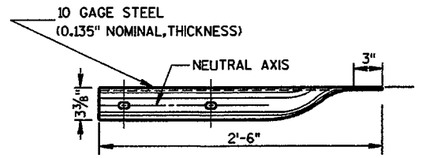
REFLECTOR SPACING ②

	BEAM GUARD LENGTH	REFLECTOR SPACING	NO. SURFACES REFLECTORIZED	MIN. NO. REFLECTORS
ONE WAY TRAFFIC	< 200'	50' C-C	1	3
	> 200'	100' C-C	1	
TWO WAY TRAFFIC	< 200'	25' C-C	1 ③	6
	> 200'	50' C-C	1	
TWO WAY TRAFFIC	< 200'	50' C-C	2	3
	> 200'	100' C-C	2 ④	

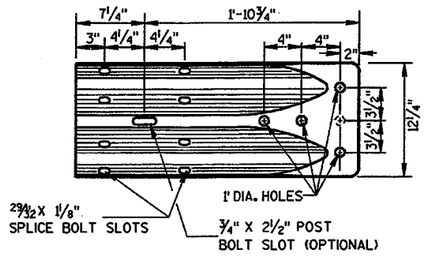




ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION ①



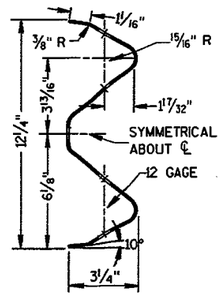
PLAN VIEW



FRONT VIEW

W BEAM TERMINAL CONNECTOR

(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)



SECTION THRU W BEAM

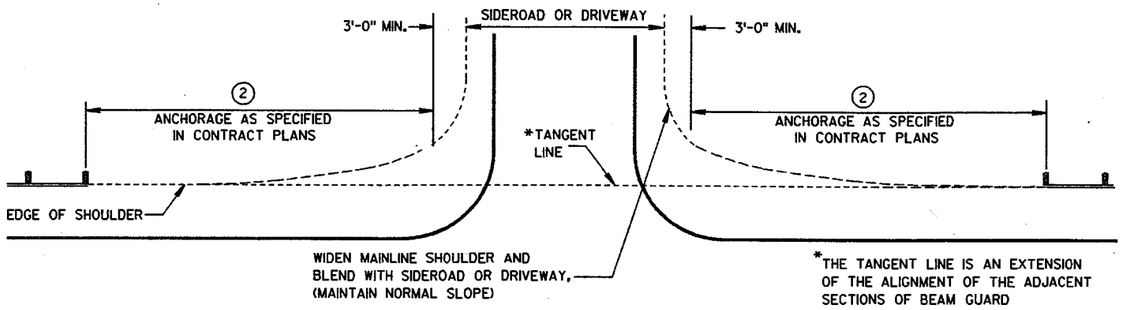
STEEL PLATE BEAM GUARD,
CLASS "A",
INSTALLATION & ELEMENTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

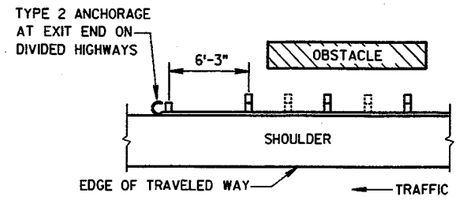
APPROVED
12/08/00
DATE
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

S.D.D. 14 B 15-4b

S.D.D. 14 B 15-4b



BEAM GUARD AT SIDEROADS OR DRIVEWAYS



BEAM GUARD AT OBSTACLES EXIT END - ONE WAY TRAFFIC

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.

W6 X 9 OR W6 X 8.5 STEEL POSTS WITH NOTCHED PLASTIC BLOCKOUTS ARE ACCEPTABLE ALTERNATIVES FOR 6" X 8" WOOD POSTS WITH WOOD OR PLASTIC BLOCKOUTS. USE APPROVED NOTCHED PLASTIC BLOCKOUTS WITH STEEL POSTS.

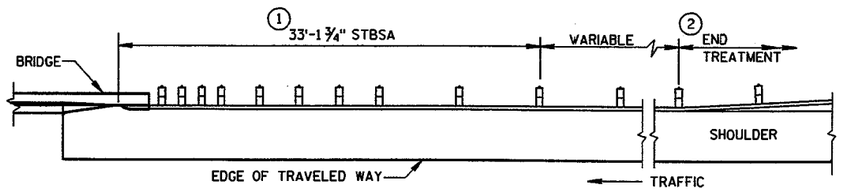
THE LOCATIONS AND LENGTHS OF BEAM GUARD ARE SHOWN ELSEWHERE IN THE PLAN.

(1) USE STEEL THRIE BEAM STRUCTURAL APPROACH (STBSA).

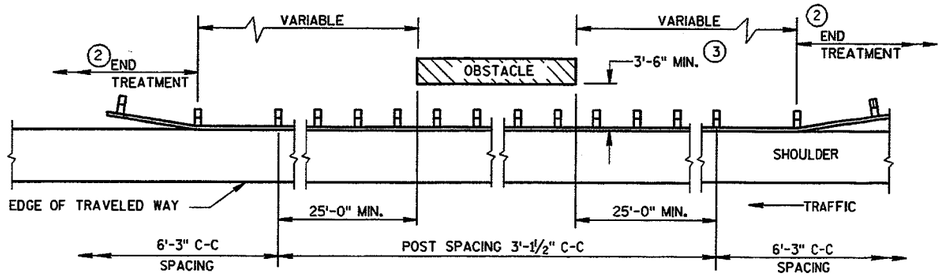
(2) USE AN APPROVED END TREATMENT FOR THE TRAFFIC APPROACH SIDE OF BRIDGE/OBSTACLES. USE TYPE 2 ANCHORAGE ONLY AT THE DOWNSTREAM ENDS OF BEAM GUARD LOCATED ALONG ROADWAYS WITH ONE WAY TRAFFIC.

(3) DESIGN DEFLECTION OF W-BEAM BARRIER SYSYTEM

LATERAL DISTANCE TO FIXED OBJECT	POST SPACING
3'-6" TO 4'-6"	3' - 1½"
4'-6" AND OVER	6' - 3"

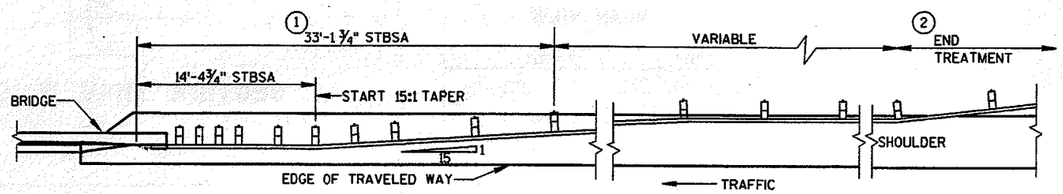


BEAM GUARD AT FULL WIDTH BRIDGES



BEAM GUARD AT OSBSTACLES - TWO WAY TRAFFIC

(RAIL TO OBSTACLE CLEARANCE 3'-6" TO 4'-6")



BEAM GUARD AT NARROW BRIDGES

(FLARED TO SHOULDER EDGE, THEN PARALLEL TO ROADWAY)

STEEL PLATE BEAM GUARD, CLASS "A" (AT BRIDGES, OBSTACLES AND SIDEROADS/DRIVEWAYS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

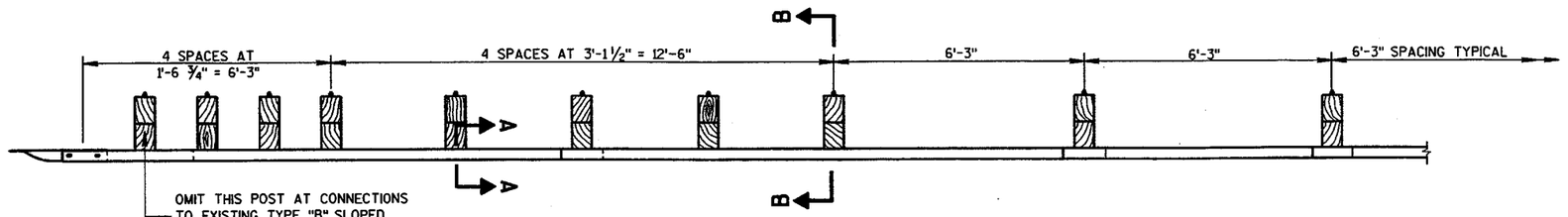
APPROVED
12/08/00
DATE

John Haverberg
CHIEF ROADWAY DEVELOPMENT ENGINEER

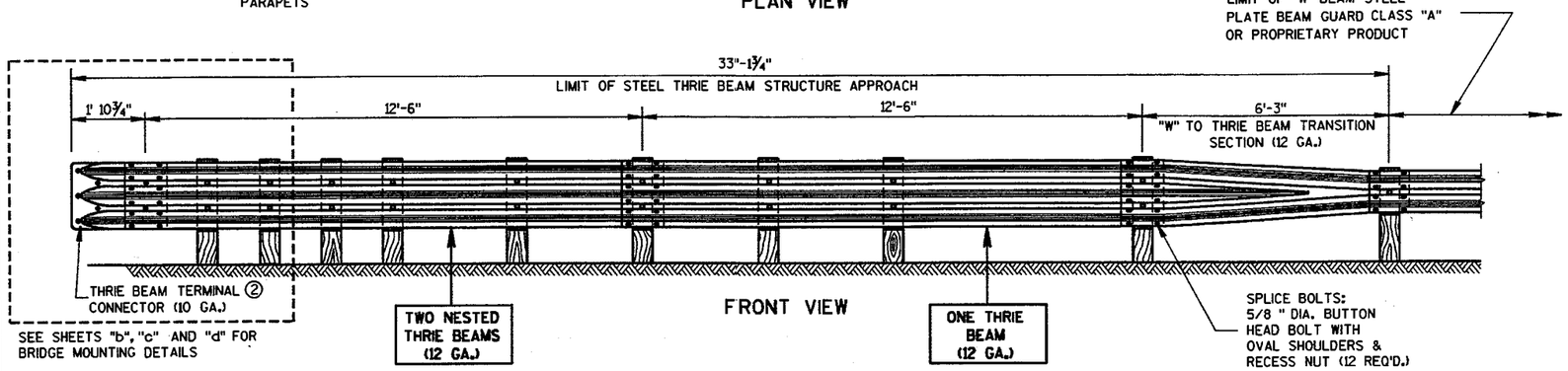
FHWA

S.D.D. 14 B 18-4a

S.D.D. 14 B 18-4a



PLAN VIEW



FRONT VIEW

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.

FURNISH AND CONSTRUCT THRIE BEAM STRUCTURAL APPROACH ACCORDING TO THE REQUIREMENTS OF SECTION 614 OF THE STANDARD SPECIFICATIONS. THRIE BEAM SECTIONS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO DESIGNATION M180, CLASS "A", TYPE 2.

BOLT THE THRIE BEAM TO ALL POSTS AND BLOCKOUTS. DRILL OR PUNCH BOLT HOLES IN THE BEAM IF THE POST SPACING IS LESS THAN 6'-3.

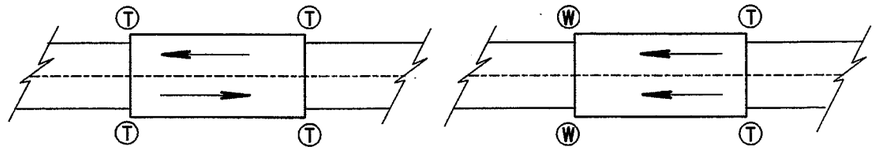
DO NOT USE STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS IN THE STEEL THRIE BEAM STRUCTURAL APPROACH AND THE TRANSITION SECTION OF STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATIONS.

IF ROCK IS ENCOUNTERED DURING EXCAVATION, THE ENGINEER MAY APPROVE USING A 12 INCH DIAMETER POST HOLE EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE APPROXIMATELY 2 1/2 INCHES DEEP. CUT THE POSTS TO LENGTH AND PLACE IN THE HOLE. BACKFILL WITH MATERIAL EXCAVATED FROM THE HOLE AND COMPACT ADEQUATELY.

(1) INCREASE POST LENGTH TO PROVIDE A MINIMUM EMBEDMENT OF 4'-0" IF THE SHOULDER HINGE POINT IS LOCATED IN FRONT OF THE POST.

(2) BRIDGE RAILING TYPE "W" DO NOT REQUIRE A TERMINAL CONNECTOR.

(3) WHEN SPECIFIED IN THE PLANS, THE CONTRACTOR MAY REDUCE OR ELIMINATE THE 2 FOOT MINIMUM TO HINGE POINT IF EXISTING CONDITIONS DO NOT PERMIT THE DESIRABLE EARTHWORK.



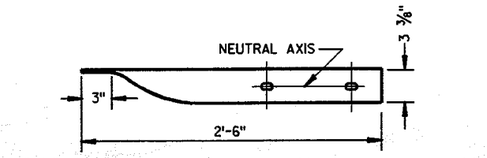
TWO WAY TRAFFIC

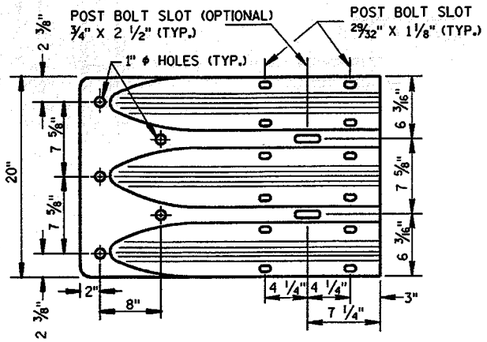
ONE WAY TRAFFIC

(T) THRIE BEAM CONNECTION

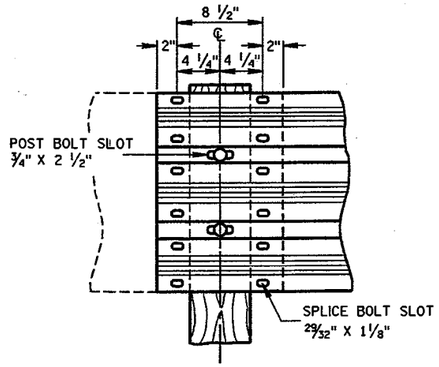
(W) W-BEAM CONNECTION WHEN REQUIRED

TYPICAL LOCATIONS OF THRIE BEAM AND W-BEAM CONNECTIONS TO BRIDGE

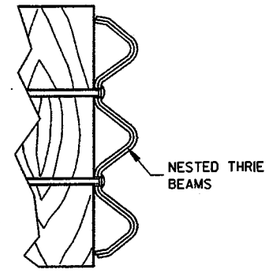




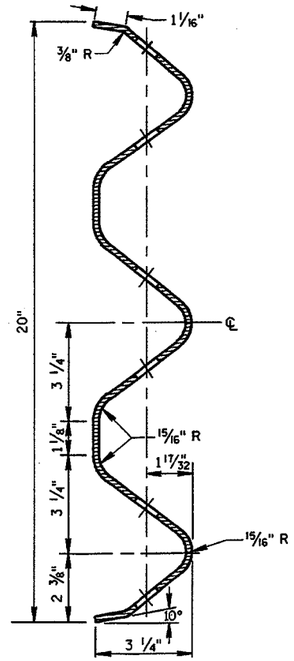
THRIE BEAM TERMINAL CONNECTOR



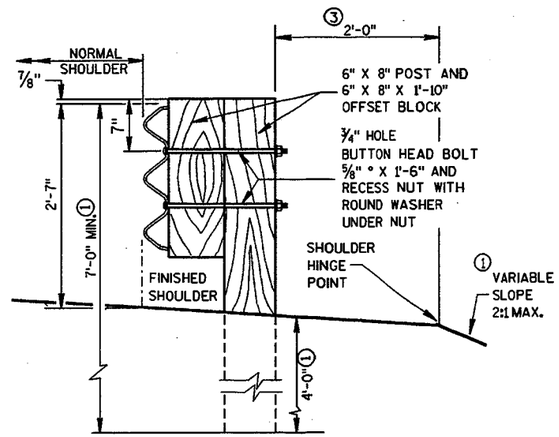
THRIE BEAM SPLICE



PARTIAL SECTION A-A



SECTION THRU THRIE BEAM RAIL ELEMENT



SECTION B-B

STEEL THRIE BEAM STRUCTURE APPROACH

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

S.D.D. 14 B 20-5a

S.D.D. 14 B 20-5a

BILL OF MATERIALS

NOTE NO.	QTY.	DESCRIPTION
①	4	WOOD BREAKAWAY TERMINAL POST: 5½" X 7½" X 3'-9"
②	4	STEEL TUBE: TS 8" X 6" X 0.188", 4'-6" LONG
③	4	SOIL PLATE: 2'-0" X 1'-6" X ¼"
④	4	WOOD BREAKAWAY CRT POST: 6" X 8" X 6'-0"
⑤	6	WOOD OFFSET BLOCKS: 6'X 8" X 1'-2"
⑥	1	PIPE SLEEVE: 2" X 5 ½" STANDARD PIPE
⑦	1	BEARING PLATE
⑧	1	BCT CABLE ASSEMBLY
⑨	1	CABLE ANCHOR BOX
⑩	1	STRUT & YOKE
⑪	1	STEEL PLATE BEAM, END PANEL 12 GA. 13'-6½" LONG FOR SKT-350, ET-2000 AND ET-2000 PLUS
⑫	3	STEEL PLATE BEAM: 12 GA. 13'-6½"
⑬	1	ET-2000/ET-2000 PLUS GUARDRAIL EXTRUDER OR SKT-350 IMPACT HEAD: AS FURNISHED BY MANUFACTURER
⑭	1	REFLECTIVE SHEETING: 18" X 18"

GENERAL NOTES

Ⓐ USE 3:1 OR FLATTER SLOPE FOR INSTALLATION ON EXISTING HIGHWAYS.

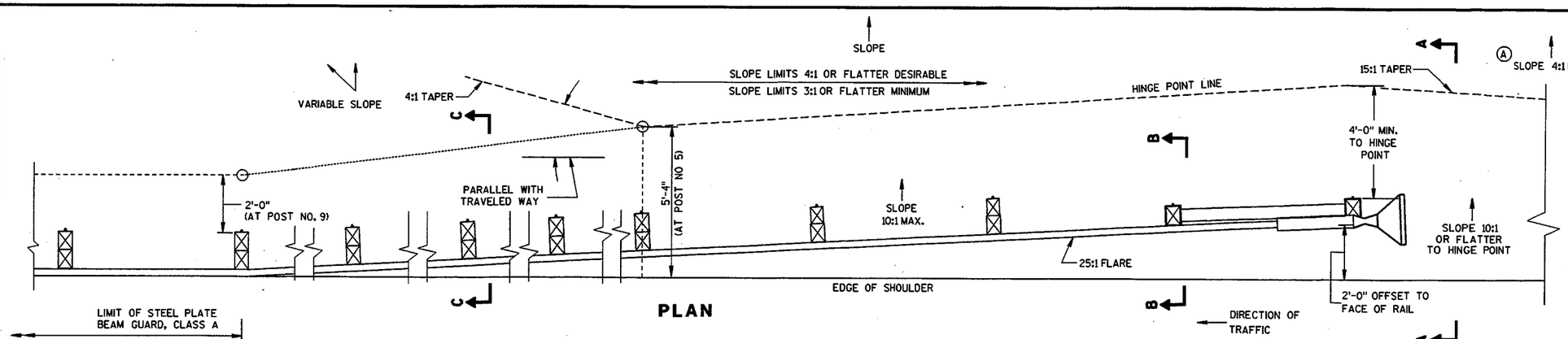
Ⓑ DO NOT ATTACH GUARDRAIL TO POST BLOCKS AT POSTS NO. 3, 5 & 7.

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

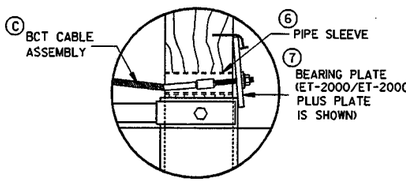
STEEL POSTS SHALL NOT BE ALLOWED FOR USE WITH ENERGY ABSORBING TERMINALS.

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

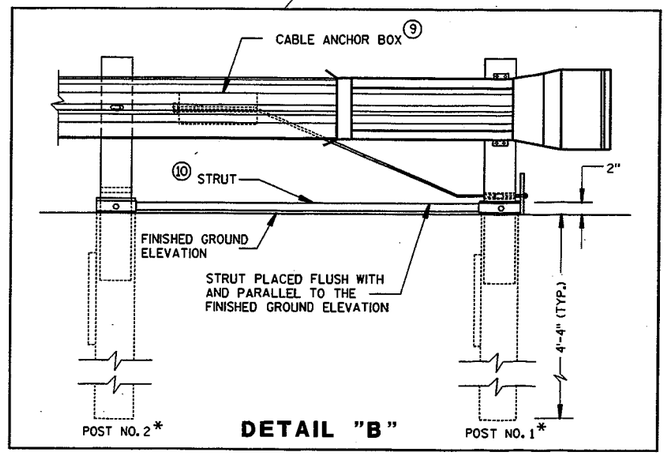
*DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.



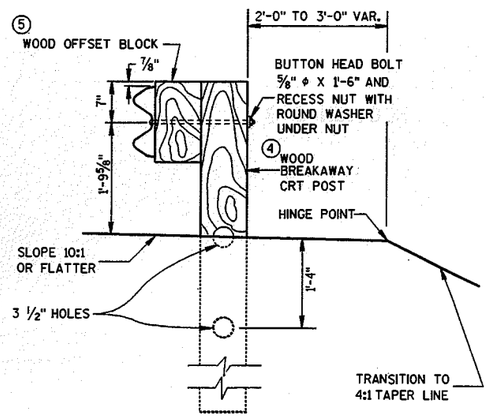
ELEVATION



DETAIL "A"

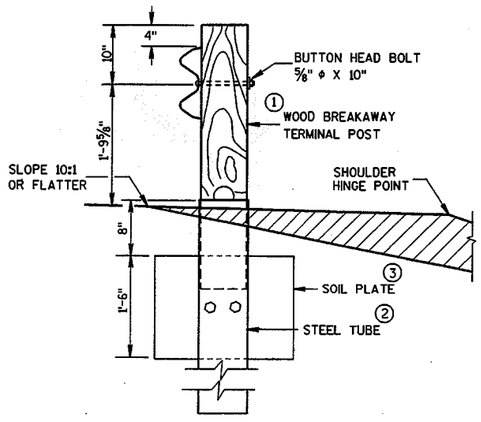


DETAIL "B"



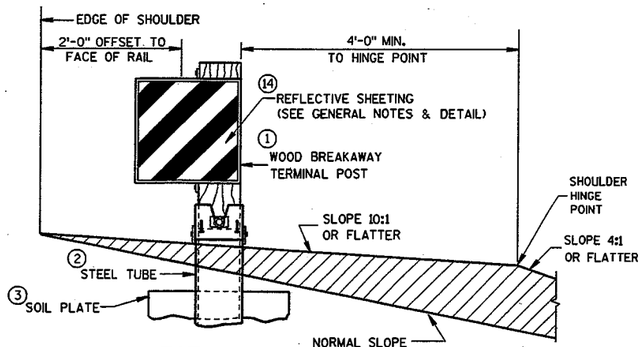
SECTION C-C

TYPICAL AT POST NOS. 4, 6, 8



SECTION B-B

TYPICAL AT POST NO. 2*



SECTION A-A

TYPICAL AT POST NO. 1*

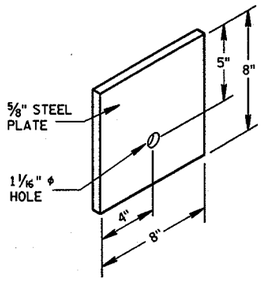
STEEL PLATE BEAM GUARD
ENERGY ABSORBING TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

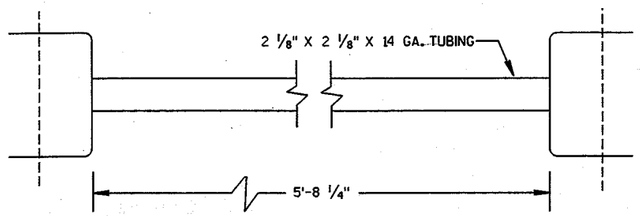
S.D.D. 14 B 24-4a

6

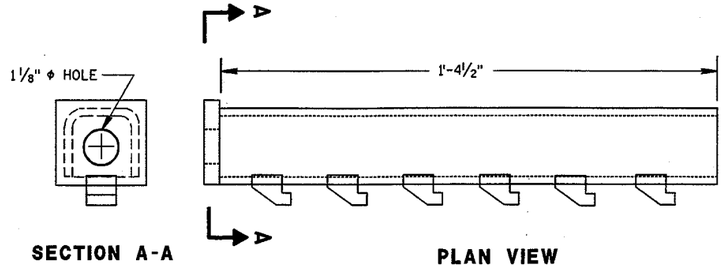
S.D.D. 14 B 24-4a



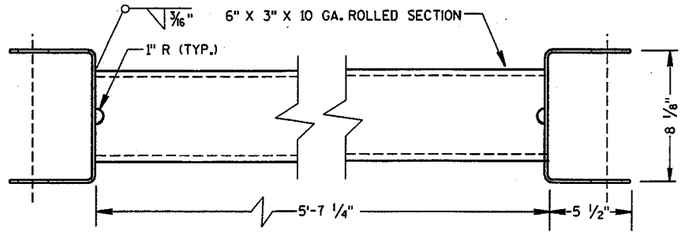
STEEL BEARING PLATE (SKT-350)



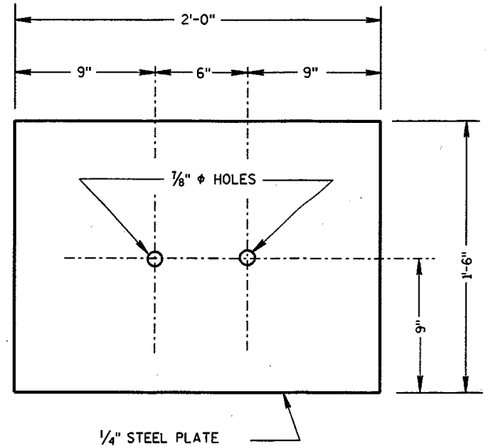
STRUT DETAIL (SKT-350)



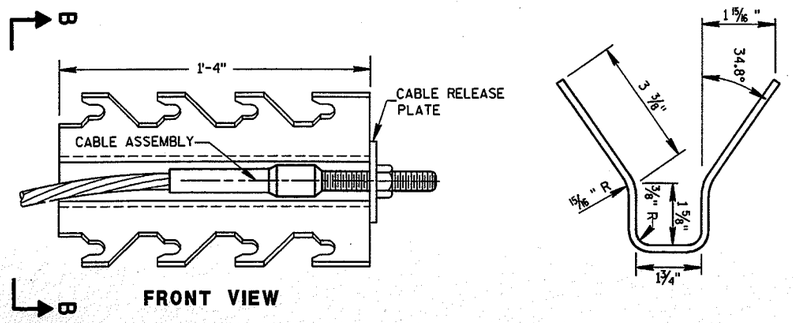
CABLE ANCHOR BOX (ET-2000/ET-2000 PLUS)



STRUT DETAIL (ET-2000/ET-2000 PLUS)

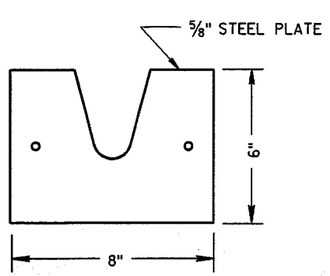


SOIL PLATE
(SKT-350, ET-2000/ET-2000 PLUS)

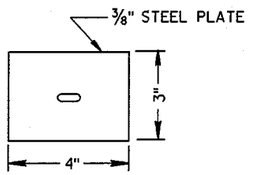


CABLE ANCHOR BOX (SKT-350)

(SKT-350)



STEEL BEARING PLATE
(ET-2000/ET-2000 PLUS)



BEARING PLATE WASHER
(ET-2000/ET-2000 PLUS)

(ET-2000/ET-2000 PLUS)

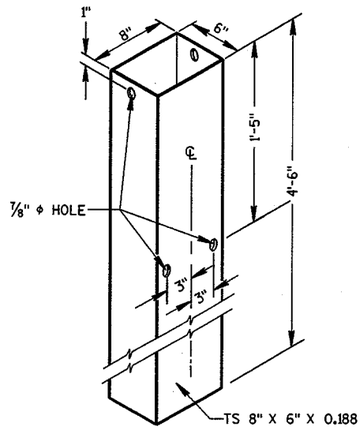
STEEL PLATE BEAM GUARD
ENERGY ABSORBING TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

S.D.D. 14 B 24-4b

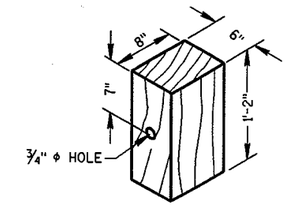
S.D.D. 14 B 24-4b



STEEL TUBE

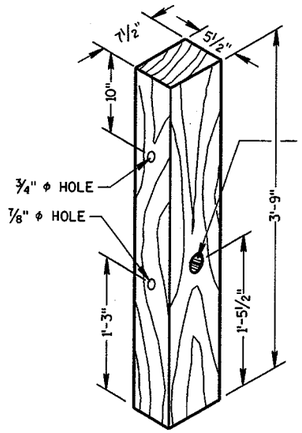
(POSTS NO. 1-4

THE STEEL TUBE SHALL CONFORM TO REQUIREMENTS OF ASTM A500



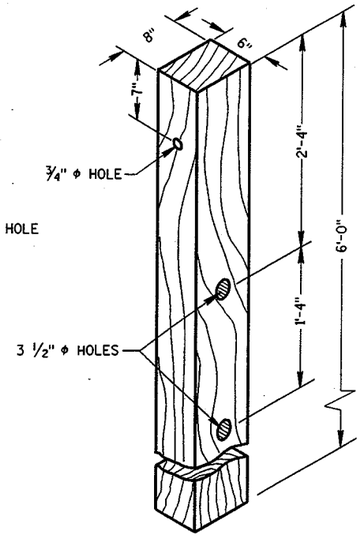
WOOD OFFSET BLOCK

REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



TERMINAL POST

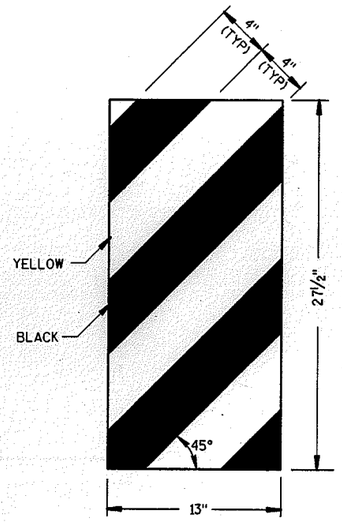
(POSTS NO. 1-4



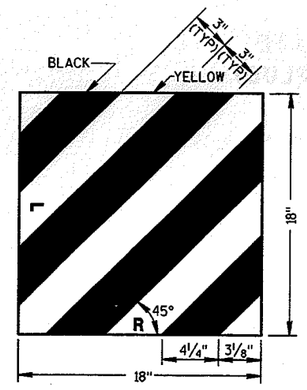
CRT POST

(POSTS NO'S 5-8

WOOD BREAKAWAY POSTS



ET-2000 PLUS ONLY



ET-2000 AND SKT-350

REFLECTIVE SHEETING DETAILS

GENERAL NOTES

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 MANUFACTURERS INSTRUCTIONS.

STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL SHALL BE EITHER THE EXTRUDER TERMINAL (ET-2000), OR THE SEQUENTIAL KINKING TERMINAL (SKT-350). THE CONTRACTOR SHALL NOT INTERMIX PROPRIATERY PRODUCT MATERIALS.

STEEL PLATE BEAM GUARD, ENERGY ABSORBING TERMINAL SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH, WHICH SHALL INCLUDE HARDWARE, STEEL PLATE BEAM GUARD, POSTS, REFLECTIVE SHEETING AND INSTALLATION AS SHOWN.

REFLECTIVE SHEETING - SHALL CONFORM TO ASTM SPECIFICATION D4956-94, REFLECTIVE SHEETING TYPE III, BACKING CLASS 4, PERFORMANCE REQUIREMENT TYPE III. THE MESSAGE AND LINES SHALL BE APPLIED TO THE SIGNS BY THE SILK SCREEN STENCIL PROCESS USING A BLACK OR DARK STENCIL PASTE AS A TYPE APPROVED BY THE MANUFACTURER OF THE FACE MATERIAL TO WHICH IT IS TO BE APPLIED. MESSAGE UNITS CUT FROM NONREFLECTIVE SHEETING AND APPLIED TO THE SIGN FACE ARE NOT ACCEPTABLE. AFTER THE APPROACH END OF THE STEEL PLATE BEAM GUARD INSTALLATION IS COMPLETE, CLEAN THE AREA WHERE THE REFLECTIVE SHEETING WILL BE APPLIED IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATION. ONCE CLEAN, APPLY REFLECTIVE SHEETING DIRECTLY TO THE STEEL PLATE BEAM GUARD AS SHOWN. THE CONTRACTOR SHALL TURN OVER THE MANUFACTURERS WARRANTY FOR THE REFLECTIVE SHEETING TO THE DEPARTMENT FOR POTENTIAL DEALING WITH THE MANUFACTURER. PAYMENT OF REFLECTIVE SHEETING IS INCIDENTAL TO STEEL PLATE BEAM GUARD, ENERGY ABSORBING TERMINAL.

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

STEEL PLATE BEAM GUARD
ENERGY ABSORBING TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED 6/25/03
DATE

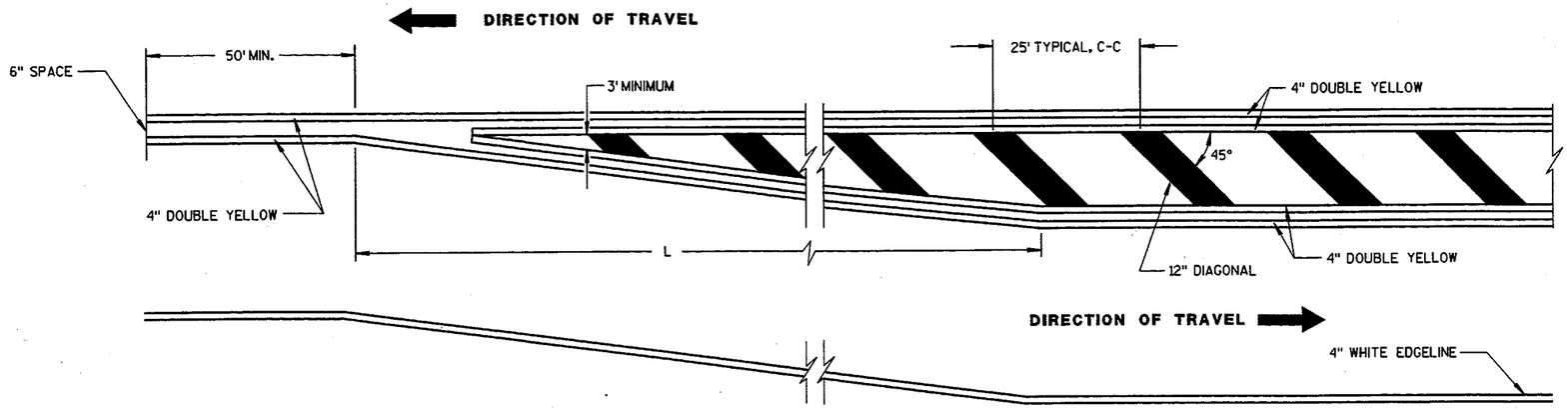
CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

6

S.D.D. 14 B 24-4c

S.D.D. 14 B 24-4c



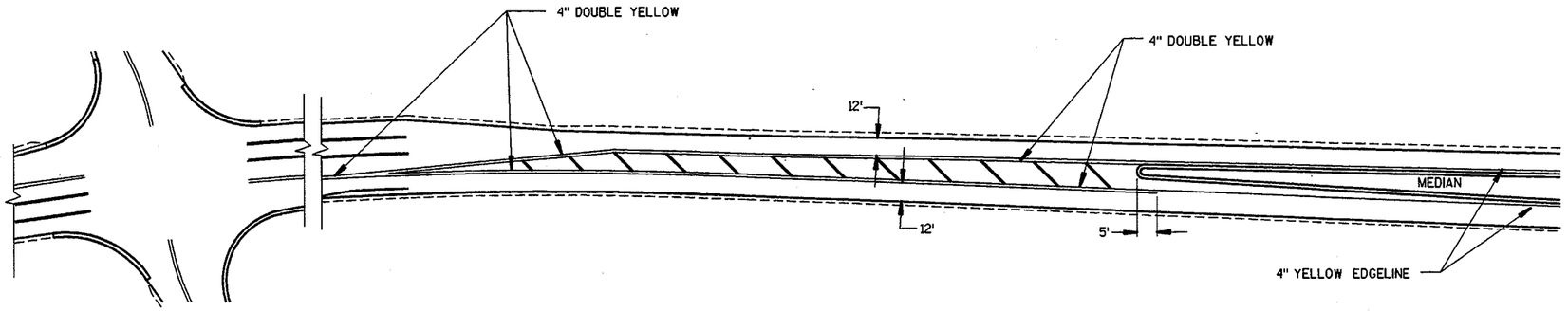
MEDIAN ISLAND DETAIL

GENERAL NOTE

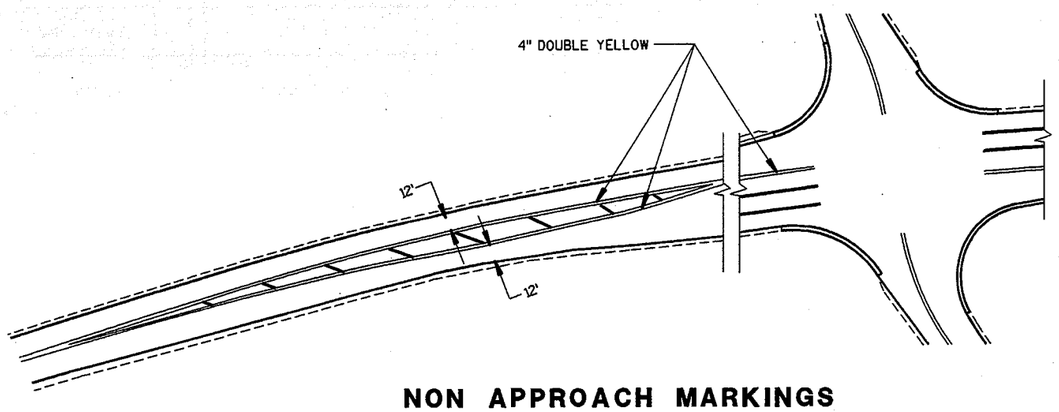
DIAGONALS ARE OPTIONAL WHEN PAINTED ISLAND IS LESS THAN 6 FEET AT WIDEST POINT.

MINIMUM SHIFTING TAPER LENGTH TABLE

POSTED SPEED (S)	TAPER LENGTH (L)
25	100'
30	100'
35	125'
40	165'
45	270'
50	300'
55	330'
65	390'



APPROACH MARKINGS FOR OTHER MEDIAN TYPES



NON APPROACH MARKINGS

MEDIAN ISLAND MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

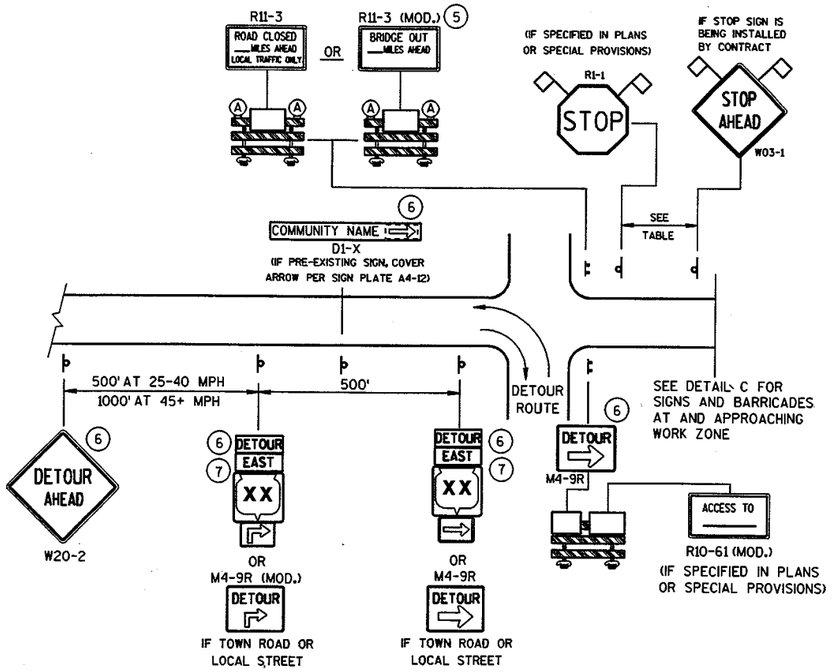
APPROVED
3-17-03 (DATE)
Deborah T. Kyrl for
CHIEF SIGNS AND MARKING ENGINEER

FHWA

6

S.D.D. 15 C 18-1

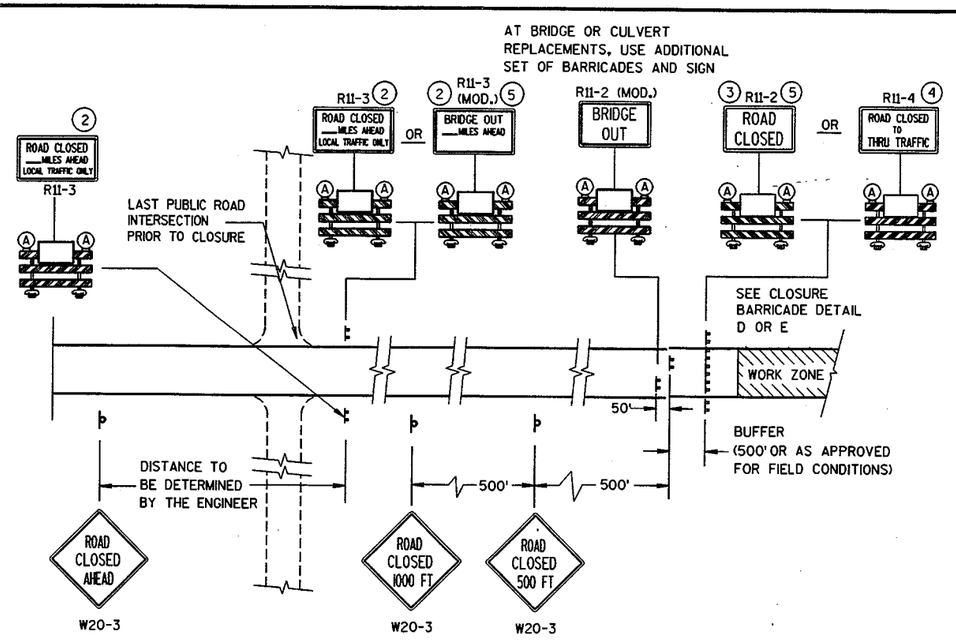
S.D.D. 15 C 18-1



DETAIL A

MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE GREATER THAN ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)

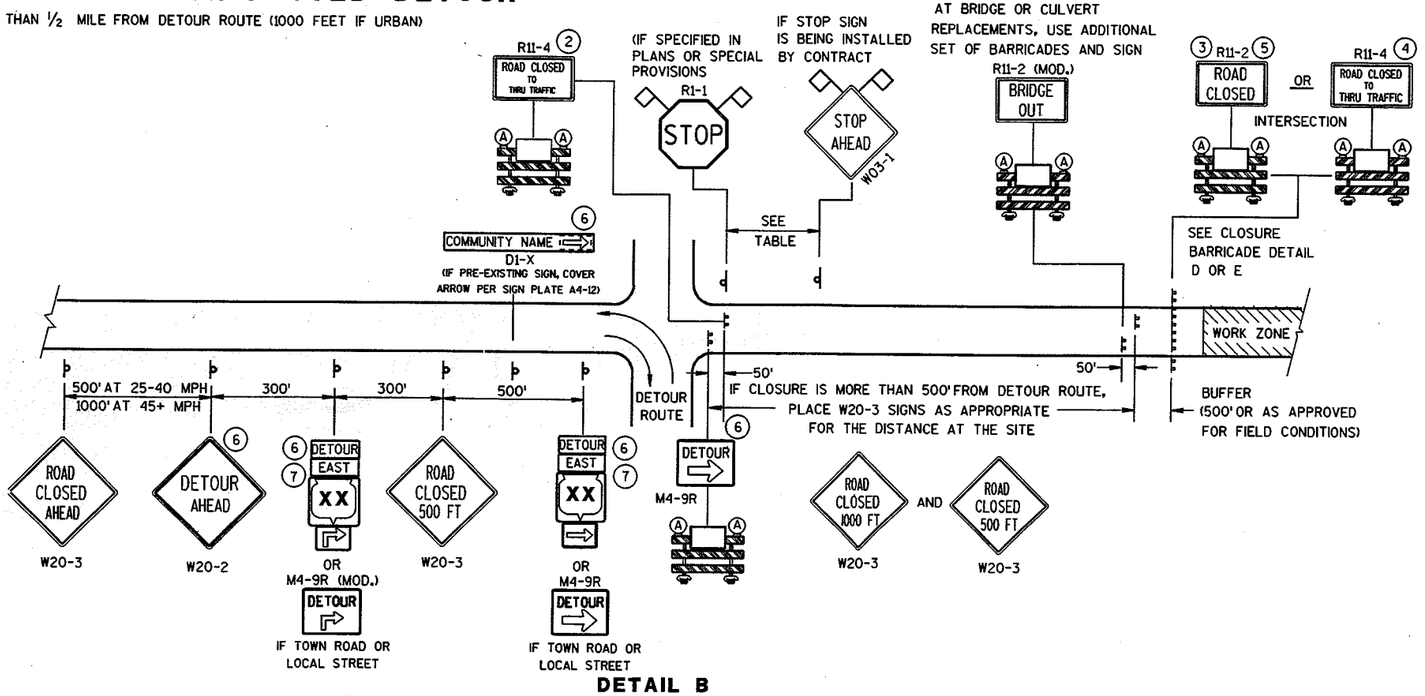


DETAIL C

MAINLINE CLOSURE, NO POSTED DETOUR

SPEED LIMIT (MPH)	"STOP AHEAD" ADVANCE WARNING DISTANCE (FT)
25	200
30	200
35	350
40	350
45	500
50	550
55	750

SEE SDD 15C2-4b
FOR GENERAL NOTES
AND FOOTNOTES (1) THROUGH (7)



DETAIL B

MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE LESS THAN ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)

LEGEND

- POST MOUNTED SIGN
- TYPE III BARRICADES
- (A) TYPE "A" LOW INTENSITY FLASHING WARNING LIGHT (FOR NIGHT USE)
- WORK ZONE
- DETOUR / EAST — M4-8 / M3-X
- XX OR COUNTY XX OR XX — M1-4 / M1-5A / M1-6
- OR — M05-1 / M06-1
- FLAGS, 16" X 16" MIN., (ORANGE)

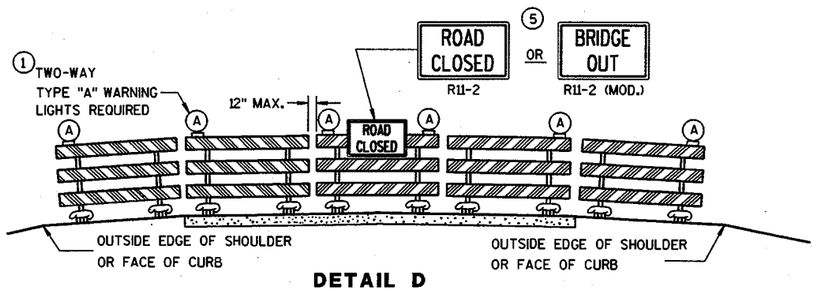
BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

S.D.D. 15 C 2-4a

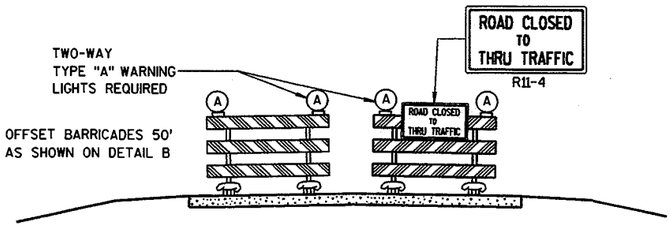
S.D.D. 15 C 2-4a



DETAIL D

ROAD CLOSURE BARRICADE DETAIL

APPROACH VIEW



DETAIL E

LANE CLOSURE BARRICADE DETAIL

APPROACH VIEW

SEE SDD 15C2-4a FOR LEGEND

GENERAL NOTES

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

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.

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

BARRICADES THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED UPON COMPLETION OF THE OPERATION OR, FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

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

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL D FOR FULL ROAD CLOSURES.

TYPE "A" LOW-INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE R11-2, R11-3, M4-9, R11-4 AND R10-61 SIGNS PLACED ON BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE OR BOTTOM RAILS.

THE REFLECTIVE SHEETING USED ON R11-2, R11-3, R11-4, R10-61 AND R1-1 SIGNS SHALL COMPLY WITH SUBSECTION 637.2.2.2 OF THE STANDARD SPECIFICATIONS.

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

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
- R11-2 SHALL BE 48" X 30".
- R11-3, R11-4 AND R10-61 SHALL BE 60" X 30".
- M4-9 SHALL BE 30" X 24".
- M3-X AND M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)
- M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)
- M05-1 AND M06-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.
- R1-1 SHALL BE 36" X 36".

(1) TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8-FOOT LIGHT SPACING).

(2) THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT INTERSECTION.

(3) FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL D.

(4) FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE LANE CLOSURE BARRICADE DETAIL E.

(5) FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11-2 AND R11-3 SIGNS.

(6) INSTALL DETOUR AND COMMUNITY GUIDE SIGNS AND ARROWS ONLY IF SPECIFIED IN THE CONTRACT. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. IF DETOUR SIGNS ARE BEING INSTALLED BY OTHERS, PLACE THE CONTRACTED TRAFFIC CONTROL SIGNS TO ALLOW FOR PLACEMENT OF ALL WARNING, DETOUR AND GUIDE SIGNS AS SHOWN.

(7) "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

6

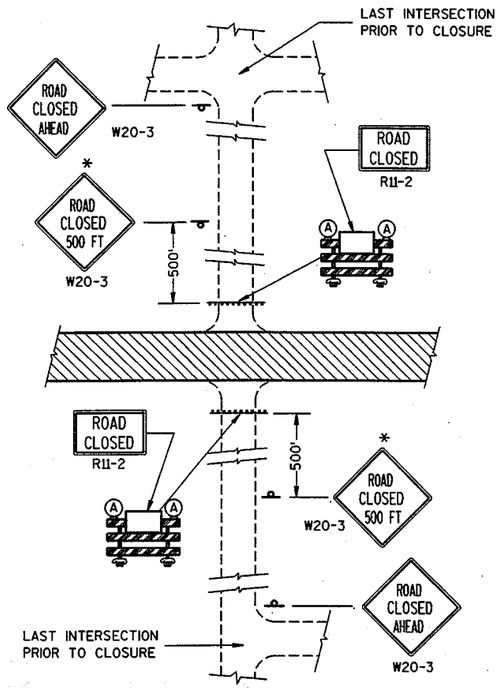
BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
9/16/03
DATE
Thomas N. Notbohm for
CHIEF SIGNS AND MARKING ENGINEER
FHWA

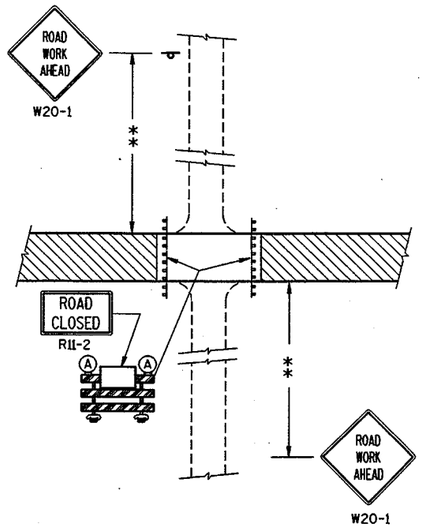
S.D.D. 15 C 2-4b

S.D.D. 15 C 2-4b



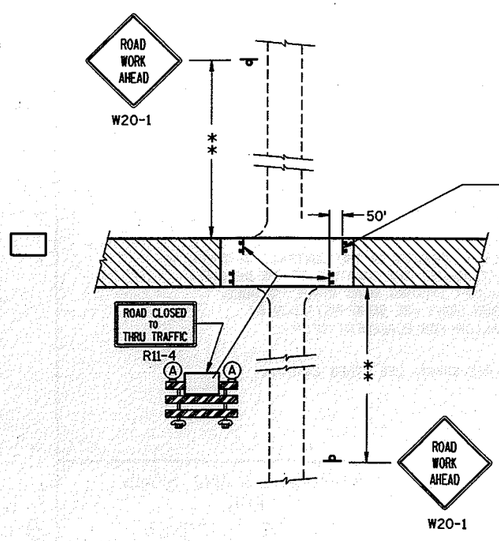
DETAIL 1

(NO ACCESS TO PROJECT)



DETAIL 2

(PUBLIC CROSS-TRAFFIC MAINTAINED. NO ACCESS TO PROJECT).



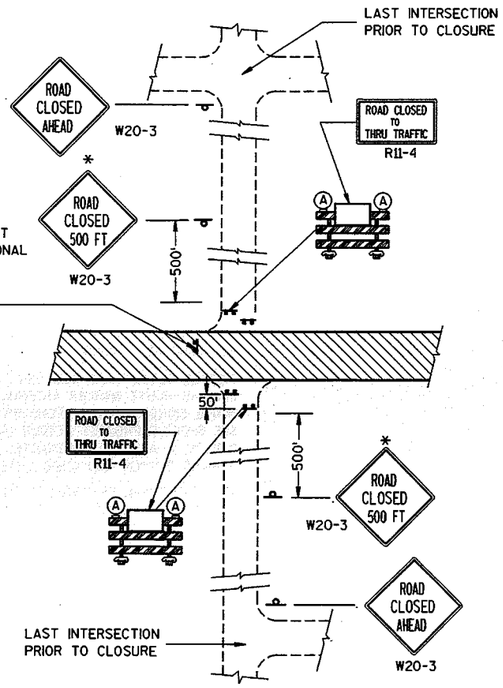
DETAIL 3

(PUBLIC CROSS-TRAFFIC MAINTAINED. CONTRACTOR, LOCAL BUSINESS AND RESIDENT ACCESS).

FOR BRIDGE OR CULVERT REPLACEMENT, USE ADDITIONAL SIGN ON BARRICADE

BRIDGE OUT XX MILES AHEAD

R11-3 (MOD.)



DETAIL 4

(CONTRACTOR, LOCAL BUSINESS AND RESIDENT ACCESS TO PROJECT)

GENERAL NOTES

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

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.

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

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

BARRICADES THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED UPON COMPLETION OF THE OPERATION OR, FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

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

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL D FOR FULL ROAD CLOSURES.

TYPE "A" LOW-INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE R11-2, R11-3 AND R11-4 SIGNS PLACED ON BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE OR BOTTOM RAILS.

THE REFLECTIVE SHEETING USED ON R11-2, R11-3 AND R11-4 SIGNS SHALL COMPLY WITH SUBSECTION 637.2.2.2 OF THE STANDARD SPECIFICATIONS.

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
R11-2 SHALL BE 48" X 30".
R11-4 AND R11-3 SHALL BE 60" X 30".

*OMIT THE "ROAD CLOSED 500 FT." SIGN IF THE LAST INTERSECTION IS 500 FT. OR LESS FROM THE WORK ZONE.

**500' MAX. OR AT LAST INTERSECTION WHICHEVER IS CLOSER.

LEGEND

- p — POST MOUNTED WARNING SIGN
- — TYPE III BARRICADES
- (A) — TYPE "A" LOW INTENSITY FLASHING WARNING LIGHT (FOR NIGHT USE)
- — WORK AREA

6

BARRICADES AND SIGNS FOR SIDEROAD CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
9/16/03
DATE
Thomas N. Notbohm for
CHIEF SIGNS AND MARKING ENGINEER
FHWA

S.D.D. 15 C 3-1

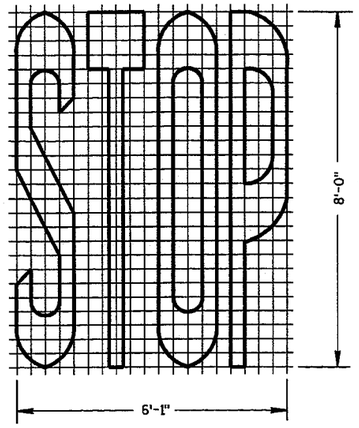
S.D.D. 15 C 3-1

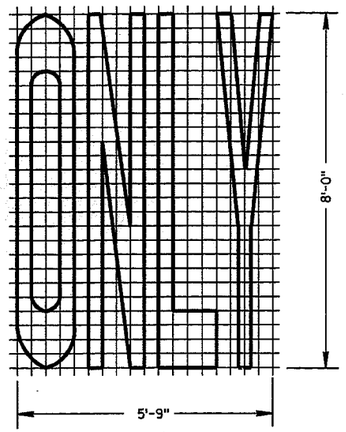
GENERAL NOTES

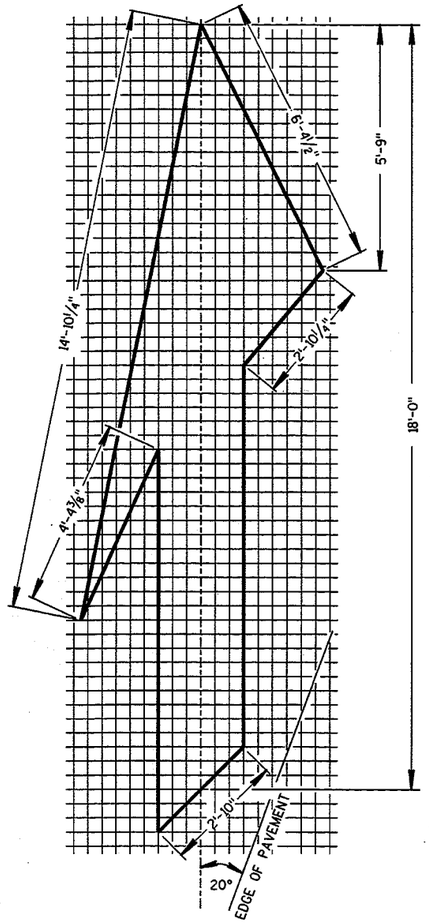
DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

ALL LETTERS AND SYMBOLS SHALL BE IN CONFORMANCE WITH REQUIREMENTS INCLUDED IN "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKING" BY THE FEDERAL HIGHWAY ADMINISTRATION. ALL LETTERS, ARROWS AND SYMBOLS SHALL BE WHITE AND REFLECTORIZED.

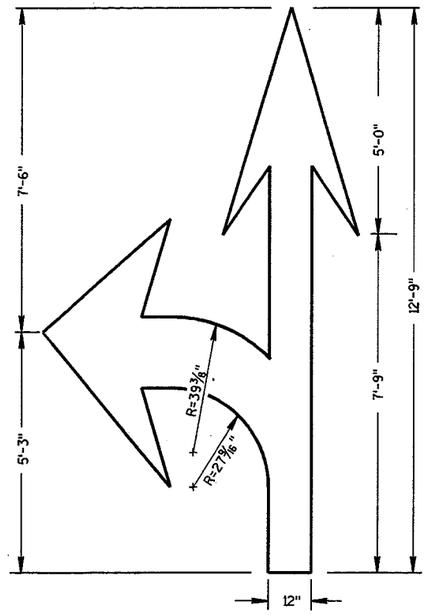
A DETAILED DRAWING OF THE HANDICAPPED PARKING SYMBOL IS ILLUSTRATED IN THE "STANDARD HIGHWAY SIGNS MANUAL" BY THE FEDERAL HIGHWAY ADMINISTRATION.



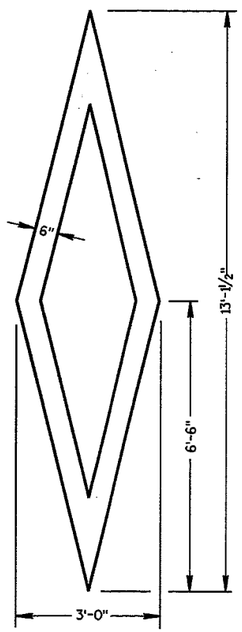




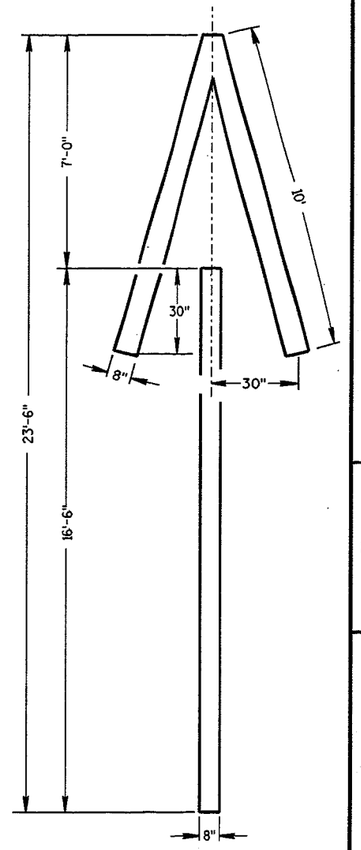
TYPE 5 LANE DROP ARROW



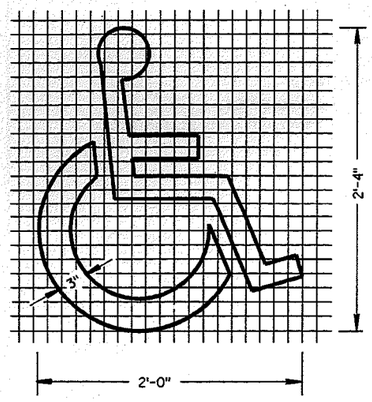
TYPE 3

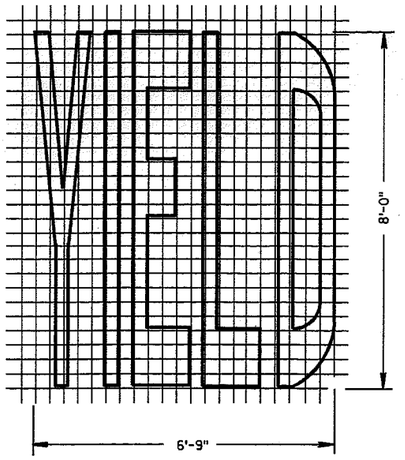


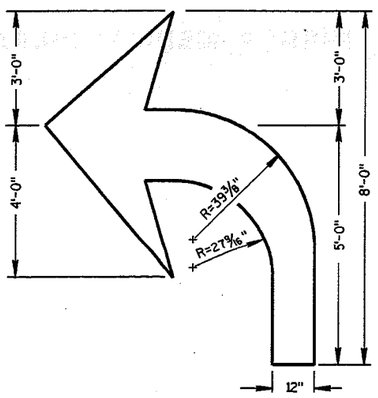
PREFERENTIAL LANE SYMBOL



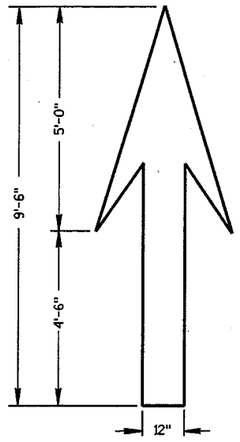
TYPE 4







TYPE 2



TYPE 1

PAVEMENT MARKING SYMBOLS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

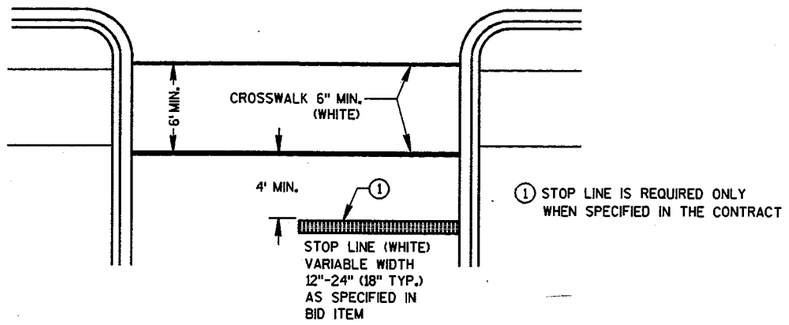
APPROVED
3-18-03 DATE
Deborah D. Kyle for
CHIEF SIGNS AND MARKING ENGINEER

FHWA

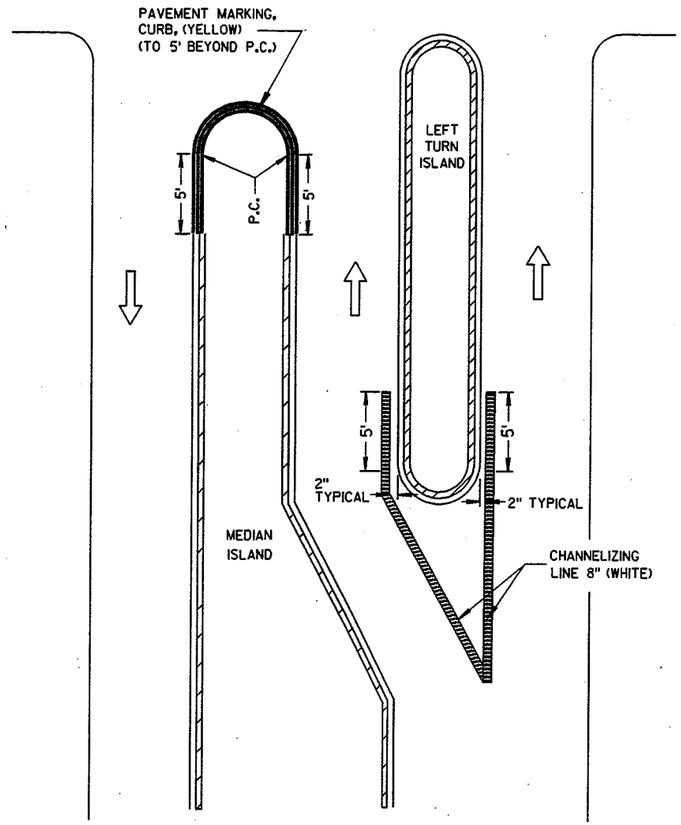
6

S.D.D. 15 C 7-6a

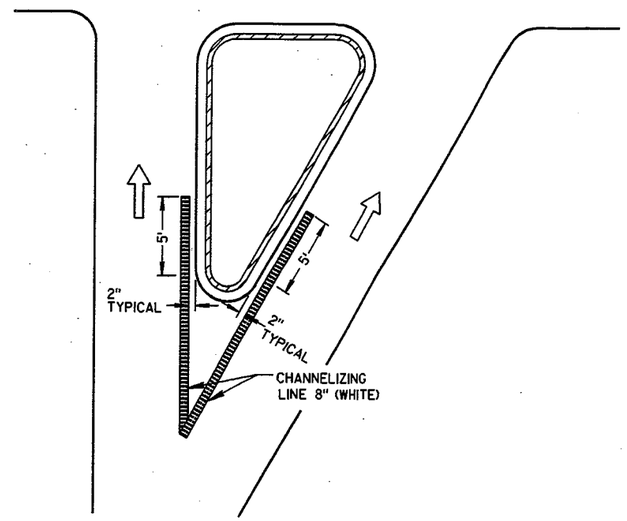
S.D.D. 15 C 7-6a



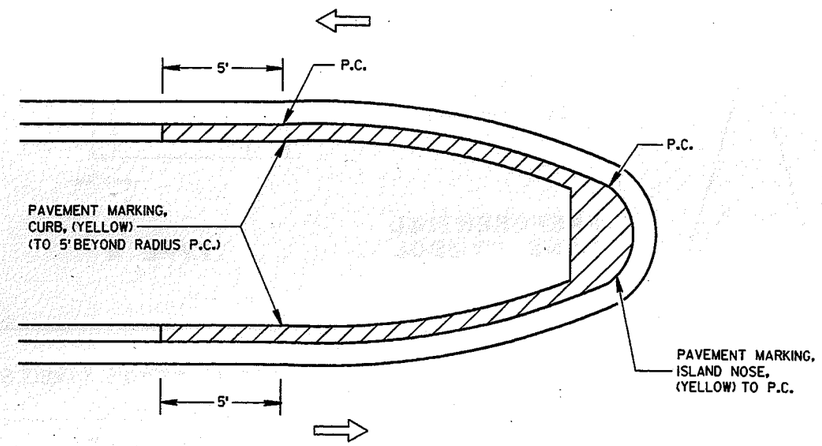
STOP LINE AND CROSSWALK



LEFT TURN & MEDIAN ISLAND



RIGHT TURN ISLAND



MEDIAN ISLAND WITH SLOPED NOSE

NOTE:
ARROW SYMBOL (⇨)
SHOWS DIRECTION OF TRAVEL

PAVEMENT MARKING
(ISLANDS, STOP LINE & CROSS WALK)

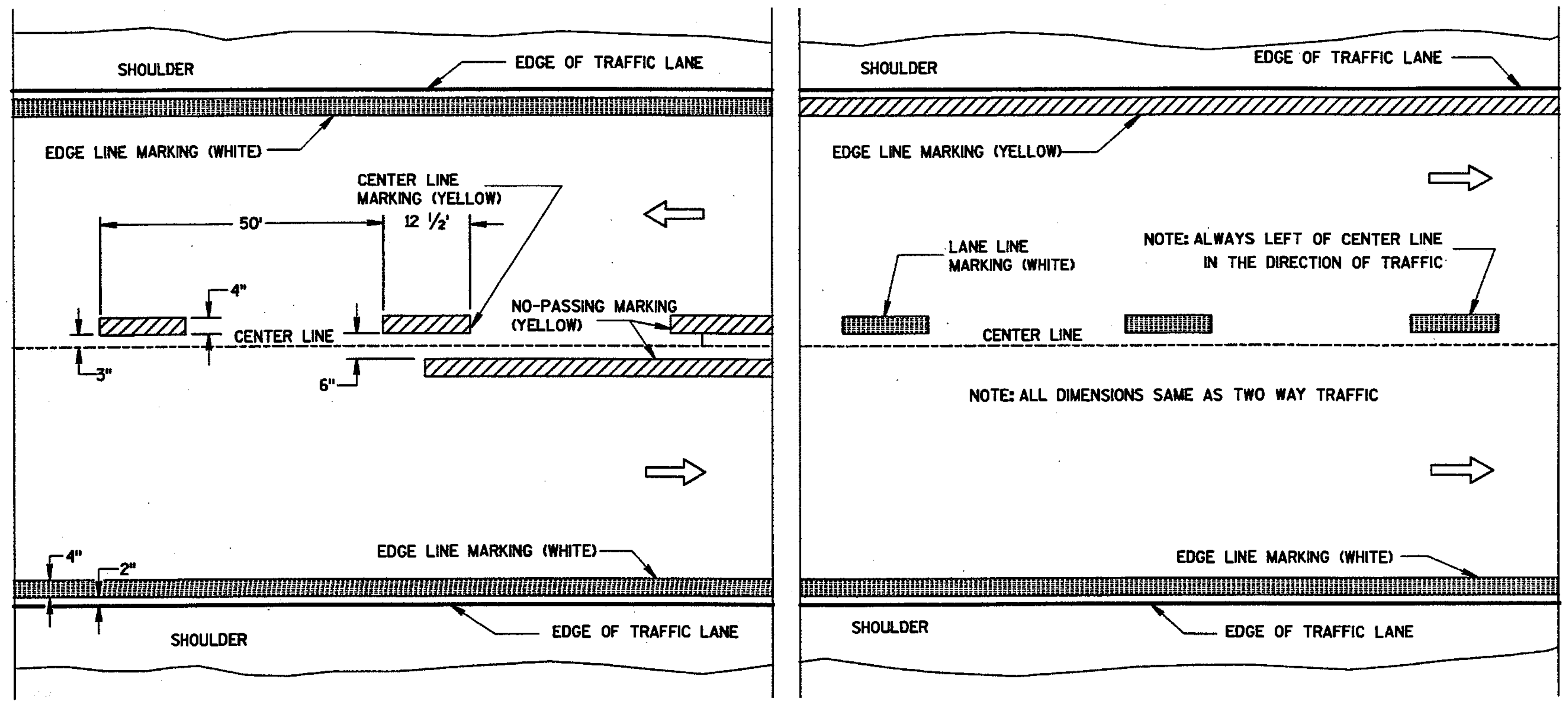
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
1-16-03 DATE
Debra K. Vogel for CHIEF SIGNS AND MARKING ENGINEER
FHWA

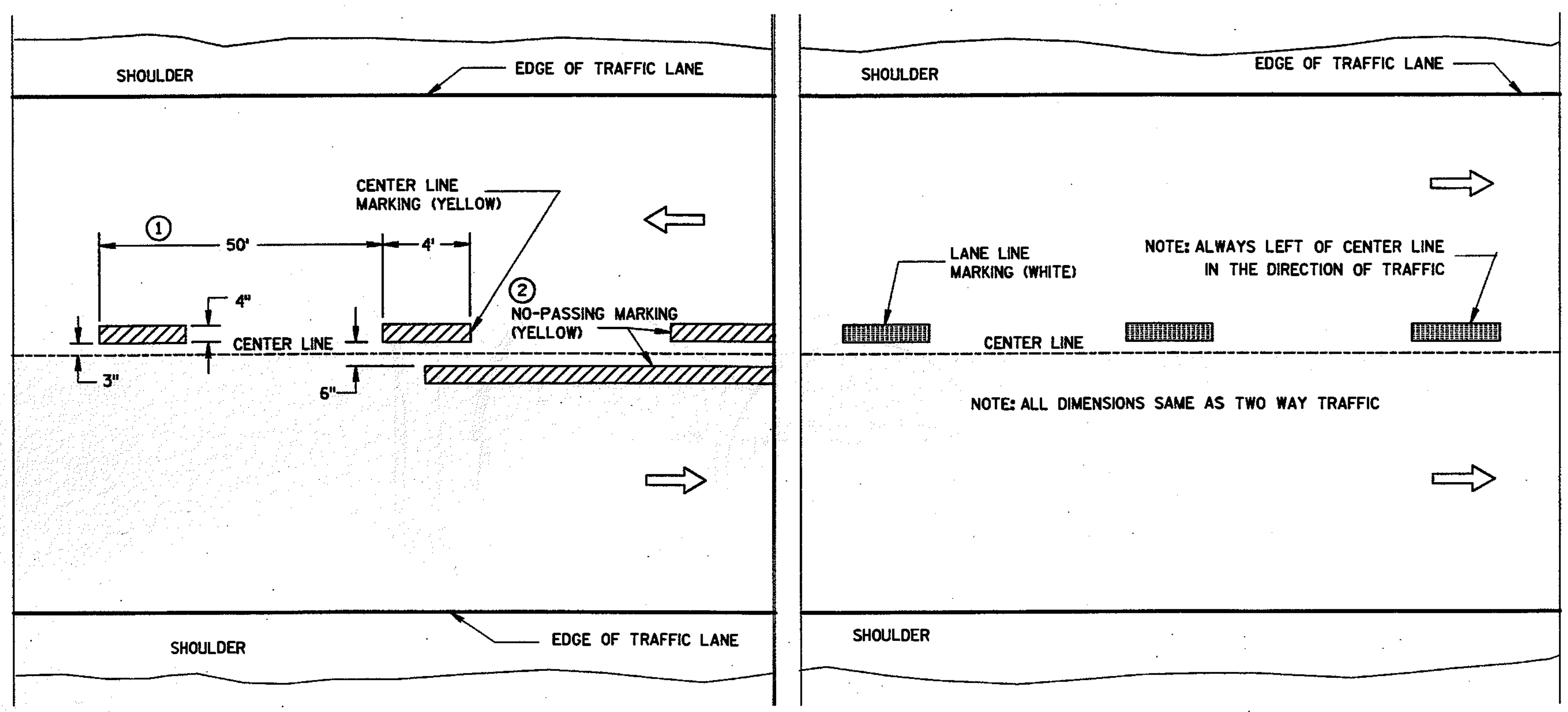
6

S.D.D. 15 C 8-10e

S.D.D. 15 C 8-10e



PERMANENT PAVEMENT MARKING



TEMPORARY (INTERMEDIATE) PAVEMENT MARKING
(SHOWS CYCLE FOR TEMPORARY CENTER LINE OR TEMPORARY LANE LINE MARKING)

GENERAL NOTES

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

① HALF CYCLE LENGTHS (25'±) WITH 2' MINIMUM STRIPE LENGTHS SHALL BE PROVIDED ON ROADWAYS (INCLUDING TEMPORARY TRAVELED WAYS) WITH REVERSE CURVATURE, CURVATURE OF OVER 5 DEGREES OR WHEN DIRECTED BY THE ENGINEER TO MARK UNUSUAL ALIGNMENT OF THE TRAVELED WAY.

② NO PASSING ZONE TEMPORARY PAVEMENT MARKING IS REQUIRED TO BE PLACED, WHERE APPROPRIATE, ALONG WITH CENTERLINE TEMPORARY PAVEMENT MARKING WHEN A SAME DAY PERMANENT PAVEMENT MARKING ITEM IS INCLUDED IN THE CONTRACT.

NOTE

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

PAVEMENT MARKING
(MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
2-17-00 DATE
CHIEF SIGNS AND MARKING ENGINEER
FHWA

S.D.D. 15 C 8-9a

NOTES

EDGE LINES SHALL BE OMITTED THROUGH INTERSECTIONS. EDGE LINES SHALL BE CONTINUED THROUGH DRIVEWAYS.

(1) WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT LANE LINE.

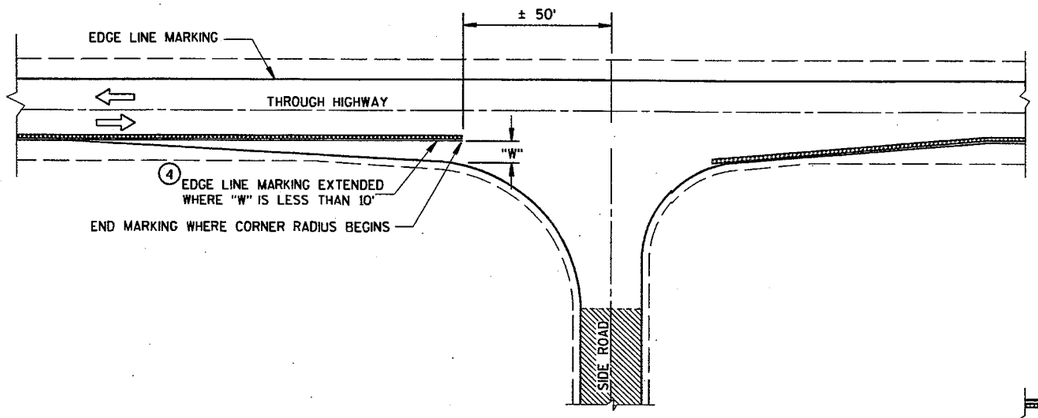
(2) WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.

(3) ALTERNATIVE MARKING SHALL BE PROVIDED WHEN SPECIFIED IN THE CONTRACT. TYPICAL SITUATIONS WHERE THIS MARKING MAY BE REQUIRED ARE WHERE THE INTERSECTION IS ON A SHARP HORIZONTAL CURVE OR CREST VERTICAL CURVE IN AN UNLIGHTED AREA SUCH THAT THE EDGE LINE MAY BE MISLEADING TO THE MOTORIST OR DISAPPEAR FROM SIGHT.

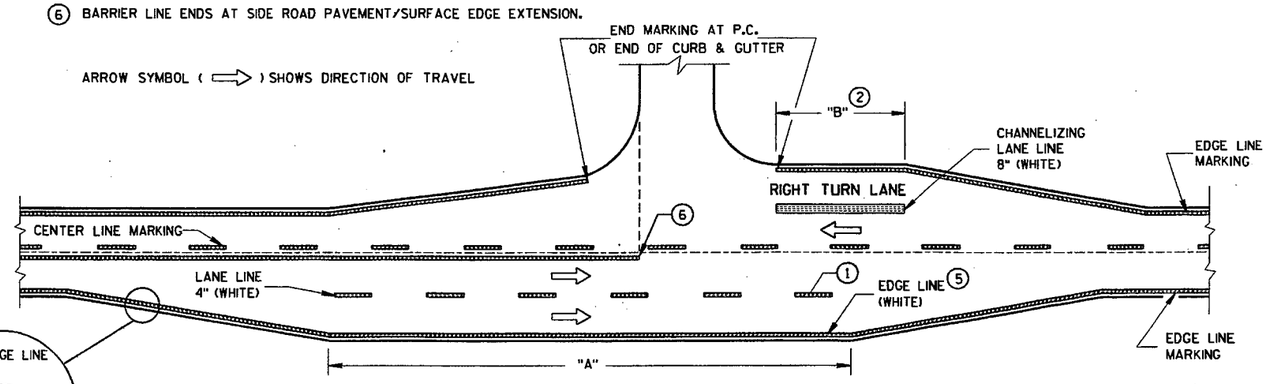
(4) LOCATE THE EDGE LINE ALONG THE TAPER WHERE "W" IS 10' OR MORE.

(5) THE EDGE LINE IN THE TAPER AREAS OF THE BYPASS LANE AND THE BYPASS LANE SHALL BE LOCATED 1-FOOT FROM EDGE OF PAVEMENT TO THE OUTSIDE EDGE OF EDGE LINE.

(6) BARRIER LINE ENDS AT SIDE ROAD PAVEMENT/SURFACE EDGE EXTENSION.

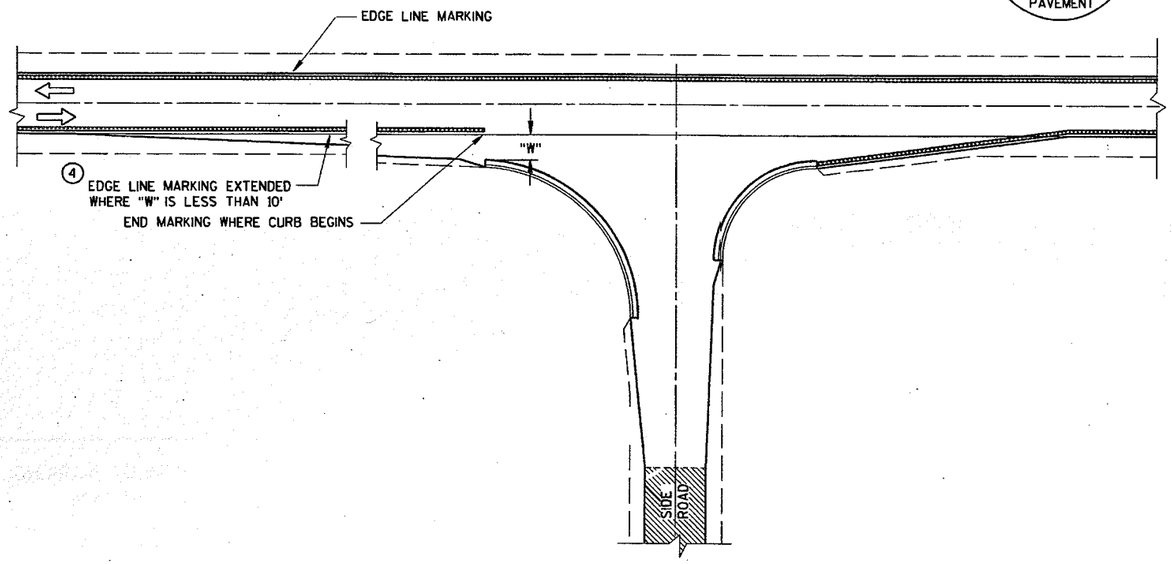


MINOR INTERSECTION WITHOUT CURBS



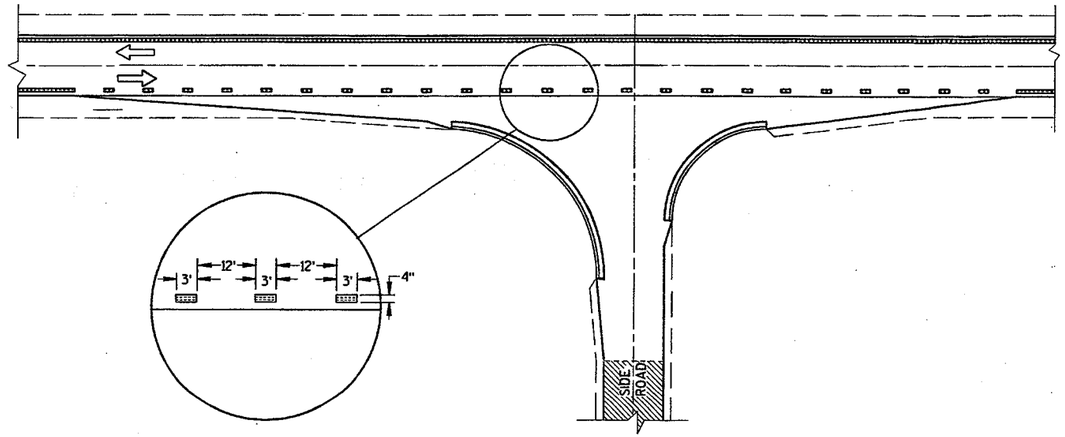
MAJOR INTERSECTIONS

(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANES)



MINOR INTERSECTION WITH CURBS

(TYPICAL MARKING)



MINOR INTERSECTION WITH CURBS

(3) (FOR SPECIAL CONDITIONS AS SPECIFIED)

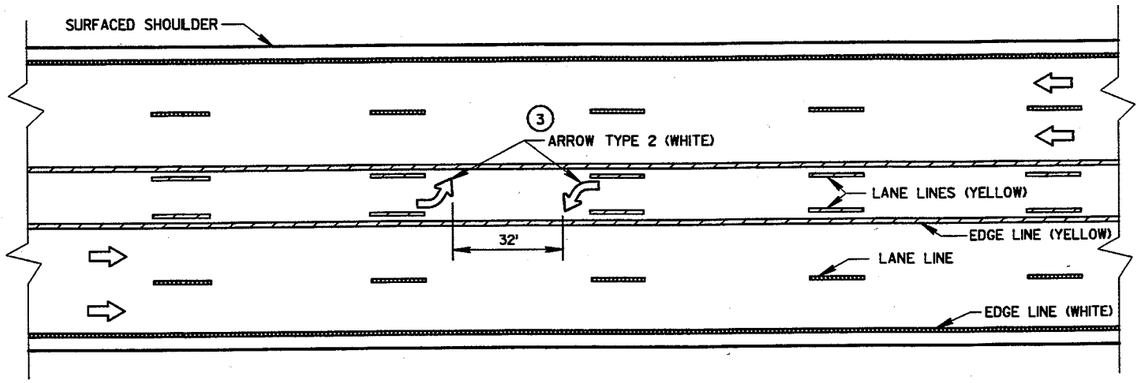
PAVEMENT MARKING
(INTERSECTIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

S.D.D. 15 C 8-9b

S.D.D. 15 C 8-9b

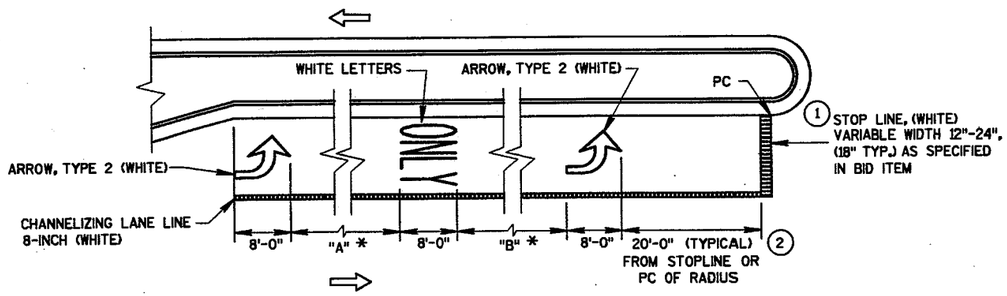
NOTE:
ARROW SYMBOL (⇨)
SHOWS DIRECTION OF TRAVEL



TWO WAY LEFT TURN LANE

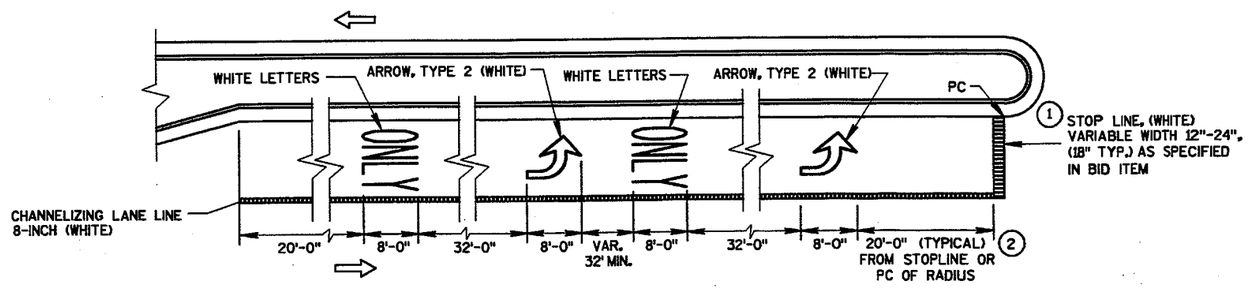
NOTES:

1. STOP BAR IS REQUIRED ONLY WHEN SPECIFIED IN THE CONTRACT.
2. DISTANCE MAY BE ADJUSTED TO ACCOMODATE SHORT LEFT TURN LANES. AS APPROVED BY THE ENGINEER.
3. A SET OF ARROWS IS REQUIRED EVERY 400' OR NEAR INTERSECTIONS OR DRIVEWAYS WITH TURNING TRAFFIC.

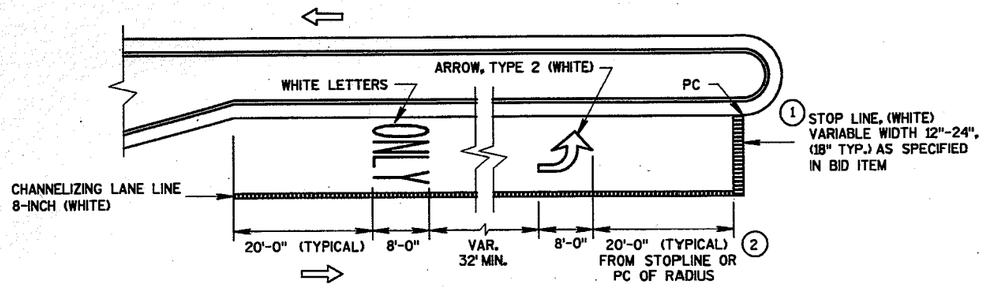


*VARIABLE, 32' MIN.
"A" = "B" (TYPICAL)

LEFT TURN LANE
(LENGTH 108' TO 157')



LEFT TURN LANE
(LENGTH OVER 157')



LEFT TURN LANE
(LENGTH UNDER 108')

PAVEMENT MARKING
(LEFT TURN LANE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

S.D.D. 15 C 8-9d

S.D.D. 15 C 8-9d

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.

W20-1 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.

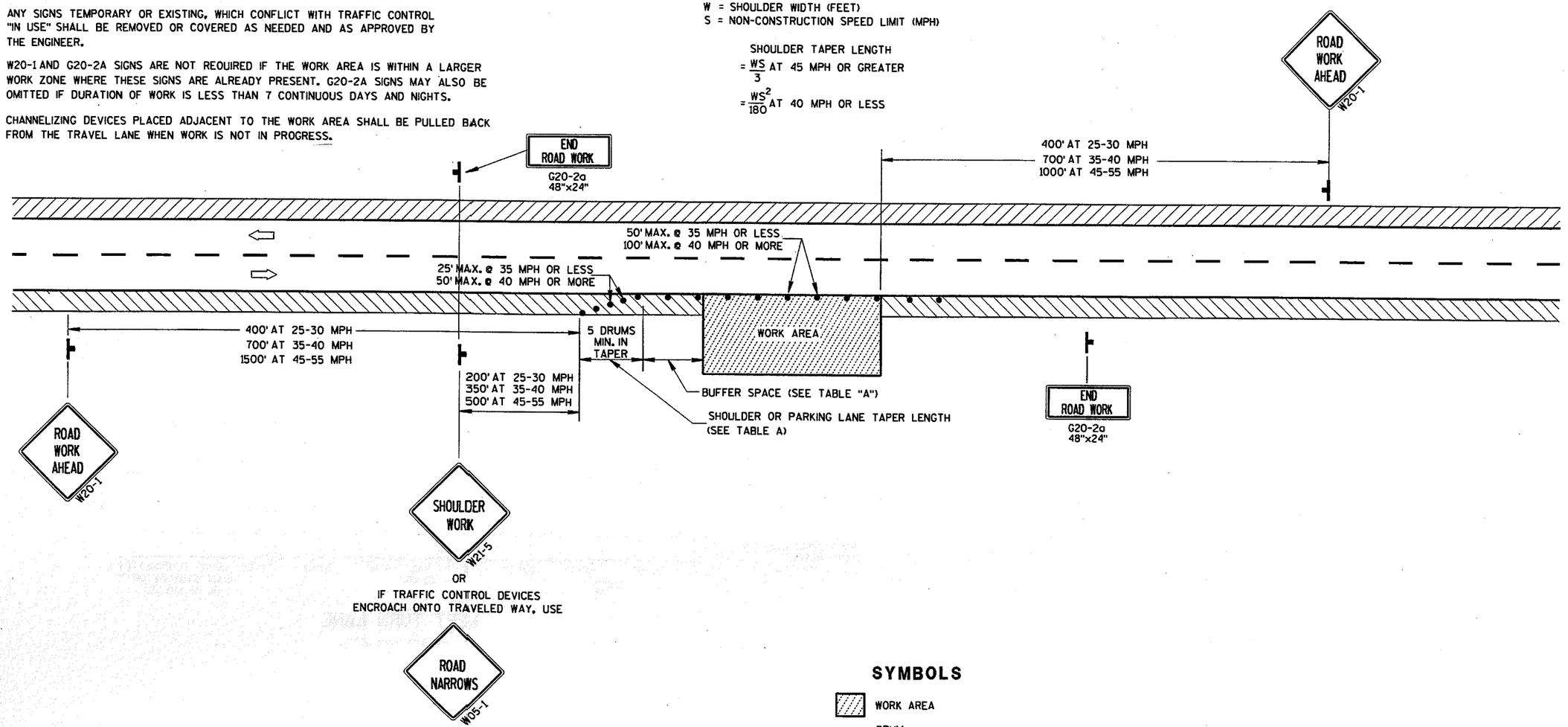
CHANNELIZING DEVICES PLACED ADJACENT TO THE WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

TABLE A

S \ W	SHOULDER TAPER LENGTH (FEET) 4	6	8	10	BUFFER SPACE (FEET)
30	20	30	40	50	85
35	30	45	55	70	120
40	40	55	75	90	170
45	60	90	120	150	220
50	70	100	135	170	280
55	75	110	150	185	335

W = SHOULDER WIDTH (FEET)
S = NON-CONSTRUCTION SPEED LIMIT (MPH)

SHOULDER TAPER LENGTH
$= \frac{WS}{3}$ AT 45 MPH OR GREATER
$= \frac{WS^2}{180}$ AT 40 MPH OR LESS



SYMBOLS

- WORK AREA
- DRUM
- POST MOUNTED SIGN
- DIRECTION OF TRAFFIC FLOW

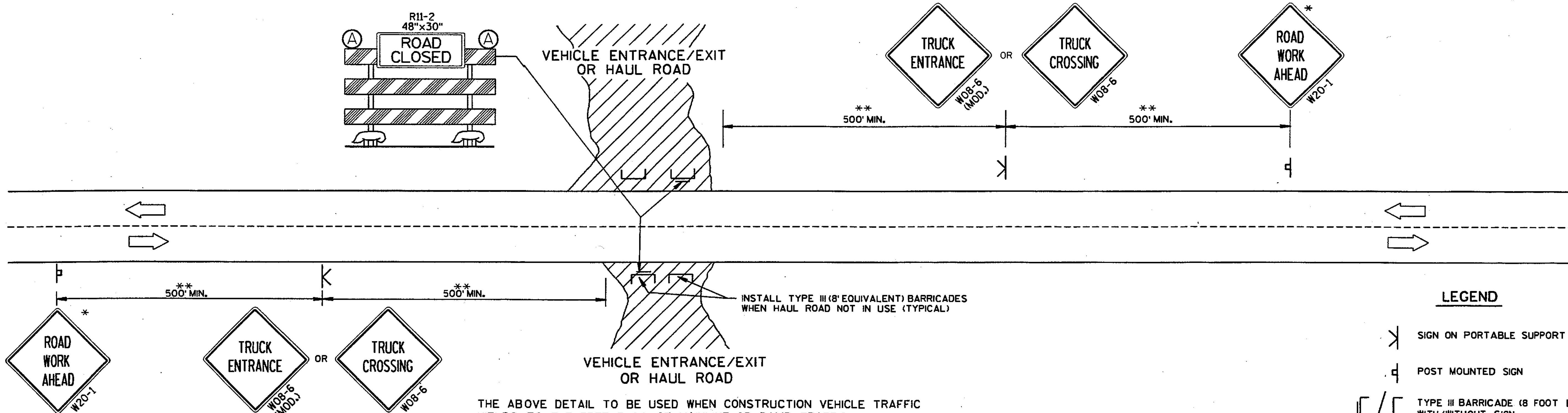
TRAFFIC CONTROL,
WORK ON SHOULDER OR
PARKING LANE,
UNDIVIDED ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
5/23/00 DATE
Clinton J. Sperry
CHIEF SIGNS AND MARKING ENGINEER
FHWA

S.D.D. 15 D 28-1

S.D.D. 15 D 28-1



THE ABOVE DETAIL TO BE USED WHEN CONSTRUCTION VEHICLE TRAFFIC YIELDS TO THE FREE FLOW OF MAINLINE OR RAMP TRAFFIC

GENERAL NOTES :

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

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 ORDERED BY THE ENGINEER.

** 500' SHOWN IS FOR ROADWAYS WITH A NON-CONSTRUCTION REGULATORY SPEED LIMIT OF 45 MPH OR MORE. FOR 35-40 MPH, USE 350'. FOR 25-30 MPH, USE 200'.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

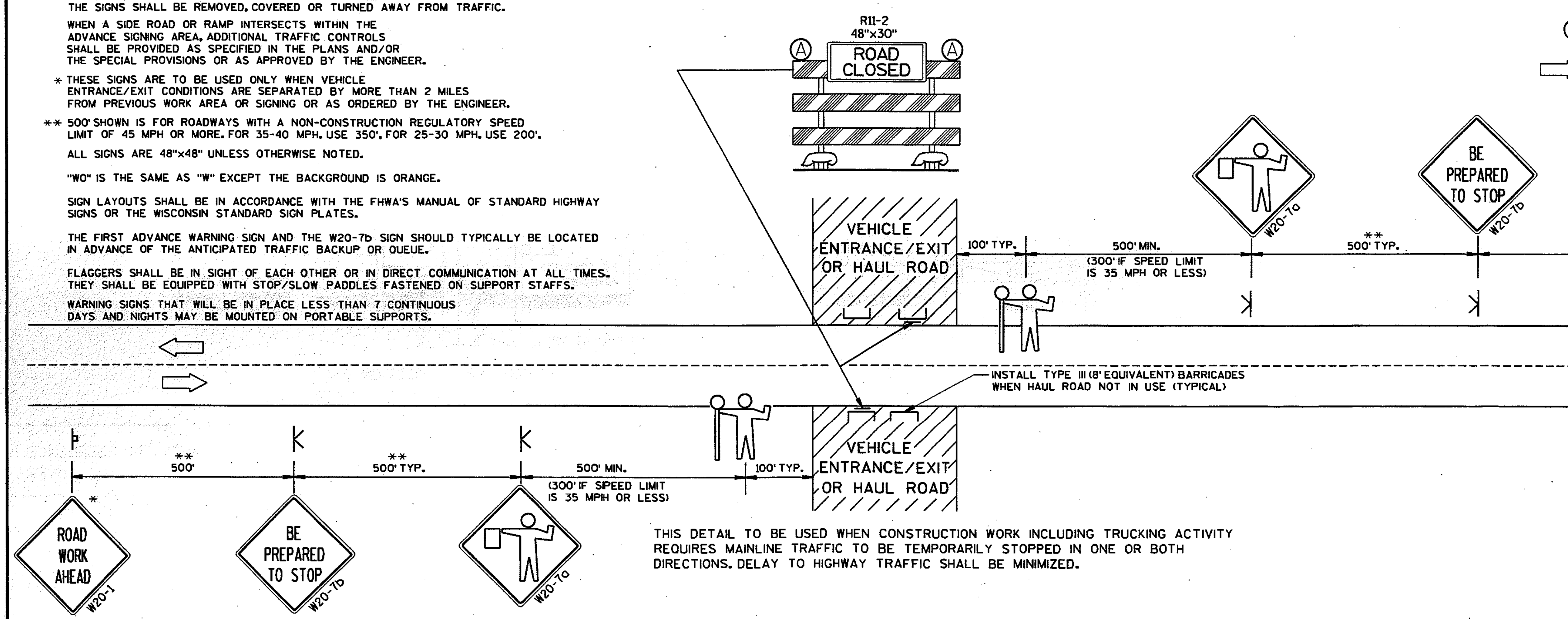
THE FIRST ADVANCE WARNING SIGN AND THE W20-7b SIGN SHOULD TYPICALLY BE LOCATED IN ADVANCE OF THE ANTICIPATED TRAFFIC BACKUP OR QUEUE.

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.

LEGEND

- SIGN ON PORTABLE SUPPORT
- POST MOUNTED SIGN
- TYPE III BARRICADE (8 FOOT EQUIVALENT) WITH/WITHOUT SIGN
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- (A) WARNING LIGHT, TYPE A, (LOW-INTENSITY FLASHING)
- DIRECTION OF TRAFFIC FLOW



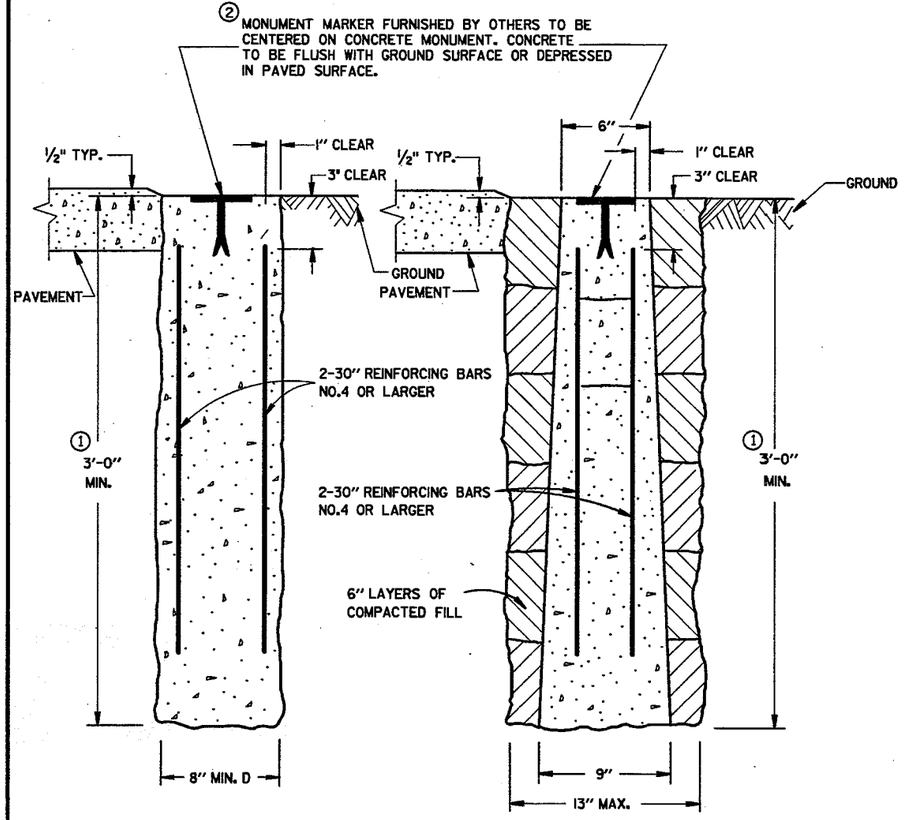
THIS DETAIL TO BE USED WHEN CONSTRUCTION WORK INCLUDING TRUCKING ACTIVITY REQUIRES MAINLINE TRAFFIC TO BE TEMPORARILY STOPPED IN ONE OR BOTH DIRECTIONS. DELAY TO HIGHWAY TRAFFIC SHALL BE MINIMIZED.

TRAFFIC CONTROL, VEHICLE ENTRANCE/EXIT OR HAUL ROAD

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

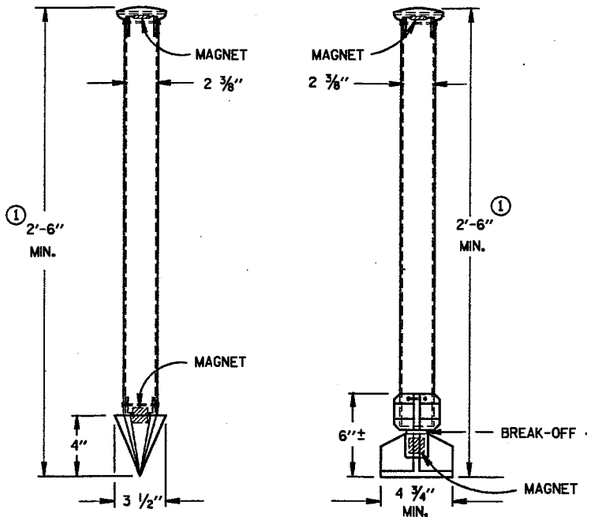
APPROVED
5/23/00 DATE — CHIEF SIGNS AND MARKING ENGINEER
FHWA

S.D.D. 15 D 29-1



CAST-IN-PLACE PRECAST

CONCRETE MONUMENTS
TYPE A



TYPE C — DRIVE-IN MONUMENT

TYPE D — BREAK-OFF MONUMENT

ALUMINUM MONUMENTS
(INCLUDES MARKER)

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.

DETAILED DRAWINGS OF PROPOSED ALTERNATE DESIGNS FOR METAL MONUMENTS OR MONUMENT COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

INSTALLED METAL MONUMENTS MUST BE EASILY DETECTED WITH A DIP NEEDLE. INSERT PERMANENT MAGNETS SHALL BE ATTACHED NEAR THE TOP AND BOTTOM OF THOSE MONUMENTS CONSTRUCTED OF A METAL ALLOY WHICH IS NOT ATTRACTIVE TO A DIP NEEDLE.

THE CAST IRON MONUMENT COVER SHALL BE A "NON-ROCKING" TYPE. ADJUSTMENT OF THE COVER TO GRADE MAY BE ACCOMPLISHED BY THE USE OF MORTAR AND BRICK, OR BY EITHER PRECAST OR CAST-IN-PLACE REINFORCED CONCRETE GRADE RINGS.

MONUMENTS SHALL BE LOCATED AND PLACED AT THE DIRECTION OF THE ENGINEER.

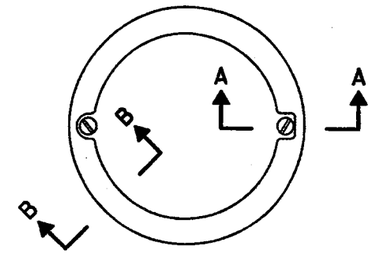
ALUMINUM MONUMENTS AND MONUMENT COVERS SHALL BE MADE FROM AN ALUMINUM AND MAGNESIUM ALLOY AS DETERMINED BY THE MANUFACTURER.

THE MONUMENT COVERS DETAILED ON THIS DRAWING ARE NOT EQUAL ALTERNATES. MONUMENT COVERS SHALL BE CAST IRON UNLESS ALUMINUM IS SPECIFIED ELSEWHERE IN THE CONTRACT.

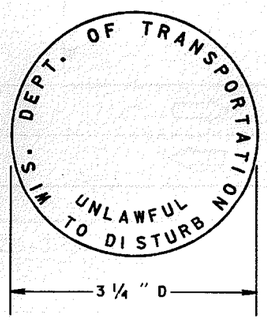
MONUMENT SHALL BE CAST-IN-PLACE CONCRETE UNLESS PRECAST CONCRETE OR ALUMINUM MONUMENTS ARE SPECIFIED IN THE CONTRACT OR PERMITTED BY THE ENGINEER.

① MINIMUM LENGTH SHALL BE 4'-0" FOR MONUMENTS INSTALLED IN PAVED AREAS.

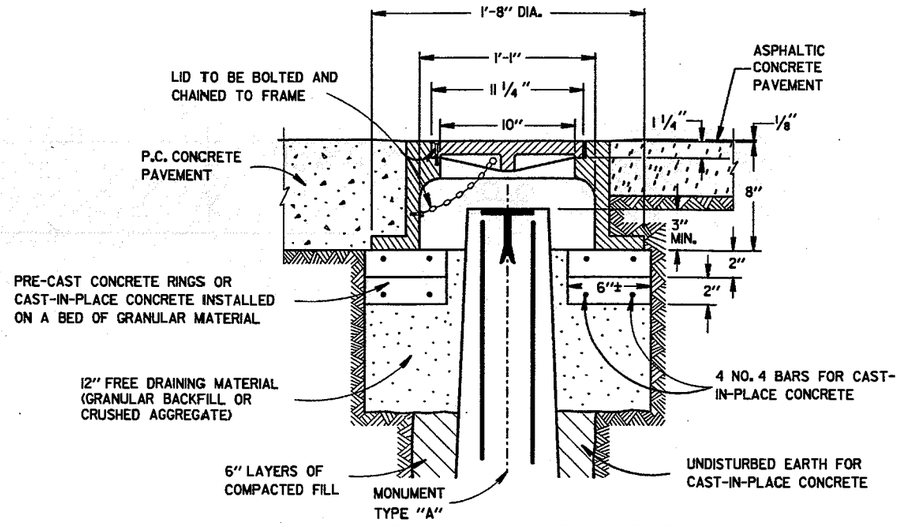
② AN OFFICIAL COUNTY MONUMENT MARKER SUPPLIED BY A COUNTY MAY BE REQUIRED FOR SOME SECTION CORNERS AND WITNESS MONUMENTS INSTEAD OF THIS WIS DOT MARKER.



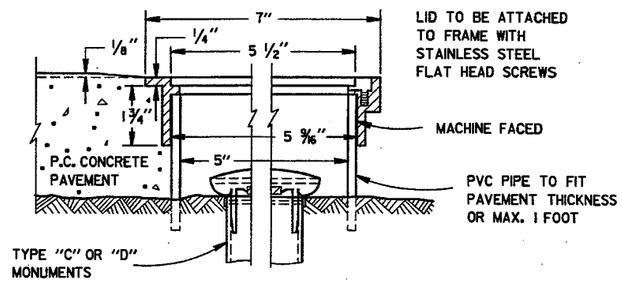
TOP VIEW



② WIS DOT MONUMENT MARKER LOGO
FOR TYPES "A", "C" & "D"



CAST IRON MONUMENT COVER
(APPROXIMATE WEIGHT - 95 LBS.)



SECTION B-B SECTION A-A

ALUMINUM MONUMENT COVER
(APPROXIMATE WEIGHT 2 LBS)
(FOR CONCRETE PAVEMENT ONLY)

LANDMARK REFERENCE MONUMENTS AND COVERS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED 9/22/99 DATE
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

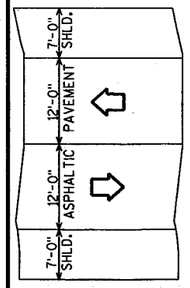
S.D.D. 16 A 1-6

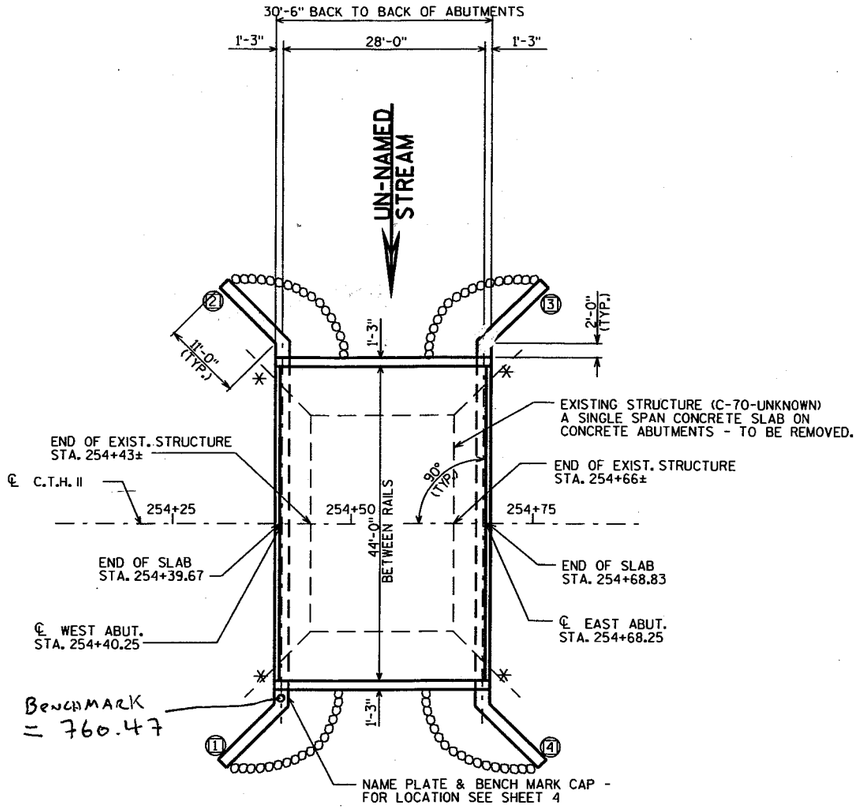
S.D.D. 16 A 1-6

STATE PROJECT NUMBER
6448-03-72

* PROVIDE FOR THRIE BEAM GUARD RAIL ATTACHMENT

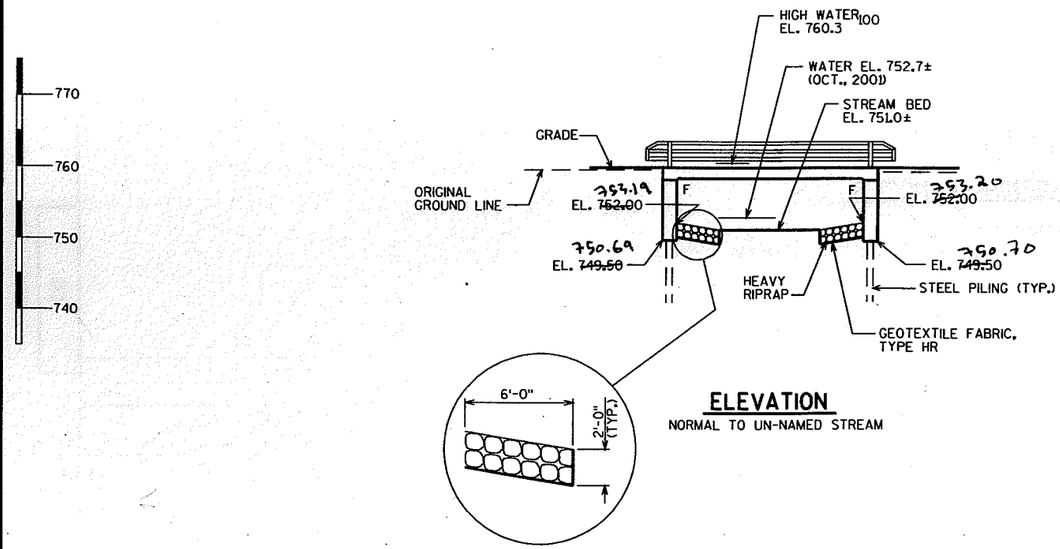
(1) INDICATES WING NUMBER





PLAN B-70-243

SINGLE SPAN-FLAT SLAB



ELEVATION

NORMAL TO UN-NAMED STREAM

DESIGN DATA

LIVE LOAD:

DESIGN RATING; HS-20
INVENTORY RATING; HS-30
OPERATIONAL RATING; HS-50
MAXIMUM STANDARD PERMIT VEHICLE LOAD = 250 KIPS.

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 POUNDS PER SQUARE FOOT.

ULTIMATE DESIGN STRESSES:

CONCRETE MASONRY SLAB — f'c = 4,000 P.S.I. ALL OTHER — f'c = 3,500 P.S.I.

BAR STEEL REINFORCEMENT, GRADE 60 — fy = 60,000 P.S.I.

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON HP 10X42 STEEL PILING DRIVEN TO A MINIMUM BEARING VALUE OF 55 TONS PER PILE. ESTIMATED 40'-0" LONG AT WEST ABUTMENT AND 30'-0" LONG AT EAST ABUTMENT. PILE POINTS REQUIRED

HYDRAULIC DATA

100 YEAR FREQUENCY

Q_{100} = 1925 C.F.S.
Q_{BRIDGE} = 820 C.F.S.
$Q_{RDWY.}$ = 1130 C.F.S.
VEL. = 5.1 F.P.S.
HW.= EL. 760.3
WATERWAY AREA= 160.1 SQ. FT.
DRAINAGE AREA= 4.24 SQ. MI.
SCOUR CRITICAL CODE = 8

ROADWAY OVERTOPPING FREQUENCY = 10 YEARS

Q_{10} =816 C.F.S.
$HW._{10}$ = EL. 759.6

2 YEAR FREQUENCY

Q_2 =290 C.F.S.
$HW._2$ = EL. 756.9

TRAFFIC VOLUME

S.T.H. 150
A.D.T.=4860 (2024)
R.D.S.=55 M.P.H.

LIST OF DRAWINGS

NO.	DATE	REVISION	BY

Plans Prepared By **WISDOT**
BUREAU OF STRUCTURES

APPROVED Kris Hubbard 3-8-2004
CHIEF STRUCTURAL DESIGN ENGINEER — DATE

8

STRUCTURE B-70-243

CTH II (OLD STH 150) OVER UN-NAMED STREAM

COUNTY: WINNEBAGO		TOWN: CLAYTON	
DESIGN SPEC.: AASHTO STD. SPEC. 2003		LOAD: HS-20	CONST. SPEC.: 2003
DESIGNED BY: DRG	DESIGN CK'D.:	DRAWN BY: EMP	PLANS CK'D.: DRG

GENERAL PLAN

SHEET 1 OF 8

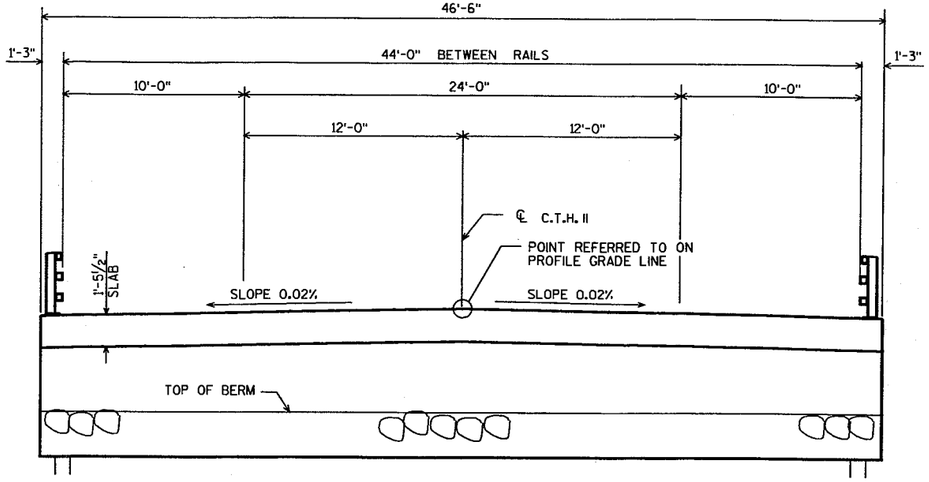
91

I.D. 6448-03-01A

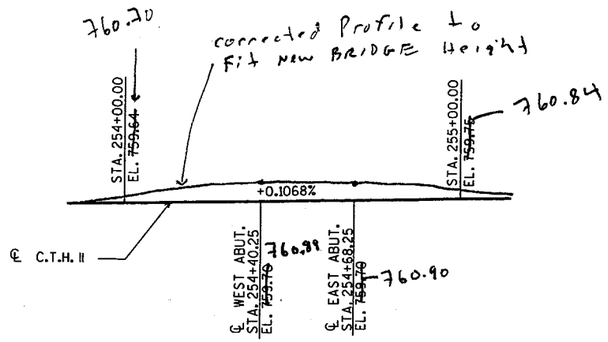
DATE: JUNE, '03

FILE= PREPLAN.DGN
SCALE =

STATE PROJECT NUMBER
6448-03-72



CROSS SECTION THRU ROADWAY LOOKING EAST



PROFILE GRADE LINE C.T.H. II

TOTAL ESTIMATED QUANTITIES

BID ITEMS	UNIT	SUPER.	WEST ABUT.	EAST ABUT.	TOTALS
REMOVING OLD STRUCTURE, STA. 254+53.00	L.S.	——	——	——	1
EXCAVATION FOR STRUCTURES, BRIDGES, B-70-243	L.S.	——	——	——	1
BACKFILL STRUCTURE	C.Y.	——	290	290	580
CONCRETE MASONRY, BRIDGES	C.Y.	82	53	53	188
PROTECTIVE SURFACE TREATMENT	S.Y.	170	——	——	170
BAR STEEL REINFORCEMENT HS BRIDGES	LB.	——	3410	3410	6820
BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB.	14840	——	——	14840
PILING STEEL DELIVERED AND DRIVEN HP 10-INCH X 42LB.	L.F.	——	320	240	560
PILE POINTS	EACH	——	8	8	16
RAILING TUBULAR TYPE M B-70-243	L.S.	——	——	——	1
RUBBERIZED MEMBRANE WATERPROOFING	S.Y.	——	10	10	20
RIPRAP HEAVY	C.Y.	——	36	36	72
GEOTEXTILE FABRIC, TYPE HR	S.Y.	——	70	70	140
OMP CONCRETE STRUCTURES 5-CYLINDER	C.Y.	82	53	53	188
INCENTIVE STRENGTH CONCRETE STRUCTURES	DOL.	——	——	——	1880
NON-BID ITEMS					
FILLER	SIZE	——	——	——	½" & ¾"

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

SLAB FALSEWORK SHALL BE SUPPORTED ON PILES, UNLESS ALTERNATE METHOD IS APPROVED BY THE ENGINEER.

THE SLOPE OF FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH HEAVY RIPRAP AND GEOTEXTILE FABRIC TO THE EXTEND SHOWN ON SHEET 1 AND IN THE ABUTMENT DETAILS.

AT THE BACKFACE OF ABUTMENT ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL.

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

THE GRADATION OF THE STRUCTURE BACKFILL SHALL MEET THE REQUIREMENTS OF SECTION 209.2.2 OF THE STANDARD SPECIFICATIONS FOR GRADE 1 MATERIAL.

PROTECIVE SURFACE TREATMENT SHALL BE APPLIED TO THE TOP AND SIDES OF THE DECK.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-70-243

CONST. SPEC. 2003	DRAWN BY EMP	PLANS CK'D. DRG

CROSS SECTION & QUANTITIES

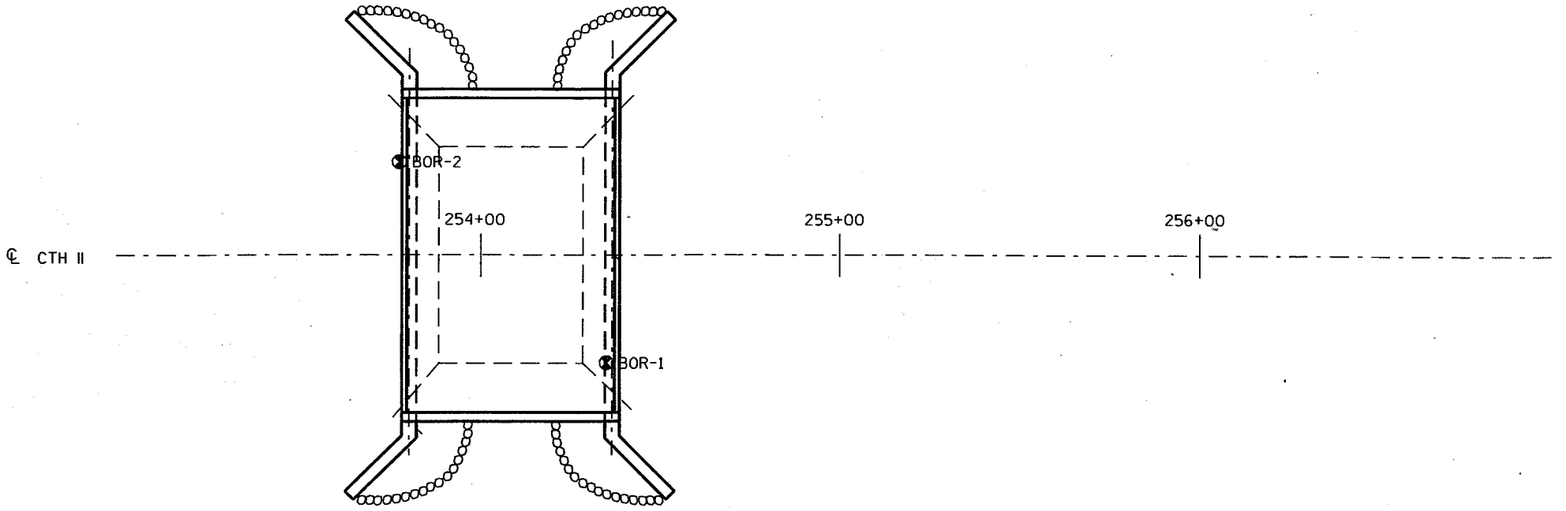
SHEET 2

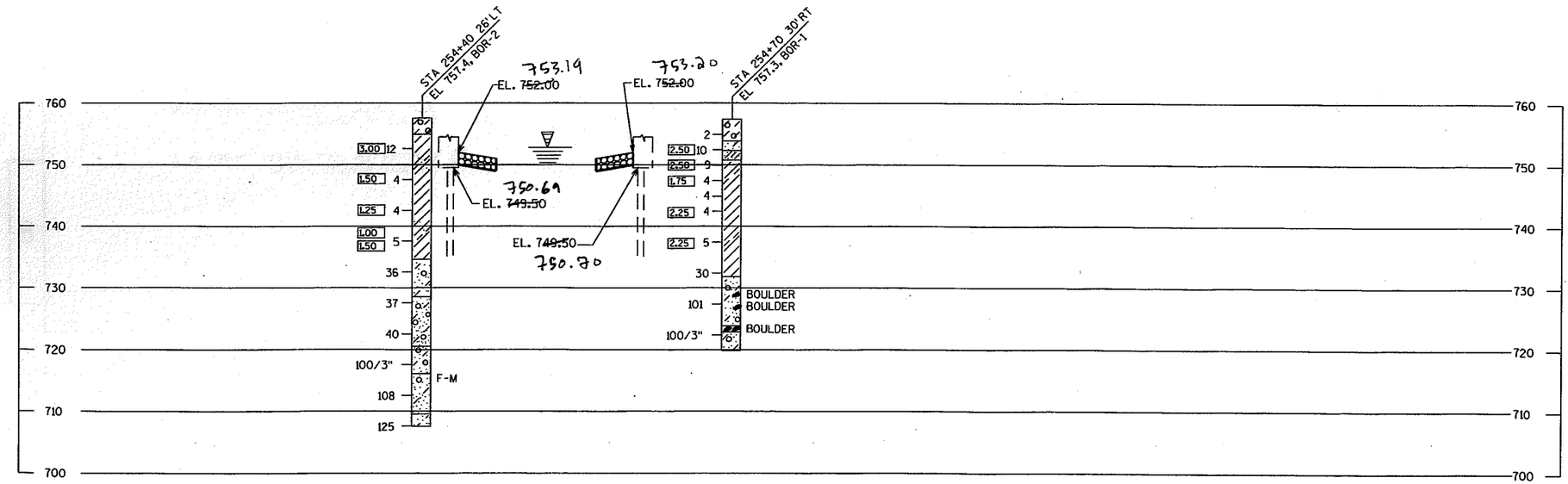
92

8

FILE= 02XSECT243.DGN
SCALE = 4

CTH II OVER UNNAMED STREAM
CTH W- USH 45, WINNEBAGO COUNTY





STATE PROJECT NUMBER

6448-03-72

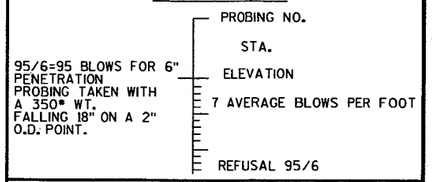
ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

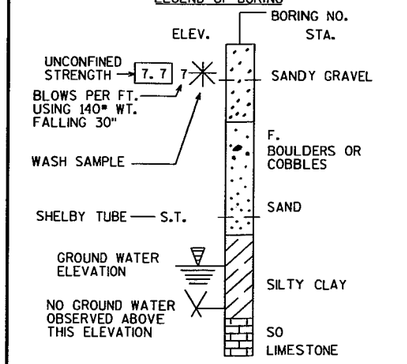
MATERIAL SYMBOLS

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.

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-70-243

CONST. SPEC.	DRAWN BY	PLANS CK'D.
2003	EMP	DRG

SUBSURFACE EXPLORATION

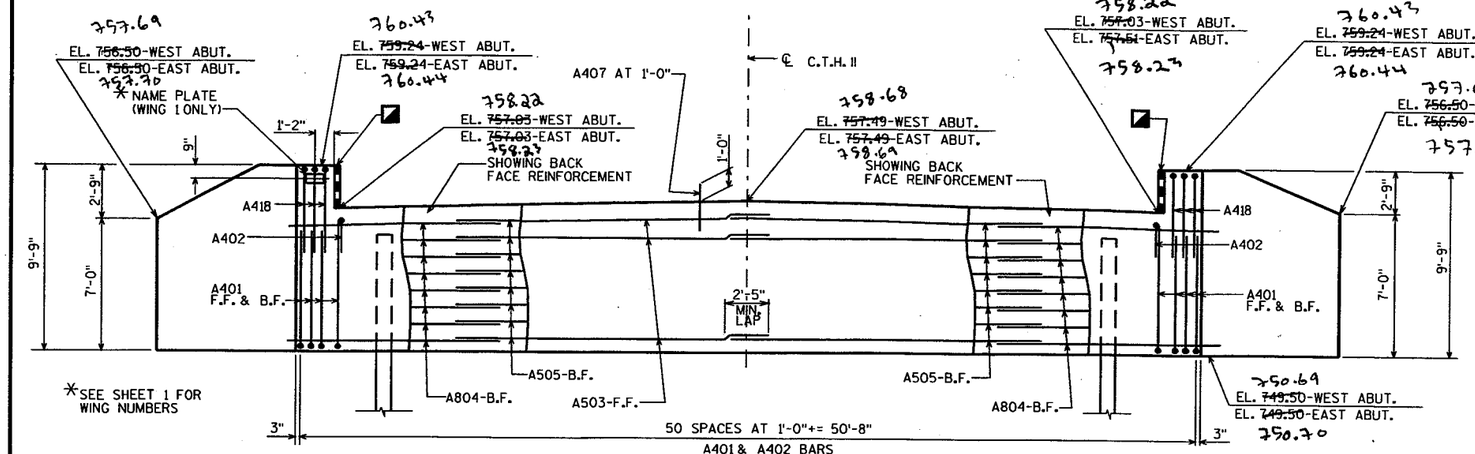
SHEET 3

93

FILE=
SCALE =

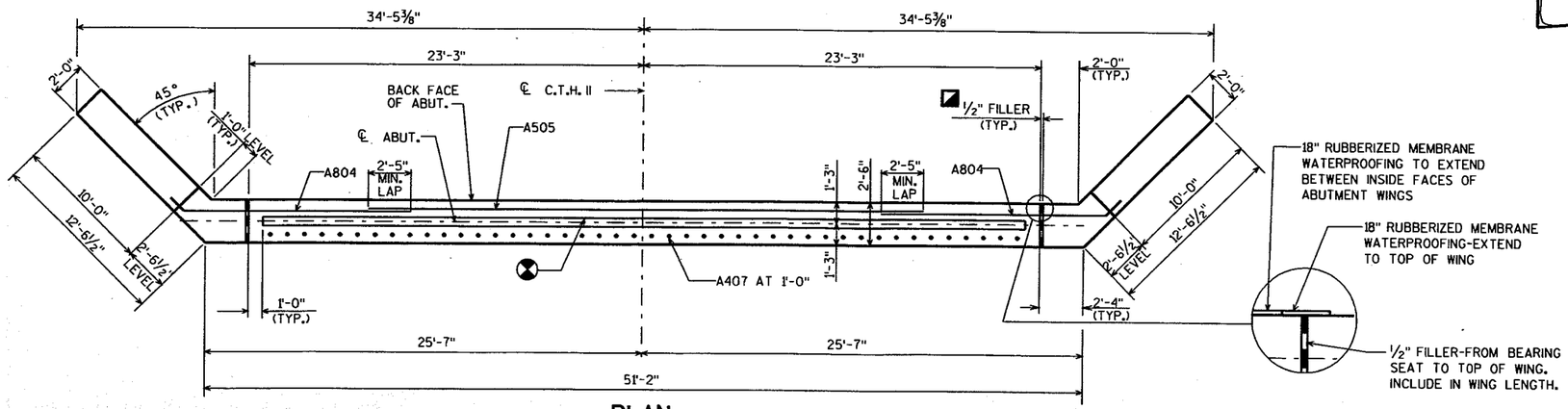
STATE PROJECT NUMBER

6448-03-72

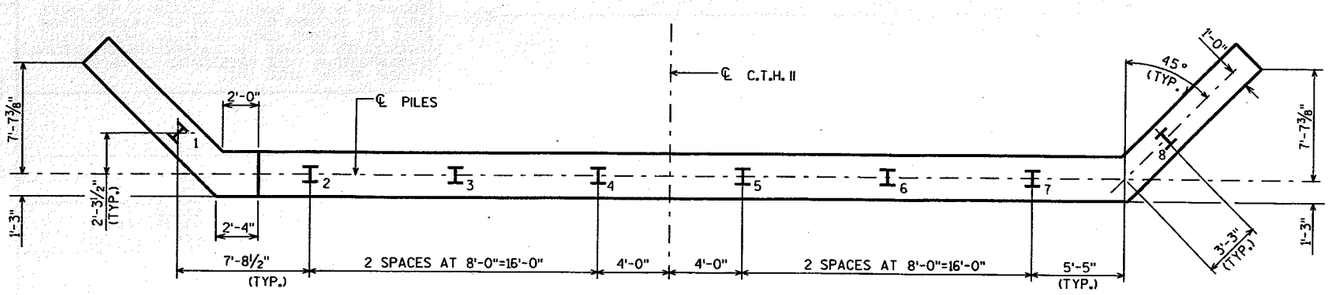


ELEVATION

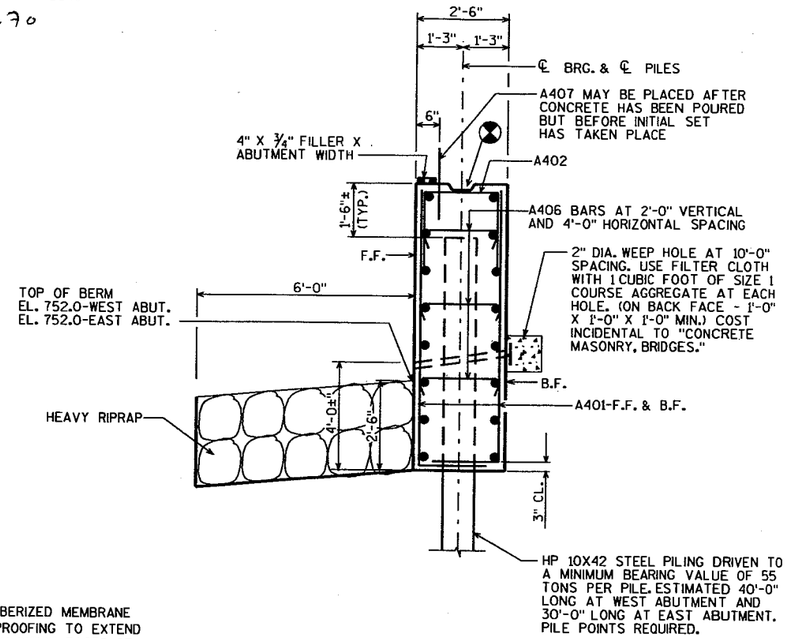
WEST ABUTMENT - LOOKING WEST
EAST ABUTMENT - LOOKING EAST



PLAN



FOOTING & PILE PLAN



SECTION THRU BODY

NOTE: ALL HORIZONTAL BARS NOT LABELED ARE A503 FRONT FACE & A804, A505 BACKFACE.

NOTES

THE ABUTMENTS SHALL NOT BE BACKFILLED ABOVE WATER ELEVATION UNTIL THE SUPERSTRUCTURE IS IN PLACE.

½" FILLER - EXTEND TO TOP OF SLAB

SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE.)

CONSTRUCTION JOINT KEYWAY FORMED BY A SURFACED, BEVELED 2" X 6"

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-70-243

CONST. SPEC. 2003	DRAWN BY EMP	PLANS CK'D. DRG

ABUTMENTS

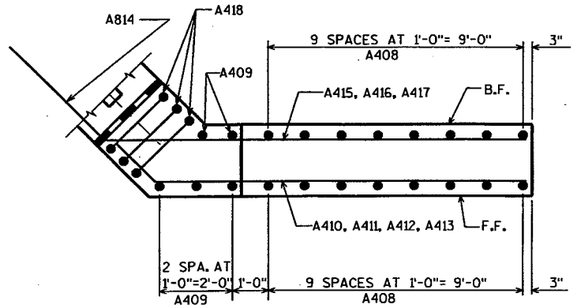
SHEET 4

94

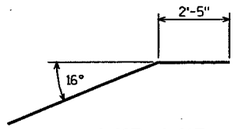
FILE= 04ABUTS243.DGN
SCALE = 4

STATE PROJECT NUMBER

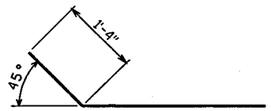
6448-03-72



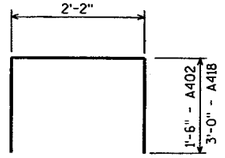
WING PLAN



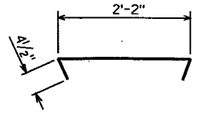
A413, A417



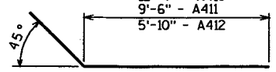
A804, A814



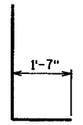
A402, A418



A406



A410
A411
A412



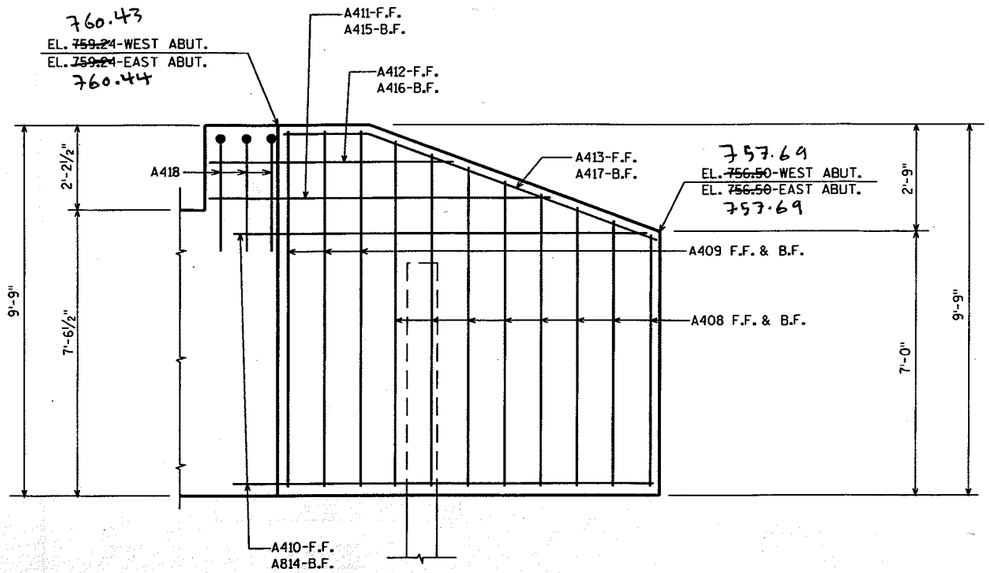
A401

BILL OF BARS

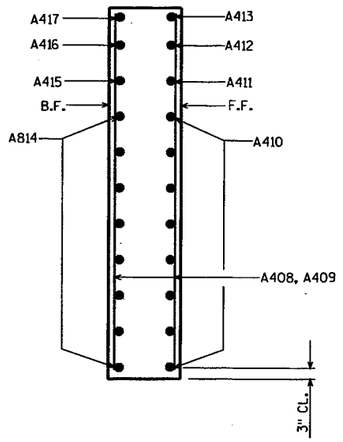
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D. WEST ABUT.	NO. REQ'D. EAST ABUT.	LENGTH	BENT	BAR SERIES	LOCATION	
A401		102	102	8-7	X		BODY	VERT.
A402		47	47	5-0	X		BODY-TOP	HORIZ.
A503		16	16	26-10			BODY-F.F.	HORIZ.
A804		16	16	15-0	X		BODY-B.F. AT WINGS	HORIZ.
A505		8	8	32-6			BODY-B.F.	HORIZ.
A406		42	42	2-9	X		BODY-TIE BARS	HORIZ.
A407		45	45	2-0			BODY-TOP	VERT.
A408		40	40	7-10		▲	WINGS-F.F. & B.F.	VERT.
A409		10	10	9-4			WINGS-F.F. & B.F.	VERT.
A410		16	16	13-6	X		WINGS-F.F.	HORIZ.
A411		2	2	11-7	X		WINGS-F.F.	HORIZ.
A412		2	2	7-11	X		WINGS-F.F.	HORIZ.
A413		2	2	12-8	X		WINGS-F.F.-TOP	HORIZ.
A814		16	16	15-0	X		WINGS-B.F.	HORIZ.
A415		2	2	9-6			WINGS-B.F.	HORIZ.
A416		2	2	5-10			WINGS-B.F.	HORIZ.
A417		2	2	12-8	X		WINGS-B.F.-TOP	HORIZ.
A418		6	6	8-0	X		BODY-TOP AT WINGS	HORIZ.

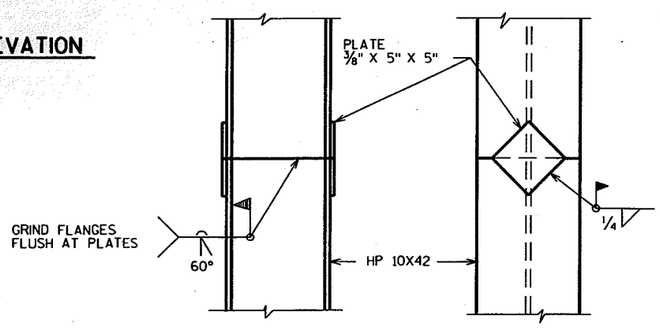
▲ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.



WING ELEVATION



SECTION THRU WING



PILE SPLICE DETAIL

BAR SERIES TABLE

MARK	NO. REQD.	LENGTH
A408	8 SERIES OF 10	6'-7" TO 9'-1"

BUNDLE AND TAG EACH SERIES SEPARATELY.

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-70-243

CONST. SPEC.	2003	DRAWN BY	EMP	PLANS CK'D.	DRG

ABUTMENT DETAILS

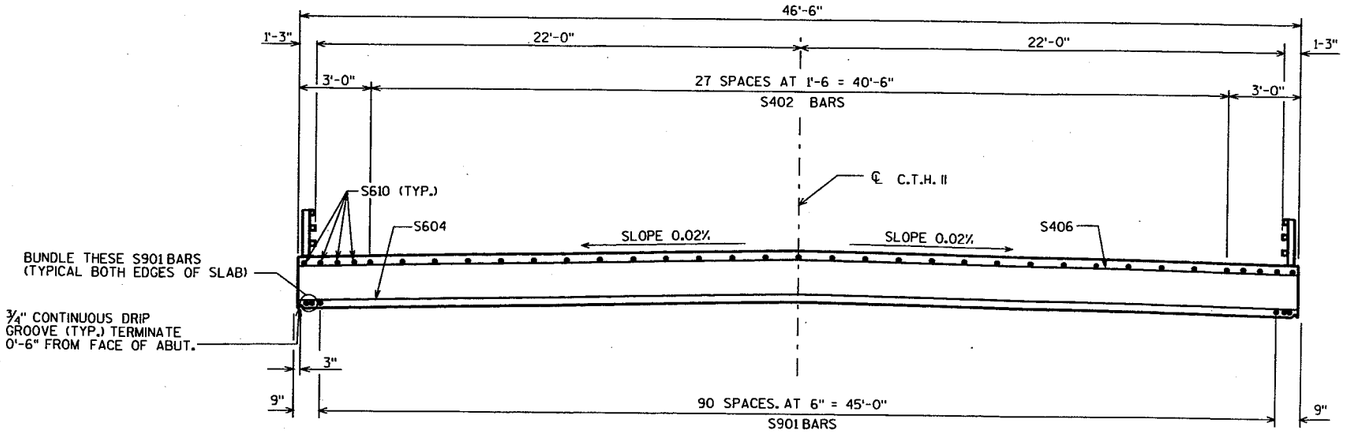
SHEET 5

95

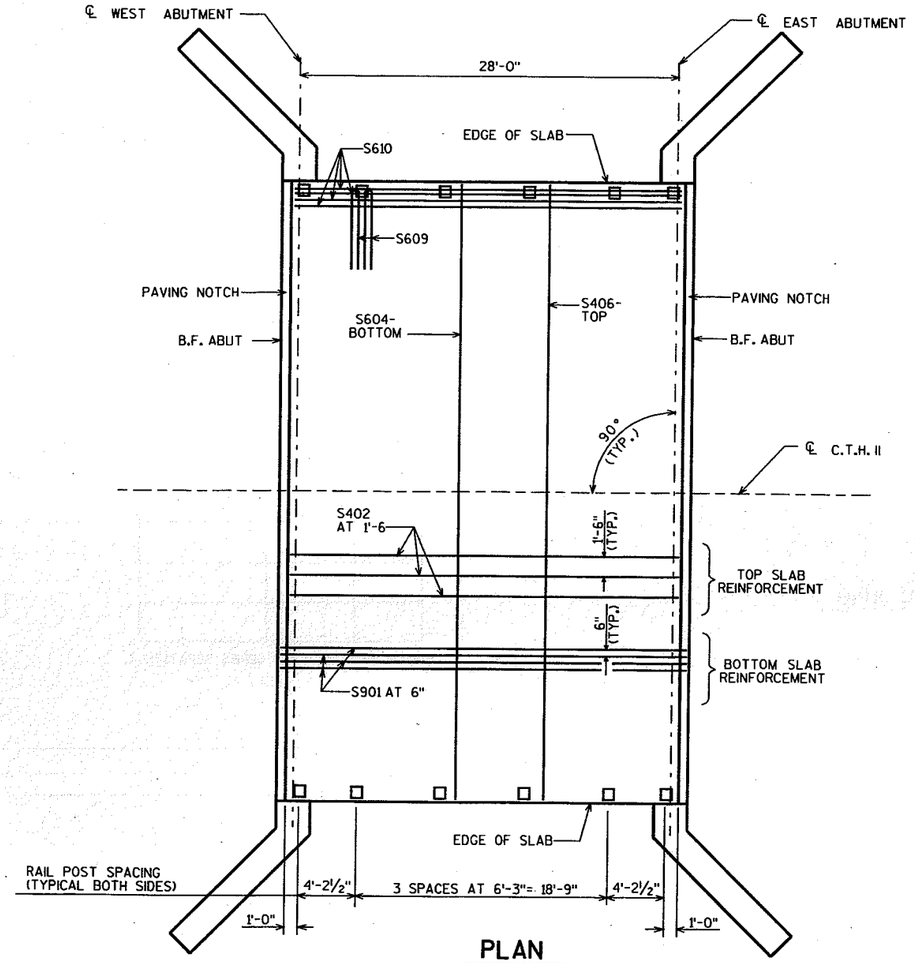
FILE= 05ABUTDET243.DGN
SCALE = 2

STATE PROJECT NUMBER

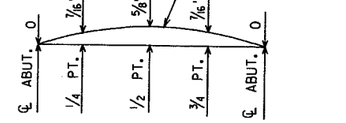
6448-03-72



CROSS SECTION THRU ROADWAY LOOKING EAST



PLAN



CAMBER DIAGRAM

CAMBER SPAN AS SHOWN TO PROVIDE FOR DEADLOAD DEFLECTION & FUTURE CREEP. CAMBER DOES NOT INCLUDE ALLOWANCE FOR FORM SETTLEMENT.

NOTE: CAMBER BASED ON 3 TIMES DEAD LOAD DEFLECTIONS

NOTES

TOP TRANSVERSE BARS IN SLAB SHALL BE SUPPORTED BY INDIVIDUAL BAR CHAIRS AT APPROXIMATELY 3'-0" CENTERS EACH WAY. BOTTOM LONGITUDINAL BARS TO BE SUPPORTED BY CONTINUOUS BAR CHAIRS AT APPROXIMATELY 4'-0" CENTERS.

SLAB THICKNESS DIMENSIONS ARE MINIMUM. ANY TOLERANCES NECESSARY TO CORRECT CONSTRUCTION DISCREPANCIES ARE TO BE PLUS (+).

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-70-243

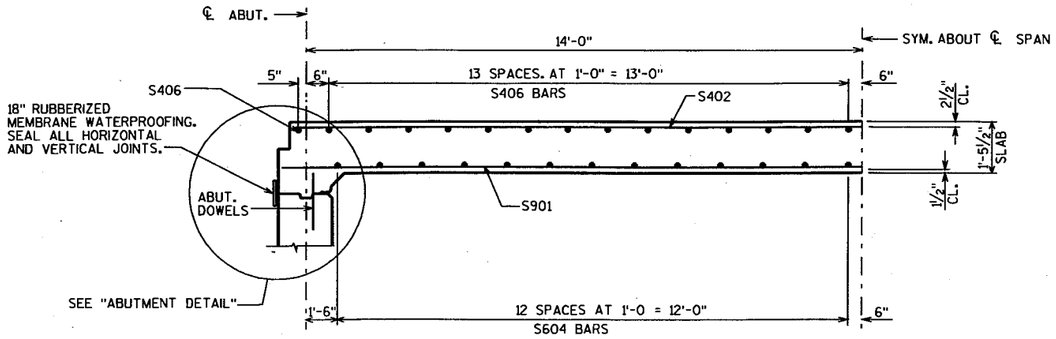
CONST. SPEC. 2003	DRAWN BY EMP	PLANS CK'D. DRG

SUPERSTRUCTURE

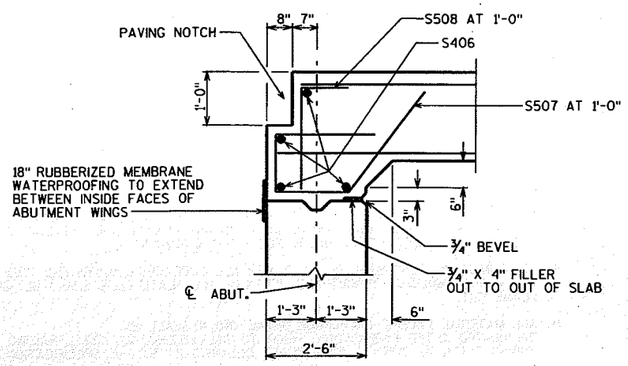
SHEET 6

96

FILE= 06SUPER243.DGN
SCALE = 5.333



LONGITUDINAL SECTION THRU ROADWAY



ABUTMENT DETAIL

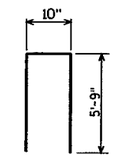
STATE PROJECT NUMBER

6448-03-72

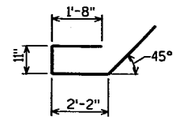
BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

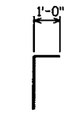
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	CUT. DIAG.	BUN-DLE	LOCATION	
S901	X	95	30-0			X	SLAB-BOTTOM	LONGIT.
S402	X	28	28-10				SLAB-TOP	LONGIT.
S604	X	26	46-2				SLAB-BOTTOM	TRANS.
S406	X	36	46-2				SLAB-TOP & ABUT. DIAPH.	TRANS.
S507	X	94	6-6	X			ABUT. DIAPH.	VERT.
S508	X	94	2-10	X			ABUT. DIAPH.	VERT.
S609	X	24	12-0	X			SLAB-2 PIER RAIL POSTS	HORIZ.
S610	X	8	28-10				SLAB-TOP AT RAIL POSTS	HORIZ.



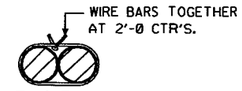
S609



S507



S508



BUNDLING DETAIL

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-70-243

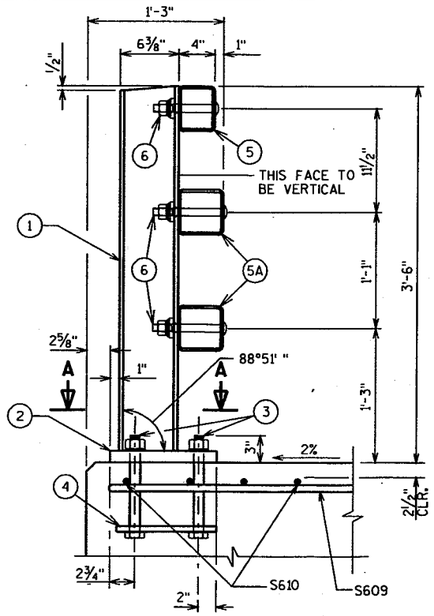
CONST. SPEC.	2003	DRAWN BY	EMP	PLANS CK'D.	DRG

SUPERSTRUCTURE DETAILS

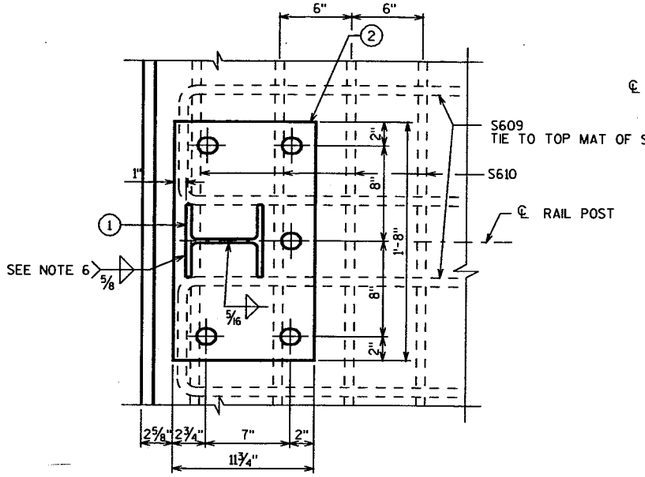
SHEET 7

97

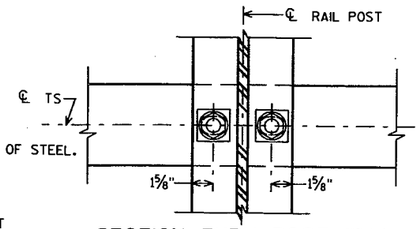
FILE= 07SUPERDET243.DGN
SCALE = 2.666



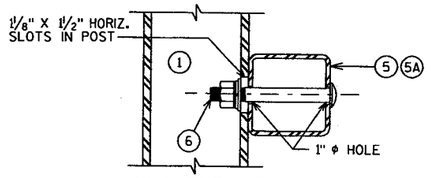
SECTION THRU RAILING ON DECK



SECTION A



SECTION THRU POST WEB



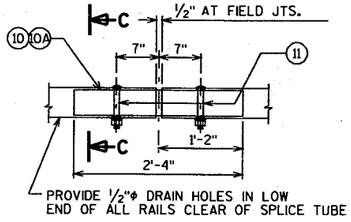
SECTION THRU RAIL

NOTE: CONNECTIONS AT LOWER RAILS SHOWN. CONNECTIONS AT TOP RAIL SIMILAR.

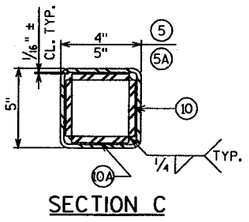
TYPICAL RAIL TO POST CONNECTIONS

LEGEND

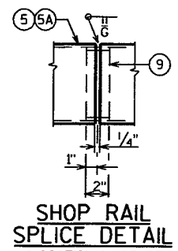
1. W6 x 25 WITH 1⅛" X ½" HORIZ. SLOTS ON EACH SIDE OF POST FOR BOLT NO. 6. CUT BOTTOM OF POST TO MATCH CROSS SLOPE OF ROADWAY. PLACE POST VERTICAL. PLACE POSTS NORMAL TO GRADE LINE.
2. PLATE 1¼" x 11¾" x 1'-8" WITH 15/16" X 1⅝" SLOTTED HOLES FOR ANCHOR BOLTS NO. 3. WELD TO NO. 1 AS SHOWN. SLOTS PARALLEL TO SHORT SIDE OF PLATE.
3. ASTM A449 - 1⅛" DIA. ANCHOR BOLTS WITH NUT AND HARDENED WASHER (ALL GALVANIZED). 5 REQ'D. PER POST. THREAD 3" AND PLACE NORMAL TO PLATE NO. 2. CHAMFER TOP OF BOLTS BEFORE THREADING. 1'-3" LONG. (AN EQUIVALENT THREADED ROD WITH NUTS AND HARDENED WASHERS MAY BE SUBSTITUTED FOR ANCHOR BOLTS IN WINGS IF REQ'D. FOR CONSTRUCTIBILITY.)
4. 5/8" x 11" x 1'-8" ANCHOR PLATE (GALVANIZED) WITH 1 3/16" DIA. HOLES FOR ANCHOR BOLTS NO. 3
5. TS 5 x 4 x 0.25 STRUCTURAL TUBING. ATTACH TO NO. 1 WITH NO. 6.
5A. TS 5 x 5 x 0.25 STRUCTURAL TUBING. ATTACH TO NO. 1 WITH NO. 6.
6. ⅞" DIA. A325 ROUND HEAD BOLT WITH NUT, 3/16" X 1⅝" X 1⅝" WASHER, AND LOCK WASHER (2 REQ'D. AT EACH RAIL TO POST LOCATION.)
7. PLATE 3/8" x 1'-4" X 1'-8". BOLT TO RAIL AS SHOWN IN DETAIL. REQUIRED AT THRIE BEAM GUARD RAIL ATTACHMENTS ONLY. PLACE SYMMETRICALLY ABOUT TUBES NO. 5A.
8. 1" DIA. HOLES IN PLATE NO. 7 & TUBES NO. 5A FOR ⅞" DIA. A325 BOLTS WITH HEX NUTS AND WASHERS. 6 HOLES IN TUBES AND PLATE NO. 7.
9. SPLICE SLEEVE FABRICATED FROM ¼" PLATE. PROVIDE "SLIDING FIT".
10. 3/8" X 3 5/8" X 2'-4" PLATE. 2 PER RAIL. USED IN NO. 5 & 5A.
10A. 3/8" X 2⅝" X 2'-4" PLATE USED IN NO. 5, 3/8" X 3 5/8" X 2'-4" PLATE USED IN NO. 5A. 2 PER RAIL.
11. ⅞" ϕ A325 ROUND HEAD BOLT WITH NUT, WASHER, AND LOCK WASHER. USE 15/16" X 1¼" LONGIT. SLOTTED HOLES AT FIELD JOINTS IN PLATE NO. 10A.
12. ⅞" DIA. X 1½" LONG THREADED SHOP WELDED STUDS (3 REQ'D).



FIELD ERECTION JOINT DETAIL

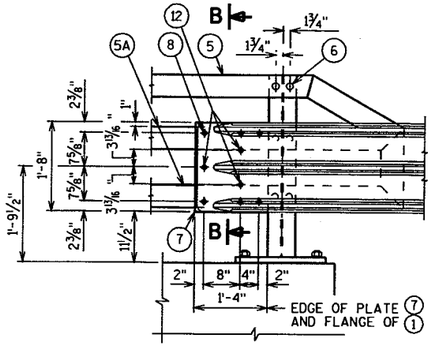


SECTION C



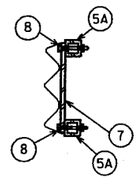
SHOP RAIL SPLICE DETAIL

(LOCATION MUST BE SHOWN ON SHOP DRAWINGS)



DETAIL AT END POST

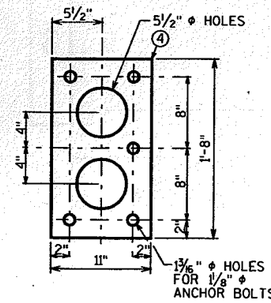
(THRIE BEAM RAIL ATTACHMENT)



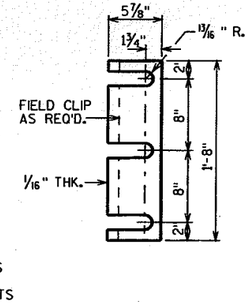
SECTION B

GENERAL NOTES

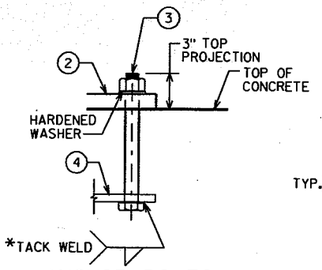
1. BID ITEM SHALL BE "TUBULAR RAILING TYPE "M" WHICH INCLUDES ALL ITEMS SHOWN.
2. RAIL POST AND BASE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 50. HOLLOW RAILING STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A500 GRADE B OR C WITH A CERTIFIED FY = 50 KSI. ANCHOR PLATES, AND SPLICE TUBE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 36.
3. THE NUT SECURING THE POST BASE PLATE TO THE CONCRETE SHALL BE TIGHTENED TO A SNUG FIT AND GIVEN AN ADDITIONAL ⅛ TURN.
4. RAILS SHALL BE CONTINUOUS OVER A MINIMUM OF FOUR (4) POSTS WITHOUT SPLICES WHERE POSSIBLE. RAILS SHALL BE SPLICED IN A PANEL OVER EXPANSION JOINTS.
5. ENDS OF TUBE SECTIONS SHALL BE SAWED. GRIND SMOOTH EXPOSED EDGES. ALL CUT ENDS SHALL BE TRUE AND SMOOTH.
6. WELD IS THE SAME ON BOTH FLANGES. FLANGE WELD DOES NOT REQUIRE MAGNETIC PARTICLE TESTING.
7. FILL BOLT SLOT OPENINGS IN POST SHIMS AND PLATE NO. 2 AND CAULK AROUND PERIMETER OF PLATE NO. 2 WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. STEEL POST SHIMS MAY BE USED UNDER POSTS WHERE REQ'D. FOR ALIGNMENT.
8. POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUT.
9. ALL MATERIAL EXCEPT ANCHORAGE DETAIL (NO. 4) SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING, ALL STEEL RAILING POSTS & STEEL TUBING SHALL BE GIVEN A NO. 6 BLAST CLEANING BY S.S.P.C. SPECIFICATIONS.



ANCHOR PLATE

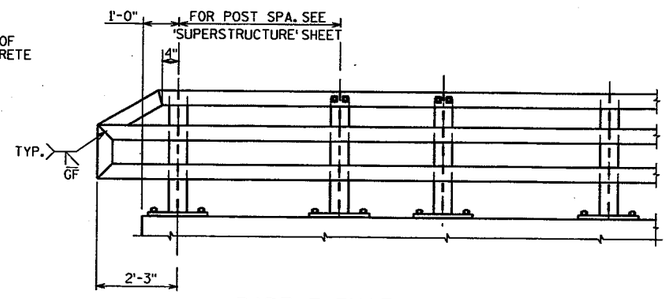


POST SHIM DETAIL



ANCHOR BOLTS

*FOR ANCHOR BOLTS IN WINGS, TACK WELD MAY BE USED IN FIELD AFTER ANCHOR PLATE IS IN POSITION IF REQ'D. FOR CONSTRUCTIBILITY.



PART ELEVATION OF RAILING

STATE PROJECT NUMBER

6448-03-72

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-70-243

CONST. SPEC.	2003	DRAWN BY	EMP	PLANS CK'D.	DRG

TUBULAR RAILING TYPE M

SHEET 8

98

8

FILE= 08MRAIL243.DGN
SCALE = 1

6/02

EARTHWORK
DRAINAGE AREA 1

STATION	EXCAVATION COMMON CY	FILL CY
0+00.00		
	9.90	0.00
0+05.00		
	8.15	0.00
0+10.00		
	7.19	0.00
0+15.00		
	6.31	0.00
0+20.00		
	5.53	0.00
0+25.00		
	4.87	0.00
0+30.00		
	4.28	0.00
0+35.00		
	3.69	0.00
0+40.00		
	3.12	0.00
0+45.00		
	2.60	0.00
0+50.00		
	2.09	0.00
0+55.00		
	1.52	0.00
0+60.00		
	0.92	0.00
0+65.00		
	0.43	0.00
0+70.00		
	0.15	0.00
0+75.00		
	0.05	0.00
0+80.00		
	0.01	0.00
0+85.00		
SUBTOTAL	60.80	0.00

EARTHWORK
DRAINAGE AREA 2

STATION	EXCAVATION COMMON CY	FILL CY
0+00.00		
	11.54	0.00
0+10.00		
	6.96	0.00
0+20.00		
	4.64	0.00
0+30.00		
	3.08	0.00
0+40.00		
	2.97	0.00
0+50.00		
	3.58	0.00
0+60.00		
	3.86	0.11
0+70.00		
	3.67	0.29
0+80.00		
	3.13	0.29
0+90.00		
	2.46	0.20
1+00.00		
	2.11	0.17
1+10.00		
	1.83	0.12
1+20.00		
	1.56	0.07
1+30.00		
	1.29	0.22
1+40.00		
	0.99	0.50
1+50.00		
	0.79	0.69
1+60.00		
	0.70	0.82
1+70.00		
	0.56	1.22
1+80.00		
	0.30	2.40
1+90.00		
	0.12	3.18
2+00.00		
	0.02	0.78
2+05.00		
SUBTOTAL	~~56.16~~ 29.19	~~11.06~~ 0.06

EARTHWORK
CTH II AT STRUCTURE

STATION	EXCAVATION COMMON CY	FILL CY
252+65.00		
	4.73	0.76
252+76.90		
	0.07	0.01
252+77.00		
	21.37	2.96
253+00.00		
	49.77	20.49
253+50.00		
	6.26	3.93
253+55.90		
	13.94	9.71
253+68.40		
	41.15	28.53
253+99.90		
	0.22	0.10
254+00.00		
	101.38	72.85
254+38.00		
	0.12	0.14
254+38.10		
	0.00	0.00
254+50.00		
	0.00	0.00
254+69.90		
	0.13	0.18
254+70.00		
	85.87	62.74
255+00.00		
	121.88	21.10
255+40.20		
	28.48	4.79
255+50.00		
	22.11	4.61
255+58.00		
	0.20	0.06
255+58.10		
	8.90	4.17
255+65.20		
	39.83	14.50
256+00.00		
	29.06	5.32
256+31.00		
	0.06	0.01
256+31.10		
	7.61	1.43
256+50.00		
	1.98	0.44
256+55.00		
SUBTOTAL	585.11	258.83

EARTHWORK
DIVERSION CHANNEL

STATION	EXCAVATION COMMON CY	FILL CY
0+00.00		
	35.22	9.46
0+25.00		
	90.09	11.78
0+50.00		
	157.62	2.32
0+75.00		
	182.80	0.00
1+00.00		
	165.42	0.00
1+25.00		
	194.13	0.00
1+50.00		
	237.17	0.00
1+75.00		
	160.57	0.00
2+00.00		
	143.50	0.00
2+25.00		
	199.08	0.00
2+50.00		
	148.76	2.70
2+75.00		
	35.19	4.20
2+90.00		
	6.45	1.72
3+00.00		
	3.04	0.00
3+05.00		
SUBTOTAL	1,759.05	32.18

EARTHWORK
CTH II AT INTERSECTION EAST

STATION	EXCAVATION COMMON CY	FILL CY
447+50.00		
	92.60	1.78
447+76.45		
	77.74	0.45
448+00.00		
	173.67	0.17
448+50.00		
	155.11	0.00
449+00.00		
	56.03	0.43
449+20.00		
	86.13	0.64
449+50.00		
	76.88	0.01
449+80.00		
SUBTOTAL	718.16	3.48

EARTHWORK
CTH II AT INTERSECTION WEST

STATION	EXCAVATION COMMON CY	FILL CY
443+40.00		
	18.75	1.44
443+50.00		
	50.20	2.04
443+77.50		
	40.20	1.85
444+00.00		
	97.58	6.10
444+50.00		
	22.99	1.31
444+61.00		
	29.17	1.97
444+74.97		
	49.91	3.80
445+00.00		
	87.23	15.37
445+50.00		
	92.30	20.86
446+00.00		
	74.68	8.27
446+30.00		
	39.35	3.03
446+43.20		
	21.47	1.54
446+50.00		
	106.76	2.49
446+75.00		
SUBTOTAL	730.57	70.09

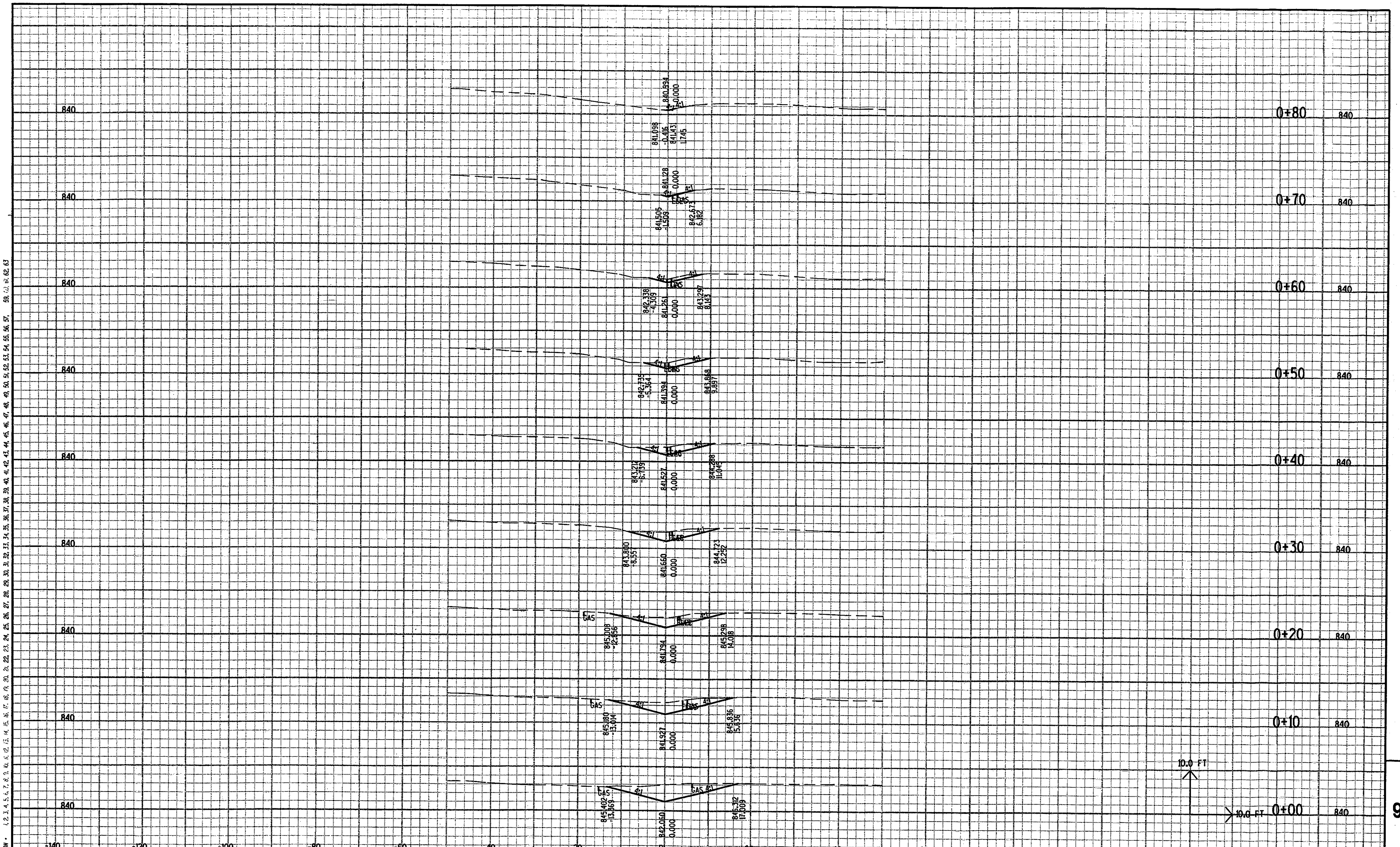
EARTHWORK
STH 76 AT INTERSECTION

STATION	EXCAVATION COMMON CY	FILL CY
14+14.50		
	65.50	3.07
14+50.00		
	129.66	7.94
15+00.00		
	47.72	1.91
15+13.75		
	108.51	2.53
15+50.00		
	121.98	2.23
16+00.00		
	50.31	0.58
16+20.00		
	77.61	0.32
16+50.00		
	128.63	0.15
16+94.00		
	19.41	0.10
17+00.00		
	154.62	2.31
17+50.00		
	97.64	6.38
17+84.50		
	40.42	4.92
18+00.00		
	117.77	16.34
18+50.00		
	108.93	13.44
19+00.00		
	65.34	2.99
19+28.30		
	54.82	1.71
19+50.00		
	141.55	3.85
19+98.93		
	3.45	0.00
20+00.00		
	152.91	0.57
20+50.00		
	36.03	0.69
20+62.50		
	94.82	4.39
21+00.00		
	7.54	0.51
21+03.50		

CONTINUED...

EARTHWORK
STH 76 AT INTERSECTION
CONTINUED

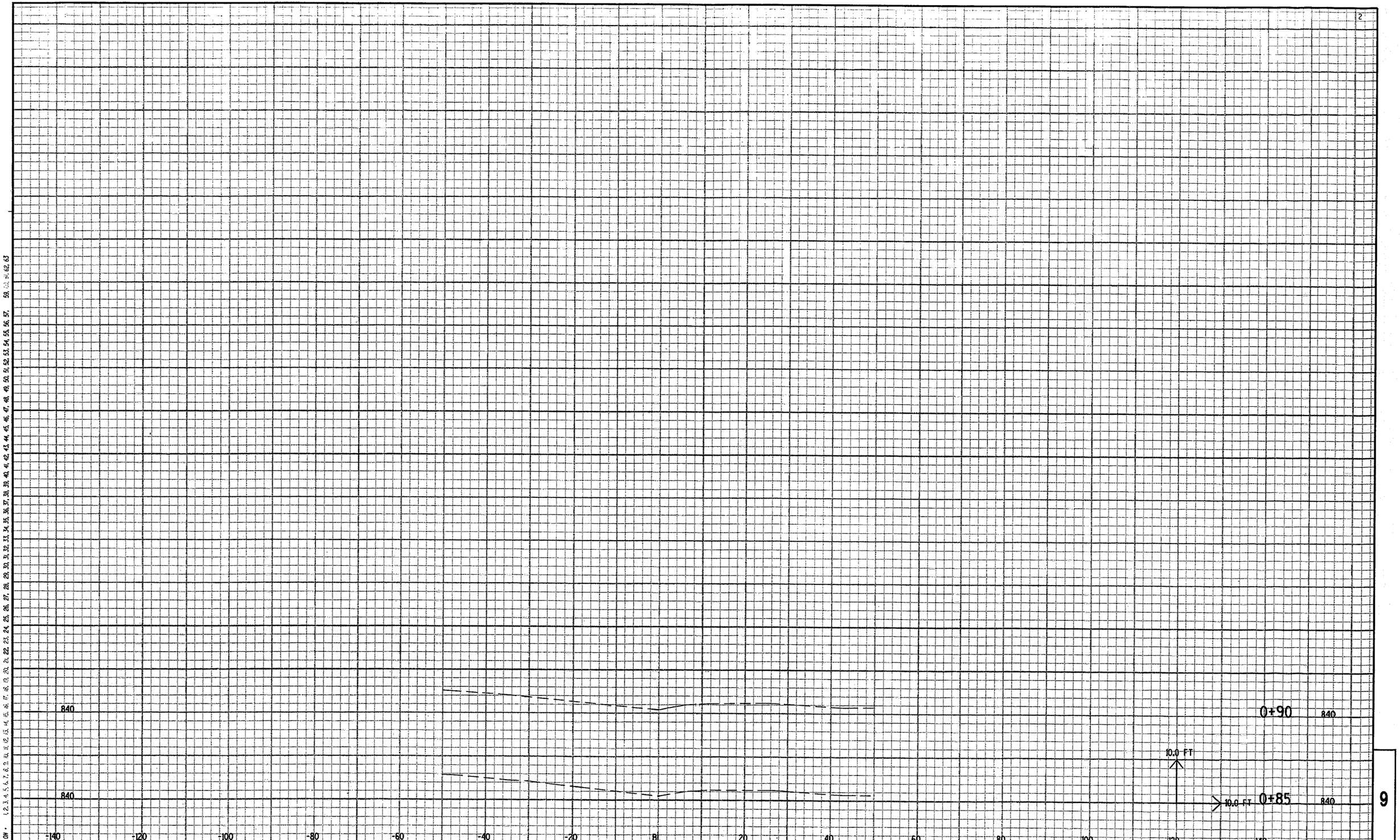
STATION	EXCAVATION COMMON CY	FILL CY
21+03.50		
	3.19	0.22
21+05.00		
	95.95	7.02
21+50.00		
	101.68	4.24
22+00.00		
	101.82	4.37
22+50.00		
	112.59	6.32
23+00.00		
	74.81	1.69
23+33.75		
	33.60	1.41
23+50.00		
	79.60	8.44
23+90.00		
	20.43	1.51
24+00.00		
	98.76	3.24
24+50.00		
	83.69	3.87
25+00.00		
	72.33	7.06
25+50.00		
	78.97	9.83
26+00.00		
	38.40	2.27
26+23.00		
SUBTOTAL	1825.16	76.92



STATE PROJECT NO: 6448-03-72	HWY: CTH II	COUNTY: WINNEBAGO	CROSS SECTIONS -- DRAINAGE AREA #1	SHEET NO: 101	E

FILE NAME : C:\Users\P\D3\STH150\DGN FILES\newdarxs10.DGN PLOT DATE : 02-DEC-2003 09:57 PLOT BY : DOTEAD PLOT NAME : PLOT SCALE : 1.993916:1.000000

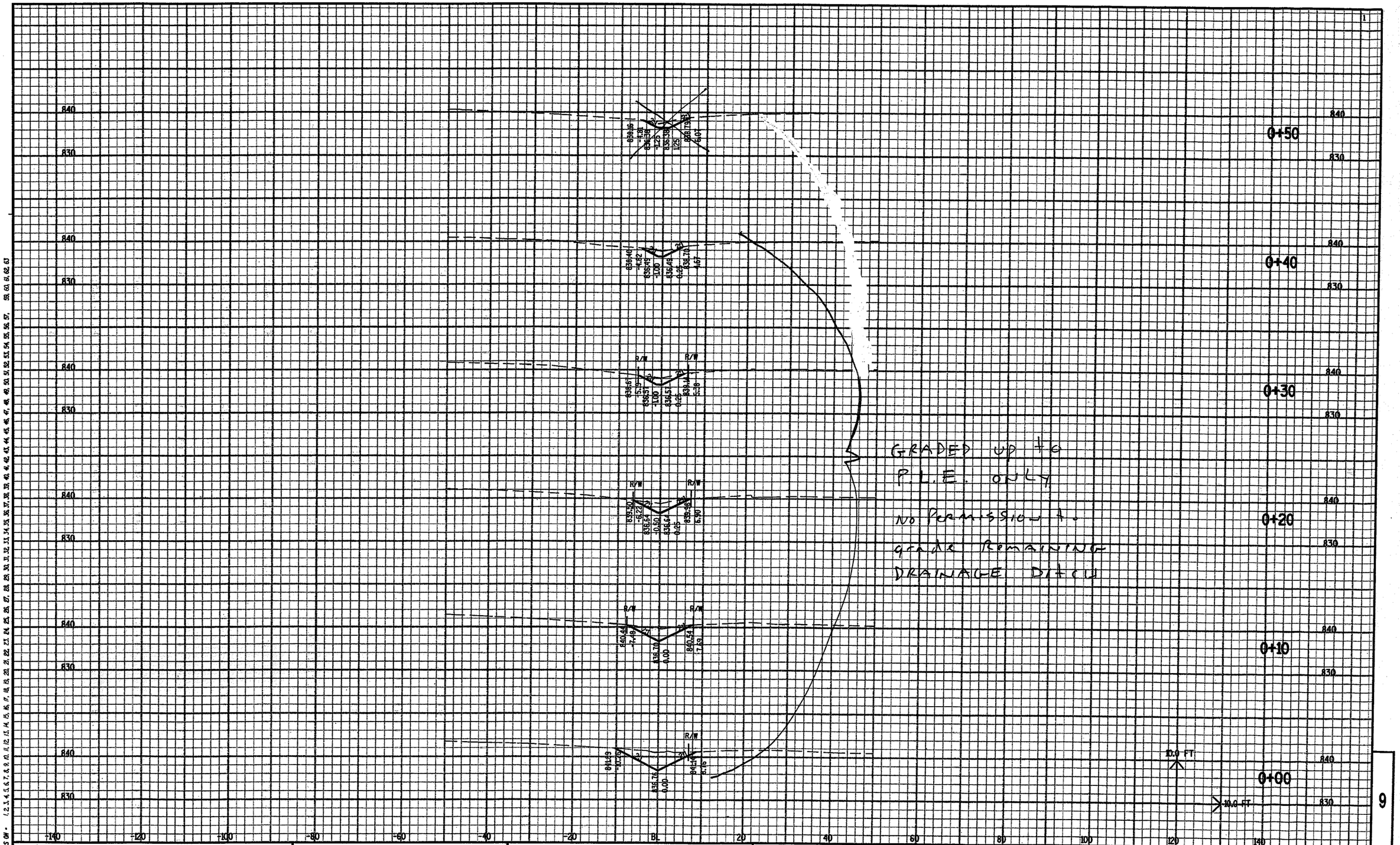
LEVELS ON • 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 59, 60, 61, 62, 63



9

STATE PROJECT NO: 6448-03-72	HWY: CTH II	COUNTY: WINNEBAGO	CROSS SECTIONS -- DRAINAGE AREA #1	SHEET NO: 102	E

FILE NAME : C:\Users\P\D3\STH150\DGN FILES\newwdarxs10.DGN PLOT DATE : 02-DEC-2003 09:57 PLOT BY : DOTEAD PLOT NAME : PLOT SCALE : 1.993916:1.000000



PROJECT NO: 6448-03-72	HWY: CTH II	COUNTY: WINNEBAGO	CROSS SECTIONS -- DRAINAGE AREA #2	SHEET NO: 183	E

FILE NAME : \\gre31fp1\FCSERVER\d3_644803E\newfinedorxs.DGN PLOT DATE : 05-MAR-2004 13:45 PLOT BY : DOTC3S PLOT NAME : PLOT SCALE : 2.000000:1.000000

9

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

1+20
1+10
1+00
0+90
0+80
0+70
0+60

10.0 FT
10.0 FT

PROJECT NO: 6448-03-72	HWY: CTH II	COUNTY: WINNEBAGO	CROSS SECTIONS -- DRAINAGE AREA #2	SHEET NO: 104	E

FILE NAME : \\gre31fp1\FCSERVER\d3_644803E\newfinedarxs.DGN
PLOT DATE : 05-MAR-2004 13:45
PLOT BY : DOTC3S
PLOT NAME :
PLOT SCALE : 2.000000:1.000000

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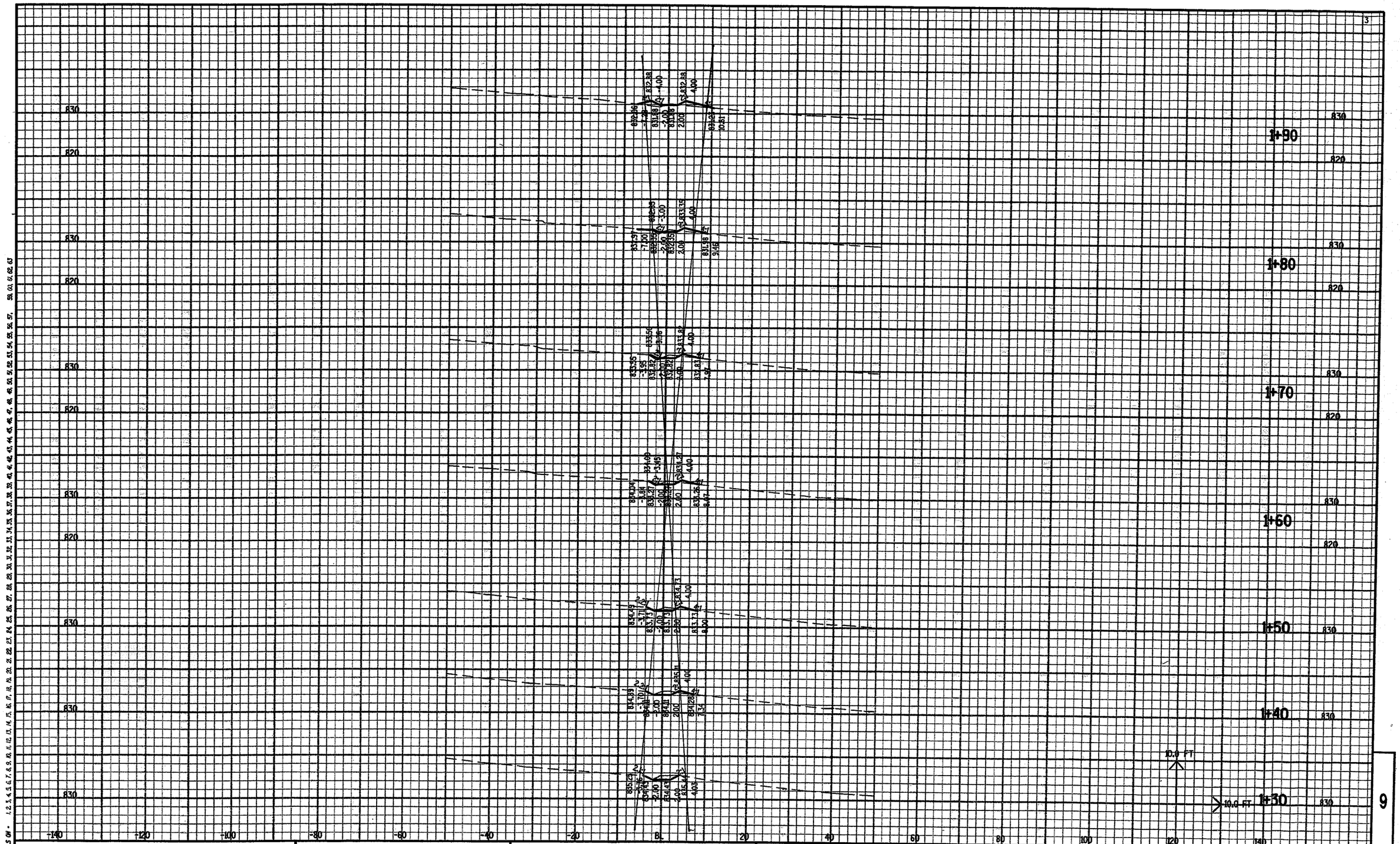

PROJECT NO: 6448-03-72	HWY: CTH II	COUNTY: WINNEBAGO	CROSS SECTIONS -- DRAINAGE AREA #2	SHEET NO: 105

9

E

FILE NAME : \\gre31fp1\FCSERVER\d3_644803E\newfilnedarxs.DGN
PLOT DATE : 05-MAR-2004 13:45
PLOT BY : DOTC3S
PLOT NAME :
PLOT SCALE : 2.000000:1.000000

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4

2+20

2+10

2+05

2+00

830
820

-140 -120 -100 -80 -60 -40 -20 BL 20 40 60 80 100 120 140

10.0 FT

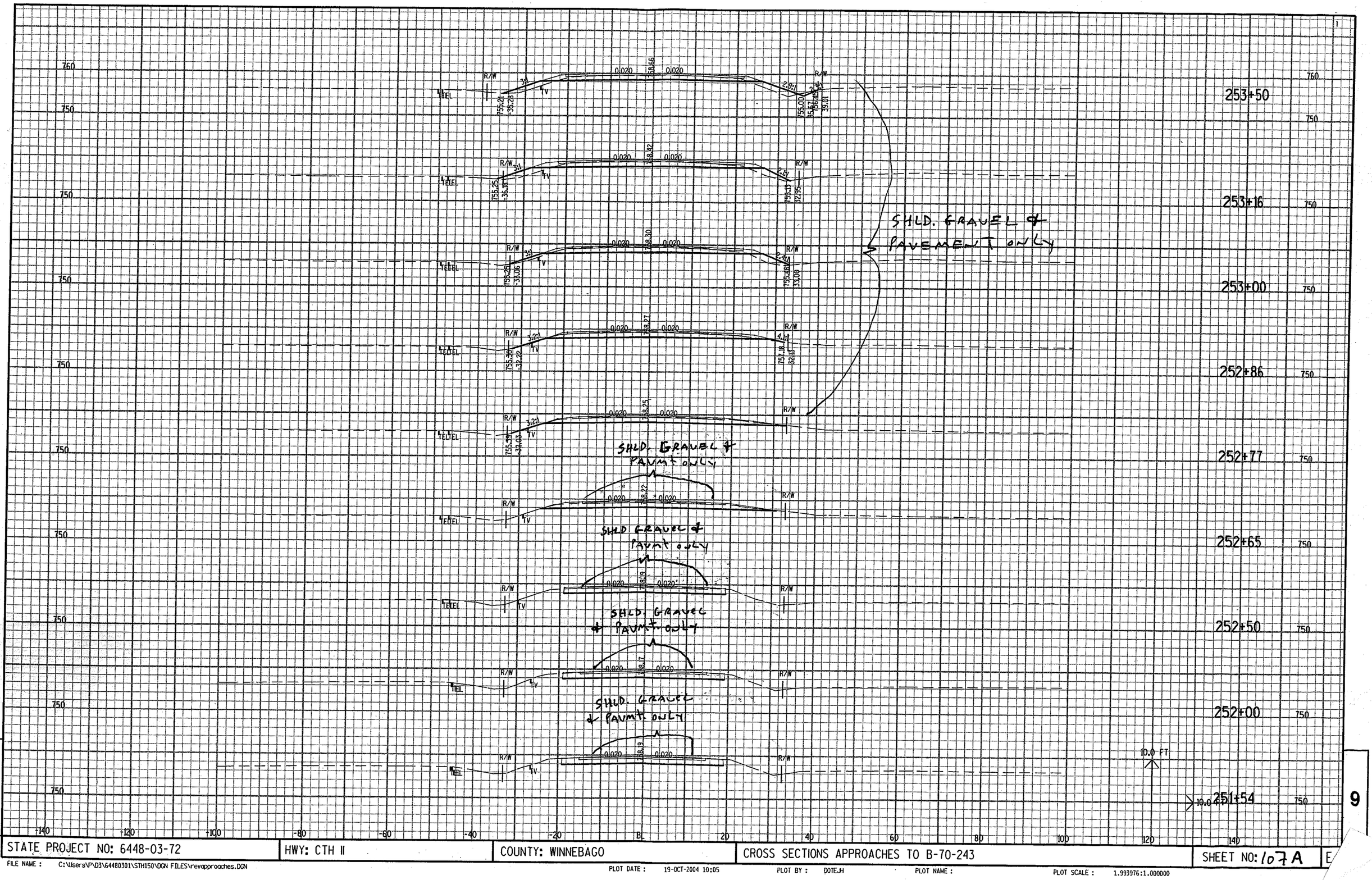
10.0 FT

9

PROJECT NO: 6448-03-72	HWY: CTH II	COUNTY: WINNEBAGO	CROSS SECTIONS -- DRAINAGE AREA #2	SHEET NO: 106	E

FILE NAME : \\gre31fp1\FCSERVER\d3_644803E\newfinedarxs.DGN

PLOT DATE : 05-MAR-2004 13:45 PLOT BY : DOTC3S PLOT NAME : PLOT SCALE : 2.000000:1.000000

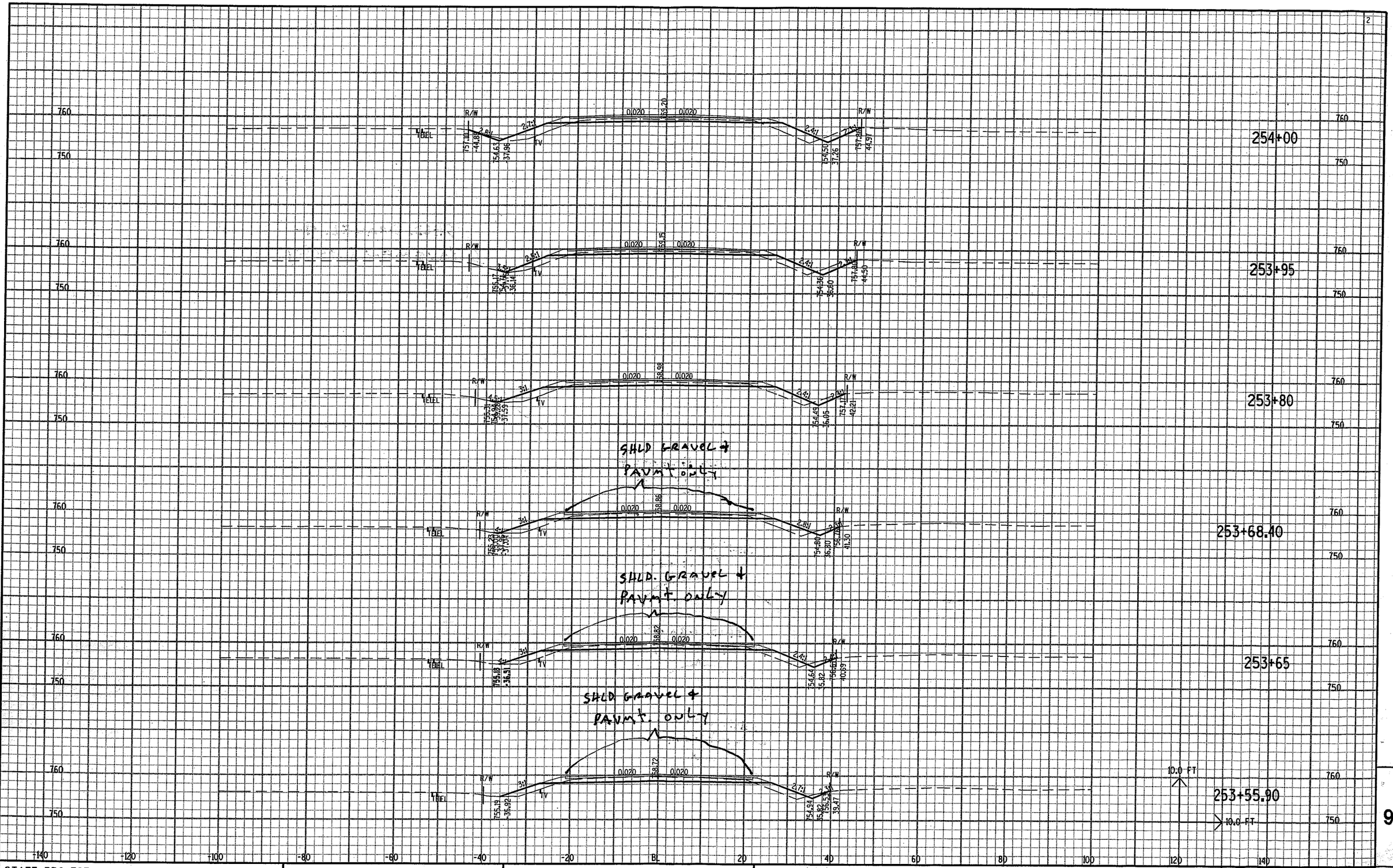


9

9

STATE PROJECT NO: 6448-03-72	HWY: CTH II	COUNTY: WINNEBAGO	CROSS SECTIONS APPROACHES TO B-70-243	SHEET NO: 107A

FILE NAME : C:\Users\P\D3\64480301\STH150\DGN FILES\revapproaches.DGN PLOT DATE : 19-OCT-2004 10:05 PLOT BY : DOTEJH PLOT NAME : PLOT SCALE : 1.993976:1.000000

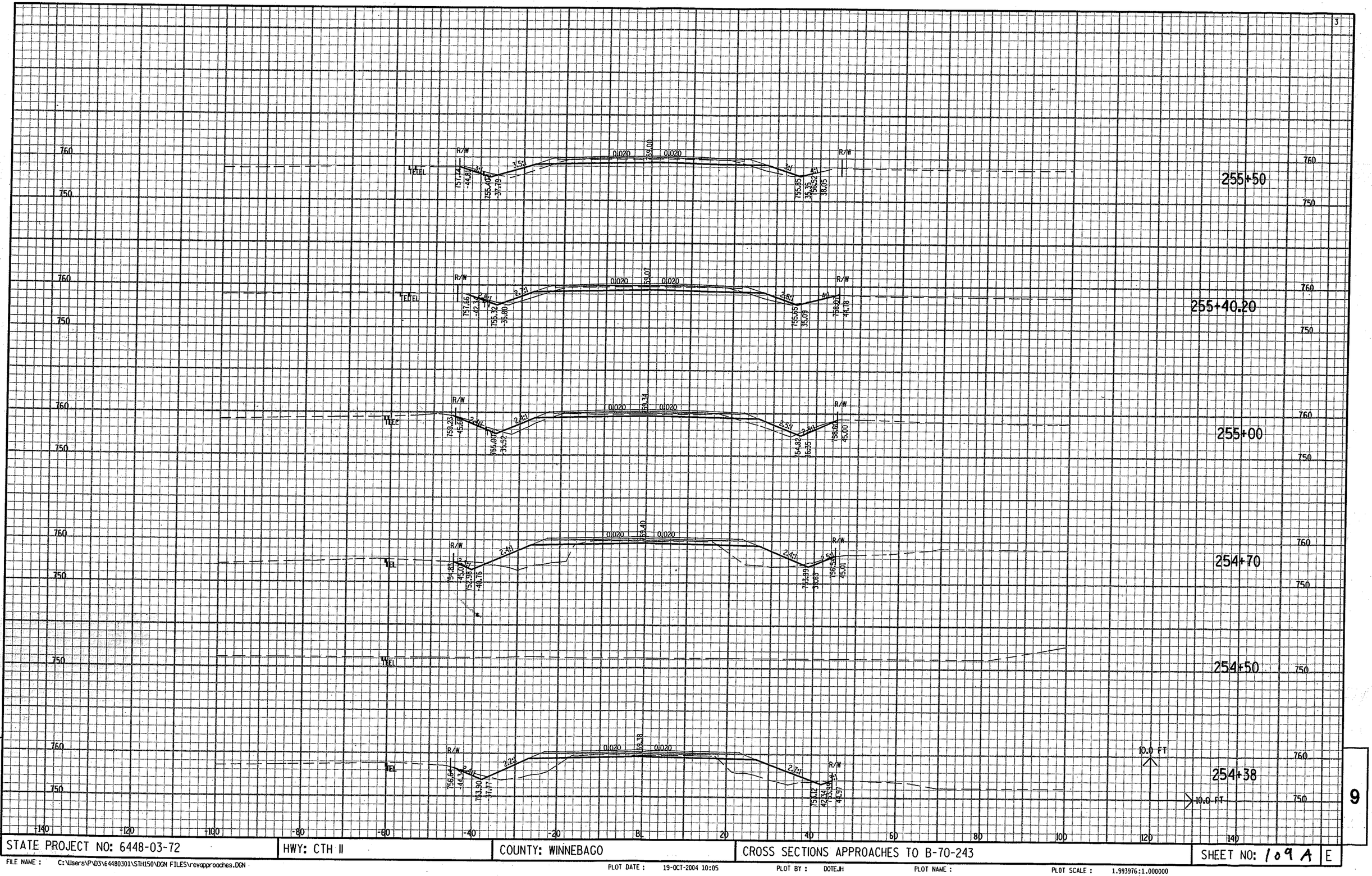


9

9

STATE PROJECT NO: 6448-03-72	HWY: CTH II	COUNTY: WINNEBAGO	CROSS SECTIONS APPROACHES TO B-70-243	SHEET NO: 108A	E

FILE NAME : C:\Users\P\D3\64480301\STH150\DGN FILES\revapprooches.DGN
PLOT DATE : 19-OCT-2004 10:05
PLOT BY : DOTEJH
PLOT NAME :
PLOT SCALE : 1.993976:1.000000



STATE PROJECT NO: 6448-03-72	HWY: CTH II	COUNTY: WINNEBAGO	CROSS SECTIONS APPROACHES TO B-70-243	SHEET NO: 109 A	E

FILE NAME : C:\Users\P\D3\64480301\STH150\DGN FILES\revapproaches.DGN PLOT DATE : 19-OCT-2004 10:05 PLOT BY : DOTEJH PLOT NAME : PLOT SCALE : 1.993976:1.000000

256+31.10

256+15

256+00

PLACED PAVMENT & SHLD. GRAVEL ONLY

255+86

255+65.20

255+58.10

10.0 FT

10.0 FT

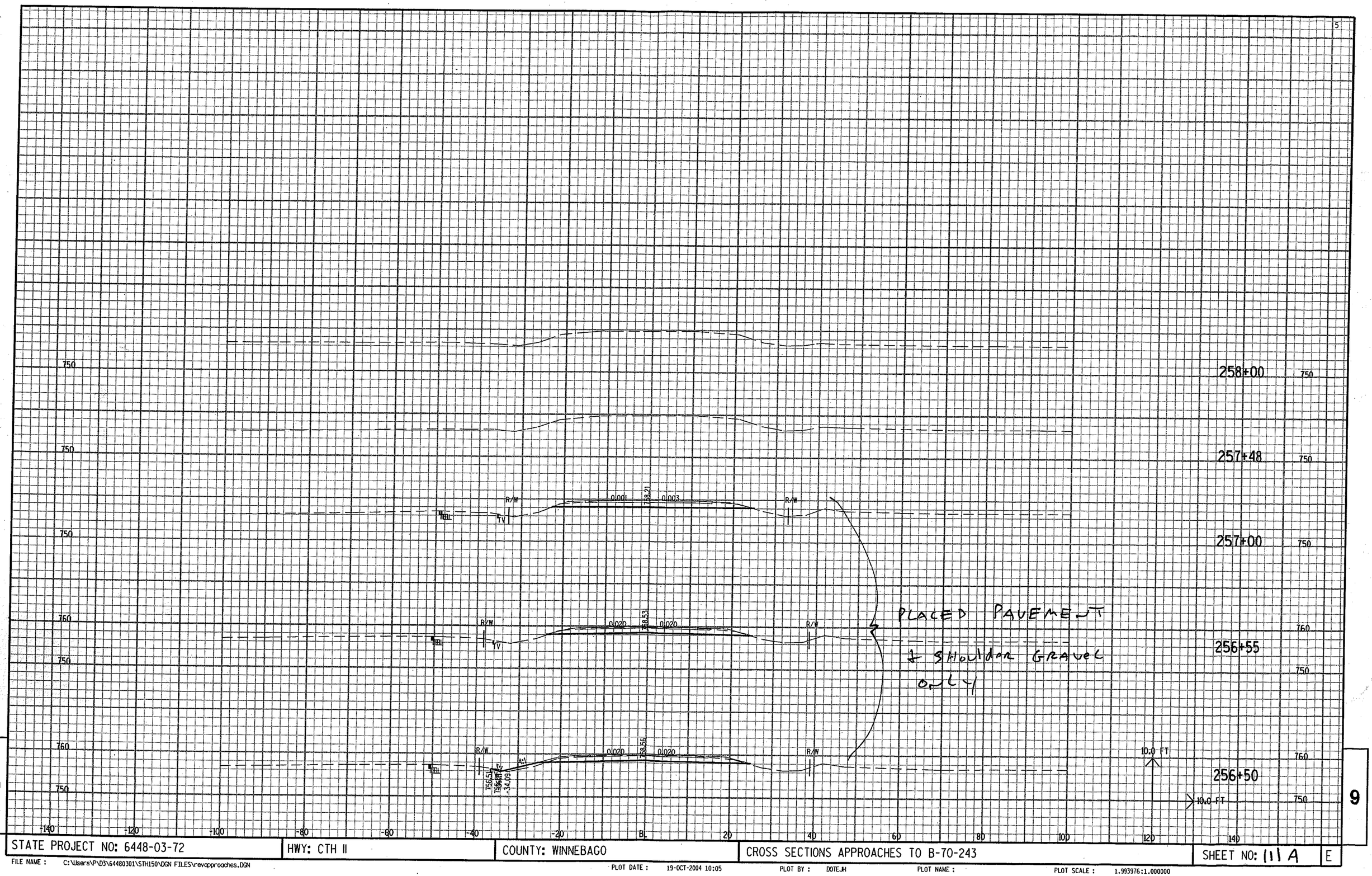
9

9

STATE PROJECT NO: 6448-03-72 | HWY: CTH II | COUNTY: WINNEBAGO | CROSS SECTIONS APPROACHES TO B-70-243 | SHEET NO: 110A | E

FILE NAME : C:\Users\P\D3\64480301\STH150\DGN FILES\revapproaches.DGN

PLOT DATE : 19-OCT-2004 10:05 PLOT BY : DOTEJH PLOT NAME : PLOT SCALE : 1.993976:1.000000



9

9

STATE PROJECT NO: 6448-03-72	HWY: CTH II	COUNTY: WINNEBAGO	CROSS SECTIONS APPROACHES TO B-70-243	SHEET NO: 11 A	E

FILE NAME : C:\Users\P\D3\64480301\STH150\DGN FILES\revapproaches.DGN PLOT DATE : 19-OCT-2004 10:05 PLOT BY : DOTEJH PLOT NAME : PLOT SCALE : 1.993976:1.000000

STATE PROJECT NO: 6448-03-72	HWY: CTH II	COUNTY: WINNEBAGO	CROSS SECTIONS -- CTH II AT STRUCTURE	SHEET NO: 10	E

FILE NAME : C:\Users\P\D3\STH150\DGN FILES\newbridgeqxs10.DGN PLOT DATE : 02-DEC-2003 09:59 PLOT BY : DOTEAD PLOT NAME : PLOT SCALE : 1.993916:1.000000

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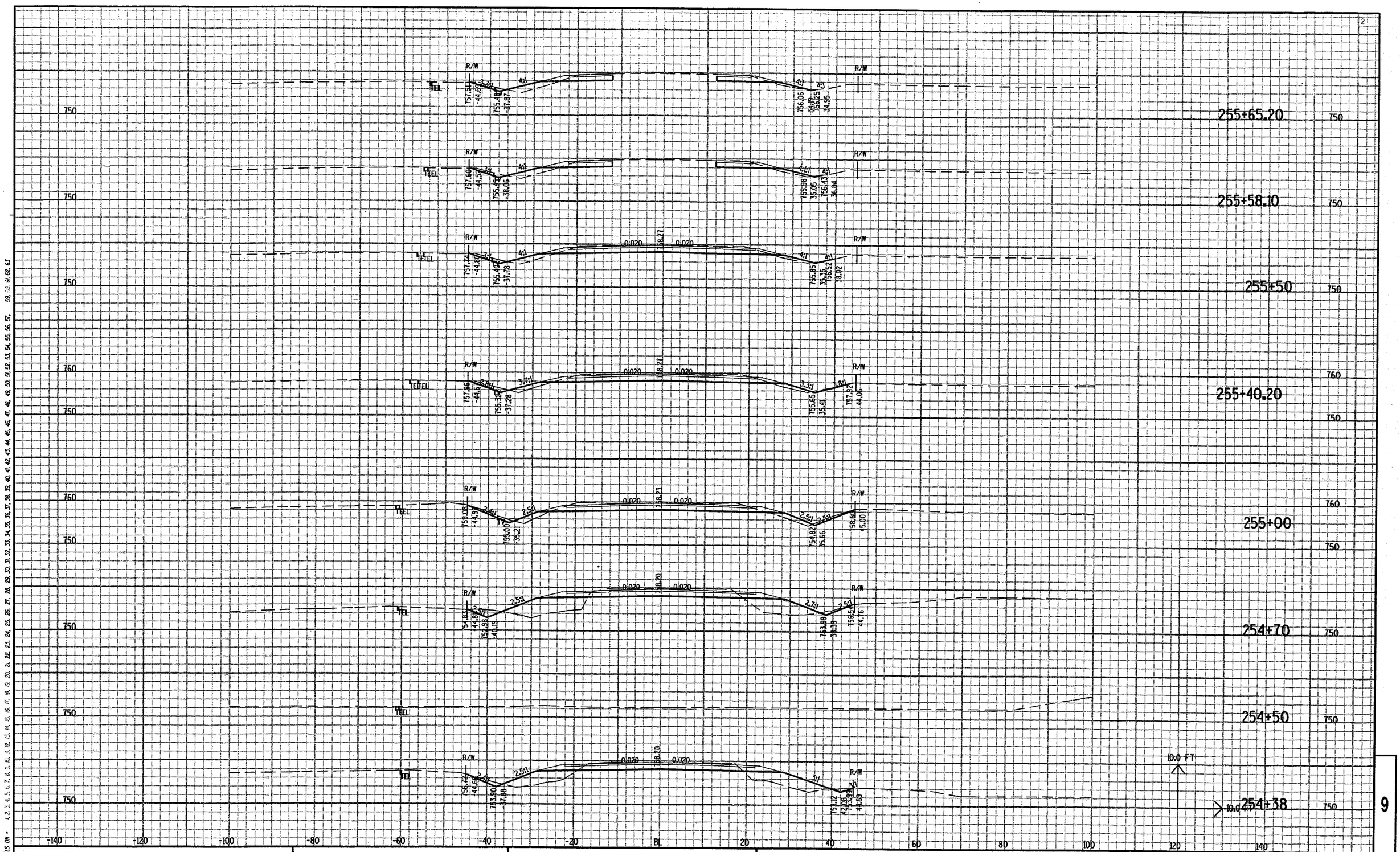
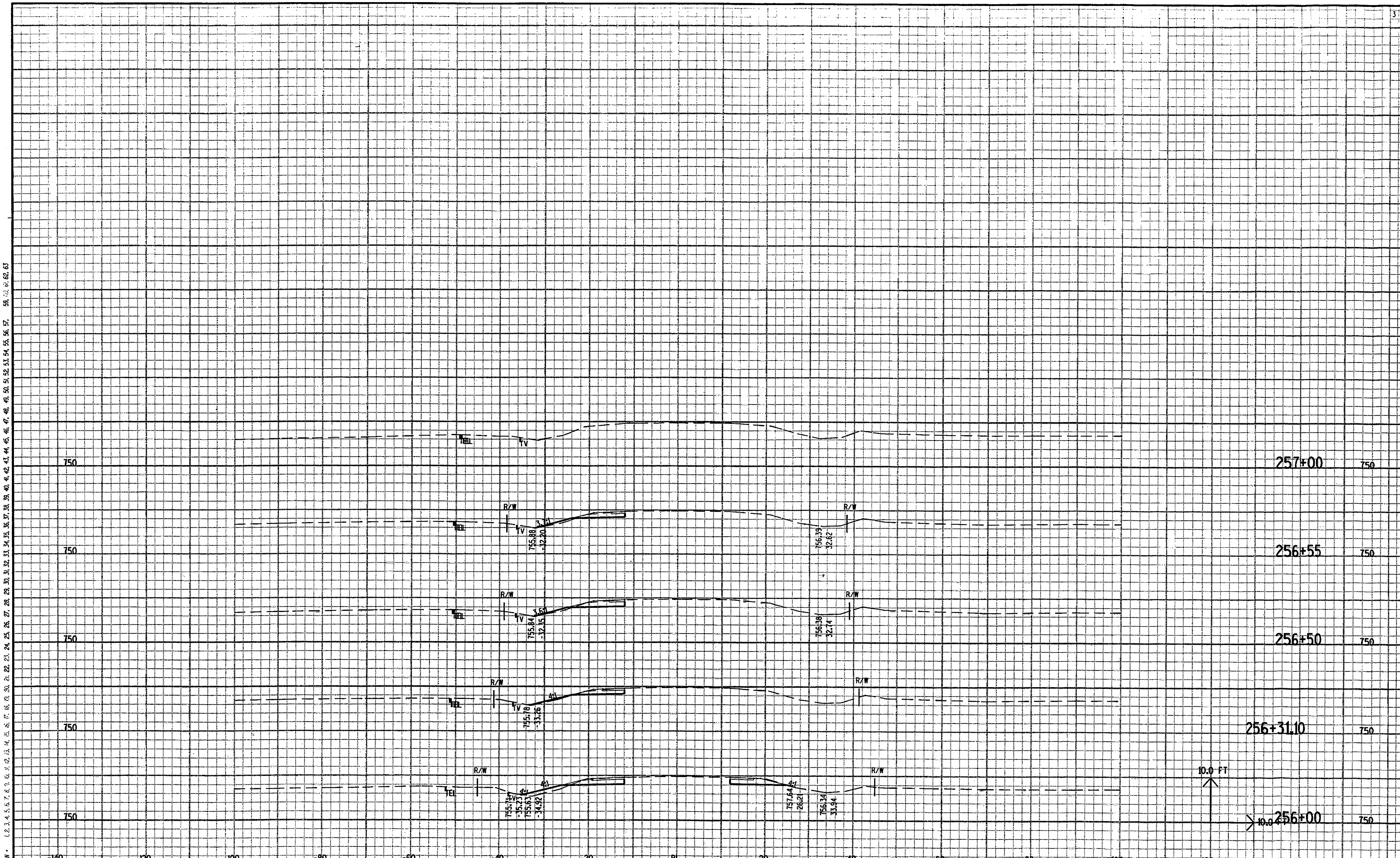


STATE PROJECT NO: 6448-03-72	HWY: CTH II	COUNTY: WINNEBAGO	CROSS SECTIONS -- CTH II AT STRUCTURE	SHEET NO: ~~108~~ 9	E

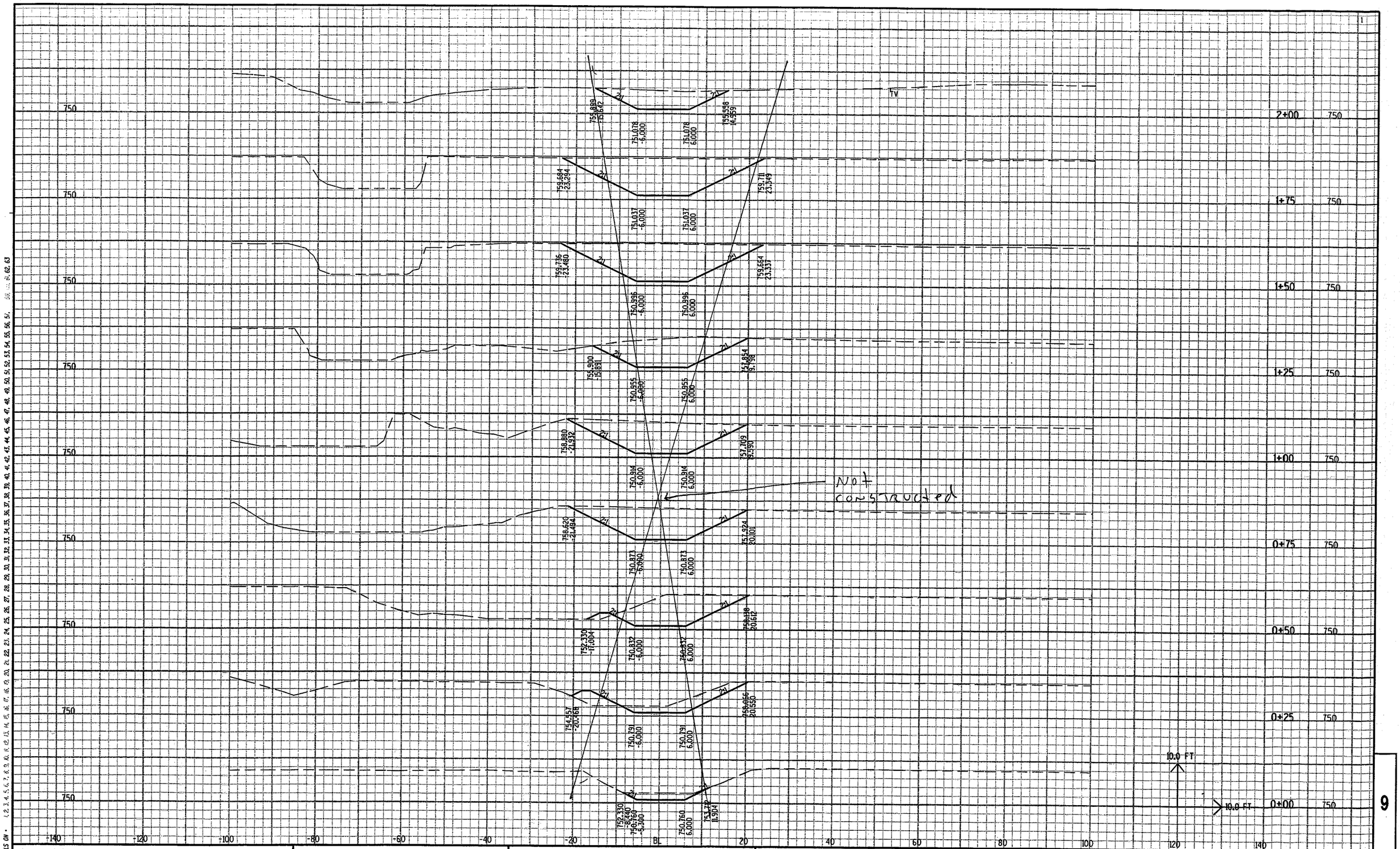
FILE NAME : C:\Users\P\D3\STH150\DGN FILES\newbridgegxs10.DGN PLOT DATE : 02-DEC-2003 09:59 PLOT BY : DOTEAD PLOT NAME : PLOT SCALE : 1.993916:1.000000



9

STATE PROJECT NO: 6448-03-72	HWY: CTH II	COUNTY: WINNEBAGO	CROSS SECTIONS -- CTH II AT STRUCTURE	SHEET NO:	E

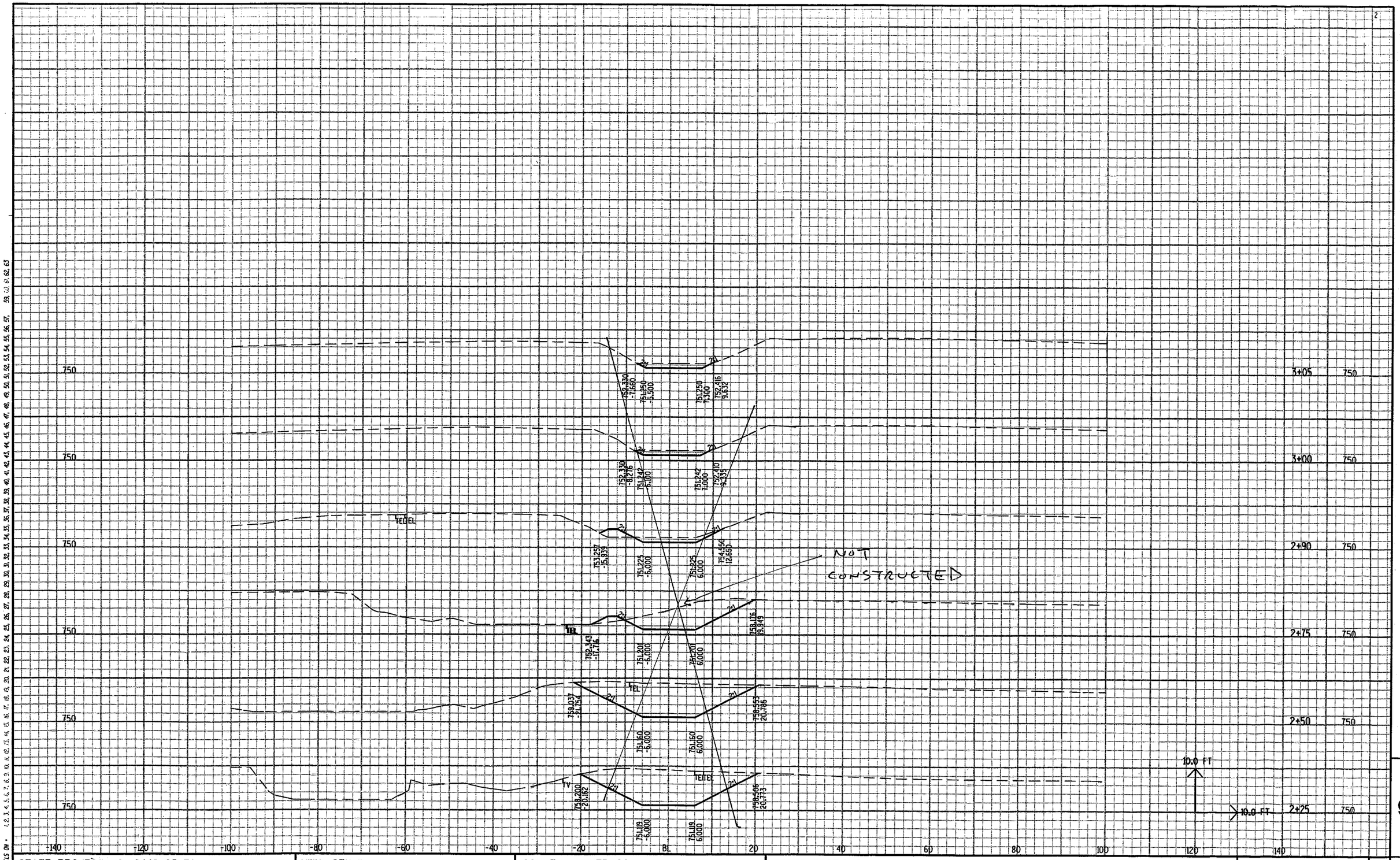
FILE NAME : C:\Users\P\D3\STH150\DGN FILES\newbridgegxs10.DGN PLOT DATE : 02-DEC-2003 09:59 PLOT BY : DOTEAD PLOT NAME : PLOT SCALE : 1.993916:1.000000



STATE PROJECT NO: 6448-03-72	HWY: CTH II	COUNTY: WINNEBAGO	CROSS SECTIONS -- DIVERSION CHANNEL	SHEET ~~NO:~~ 110 E

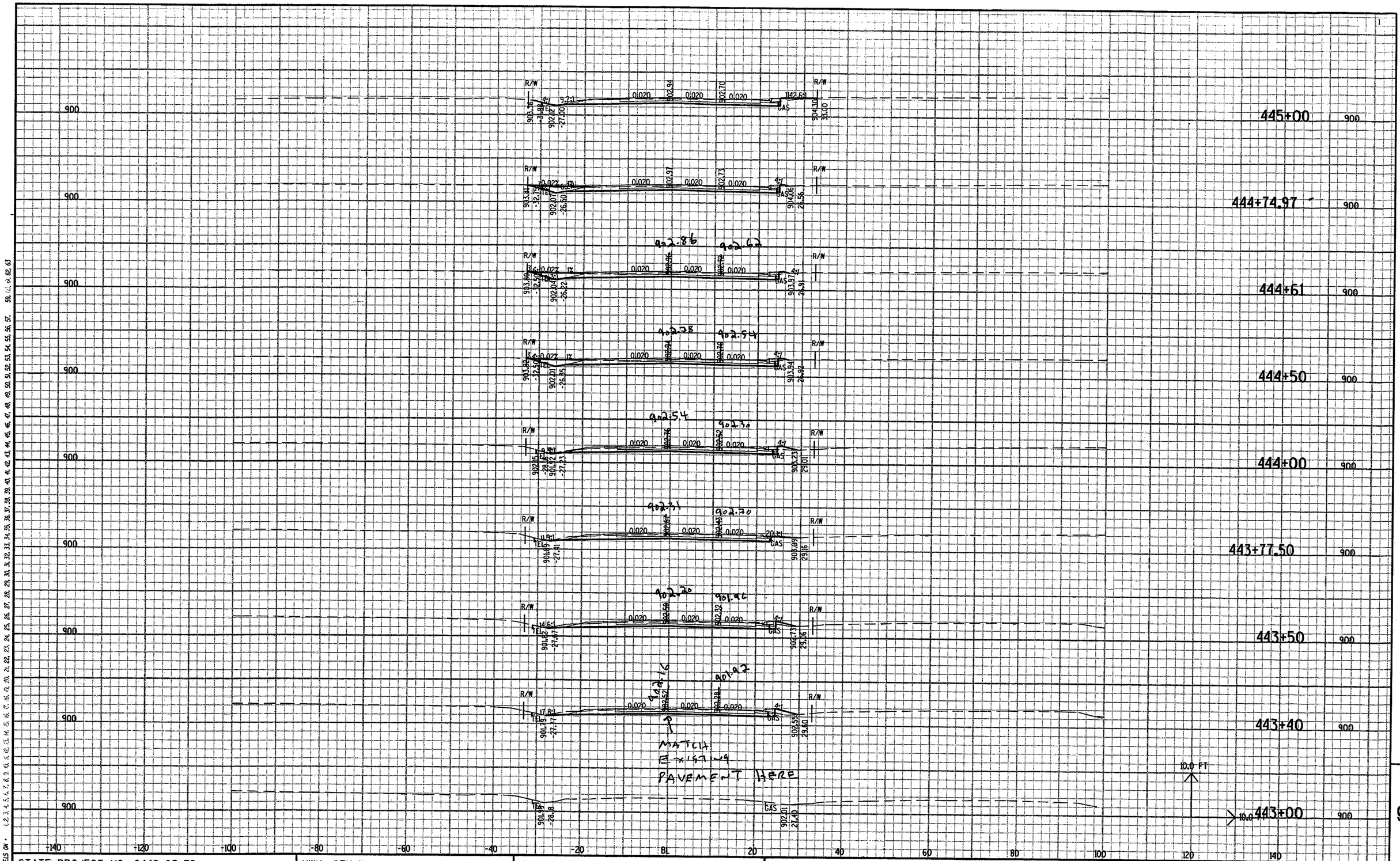
FILE NAME : C:\Users\P\D3\STH150\DGN FILES\newdiversion5.DGN PLOT DATE : 02-DEC-2003 10:01 PLOT BY : DOTEAD PLOT NAME : PLOT SCALE : 1.993976:1.000000

9



STATE PROJECT NO: 6448-03-72	HWY: CTH II	COUNTY: WINNEBAGO	CROSS SECTIONS -- DIVERSION CHANNEL	SHEET NO: 11	E

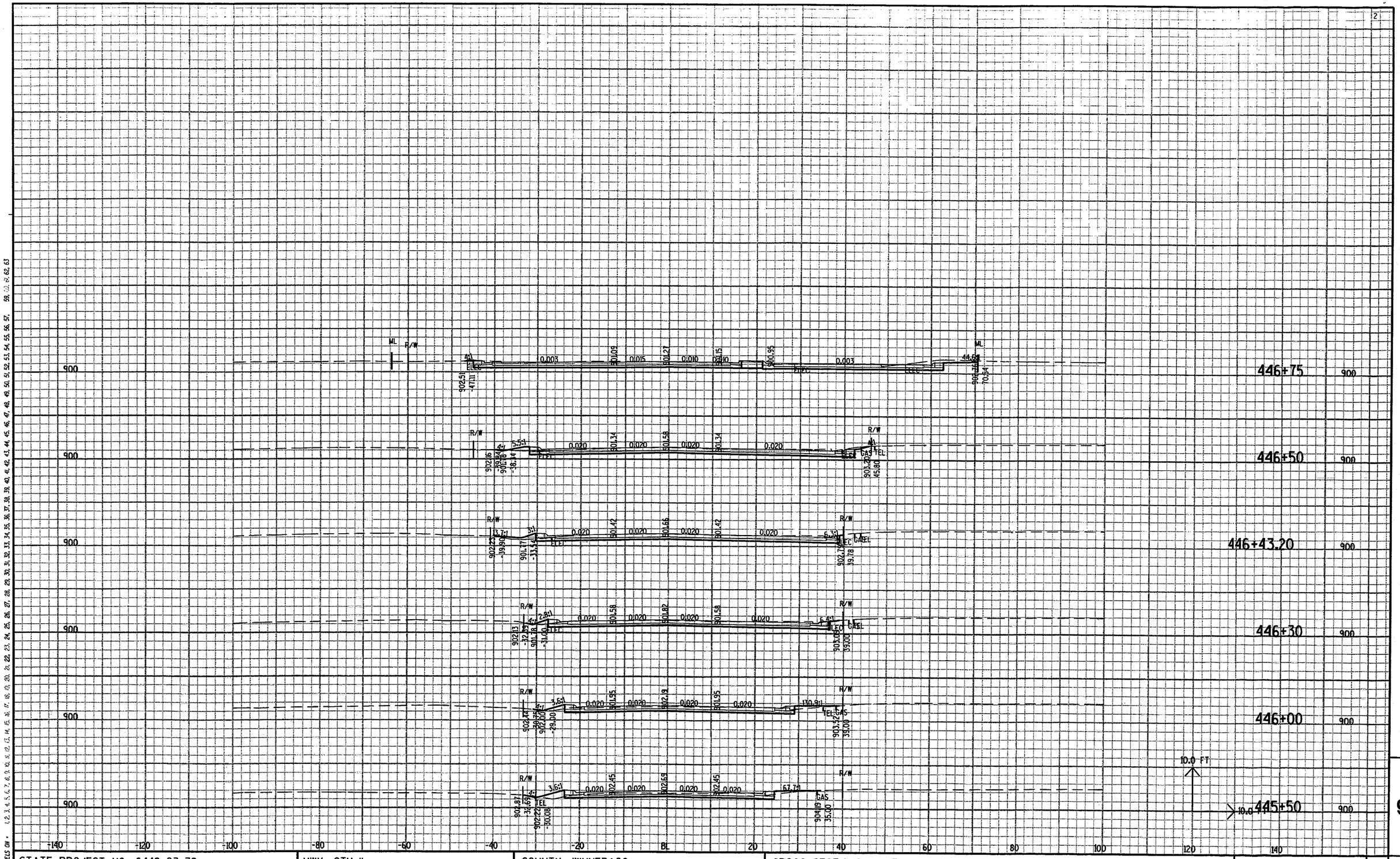
FILE NAME : C:\Users\P\D3\STH150\DGN FILES\newdiversion5.DGN PLOT DATE : 02-DEC-2003 10:02 PLOT BY : DOTEAD PLOT NAME : PLOT SCALE : 1.993976:1.000000



STATE PROJECT NO: 6448-03-72	HWY: CTH II	COUNTY: WINNEBAGO	CROSS SECTIONS -- CTH II AT INTERSECTION	SHEET NO: 112	E

FILE NAME : C:\Users\P\D3\STH150\DGN FILES\redesign150wxs10.DGN PLOT DATE : 02-DEC-2003 10:05 PLOT BY : DOTEAD PLOT NAME : PLOT SCALE : 1.993916:1.000000

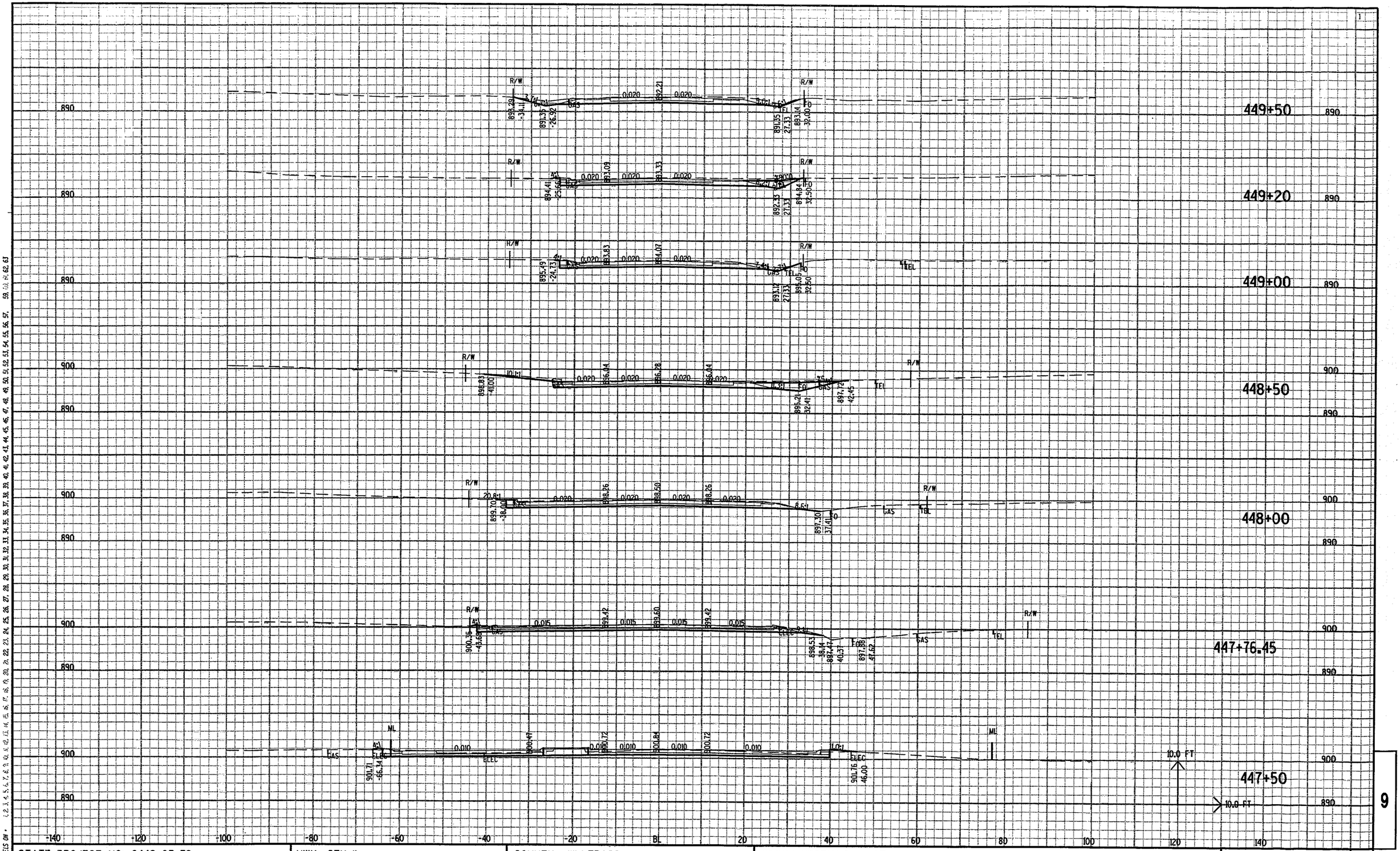
9



STATE PROJECT NO: 6448-03-72	HWY: CTH II	COUNTY: WINNEBAGO	CROSS SECTIONS -- CTH II AT INTERSECTION	SHEET NO: 113 E

FILE NAME : C:\Users\P\D3\STH150\DGN FILES\redesign150wxs10.DGN PLOT DATE : 02-DEC-2003 10:05 PLOT BY : DOTEAD PLOT NAME : PLOT SCALE : 1.993916:1.000000

9

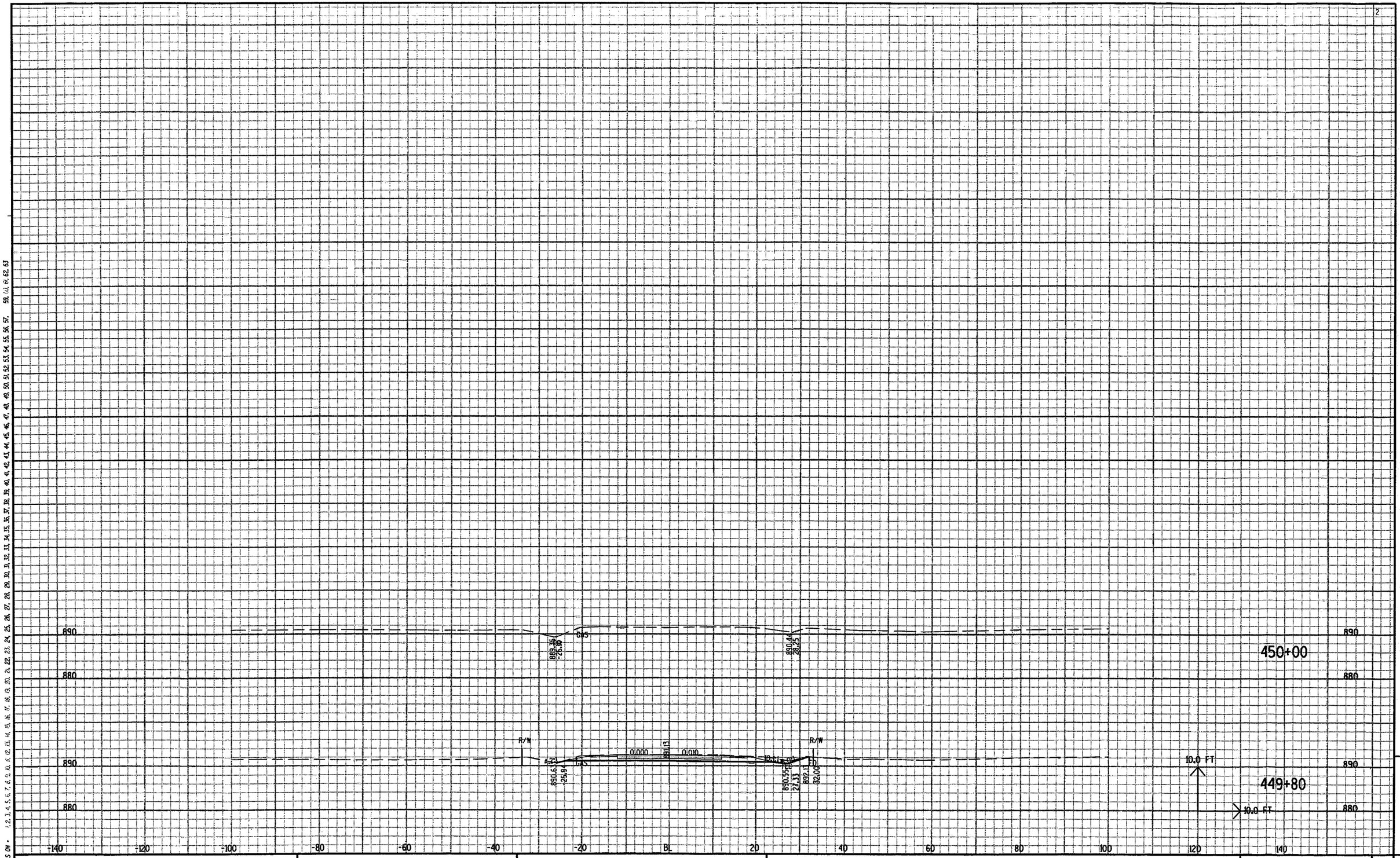


LEVELS ON • 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 59, 60, 61, 62, 63

STATE PROJECT NO: 6448-03-72	HWY: CTH II	COUNTY: WINNEBAGO	CROSS SECTIONS -- CTH II AT INTERSECTION	SHEET NO: 114	E

FILE NAME : C:\Users\P\D3\STH150\DGN FILES\redesign150exs10.DGN PLOT DATE : 02-DEC-2003 10:04 PLOT BY : DOTEAD PLOT NAME : PLOT SCALE : 1.993916:1.000000

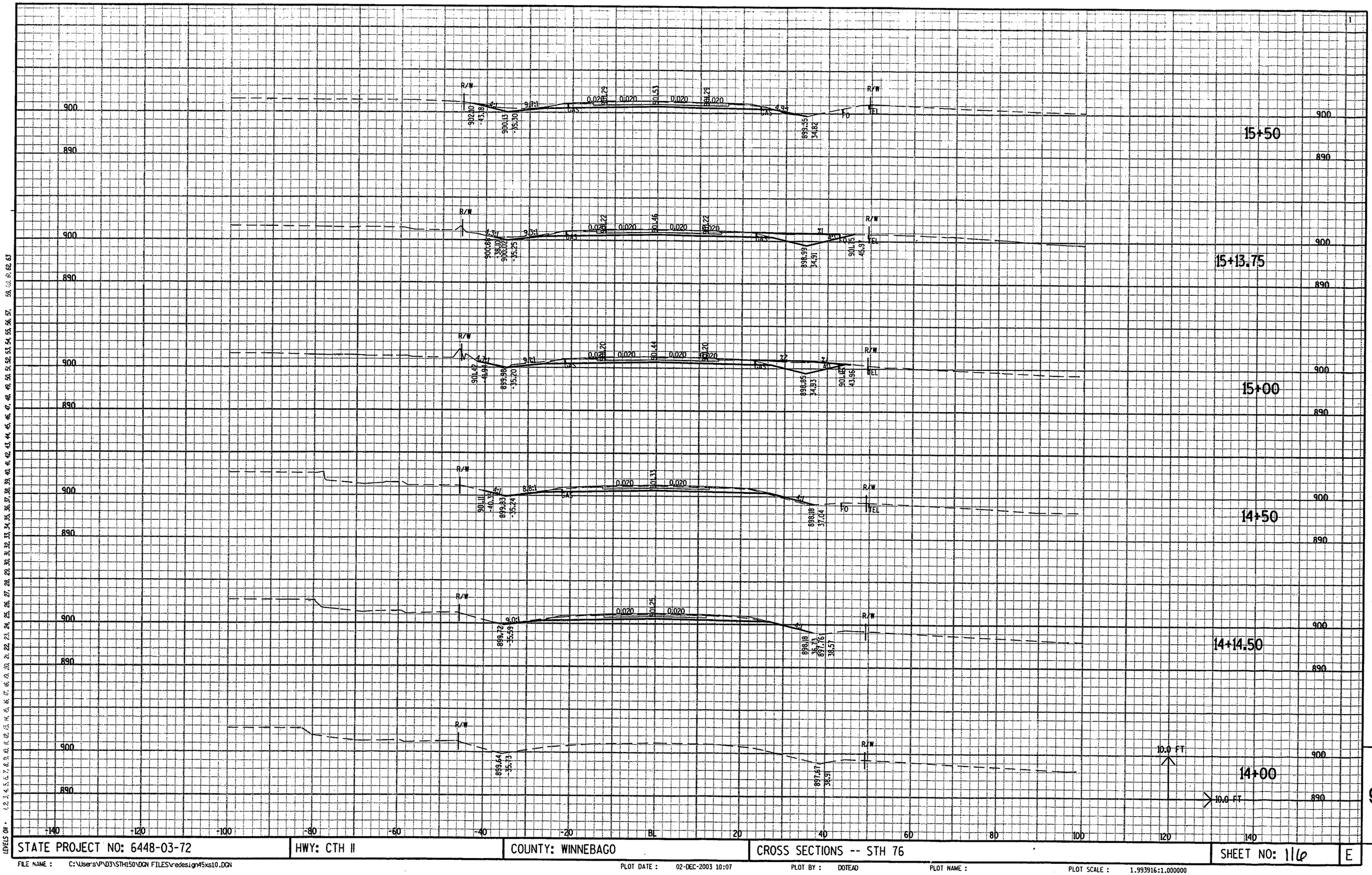
9



STATE PROJECT NO: 6448-03-72	HWY: CTH II	COUNTY: WINNEBAGO	CROSS SECTIONS -- CTH II AT INTERSECTION	SHEET NO: 115	E

FILE NAME : C:\Users\P\D3\STH150\DGN FILES\redesign150exs10.DGN PLOT DATE : 02-DEC-2003 10:04 PLOT BY : DOTEAD PLOT NAME : PLOT SCALE : 1.993916:1.000000

9

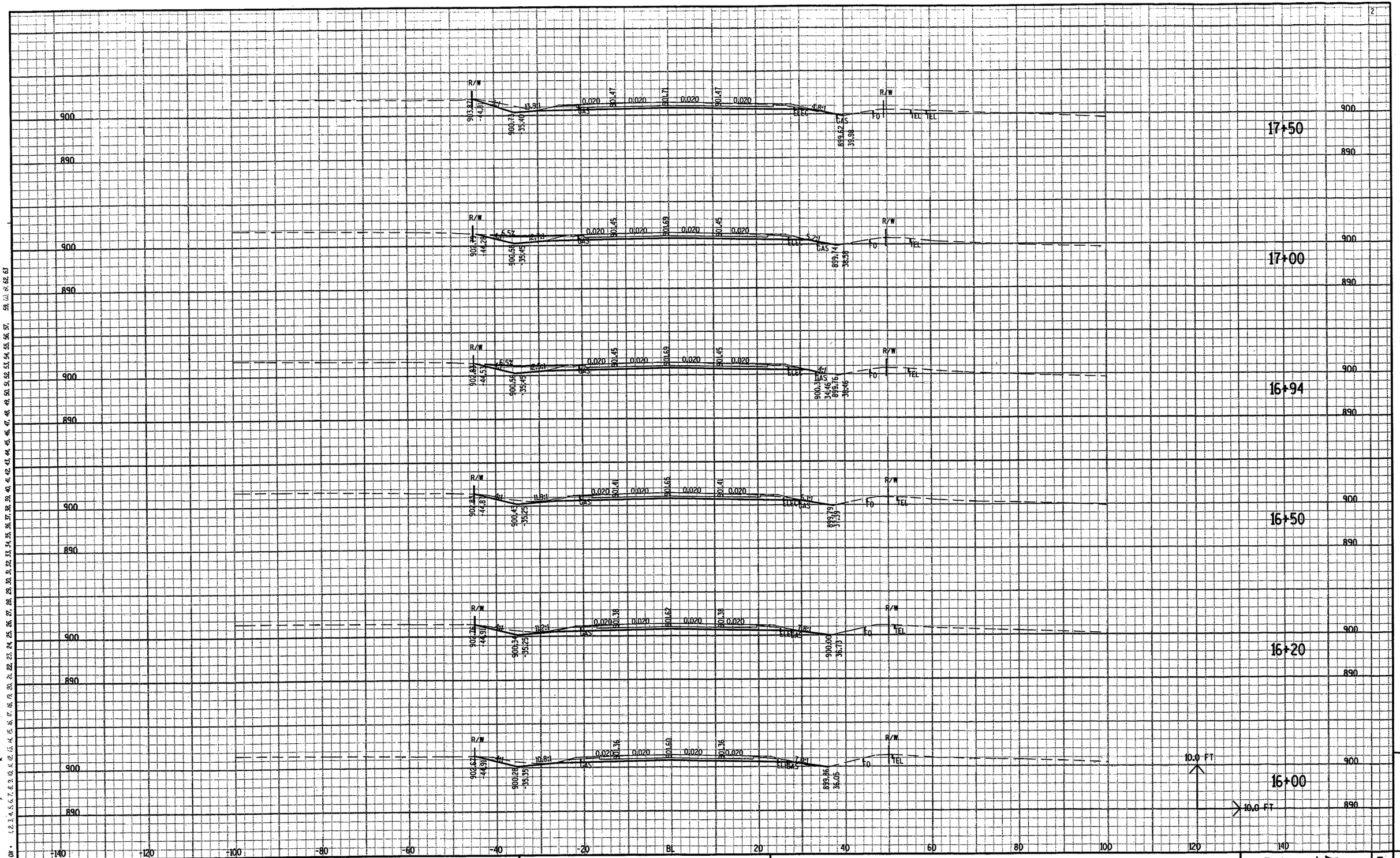


LEVELS ON • 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63

STATE PROJECT NO: 6448-03-72	HWY: CTH II	COUNTY: WINNEBAGO	CROSS SECTIONS -- STH 76	SHEET NO: 116	E

9

FILE NAME : C:\Users\P\D3\STH150\DGN FILES\redesign45xs10.DGN PLOT DATE : 02-DEC-2003 10:07 PLOT BY : DOTEAD PLOT NAME : PLOT SCALE : 1.993916:1.000000

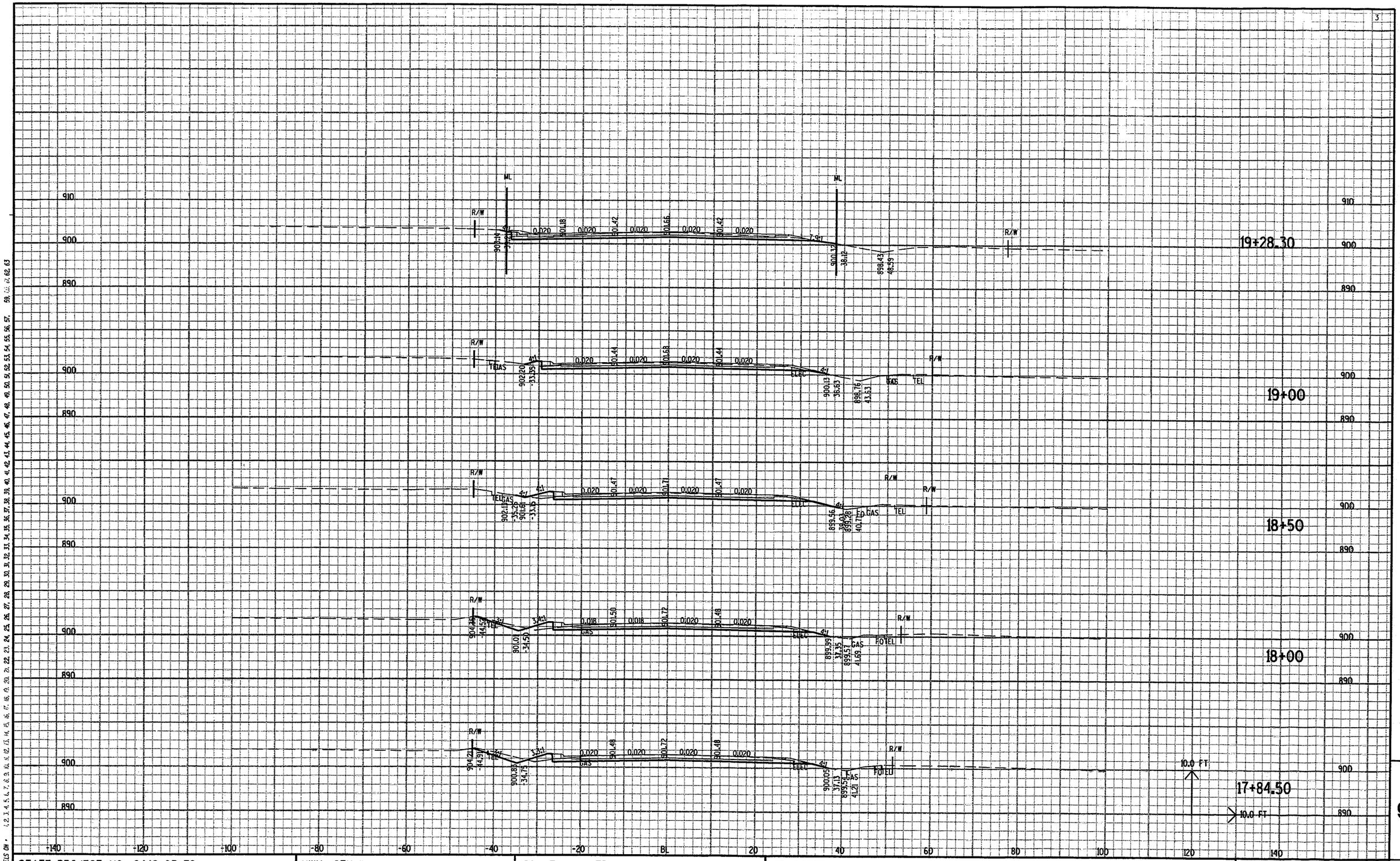


STATE PROJECT NO: 6448-03-72	HWY: CTH II	COUNTY: WINNEBAGO	CROSS SECTIONS -- STH 76	SHEET NO: 117	E

FILE NAME : C:\Users\P\D3\STH150\DGN FILES\redesign45xs10.DGN PLOT DATE : 02-DEC-2003 10:07 PLOT BY : DOTEAD PLOT NAME : PLOT SCALE : 1.993916:1.000000

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

9

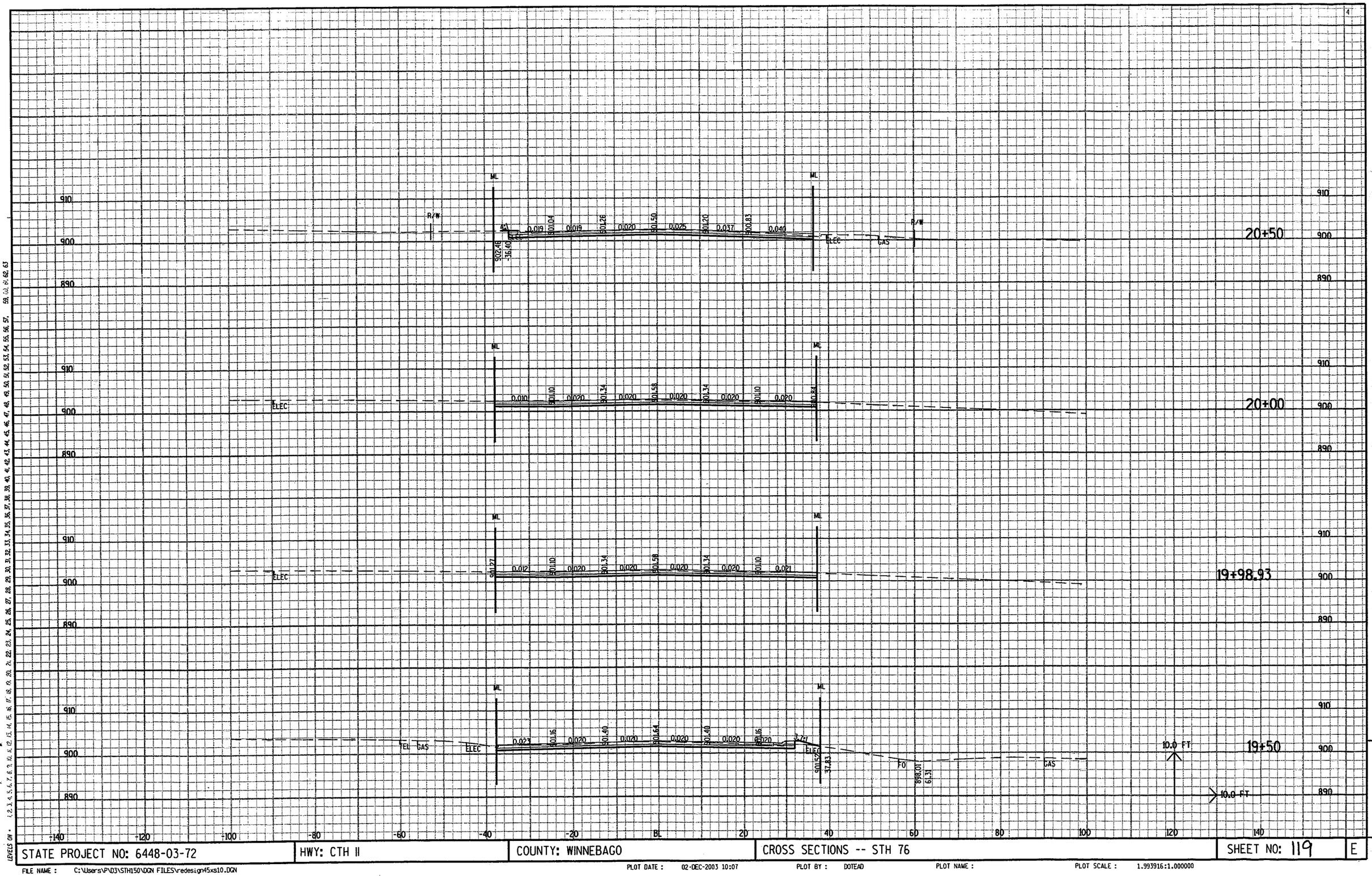


STATE PROJECT NO: 6448-03-72	HWY: CTH II	COUNTY: WINNEBAGO	CROSS SECTIONS -- STH 76	SHEET NO: 118	E

FILE NAME : C:\Users\P\D3\STH150\DGN FILES\redesign45xs10.DGN PLOT DATE : 02-DEC-2003 10:07 PLOT BY : DOTEAD PLOT NAME : PLOT SCALE : 1.993916:1.000000

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

9



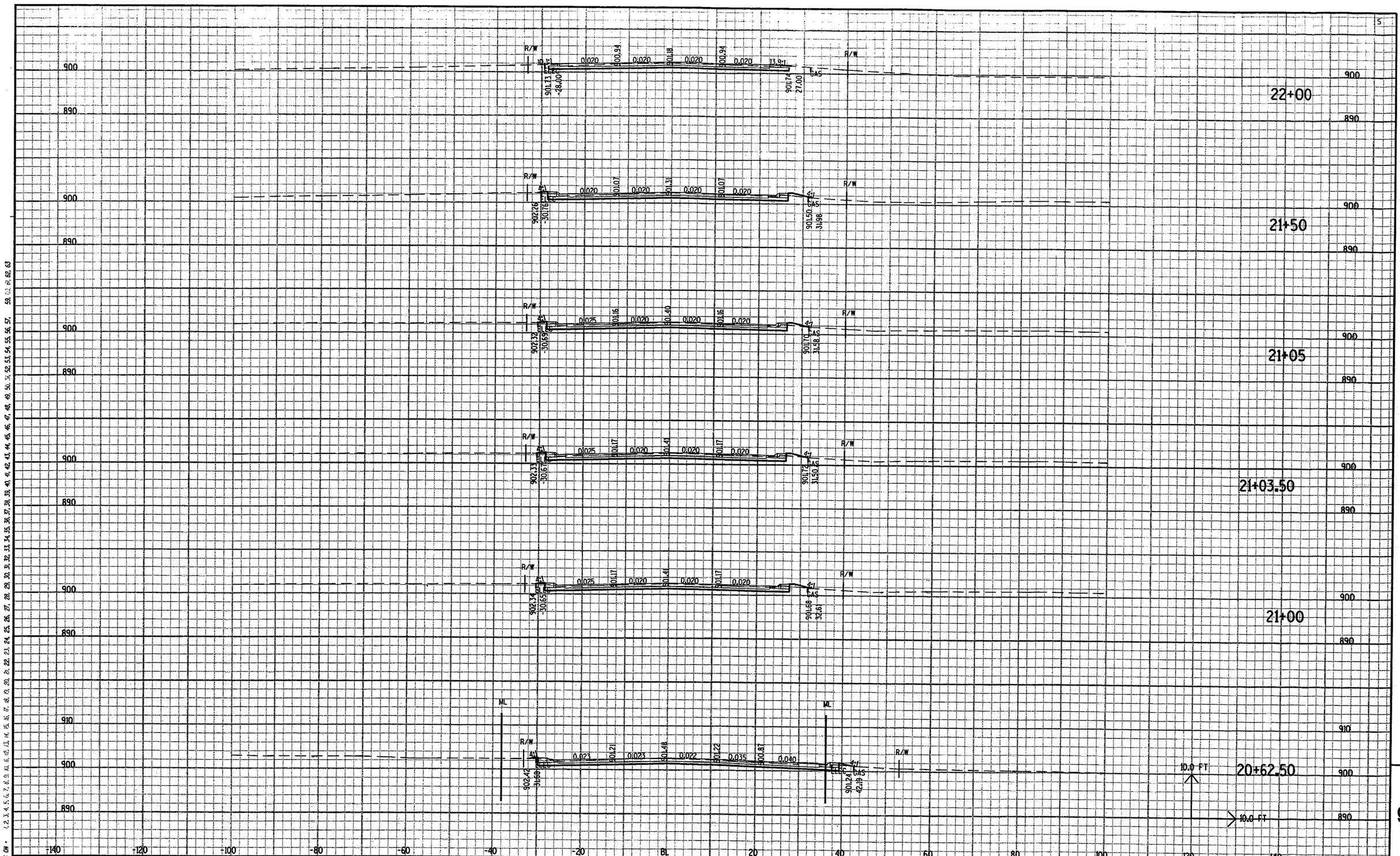
STATE PROJECT NO: 6448-03-72	HWY: CTH II	COUNTY: WINNEBAGO	CROSS SECTIONS -- STH 76	SHEET NO: 119	E

9

FILE NAME : C:\Users\P\D3\STH150\DGN FILES\redesign45xs10.DGN

PLOT DATE : 02-DEC-2003 10:07 PLOT BY : DOTEAD PLOT NAME : PLOT SCALE : 1.993916:1.000000

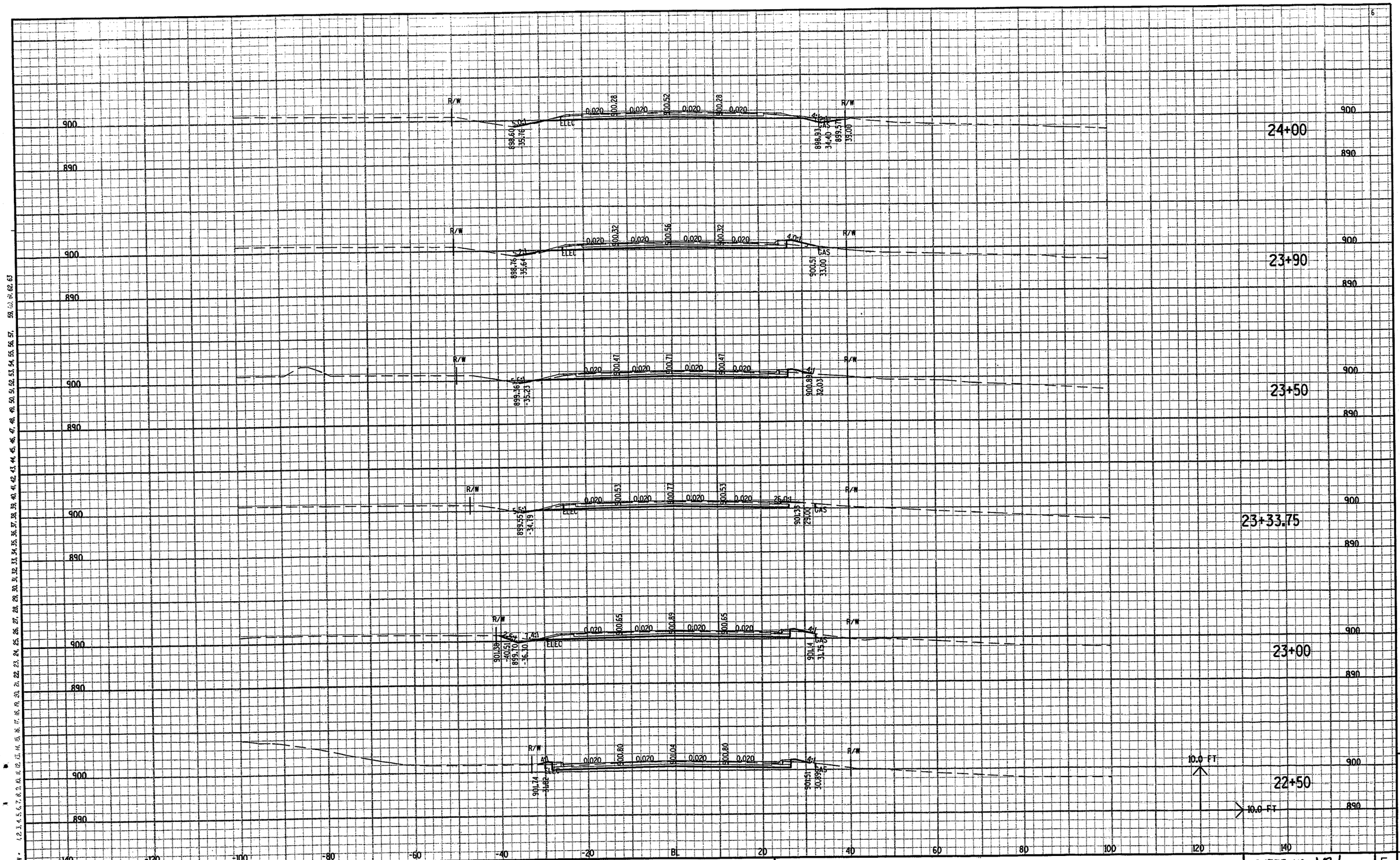
LEVELS ON : 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63



STATE PROJECT NO: 6448-03-72	HWY: CTH II	COUNTY: WINNEBAGO	CROSS SECTIONS -- STH 76	SHEET NO: 120	E

FILE NAME : C:\Users\P\D3\STH150\DGN FILES\redesign45xs10.DGN PLOT DATE : 02-DEC-2003 10:07 PLOT BY : DOTEAD PLOT NAME : PLOT SCALE : 1.993916:1.000000

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



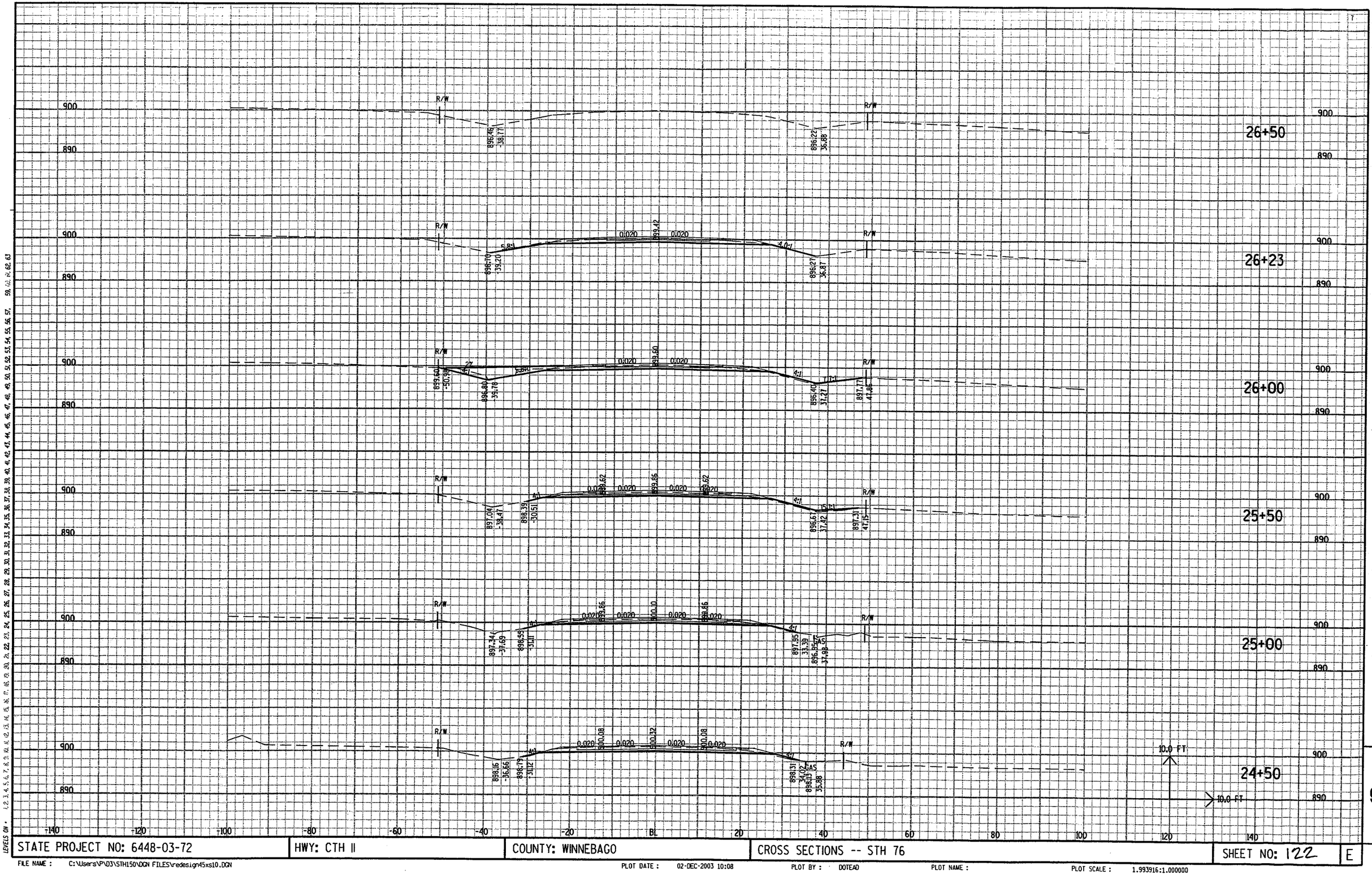
LEVELS ON - 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 59, 60 & 62, 63

STATE PROJECT NO: 6448-03-72	HWY: CTH II	COUNTY: WINNEBAGO	CROSS SECTIONS -- STH 76	SHEET NO: 12.1	E

FILE NAME : C:\Users\P\D3\STH150\DGN FILES\redesign45xs10.DGN

PLOT DATE : 02-DEC-2003 10:07 PLOT BY : DOTEAD PLOT NAME : PLOT SCALE : 1.993916:1.000000

9



STATE PROJECT NO: 6448-03-72	HWY: CTH II	COUNTY: WINNEBAGO	CROSS SECTIONS -- STH 76	SHEET NO: 122 E

9

FILE NAME : C:\Users\P\03\STH150\DGN FILES\redesign45xs10.DGN PLOT DATE : 02-DEC-2003 10:08 PLOT BY : DOTEAD PLOT NAME : PLOT SCALE : 1.993916:1.000000

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