

AS-BUILT PLAN

PLAN OF PROPOSED IMPROVEMENT

CTH JJ - ~~STH 150~~ CTH-II

(WEST SIDE ARTERIAL)

CTH CB

WINNEBAGO COUNTY

WINNEBAGO COUNTY

INDEX OF SHEETS

Sheet No. 1	Title
Sheet No.	Typical Sections and Details (Includes Erosion Control Plan)
Sheet No.	Estimate of Quantities
Sheet No.	Miscellaneous Quantities
Sheet No.	Right of Way Plat
Sheet No.	Plan and Profile
Sheet No.	Standard Detail Drawings
Sheet No.	Sign Plates
Sheet No.	Structure Plans
Sheet No.	Computer Earthwork Data
Sheet No.	Cross Sections

TOTAL SHEETS =



CONTRACTOR: NORTHEAST ASPHALT
 ENGINEER: MEAD & HUNT, INC.
 COMPLETION: JUNE 16, 2000

DESIGN DESIGNATION

A.D.T. (1995)	= 14,100
A.D.T. (2015)	= 20,600
D.H.V. (2015)	= 1,566
D.	= 55-45%
T.	= 9.5%
DESIGN SPEED	= 45 MPH
ESALS	= 6,978,800

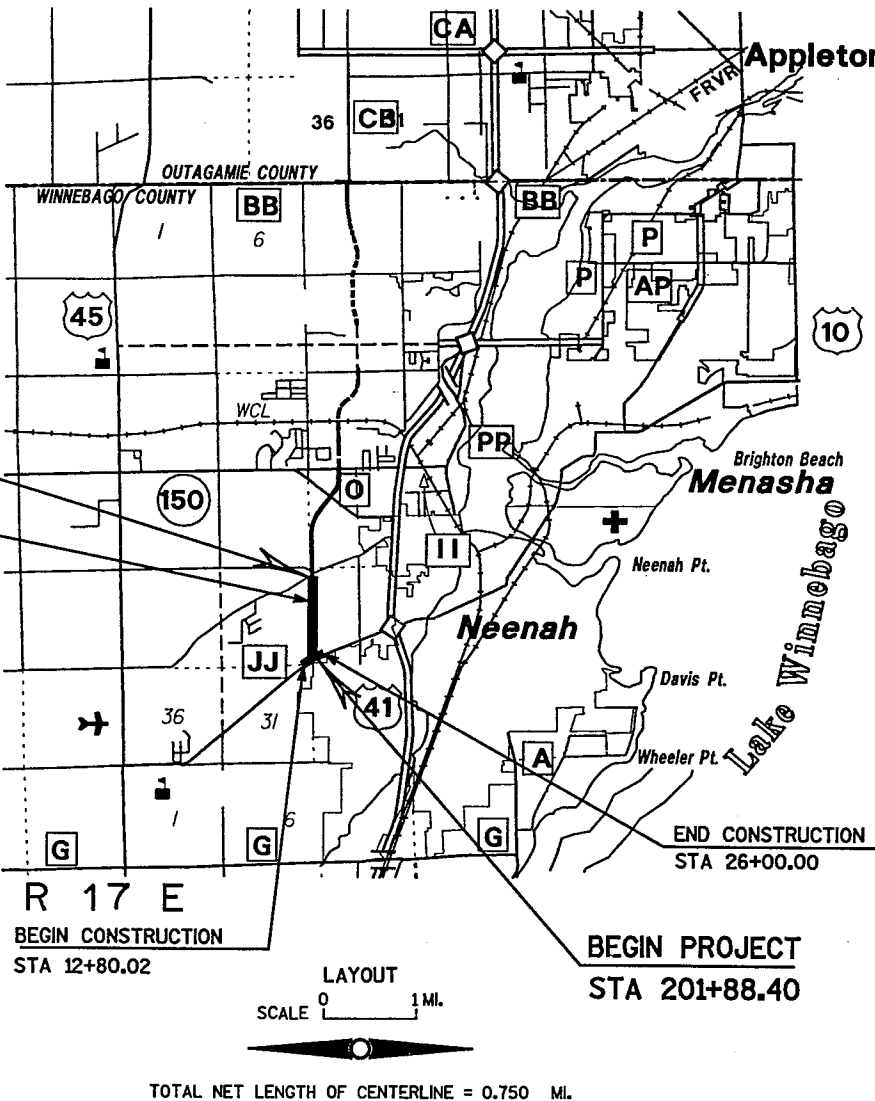
CONVENTIONAL SIGNS

COUNTY LINE	
CORPORATE LIMITS	
PROPERTY LINE	
LOT LINE	
LIMITED EASEMENT	
EXISTING RIGHT OF WAY	
PROPOSED OR NEW R/W LINE	
SURVEY LINE	
SLOPE INTERCEPT	
ORIGINAL GROUND	
MARSH OR ROCK PROFILE	
EXISTING CULVERT	
PROPOSED CULVERT (Box or Pipe)	
CULVERT (Profile View)	

END PROJECT
 STA 241+50.00

STRUCTURE B-70-184
 STA 239+10.00

T 20 N



LAYOUT
 SCALE 0 1 MI.

TOTAL NET LENGTH OF CENTERLINE = 0.750 MI.

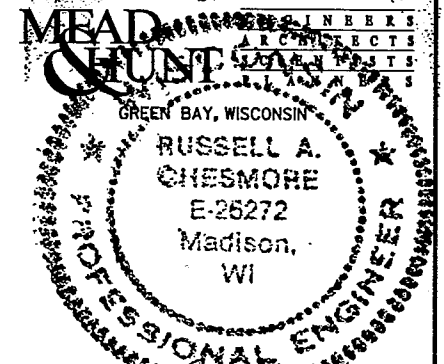
ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO U.S.G.S. DATUM.

ALL COORDINATES SHOWN ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COORDINATE SYSTEM, CENTRAL ZONE.

APPROVED FOR
 WINNEBAGO COUNTY

2/10/99
 DATE *John M. Haen*
 HIGHWAY COMMISSIONER

ORIGINAL PLANS PREPARED
 BY



1/27/99
 DATE *Russell A. Chesmore*
 CONSULTING ENGINEER

GENERAL NOTES

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

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

ALL DISTANCES ARE GROUND DISTANCES.

ALL TIES ON THIS PLAN ARE HORIZONTAL UNLESS DESCRIBED OTHERWISE.

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

CURB AND GUTTER RADII ARE SHOWN TO THE EDGE OF PAVEMENT

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

NO TREES OR SHRUBS SHALL BE REMOVED WITHOUT APPROVAL IN THE FIELD.

THE EXACT LOCATIONS AND LIMITS OF PRIVATE ENTRANCES SHALL BE DETERMINED IN THE FIELD.

INLET AND DISCHARGE ELEVATIONS FOR DRAINAGE STRUCTURES SHOWN ON THE PLAN ARE APPROXIMATE AND SHALL BE DETERMINED IN THE FIELD.

REINFORCED CONCRETE APRON ENDWALLS AND ADJOINING TWO SECTIONS OF CONCRETE PIPE SHALL BE TIED TOGETHER AS SHOWN ON THE DETAIL DRAWINGS AND AS LOCATED IN THE MISCELLANEOUS QUANTITIES. JOINT TIES SHALL BE INCIDENTAL TO VARIOUS ITEMS.

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

UPON COMPLETION OF EACH INLET INSTALLATION, EROSION CONTROL FILTER BAG INLET PROTECTION SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE DETAIL SHOWN ON THE PLAN TO MINIMIZE SEDIMENTATION IN THE INLET.

SILT FENCE REQUIRED FOR THIS PROJECT SHALL MEET THE REQUIREMENTS OF SILT FENCE FOR SILTY SOILS.

THE ITEM "REMOVING OLD CULVERTS" WILL PERTAIN ONLY TO THOSE CULVERTS ENUMERATED IN THE SUMMARY OF MISCELLANEOUS QUANTITIES. ALL OTHER CULVERTS TO BE REMOVED WILL BE INCIDENTAL TO UNCLASSIFIED EXCAVATION.

EXCAVATION BELOW SUBGRADE (E.B.S.) AS SHOWN ON THE PLAN SHALL BE MEASURED AND PAID FOR AS UNCLASSIFIED EXCAVATION. THE EXACT LIMITS AND LOCATIONS ARE TO BE DETERMINED IN THE FIELD.

FILL AS SHOWN ON THE PLANS PERTAINS TO EMBANKMENT CONSTRUCTED FROM BORROW EXCAVATION OR UNCLASSIFIED EXCAVATION. THE ALLOWANCE USED FOR EXPANDING THE FILLS TO COMPUTE THE VOLUME OF MATERIAL REQUIRED IS 1.3 FOR BORROW EXCAVATION.

WHEN THE QUANTITY OF CRUSHED AGGREGATE BASE COURSE IS MEASURED FOR PAYMENT BY THE TON, THE DEPTH OR THICKNESS AS SHOWN ON THE PLAN IS APPROXIMATE. THE ACTUAL THICKNESS WILL DEPEND UPON THE DISTRIBUTION OF THE MATERIAL.

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

DISTURBED AREAS THAT WERE PREVIOUSLY LAWNS SHALL BE SEEDED WITH SEED MIXTURE NO. 40. SEED MIXTURE NO. 30 SHALL BE USED ON ALL REMAINING CUT AND FILL SLOPES.

6 INCH AND 4 INCH ASPHALTIC CONCRETE PAVEMENT SHALL BE CONSTRUCTED WITH AN 1 1/2 INCH UPPER COURSE, AND 2 - 2 1/4 INCH OR 1 - 2 1/2 INCH LOWER COURSE.

TACK COAT HAS BEEN ESTIMATED AT AN APPLICATION RATE OF 0.025 GALLONS PER SQUARE YARD AND SHALL BE PLACED BETWEEN LAYERS OF ASPHALTIC CONCRETE PAVEMENT.

UTILITIES

WEPCO ELECTRIC OPERATIONS
ATTN: JOHN THIEL
800 S. LYNNDALE DRIVE
P.O. BOX 1699
APPLETON, WI 54913-1699
(920) 380-3554

TIME WARNER CABLE
ATTN: DENNIS RITTER
1001 KENNEDY AVENUE
KIMBERLY, WI 54136
(920) 831-9217

WEPCO GAS OPERATIONS
ATTN: DENNIS GERARD
800 S. LYNNDALE DRIVE
P.O. BOX 1699
APPLETON, WI 54913-1699
(920) 380-3466

AMERITECH
ATTN: TOM KOTESKI
221 W. WASHINGTON ST., 4TH FLOOR
APPLETON, WI 54911
(920) 735-3255

DEPARTMENT OF NATURAL RESOURCES LIAISON
KELLEY O'CONNOR
WISCONSIN DEPARTMENT OF NATURAL RESOURCES
NORTHEASTERN DISTRICT
1125 N. MILITARY AV.
GREEN BAY, WI
(920) 492-5819

TOWN OF MENASHA
ATTN: STEVEN LAABES
SANITARY DISTRICT NO. 4
2340 AMERICAN DRIVE
NEENAH, WI 54956
(920) 739-5128



TO OBTAIN LOCATION OF PARTICIPANTS' UNDERGROUND FACILITIES BEFORE YOU DIG IN WISCONSIN

CALL DIGGERS HOTLINE

1-800-242-8511

TOLL FREE

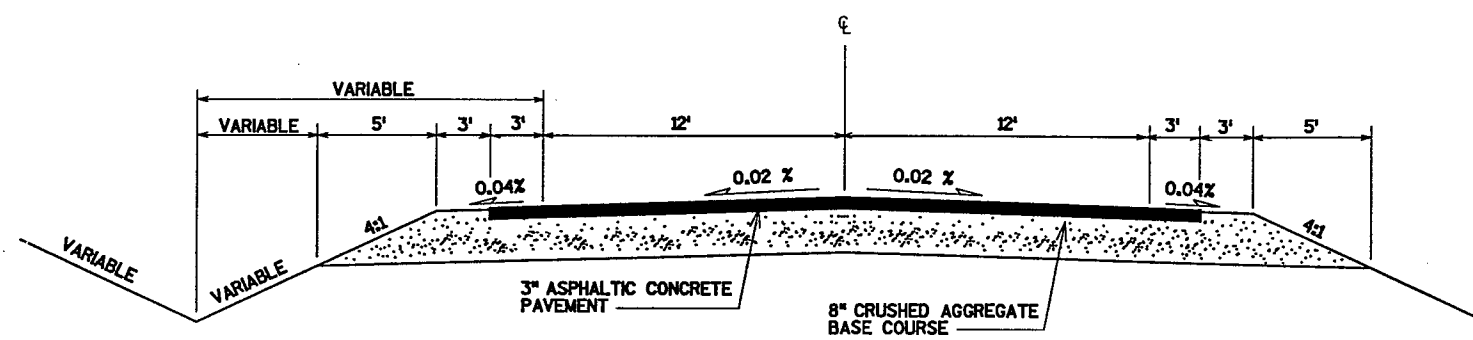
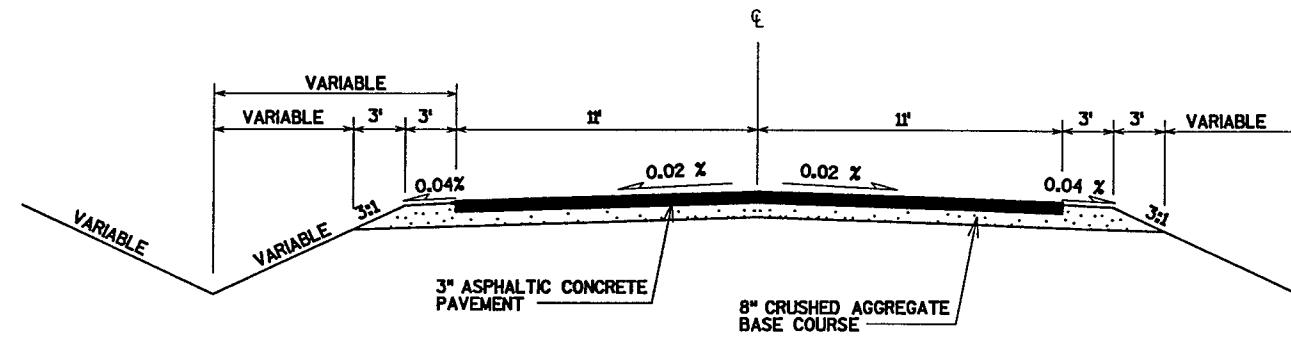
FAX A LOCATE 1-800-338-3860

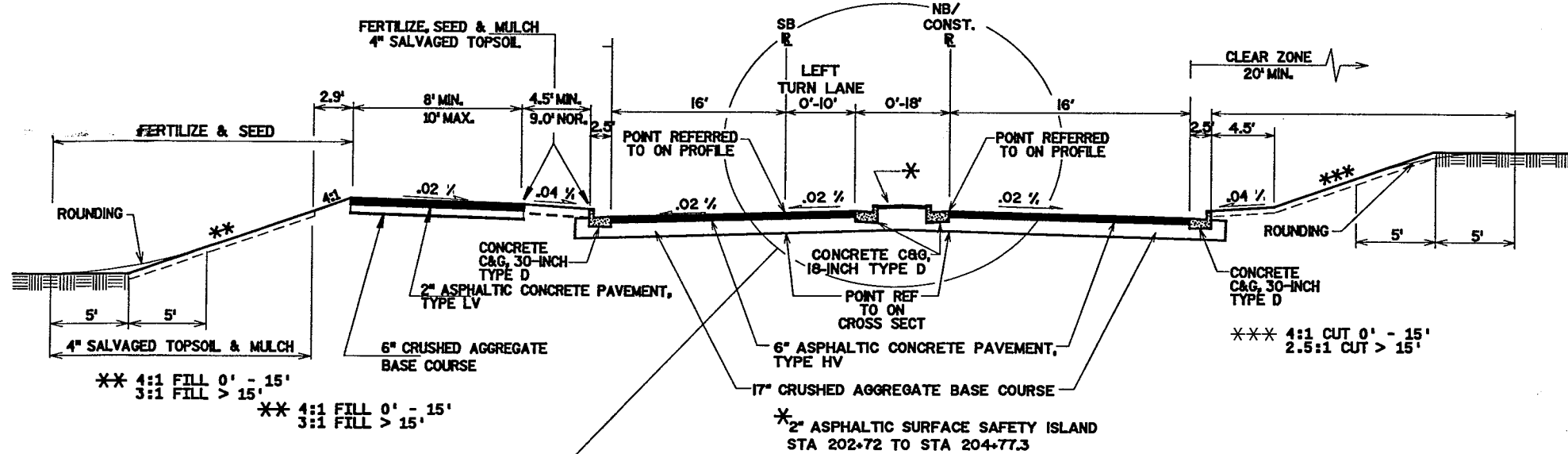
TDD (FOR HEARING IMPAIRED) 1-800-542-2289

WISCONSIN STATUTE 182.0175 (1974)
REQUIRES MINIMUM OF 3 WORK DAYS
NOTICE BEFORE YOU EXCAVATE.

STANDARD ABBREVIATIONS

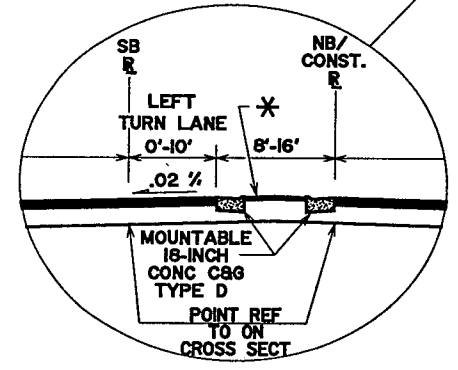
Δ	CENTRAL ANGLE OR DELTA
B	BUILDING
BM	BENCH MARK
C&G	CURB AND GUTTER
CE	COMMERCIAL ENTRANCE
CONC	CONCRETE
CL	CENTERLINE
CMP	CORRUGATED METAL CULVERT PIPE
CSCP	CORRUGATED STEEL CULVERT PIPE
EOP	EDGE OF PAVEMENT
EXIST	EXISTING
FE	FIELD ENTRANCE
EL OR ELEV	ELEVATION
EOP	EDGE OF PAVEMENT
e	EXTERNAL DISTANCE
H	HOUSE
L	LENGTH
LT	LEFT
LF	LINEAR FOOT
LS	LUMP SUM
MAX	MAXIMUM
MIN	MINIMUM
NC	NORMAL CROWN
NB	NORTHBOUND
NTS	NOT TO SCALE
PAV'T	PAVEMENT
PE	PRIVATE ENTRANCE
PG	PROFILE GRADE
PI	POINT OF INTERSECTION
R/W	RIGHT OF WAY
R	RADIUS
RL	REFERENCE LINE
RT	RIGHT
REQ'D	REQUIRED
RCCP	REINFORCED CONCRETE CULVERT PIPE
REM.	REMOVE
RCHEP	REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CULVERT PIPE
RR	RAILROAD
RO	RUNOUT
SB	SOUTHBOUND
SE	SUPERELEVATION
SF OR SQ FT	SQUARE FOOT
STA	STATION
SY OR SQ YD	SQUARE YARD
T	TANGENT
TYP	TYPICAL
YD	YARD



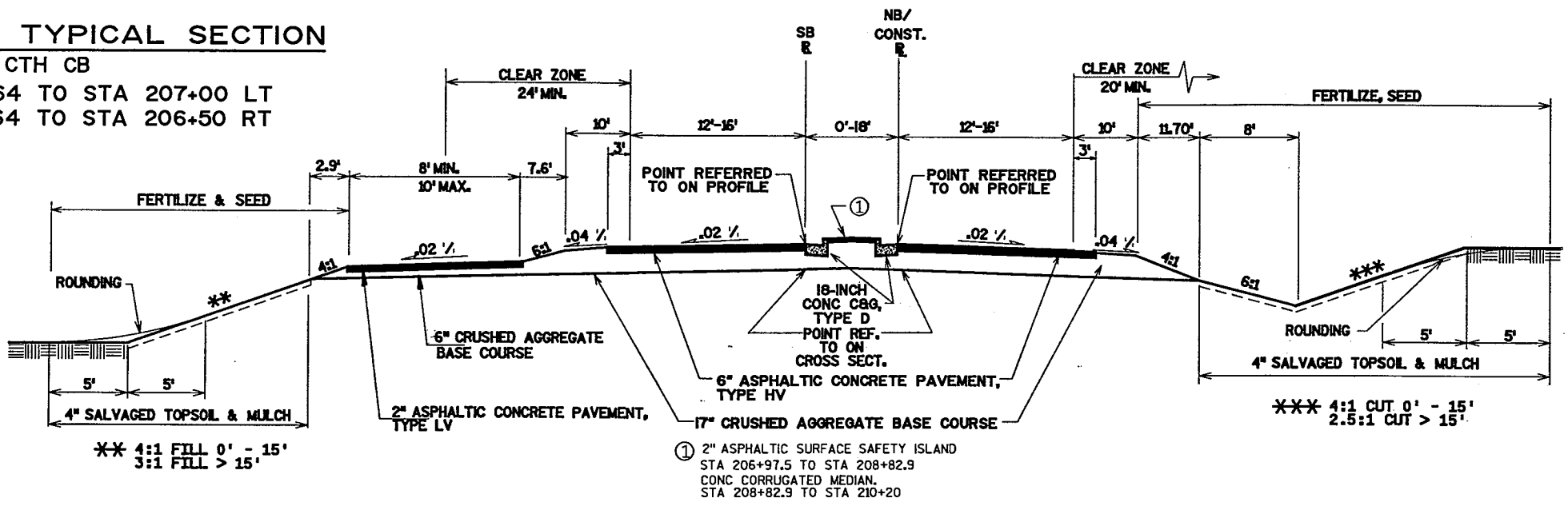


PROPOSED TYPICAL SECTION

CTH CB
 STA 202+26.64 TO STA 207+00 LT
 STA 202+26.64 TO STA 206+50 RT

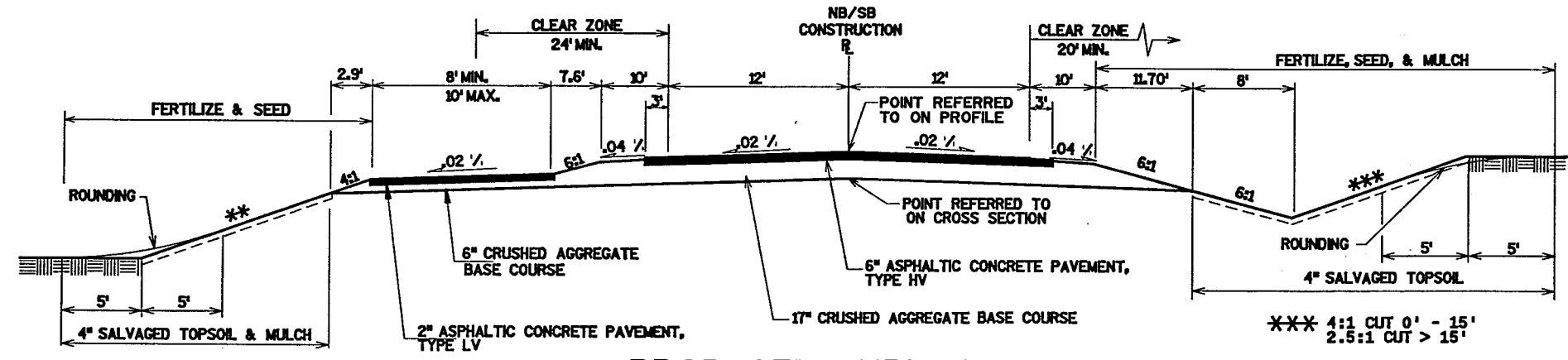


* 2" MOUNTABLE ASPHALTIC SURFACE ISLAND
 STA 204+77.3 TO STA 206+97.5



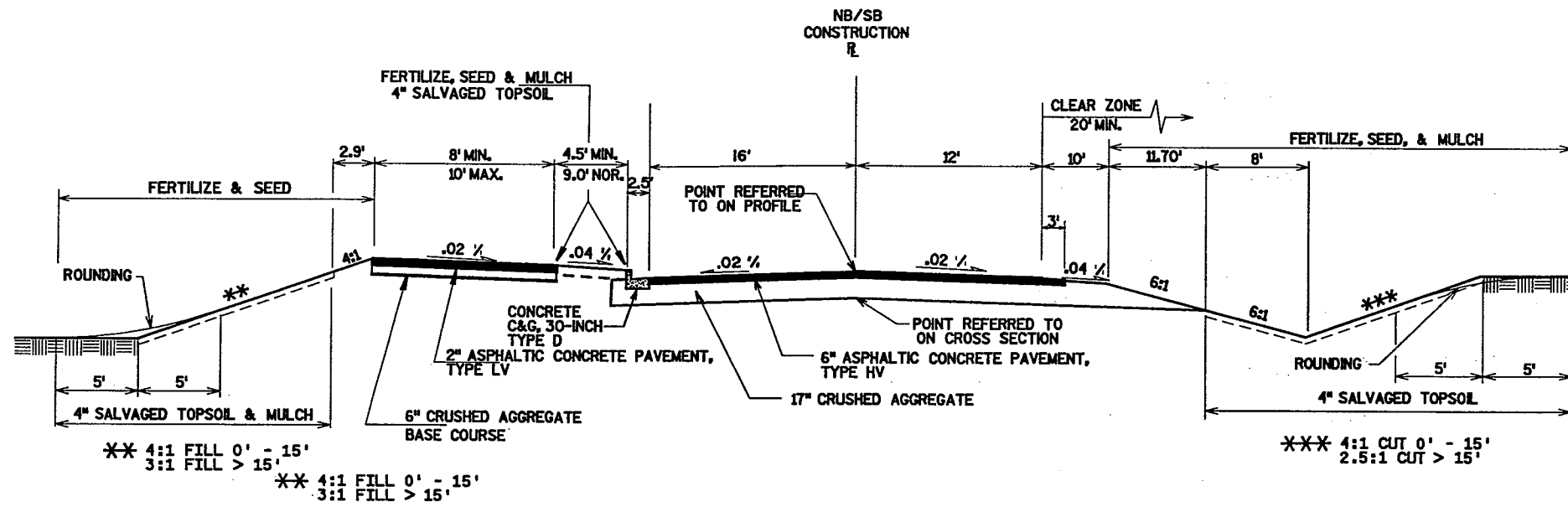
PROPOSED TYPICAL SECTION

CTH CB
 STA 206+50.00 TO STA 211+9.94 RT
 STA 207+00.00 TO STA 211+9.94 LT



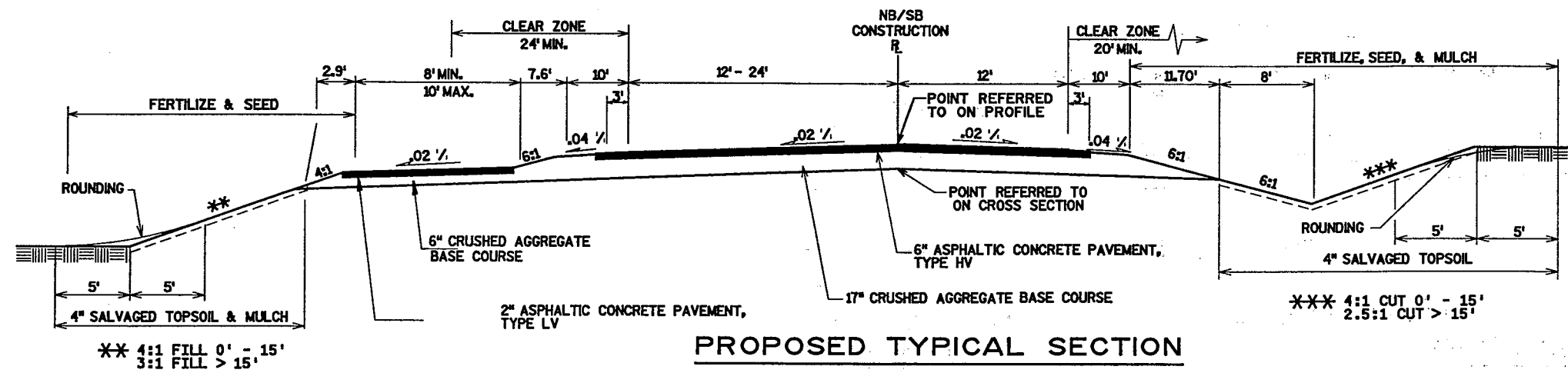
PROPOSED TYPICAL SECTION

CTH CB
 STA 211+19.94 TO STA 216+50



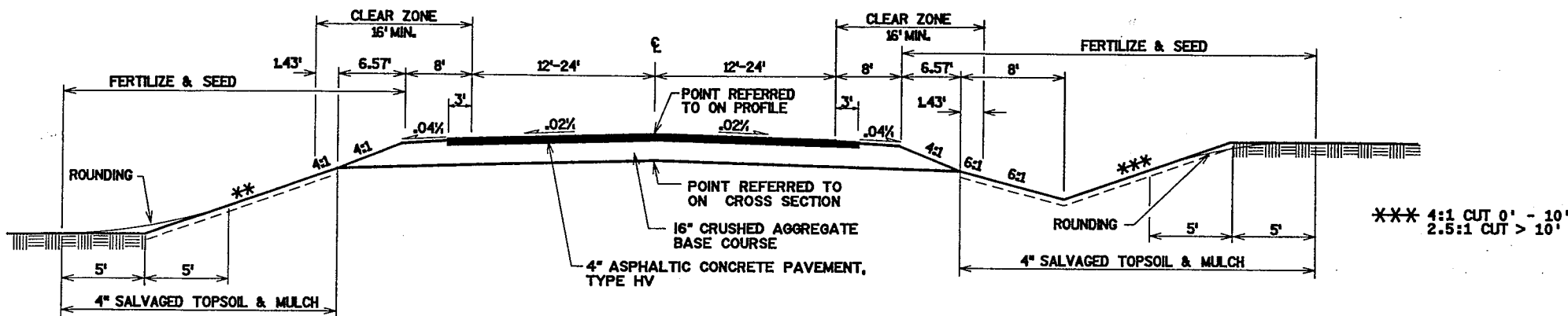
PROPOSED TYPICAL SECTION

CTH CB
STA 216+50 TO STA 227+50



PROPOSED TYPICAL SECTION

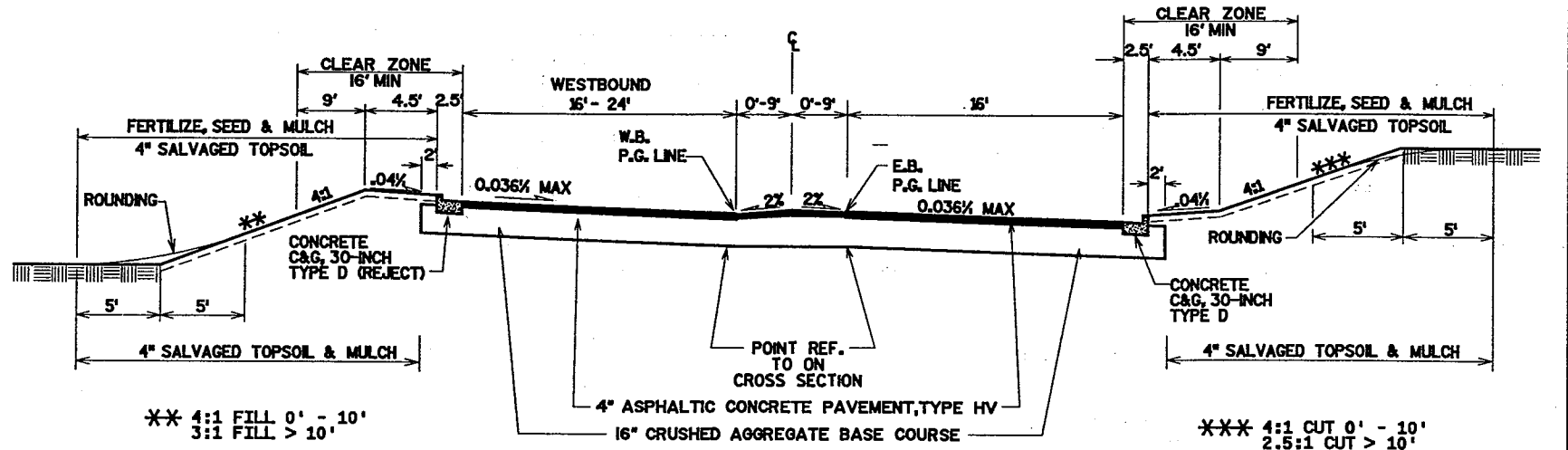
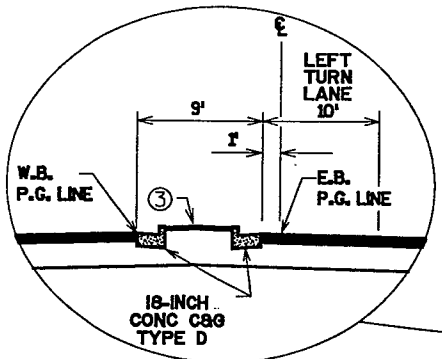
CTH CB
STA 227+50 TO STA 241+50



**PROPOSED TYPICAL SECTION
SIDE ROADS**

WOODHAVEN LANE
STA 22+00.00 TO STA 23.87.00
STURGIS LANE
STA 9+90.75 TO STA 8+00.00
CTH JJ
STA 12+80 TO STA 15+75, LT ①
STA 23+50 TO STA 26+00, LT ②
STA 12+80 TO STA 14+60, RT ①
STA 24+00 TO STA 26+00, RT ②

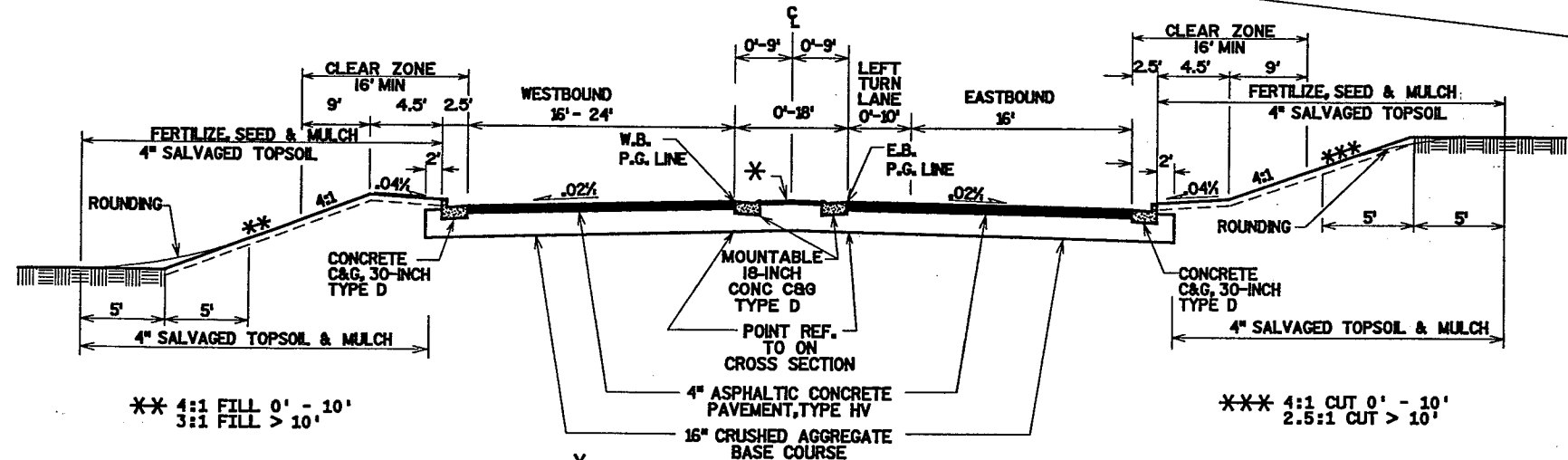
- ① STA 13+48, BEGIN CONC CORRUGATED MEDIAN, STA 14+10, END CONC CORRUGATED MEDIAN AND BEGIN MOUNTABLE MEDIAN.
- ② STA 24+68, END MOUNTABLE MEDIAN AND BEGIN CONC CORRUGATED MEDIAN, STA 25+33, END CONC CORRUGATED MEDIAN.



PROPOSED TYPICAL SECTION (SUPERELEVATED) - CTH JJ

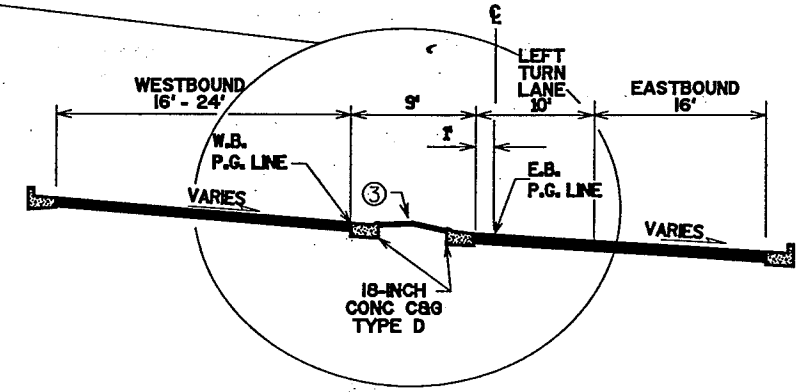
STA 19+15 TO STA 20+71.3

- ③ STA 18+31 TO STA 19+16
RAISED 2" ASPHALTIC SURFACE SAFETY ISLAND



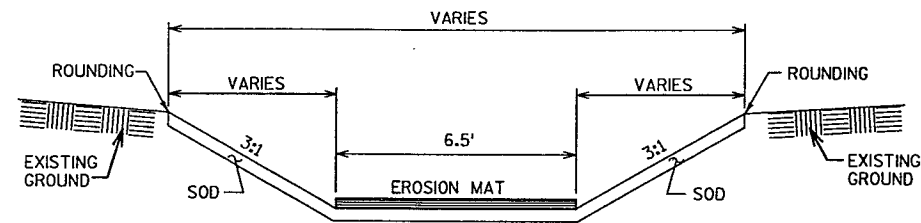
PROPOSED TYPICAL SECTION - CTH JJ

STA 15+75 TO STA 17+50 LT
STA 14+60 TO STA 17+50 RT

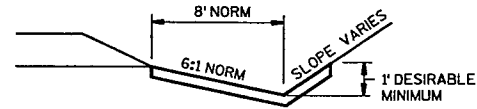


**PROPOSED TYPICAL SECTION
(SUPERELEVATED) - CTH JJ**

STA 17+50 TO STA 19+15
STA 20+71.3 TO STA 23+50, LT
STA 20+71.3 TO STA 24+00, RT

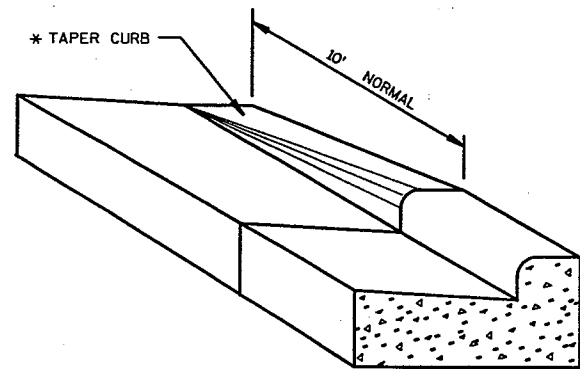


FLAT BOTTOM DITCH DETAIL
STA 206+80, RT CTH CB

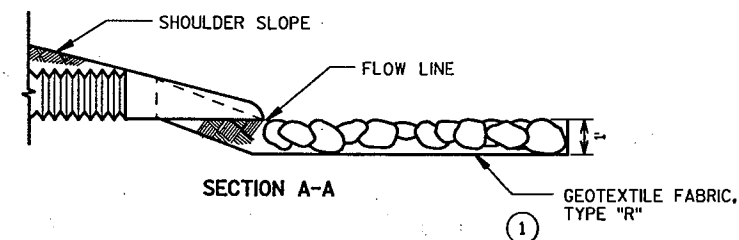
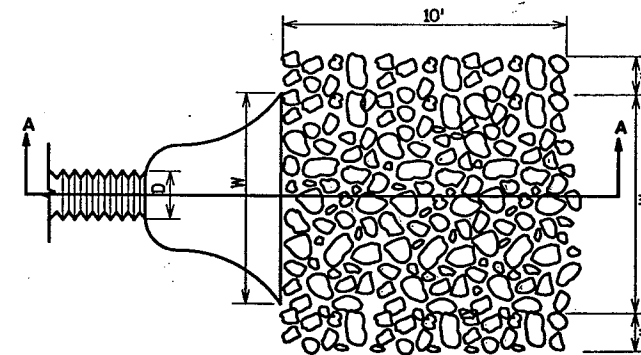


SOD DETAIL FOR DITCHES

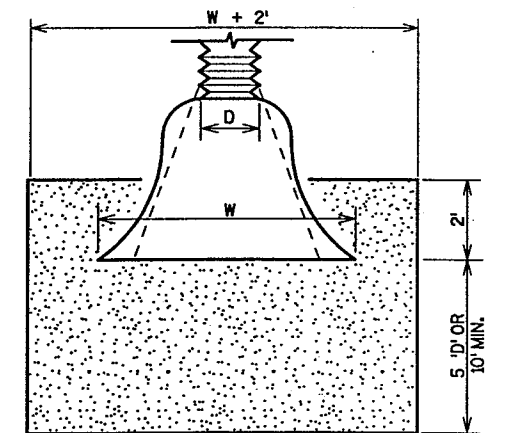
* TAPER CURB HEIGHT 6" TO 2" AT END OF GUTTER FLOW
* TAPER CURB HEIGHT 0" TO 6" AT START OF GUTTER FLOW



DETAIL OF CURB & GUTTER TERMINI

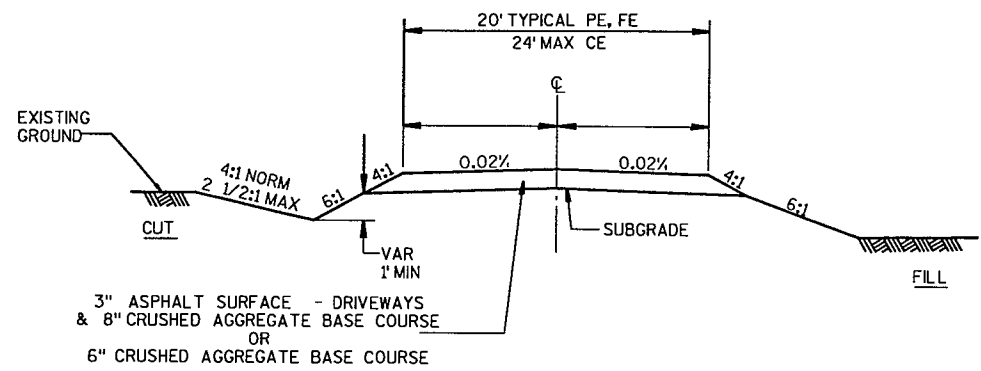


MEDIUM RANDOM RIPRAP AT PIPE DISCHARGE

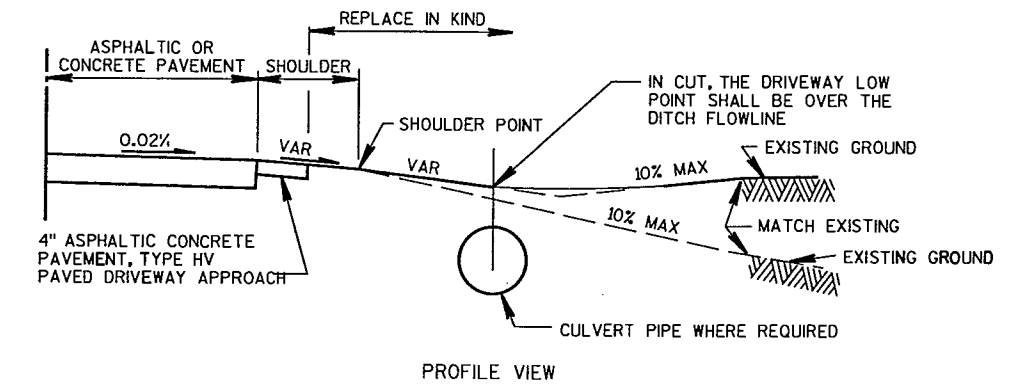


SOD AT PIPE DISCHARGE

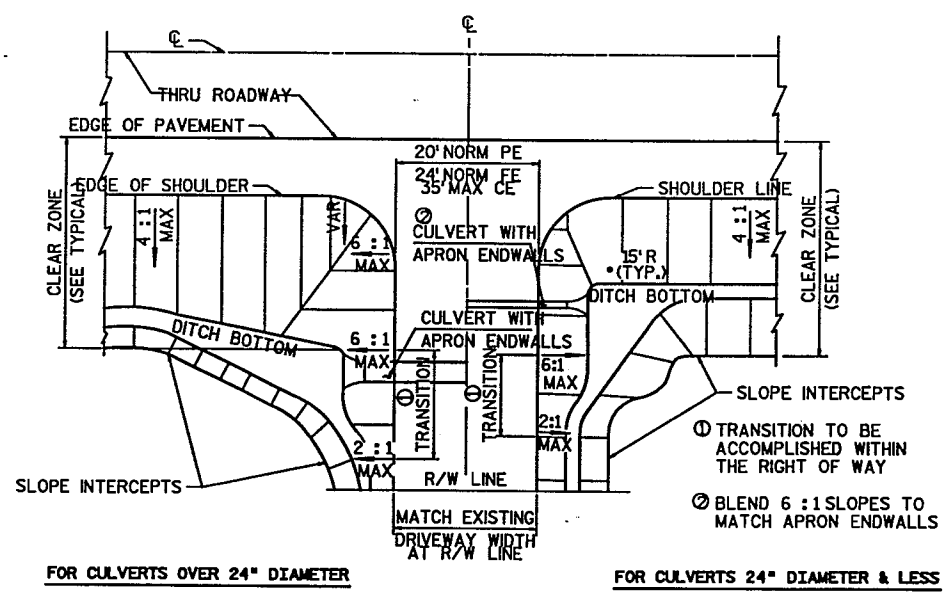
① SEE EROSION CONTROL PLANS FOR LOCATIONS



TYPICAL SECTION - DRIVEWAY



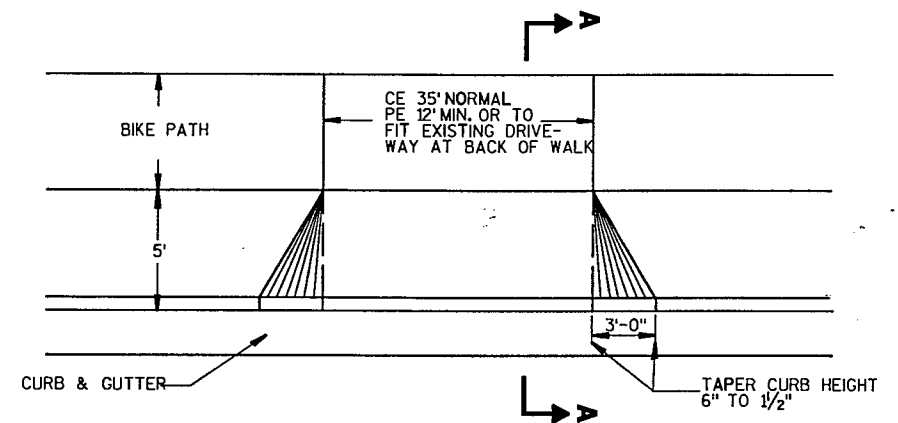
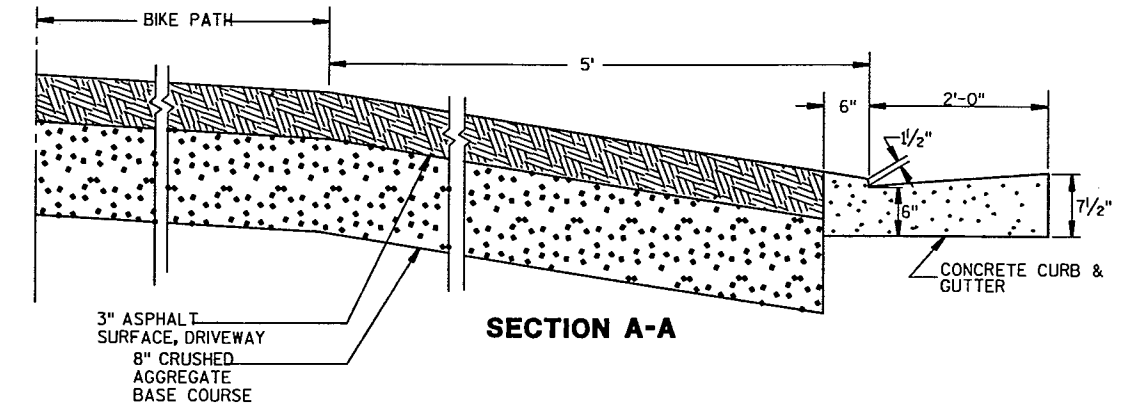
PROFILE - DRIVEWAY



PLAN VIEW - DRIVEWAY

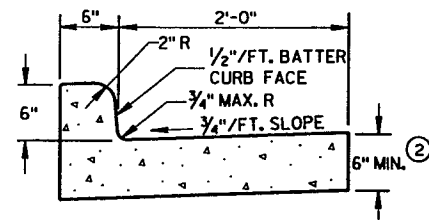
PRIVATE AND COMMERCIAL ENTRANCES (RURAL)

CTH CB	CTH JJ	STURGIS LANE
STA 210+00, LT	STA 24+88, RT	STA 9+60, RT
STA 212+27, RT		STA 8+25, RT
STA 225+25, LT & RT		
STA 229+72, LT		
STA 229+94, RT		
STA 237+69, RT		
STA 240+82, LT		
STA 240+87, RT		

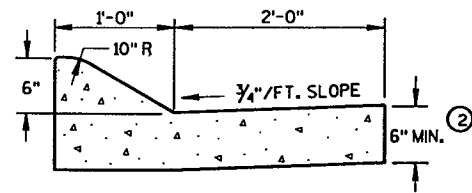


PRIVATE AND COMMERCIAL ENTRANCES (URBAN)

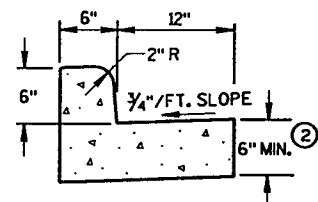
CTH CB	CTH JJ
STA 205+16, LT	STA 16+30, LT
STA 205+86, LT	STA 17+00, LT
STA 206+61, LT	STA 18+00, RT
STA 225+25, LT	STA 21+50, RT
STA 204+00, LT	STA 21+70, LT
STA 216+10, LT	STA 23+53, RT



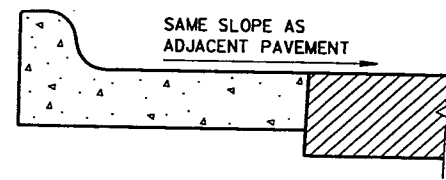
TYPE D
CONCRETE CURB & GUTTER 30"



TYPE D
CONCRETE CURB & GUTTER 36"



TYPE D
CONCRETE CURB & GUTTER 18"



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

GENERAL NOTES

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

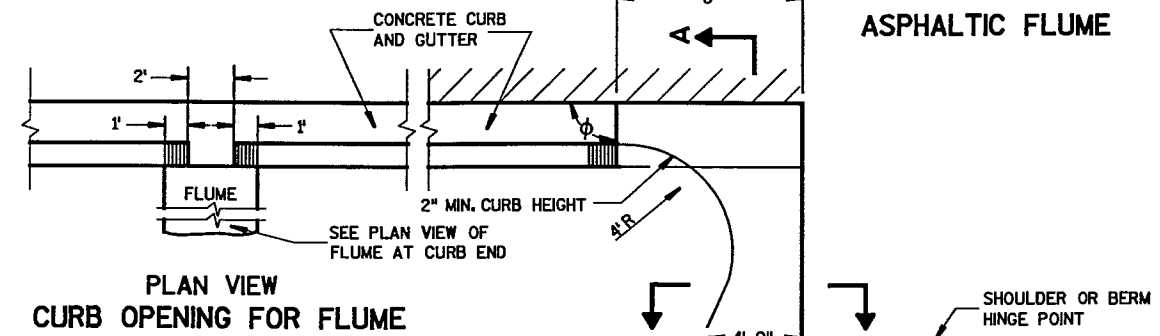
WHERE THE TRANSVERSE JOINTS IN THE PAVEMENT ARE REQUIRED TO BE SEALED, THE JOINTS IN THE INTEGRAL CURB AND GUTTER SHALL BE SEALED TO THE FACE OF CURB WITH THE SAME TYPE OF SEALANT. THE COST OF FURNISHING AND INSTALLING THIS SEALANT SHALL BE INCIDENTAL TO THE ITEM CONCRETE CURB AND GUTTER.

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

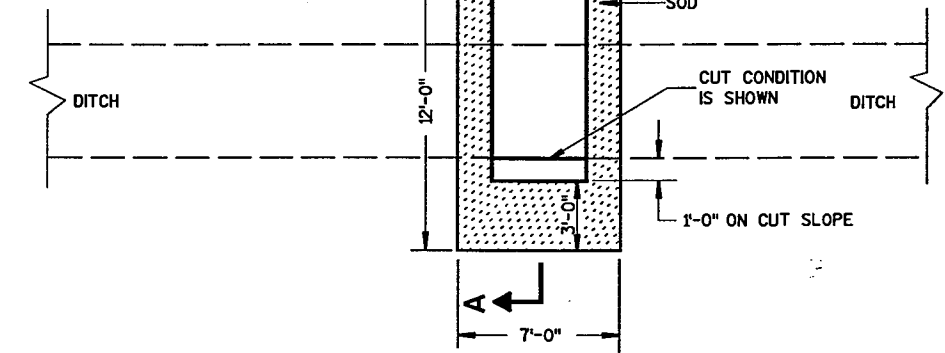
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE COURSE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ③ WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.

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

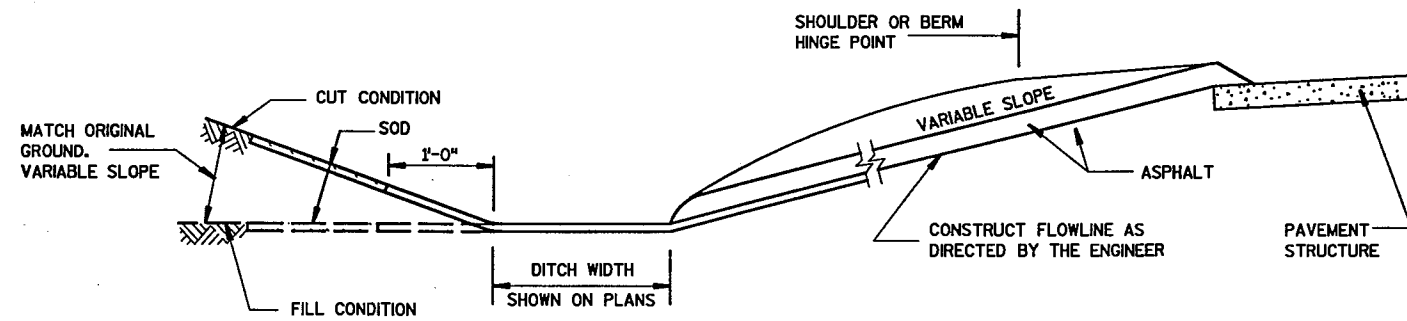
INCREASE ϕ FROM RIGHT ANGLE TO BEST FIT FIELD CONDITIONS



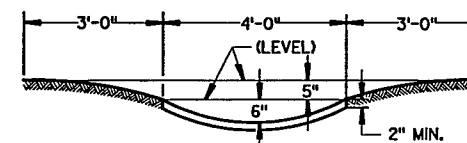
PLAN VIEW
CURB OPENING FOR FLUME



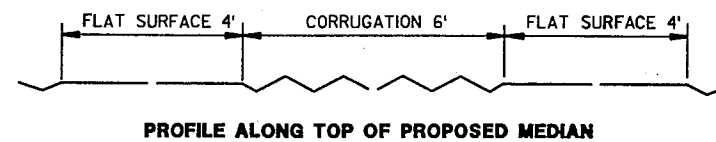
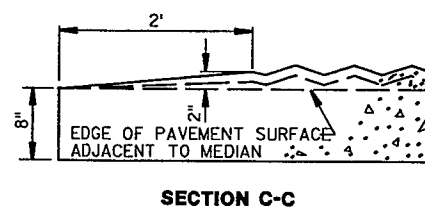
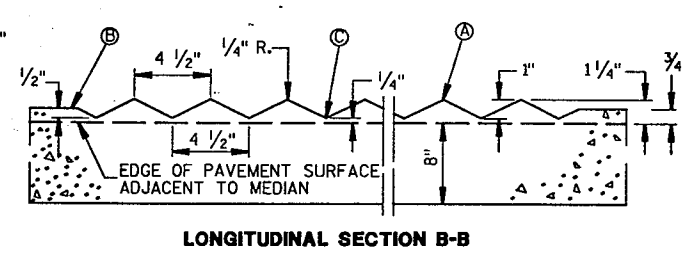
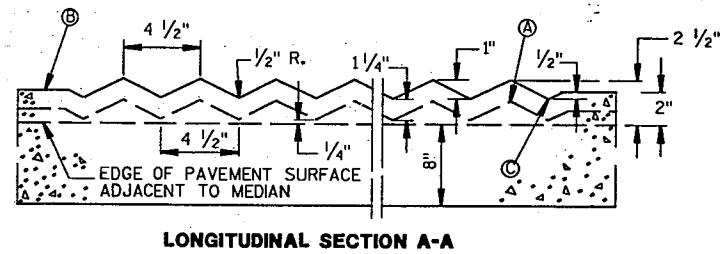
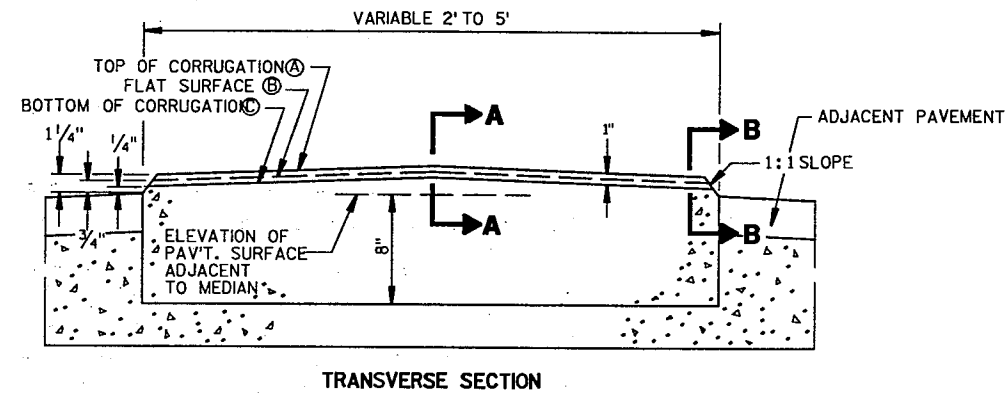
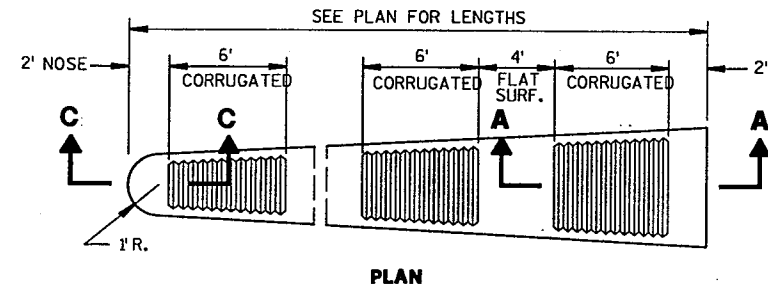
PLAN VIEW
FLUME AT CURB END



SECTION A-A



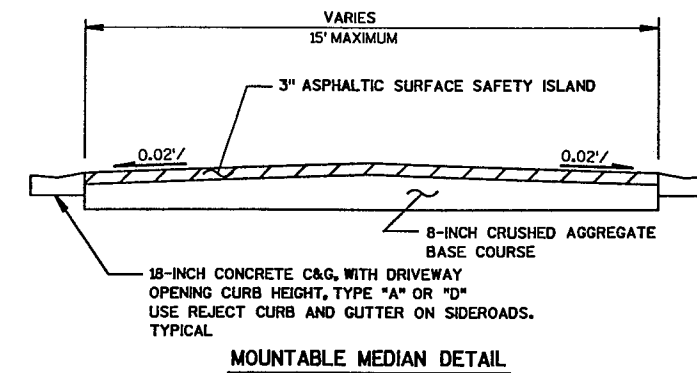
SECTION B-B



CONCRETE CORRUGATED MEDIAN

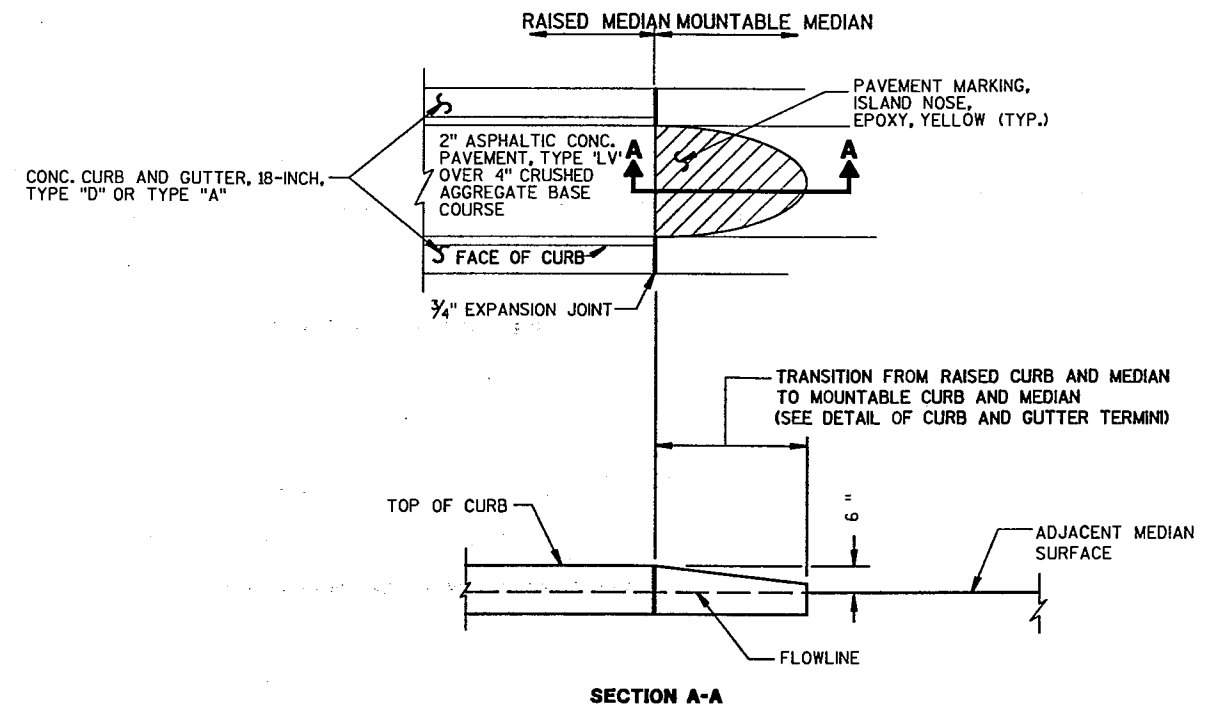
CTH JJ
 STA 13+48 TO STA 14+10
~~STA 24+68 TO STA 25+33~~

CTH CB
 STA 208+83 TO STA ~~210+20~~
 209+69



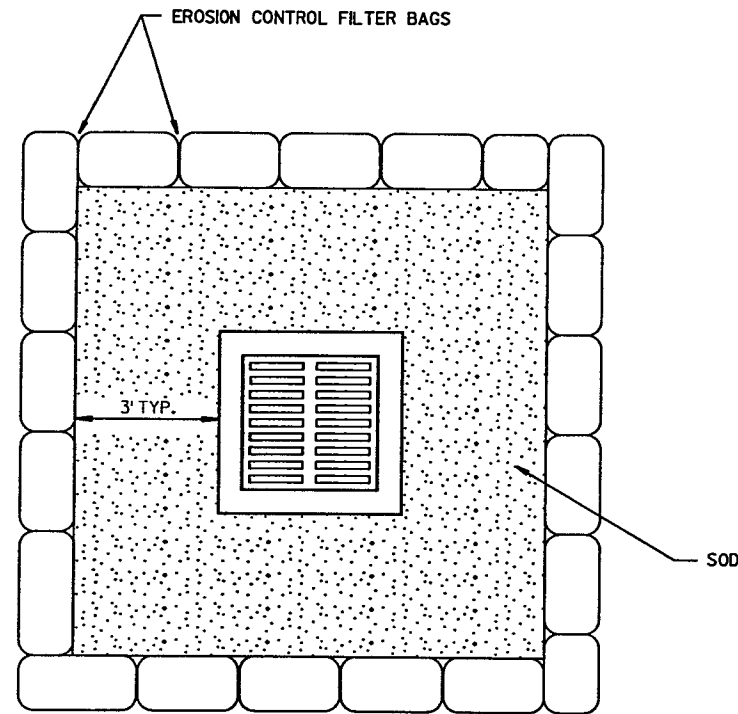
MOUNTABLE MEDIAN LOCATIONS

STATION TO STATION	LOCATION
204+77 - 206+97	CTH CB
14+10 - 18+31	CTH JJ
20+72 - 24+68	CTH JJ

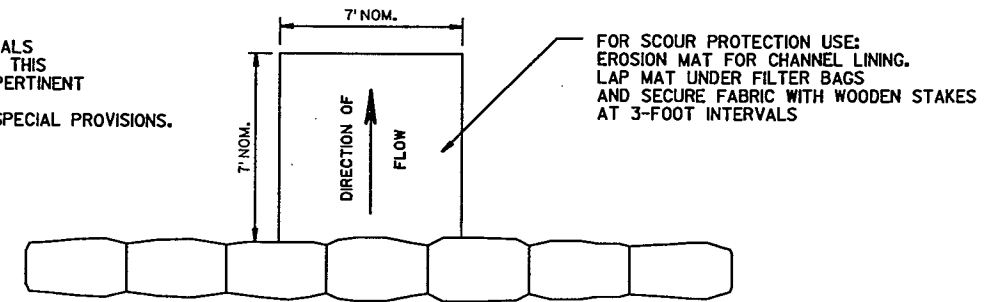


MEDIAN ISLAND NOSE DETAIL

LOCATION			
202+72	CTH CB	18+31	CTH JJ
204+77	CTH CB	19+15	CTH JJ
208+83	CTH CB	20+72	CTH JJ

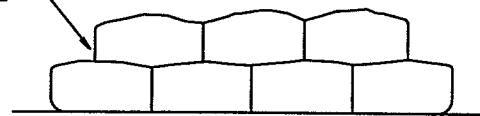


NOTE: DETAILS OF CONSTRUCTION MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DETAIL SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

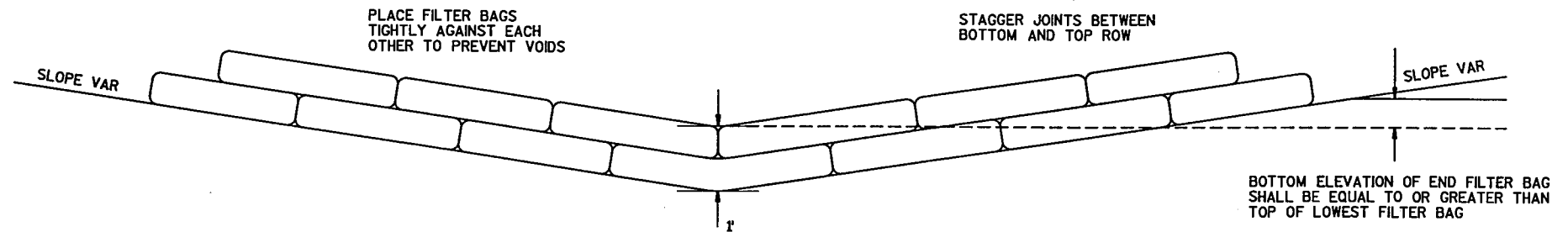


NOTE: EROSION CONTROL FILTER BAGS MAY BE USED ON PAVEMENT OR BARE GROUND. TREAT INLETS THAT ARE SPACED 8 FEET OR LESS AS ONE INLET FOR EROSION CONTROL.

EROSION CONTROL FILTER BAGS CAN BE A SINGLE OR DOUBLE LAYER PLACED SUCH THAT NO GAPS ARE EVIDENT.



DETAIL FOR EROSION CONTROL
(FILTER BAGS & SOD FOR AREA INLETS)

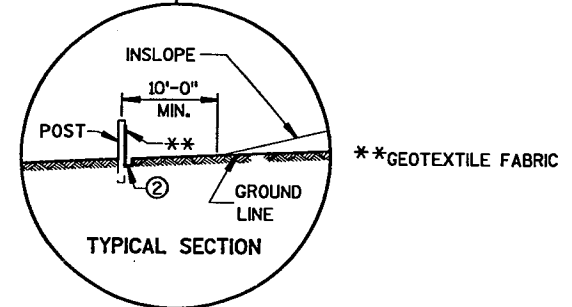
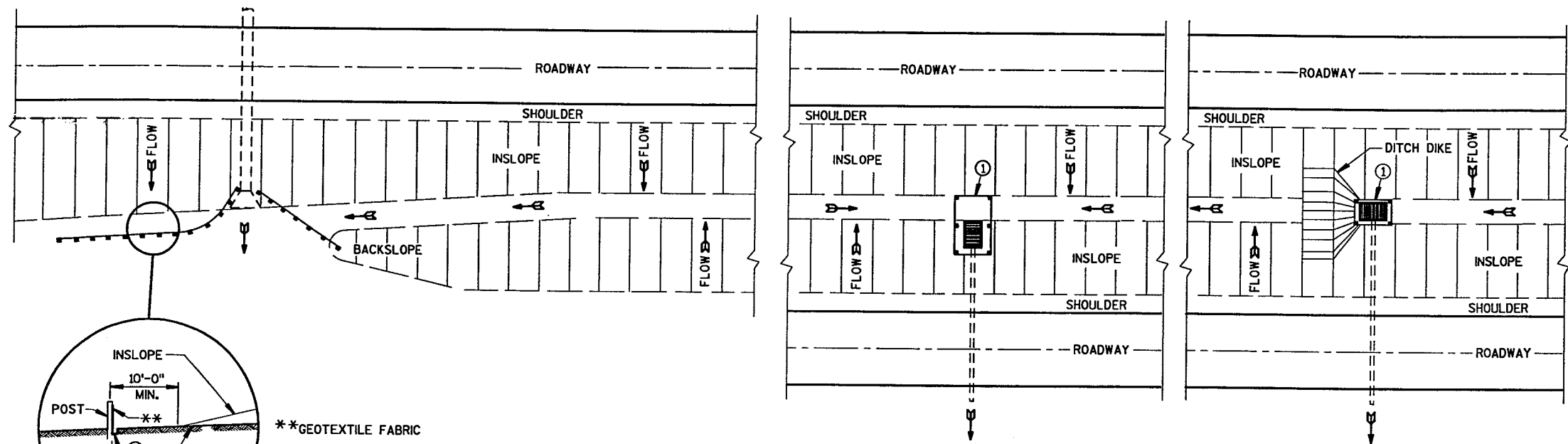


FRONT ELEVATION

FILTER BAG DITCH CHECK DETAIL

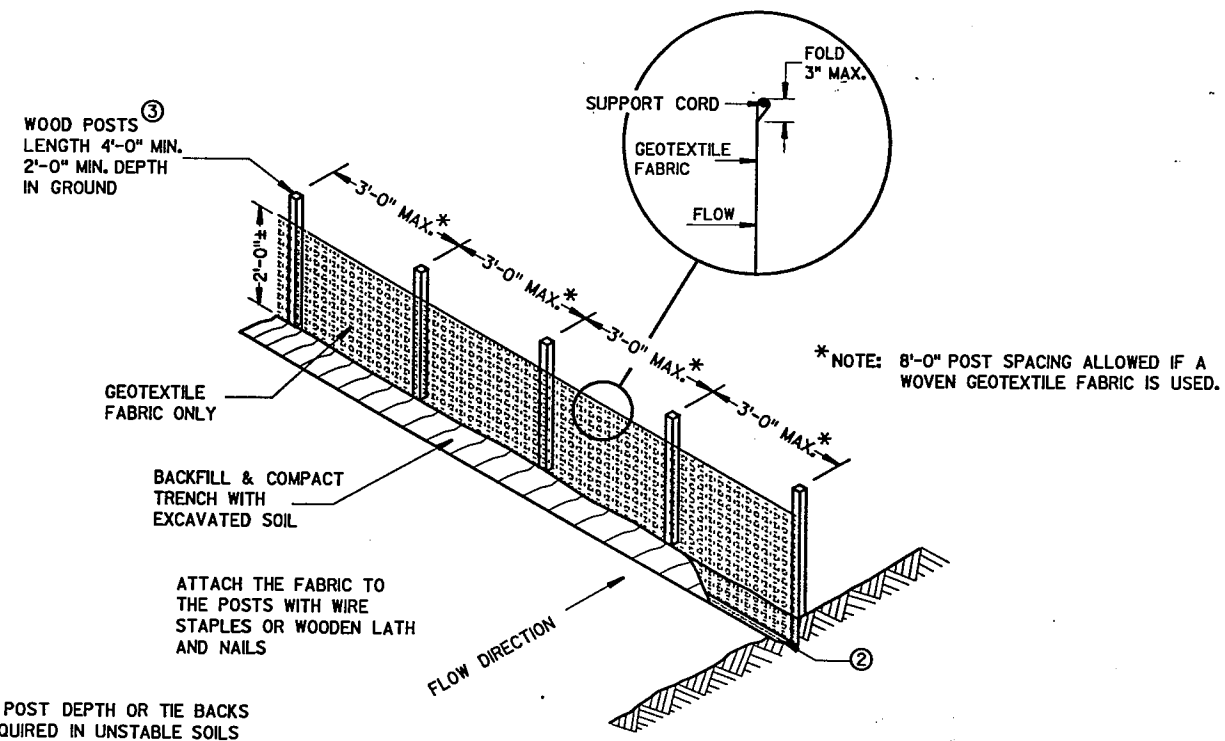
FILTER BAG DESCRIPTION

COARSE AGGREGATE FOR CONCRETE MASONRY, SIZE 1, CONTAINED IN PERVIOUS BURLAP BAGS OR SYNTHETIC NET BAGS (1/8-INCH MESH) APPROXIMATELY 24 INCHES LONG, 12 INCHES WIDE AND 6 INCHES HIGH



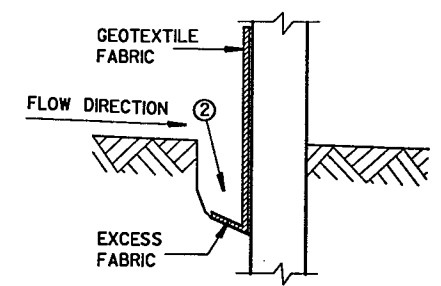
PLAN VIEW
TYPICAL APPLICATIONS OF SILT FENCE

SITUATION 1 SITUATION 2
PLAN VIEW
SILT FENCE AT MEDIAN SURFACE DRAINS

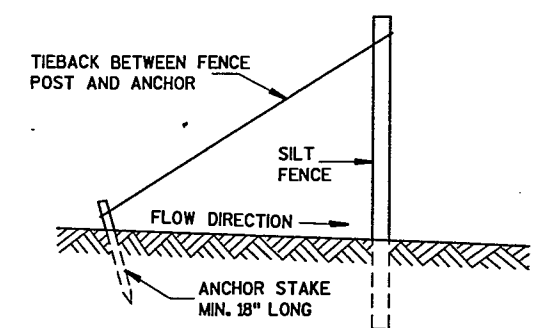


NOTE: ADDITIONAL POST DEPTH OR TIE BACKS MAY BE REQUIRED IN UNSTABLE SOILS

SILT FENCE
(NON-REINFORCED)



TRENCH DETAIL



SILT FENCE TIE BACK
(WHEN REQUIRED BY THE ENGINEER)

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 WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS AS DIRECTED BY THE ENGINEER.
- 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 1/8" X 1/8" OF OAK OR HICKORY.

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

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.

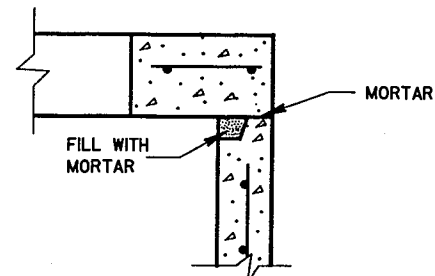
PRECAST REINFORCED BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF GRANULAR BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

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

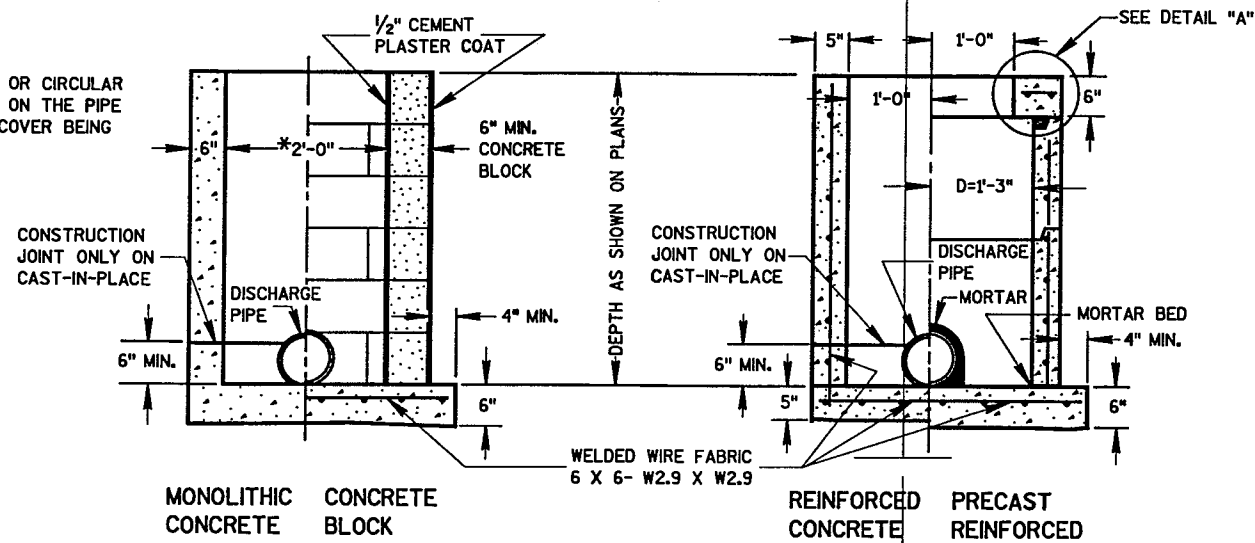
ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

PRECAST REINFORCED CONCRETE RISERS SHALL BE PLACED WITH TONGUE DOWN.

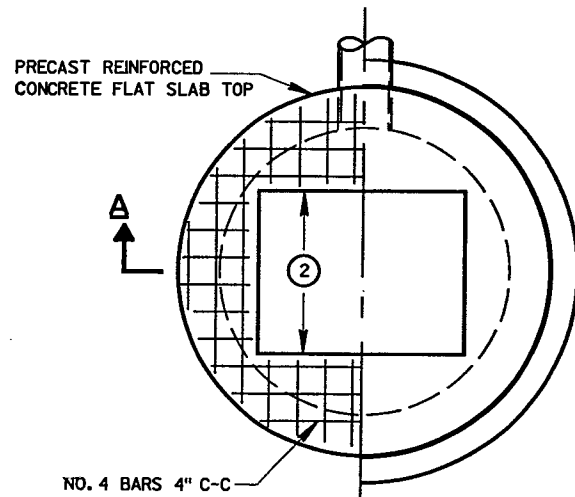
- ① USE 3'-0" OPENING FOR TYPE 3 INLETS.
- ② USE 2'-0" OPENING FOR TYPE 1 & 3 INLETS.



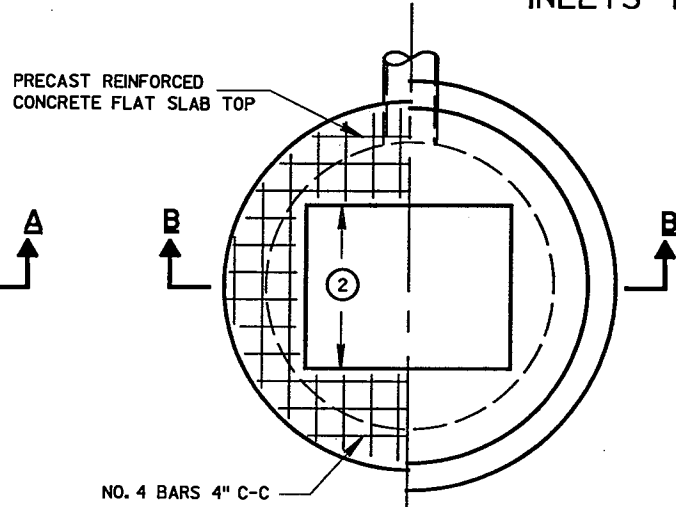
DETAIL "A"



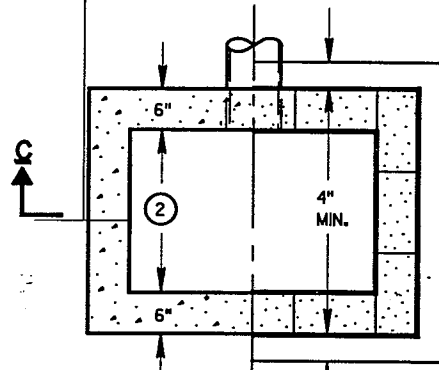
INLETS TYPE 1



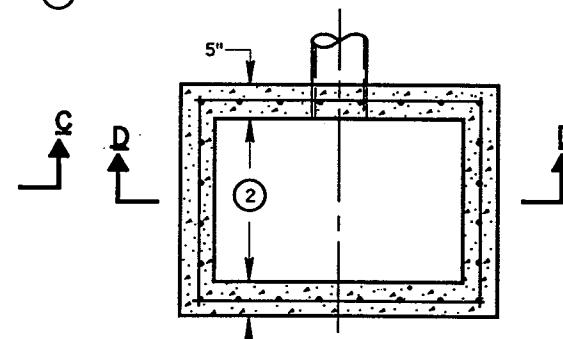
PLAN VIEW



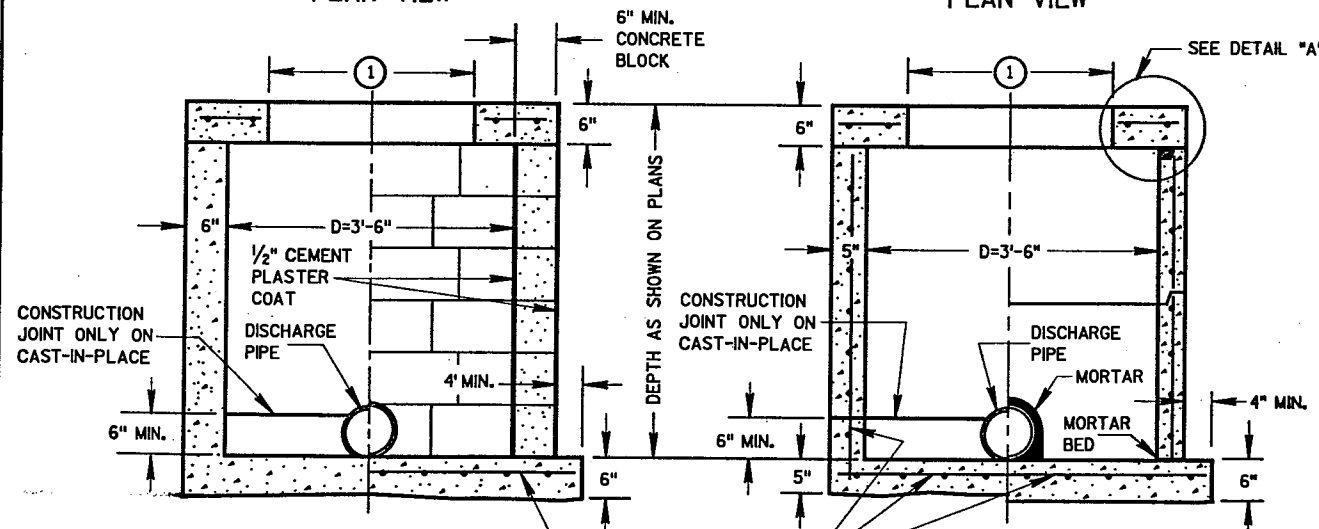
PLAN VIEW



PLAN VIEW

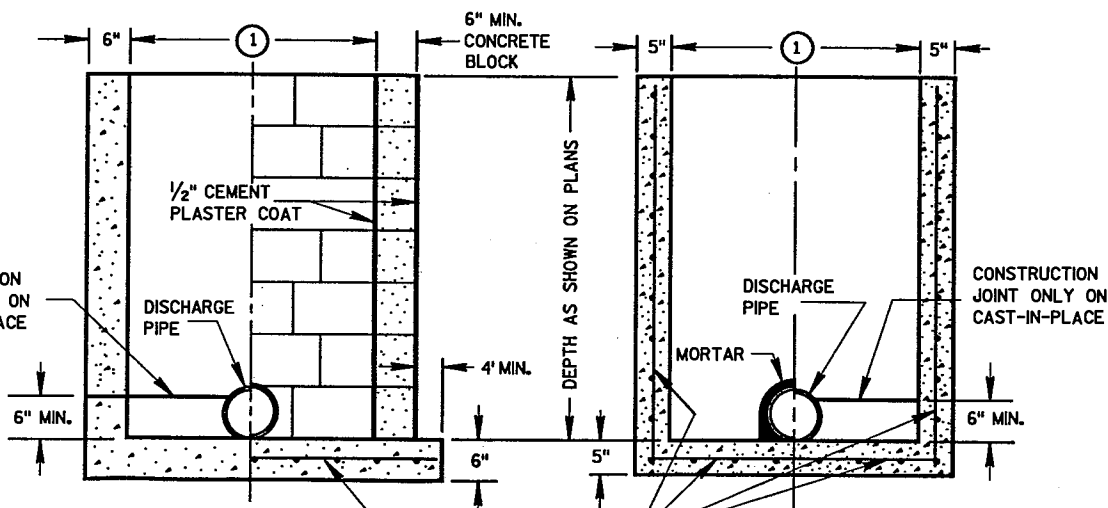


PLAN VIEW



SECTION A-A

SECTION B-B



SECTION C-C

SECTION D-D

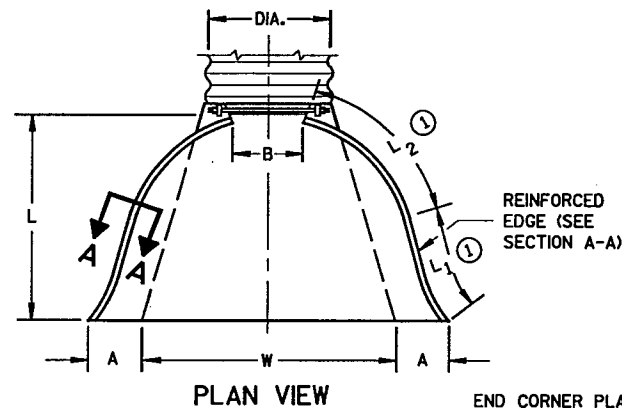
INLETS TYPE 2, 3 & 4

METAL APRON ENDWALLS											
PIPE DIA. (IN.)	MIN. THICK. (Inches)		DIMENSIONS (Inches)						APPROX. SLOPE	BODY	
	STEEL	ALUM.	A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L ₁ (⓪)	L ₂ (⓪)			W (±2")
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 1/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4	36	2 1/2 to 1	1 Pc.
21	.064	.060	9	12	6	36	18	29 5/8	42	2 1/2 to 1	1 Pc.
24	.064	.075	10	13	6	41	18	37 1/4	48	2 1/2 to 1	1 Pc.
30	.079	.075	12	16	8	51	18	52 1/4	60	2 1/2 to 1	1 Pc.
36	.079	.105	14	19	9	60	24	59 3/4	72	2 1/2 to 1	2 Pc.
42	.109	.105	16	22	11	69	24	75 5/8	84	2 1/2 to 1	2 Pc.
48	.109	.105	18	27	12	78	24	81	90	2 1/2 to 1	3 Pc.
54	.109	.105	18	30	12	84	30	85 1/2	102	2 1/2 to 1	3 Pc.
60	.109x	.105x	18	33	12	87	—	—	114	2 to 1	3 Pc.
66	.109x	.105x	18	36	12	87	—	—	120	2 to 1	3 Pc.
72	.109x	.105x	18	39	12	87	—	—	126	2 to 1	3 Pc.
78	.109x	.105x	18	42	12	87	—	—	132	1 1/2 to 1	3 Pc.
84	.109x	.105x	18	45	12	87	—	—	138	1 1/2 to 1	3 Pc.
90	.109x	.105x	18	37	12	87	—	—	144	1 1/2 to 1	3 Pc.
96	.109x	.105x	18	35	12	87	—	—	150	1 1/2 to 1	3 Pc.

* EXCEPT CENTER PANEL SEE GENERAL NOTES

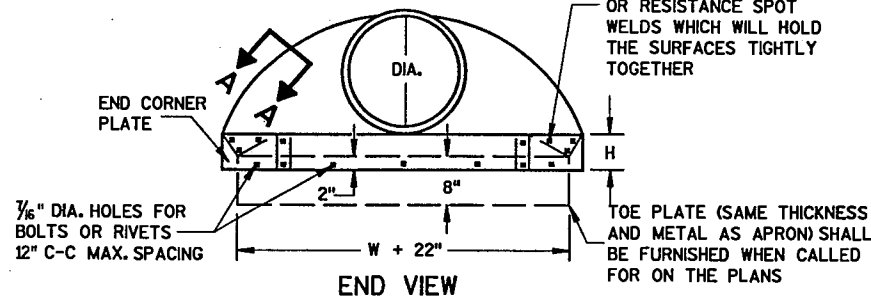
REINFORCED CONCRETE APRON ENDWALLS										
PIPE DIA. (IN.)	DIMENSIONS (Inches)							APPROX. SLOPE		
	T	A	B	C	D	E	G			
12	2	4	24	48 1/4	72 1/4	24	2	3 to 1		
15	2 1/4	6	27	46	73	30	2 1/4	3 to 1		
18	2 1/2	9	27	46	73	36	2 1/2	3 to 1		
21	2 3/4	9	36	37 1/2	73 1/2	42	2 3/4	3 to 1		
24	3	9 1/2	43 1/2	30	73 1/2	48	3	3 to 1		
27	3 1/4	10 1/2	49 1/2	24	73 1/2	54	3 1/4	3 to 1		
30	3 1/2	12	54	19 1/4	73 1/2	60	3 1/2	3 to 1		
36	4	15	63	34 1/4	97 1/4	72	4	3 to 1		
42	4 1/2	21	63	35	98	78	4 1/2	3 to 1		
48	5	24	72	26	98	84	5	3 to 1		
54	5 1/2	27	65	33 1/4-35	98 1/4-100	90	5 1/2	2 3/4 to 1		
60	6	30-35	60	39	99	96	5	2 to 1		
66	6 1/2	24-30	72-78	21-27	99	102	5 1/2	2 to 1		
72	7	24-36	78	21	99	108	6	2 to 1		
78	7 1/2	24-36	78	21	99	114	6 1/2	2 to 1		
84	8	36	90 1/2	21	111 1/2	120	6 1/2	1 1/2 to 1		
90	8 1/2	41	87 1/2	24	111 1/2	132	6 1/2	1 1/2 to 1		

* MINIMUM
 ** MAXIMUM

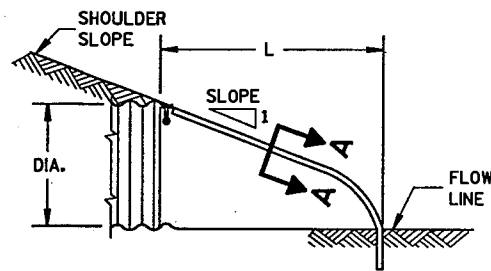


PLAN VIEW

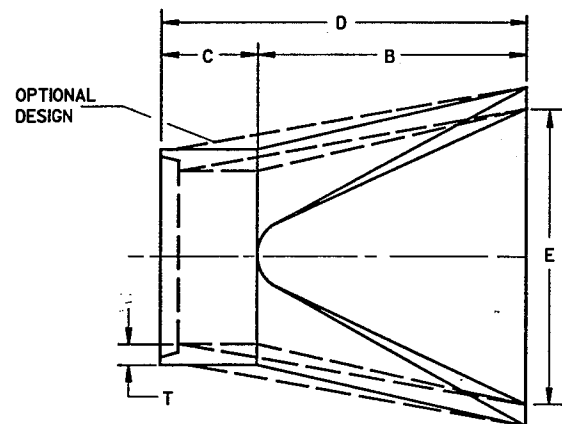
END CORNER PLATES MAY BE FASTENED TO APRON PROPER BY BOLTS, RIVETS, OR RESISTANCE SPOT WELDS WHICH WILL HOLD THE SURFACES TIGHTLY TOGETHER



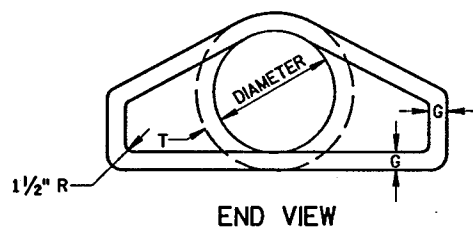
END VIEW



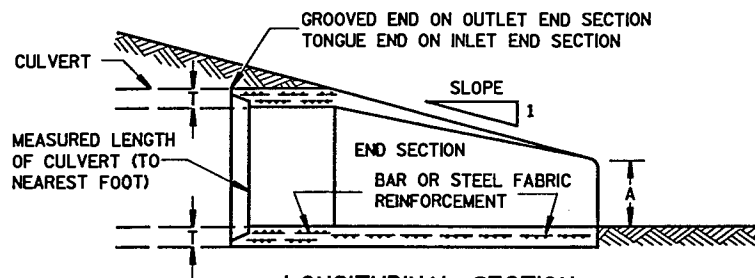
SIDE ELEVATION
 METAL ENDWALLS



PLAN

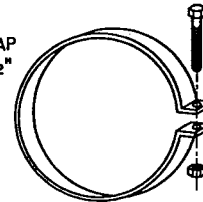


END VIEW



LONGITUDINAL SECTION
 CONCRETE ENDWALLS

1" WIDE, 12 GA. (0.109" THICK) GALVANIZED STRAP WITH STANDARD 6" X 1/2" BAND BOLT AND NUT



ALTERNATE FOR TYPE 1 CONNECTION
 END SECTION CONNECTOR STRAP

THREADED 1/8" DIA. ROD AROUND CULVERT & THROUGH TANK TYPE CONNECTOR LUG OR ALTERNATE CONNECTOR STRAP (SEE DETAIL)



TYPE 1
 FOR 12" THRU 24" CORR. PIPE

THREADED 1/8" DIA. ROD OVER TOP OF APRON, SIDE LUGS TO BE RIVETED TO APRON



TYPE 2
 FOR 30" THRU 96" CORR. PIPE

MEASURED LENGTH OF CULVERT
 CONNECTOR SECTION TO BE PAID FOR AS PART OF END SECTION



TYPE 3
 FOR 42" THRU 96" CORR. PIPE

DIMPLED OR CORRUGATED COUPLING BAND
 RIVETED OR BOLTED AT DIMPLES (6" C-C FOR CORRUGATED BAND)



TYPE 5
 ALTERNATE FOR:
 ALL SIZES CORRUGATED CIRCULAR PIPE

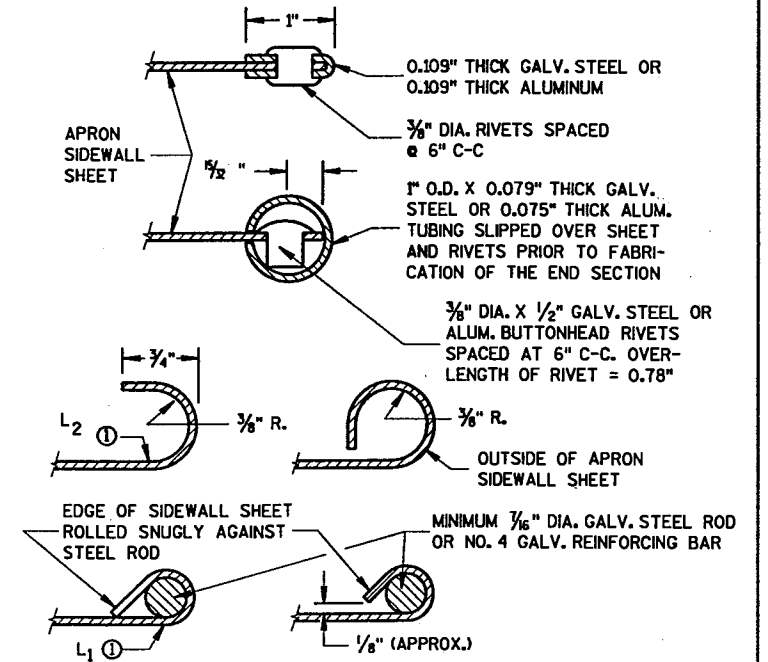
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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.

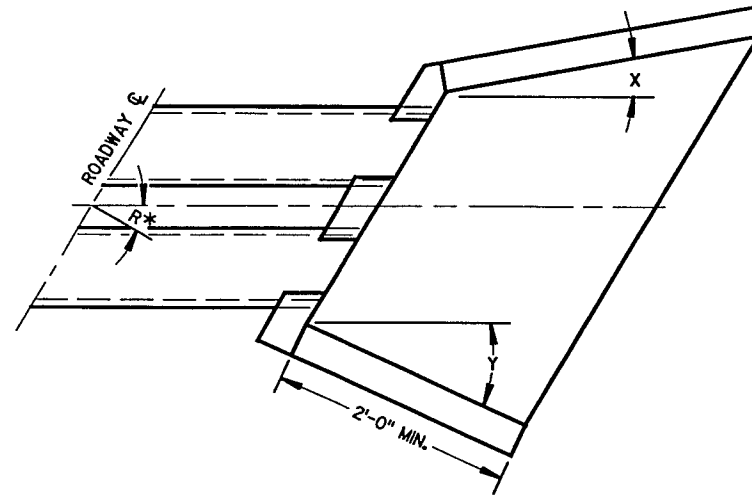
CONCRETE CULVERT ENDWALLS MAY NOT BE USED WITH GALVANIZED STEEL OR ALUMINUM CULVERT PIPE OR VICE VERSA. GALVANIZED STEEL OR ALUMINUM ENDWALLS SHALL NORMALLY BE INSTALLED ON CULVERT PIPE OF THE SAME METAL.

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.

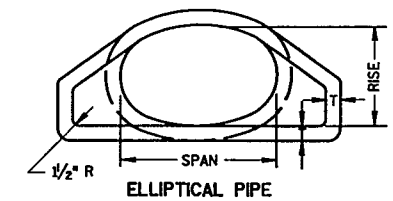
⓪ FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.



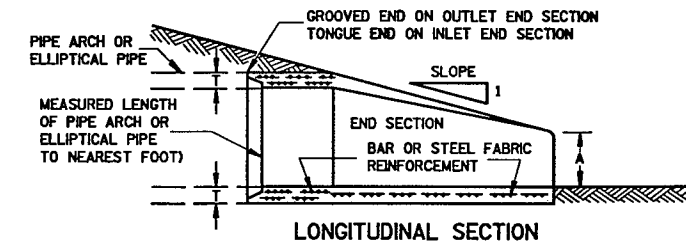
WINGWALL ANGLE DETAILS

INLET			OUTLET		
R*	X	Y	R*	X	Y
0 - 7°	30°	30°	0 - 15°	15°	15°
8 - 22°	25°	"	16 - 45°	10°	"
23 - 37°	20°	"	46 - 75°	5°	"
38 - 52°	15°	"	OVER 75°	0°	"
53 - 67°	10°	"			
68 - 82°	5°	"			
OVER 82°	0°	"			

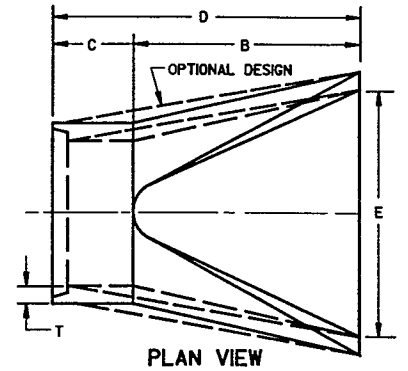
*R = NUMBER OF DEGREES RIGHT OR LEFT HAND FORWARD



END VIEW

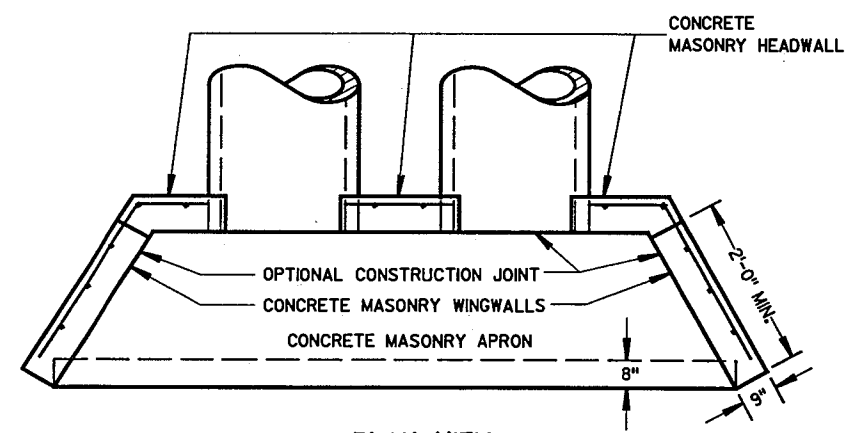


LONGITUDINAL SECTION



PLAN VIEW

CONCRETE ENDWALL



PLAN VIEW
CULVERT PIPE AND PIPE ARCH

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.

FILL SLOPES FLATTER THAN 2 1/2:1 SHALL BE WARPED TO MEET THE TOP OF THE WINGWALLS.

ALL STEEL REINFORCEMENT AND WELDED STEEL WIRE FABRIC SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE NOTED.

- 1 MINIMUM REINFORCEMENT SHALL BE 6" X 6" - W4.0 X W4.0 OR NO. 3 BARS SPACED 12" C-C IN BOTH DIRECTIONS.
- 2 THE SPACE BETWEEN PIPES SHALL BE AS FOLLOWS:

DIAMETER OR SPAN	SPACE
UP TO AND INCLUDING 48"	2'-0"
OVER 48" TO 72"	1/2 DIA. OR SPAN
OVER 72"	3'-0"

EQUIV. DIA. (Inches)	DIMENSIONS (Inches)							APPROX. SLOPE	
	** SPAN	** RISE	T	A	B	C	D		E
24	30	19	3/4	8 1/2	39	33	72	48	3 to 1
30	38	24	3 3/4	9 1/2	54	18	72	60	3 to 1
36	45	29	4 1/2	11 1/8	60	24	84	72	2 1/2 to 1
42	53	34	5	15 3/4	60	36	96	78	2 1/2 to 1
48	60	38	5 1/2	21	60	36	96	84	2 1/2 to 1
54	68	43	6	25 1/2	60	36	96	90	2 1/2 to 1
60	76	48	6 1/2	30	60	36	96	96	2 1/2 to 1

**NOMINAL SIZE

GENERAL NOTES

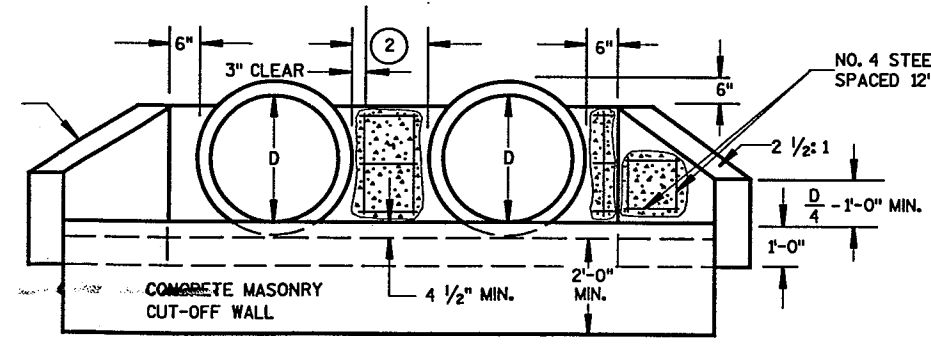
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

CONCRETE APRON ENDWALLS MAY NOT BE USED WITH GALVANIZED STEEL OR ALUMINUM CULVERT PIPE OR VISE VERSA. GALVANIZED STEEL OR ALUMINUM APRON ENDWALLS SHALL NORMALLY BE INSTALLED ON CULVERT PIPE OF THE SAME METAL.

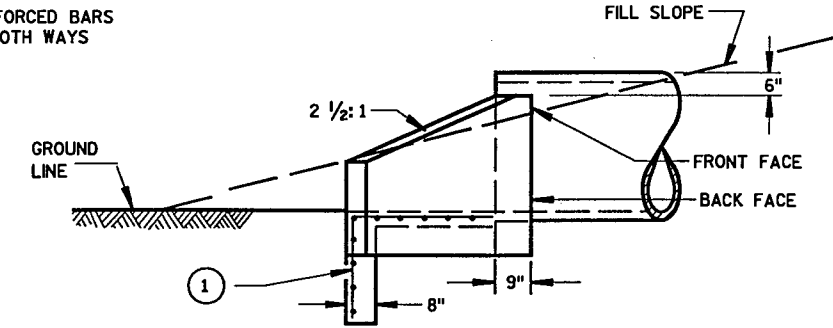
ALL THREE PIECE STEEL APRON ENDWALLS FOR 66" X 51" PIPE ARCH AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 66" X 51" PIPE ARCH AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT OF THE PIPE ARCH PERIMETER.

LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS. FOR THE 77" X 52" THROUGH 112" X 75" APRON ENDWALL SIZES, THE REINFORCED EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH GALVANIZED STEEL OR ALUMINUM STIFFENER ANGLES. THE ANGLES SHALL BE ATTACHED BY GALVANIZED NUTS AND BOLTS FOR STEEL UNITS AND ALUMINUM NUTS AND BOLTS FOR ALUMINUM UNITS.

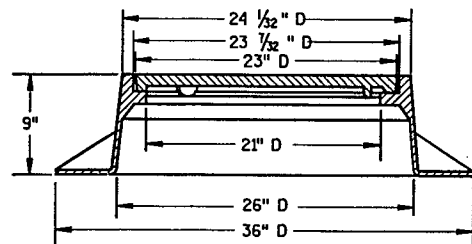
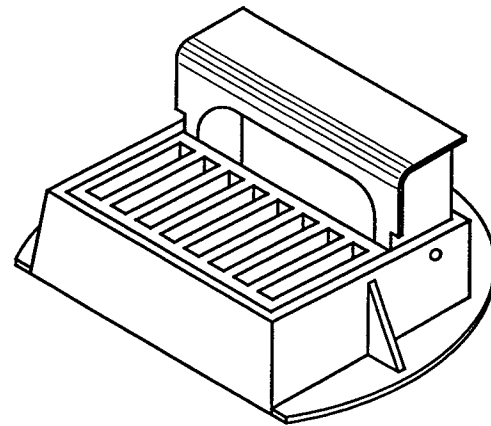
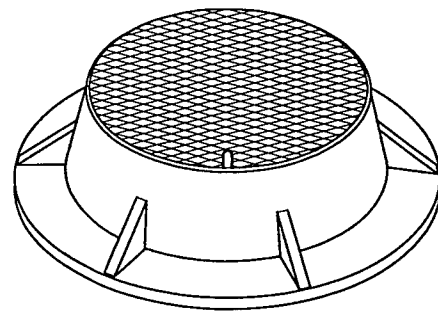
WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.



END ELEVATION
CULVERT PIPE



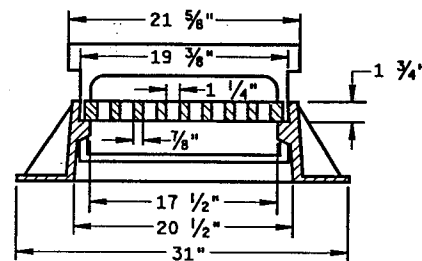
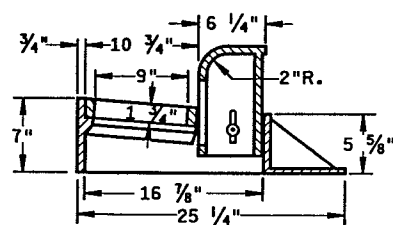
SIDE ELEVATION
CULVERT PIPE



TYPE "J"

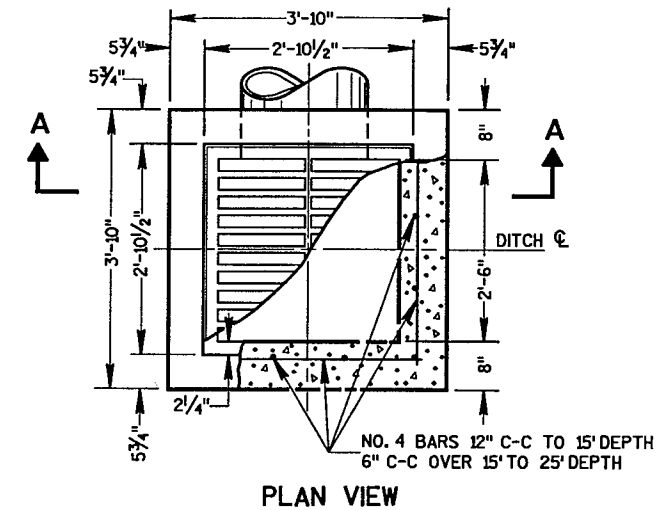
(APPROXIMATE WEIGHT 250 LBS.)
 FRAME..... 135 LBS.
 LID..... 115 LBS.

CURB BOX ADJUSTABLE 4" TO 10"

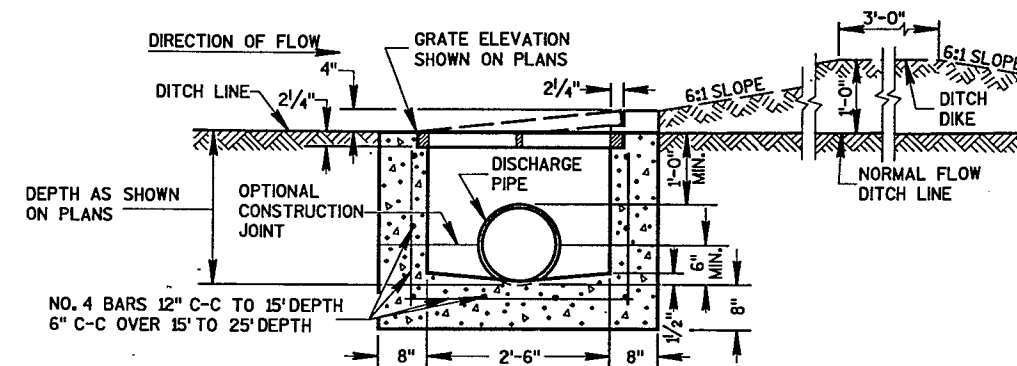


INLET COVER TYPE "Z"

(APPROXIMATE WEIGHT 280 LBS.)
 FRAME..... 145 LBS.
 GRATE..... 50 LBS.
 CURB BOX..... 85 LBS.



PLAN VIEW



SECTION A-A

REINFORCED CONCRETE INLET TYPE 8

GENERAL NOTES

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

DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR MANHOLE COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.

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

GENERAL NOTES

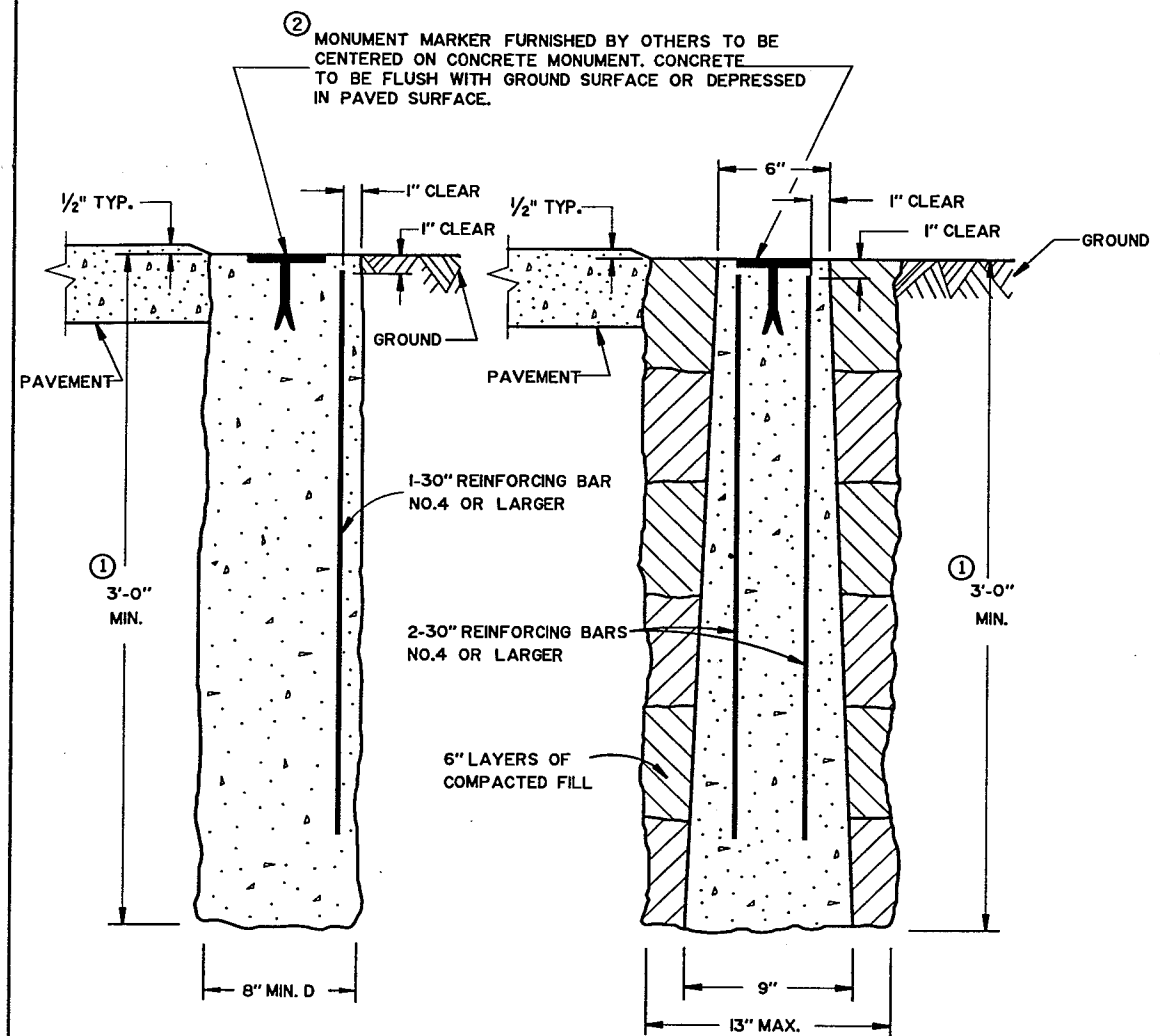
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR INLETS WHICH MAY INCLUDE PRECAST REINFORCED CONCRETE INLETS, SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

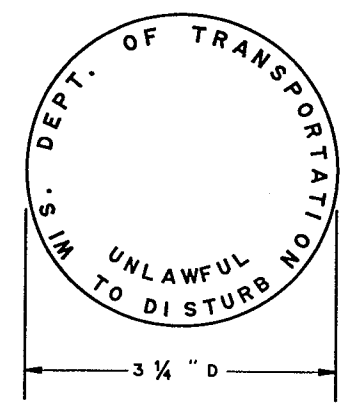
PRECAST REINFORCED CONCRETE INLET UNITS, IF USED, SHALL CONFORM TO THE REQUIREMENTS OF THE CATCH BASINS, MANHOLES AND INLETS SECTION OF THE STANDARD SPECIFICATIONS. UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST INLET UNITS REQUIRED FOR THE PROJECT UNTIL A CORRECTED LIST OF SIZES IS FURNISHED BY THE ENGINEER.

ALL INLETS ARE DESIGNATED ON THE PLANS AS "INLETS, 8-MS", ETC. THIS DESIGNATION IS INTERPRETED TO MEAN THAT THE NUMBER, OR FIRST DIGIT DESIGNATES THE MASONRY PORTION OF THE STRUCTURE AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER OR IRON CASTING TO BE USED THEREWITH TO COMPRISE THE COMPLETE UNIT.

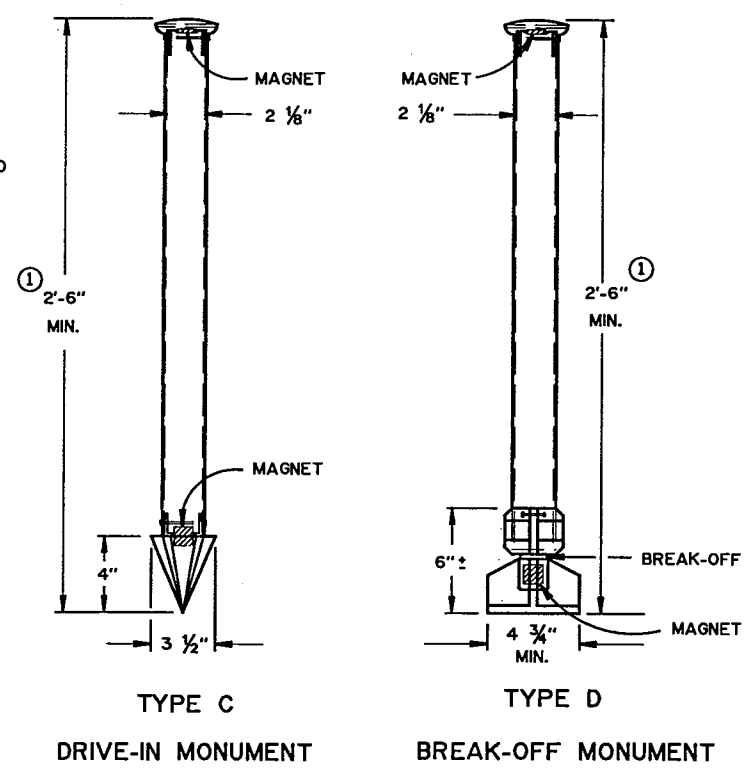
ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.



CAST-IN-PLACE
PRECAST
CONCRETE MONUMENTS
TYPE A



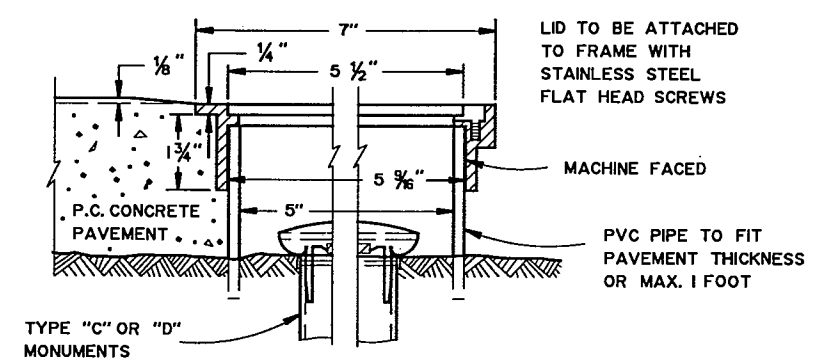
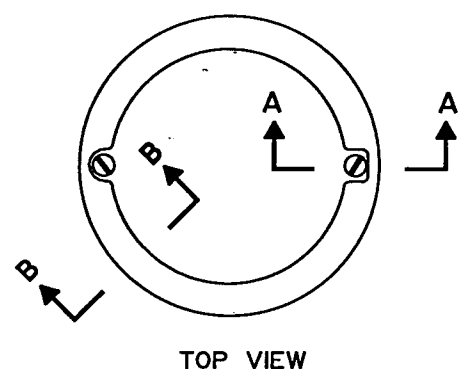
② WIS DOT MONUMENT MARKER LOGO
FOR TYPES "A", "C" & "D"



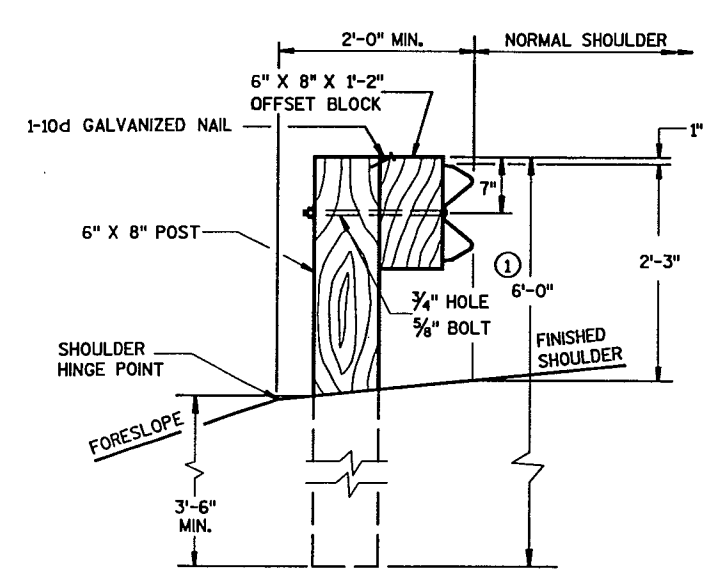
TYPE C
DRIVE-IN MONUMENT
TYPE D
BREAK-OFF MONUMENT
ALUMINUM MONUMENTS
(INCLUDES MARKER)

GENERAL NOTES

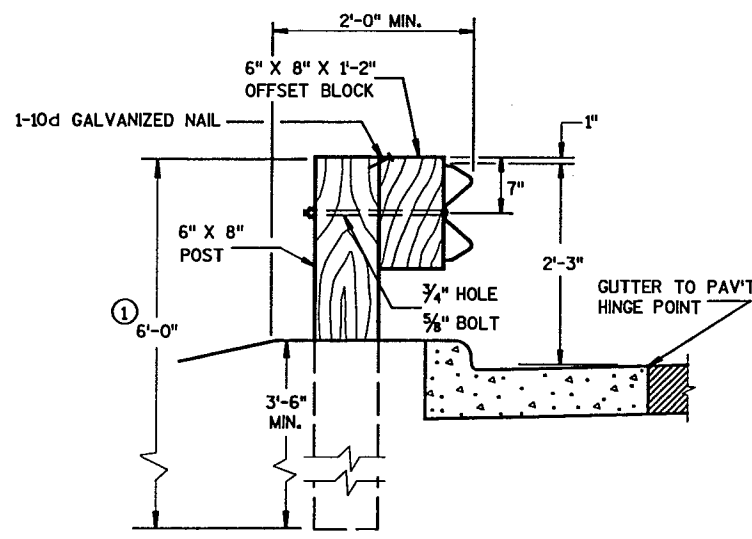
- DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.
- DETAILED DRAWINGS OF PROPOSED ALTERNATE DESIGNS FOR METAL MONUMENTS OR MONUMENT COVERS SHALL BE SUBMITTED 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.



SECTION B-B SECTION A-A
ALUMINUM MONUMENT COVER
(APPROXIMATE WEIGHT 2 LBS)
(FOR CONCRETE PAVEMENT ONLY)

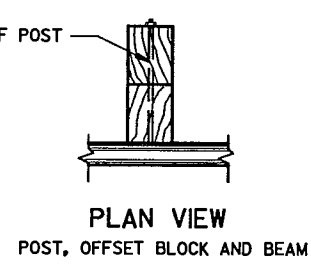


END VIEW
 LOCATED ALONG A ROADWAY SHOULDER

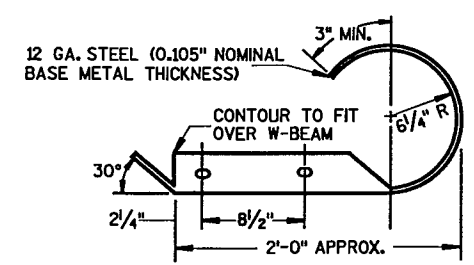


END VIEW
 LOCATED ALONG A CURBED ROADWAY

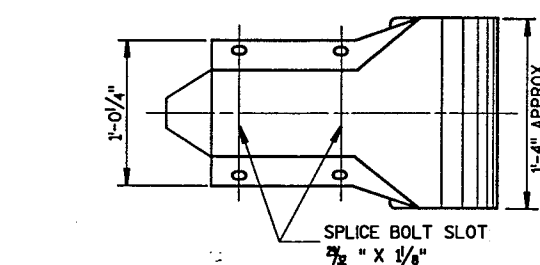
3/4" HOLE, 5/8" BOLT
 THROUGH CENTER OF POST
 AND OFFSET BLOCK



PLAN VIEW
 POST, OFFSET BLOCK AND BEAM

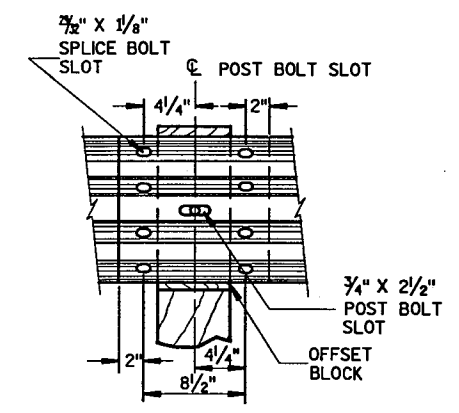


PLAN VIEW

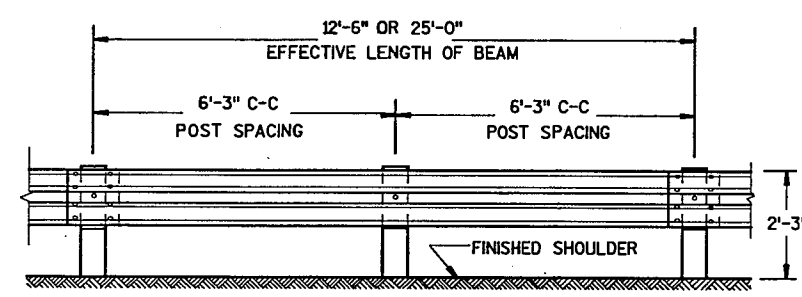


FRONT VIEW

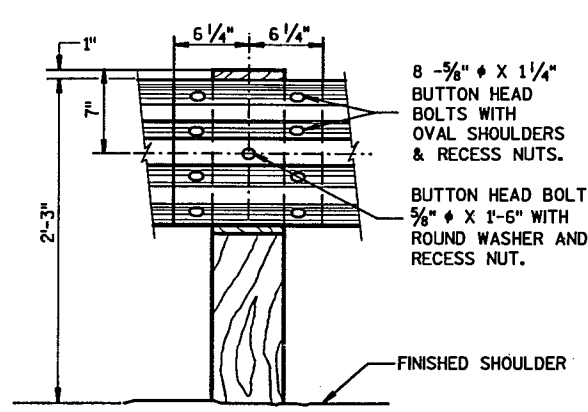
W BEAM END SECTION (ROUNDED)



W BEAM SPLICE



FRONT VIEW



FRONT VIEW

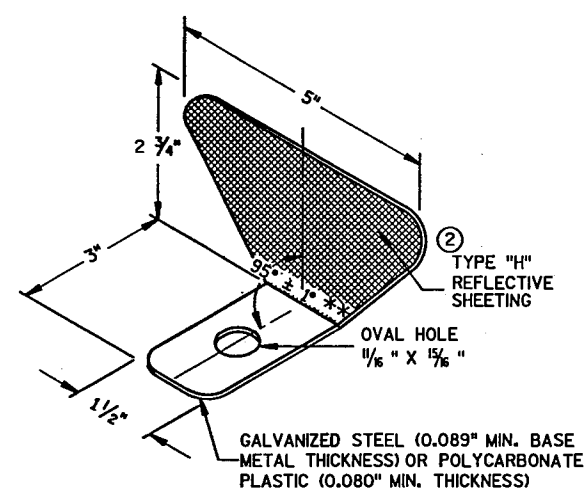
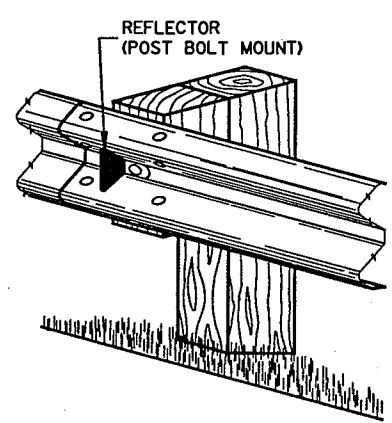
BEAM SPLICING AND POST MOUNTING DETAIL

TYPICAL INSTALLATION OF STEEL PLATE BEAM GUARD

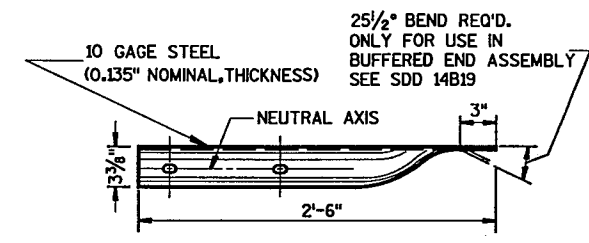
REFLECTOR SPACING

	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	3
TWO WAY TRAFFIC	< 200'*	25' C-C	1*	6
	> 200'*	50' C-C	1*	6
TWO WAY TRAFFIC	< 200'	50' C-C	2**	3
	> 200'	100' C-C	2**	3

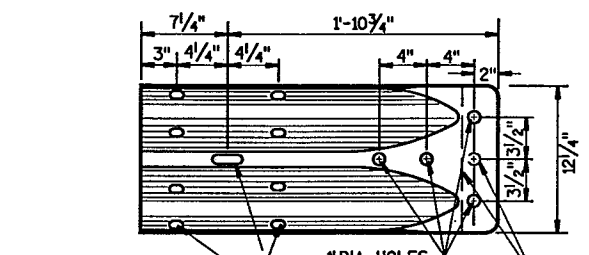
* EVERY OTHER REFLECTOR REVERSED FOR 2-WAY VISIBILITY. CONTRACTOR MAY FURNISH TWO-SIDED REFLECTORS IN LIEU OF ONE-SIDED REFLECTORS.
 ** ANGLE OF BEND TO BE 90° ± 1° FOR TWO-SIDED REFLECTORS.



REFLECTOR DETAIL AND TYPICAL INSTALLATION

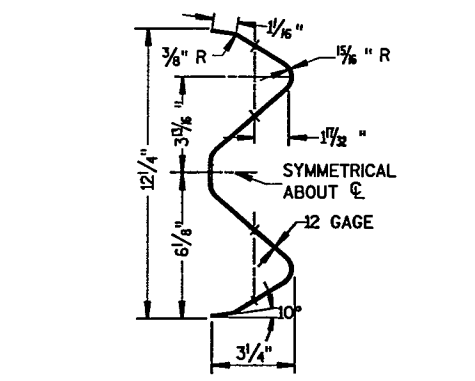


PLAN VIEW



FRONT VIEW

W BEAM TERMINAL CONNECTOR

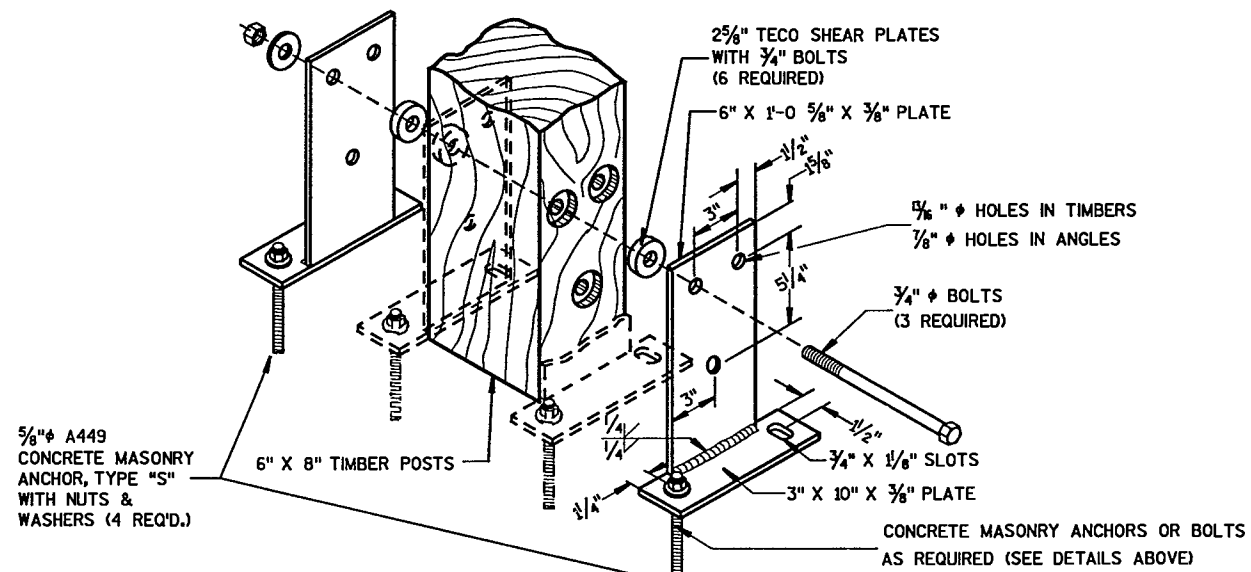


SECTION THRU W BEAM

NOTES

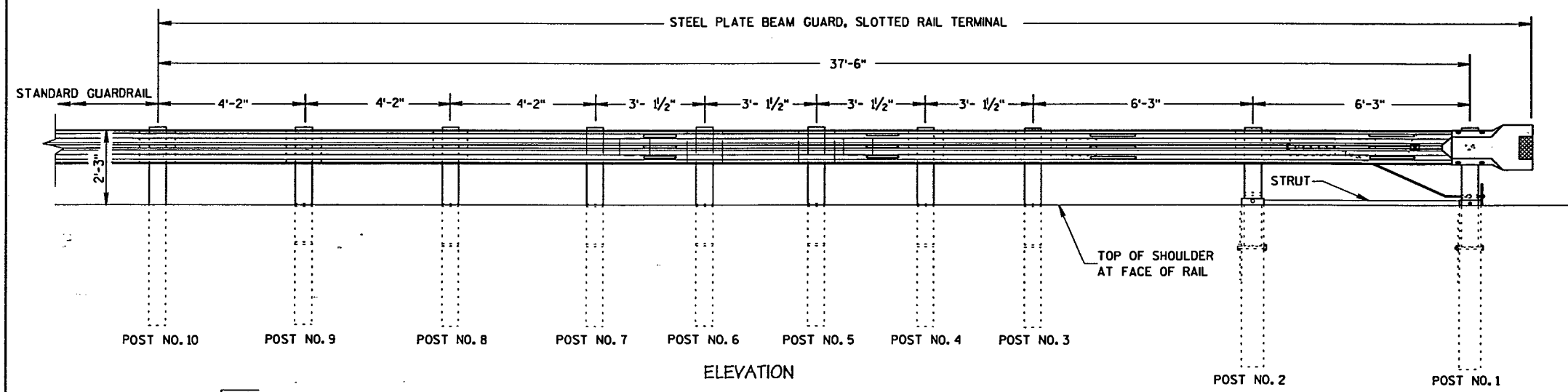
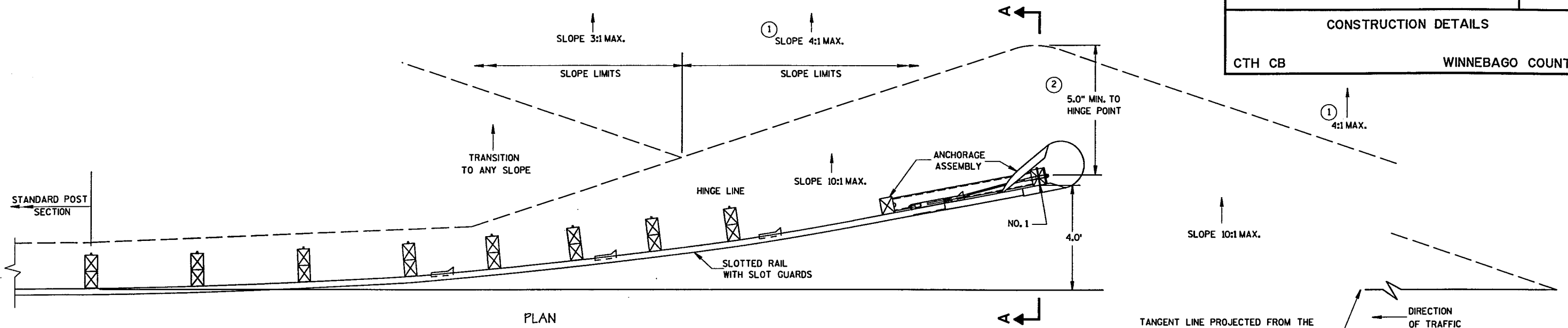
CONCRETE MASONRY ANCHORS SHALL BE CERTIFIED TO PROVIDE A MINIMUM PULLOUT STRENGTH OF 16,000 LBS.

PAYMENT FOR MISCELLANEOUS HARDWARE SHALL BE INCLUDED WITH THE ITEM STEEL PLATE BEAM GUARD, CLASS "A".



ISOMETRIC VIEW
TIMBER GUARD RAIL POST ANCHORS, TYPE 1
(POSTS EMBEDDED 2'-0" OR LESS)

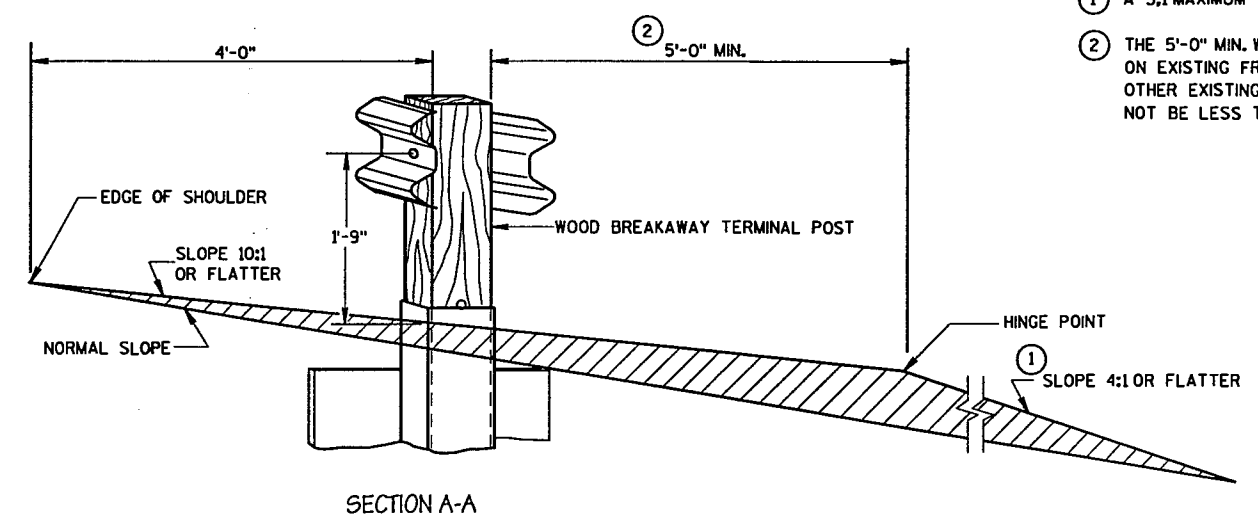
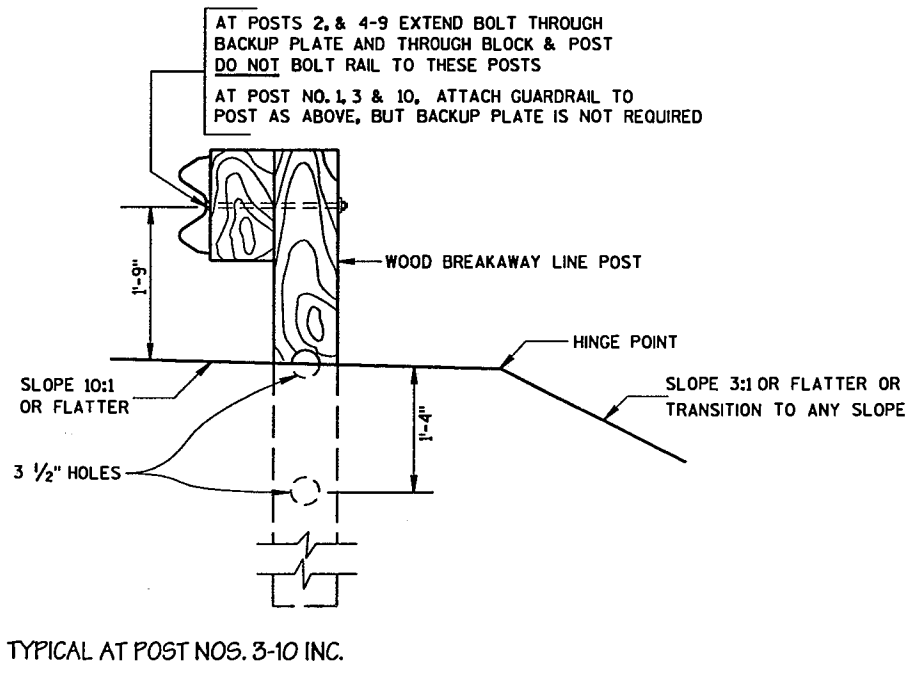
BOX CULVERT
POST MOUNTING DETAIL



NOTE: THE POST OFFSET DIMENSIONS ARE TO THE CENTER OF THE TRAFFIC FACE OF THE BLOCKOUTS EXCEPT FOR POST NO. 1 & 2 WHERE THE DIMENSION IS TO THE CENTER OF THE TRAFFIC FACE OF THE POST.

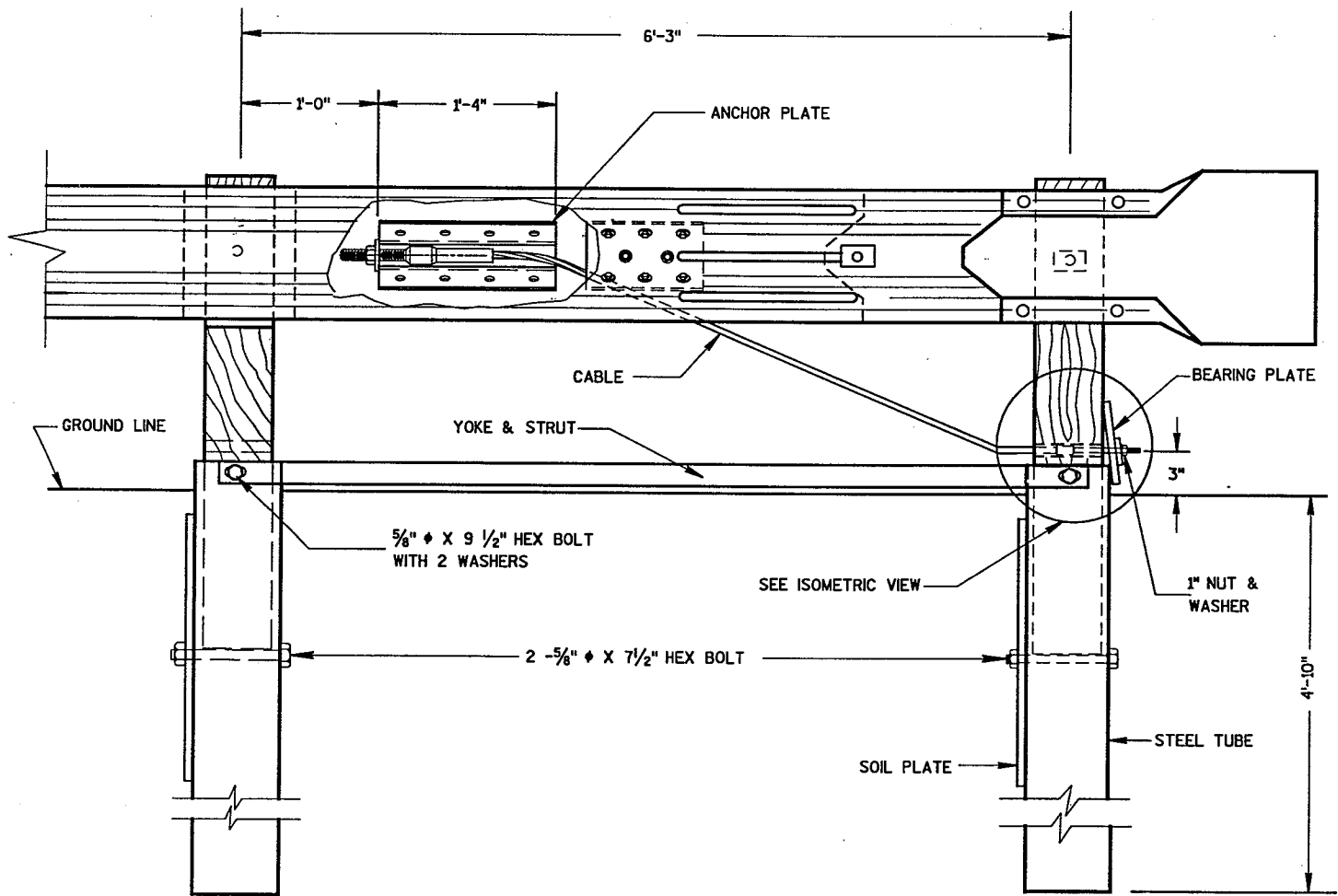
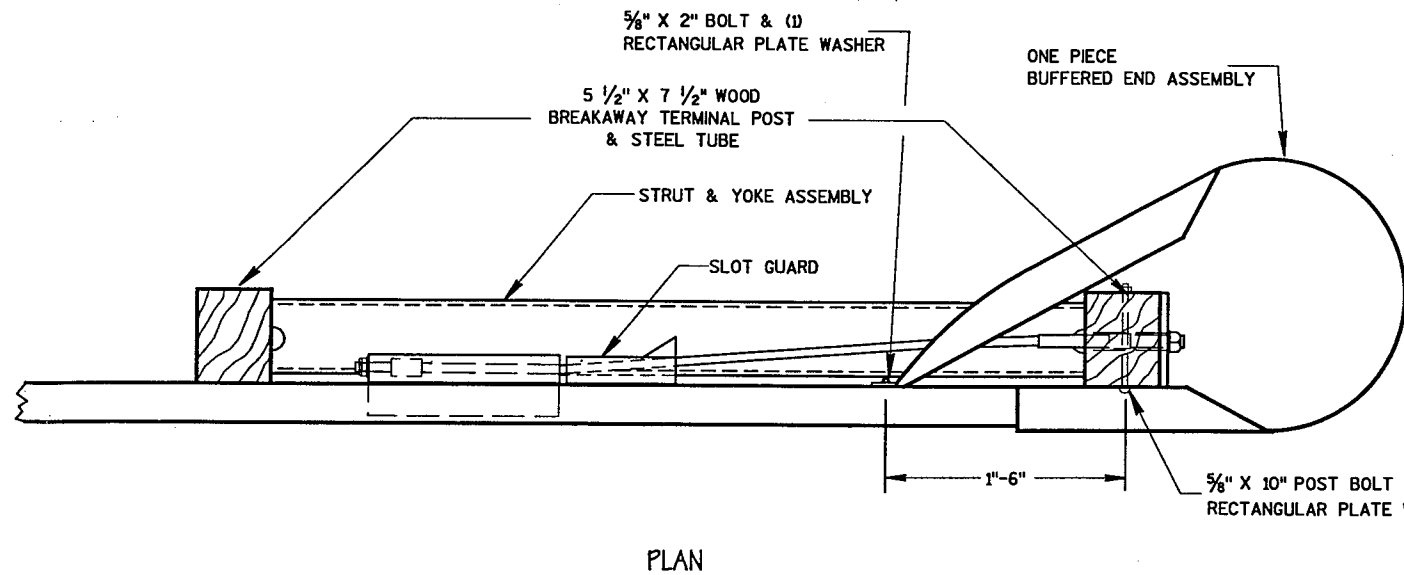
POST OFFSET TABLE

POST NO.	OFFSET
1	4.0'
2	2.8'
3	1.8'
4	1.4'
5	1.0'
6	0.7'
7	0.5'
8	0.2'
9	0.05'
10	NONE

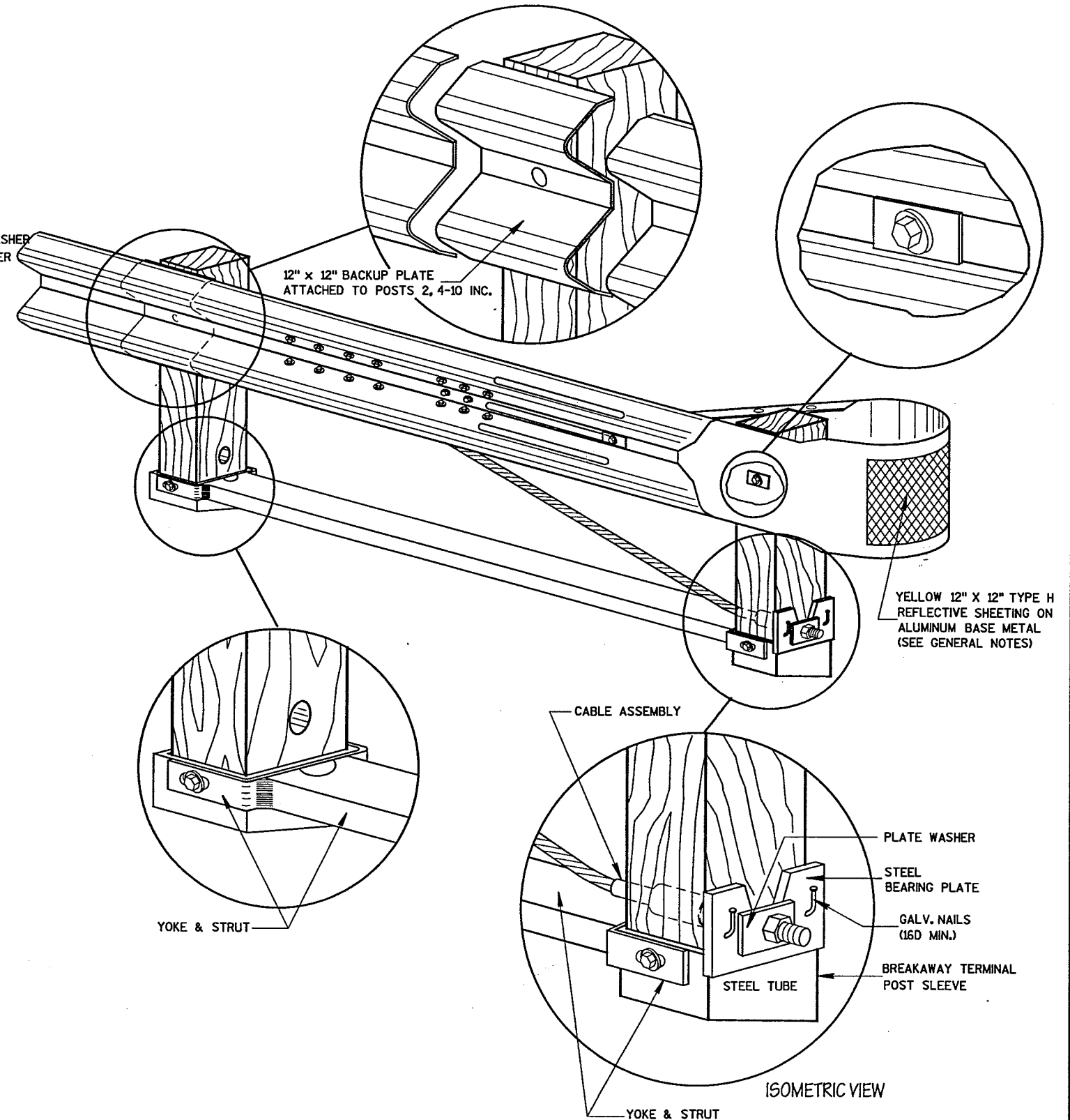


- NOTES:
- ① A 3:1 MAXIMUM SLOPE MAY BE USED FOR INSTALLATIONS ON EXISTING HIGHWAYS.
 - ② THE 5'-0" MIN. WIDTH APPLIES TO ALL NEW CONSTRUCTION AND INSTALLATIONS ON EXISTING FREEWAYS AND EXPRESSWAYS. FOR INSTALLATIONS ON ALL OTHER EXISTING HIGHWAYS, THIS DIMENSION MAY BE REDUCED, BUT SHALL NOT BE LESS THAN 3'-0". SEE CROSS SECTIONS.

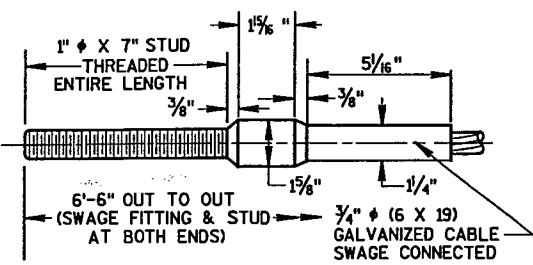
SLOTTED RAIL TERMINAL DETAIL



ANCHORAGE ASSEMBLY

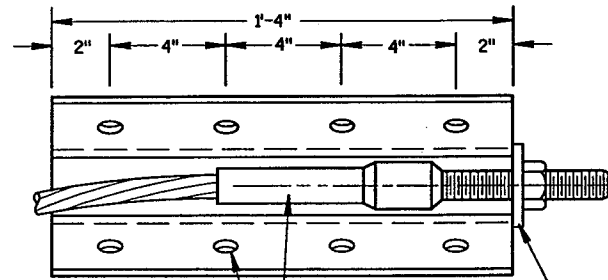


SLOTTED RAIL TERMINAL DETAIL

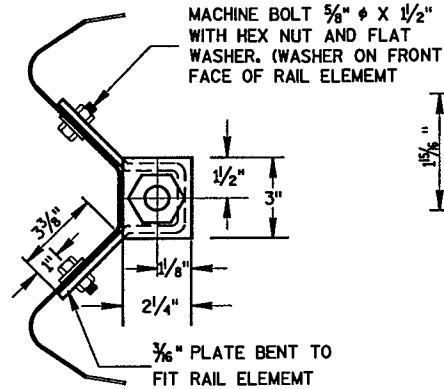


CABLE ASSEMBLY

CABLE, SWAGE FITTING, STUD AND NUT SHALL DEVELOP A MINIMUM BREAKING STRENGTH OF 40,000 LB. (TIGHTEN UNTIL TAUT)

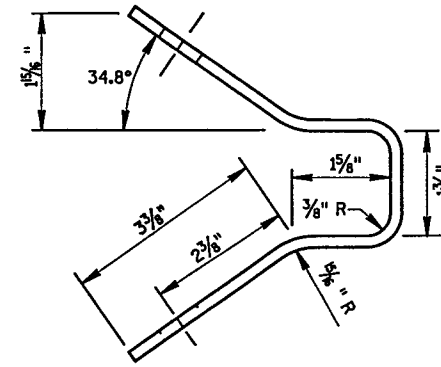


FRONT VIEW



END VIEW

ANCHOR PLATE DETAIL



END 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.

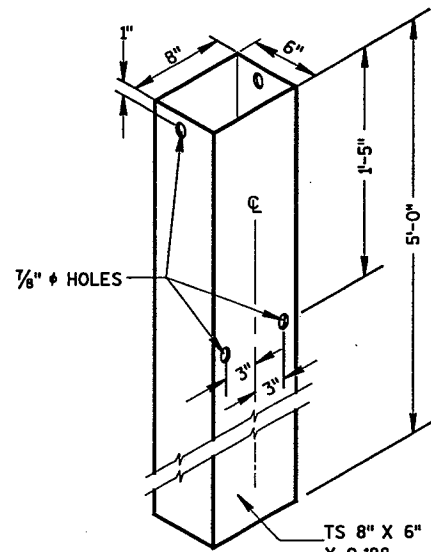
STEEL PLATE BEAM GUARD, SLOTTED RAIL TERMINAL SHALL BE THE SLOTTED RAIL TERMINAL (SRT-350) MANUFACTURED BY SYRO, INC., 2524 N. STEMMONS FREEWAY, DALLAS, TEXAS 75207. TELEPHONE (214) 589-8814, 800 (644-7976)

SLOTTED RAIL TERMINALS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.

POSTS 1 & 2 SHALL BE WOOD BREAKAWAY TERMINAL POSTS INSERTED AND BOLTED INTO STEEL TUBES.

STEEL PLATE BEAM GUARD, SLOTTED RAIL TERMINAL SHALL BE MEASURED IN PLACE AS A UNIT AND PAID FOR AT THE CONTRACT UNIT PRICE EACH.

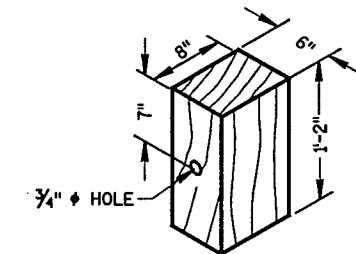
YELLOW TYPE H REFLECTIVE SHEETING ON ALUMINUM BASE MATERIAL SHALL CONFORM TO SECTIONS 637.2.2.2 AND 637.2.3.3 OF THE STANDARD SPECIFICATIONS. THE SHEETING AND BASE SHALL BE CURVED AND ATTACHED TO THE OUTSIDE OF THE BUFFERED END SECTION. ATTACHMENT SHALL BE MADE USING DOUBLE FACED "HI-BOND" TAPE MANUFACTURED BY THE 3M COMPANY, ST PAUL, MN. (SUPPLIED BY CONTRACTOR).



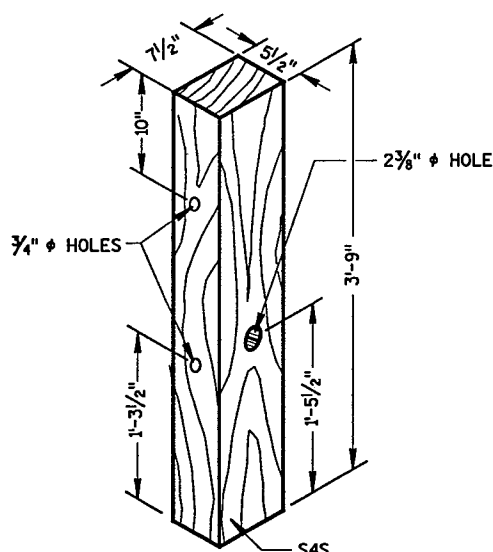
TERMINAL POST (POSTS NO. 1 & 2)

STEEL TUBE

THE STEEL TUBE SHALL CONFORM TO REQUIREMENTS OF ASTM A500

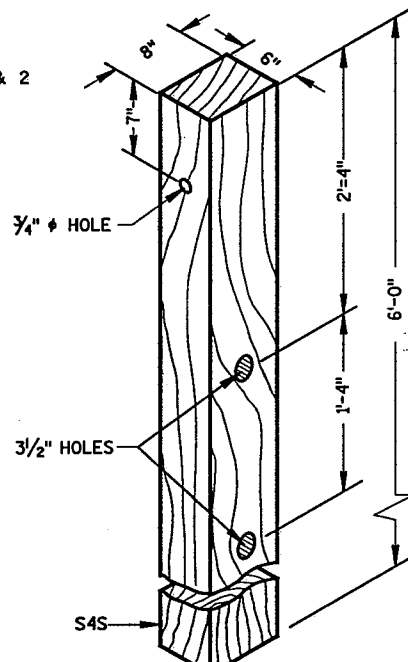


WOOD OFFSET BLOCK
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2

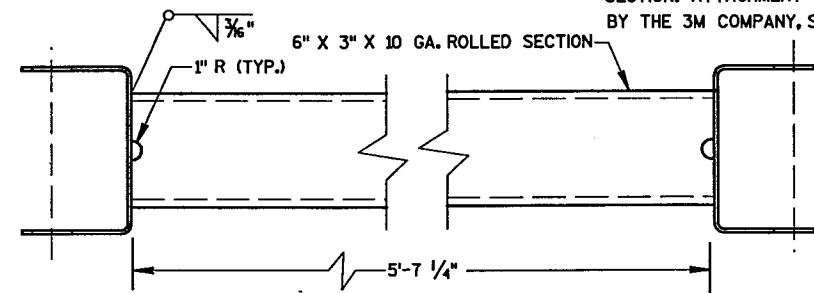


TERMINAL POST (POSTS NO. 1 & 2)

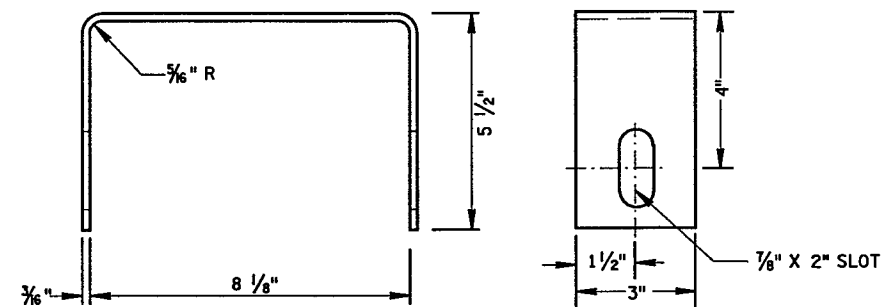
WOOD BREAKAWAY POSTS



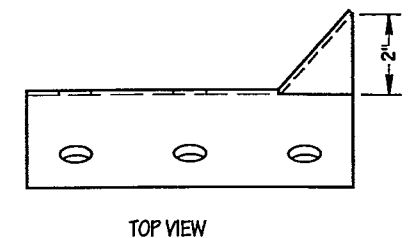
LINE POST (POSTS NO'S 3 - 10)



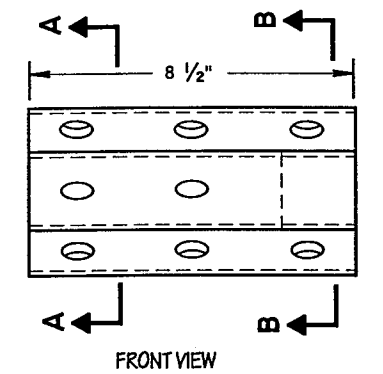
STRUT DETAIL



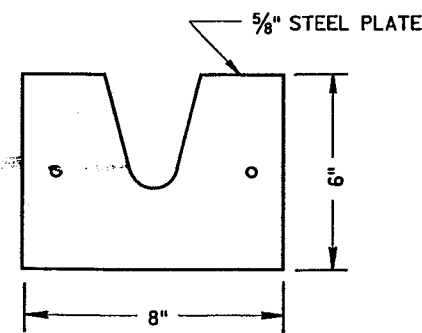
YOKE DETAIL



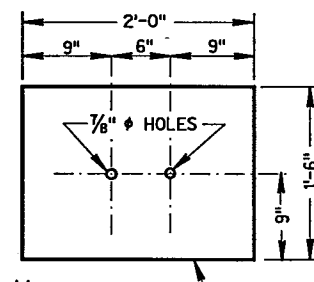
TOP VIEW



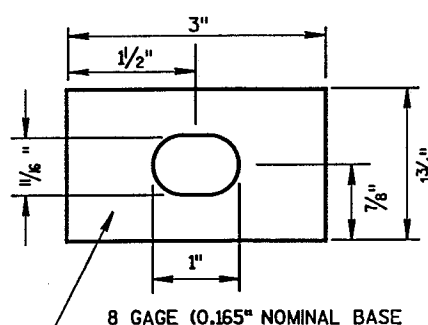
FRONT VIEW



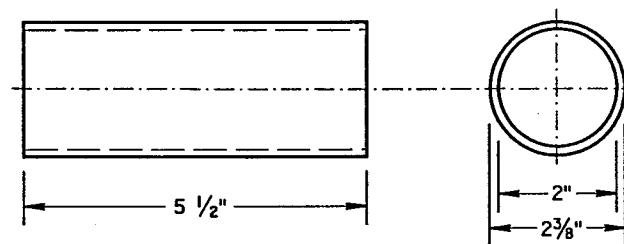
STEEL BEARING PLATE



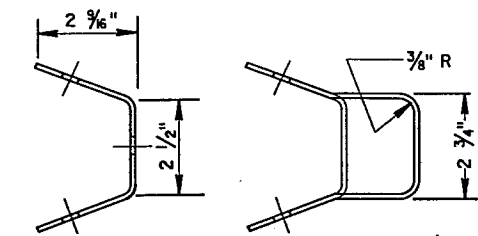
SOIL PLATE



RECTANGULAR PLATE WASHER

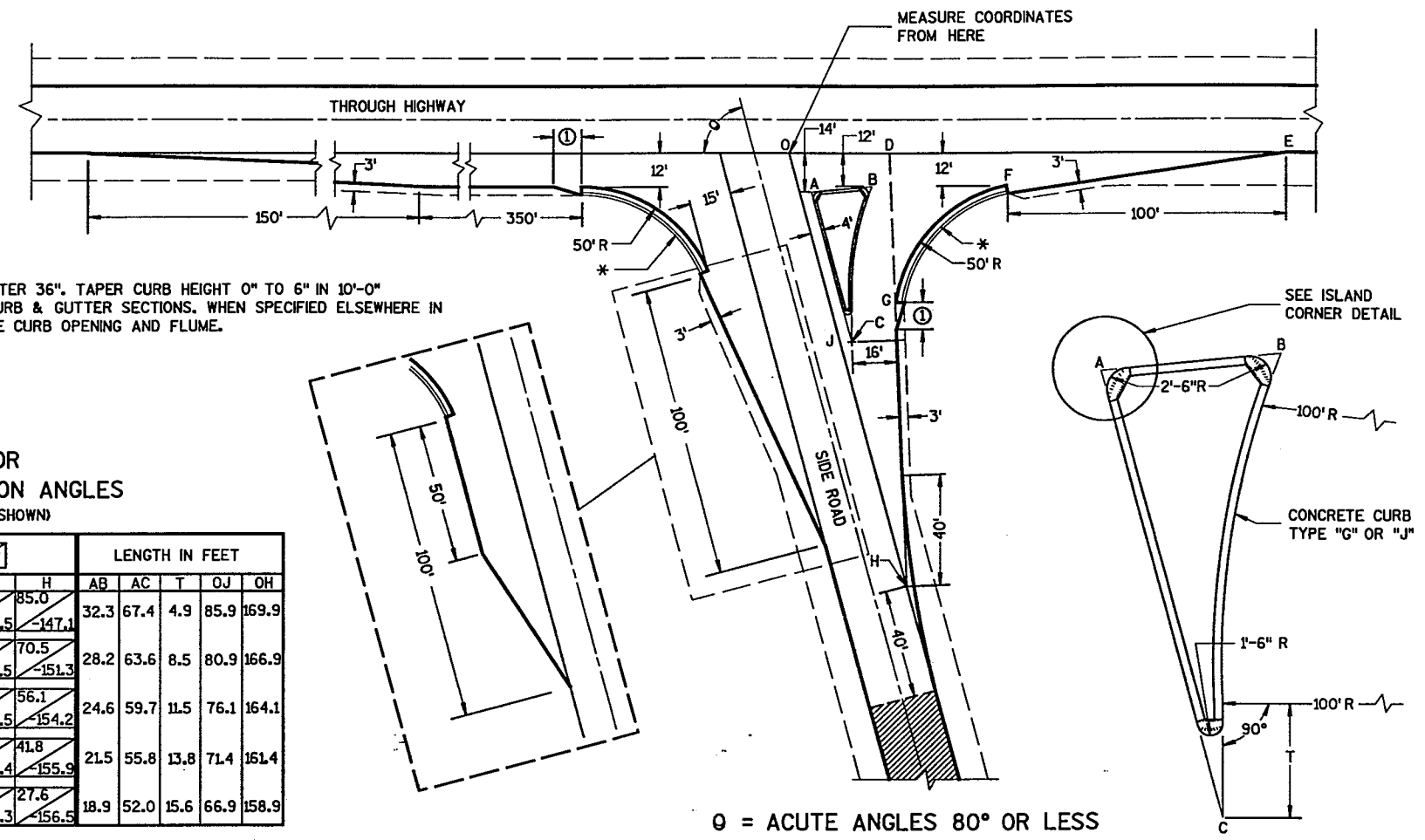
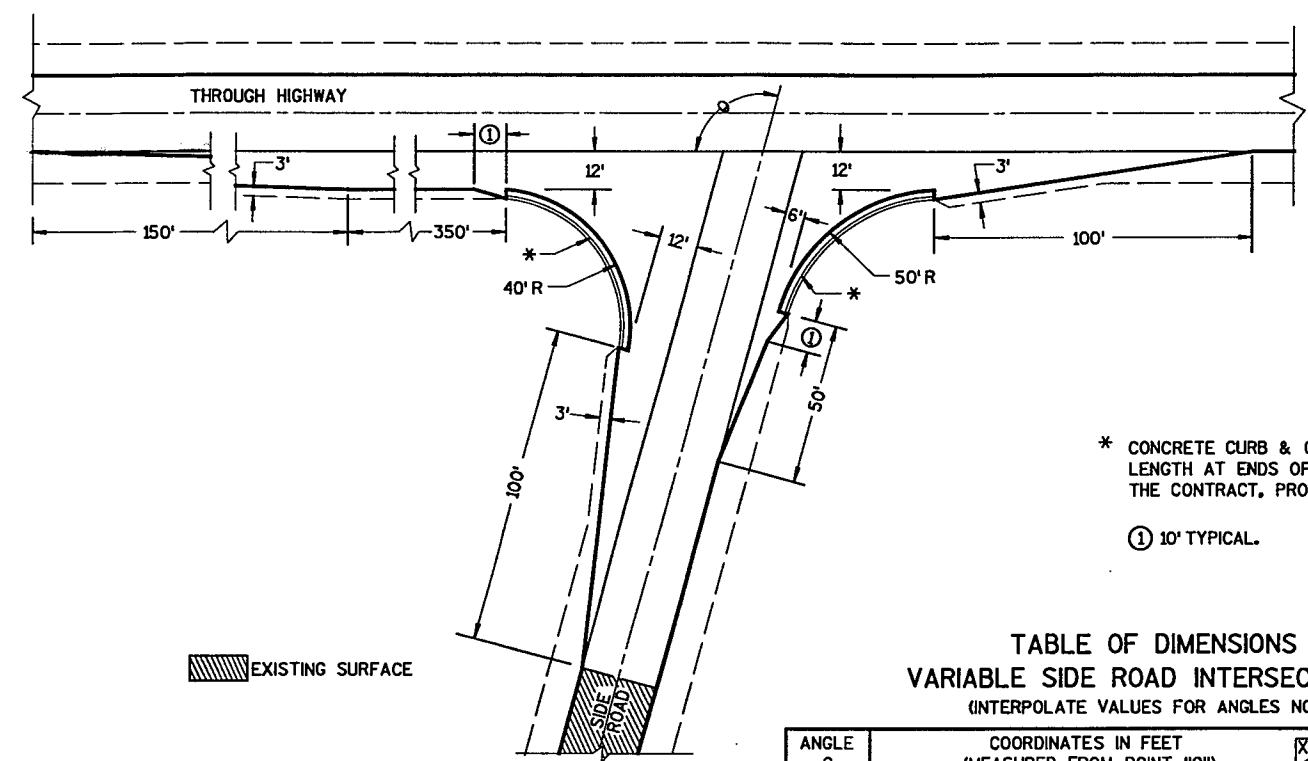


BREAKAWAY TERMINAL POST SLEEVE
STANDARD STRENGTH STEEL PIPE, ASTM A53 GRADE "B"



SECTION A-A
SECTION B-B
SLOT GUARD BRACKET

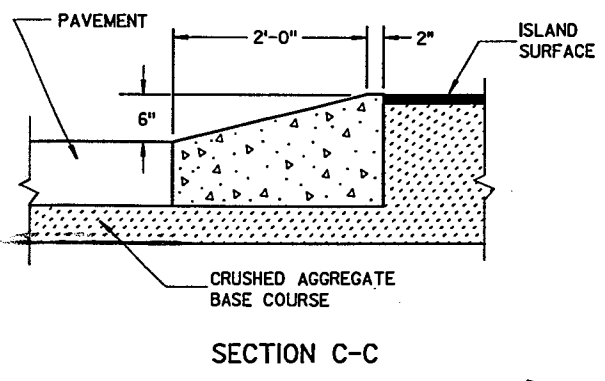
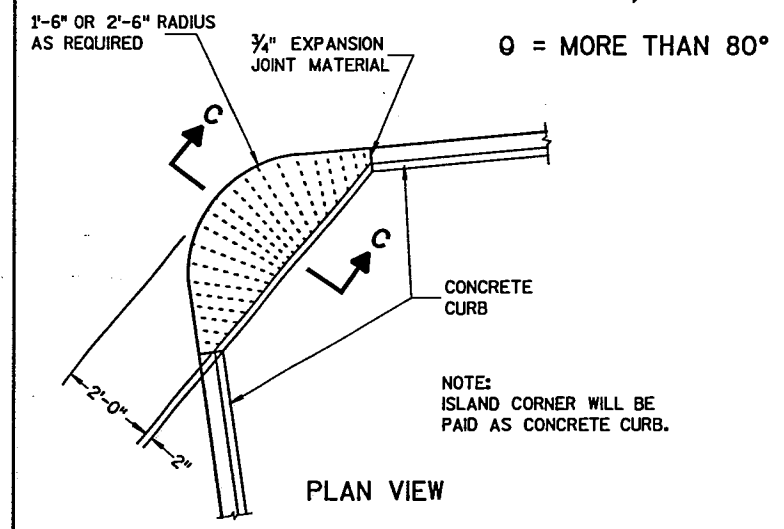
SLOTTED RAIL TERMINAL DETAIL



* CONCRETE CURB & GUTTER 36". TAPER CURB HEIGHT 0" TO 6" IN 10'-0" LENGTH AT ENDS OF CURB & GUTTER SECTIONS. WHEN SPECIFIED ELSEWHERE IN THE CONTRACT, PROVIDE CURB OPENING AND FLUME.
 ① 10' TYPICAL.

TABLE OF DIMENSIONS FOR VARIABLE SIDE ROAD INTERSECTION ANGLES
 (INTERPOLATE VALUES FOR ANGLES NOT SHOWN)

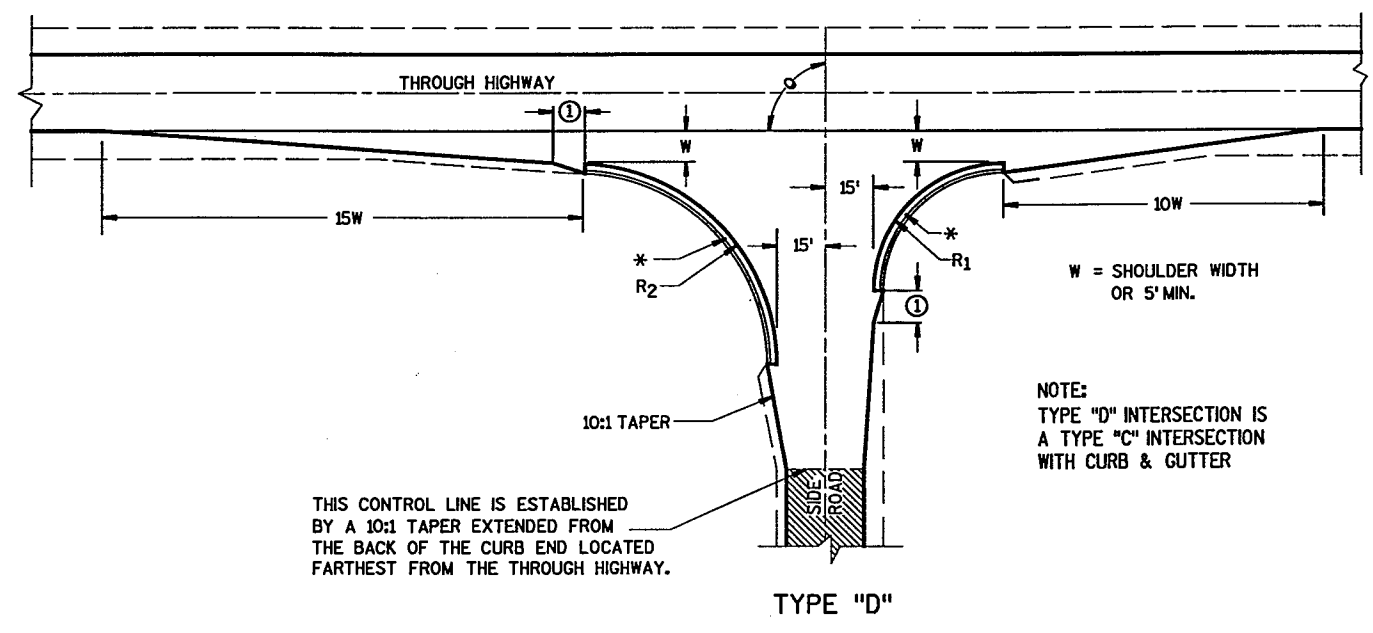
ANGLE θ DEGREES	COORDINATES IN FEET (MEASURED FROM POINT "O")								LENGTH IN FEET				
	A	B	C	D	E	F	G	H	AB	AC	T	OJ	OH
60	12.7	44.9	46.4	41.9	205.0	104.6	64.0	85.0	32.3	67.4	4.9	85.9	169.9
65	10.9	39.0	37.8	39.4	196.1	95.7	54.1	70.5	28.2	63.6	8.5	80.9	166.9
70	9.4	33.9	29.8	37.4	188.3	87.8	45.6	56.1	24.6	59.7	11.5	76.1	164.1
75	7.9	29.3	22.3	35.7	181.2	80.7	38.2	41.8	21.5	55.8	13.8	71.4	161.4
80	6.5	25.4	15.6	34.4	174.8	74.4	31.8	27.6	18.9	52.0	15.6	66.9	158.9



ISLAND CORNER DETAIL
 (TO BE CONSTRUCTED AT ALL ISLAND CORNERS)

TYPE "A" SIDE ROAD INTERSECTION DETAILS

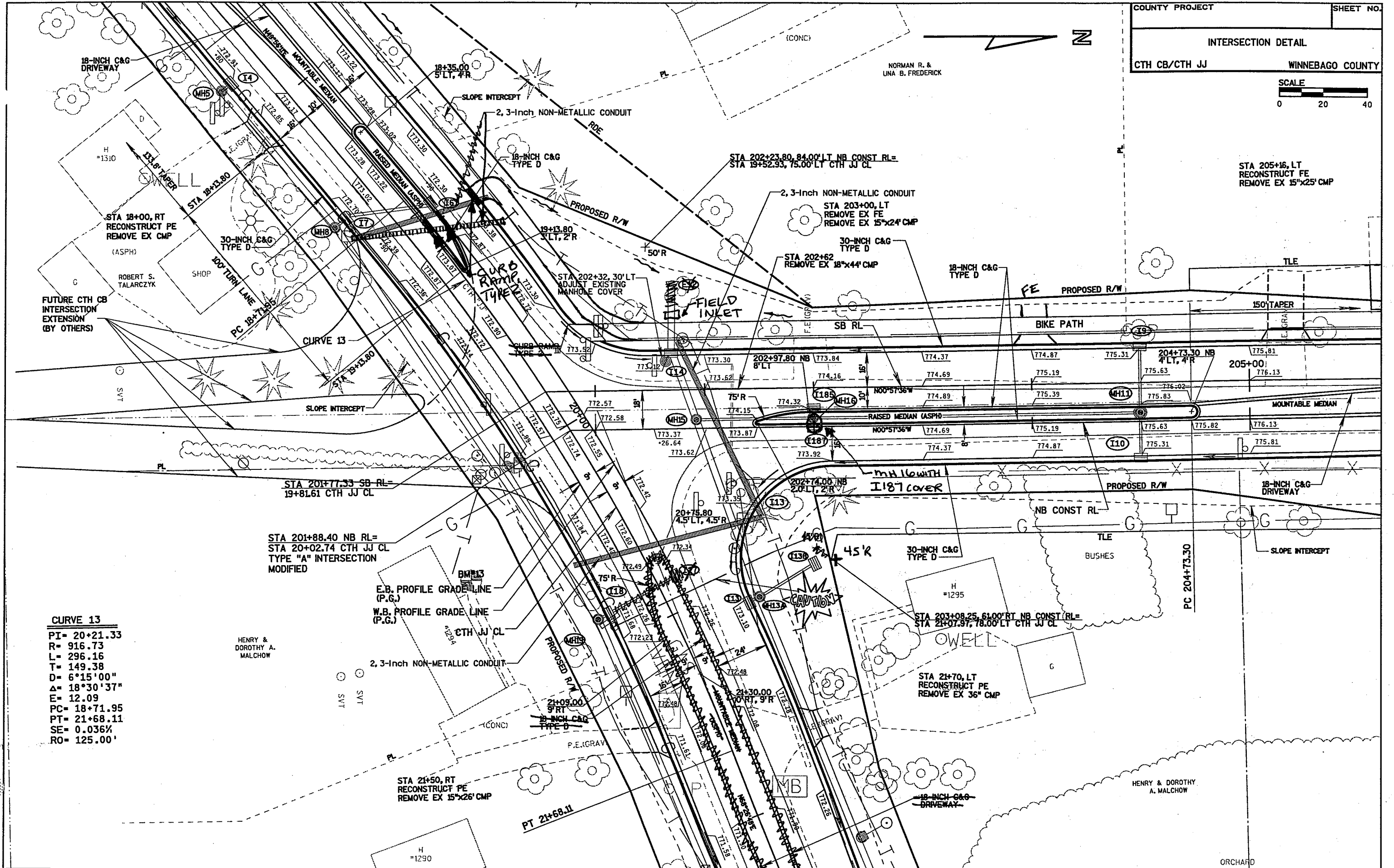
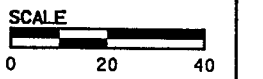
SIDE ROAD WIDENING AND TAPER REQUIRED WHERE THE THROUGH HIGHWAY CARRIES TWO-WAY TRAFFIC
 θ = ACUTE ANGLES 70° OR LESS



NOTE: TYPE "D" INTERSECTION IS A TYPE "C" INTERSECTION WITH CURB & GUTTER

THIS CONTROL LINE IS ESTABLISHED BY A 10:1 TAPER EXTENDED FROM THE BACK OF THE CURB END LOCATED FARTHEST FROM THE THROUGH HIGHWAY.

TYPE "D"



CURVE 13
 PI= 20+21.33
 R= 916.73
 L= 296.16
 T= 149.38
 D= 6°15'00"
 Δ= 18°30'37"
 E= 12.09
 PC= 18+71.95
 PT= 21+68.11
 SE= 0.036%
 RO= 125.00'

STA 20+188.40 NB RL=
 STA 20+02.74 CTH JJ CL
 TYPE "A" INTERSECTION
 MODIFIED

E.B. PROFILE GRADE LINE
 (P.G.)
 W.B. PROFILE GRADE LINE
 (P.G.)
 CTH JJ CL

2, 3-INCH NON-METALLIC CONDUIT
 PROPOSED R/W

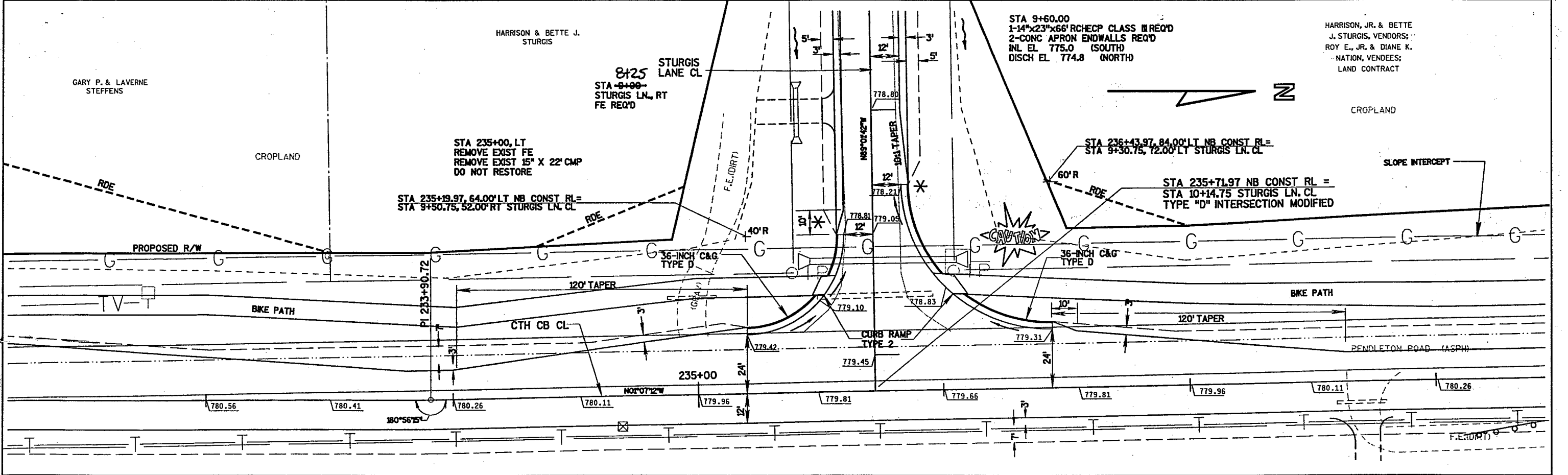
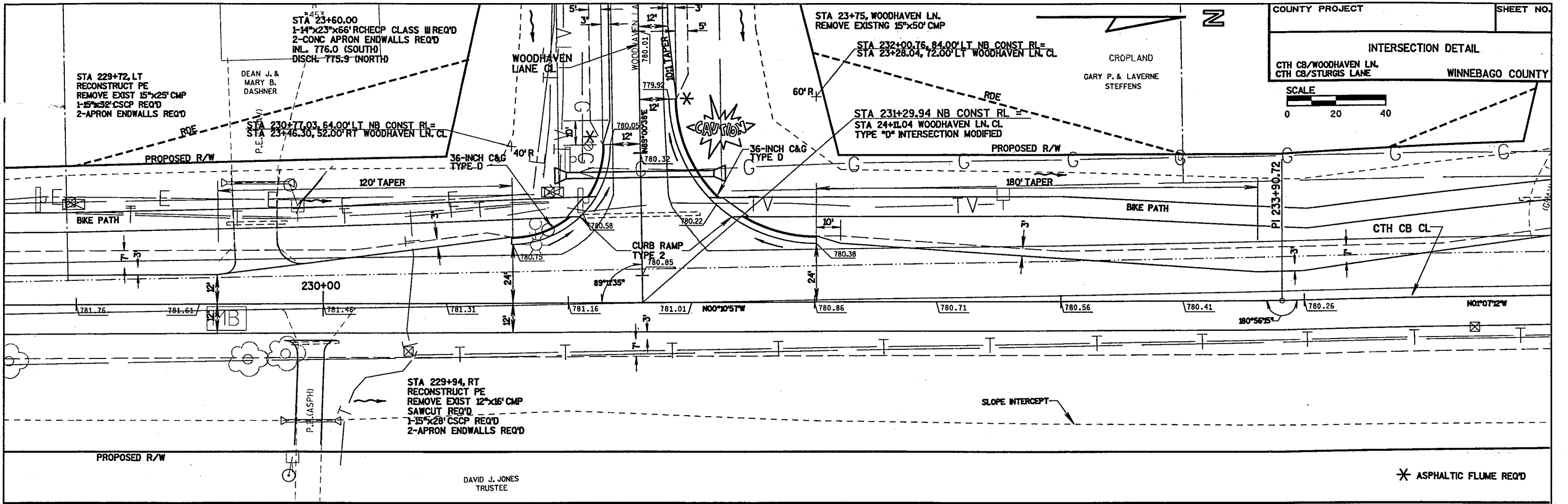
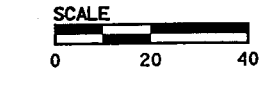
STA 21+50, RT
 RECONSTRUCT PE
 REMOVE EX 15'x26' CMP

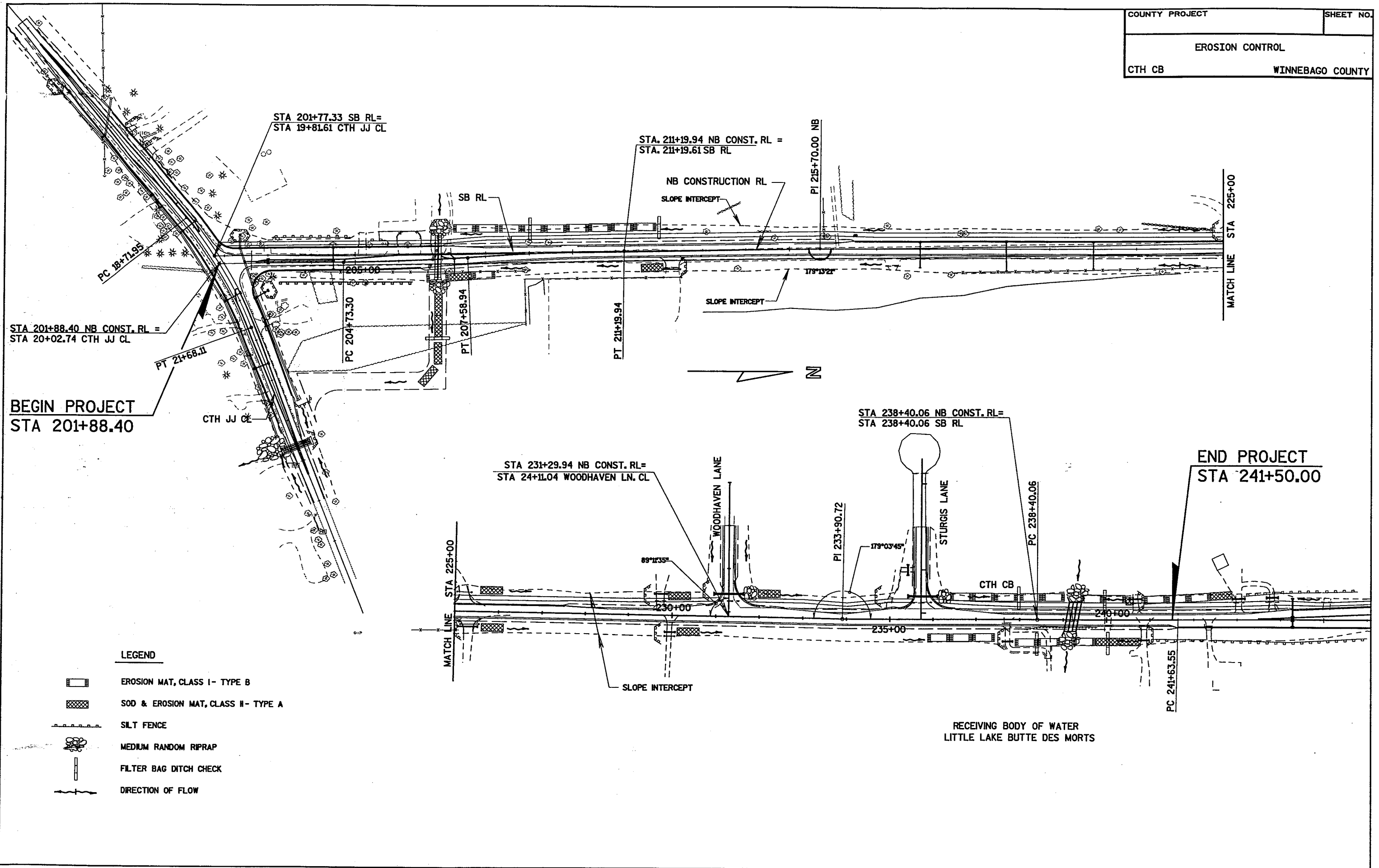
STA 203+08.25, 61.00' RT NB CONST RL=
 STA 21+07.97, 78.00' LT CTH JJ CL

STA 21+70, LT
 RECONSTRUCT PE
 REMOVE EX 36' CMP

STA 205+16, LT
 RECONSTRUCT FE
 REMOVE EX 15'x25' CMP

INTERSECTION DETAIL
CTH CB/WOODHAVEN LN.
CTH CB/STURGIS LANE WINNEBAGO COUNTY











BEGIN PROJECT
STA 201+88.40

END PROJECT
STA 241+50.00

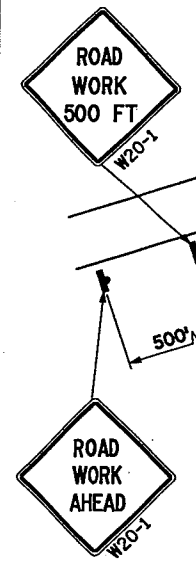
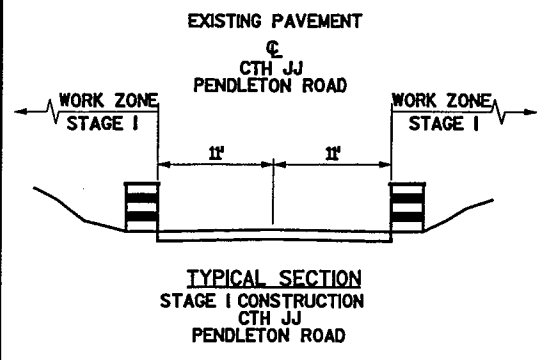
LEGEND

-  EROSION MAT, CLASS I- TYPE B
-  SOD & EROSION MAT, CLASS II- TYPE A
-  SILT FENCE
-  MEDIUM RANDOM RIPRAP
-  FILTER BAG DITCH CHECK
-  DIRECTION OF FLOW

RECEIVING BODY OF WATER
LITTLE LAKE BUTTE DES MORTS

CTH "JJ"- STAGE I

COUNTY PROJECT	SHEET NO
TRAFFIC CONTROL	
CTH CB	WINNEBAGO COUNTY



END CONSTRUCTION
 G20-2
 60" X 24"

STAGE I CONSTRUCTION NOTES

1. GRADE, INSTALL DRAINAGE STRUCTURES AND CONSTRUCT CTH JJ TO CRUSHED AGGREGATE BASE COURSE NORTH AND SOUTH OF EXISTING EDGES OF PAVEMENT.
2. GRADE, INSTALL DRAINAGE STRUCTURES, CONSTRUCT CTH CB TO CRUSHED AGGREGATE BASE COURSE FROM CTH JJ TO PROJECT END, CONSTRUCT EAST AND WEST OF EXISTING PENDLETON ROAD EDGES OF PAVEMENT.

GENERAL TRAFFIC CONTROL NOTES

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

ALL SIGNS INAPPROPRIATE TO THE STATUS OF THE CONTROL ZONE INCLUDING PRE-EXISTING SIGNING IN THE VICINITY, SHALL BE COVERED OR REMOVED AS SPECIFIED IN THE PLANS AND/ OR SPECIAL PROVISIONS.

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

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

CONTINUOUS ACCESS MUST BE PROVIDED FOR ALL BUSINESSES AND RESIDENCES DURING ALL STAGES OF CONSTRUCTION.

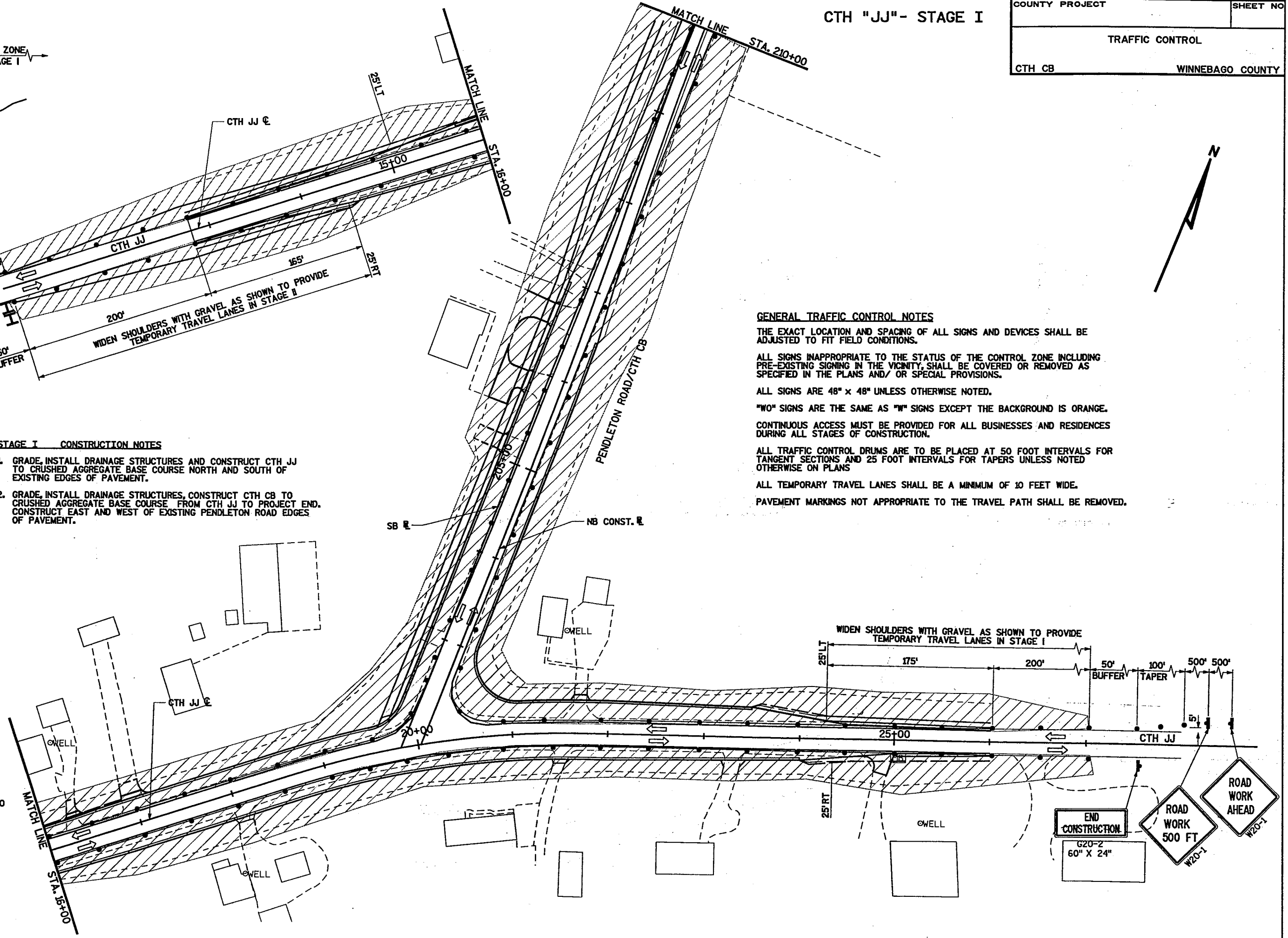
ALL TRAFFIC CONTROL DRUMS ARE TO BE PLACED AT 50 FOOT INTERVALS FOR TANGENT SECTIONS AND 25 FOOT INTERVALS FOR TAPERS UNLESS NOTED OTHERWISE ON PLANS

ALL TEMPORARY TRAVEL LANES SHALL BE A MINIMUM OF 10 FEET WIDE.

PAVEMENT MARKINGS NOT APPROPRIATE TO THE TRAVEL PATH SHALL BE REMOVED.

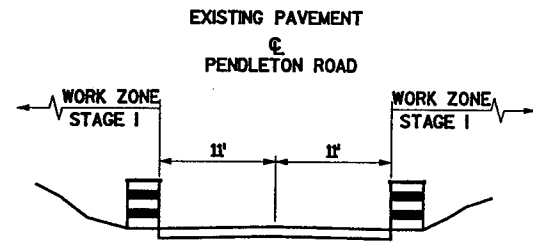


- LEGEND
- † EXISTING SIGN
 - ‡ CONSTRUCTION SIGN
 - ▨ WORK ZONE
 - I TYPE III BARRICADE AND TWO TYPE "A" WARNING LIGHTS (FLASHING)
 - H TYPE III BARRICADE WITH SIGN AND TWO TYPE "A" WARNING LIGHTS (FLASHING)
 - ← DIRECTION OF TRAVEL
 - TRAFFIC CONTROL DRUMS
 - ⊙ TYPE "A" WARNING LIGHT (FLASHING)



CTH "CB"/ WOODHAVEN LANE/STURGIS LANE
STAGE I

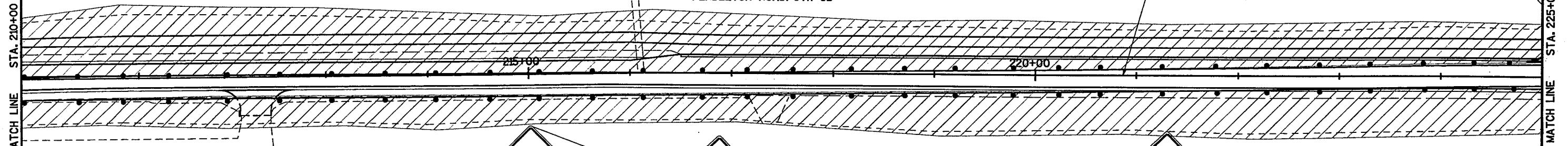
COUNTY PROJECT	SHEET NO
TRAFFIC CONTROL	
CTH CB	WINNEBAGO COUNTY



TYPICAL SECTION
STAGE I CONSTRUCTION
PENDLETON ROAD

PENDLETON ROAD/CTH CB

CONSTRUCTION R



GENERAL TRAFFIC CONTROL NOTES

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

ALL SIGNS INAPPROPRIATE TO THE STATUS OF THE CONTROL ZONE INCLUDING PRE-EXISTING SIGNING IN THE VICINITY, SHALL BE COVERED OR REMOVED AS SPECIFIED IN THE PLANS AND/ OR SPECIAL PROVISIONS.

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

"W0" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

CONTINUOUS ACCESS MUST BE PROVIDED FOR ALL BUSINESSES AND RESIDENCES DURING ALL STAGES OF CONSTRUCTION.

ALL TRAFFIC CONTROL DRUMS ARE TO BE PLACED AT 50 FOOT INTERVALS FOR TANGENT SECTIONS AND 25 FOOT INTERVALS FOR TAPERS UNLESS NOTED OTHERWISE ON PLANS

ALL TEMPORARY TRAVEL LANES SHALL BE A MINIMUM OF 30 FEET WIDE.

W020-4 AND W020-7 SIGNS SHALL BE REMOVED OR COVERED WHEN FLAGGING OPERATIONS ARE NOT IN USE.

PAVEMENT MARKINGS NOT APPROPRIATE TO THE TRAVEL PATH SHALL BE REMOVED.

NOTE: TRAFFIC CONTROL FOR WOODHAVEN LANE SHOWN FOR FLAGGING PERIODS.



OWELL

WOODHAVEN LANE

WOODHAVEN LANE C

CONSTRUCTION R



STURGIS LANE C

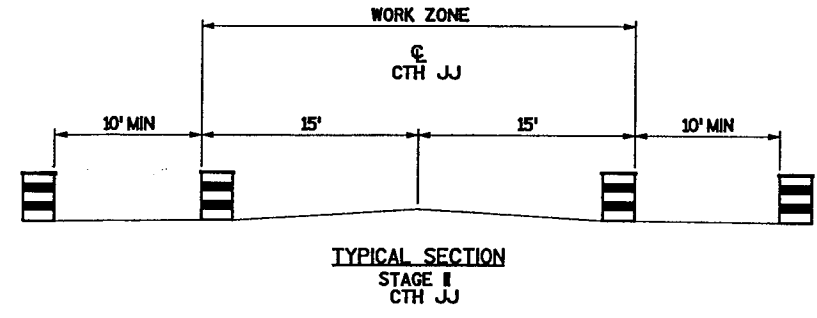
PENDLETON ROAD/CTH CB

LEGEND

- EXISTING SIGN
- CONSTRUCTION SIGN
- WORK ZONE
- TYPE III BARRICADE AND TWO TYPE "A" WARNING LIGHTS (FLASHING)
- TYPE III BARRICADE WITH SIGN AND TWO TYPE "A" WARNING LIGHTS (FLASHING)
- FLAGGER
- DIRECTION OF TRAVEL
- TRAFFIC CONTROL DRUMS
- TYPE "A" WARNING LIGHT (FLASHING)

STAGE I CONSTRUCTION NOTES

1. GRADE, INSTALL DRAINAGE STRUCTURES AND CONSTRUCT SOUTH HALF OF WOODHAVEN LANE/STURGIS LANE TO CRUSHED AGGREGATE BASE COURSE AND GRADE TO MATCH EXISTING PAVEMENT. UPON COMPLETION, CONSTRUCT NORTH HALF AND USE IDENTICAL TRAFFIC CONTROL.



GENERAL TRAFFIC CONTROL NOTES

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

ALL SIGNS INAPPROPRIATE TO THE STATUS OF THE CONTROL ZONE INCLUDING PRE-EXISTING SIGNING IN THE VICINITY, SHALL BE COVERED OR REMOVED AS SPECIFIED IN THE PLANS AND/ OR SPECIAL PROVISIONS.

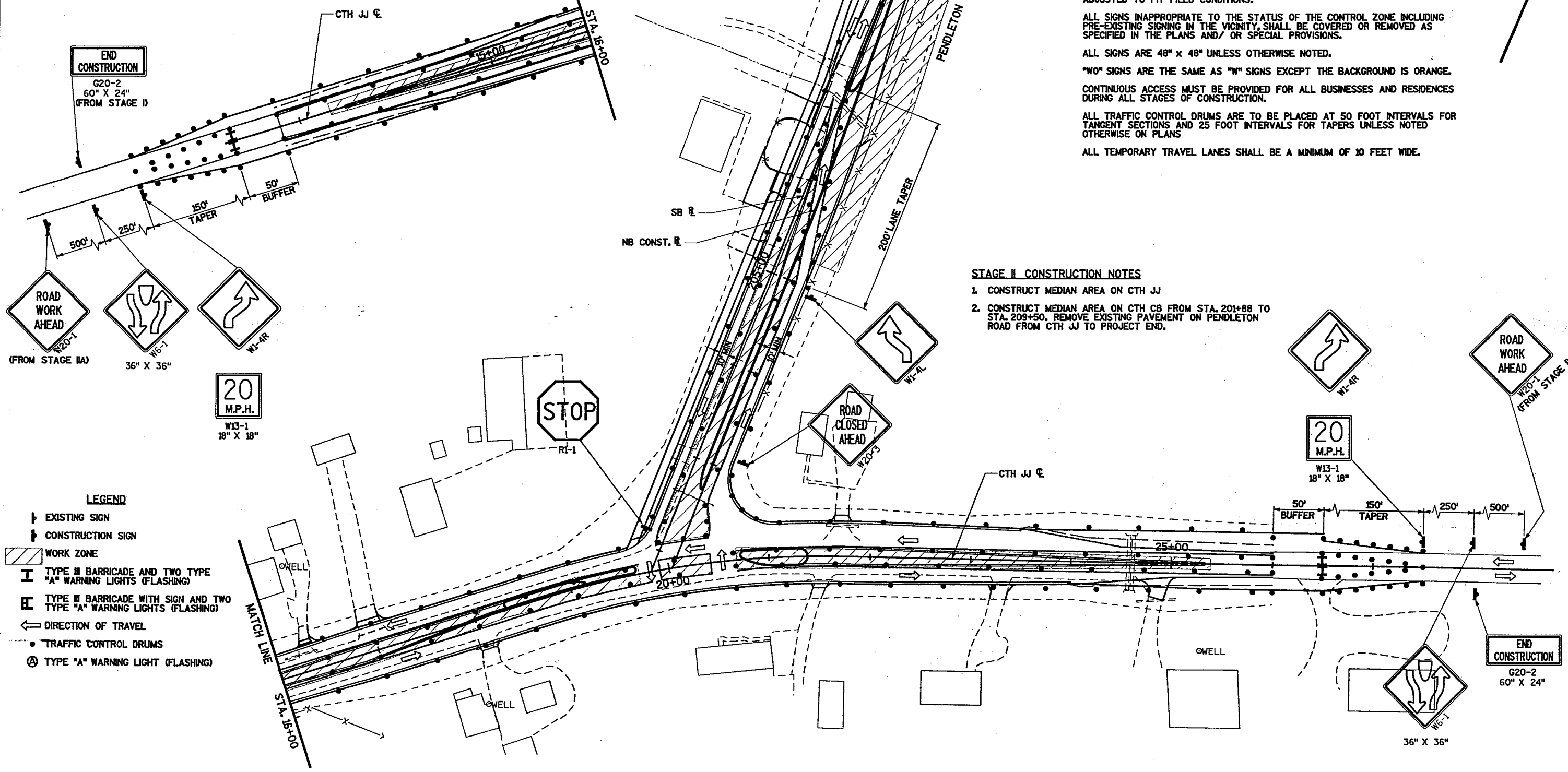
ALL SIGNS ARE 48" x 48" UNLESS OTHERWISE NOTED.

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

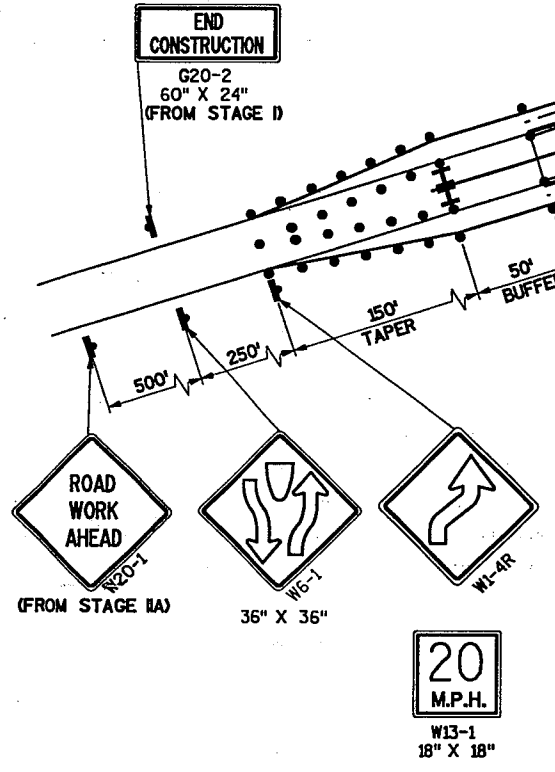
CONTINUOUS ACCESS MUST BE PROVIDED FOR ALL BUSINESSES AND RESIDENCES DURING ALL STAGES OF CONSTRUCTION.

ALL TRAFFIC CONTROL DRUMS ARE TO BE PLACED AT 50 FOOT INTERVALS FOR TANGENT SECTIONS AND 25 FOOT INTERVALS FOR TAPERS UNLESS NOTED OTHERWISE ON PLANS

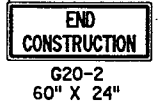
ALL TEMPORARY TRAVEL LANES SHALL BE A MINIMUM OF 10 FEET WIDE.



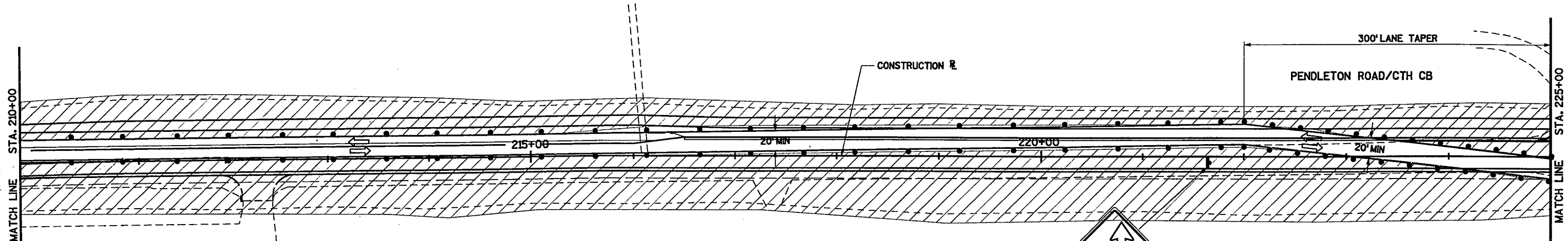
- STAGE II CONSTRUCTION NOTES**
1. CONSTRUCT MEDIAN AREA ON CTH JJ
 2. CONSTRUCT MEDIAN AREA ON CTH CB FROM STA. 201+88 TO STA. 209+50. REMOVE EXISTING PAVEMENT ON PENDLETON ROAD FROM CTH JJ TO PROJECT END.



- LEGEND**
- EXISTING SIGN
 - CONSTRUCTION SIGN
 - WORK ZONE
 - TYPE III BARRICADE AND TWO TYPE "A" WARNING LIGHTS (FLASHING)
 - TYPE III BARRICADE WITH SIGN AND TWO TYPE "A" WARNING LIGHTS (FLASHING)
 - DIRECTION OF TRAVEL
 - TRAFFIC CONTROL DRUMS
 - TYPE "A" WARNING LIGHT (FLASHING)



CTH "CB" / WOODHAVEN LANE / STURGIS LANE
STAGE II



GENERAL TRAFFIC CONTROL NOTES

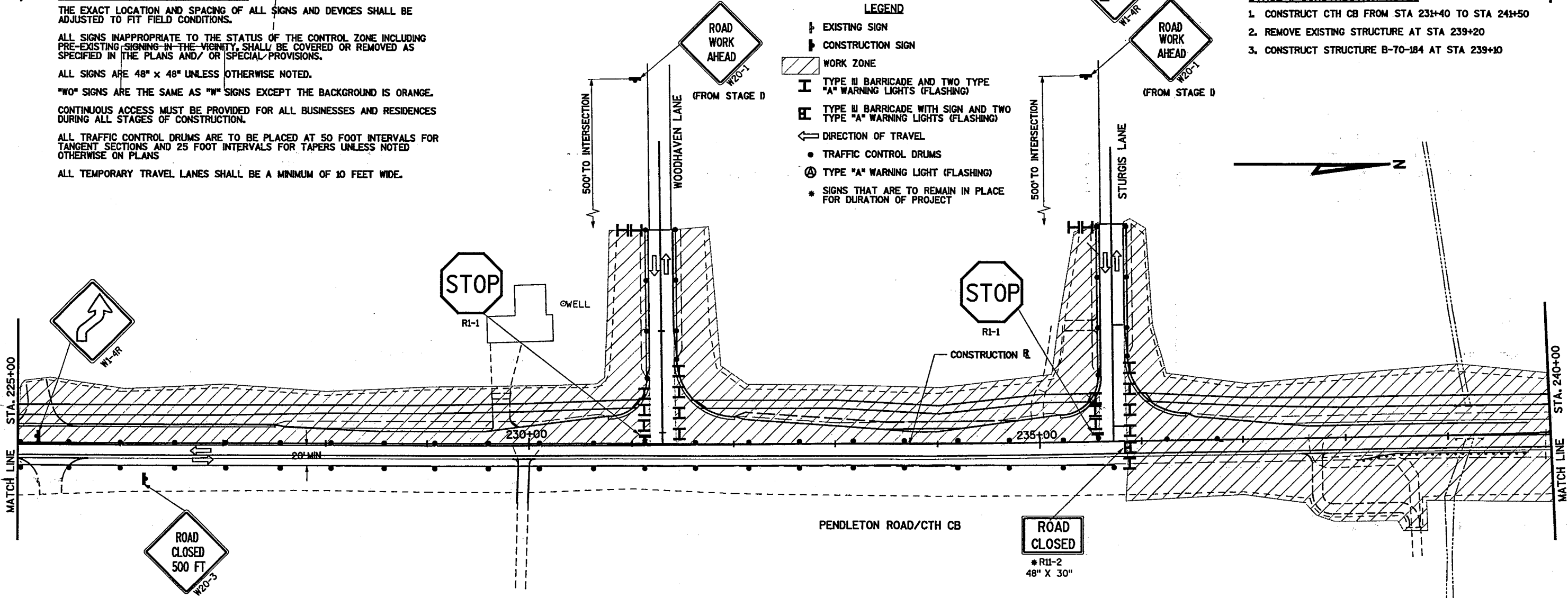
- THE EXACT LOCATION AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS.
- ALL SIGNS INAPPROPRIATE TO THE STATUS OF THE CONTROL ZONE INCLUDING PRE-EXISTING SIGNING IN THE VICINITY SHALL BE COVERED OR REMOVED AS SPECIFIED IN THE PLANS AND/OR SPECIAL PROVISIONS.
- ALL SIGNS ARE 48" x 48" UNLESS OTHERWISE NOTED.
- "WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.
- CONTINUOUS ACCESS MUST BE PROVIDED FOR ALL BUSINESSES AND RESIDENCES DURING ALL STAGES OF CONSTRUCTION.
- ALL TRAFFIC CONTROL DRUMS ARE TO BE PLACED AT 50 FOOT INTERVALS FOR TANGENT SECTIONS AND 25 FOOT INTERVALS FOR TAPERS UNLESS NOTED OTHERWISE ON PLANS
- ALL TEMPORARY TRAVEL LANES SHALL BE A MINIMUM OF 10 FEET WIDE.

LEGEND

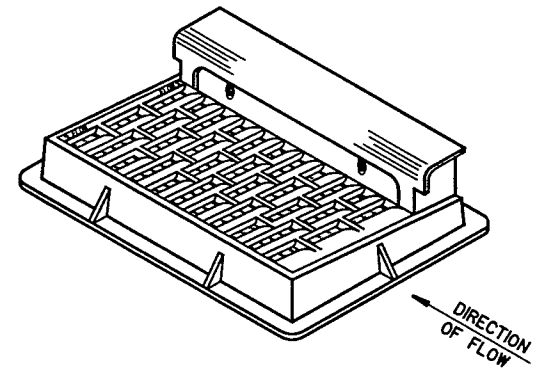
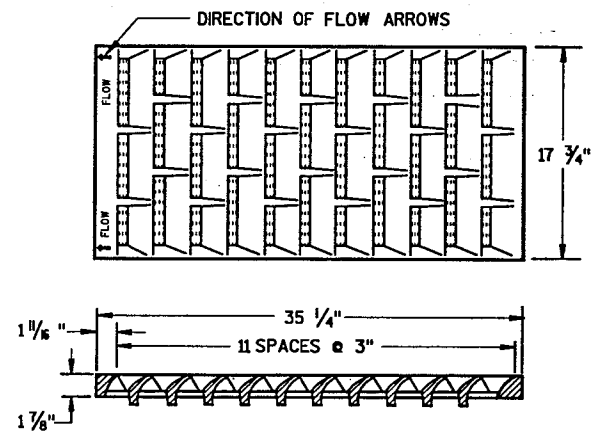
- EXISTING SIGN
- CONSTRUCTION SIGN
- WORK ZONE
- TYPE III BARRICADE AND TWO TYPE "A" WARNING LIGHTS (FLASHING)
- TYPE III BARRICADE WITH SIGN AND TWO TYPE "A" WARNING LIGHTS (FLASHING)
- DIRECTION OF TRAVEL
- TRAFFIC CONTROL DRUMS
- TYPE "A" WARNING LIGHT (FLASHING)
- SIGNS THAT ARE TO REMAIN IN PLACE FOR DURATION OF PROJECT

STAGE II CONSTRUCTION NOTES

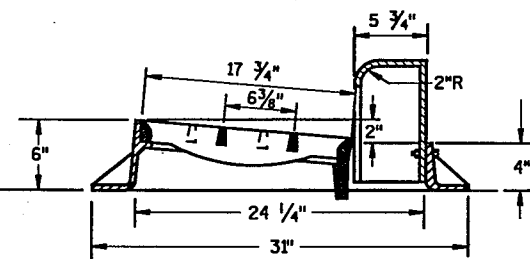
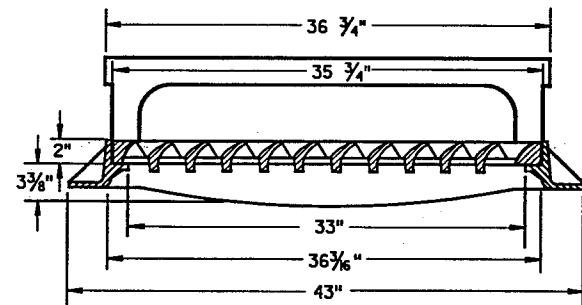
1. CONSTRUCT CTH CB FROM STA 231+40 TO STA 241+50
2. REMOVE EXISTING STRUCTURE AT STA 239+20
3. CONSTRUCT STRUCTURE B-70-184 AT STA 239+10



NOTE:
GRATE IS REVERSIBLE.

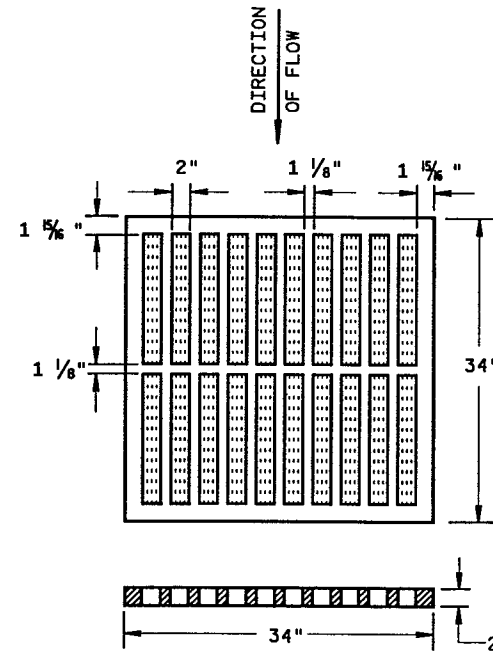


NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"



TYPE "H"

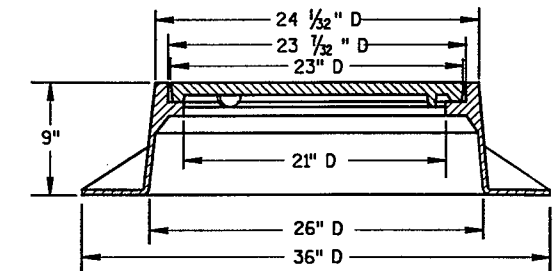
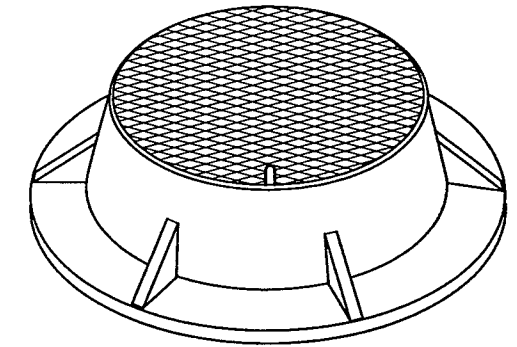
(APPROXIMATE WEIGHT 422 LBS.)
 FRAME..... 175 LBS.
 GRATE..... 138 LBS.
 CURB BOX..... 109 LBS.



TYPE "MS"

(APPROXIMATE GRATE WEIGHT 270 LBS.)
 GRATE..... 270 LBS.

USE ON FREEWAYS AND EXPRESSWAYS
 NOTED AS TYPE MS ON DRAINAGE TABLE



TYPE "J"

(APPROXIMATE WEIGHT 250 LBS.)
 FRAME..... 135 LBS.
 LID..... 115 LBS.

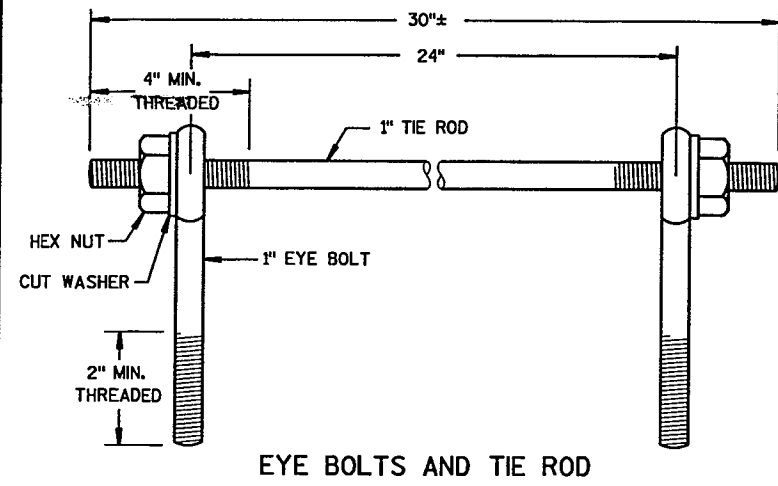
GENERAL NOTES

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.

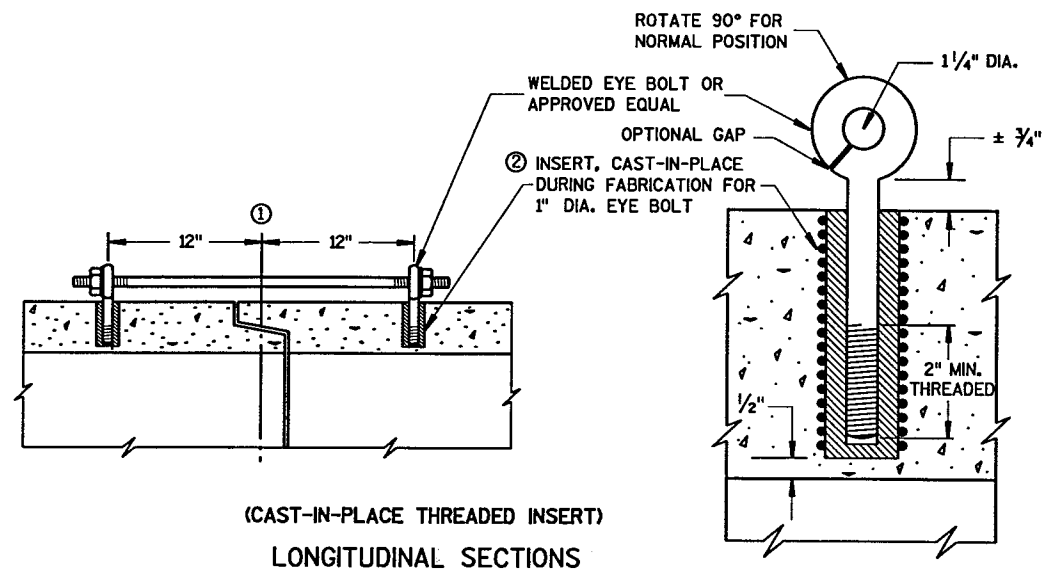
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

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.

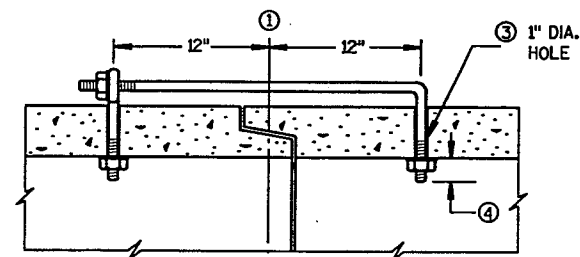


EYE BOLTS AND TIE ROD

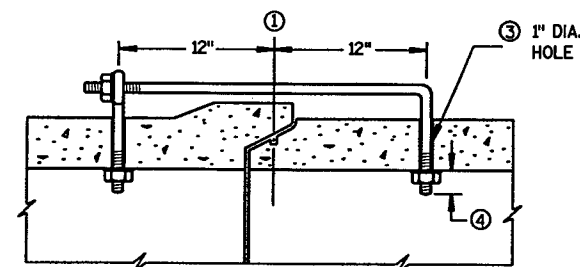


(CAST-IN-PLACE THREADED INSERT)
LONGITUDINAL SECTIONS

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



(TONGUE & GROOVE PIPE)



(MODIFIED BELL PIPE)
LONGITUDINAL SECTION

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 INDICATED ON THE PLANS AND BY THIS DETAIL WILL BE CONSIDERED INCIDENTAL TO CULVERT PIPE, REINFORCED CONCRETE CULVERT PIPE, OR REINFORCED CONCRETE PIPE CATTLE PASS.

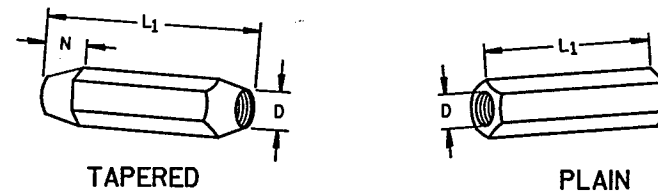
DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR JOINT TIES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

- ① C 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 C 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.

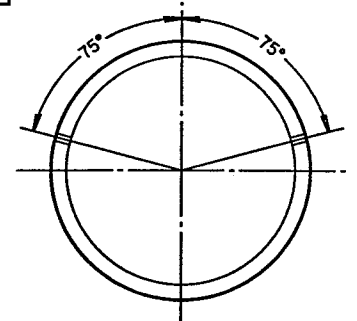
ADJUSTABLE TIE ROD TABLE

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 1/8

DIMENSIONS SHOWN ARE IN INCHES

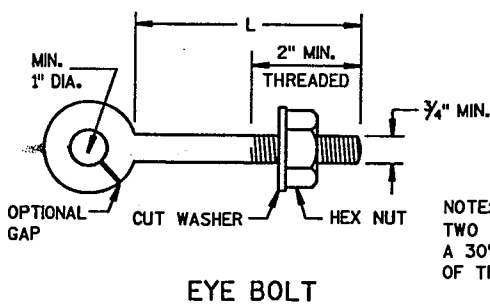


TAPERED PLAIN
RIGHT AND LEFT THREADS
SLEEVE NUTS



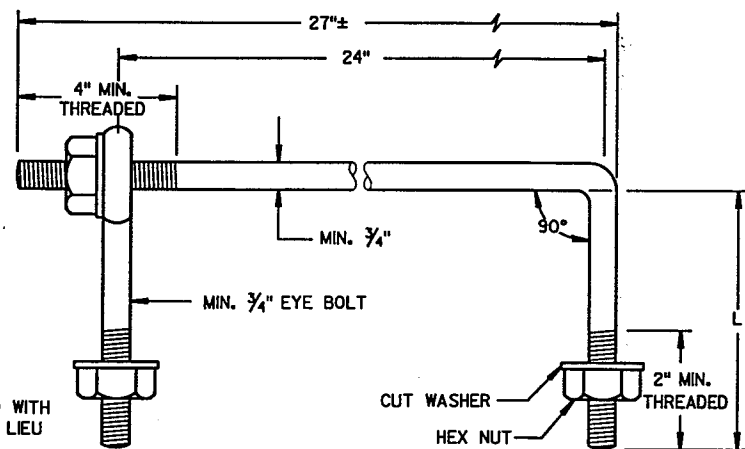
PLACEMENT OF (2) CAST-IN-PLACE INSERTS OR HOLES DURING FABRICATION FOR PIPE SECTIONS REQUIRING TIE RODS

TRANSVERSE SECTION



EYE BOLT

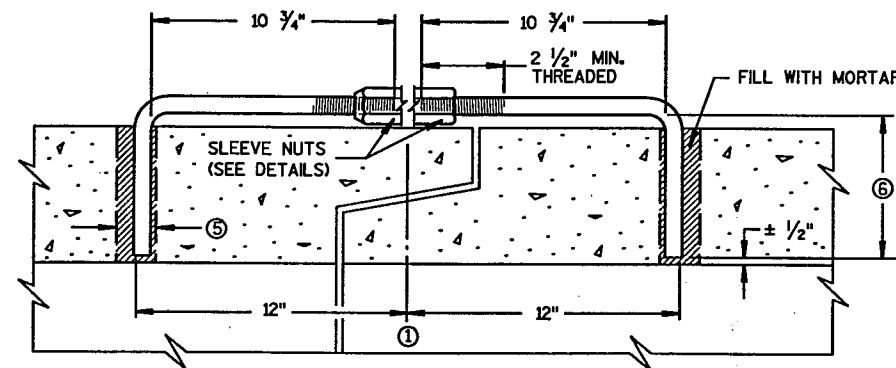
NOTE:
TWO EYE BOLTS MAY BE USED WITH A 30" LONG THREADED ROD IN LIEU OF THE 90° BENT TIE ROD.



EYE BOLT AND TIE ROD

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

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



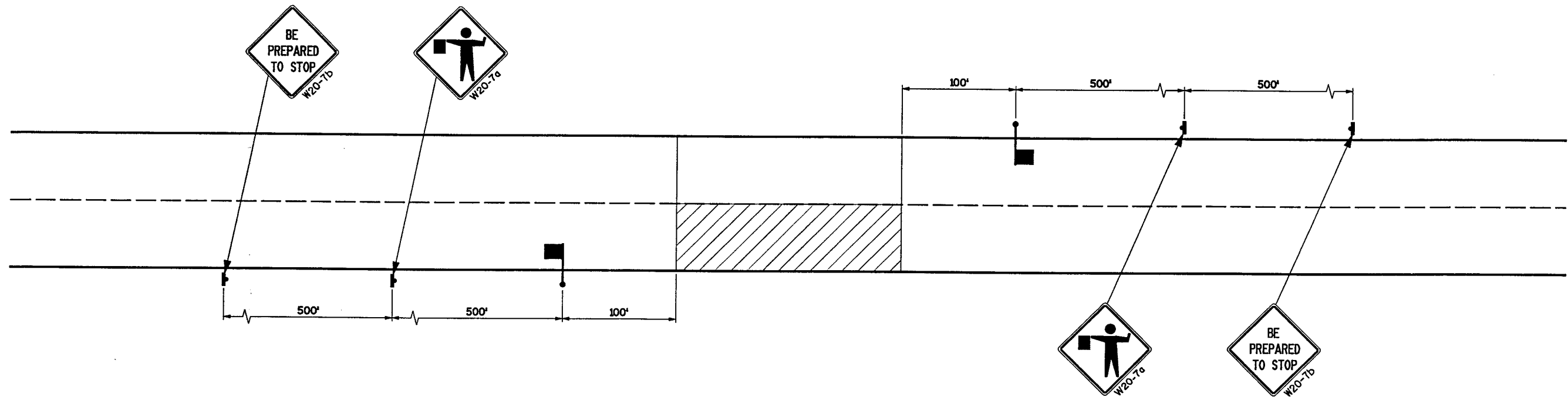
LONGITUDINAL SECTION

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

ADJUSTABLE TIE ROD (ALTERNATE NO. 3)

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"	



GENERAL TRAFFIC CONTROL NOTES

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

ALL SIGNS INAPPROPRIATE TO THE STATUS OF THE CONTROL ZONE INCLUDING PRE-EXISTING SIGNING IN THE VICINITY, SHALL BE COVERED OR REMOVED AS SPECIFIED IN THE PLANS AND/ OR SPECIAL PROVISIONS.

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









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

CONTINUOUS ACCESS MUST BE PROVIDED FOR ALL BUSINESSES AND RESIDENCES DURING ALL STAGES OF CONSTRUCTION.

ALL TRAFFIC CONTROL DRUMS ARE TO BE PLACED AT 50 FOOT INTERVALS FOR TANGENT SECTIONS AND 25 FOOT INTERVALS FOR TAPERS UNLESS NOTED OTHERWISE ON PLANS

ALL TEMPORARY TRAVEL LANES SHALL BE A MINIMUM OF 10 FEET WIDE.

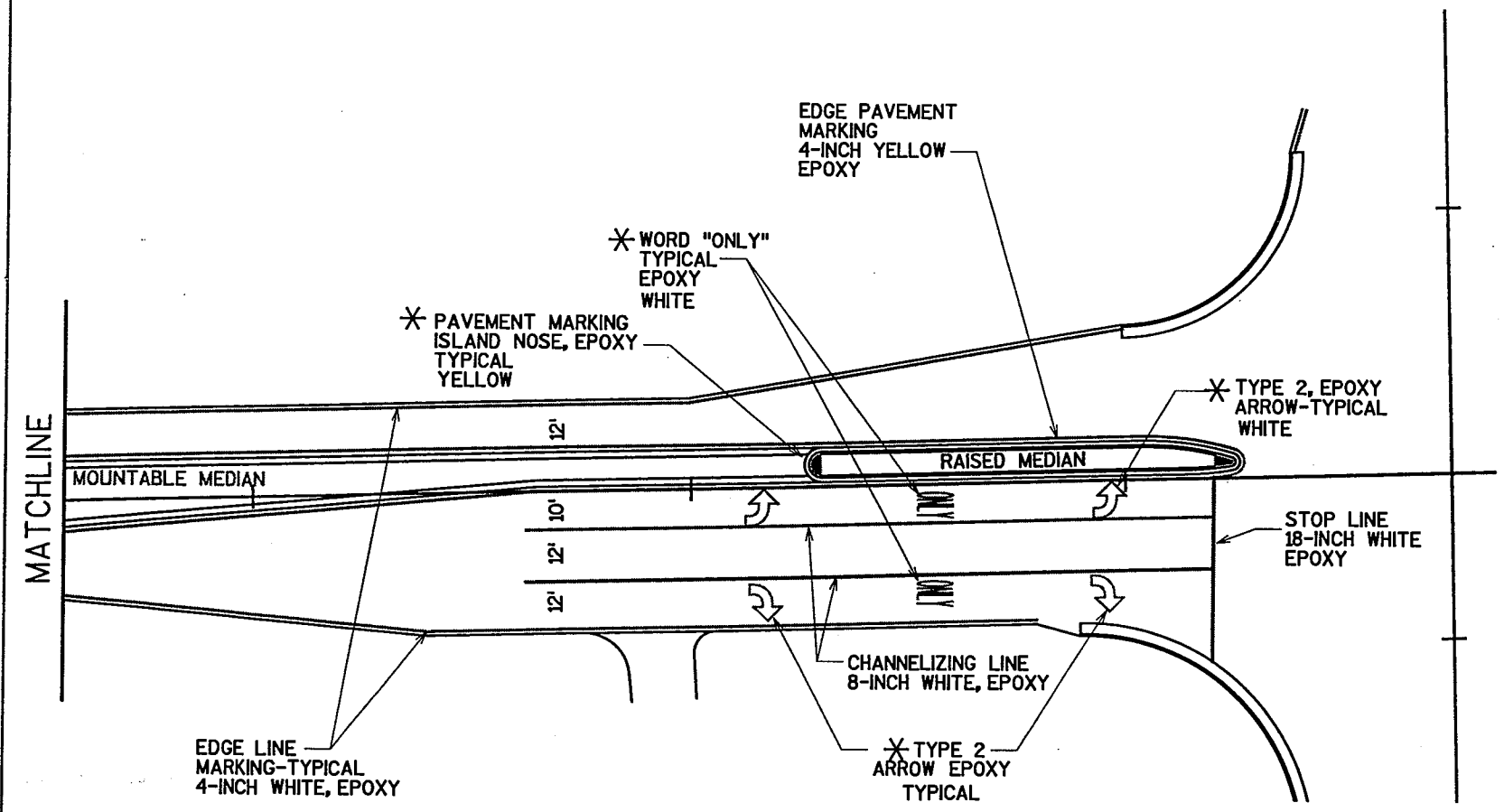
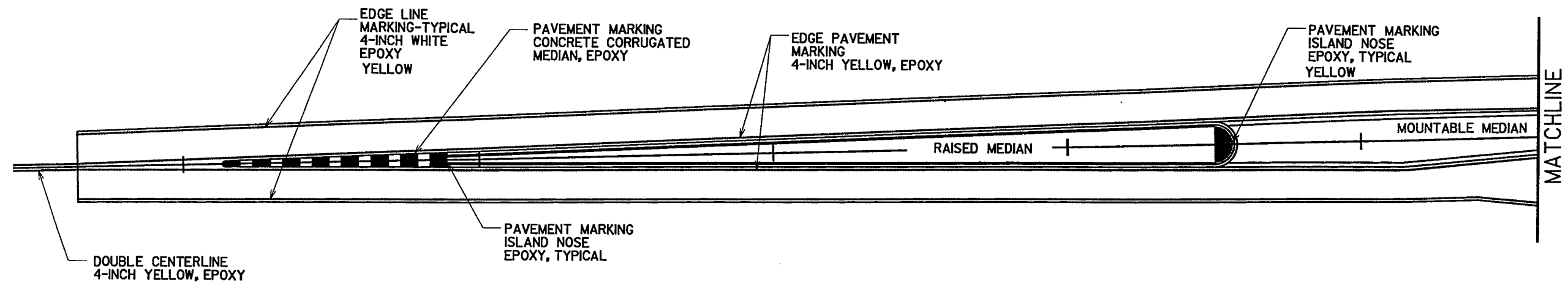
LEGEND

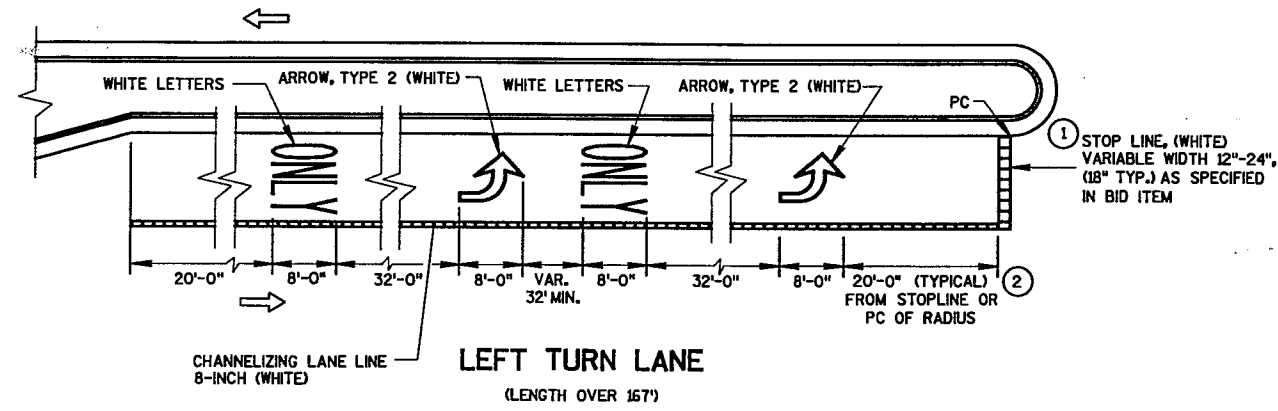
-  CONSTRUCTION SIGN
-  WORK ZONE
-  TYPE II BARRICADE AND TWO TYPE "A" WARNING LIGHTS (FLASHING)
-  TYPE II BARRICADE WITH SIGN AND TWO TYPE "A" WARNING LIGHTS (FLASHING)
-  FLAGGER
-  DIRECTION OF TRAVEL
-  TRAFFIC CONTROL DRUMS
-  TYPE "A" WARNING LIGHT (FLASHING)

SIDEROAD TYPICAL

CTH JJ

COUNTY PROJECT	SHEET NO
PAVEMENT MARKING DETAILS	
CTH CB	WINNEBAGO COUNTY

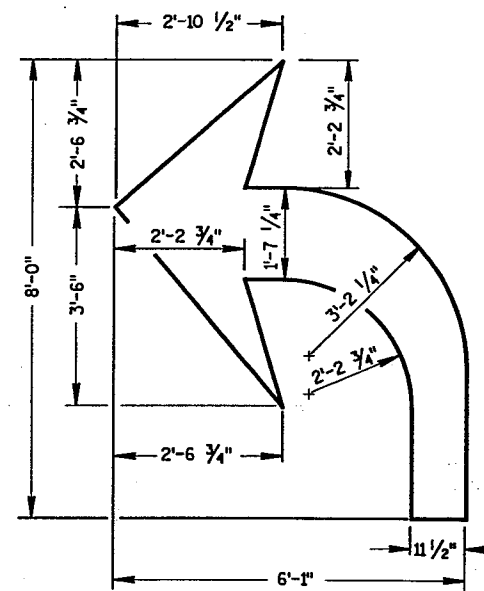
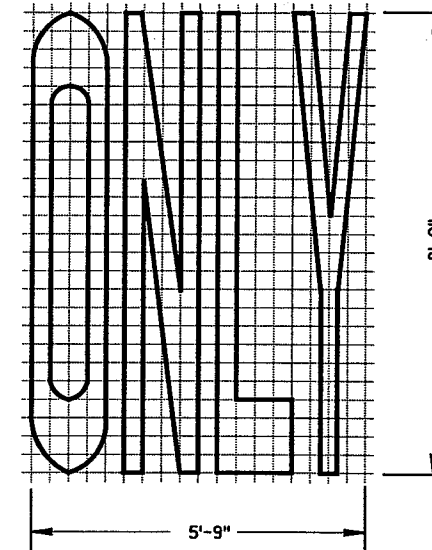
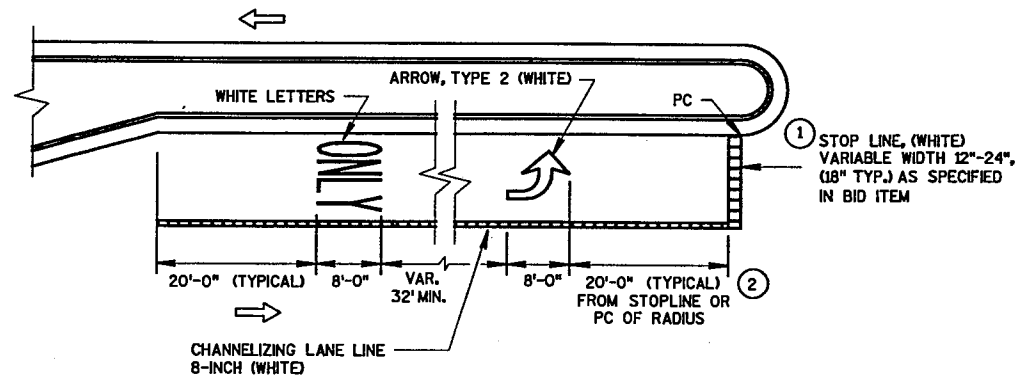




NOTE:
ARROW SYMBOL (→)
SHOWS DIRECTION OF TRAVEL

NOTES:

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

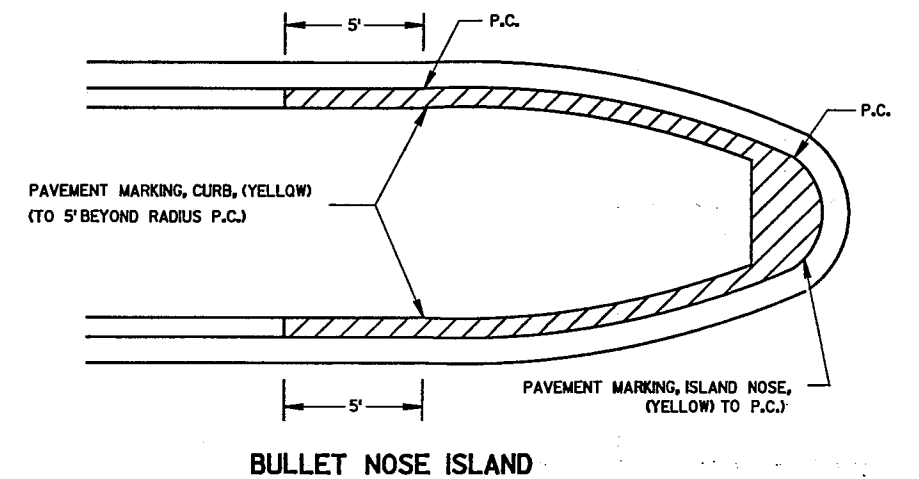
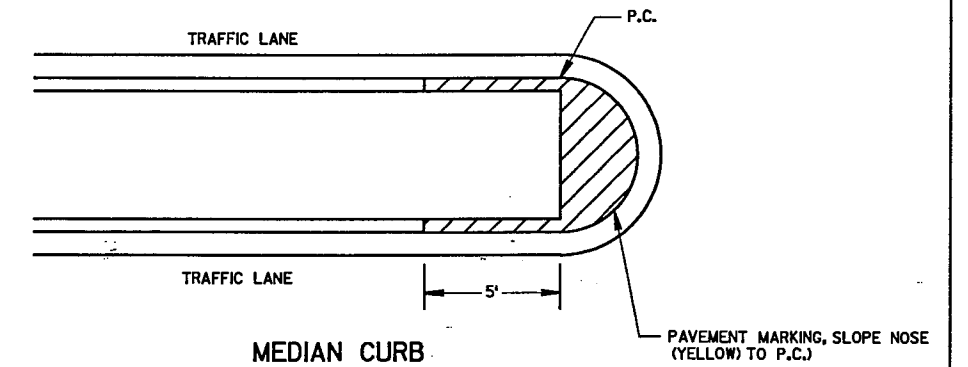
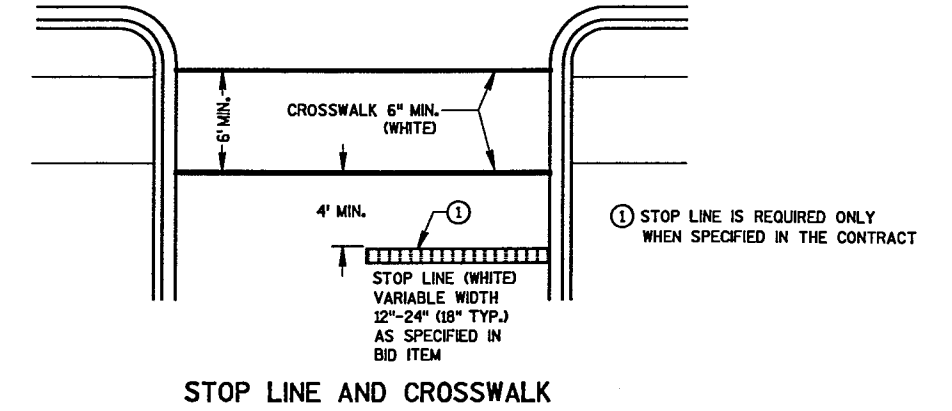


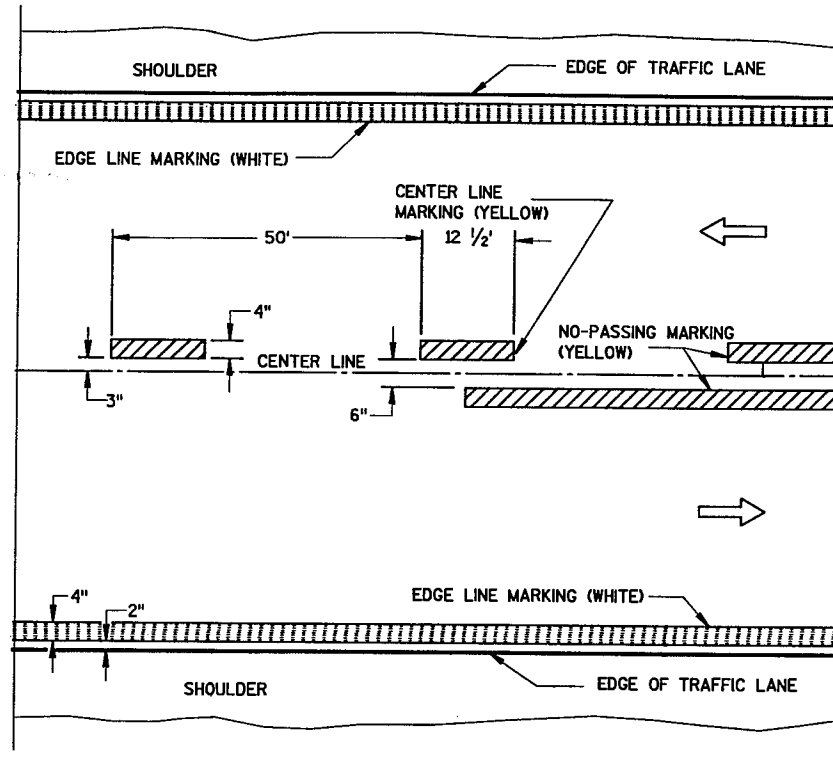
GENERAL NOTES

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.

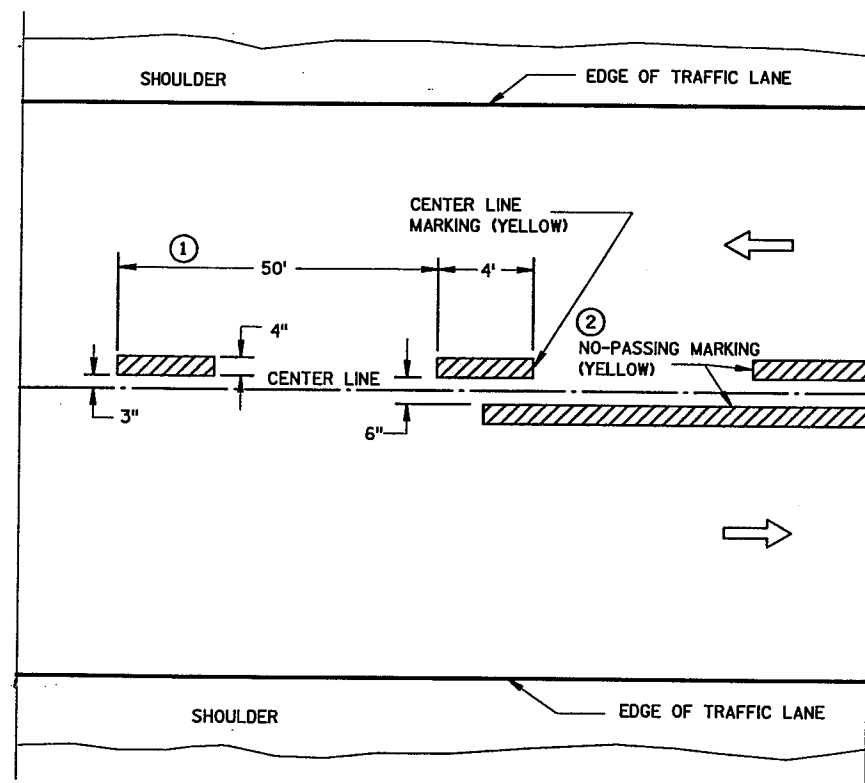
A DETAILED DRAWING OF THE HANDICAPPED PARKING SYMBOL IS ILLUSTRATED IN THE "STANDARD HIGHWAY SIGNS MANUAL" BY THE FEDERAL HIGHWAY ADMINISTRATION.





TWO WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC

TEMPORARY (INTERMEDIATE) PAVEMENT MARKING

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

GENERAL NOTES

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

- ① HALF CYCLE LENGTHS (25'±) WITH 2' MINIMUM STRIPE LENGTHS SHALL BE PROVIDED ON ROADWAYS (INCLUDING TEMPORARY TRAVELED WAYS) WITH REVERSE CURVATURE, CURVATURE OF OVER 5 DEGREES OR WHEN DIRECTED BY THE ENGINEER TO MARK UNUSUAL ALIGNMENT OF THE TRAVELED WAY.
- ② NO PASSING ZONE TEMPORARY PAVEMENT MARKING IS REQUIRED TO BE PLACED, WHERE APPROPRIATE, ALONG WITH CENTERLINE TEMPORARY PAVEMENT MARKING WHEN A SAME DAY PERMANENT PAVEMENT MARKING ITEM IS INCLUDED IN THE CONTRACT.

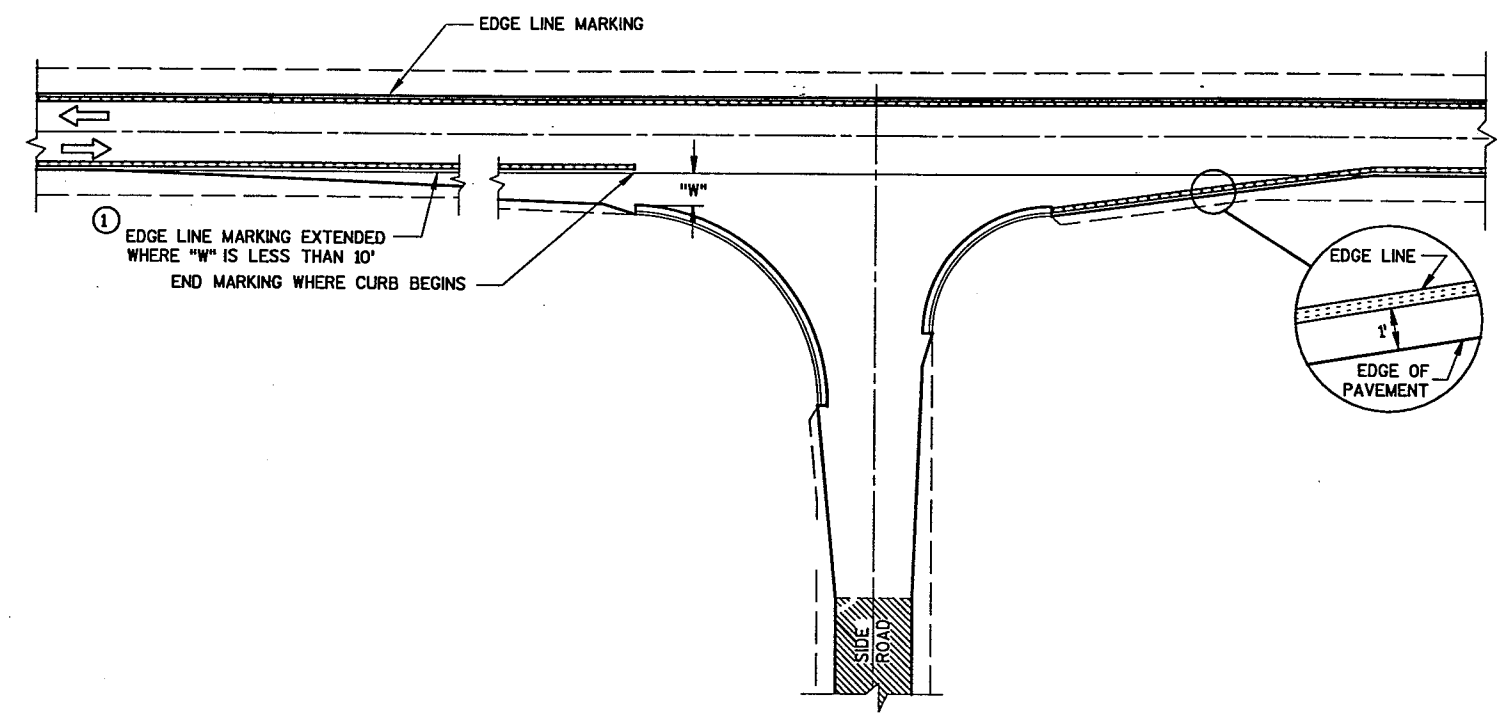
NOTE

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

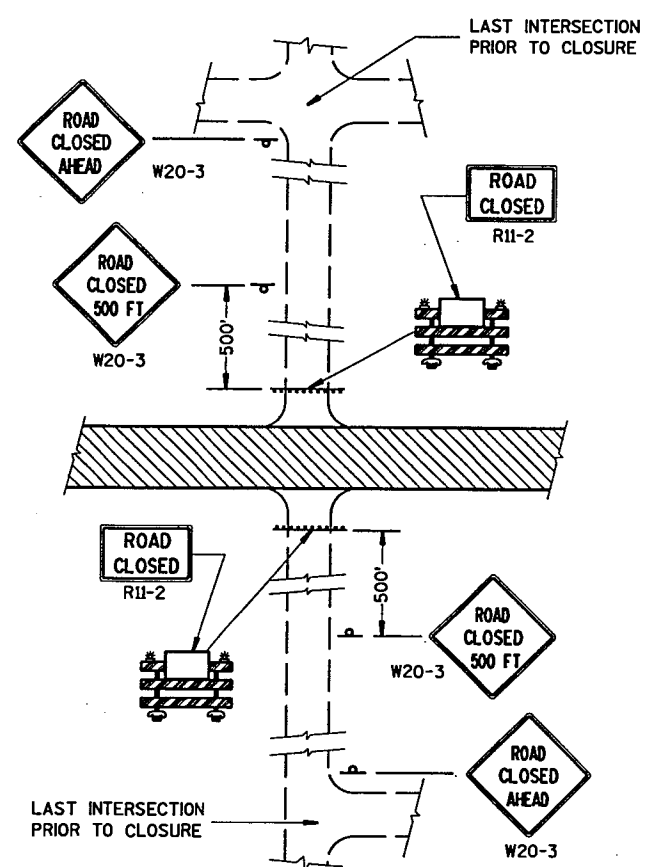
NOTES

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

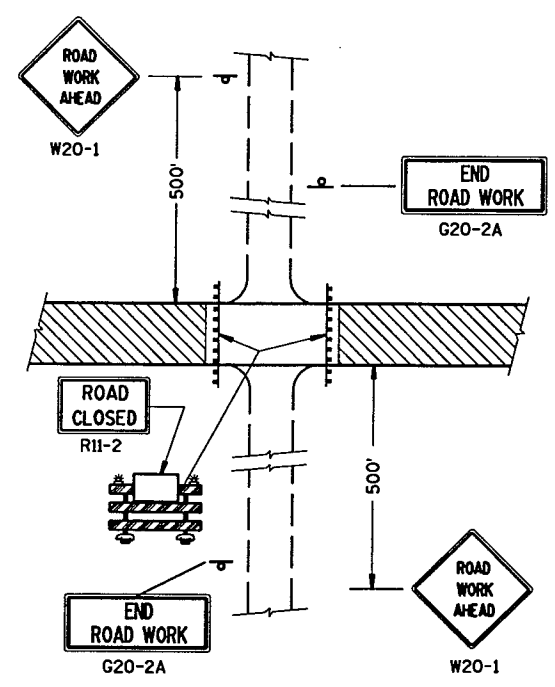
- ① LOCATE THE EDGE LINE ALONG THE TAPER WHERE "W" IS 10' OR MORE.



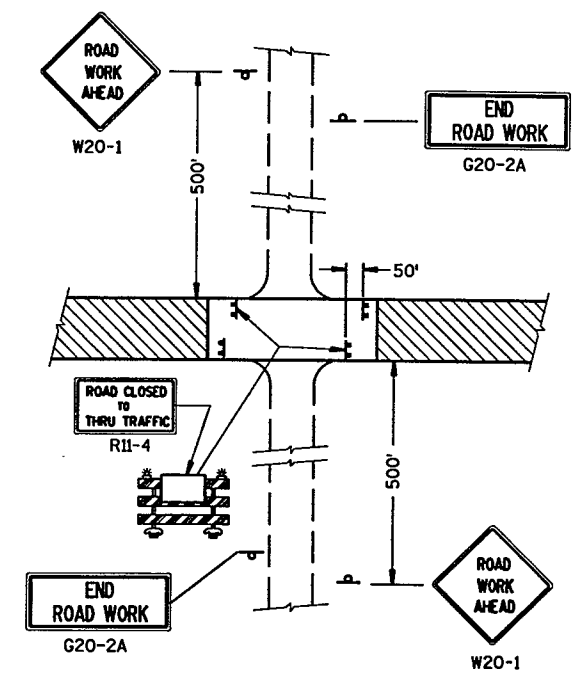
MINOR INTERSECTION WITH CURBS
(TYPICAL MARKING)



DETAIL 1
(NO ACCESS TO PROJECT)

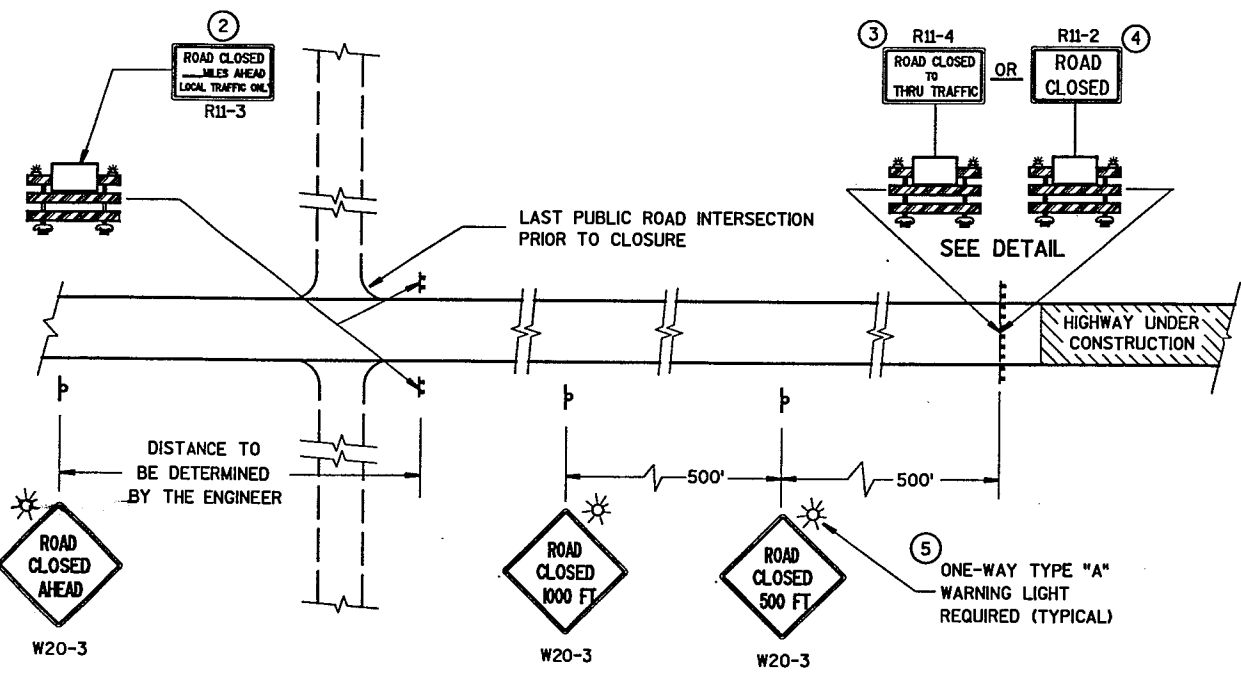


DETAIL 2
(PUBLIC CROSS-TRAFFIC MAINTAINED.
NO ACCESS TO PROJECT).

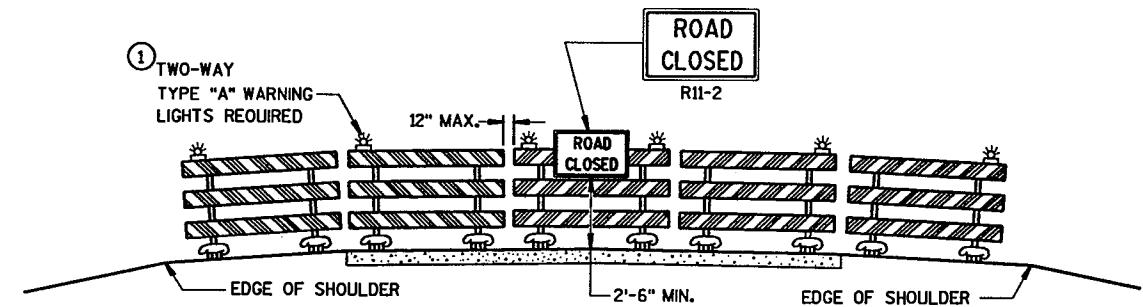


DETAIL 3
(PUBLIC CROSS-TRAFFIC MAINTAINED, CONTRACTOR,
LOCAL BUSINESS AND RESIDENT ACCESS).

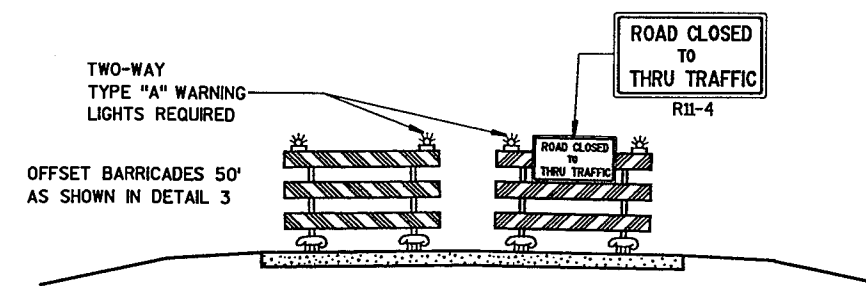
SIDEROAD CLOSURES



MAINLINE CLOSURE



APPROACH VIEW
ROAD CLOSURE BARRICADE DETAIL



APPROACH VIEW
LANE CLOSURE BARRICADE DETAIL

GENERAL NOTES

DETAILS OF TRAFFIC CONTROL DEVICES AND THEIR LOCATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE WISCONSIN MANUAL OF TRAFFIC CONTROL DEVICES, THE PLANS, SPECIFICATIONS AND CONTRACT.

SIGN AND BARRICADE LOCATIONS MAY BE ADJUSTED IN THE FIELD AS DIRECTED BY THE ENGINEER. ANY EXISTING TRAFFIC SIGNS THAT CONFLICT WITH THIS WORK SHALL BE COVERED AS DIRECTED BY THE ENGINEER. ALL "STOP" OR OTHER REGULATORY SIGNS ON THE SIDE ROADS SHALL NOT BE DISTURBED, EXCEPT WHEN NECESSARY TO COMPLETE THE WORK. THE SIGNS MUST THEN BE IMMEDIATELY REESTABLISHED.

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 FOR FULL ROAD CLOSURES. TYPE "A" LOW INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE ROAD CLOSED SIGN (R11-2), ROAD CLOSED MILES AHEAD SIGN (R11-3) AND THE ROAD CLOSED TO THRU TRAFFIC SIGN (R11-4) SHALL BE ATTACHED ONLY TO THE TOP RAIL OF THE TYPE III BARRICADE. THE SIGNS SHALL NOT COVER MIDDLE RAIL.

TYPE "H" REFLECTIVE SHEETING SHALL BE USED ON ALL BARRICADES, TYPE I, II AND III, AND ON ALL R11-2, R11-3 AND R11-4 SIGNS.

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
R11-2, "ROAD CLOSED" SIGNS SHALL BE 48" X 30".
R11-3, AND R11-4 SIGNS SHALL BE 60" X 30".
G20-2A SIGNS SHALL BE 48" X 24".

- 1 TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND AT LEAST 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.
- 2 THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT INTERSECTION.
- 3 FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT. SEE LANE CLOSURE BARRICADE DETAIL.
- 4 FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT. SEE ROAD CLOSURE BARRICADE DETAIL.
- 5 ONE-WAY LIGHTS SHALL BE PROVIDED ON ALL ADVANCE WARNING SIGNS. THE UNIT SHALL BE POSITIONED SUCH THAT THE LIGHT SOURCE IS OUTSIDE THE SIGN FACE AND AT THE TOP OF THE SIGN.

- LEGEND**
- ⊥ POST MOUNTED WARNING SIGN
 - ⊥ TYPE III BARRICADES WITH TYPE "H" REFLECTIVE SHEETING
 - ⊛ TYPE "A" LOW INTENSITY FLASHING WARNING LIGHT (FOR NIGHT USE)
 - ▨ WORK AREA



CURVE 128
 PI= 7+95.34
 Y= 130570.308
 X= 2390841.956
 R= 848.83
 L= 139.80
 T= 70.06
 D= 6°45'00"
 Δ= 9°26'12"
 E= 2.89
 PC= 7+25.28
 PT= 8+65.08

CURVE 129
 PI= 12+97.86
 Y= 130839.762
 X= 2391397.85
 R= 572.96
 L= 576.00
 T= 314.99
 D= 10°00'00"
 Δ= 57°36'02"
 E= 80.88
 PC= 9+82.87
 PT= 15+58.87

CURVE 119
 PI= 11+91.52
 Y= 130966.125
 X= 2391564.203
 R= 250.00
 L= 209.23
 T= 111.18
 D= 22°55'06"
 Δ= 47°57'06"
 E= 23.61
 PC= 10+80.34
 PT= 12+89.57

CURVE 122
 PI= 31+24.74
 Y= 131912.491
 X= 2391636.153
 R= 1909.86
 L= 121.74
 T= 60.89
 D= 3°00'00"
 Δ= 3°39'08"
 E= 0.97
 PC= 30+63.85
 PT= 31+85.59

CURVE 13
 PI= 20+21.33
 Y= 126932.289
 X= 2392269.979
 R= 916.73
 L= 296.16
 T= 149.38
 D= 6°15'00"
 Δ= 18°30'37"
 E= 12.09
 PC= 18+71.95
 PT= 21+68.11

CURVE 125
 PI= 18+33.77
 Y= 131333.402
 X= 2391975.414
 R= 1909.86
 L= 98.88
 T= 49.45
 D= 3°00'00"
 Δ= 2°57'59"
 E= 0.64
 PC= 17+84.32
 PT= 18+83.20

CURVE 93
 PI= 206+16.15
 Y= 127340.580
 X= 2392254.246
 R= 5717.58
 L= 285.64
 T= 142.85
 D= 1°00'08"
 Δ= 2°51'45"
 E= 1.78
 PC= 204+73.30
 PT= 207+58.94

CURVE 94
 PI= 209+76.55
 Y= 127700.214
 X= 2392230.246
 R= 5741.58
 L= 286.84
 T= 143.45
 D= 0°59'52"
 Δ= 2°51'45"
 E= 1.79
 PC= 208+33.10
 PT= 211+19.94

CURVE 43
 PI= 243+07.00
 Y= 131030.266
 X= 2392196.570
 R= 5741.58
 L= 286.89
 T= 143.45
 D= 0°59'52"
 Δ= 2°51'45"
 E= 1.79
 PC= 241+63.55
 PT= 244+50.44

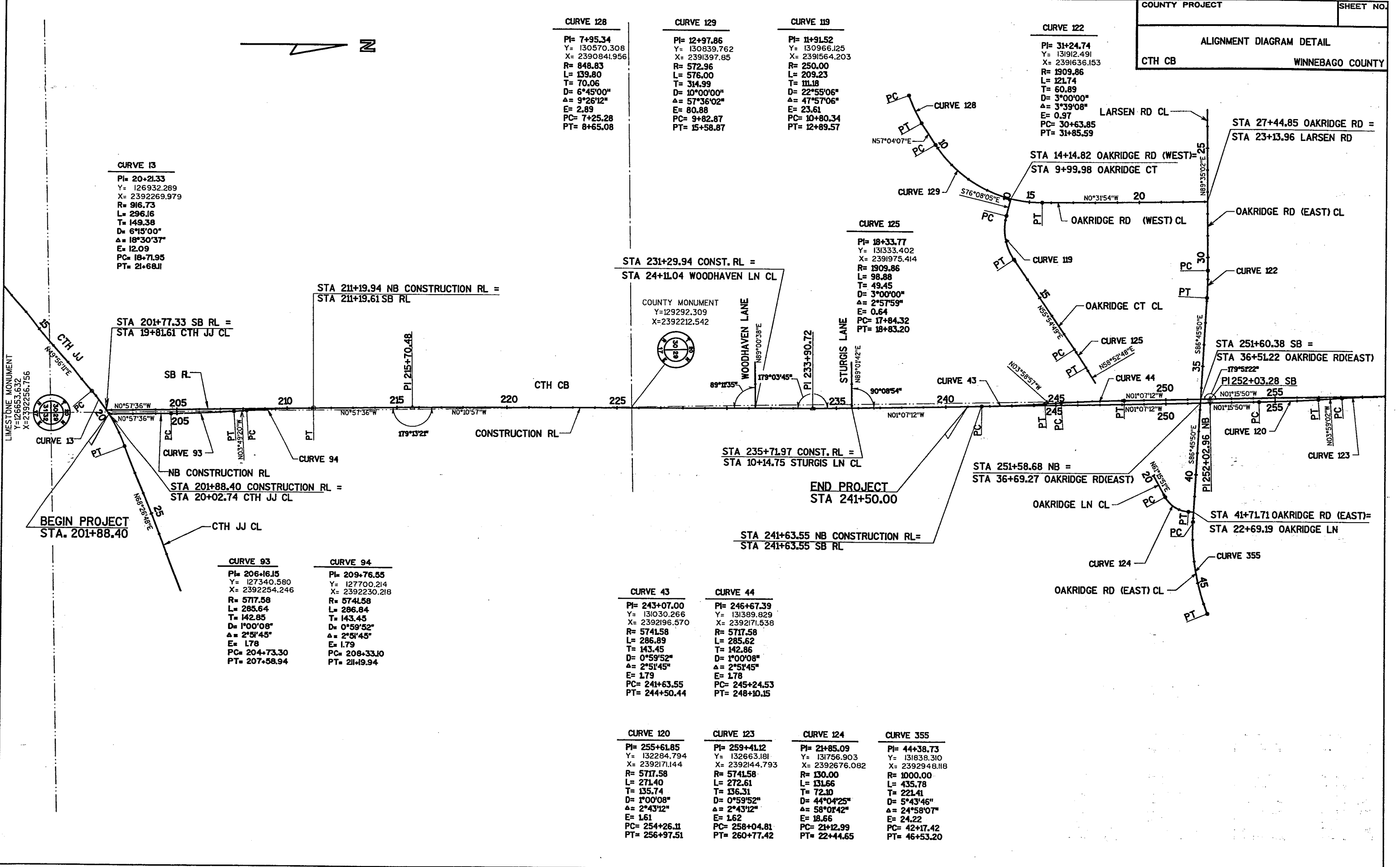
CURVE 44
 PI= 246+67.39
 Y= 131389.829
 X= 2392171.538
 R= 5717.58
 L= 285.62
 T= 142.86
 D= 1°00'08"
 Δ= 2°51'45"
 E= 1.78
 PC= 245+24.53
 PT= 248+10.15

CURVE 120
 PI= 255+61.85
 Y= 132284.794
 X= 2392171.144
 R= 5717.58
 L= 271.40
 T= 135.74
 D= 1°00'08"
 Δ= 2°43'12"
 E= 1.61
 PC= 254+26.11
 PT= 256+97.51

CURVE 123
 PI= 259+41.12
 Y= 132663.181
 X= 2392144.793
 R= 5741.58
 L= 272.61
 T= 136.31
 D= 0°59'52"
 Δ= 2°43'12"
 E= 1.62
 PC= 258+04.81
 PT= 260+77.42

CURVE 124
 PI= 21+85.09
 Y= 131756.903
 X= 2392676.082
 R= 130.00
 L= 131.66
 T= 72.10
 D= 44°04'25"
 Δ= 58°01'42"
 E= 18.66
 PC= 21+12.99
 PT= 22+44.65

CURVE 355
 PI= 44+38.73
 Y= 131838.310
 X= 2392948.118
 R= 1000.00
 L= 435.78
 T= 221.41
 D= 5°43'46"
 Δ= 24°58'07"
 E= 24.22
 PC= 42+17.42
 PT= 46+53.20



CLEARING AND GRUBBING

STATION TO STATION	LOCATION	CLEARING GRUBBING	
		STA	STA
201+88 - 241+50	CTH CB	40	40
12+80 - 26+00	CTH JJ	13	13
TOTAL		53	53

REMOVING OLD CULVERTS

STATION	LOCATION	SIZE	EACH
202+62	CTH CB	18"X44'	1
203+00	CTH CB, LT	15"X24'	1
205+16	CTH CB, LT	15"X25'	1
205+86	CTH CB, LT	15"X24'	1
206+61	CTH CB, LT	15"X25'	1
207+14	CTH CB, LT	18"X25'	1
212+27	CTH CB, RT	18"X35'	1
229+72	CTH CB, LT	15"X25'	1
229+94	CTH CB, RT	12"X16'	1
23+75	WOODHAVEN	15"X50'	1
235+00	CTH CB, LT	15"X22'	1
9+75	STURGIS	18"X55'	1
237+69	CTH CB, RT	15"X20'	1
240+03	CTH CB, RT	15"X20'	1
240+66	CTH CB, LT	15"X25'	1
240+87	CTH CB, RT	15"X25'	1
16+30	CTH JJ, LT	15"X34'	1
17+00	CTH JJ, LT	15"X30'	1
18+00	CTH JJ, RT	15"X20'	1
21+70	CTH JJ, LT	36"X33'	1
23+53	CTH JJ, RT	15"X22'	1
24+88	CTH JJ, RT	15"X35'	1

*TO BE SALVAGED TOTAL 22

REMOVING FENCE

STATION TO STATION	LOCATION	LF
203+60 - 208+85	CTH CB, RT	535
218+70 - 225+00	CTH CB, RT	630
13+20 - 16+20	CTH JJ, RT	300
15+00 - 15+50	CTH JJ, LT	50
TOTAL		1515

ASPHALTIC MATERIAL FOR TACK COAT

STATION TO STATION	LOCATION	GAL.
201+88 - 241+50	CTH CB	756
12+80 - 26+00	CTH JJ	151
22+00 - 24+11	WOODHAVEN	18
8+00 - 10+15	STURGIS	18
TOTAL		943

SAWING EXISTING PAVEMENT

STATION	LOCATION	LF
205+86	CTH CB, LT	20
206+61	CTH CB, LT	22
229+94	CTH CB, RT	11
22+00	WOODHAVEN	22
8+00	STURGIS	22
240+87	CTH CB, RT	12
12+80	CTH JJ	24
17+00	CTH JJ, LT	20
23+53	CTH JJ, RT	16
24+88	CTH JJ, RT	15
26+00	CTH JJ	24
TOTAL		208

ASPHALTIC MATERIAL FOR PLANT MIXES

STATION TO STATION	LOCATION	TONS
201+88 - 241+50	CTH CB	309
12+80 - 26+00	CTH JJ	84
22+00 - 24+11	WOODHAVEN	10
8+00 - 10+15	STURGIS	10
201+88 - 241+50	BIKE PATH	28
TOTAL		441

ASPHALTIC CONCRETE PAVEMENT, TYPE HV

STATION TO STATION	LOCATION	TONS
201+88 - 241+50	CTH CB	5,140
12+80 - 26+00	CTH JJ	1,390
22+00 - 24+11	WOODHAVEN	165
8+00 - 10+15	STURGIS	165
TOTAL		6,860

ASPHALTIC CONCRETE PAVEMENT, TYPE LV

STATION TO STATION	LOCATION	TONS
202+00 - 241+50	BIKE PATH	460
TOTAL		460

ASPHALTIC SURFACE, SAFETY ISLAND

STATION TO STATION	LOCATION	TONS
14+10 - 19+15	CTH JJ	63
20+72 - 24+68	CTH JJ	50
202+72 - 208+83	CTH CB	55
TOTAL		168

ASPHALTIC SURFACE, DRIVEWAYS AND FIELD ENTRANCES

STATION	LOCATION	TONS
205+86	CTH CB, LT	22
206+61	CTH CB, LT	14
229+94	CTH CB, RT	9
240+87	CTH CB, RT	8
17+00	CTH JJ, LT	6
23+53	CTH JJ, RT	2
24+88	CTH JJ, RT	8
TOTAL		69

ASPHALTIC FLUMES

STATION	LOCATION	SY
216+50	CTH CB, LT	7
227+50	CTH CB, LT	13
232+00	CTH CB, LT	13
23+28	WOODHAVEN, RT	12
23+46	WOODHAVEN, LT	12
9+30	STURGIS, RT	12
9+50	STURGIS, LT	12
TOTAL		81

REMOVING ASPHALT SURFACE

STATION TO STATION	LOCATION	SY
201+88 - 241+50	CTH CB	9,700
12+80 - 26+00	CTH JJ	3,500
8+00 - 9+90	STURGIS	470
22+00 - 23+87	WOODHAVEN DRIVEWAYS	460
TOTAL		14,200

EARTHWORK SUMMARY

*EXPANSION FACTOR = 30%

STATION TO STATION	LOCATION	COMMON		EXPANDED		BORROW	WASTE
		EXCAV. CY	FILL CY	FILL* CY	CY		
201+88.4 TO 241+50	CTH CB	5,002	8,053	10,469	5,467	0	0
12+80 TO 26+00	CTH JJ	7,311	70	91	0	0	7,220
21+00 TO 23+00	WOODHAVEN LANE	733	0	0	0	0	733
8+00 TO 10+00	STRUGIS LANE	500	0	0	0	0	500
201+88.4 TO 241+50	BIKE PATH	74	2,835	3,686	3,612	0	0
	DRAINAGE SWALE	400	0	0	0	0	400
TOTALS		14,020	10,958	14,245	9,079	0	8,853

ADJUSTING MANHOLE COVERS

STATION	LOCATION	EACH
202+32	CTH CB, 30' LT	1

CONCRETE MEDIAN SLOPED NOSE

STATION	LOCATION	SF
202+72	CTH CB	20
204+75	CTH CB	30
206+97	CTH CB	30
208+83	CTH CB	20
18+31	CTH JJ	30
19+15	CTH JJ	30
20+72	CTH JJ	40
TOTAL		200

CONCRETE CORRUGATED MEDIAN

STATION TO STATION	LOCATION	SF
208+82 - 209+69	CTH CB	300
13+48 - 14+10	CTH JJ	210
24+68 - 25+33	CTH JJ	220
TOTAL		730

REMOVING PAVEMENT MARKINGS

STATION TO STATION	LOCATION	DESCRIPTION	LF	TRAFFIC CONTROL
12+00 - 14+00	CTH JJ	CENTERLINE	200	1 LS
24+50 - 26+50	CTH JJ	CENTERLINE	200	
TOTAL			400	

CONCRETE CURB AND GUTTER

STATION TO STATION	LOCATION	TYPE D		
		18-INCH FT.	30-INCH FT.	36-INCH FT.
14+60 - 24+00	CTH JJ, RT		940	
14+10 - 19+15	CTH JJ, MEDIAN	1010		
20+72 - 24+68	CTH JJ, MEDIAN	790		
15+75 - 23+50	CTH JJ, LT		610	
19+50 - 202+32	NW QUAD CTH JJ / CTH CB		54	
21+10 - 203+00	NE QUAD CTH JJ / CTH CB		94	
203+00 - 206+50	CTH CB, RT		350	
202+32 - 207+00	CTH CB, LT		468	
202+72 - 208+82	CTH CB, MEDIAN	1220		
216+50 - 227+50	CTH CB, LT		1100	
230+78 - 23+46	SW QUAD CTH CB / WOODHAVEN			67
232+01 - 23+28	NW QUAD CTH CB / WOODHAVEN			88
235+20 - 9+51	SW QUAD CTH CB / STURGIS			55
236+44 - 9+30	NW QUAD CTH CB / STURGIS			92
TOTAL		3,020	3,616	302

BEAM GUARD AND ANCHORAGES

STATION TO STATION	LOCATION	STEEL PLATE BEAM GUARD, CLASS A LF	SLOTTED RAIL TERMINAL EACH	CONCRETE MASONRY ANCHORS, TYPE S EACH	GRADING, SHAPING AND FINISHING FOR BEAM GUARD ANCHORAGE EACH
238+10 - 239+85	CTH CB, RT	100	2	20	2

LANDMARK REFERENCE MONUMENTS AND ALUMINUM COVERS

STATION	LOCATION	DESCRIPTION	EACH
225+69	5' LT	W1/4 CORNER	1
225+69	5' LT	REFERENCE CORNER	1
225+69	5' LT	REFERENCE CORNER	1
225+69	5' LT	REFERENCE CORNER	1
225+69	5' LT	REFERENCE CORNER	1
TOTAL			5

QUALITY MANAGEMENT PROGRAM, BASE COURSES
36,520 TONS

CRUSHED AGGREGATE BASE COURSE

STATION TO STATION	LOCATION	TONS
201+88 - 241+50	CTH CB	24,600
12+80 - 26+00	CTH JJ	7,800
8+00 - 9+90	STURGIS	960
22+00 - 23+87	WOODHAVEN	960
201+88 - 241+50	BIKE PATH	2,200
TOTAL		36,520

QUALITY MANAGEMENT PROGRAM, SUBGRADE
14,245 CY

QUALITY MANAGEMENT PROGRAM, ASPHALTIC MIXTURE
7,320 TONS

TOPSOIL, MULCHING, FERTILIZER AND SEEDING

STATION TO STATION	LOCATION	SALVAGED TOPSOIL		FERTILIZE	SEEDING	SEEDING
		TOPSOIL S.Y.	MULCHING S.Y.	TYPE B CWT.	NO. 30 LB.	BORROW PIT MIXTURE LB.
201+88 - 241+50	CTH CB	18,500	18,500	12	350	
12+80 - 26+00	CTH JJ	6,280	6,280	4	115	
22+00 - 24+11	WOODHAVEN	1,250	1,250	1	25	
8+00 - 10+14	STURGIS	1,000	1,000	1	20	
UNDISTRIBUTED				2	40	50
TOTAL		27,030	27,030	20	550	50

GRANULAR BACKFILL
STATION LOCATION CY
239+10 CTH CB 170

TRAFFIC CONTROL SUMMARY

STATION TO STATION	LOCATION	STAGE	DURATION DAYS	DRUMS DAYS	TYPE III BARRICADES DAYS	TYPE A LIGHTS DAYS	TYPE C LIGHTS DAYS	SIGNS DAYS
201+88 - 241+50	CTH CB	I	30	5,550	0	0	680	0
12+00 - 26+00	CTH JJ	I	30	2,130	120	300	260	180
22+00 - 24+00	WOODHAVEN	I	30	360	90	210	45	120
201+88 - 241+50	CTH CB	II	25	4,100	150	325	500	175
12+00 - 26+00	CTH JJ	II	25	4,025	100	350	490	250
22+00 - 24+00	WOODHAVEN	II	25	200	300	325	25	25
TOTALS			55	16,365	760	1,510	2,000	750

FIELD OFFICE, TYPE B
1 EACH

FIELD LABORATORY
1 EACH

CULVERT PIPES, CLASS III
PRIVATE, FIELD AND COMMERCIAL ENTRANCES

STATION	LOCATION	DIAM. LENGTH		TYPE	CLASS	THICKNESS		APRON
		INCHES	FEET			STEEL INCH	ALUM. INCH	ENDWALL EACH
212+27	CTH CB RT	18	42	CP	III	0.064	0.06	2
225+25	CTH CB LT	15	40	CP	III	0.064	0.06	2
229+72	CTH CB LT	15	32	CP	III	0.064	0.06	2
227+94	CTH CB RT	15	28	CP	III	0.064	0.06	2
237+69	CTH CB LT	18	20	CP	III	0.064	0.06	2
240+66	CTH CB LT	18	28	CP	III	0.064	0.06	2
240+87	CTH CB RT	18	24	CP	III	0.064	0.06	2
24+88	CTH CB RT	15	26	CP	III	0.064	0.06	2
9+00	STURGIS RT	18	20					2
TOTALS		15" CP 126 L.F.	18" CP 114 L.F.	SALVAGED 18" CP 20 L.F.				

NON-METALLIC CONDUIT, SCHEDULE 40, 3-INCH

STATION	LOCATION	SY
202+60	CTH CB	185
20+60	CTH JJ	200
28+95	CTH JJ	185
TOTAL		570

CROSS DRAINS

STATION	LOCATION	SIZE INCHES	LENGTH FEET	TYPE	CLASS	INLET ELEV.	DISCHARGE ELEV.	APRON ENDWALLS EACH	JOINT TIES EACH	CONCRETE MASONRY, ENDWALL CY
206+80	CTH CB	2-38"X60"	208	RCHECP	III	771.2	770.5	4	24	
24+50	CTH JJ	4-29"X45"	248	RCHECP	III	767.0	766.7			12.0*
23+60	WOODHAVEN	14"X23"	66	RCHECP	III	776.0	775.9	2	12	
9+65	STURGIS	19"X30"	60	RCHECP	III	775.0	774.7	2	12	

*CONCRETE MASONRY ENDWALL REQUIRED EACH END OF THIS QUAD PIPE SET

STORM SEWER SUMMARY

STR. NO.	STATION	LOCATION	OFFSET	CASTING FLANGE ELEV.	INLETS			MANHOLES		INLET COVERS				MANHOLE DEPTH FT	FROM STR. TO STR.	INLET ELEV.	DISCH. ELEV.	REIN. CONC. PIPE CLASS III, STORM SEWER				% SLOPE	REIN. APRON	CONCRETE ENDWALLS	CONST. STAK. STORM SEWER FT		
					TYPE 1	TYPE 3	TYPE 8	TYPE 1	TYPE 3	TYPE Z	TYPE H	TYPE MS	COVERS, TYPE J					12-INCH FT	15-INCH FT	19"x30" FT	29"x45" FT						
E12	202+35	CTH CB	60.5' LT																								
I14	202+35	CTH CB	35.5' LT 773.12					1		1			3.72	E12 - I14	768.71	768.63								25	0.25	1-52365	25
MH15	202+50	CTH CB	4.0' LT 773.62					1					4.06	I14 - MH15	768.65	768.56							34	0.25		34	
MH13A	21+08	CTH JJ	39.5' LT 773.66					1					4.31	MH15 - MH13A	768.56	768.35							87	0.25		87	
I13B	21+03	CTH JJ	55' LT 771.90			1				1			3.24	I13B - MH13A	768.66	768.60	16								0.40		16
I13	21+08	CTH JJ	34.5' LT 773.10			1				1			3.92	I13 - MH13A	768.45	768.35			5						2.00		5
E23A	23+75	CTH JJ	40' LT											MH13A - E23A	768.35	767.68									0.25	1-52365	267
E1	14+40	CTH JJ	40' RT																								
MH3	16+05	CTH JJ	29.5' RT 773.98					1					3.77	E1 - MH3	769.71	769.21								165	0.30	1-52365	165
I2	16+05	CTH JJ	24.5' RT 773.44			1				1			3.38	I2 - MH3	769.31	769.21								5	2.00		5
E1A	15+50	CTH JJ	45' LT											E1A - I2	769.70	769.31							88	0.45	1-52361	88	
MH5	17+80	CTH JJ	31.5' RT 773.45					1					3.76	MH3 - MH5	769.21	768.69								175	0.30		175
I4	17+80	CTH JJ	26.5' RT 772.91			1				1			3.37	I4 - MH5	768.79	768.69			5						2.00		5
MH8	18+62	CTH JJ	31.5' RT 773.18					1					3.74	MH5 - MH8	768.69	768.44								82	0.30		82
I7	18+62	CTH JJ	26.5' RT 772.66			1				1			3.22	I7 - MH8	768.54	768.44			5						2.00		5
I6	18+90	CTH JJ	8.5' LT 772.93	1						1			3.14	I6 - I7	768.99	768.79	40								0.50		40
MH19	20+85	CTH JJ	31.5' RT 772.28					1					3.50	MH8 - MH19	768.44	767.78								223	0.30		223
I18	20+85	CTH JJ	26.5' RT 771.74			1				1			3.11	I18 - MH19	767.88	767.78			5						2.00		5
I17	20+85	CTH JJ	8.5' LT 772.32	1						1			3.27	I17 - I18	768.30	769.13	35								0.50		35
MH22	22+60	CTH JJ	30' RT 771.91					1					3.66	MH19 - MH22	767.78	767.25								175	0.30		175
I21	22+60	CTH JJ	25' RT 771.37			1				1			3.27	I21 - MH22	767.35	767.25			5						2.00		5
I20	22+60	CTH JJ	6.9' LT 771.69	1						1			3.18	I20 - I21	767.76	767.60	31								0.50		31
E23	24+25	CTH JJ	40' RT											MH22 - E23	767.25	766.76									0.30	1-52365	165
MH16	202+98	CTH CB	4' LT 774.86					1					4.28	MH16 - MH15	769.58	769.41			48						0.35		48
I185	202+98	CTH CB	7.5' LT 774.32	1						1			3.47	I185 - MH16	770.10	770.08	4								0.50		4
I187	202+98	CTH CB	0.5' LT 774.16	1						1			4.06	I187 - MH16	770.10	770.08	3								0.50		3
MH11	204+50	CTH CB	4' LT 776.37					1					5.26	MH11 - MH16	770.11	769.58			152						0.35		152
I9	204+50	CTH CB	35.5' LT 775.31			1				1			3.12	I9 - MH11	771.44	771.28	32								0.50		32
I10	204+50	CTH CB	17.5' RT 775.31			1				1			3.92	I10 - MH11	771.39	771.28	21								0.50		21
I188	207+14	CTH CB	12.4' LT 777.03	1						1			3.18														
I190	207+27	CTH CB	0.5' RT 777.07	1						1			3.58	I188 - I190	773.10	772.74	18								2.00		18
E191	207+27	CTH CB	47' RT											I190 - E191	772.74	772.27	47								1.00	1-52260	47
I192	218+00	CTH CB	17.5' LT 780.51			1				1																	
E193	218+00	CTH CB	42' RT										2.27	I192 - E193	777.49	776.90	59								1.00	1-52260	59
I194	220+00	CTH CB	17.5' LT 781.21			1				1																	
E195	220+00	CTH CB	RT										2.27	I194 - E195	778.19	777.6	59								1.00	1-52260	59
I196	222+00	CTH CB	17.5' LT 781.91			1				1																	
E197	222+00	CTH CB	RT										2.27	I196 - E197	778.89	778.3	59								1	1-52260	59
TOTALS					7	11	1	2	8	7	12	1	9					424	225	93	1,398						2,140

EROSION MAT, CLASS I, TYPE B

STATION TO STATION LOCATION	ROAD	DELIVERED SY	INSTALLED SY
207+20 - 211+90	LT CTH CB	420	420
206+70 - 208+20	RT CTH CB	90	90
236+40 - 241+30	LT CTH CB	550	550
235+80 - 239+60	RT CTH CB	340	340
UNDISTRIBUTED		50	50
TOTAL		1,450	1,450

SOD & EROSION MAT, CLASS II, TYPE A

STATION TO STATION LOCATION	ROAD	DELIVERED SY	INSTALLED SY	SOD SY
206+80 - 207+70	RT CTH CB	500	500	500
211+60 - 212+10	RT CTH CB	45	45	45
225+60 - 226+10	LT CTH CB	45	45	45
225+70 - 226+20	RT CTH CB	45	45	45
229+90 - 230+40	LT CTH CB	45	45	45
230+10 - 230+60	RT CTH CB	45	45	45
231+70 - 232+20	LT CTH CB	45	45	45
239+60 - 240+70	RT CTH CB	100	100	100
UNDISTRIBUTED		100	100	100
TOTAL		970	970	970

SILT FENCE, SILTY SOIL

STATION TO STATION LOCATION	ROAD	DELIVERED SY	INSTALLED SY	MAINTENANCE SY
14+36 AT INFLOW	RT CTH JJ	16	16	16
15+50 AT INFLOW	LT CTH JJ	16	16	16
21+03 AT INFLOW	LT CTH JJ	16	16	16
24+50 AT INFLOW	LT CTH JJ	20	20	20
202+35 AT INFLOW	LT CTH CB	16	16	16
203+30 - 205+70	LT CTH CB	240	240	240
203+30 - 206+30	RT CTH CB	300	300	300
206+80 AT INFLOW	LT CTH CB	20	20	20
212+60	RT CTH CB	20	20	20
224+80	LT CTH CB	20	20	20
225+00	RT CTH CB	20	20	20
229+30	LT CTH CB	20	20	20
229+60	RT CTH CB	20	20	20
230+75	LT CTH CB	20	20	20
234+75	LT CTH CB	20	20	20
237+50	RT CTH CB	20	20	20
240+80	LT CTH CB	20	20	20
241+00	RT CTH CB	20	20	20
UNDISTRIBUTED		100	100	100
TOTAL		944	944	944

MOBILIZATIONS, EROSION CONTROL

1 EACH

MOBILIZATIONS, EMERGENCY EROSION CONTROL

2 EACH

WATERING SODDED AREAS

18 MGAL

MEDIUM RIPRAP AND GEOTEXTILE FABRIC

STATION	LOCATION	MEDIUM GEOTEXTIL	
		RANDOM RIPRAP CY	FABRIC TYPE R SY
24+30	CTH JJ, RT	3	10
24+50	CTH JJ, RT	7	20
206+80	CTH CB, RT	8	24
207+27	CTH CB, RT	2	7
239+10	CTH CB, RT	30	90
239+10	CTH CB, LT	18	55
23+60	WOODHAVEN, LT	3	10
9+65	STURGIS, LT	3	10
TOTAL		74	226

EROSION CONTROL FILTER BAGS

STATION	PURPOSE	LOCATION	ROAD	DELIVERED EACH	INSTALLED EACH	MAINTENANCE EACH
16+05	INLET PROTECTION	RT	CTH JJ	18	18	36
17+80	INLET PROTECTION	RT	CTH JJ	18	18	36
20+85	INLET PROTECTION	RT	CTH JJ	18	18	36
20+85	INLET PROTECTION	LT	CTH JJ	18	18	36
22+60	INLET PROTECTION	LT	CTH JJ	18	18	36
22+60	INLET PROTECTION	RT	CTH JJ	18	18	36
18+90	INLET PROTECTION	LT	CTH JJ	18	18	36
18+90	INLET PROTECTION	LT	CTH JJ	18	18	36
21+03	INLET PROTECTION	RT	CTH JJ	18	18	36
21+08	INLET PROTECTION	LT	CTH JJ	18	18	36
202+35	INLET PROTECTION	LT	CTH CB	18	18	36
202+98	INLET PROTECTION	LT	CTH CB	18	18	36
202+98	INLET PROTECTION	RT	CTH CB	18	18	36
204+50	INLET PROTECTION	LT	CTH CB	18	18	36
204+50	INLET PROTECTION	RT	CTH CB	18	18	36
207+14	INLET PROTECTION	LT	CTH CB	18	18	36
207+27	INLET PROTECTION	RT	CTH CB	18	18	36
218+00	INLET PROTECTION	LT	CTH CB	18	18	36
220+00	INLET PROTECTION	LT	CTH CB	18	18	36
222+00	INLET PROTECTION	LT	CTH CB	18	18	36
209+00	DITCH CHECK	LT	CTH CB	15	15	30
212+00	DITCH CHECK	LT	CTH CB	15	15	30
206+80	DITCH CHECK	RT	CTH CB	30	30	60
	UNDISTRIBUTED			40	40	80
TOTAL				460	460	920

PAVEMENT MARKINGS, EPOXY

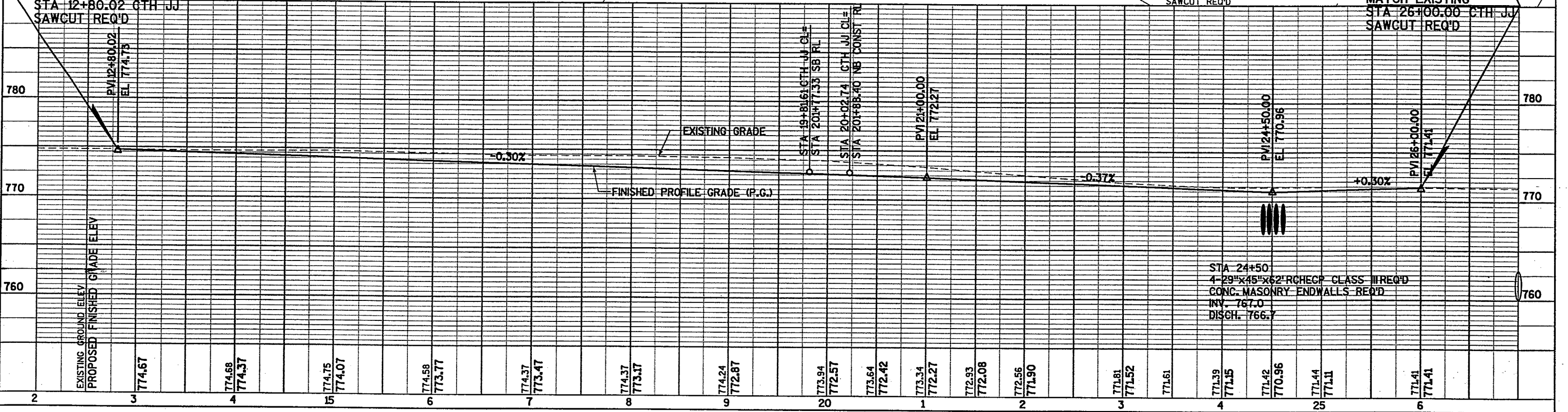
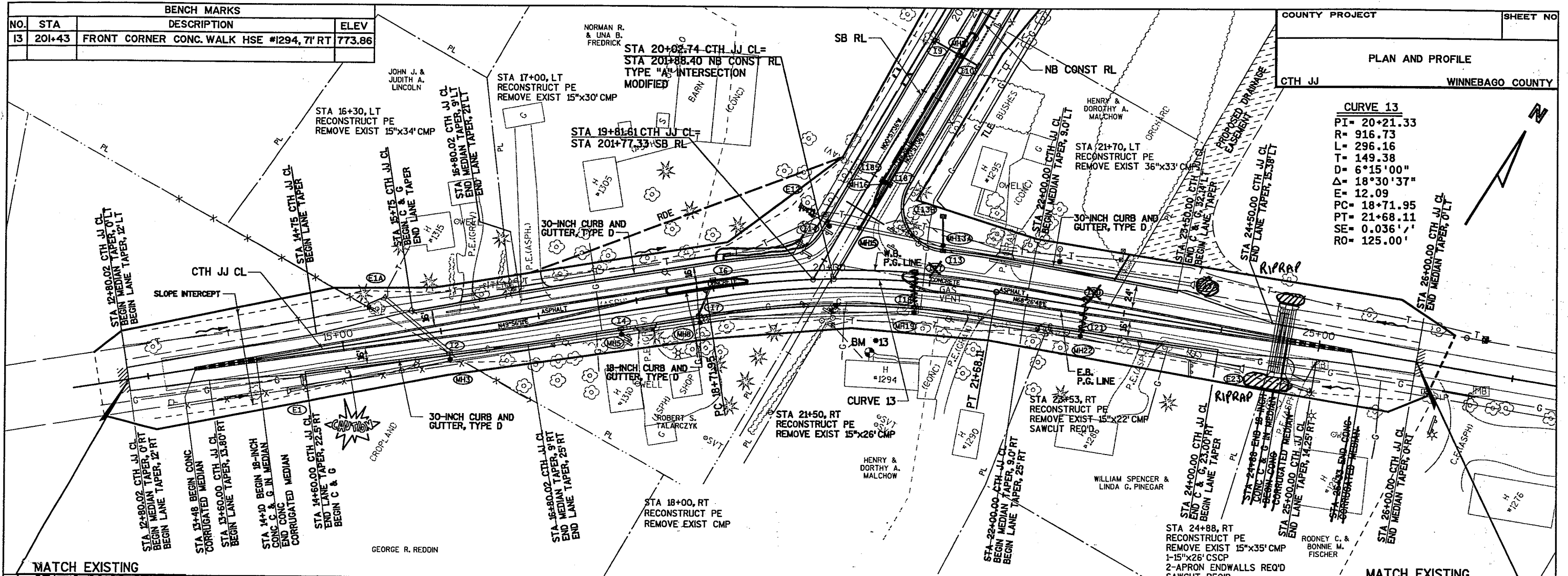
STATION TO STATION LOCATION	ROAD	EDGELINE SOLID 4-INCH WHITE LF	DOUBLE CENTERLINE 4-INCH YELLOW LF	ISLAND NOSE YELLOW EACH	ARROWS TYPE 2 WHITE EACH	WORDS "ONLY" WHITE EACH	STOPLINE 18-INCH WHITE LF	CHANNELIZING 8-INCH WHITE LF	CONCRETE CORRUGATED MEDIAN, YELLOW SF	CROSSWALK 6-INCH WHITE L.F.
202+72 - 204+77	CTH CB LT				4	3		400		
202+72	CTH CB			1			36			
204+77	CTH CB			1						
207+00	CTH CB			1						
208+83	CTH CB			1						
208+83 - 209+70	CTH CB								300	
12+80 - 26+00	CTH JJ LT/RT	930	2440							
18+30 - 19+15	CTH JJ RT				2	1				
18+30	CTH JJ			1						
19+15	CTH JJ			1						
20+72	CTH JJ			1						
24+68	CTH JJ								220	
20+75 - 23+50	CTH JJ LT				2	1		275		
22+00 - 23+50	WOODHAVEN LA	275	275				20			48
8+00 - 9+50	STURGIS LA	275	275				20			48
13+48-14+10	CTH JJ								210	
TOTAL		7,320	10,790	7	8	5	76	675	730	96

BENCH MARKS			
NO.	STA	DESCRIPTION	ELEV
13	201+43	FRONT CORNER CONC. WALK HSE #1294, 71' RT	773.86

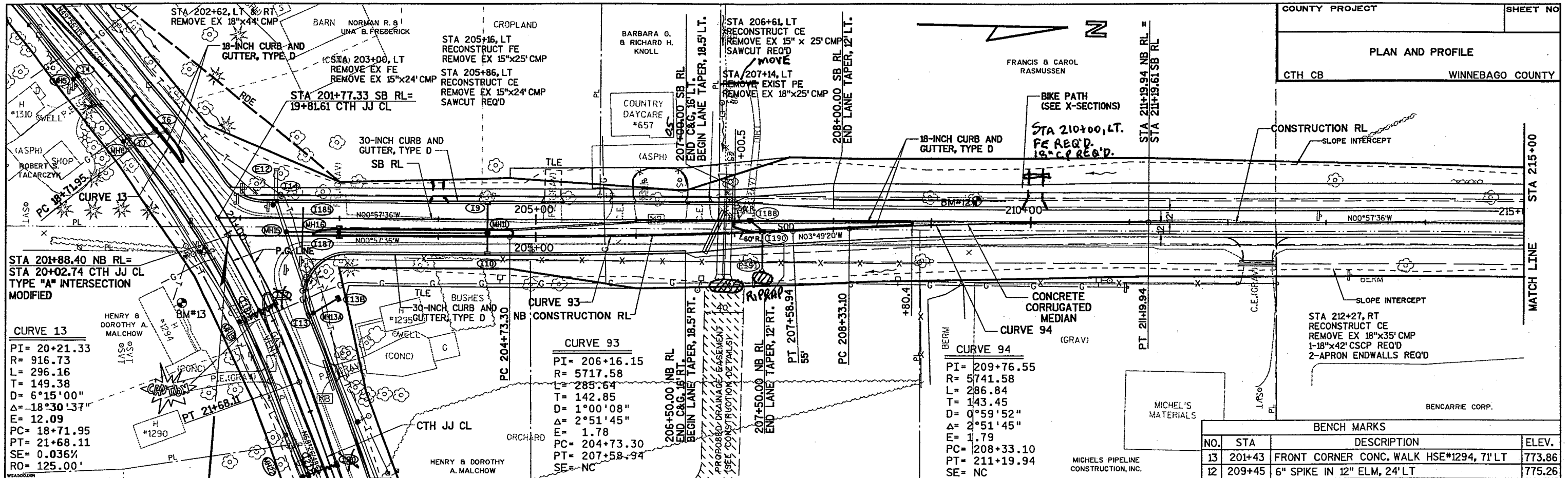
COUNTY PROJECT	SHEET NO
CTH JJ	WINNEBAGO COUNTY

CURVE 13

PI = 20+21.33
 R = 916.73
 L = 296.16
 T = 149.38
 D = 6°15'00"
 Δ = 18°30'37"
 E = 12.09
 PC = 18+71.95
 PT = 21+68.11
 SE = 0.036'
 RO = 125.00'

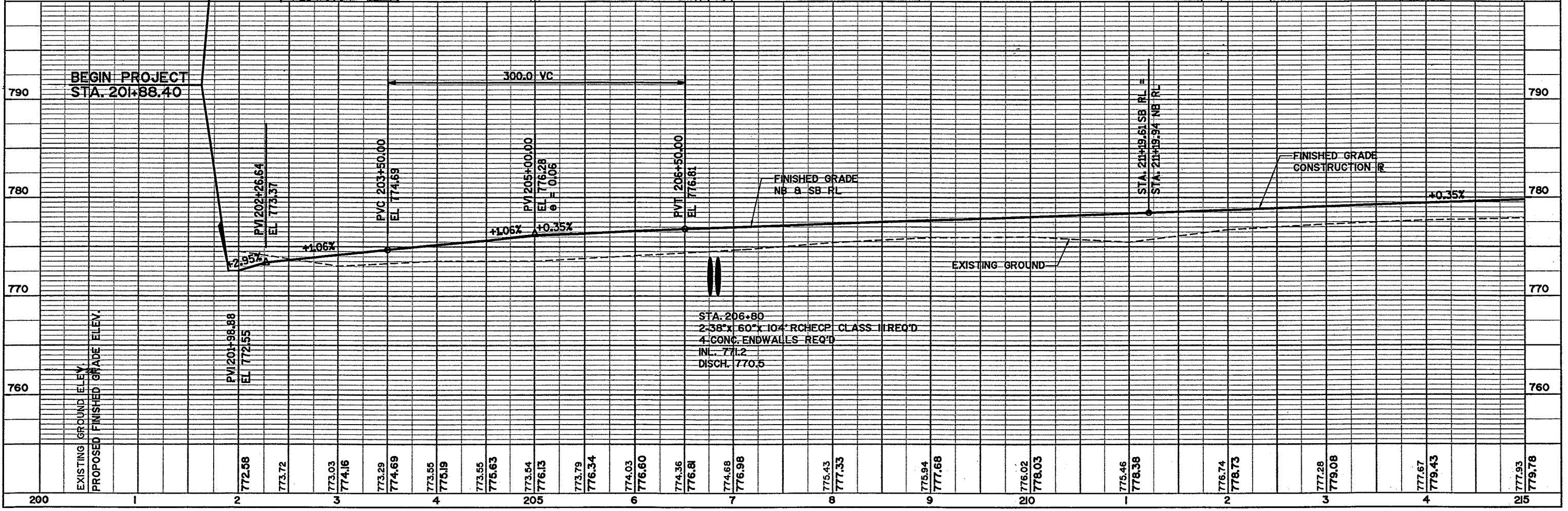


STA 24+50
 4-29"x45"x62" RCHECK CLASS III REQ'D
 CONC. MASONRY ENDWALLS REQ'D
 INV. 767.0
 DISCH. 766.7

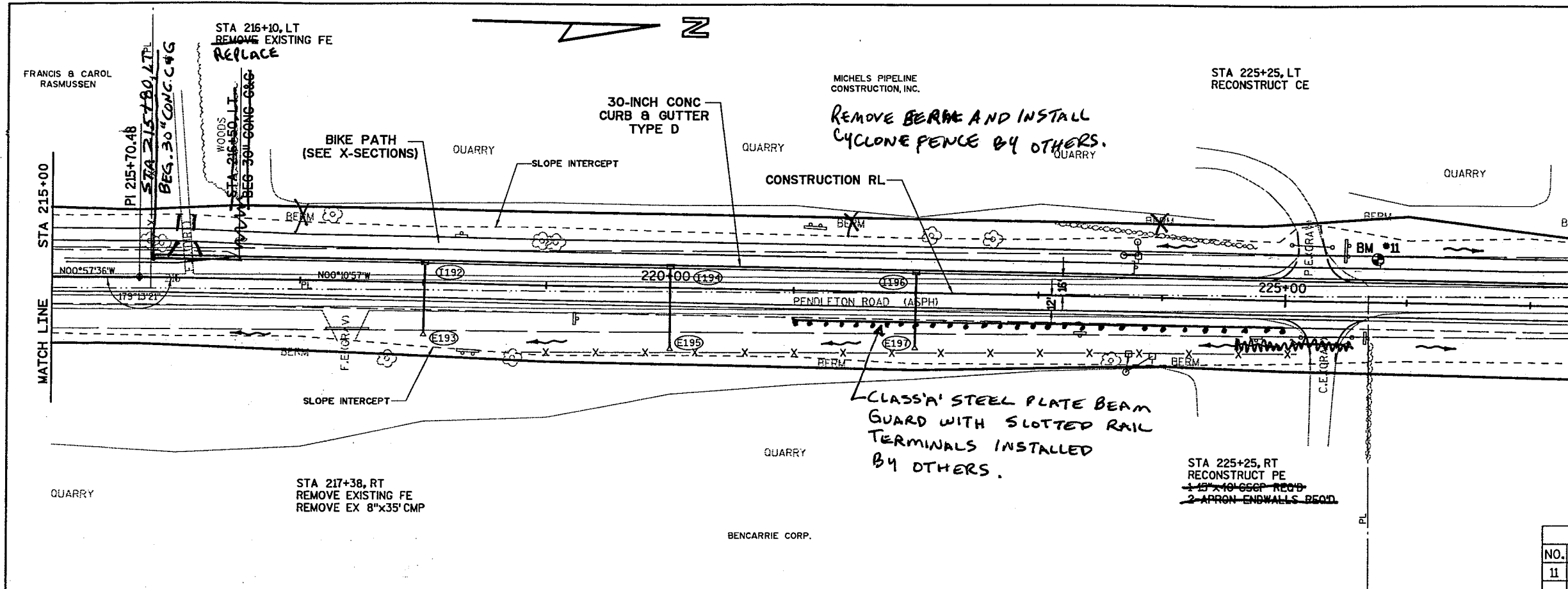


BENCH MARKS

NO.	STA	DESCRIPTION	ELEV.
13	201+43	FRONT CORNER CONC. WALK HSE#1294, 71' LT	773.86
12	209+45	6" SPIKE IN 12" ELM, 24' LT	775.26

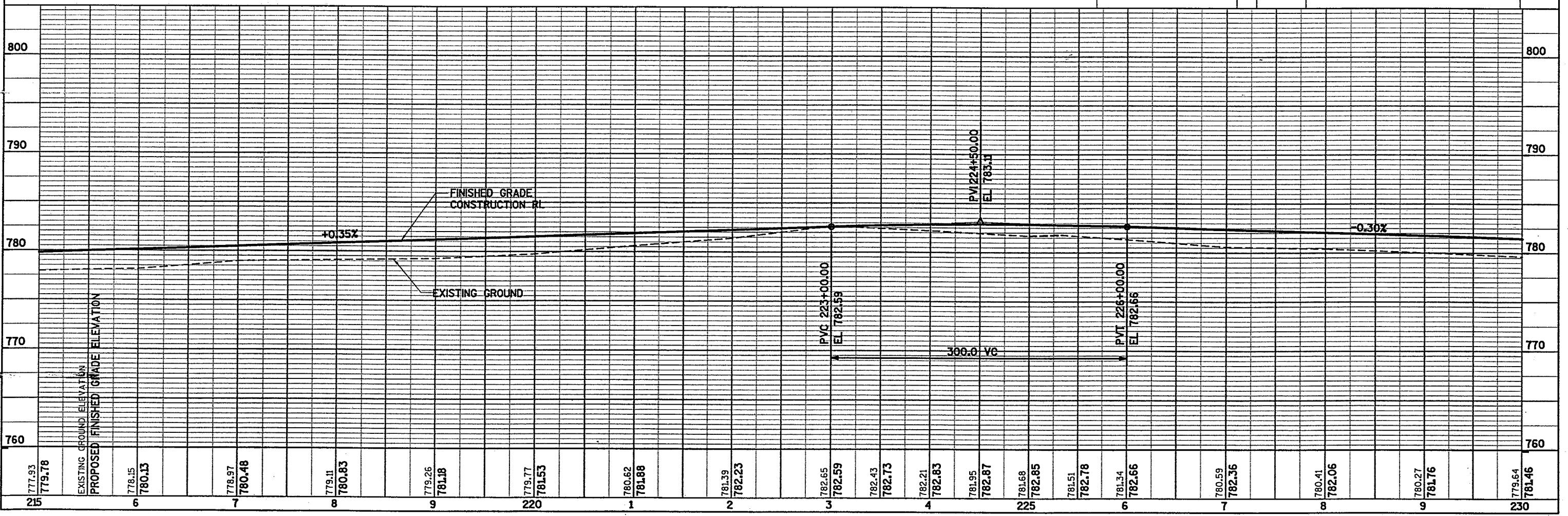


200	1	2	3	4	5	6	7	8	9	20	1	2	3	4	25																						
		772.58	773.72	773.03	774.16	773.29	774.69	773.55	775.19	773.55	775.63	773.54	776.13	773.79	776.34	774.03	776.60	774.36	776.81	774.68	776.98	775.43	777.33	775.94	777.68	776.02	778.03	775.46	778.38	776.74	778.73	777.28	779.08	777.67	779.43	777.93	779.78



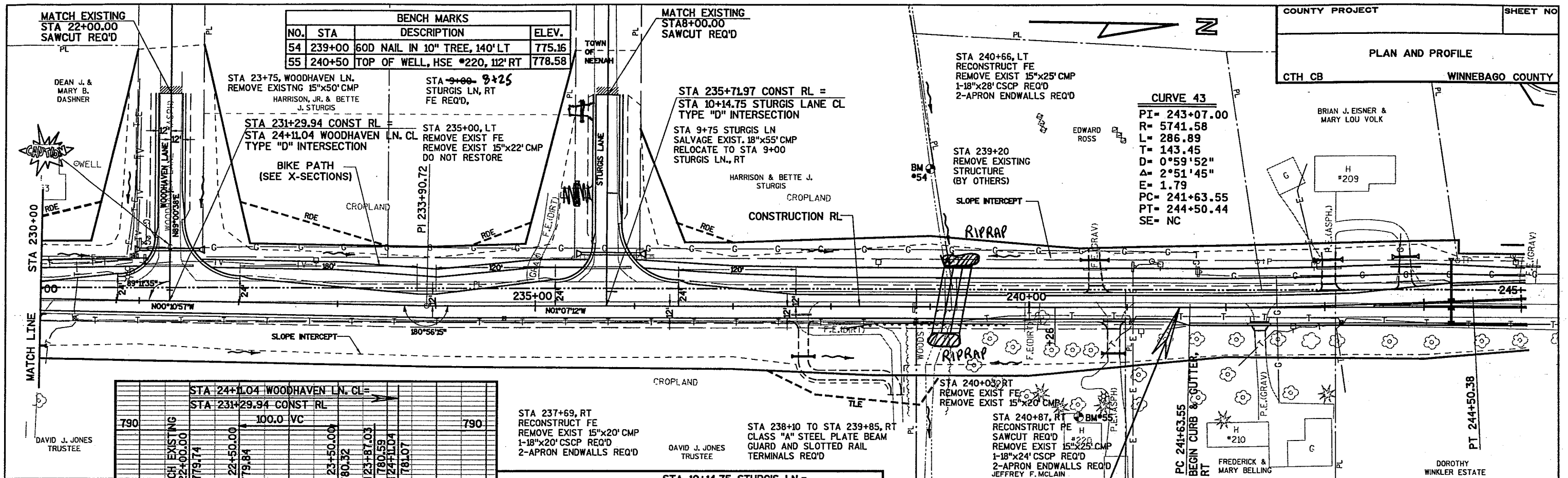
DEAN J. B. MARY B. DASHNER
 STA 229+72, LT RECONSTRUCT PE REMOVE EX 15"x25' CMP 1-15"x32' CSCP REQ'D 2-APRON ENDWALLS REQ'D
 100' TAPER
 STA 227+50, LT END 30" CONC C&G
 STA 229+94, RT RECONSTRUCT PE REMOVE EX 12"x16' CMP 1-15"x28' CSCP REQ'D 2-APRON ENDWALLS REQ'D SAWCUT REQ'D
 DAVID J. JONES TRUSTEE

BENCH MARKS			
NO.	STA	DESCRIPTION	ELEV.
11	225+76	6" SPIKE IN EAST P.P. #8323704, 35' LT	781.23



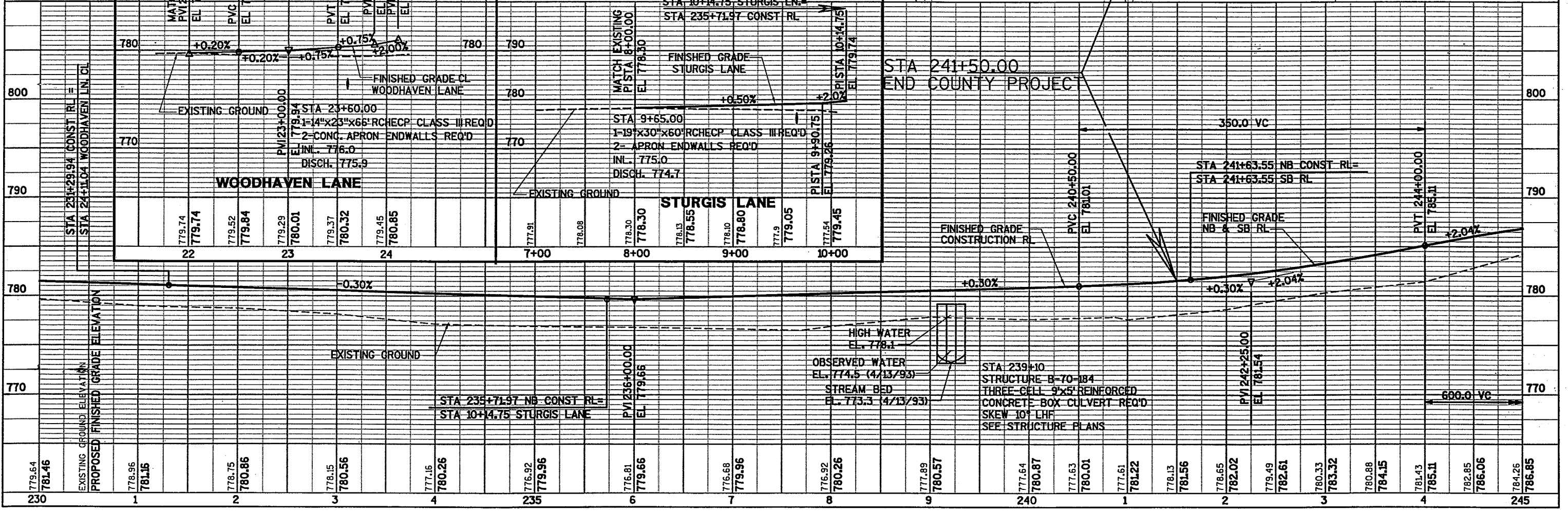
STATION	EXISTING GROUND ELEVATION	PROPOSED FINISHED GRADE ELEVATION
215	777.93	779.78
6	778.15	780.13
7	778.97	780.48
8	779.11	780.83
9	779.26	781.18
220	779.77	781.53
1	780.62	781.88
2	781.39	782.23
3	782.65	782.59
4	782.43	782.73
225	782.21	782.83
5	781.95	782.87
6	781.68	782.85
7	781.51	782.78
8	781.34	782.66
9	780.59	782.36
230	779.64	781.46

BENCH MARKS			
NO.	STA	DESCRIPTION	ELEV.
54	239+00	60D NAIL IN 10" TREE, 140' LT	775.16
55	240+50	TOP OF WELL, HSE #220, 112' RT	778.58



CURVE 43

PI=	243+07.00
R=	5741.58
L=	286.89
T=	143.45
D=	0°59'52"
Δ=	2°51'45"
E=	1.79
PC=	241+63.55
PT=	244+50.44
SE=	NC



WOODHAVEN LANE

STA 24+11.04 WOODHAVEN LN. CL	STA 23+29.94 CONST RL
100.0 VC	
MATCH EXISTING PVI 22+00.00 EL 779.74	PVC 22+50.00 EL 779.84
PVT 23+50.00 EL 780.32	PVI 23+87.03 EL 780.59
PI 23+00.00 EL 780.01	PVI 24+11.04 EL 780.85
GRADES: +0.20%, +0.15%, +0.75%, +2.00%	

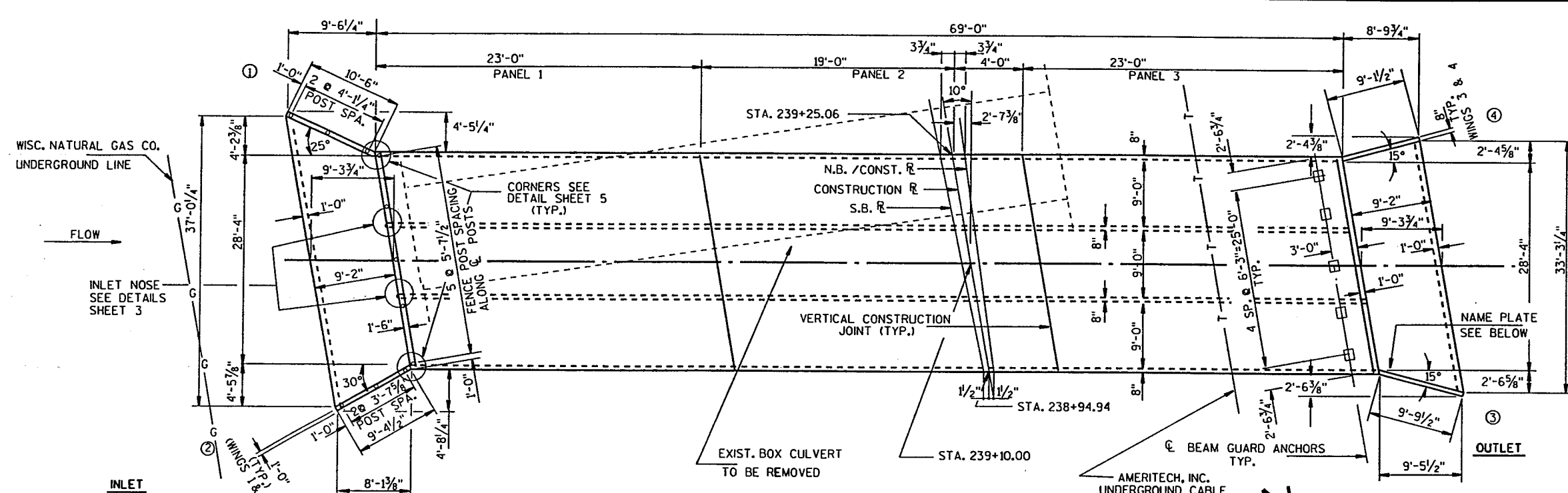
STURGIS LANE

STA 10+14.75 STURGIS LN.	STA 235+71.97 CONST RL
FINISHED GRADE STURGIS LANE	
MATCH EXISTING PVI 8+00.00 EL 778.30	PVI 9+90.75 EL 779.26
STA 9+65.00	PVI 10+14.75 EL 779.74
GRADES: +0.50%, +2.00%	

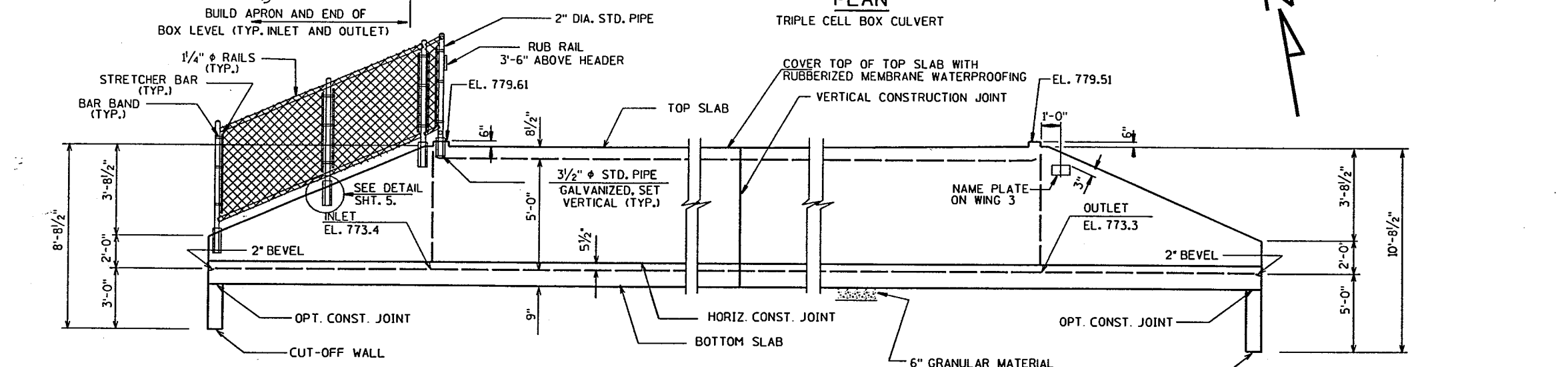
END COUNTY PROJECT

STA 241+50.00	STA 241+63.55 NB CONST RL	STA 241+63.55 SB RL
FINISHED GRADE CONSTRUCTION RL	FINISHED GRADE NB & SB RL	
PVC 240+50.00 EL 781.01	PVI 242+25.00 EL 781.54	PVT 244+00.00 EL 785.11
GRADES: +0.30%, +0.30%, +2.04%		

779.64	778.96	778.75	778.15	777.16	776.92	776.81	776.68	776.92	777.89	777.64	777.63	777.61	778.13	778.65	779.49	780.33	780.88	781.43	782.85	784.26
781.46	781.16	780.86	780.56	780.26	779.96	779.66	779.96	780.26	780.57	780.87	780.01	781.22	781.56	782.02	782.61	783.32	784.15	785.11	786.06	786.85
230	1	2	3	4	235	6	7	8	9	240	1	2	3	4	245					



PLAN



ELEVATION

DESIGN DATA
 LIVE LOAD ----- HS20
 EARTH LOAD ----- 12 FEET OF FILL.
 ULTIMATE DESIGN STRESSES:
 CONCRETE MASONRY ----- f'c = 3,500 psi
 HIGH STRENGTH BAR ----- fy = 60,000 psi

FENCE NOTES
 POSTS ARE TO BE SET VERTICAL.
 ALL FENCING COMPONENTS SHALL BE GALVANIZED STEEL OR APPROVED ALTERNATE LISTED BELOW.
 PLACE ALL NUTS ON OUTSIDE OF FENCE.
 TOP RAIL SHALL BE CONTINUOUS OVER INTERIOR POSTS. MINIMUM LENGTH OF TOP RAIL BETWEEN SPLICES SHALL BE 20'-0". PLACE TOP RAIL SPLICES NEAR 1/4 POINTS OF POST SPACING.
 NO. 9 GAGE TIES AT 9" SPACING REQ'D ON RAILS & POSTS WITHOUT STRETCHER BARS.
 ALTERNATE FENCING MATERIALS ARE ALUMINUM/ALUMINUM COATED STEEL, AND APPROVED COLOR COATING SYSTEMS. IF ALTERNATE MATERIALS ARE USED FOR POSTS & RAILS, THESE ELEMENTS SHOULD BE DESIGNED.
 CHAIN LINK FENCE IS NO. 9 GAUGE 2" MESH FENCING. KNUCKLED TOP AND BOTTOM. FABRIC HEIGHT IS 5'-0". START FENCE 1" ABOVE HEADER.
 RUB RAIL TO BE TREATED 2" X 8" TIMBER RAIL AND INCLUDED IN THE PRICE BID FOR "CHAIN LINK FENCE, 5'-0".

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.
 BAR STEEL REINFORCEMENT SHALL BE IMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED.
 THE EXISTING GROUNDLINE WAS USED AS THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES".
 WITHIN THE LENGTH OF THE BOX ALL SPACES EXCAVATED AND NOT OCCUPIED BY THE NEW BOX SHALL BE BACKFILLED WITH GRANULAR BACKFILL TO THE ELEVATION AND SECTION EXISTING PRIOR TO EXCAVATION. HOWEVER IF THE EXISTING GROUND IS ABOVE THE TOP OF BOX, GRANULAR BACKFILL WILL STOP AT THE TOP OF BOX.
 THE CONCRETE IN CUTOFF WALLS MAY BE PLACED UNDERWATER IF THE EXCAVATION CANNOT BE DEWATERED.
 THE EXISTING STRUCTURE IS A SINGLE CELL BOX CULVERT TOTAL WIDTH OF 10 FEET AND HEIGHT OF 5 FEET, 32 FEET IN LENGTH.

TOTAL ESTIMATED QUANTITIES

(BID ITEMS)	
REMOVING OLD CULVERT, STA. 239+20	1 L.S.
EXCAVATION FOR STRUCTURES, CULVERTS B-70-184	1 L.S.
CONCRETE MASONRY, CULVERTS	177 C.Y.
HIGH STRENGTH BAR STEEL REINFORCEMENT, CULVERTS	31,790 LBS.
RUBBERIZED MEMBRANE WATERPROOFING	230 S.Y.
CHAIN LINK FENCE, 5'-0"	50 L.F.
(NON-BID ITEMS)	
FILLER	3/4" SIZE
POLYVINYL CHLORIDE WATERSTOP	21 L.F.

HYDRAULIC DATA

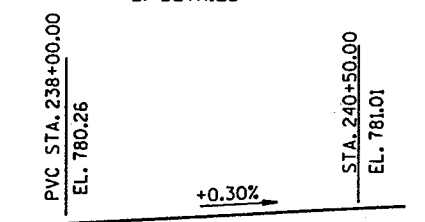
Q₁₀₀ ----- 590 C.F.S. TOTAL
 VELOCITY ----- 5.4 F.P.S.
 HIGH WATER ----- EL. 778.1
 DRAINAGE AREA ----- 0.9 SQ. MILES
 ROADWAY OVERTOPPING FREQUENCY ----- N/A

TRAFFIC DATA

ADT = 6300 (1995)
 ADT = 8850 (2015)

LIST OF DRAWINGS

1. GENERAL PLAN
2. SUBSURFACE EXPLORATION
3. DETAILS
4. DETAILS
5. DETAILS



PROPOSED GRADE LINE
 OF N.B. CONSTRUCTION R & S.B. R

BENCH MARKS

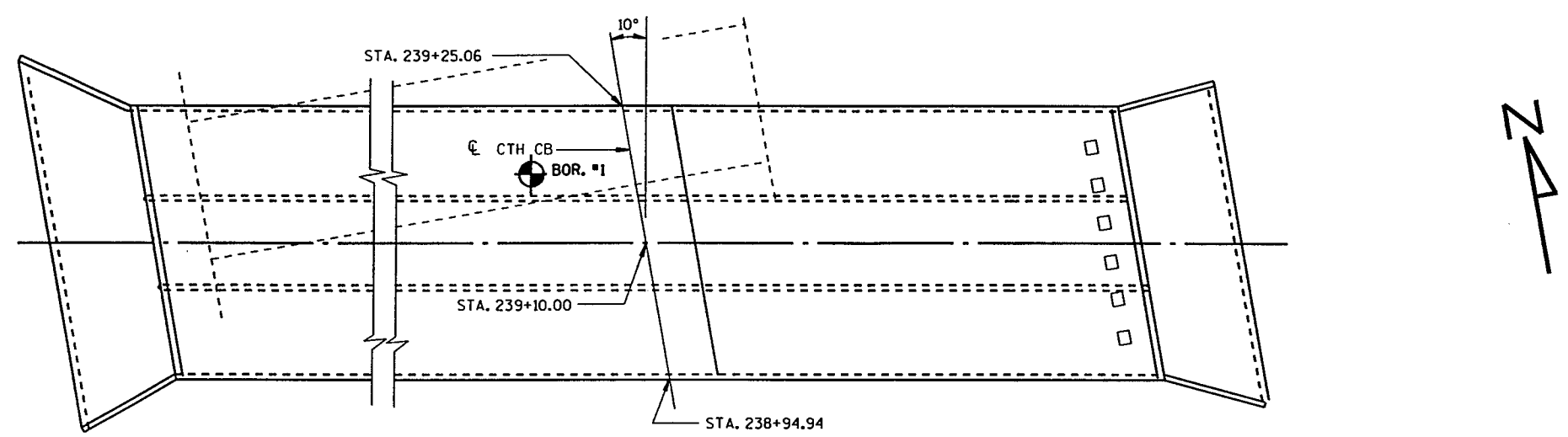
NO.	STATION	DESCRIPTION	EL.
54	239+00	60d NAIL IN 10" TREE 140' LT.	775.16
55	240+50	TOP OF WELL, HSE #220 112' RT.	778.58

PLANS BY
MEAD & HUNT, INC.
 MADISON, WISCONSIN
 RUSSELL CHESMORE, P.E.
 6501 WATTS ROAD
 608-273-6380

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-70-184			
UNNAMED TRIBUTARY OF NEENAH SLOUGH			
COUNTY	WINNEBAGO	TOWN/VILLAGE	NEENAH
DESIGN SPEC.	AASHTO '93	LOAD	HS20
DESIGNED BY	GAR	DESIGN CK'D.	CJB
DRAWN BY	NJA	PLANS CK'D.	CJB
APPROVED _____ DATE _____ STATE BRIDGE ENGINEER			
GENERAL PLAN			SHEET 1 OF 5

BRIDGE OFFICE CONTACT
 GERALD ANDERSON 608-266-8488

BORINGS BY
 RIVER VALLEY TESTING CORPORATION
 APPLETON/WAUSAU, WISCONSIN
 ON APRIL 13, 1993



ABBREVIATIONS
 F---FINE M---MEDIUM C---COARSE
 Ws---WEATHERED So---SOUND

MATERIAL SYMBOLS

Topsoil	Silt	Sandstone
Sand	Peat	Limestone
Gravel	Clay	Igneous Rock

LEGEND OF PROBING

Probing No.
 Sta.
 Elevation

95/6-95 Blows for 6"
 Penetration
 Probing taken with a
 350# wt.
 Falling 18" on a 2"
 O.D. Point.

7 Average blows per foot
 Refusal 95/6

LEGEND OF BORING

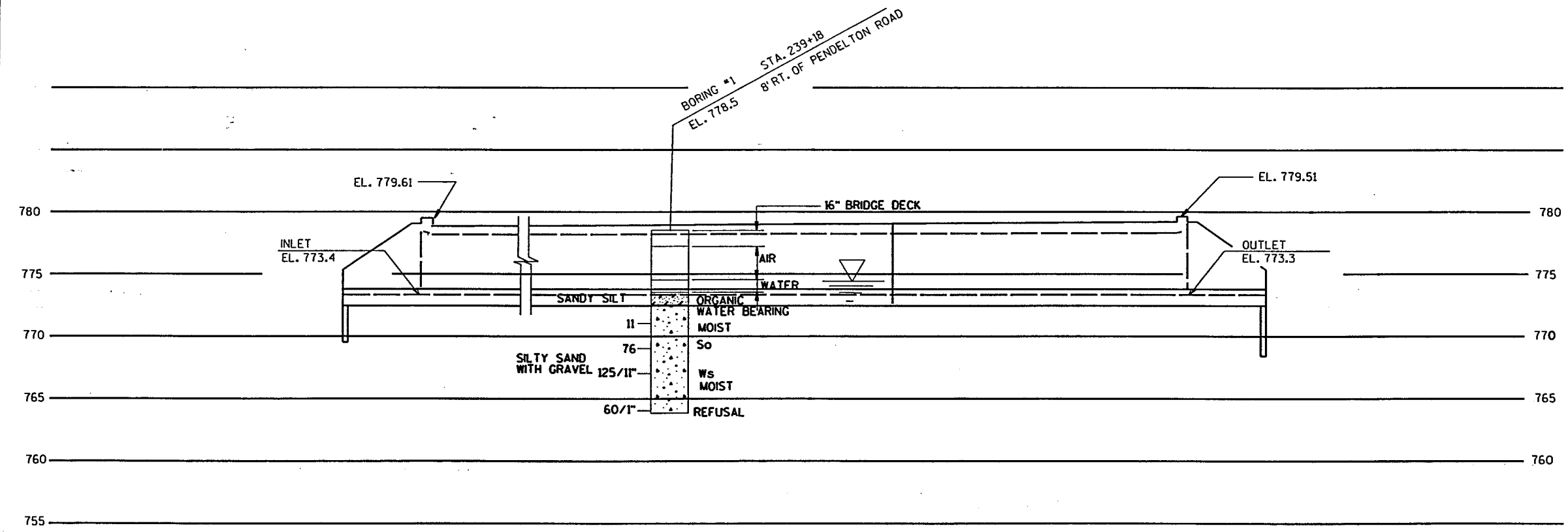
Elevation
 Boring No.
 Sta.

Unconfined strength → 7.7 *
 Blows per foot using 140# wt. falling 30"
 Wash sample
 Shelby Tube → S.T.

Ground Water Elevation
 No Ground Water Observed Above This Elevation

Sandy Gravel
 F.
 Boulders or Cobbles
 Sand
 Silty Clay
 So
 Limestone

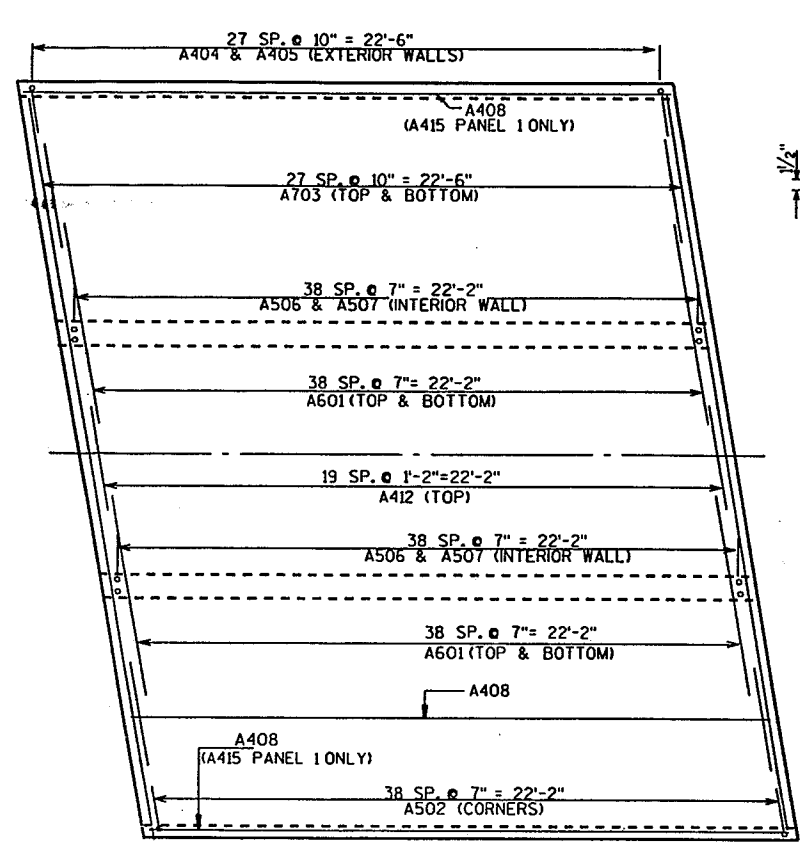
Unless otherwise specified, the blows per foot at the locations indicated are based on driving a 2" O.D. x 1.4" I.D. split spoon sampler with a 140# hammer having a free fall of 30". The blow count is taken in undisturbed soil immediately below a cased or open hole eliminating side friction on the drive pipe.



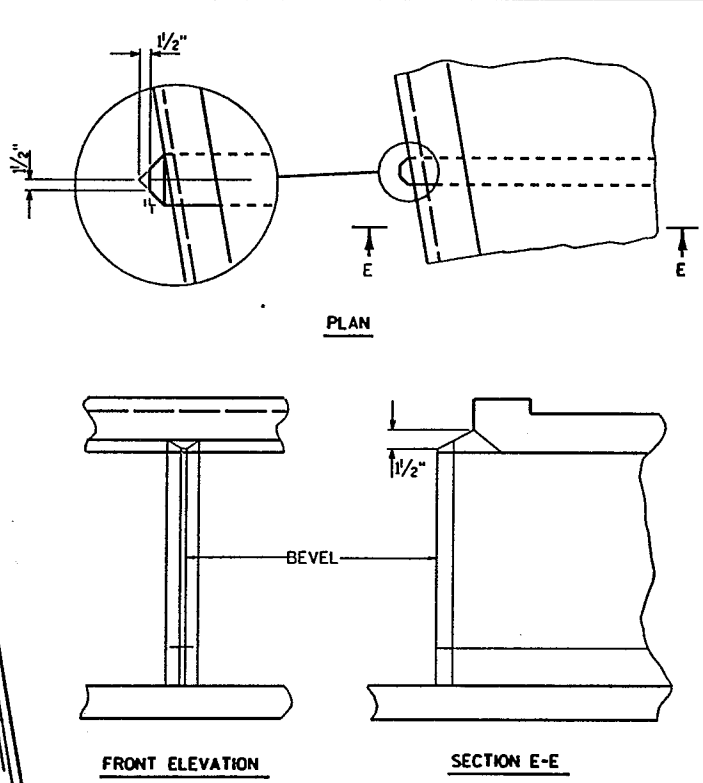
SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

To obtain relative data concerning the character of material in and upon which the foundation might be built, borings and/or soundings were made at points approximately as indicated on this drawing. The data presented herein represents the findings of the subsurface explorations made. However, because the depths investigated are limited and the area of the borings, and/or soundings is very small in relation to the entire area, the Division of Highways 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.

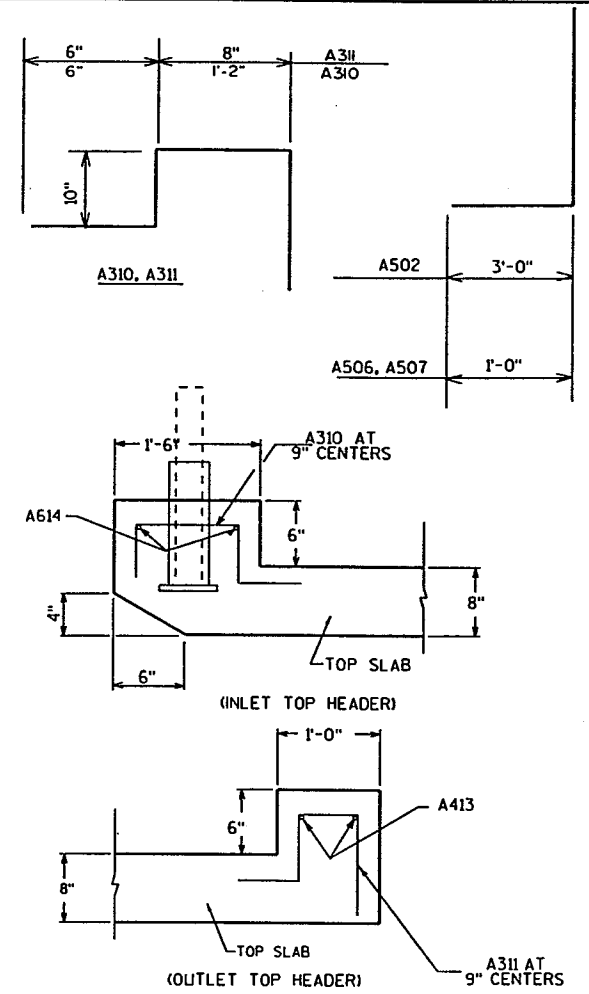
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-70-184			
CONST. SPEC.	1989	DRAWN BY NJA	PLANS CK'D. CJB
SUBSURFACE EXPLORATION			SHEET 2 OF 5



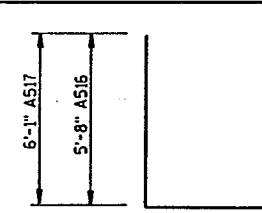
PLAN SHOWING BAR STEEL REINFORCEMENT
ALL PANELS SIMILAR.



INLET NOSE DETAILS

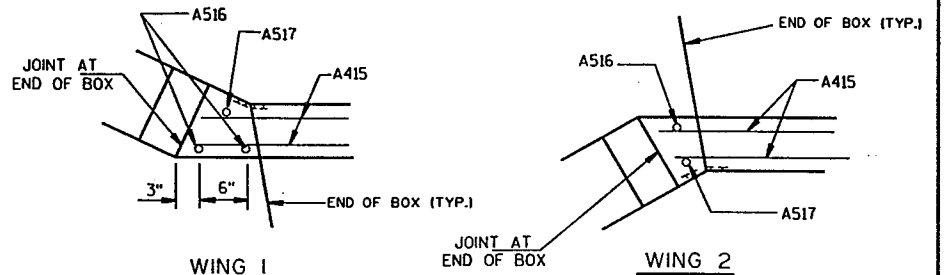


HEADER DETAILS



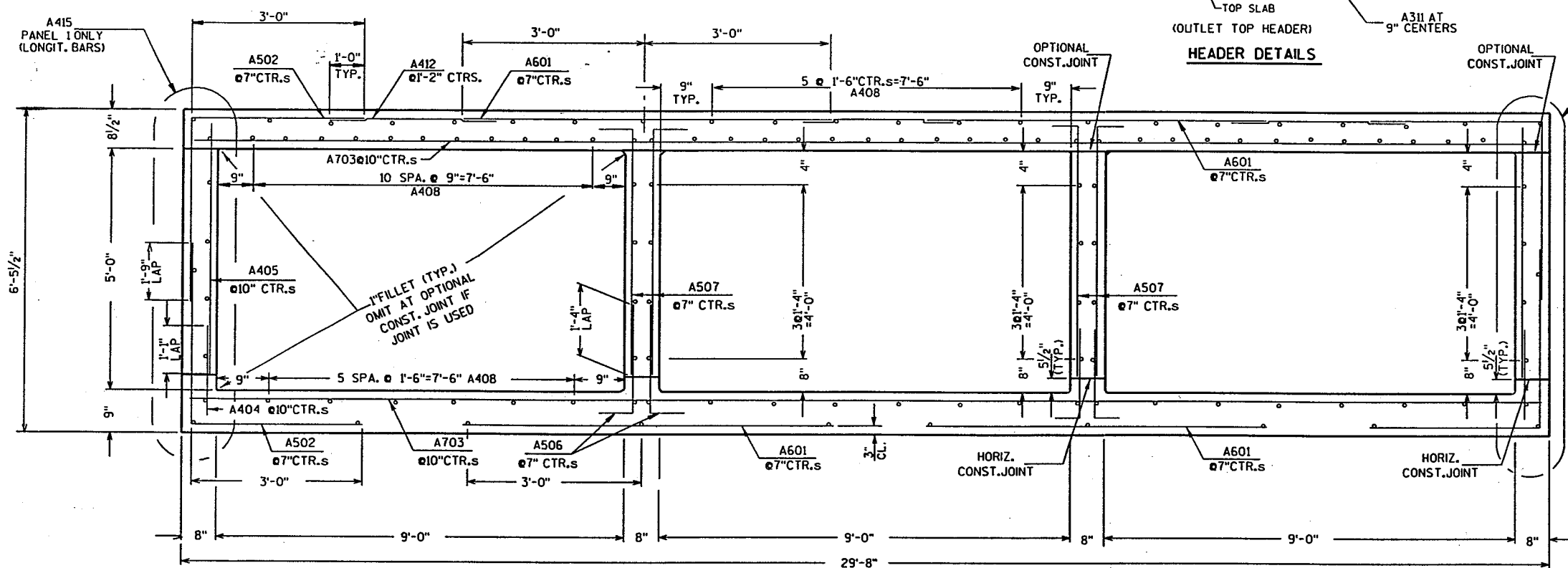
BILL OF BARS
THE FIRST DIGIT OR THE FIRST TWO DIGITS OF THE BAR MARK SIGNIFY THE BAR SIZE. DIM.S IN BENDING DETAILS ARE OUT TO OUT OF BAR.

MARK	NO. REOD	LENGTH	BENT	LOCATION
A601	468	6-0		SLAB TOP & BOTTOM ALL PANELS TRANSVERSE
A502	468	6-10	X	SLAB CORNERS ALL PANELS
A703	168	29-9		SLAB TOP & BOTTOM ALL PANELS TRANSVERSE
A404	173	2-0		SLAB EXTERIOR WALLS ALL PANELS VERTICAL
A405	173	4-11		SLAB EXTERIOR WALLS ALL PANELS VERTICAL
A506	468	3-1	X	SLAB INTERIOR WALLS ALL PANELS VERTICAL
A507	468	5-8	X	SLAB INTERIOR WALLS ALL PANELS VERTICAL
A408	345	22-8		SLAB TOP, BOTTOM & WALLS ALL PANELS LONGITUDINAL
A509	160	4-0		VERTICAL CONSTRUCTION JOINT
A310	40	2-9	X	HEADERS INLET
A311	40	2-7	X	HEADERS OUTLET
A412	180	5-10		SLAB TOP ALL PANELS TRANSVERSE
A413	2	29-9		HEADERS OUTLET TRANS.
A614	2	29-9		HEADERS INLET TRANS.
A415	18	23-3		EXTERIOR WALLS PANEL 1 LONGITUDINAL
A516	3	8-10	X	BOX WALLS AT WINGS 1 & 2
A517	2	9-3	X	BOX WALLS AT WINGS 1 & 2

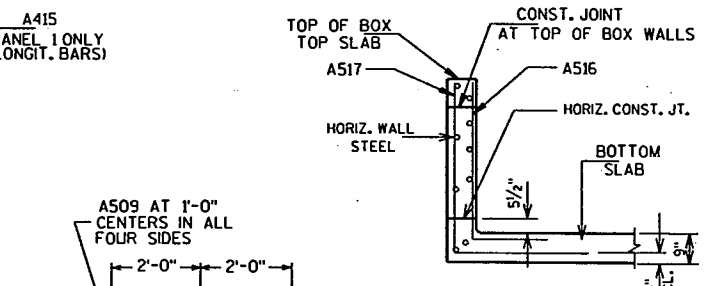


WING 1

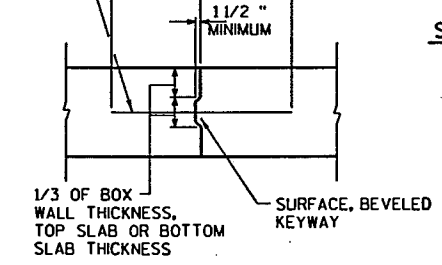
WING 2



SECTION THRU BOX

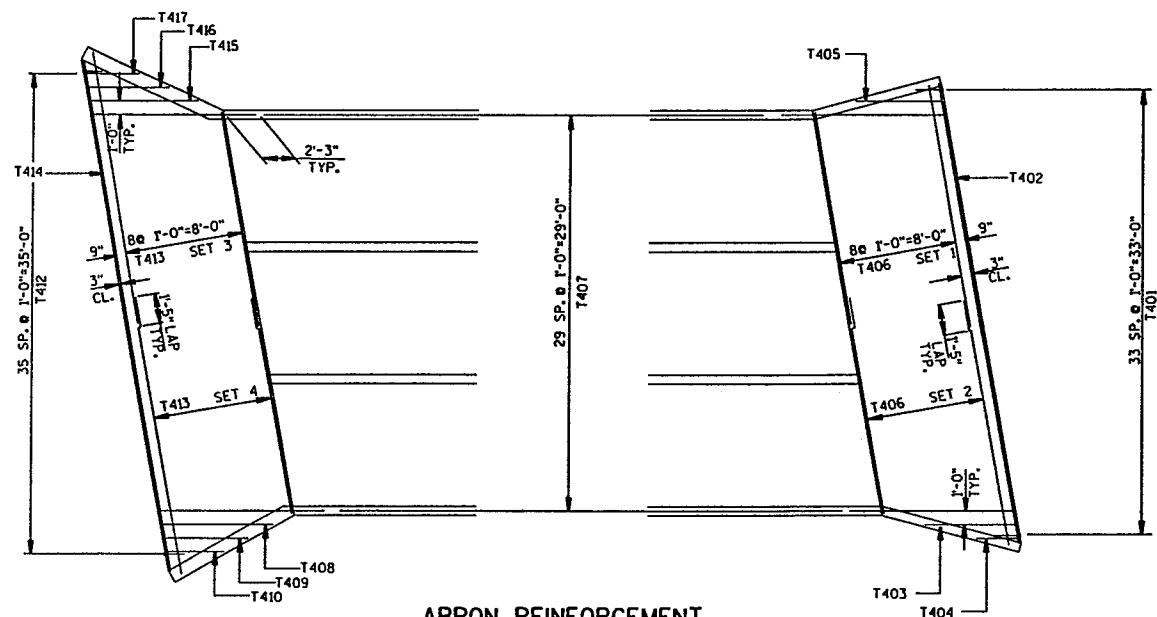


SECTION THROUGH WALLS AT WINGS 1 & 2

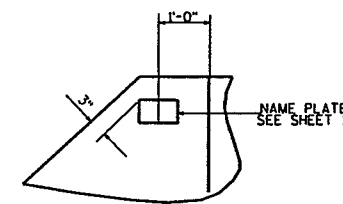


VERTICAL CONSTRUCTION JOINT

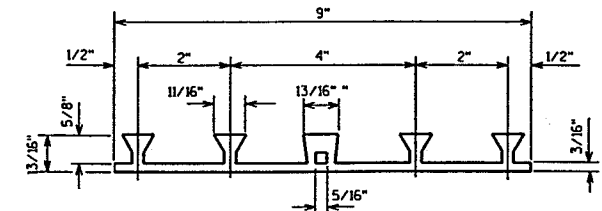
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-70-184			
CONST. SPEC.	1989	DRAWN BY NJA	PLANS CK'D. CJB
DETAILS			SHEET 3 OF 5



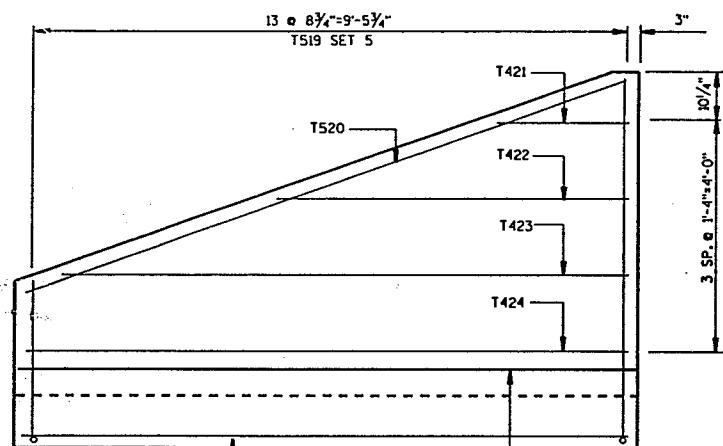
APRON REINFORCEMENT



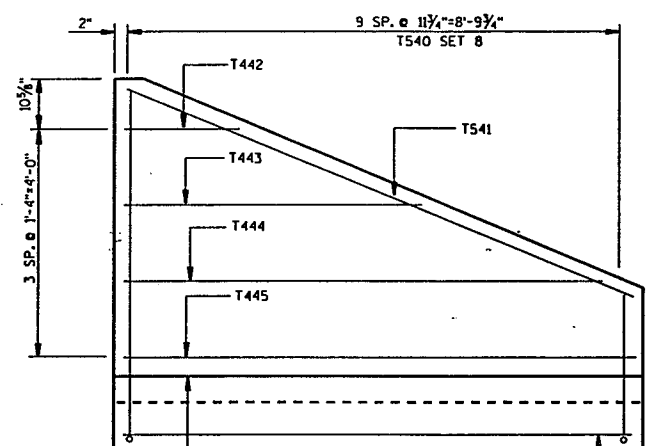
NAME PLATE LOCATION
(ON FRONT FACE WING 3)



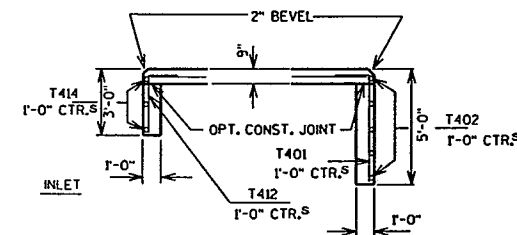
POLYVINYL CHLORIDE WATERSTOP



WING 1

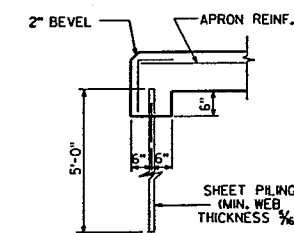


WING 4

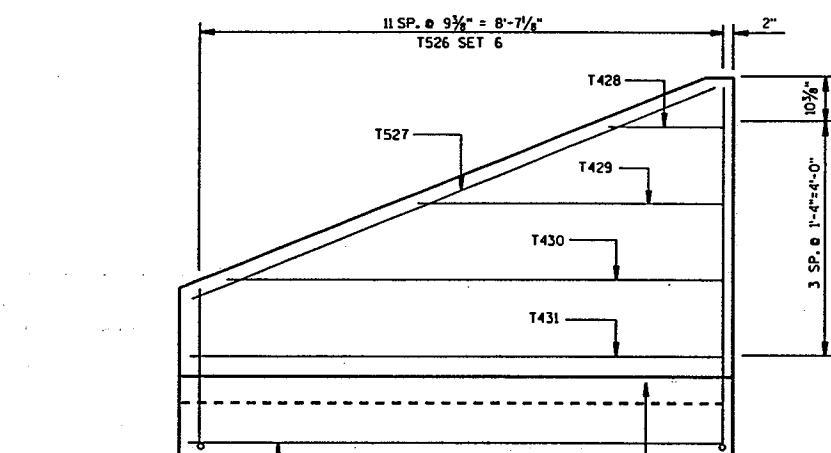


CUT-OFF WALL DETAILS

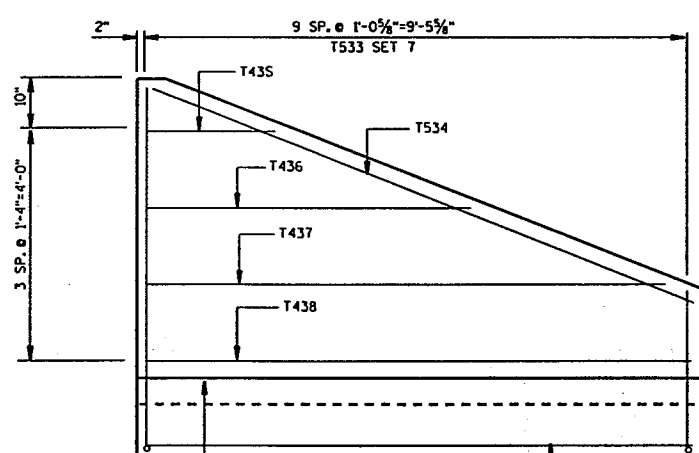
NOTE: THE CONCRETE IN CUT-OFF WALLS MAY BE PLACED UNDER WATER IF THE EXCAVATION CANNOT BE DEWATERED.



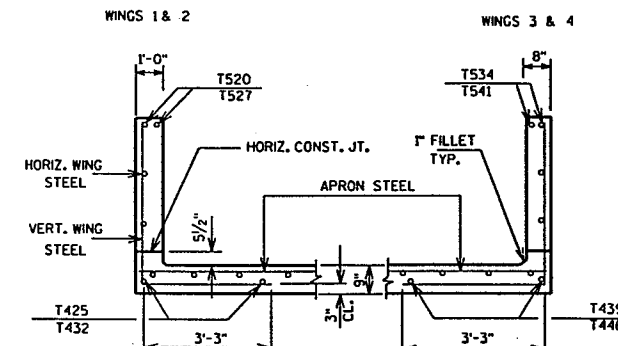
ALTERNATE CUT-OFF WALL
(PAYMENT IS BASED ON CONCRETE CUT-OFF WALLS)



WING 2



WING 3



SECTION THRU WINGS
(AT RIGHT ANGLES TO WINGS)

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STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-70-184			
CONST. SPEC.	1989	DRAWN BY NJA	PLANS CK'D. CJB
DETAILS			SHEET 4 OF 5

BILL OF BARS

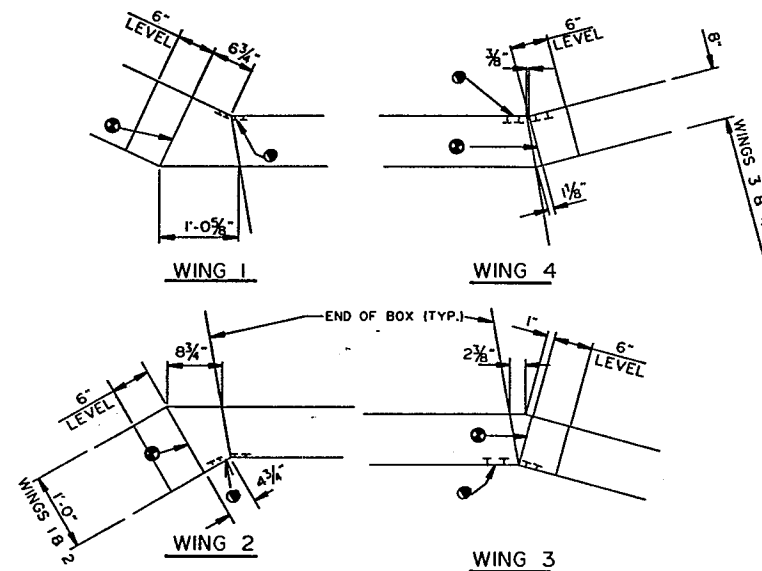
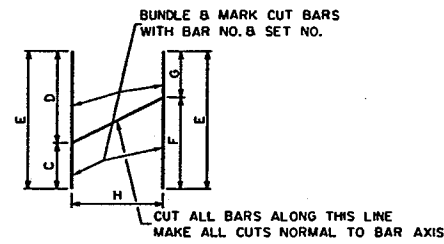
THE FIRST DIGIT OR THE FIRST TWO DIGITS OF THE BAR MARK SIGNIFY THE BAR SIZE. DIMS IN BENDING DETAILS ARE OUT TO OUT OF BAR. BENT BARS USED IN CUTTING DIAGRAMS SHALL BE BENT AFTER CUTTING

MARK	NO. REOD	LENGTH	BENT	CUT DIAGR.	LOCATION
T401	34	5-6	*		OUTLET APRON AND CUTOFF WALL
T402	5	33-6			OUTLET APRON AND CUTOFF WALL
T403	1	6-1			OUTLET APRON
T404	1	2-6			OUTLET APRON
T405	1	5-9			OUTLET APRON
T406	9	33-1	*	*	OUTLET APRON
T407	60	11-4			OUTLET AND INLET APRONS
T408	1	7-5			INLET APRON
T409	1	5-6			INLET APRON
T410	1	3-7			INLET APRON
T412	36	3-6	*	*	INLET APRON AND CUTOFF WALL
T413	9	35-2		*	INLET APRON
T414	3	37-10			INLET APRON AND CUTOFF WALL
T415	1	7-5			INLET APRON
T416	1	5-5			INLET APRON
T417	1	3-5			INLET APRON
T519	7	14-6	*	*	WING 1
T520	2	10-3			WING 1
T421	1	2-0			WING 1
T422	1	5-5			WING 1
T423	1	8-11			WING 1
T424	1	9-5			WING 1
T425	2	10-8			WING 1
T526	6	14-6	*	*	WING 2
T527	2	9-2			WING 2
T428	1	1-11			WING 2
T429	1	5-0			WING 2
T430	1	8-1			WING 2
T431	1	8-7			WING 2
T432	2	9-5			WING 2
T533	5	14-6	*	*	WING 3
T534	2	10-0			WING 3
T435	1	2-0			WING 3
T436	1	5-4			WING 3
T437	1	8-9			WING 3
T438	1	9-4			WING 3
T439	2	9-7			WING 3
T540	5	14-6	*	*	WING 4
T541	2	9-5			WING 4
T442	1	2-0			WING 4
T443	1	5-1			WING 4
T444	1	8-3			WING 4
T445	1	8-9			WING 4
T446	2	8-10			WING 4

CUTTING DIAGRAM

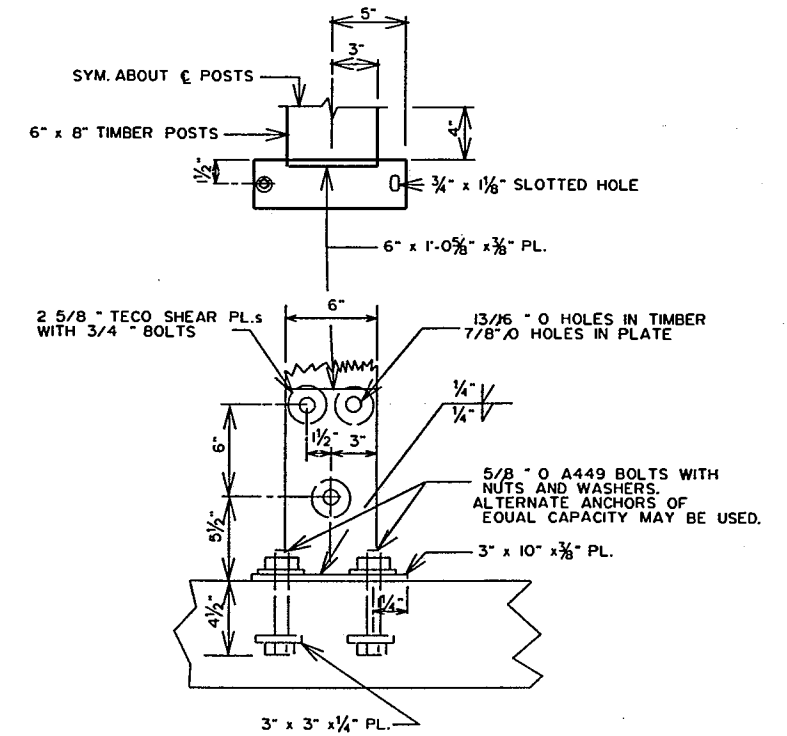
MARK	SET NO.	C	D	E	F	G	H	SETS
T406	1	15-4		33-1	17-9		9	1
	2		17-9			15-4		1
T413	3	15-4		35-2	19-10		9	1
	4		19-10			15-4		1
T519	5	5-5	9-1	14-6	7-1	7-5	7	1
T526	6	5-5	9-1	14-6	7-1	7-5	6	1
T533	7	5-5	9-1	14-6	7-1	7-5	5	1
T540	8	5-5	9-1	14-6	7-1	7-5	5	1

"H" IS NUMBER OF BARS REOD BEFORE CUTTING



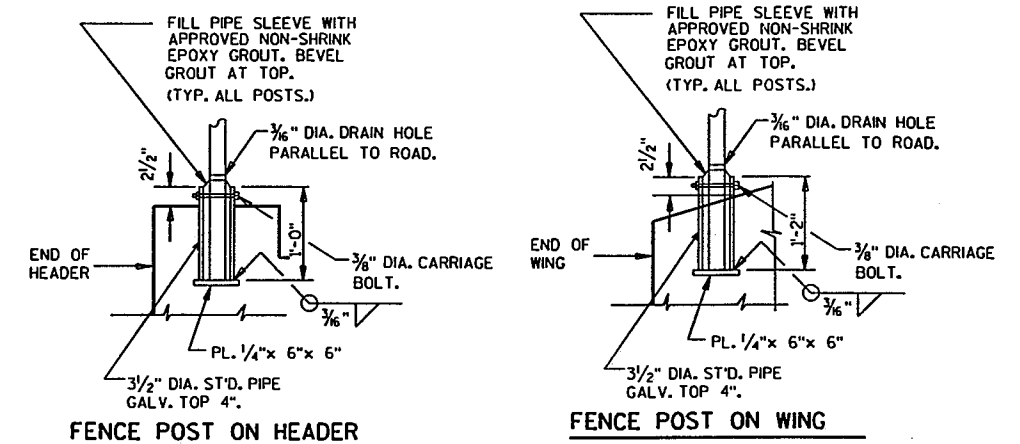
CORNER DETAILS

- POLYVINYL CHLORIDE WATERSTOP- EXTEND FROM HORIZ. CONST. JOINT TO TOP OF WING. FLUSH WITH FACE OF CONC. SEE DETAIL SHEET 4.
- 1/2" FILLER- EXTEND FROM HORIZ. CONST. JOINT TO TOP OF WING. DO NOT RUN BAR STEEL THRU JOINT.



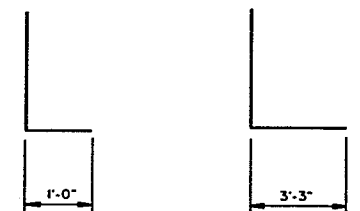
GUARD RAIL POST CONNECTION DETAIL

(INCIDENTAL TO CONCRETE MASONRY.)
(PLATES, BOLTS, NUTS, WASHERS AND ANGLES SHALL BE GALVANIZED.)



FENCE POST ON HEADER

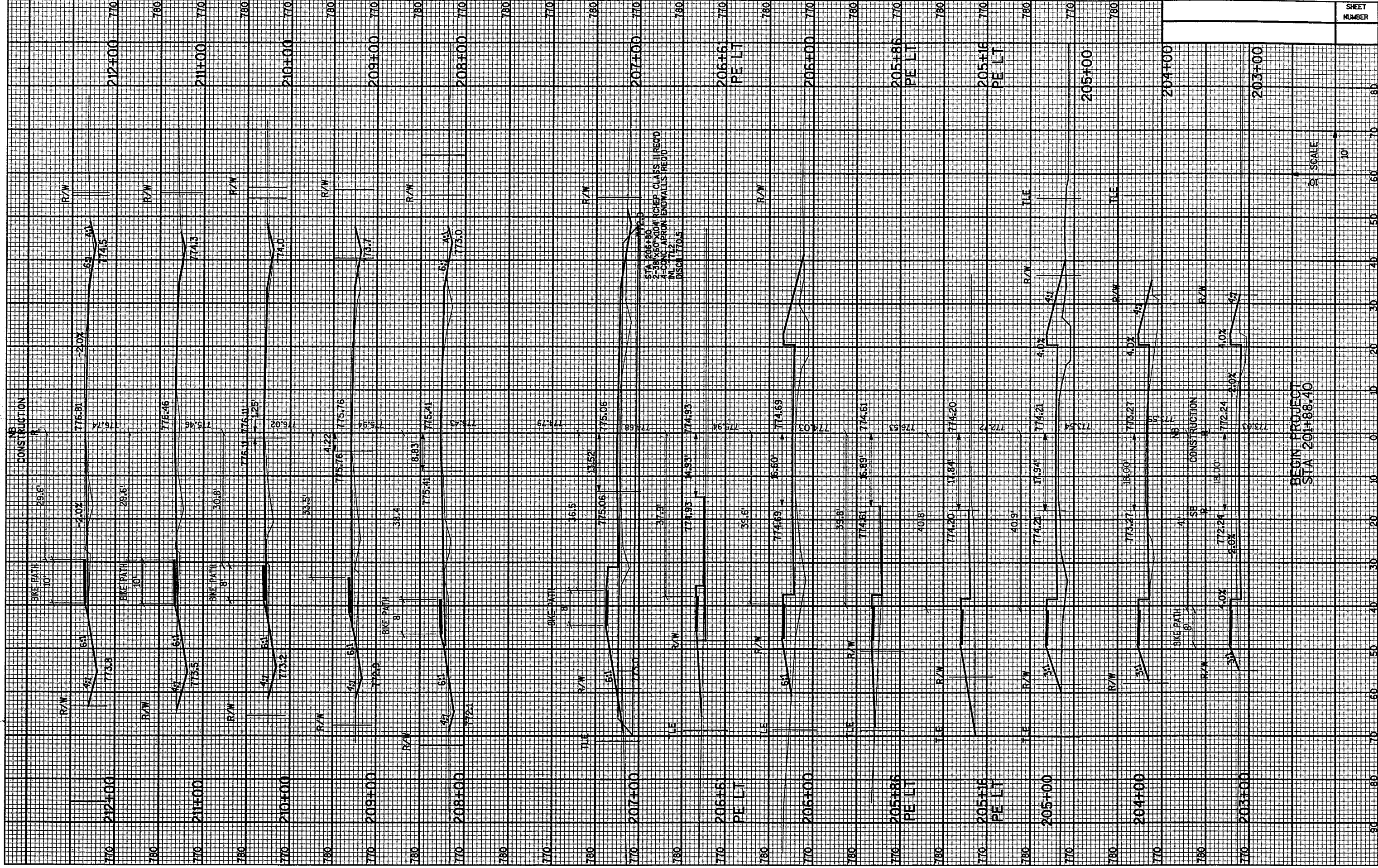
FENCE POST ON WING



T401, T412

T519, T526
T533, T540

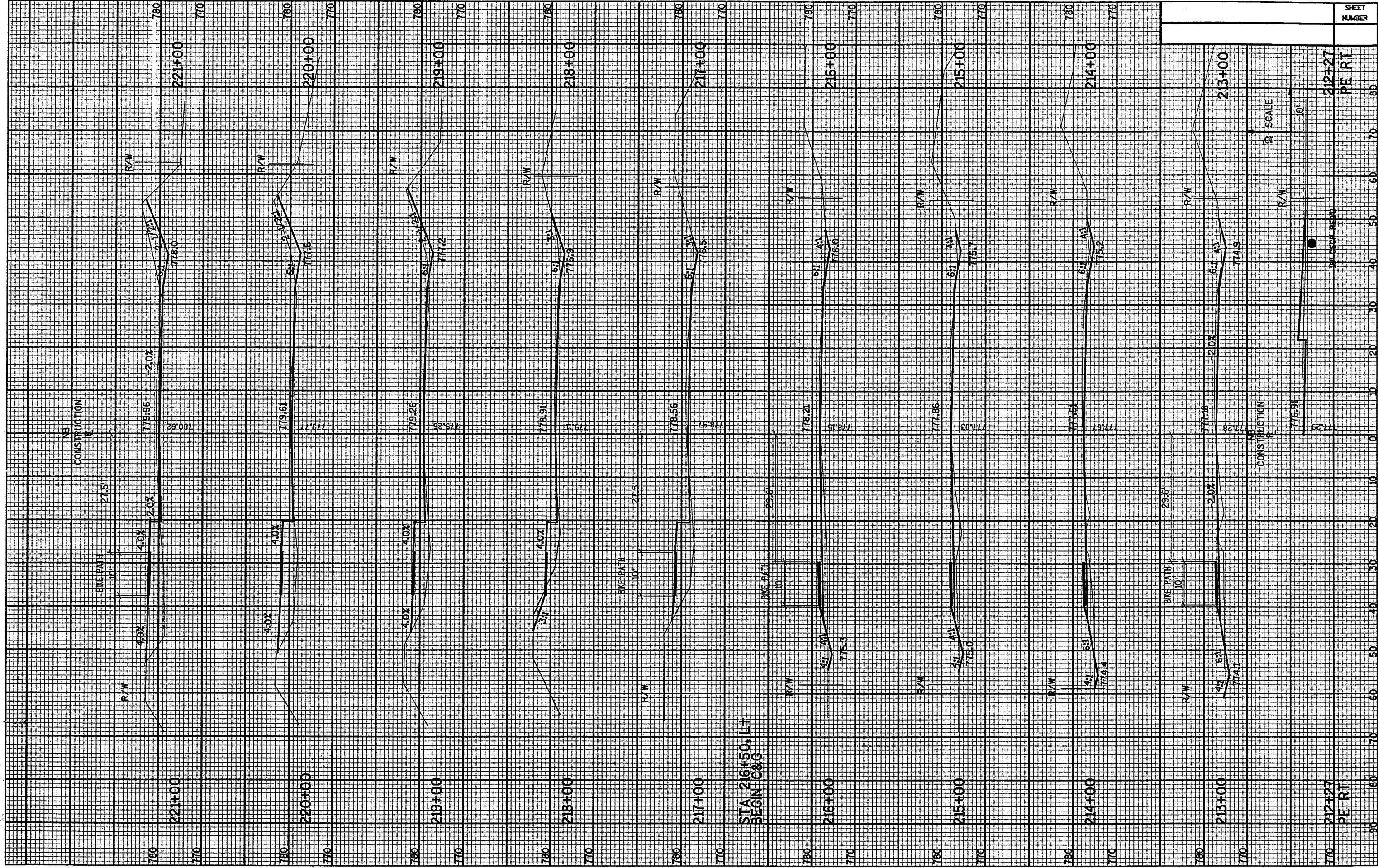
NO.	DATE	REVISION	BY
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STRUCTURE B-70-184			
CONST. SPEC.	1989	DRAWN BY NJA	PLANS CK'D CJB
DETAILS			SHEET 5 OF 5

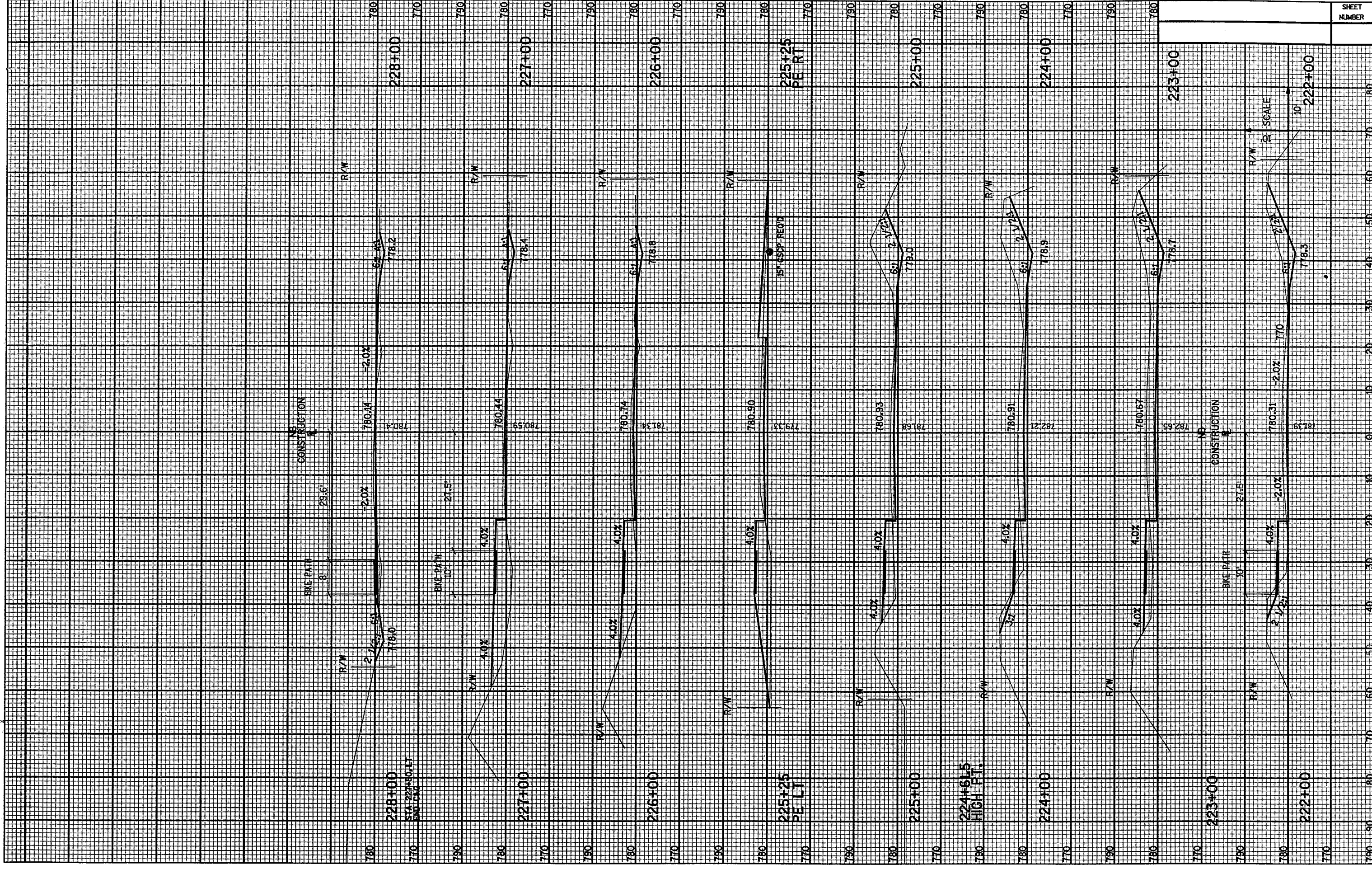


BEGIN PROJECT
STA 201+88.40

SCALE
1" = 30'

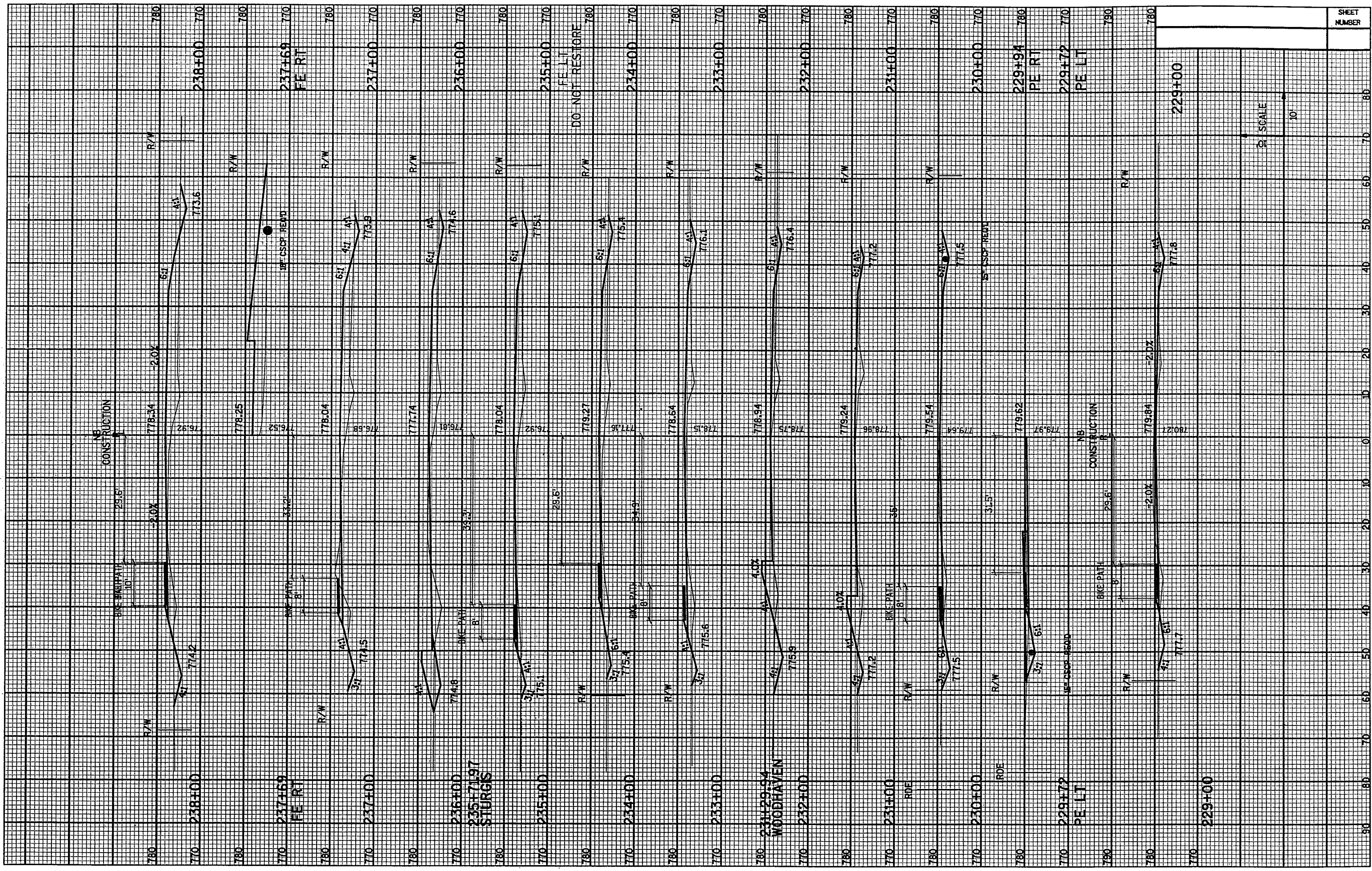
SHEET
NUMBER





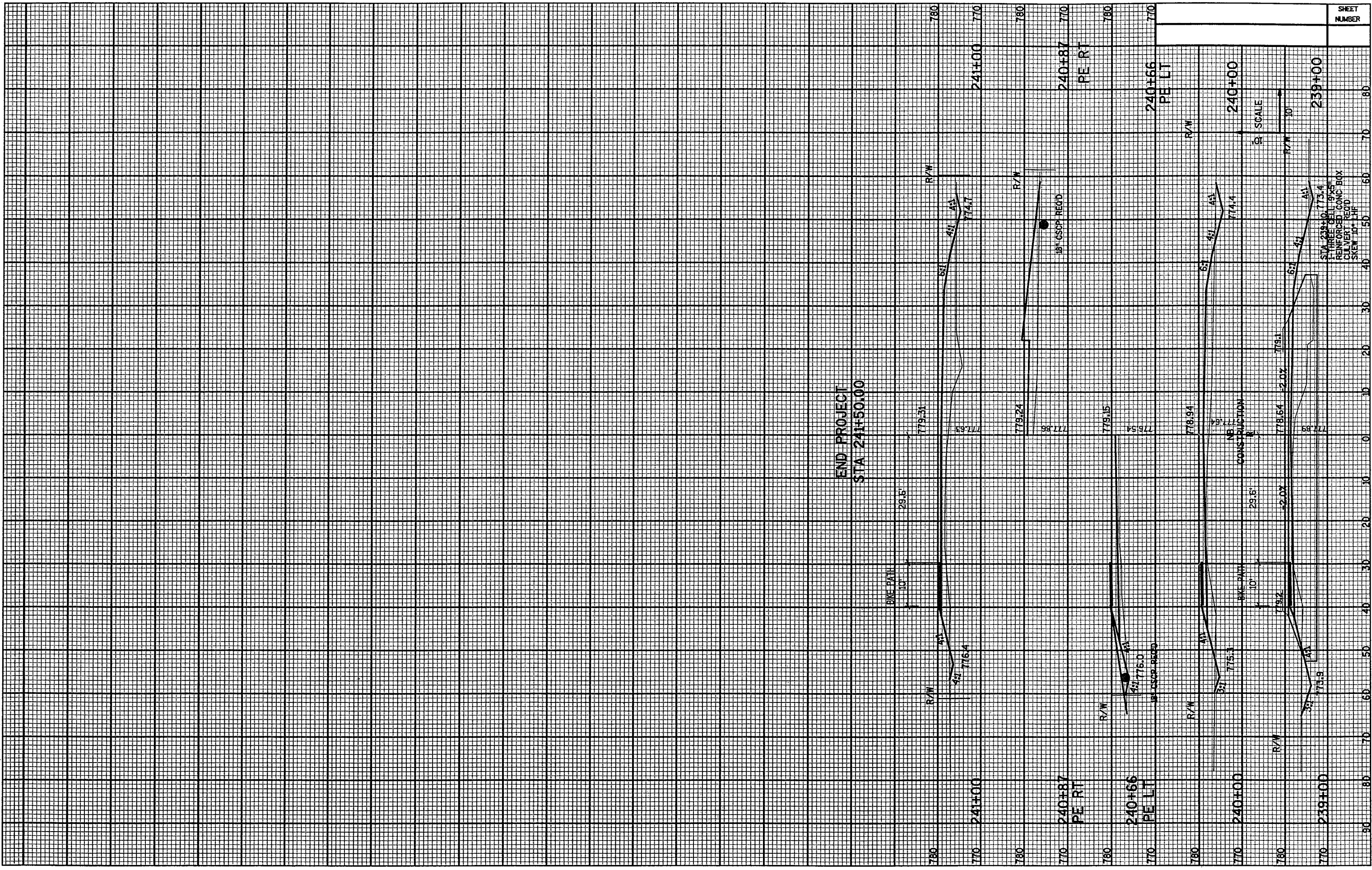
SHEET NUMBER

80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80



SCALE
10'

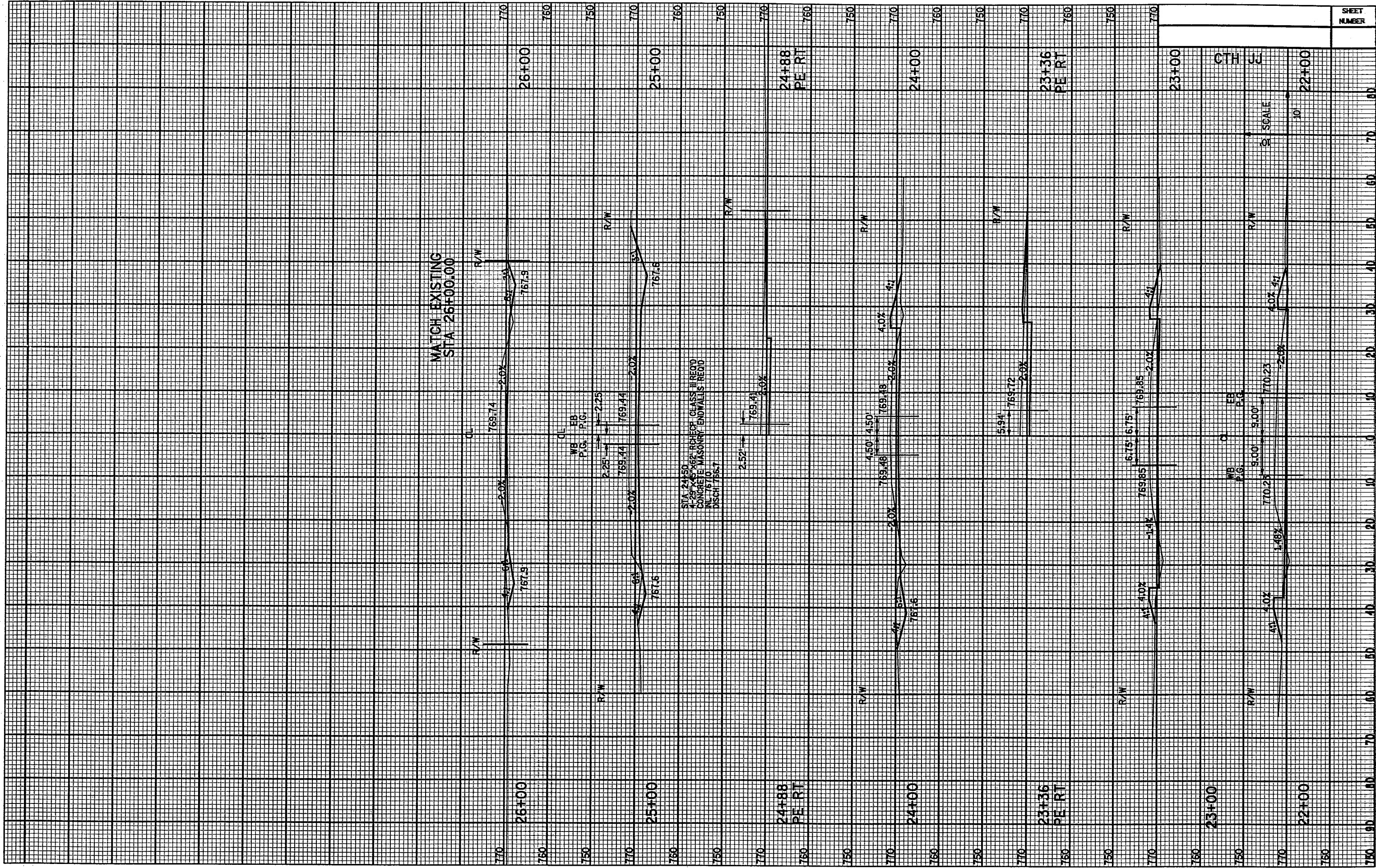
SHEET
NUMBER

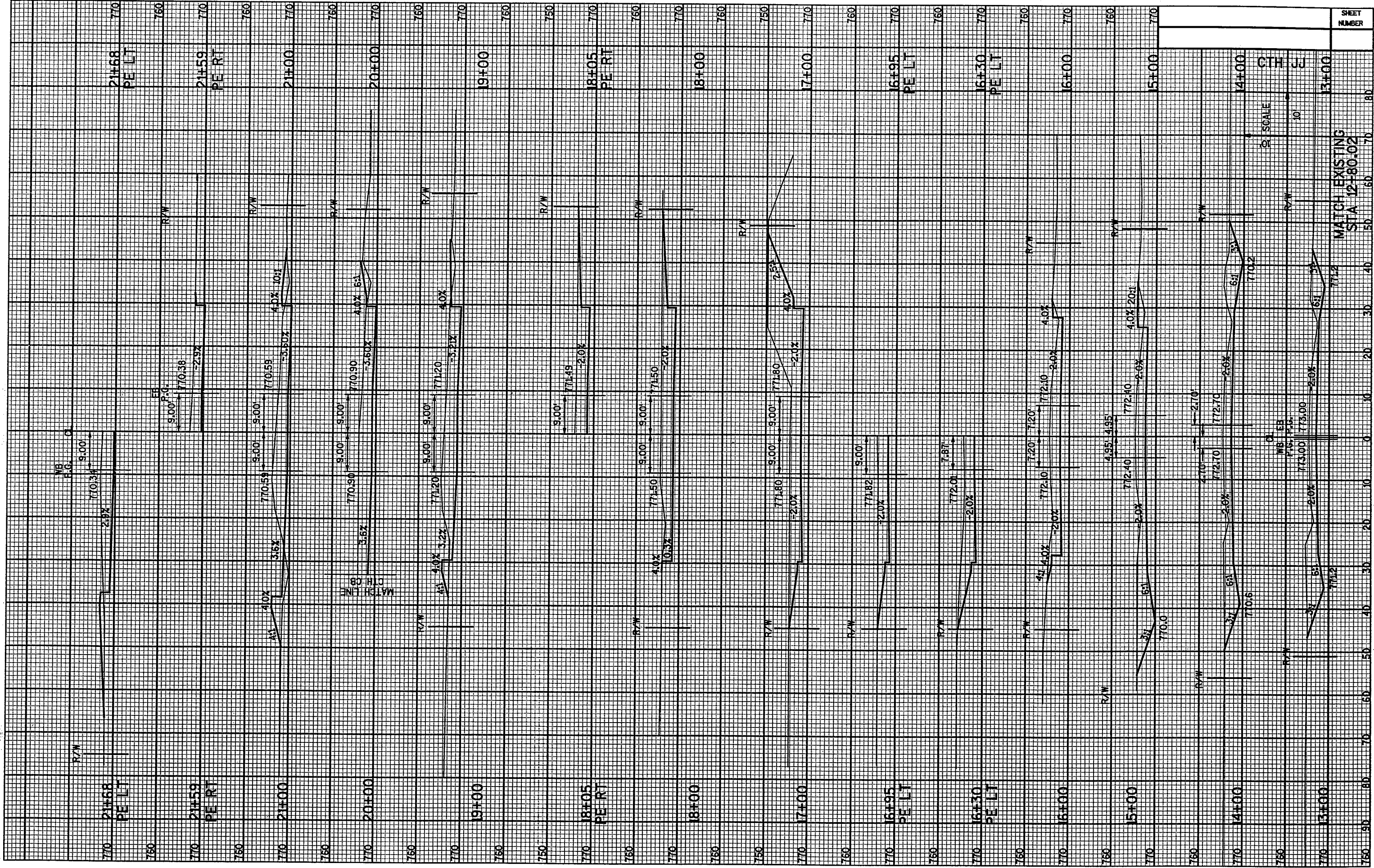


END PROJECT
STA 241+50.00

STA 239+00 773.4
A 18\"/>

SHEET
NUMBER



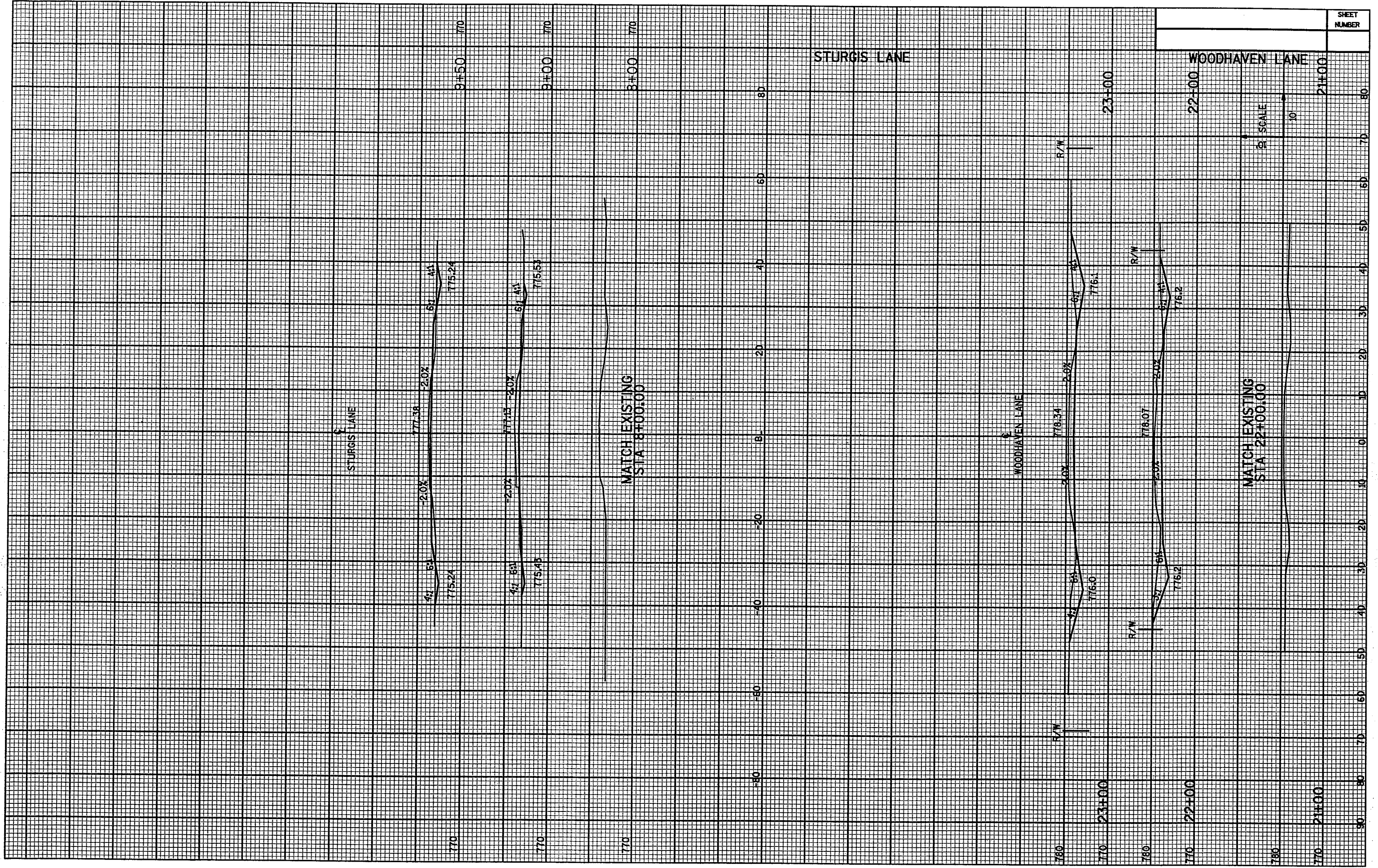


MATCH EXISTING
STA 12+80.02

CHE

SCALE
1" = 40'

SHEET
NUMBER



STURGIS LANE

WOODHAVEN LANE

MATCH EXISTING
STA 8+00.00

MATCH EXISTING
STA 22+00.00

SCALE
10

SHEET
NUMBER