

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
5991-5-12	M 4202(002)	1

Index of Sheets

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1	Typical Cross Sections
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3A-3C	Miscellaneous Quantities
4	Right of Way Plat
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6-6.8	Standard Details
-	Structure Plans
-	Computer Earthwork Data
-	Cross Sections

TOTAL SHEETS = 22

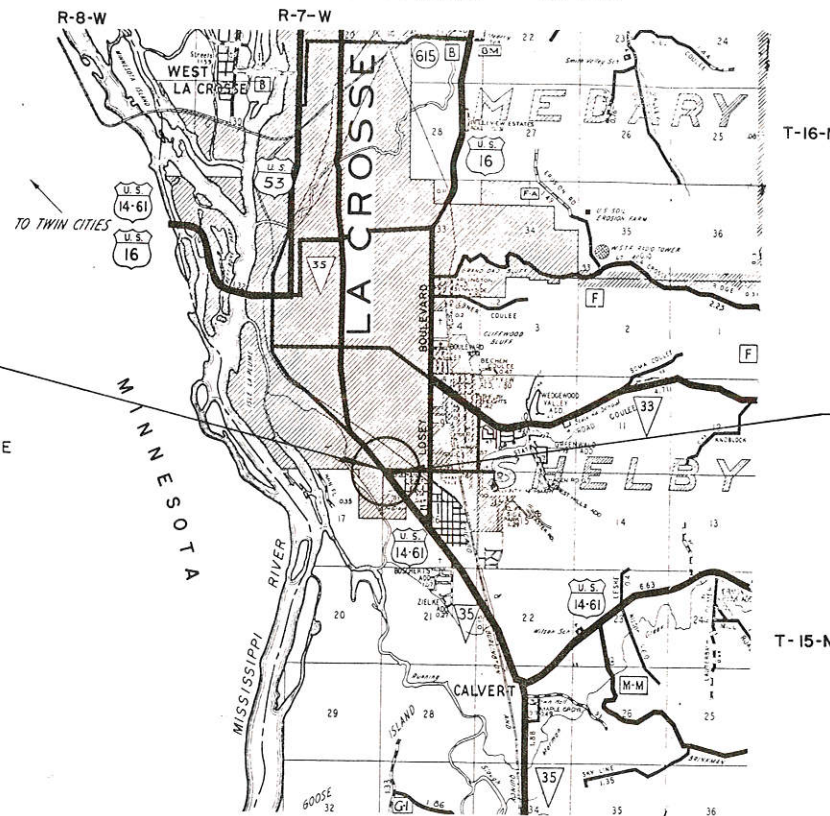


SOUTH AVENUE, CITY OF LA CROSSE

WARD AVENUE INTERSECTION
 U.S.H. 14
 LA CROSSE COUNTY

STATE PROJECT NUMBER
5991-5-12

Plan 1 in. = 20 ft.
 Profile Hor. 1 in. = 20 ft. Vert. 1 in. = 1 ft.
 Cross Sections Hor. 1 in. = Vert. 1 in. =



Design Designation

A.D.T. (1977)	= 24,600
A.D.T. (1997)	= 30,600
D.H.V.	= 1,683 (ONE WAY)
D.	= 55
T.	= 8%
V.	= 25 MPH

BEGIN PROJECT 5991-5-12
 STA. 0 + 37
 N 652,752±200
 E 1,675,360±200
 440 FEET NORTH & 400 FEET WEST OF THE
 NORTHWEST CORNER OF SECTION 16
 T 15 N. R 7 W

END PROJECT 5991-5-12
 STA. 11 + 47
 N 651,960±200
 E 1,676,389±200
 400 FEET SOUTH & 380 FEET EAST OF THE N.W.
 CORNER OF SECTION 16
 T 15 N. R 7 W

Conventional Signs

County Line		Culverts in Place	
Township or Range Line		Culverts Required	
Section Line		Drop Inlet	
New Right of Way Line		Power Pole	
Present Right of Way Line		Telephone or Telegraph Pole	
Wire Fence		Right of Way Markers	
Corporate or City Limits		Reference Stake for Hubs Only	
Property Line		Marsh	
Traveled Way or P.E.		Hedge	
Railroads		Trees	
Base or Survey Line		Ground Elevation	
Caution Symbol (combustible fluids under pressure)		Grade Elevation	

Layout
 Scale 0 2 MI.

Total Net Length of Centerline = 0.210 Mi.

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

APPROVED FOR CITY OF LA CROSSE BY DATE 12-21-78 <i>Bernard A. Mullerbach</i> CITY ENGINEER	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS Supervisor City of La Crosse <i>DRM</i> Designer City of La Crosse <i>RLC</i> District Supervisor R.V.R. C.O. Monitor <i>RAB</i>	
Approved Date <i>2-4-77</i> Approved: <i>Wayne M. Volk</i> Chief Traffic Engineer	Approved Date <i>2-4-77</i> Approved: <i>D.D. Strand</i> Chief of Facilities Development
Approved Date <i>2/4/77</i> Approved: <i>W. J. Siedler</i> State Highway Engineer	Approved Date _____ District Engineer
U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION REGION 5 WISCONSIN DIVISION	

STANDARD ABBREVIATIONS

A.D.T.	AVERAGE DAILY TRAFFIC	G.	GARAGE	R.R.	RAILROAD
AH.	AHEAD	GAL.	GALLON	R.C.C.P.	REINFORCED CONCRETE CULVERT PIPE
ET. AL.	AND OTHERS	H.P.	HIGH POINT	R.C.P.S.S.	REINFORCED CONCRETE PIPE, STORM SEWER
BK.	BACK	H	HOUSE	REQ'D	REQUIRED
B	BARN	H.T.	HOUSE TRAILER	RT.	RIGHT
B.M.	BENCH MARK	HOR.	HORIZONTAL	R.H.F.	RIGHT HAND FORWARD
BIT.	BITUMINOUS	IN.	INCHES	R/W	RIGHT OF WAY
BLVD.	BOULEVARD	Δ or I	INTERSECTION ANGLE	RD.	ROAD
BLDGS.	BUILDINGS	I.H.	INTERSTATE HIGHWAY	SALV.	SALVAGED
C.B.	CATCH BASINS	I.P.	IRON PIN	SAN.	SANITARY
¢	CENTERLINE	L.F.	LINEAL FEET	S.	SOUTH
Δ	CENTRAL ANGLE OR DELTA	LT.	LEFT	SHR	SHRINKAGE
CH. CH.	CHANNEL CHANGE	L.H.F.	LEFT HAND FORWARD	S.W.	SIDEWALK
CL.	CLASS	L	LENGTH OF CURVE	STD.	STANDARD
C.M.C.P.	CORRUGATED METAL CULVERT PIPE	L.S.	LUMP SUM	S.T.H.	STATE TRUNK HIGHWAY
CONC.	CONCRETE	L.H.E.	LIMITED HIGHWAY EASEMENT	STA.	STATION
CONST.	CONSTRUCTION	M.H.	MANHOLE	S.S.	STORM SEWER
C.P.	CULVERT PIPE	MAX.	MAXIMUM	ST.	STREET
C.T.H.	COUNTY TRUNK HIGHWAY	MI.	MILE	S.E.	SUPERELEVATION
CWT.	HUNDRED WEIGHT	MIN.	MINIMUM	SUBD.	SUBDIVISION
C.Y.	CUBIC YARD	MON.	MONUMENT	S.Y.	SQUARE YARD
D	DEGREE OF CURVE	MCPL.	MUNICIPAL	SURF.	SURFACE
D.	DIRECTIONAL DISTRIBUTION	N	NORTH	T	TRUCK PERCENTAGE
D.H.V.	DESIGN HOUR VOLUME	PAV'T.	PAVEMENT	T.	TANGENT LENGTH OF CURVE
DIS.	DISCHARGE	P.C.	POINT OF CURVATURE	TEMP.	TEMPORARY
E.	EAST	P.I.	POINT OF INTERSECTION	T.P.	TELEPHONE POLE
ELEV.	ELEVATION	P.T.	POINT OF TANGENCY	T	TRANSIT LINE
EMB.	EMBANKMENT	P.C.C.	PORTLAND CEMENT CONCRETE	UNCL.	UNCLASSIFIED
EXC.	EXCAVATION	P.E.	PRIVATE ENTRANCE	V	DESIGN SPEED
F - F	FACE TO FACE	P.L.	PROPERTY LINE	VAR.	VARIABLE
F. E.	FIELD ENTRANCE	PP	POWER POLE	V.C.	VERTICAL CURVE
F.L.	FLOW LINE	PROJ.	PROJECT	VERT.	VERTICAL
FT.	FOOT (FEET)	R.	RADIUS	W	WEST

GENERAL NOTES

- WHEN THE QUANTITY OF THE ITEM OF BASE IS MEASURED FOR PAYMENT BY THE TON OR CUBIC YARD, THE DEPTH OR THICKNESS OF THE COURSE SHOWN ON THE PLANS IS APPROXIMATE AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER.
- TOPSOIL SHALL BE PLACED AS SHOWN ON THE PLANS TO AN APPROXIMATE DEPTH OF FOUR (4) INCHES AT THE TIME OF PLACEMENT.
- THE EXACT LOCATION OF PRIVATE ENTRANCES TO BE DETERMINED IN THE FIELD BY THE ENGINEER.
- ADD 600.99 FEET TO CONVERT FROM CITY DATUM TO USGS (1929 ADJ).
- SAW CUTS DENOTED ON THE PLANS SHALL BE INCLUDED IN THE COST OF PAVEMENT REMOVAL.
- LOCATION OF GAS LINES AS SHOWN ON PLAN ARE APPROXIMATE.
- WHERE TYPE "A" CONCRETE CURB IS CALLED FOR, THE ADJOINING CONCRETE PAVEMENT SHALL BE PLACED FIRST.

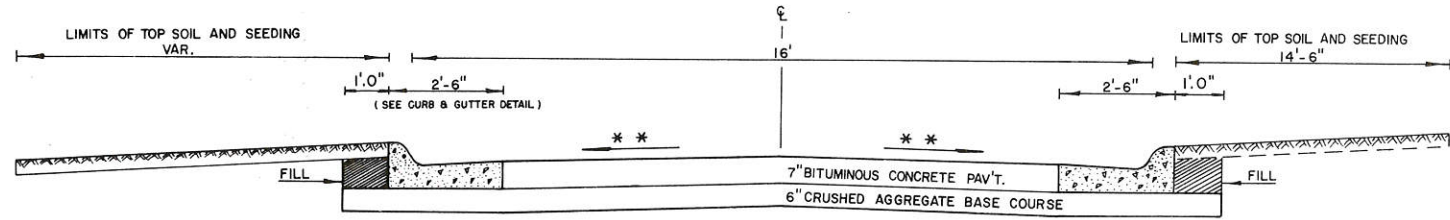
STANDARD DETAIL DRAWINGS

8A5-2	CATCH BASIN, MANHOLE & INLET COVERS
8A6-2	CATCH BASINS, TYPE 1 & 2
8D1-3	CONCRETE CURB, GUTTER, COMBINATION CURB & GUTTER
8D5-2	CURB RAMPS FOR HANDICAPPED PERSONS
9B3-2	TRAFFIC SIGNAL & TRAFFIC COUNTER DETAILS
9B4-3	DETAILS FOR THE INSTALLATION OF TRAFFIC SIGNAL AND TRAFFIC COUNTER DETECTOR LOOP WIRES IN PAVEMENT IN PLACE
13C1-2	LONGITUDINAL JOINTS CONCRETE PAVEMENT
13C4-3	TRANSVERSE JOINTS IN NON-REINFORCED CONCRETE PAVEMENT
15C1-5	CONSTRUCTION BARRICADES AND STANDARD SIGNS

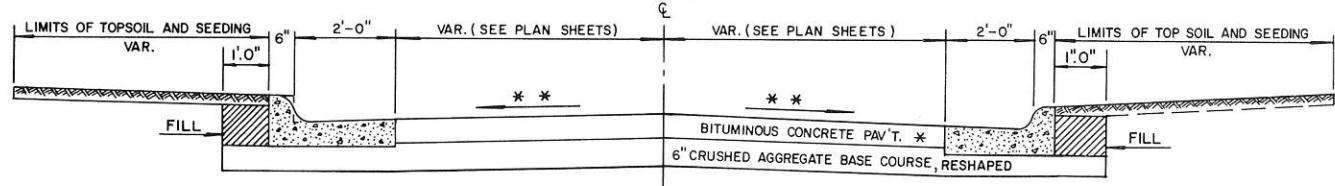
UTILITIES INVOLVED

<u>CITY OF LA CROSSE</u>	
SANITARY SEWER	- BOB SCHROEDER
STORM SEWER	- PHONE: 782-3746
WATER MAIN	-
<u>NORTHERN STATES POWER</u>	
ELECTRIC DISTRIBUTION	- CLAYTON LAMBERT
GAS DISTRIBUTION	- RICHARD M. WILKINSON
	PHONE: 782-8110
<u>LA CROSSE TELEPHONE CO.</u>	
TELEPHONE CONDUIT	- JESS GRAHAM
AERIAL CABLE	PHONE 782-9956

PROJECT DESIGNATION	SHEET NO.
5991-5-12	2.1

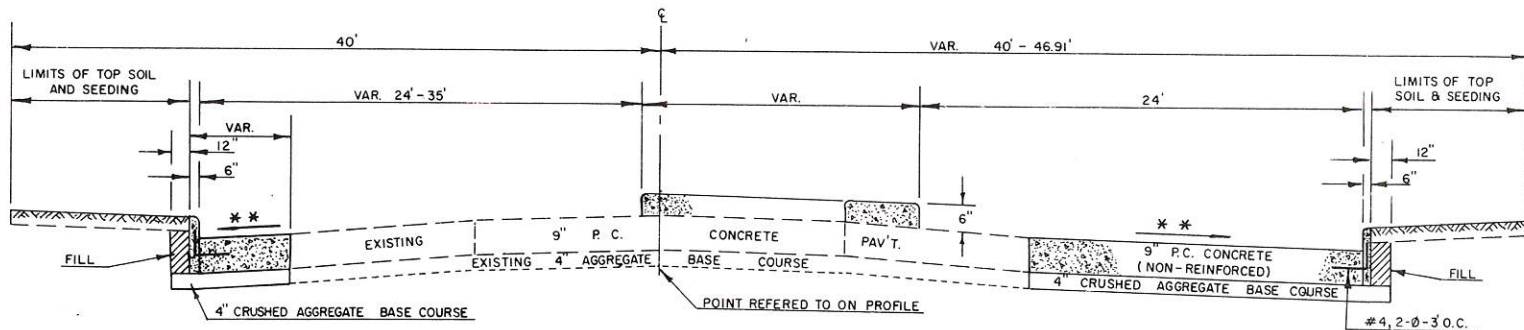


TYPICAL FINISHED SECTION
WARD AVENUE CUT-OFF



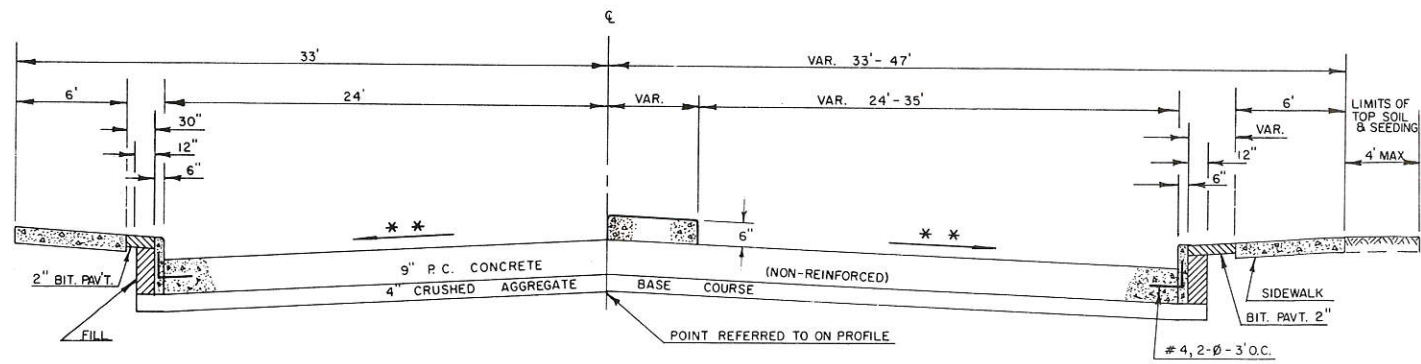
TYPICAL FINISHED SECTION

WARD AVE., STA. 0+A+67 TO STA. 1+A+75 * 7"
EAST AVE., WEST, STA. 0+C+48 TO STA. 1+C+50 * 3"



TYPICAL FINISHED SECTION

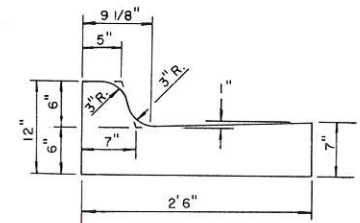
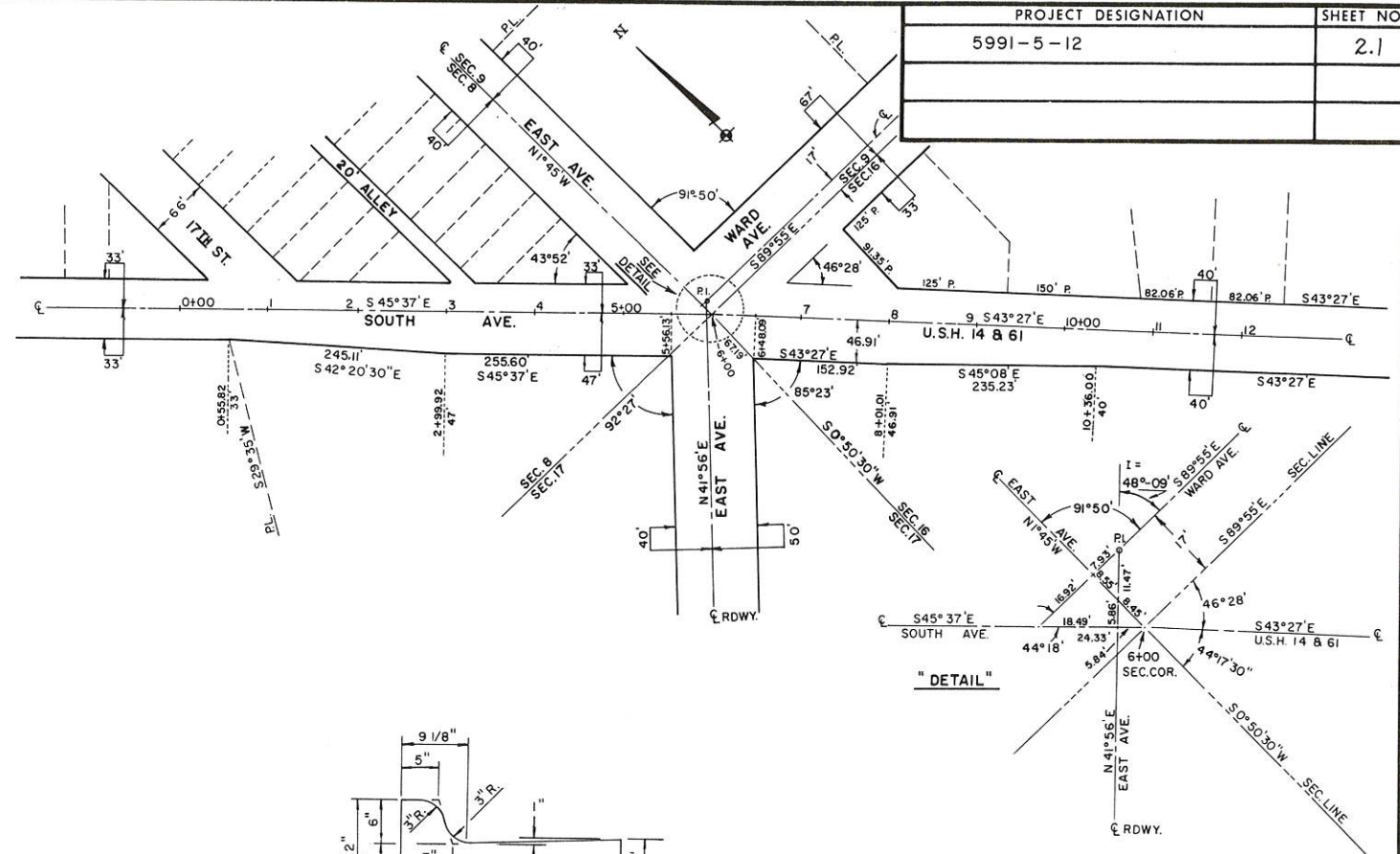
STA. 6+91.5 TO STA. 11+48



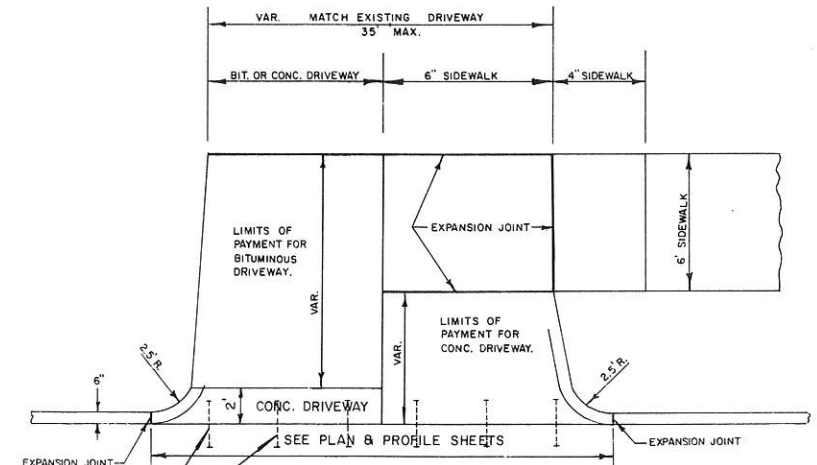
TYPICAL FINISHED SECTION

STA. 0+00 TO STA. 6+91.5

** PAVEMENT SLOPE
SEE PLAN & PROFILE SHEETS



CONCRETE CURB & GUTTER, 30 INCH, SPECIAL
WARD AVE., EAST AVE. & WARD AVE. CUT OFF.



ENTRANCE DETAIL

#4 X 2' REINF BARS
AT 3 FT. C-C

TRAFFIC ISLAND DETAILS
AND
TRAFFIC SIGNAL LAYOUT

SIGNAL NUMBER	φ 1		φ 2		φ 3		NOT USED	φ 5		φ 6		EMERGENCY FLASHING
	R/W	CL TO	R/W	CLEAR TO	R/W	CLEAR TO		R/W	CL TO	R/W	CLEAR TO	
1 & 9	R	R	R	R	R	R		R	R	R	R	FR
2, 3, 7, 8 & 8B	R	R	R	R	R	R		R	R	R	R	FR
5 & 6	R	R	R	R	R	R		R	R	R	R	FY
10	R	R	R	R	R	R		R	R	R	R	FY
11 & 12	R	R	R	R	R	R		R	R	R	R	FY
4	R	R	R	R	R	R		R	R	R	R	FY
2P-E-X-WALK	D	D	D	D	D	D		D	D	D	D	-
3P-S-X-WALK	D	D	D	D	D	D		D	D	D	D	-
6P-W-X-WALK	D	D	D	D	D	D		D	D	D	D	-

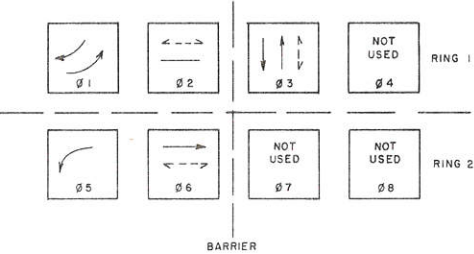
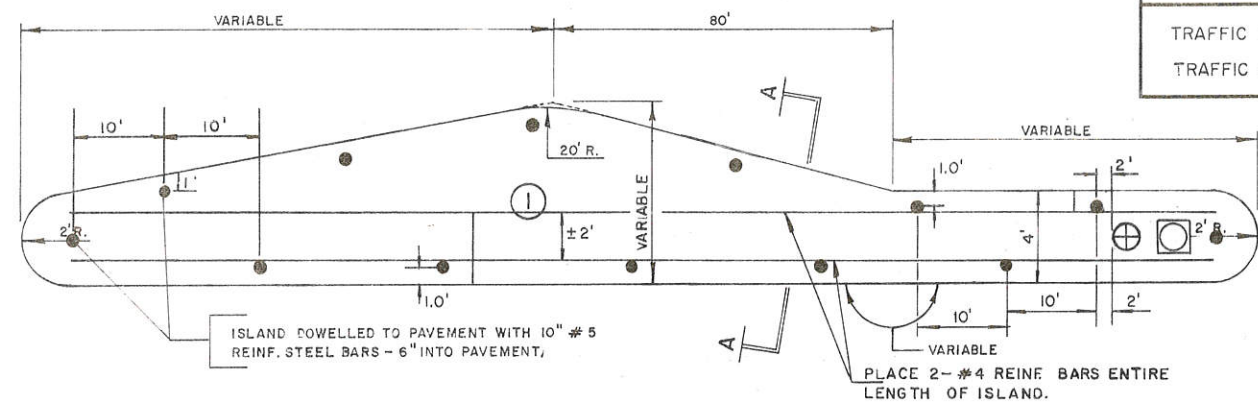
NOTE: WHEN PHASE φ 6 IS ON, PHASE φ 5 SHALL NOT FOLLOW, AND WHEN PHASE φ 2 IS ON PHASE φ 1 SHALL NOT FOLLOW. EXCEPT AS PROVIDED ABOVE, ANY ACTUATED PHASE FOR WHICH THERE IS NO CALL SHALL BE SKIPPED.

WHEN ONE PHASE IS ON ALONE, ANY NON-CONFLICTING PHASE MAY START TIMING CONCURRENTLY WITHOUT A CLEARANCE INTERVAL. (SEE CHART)

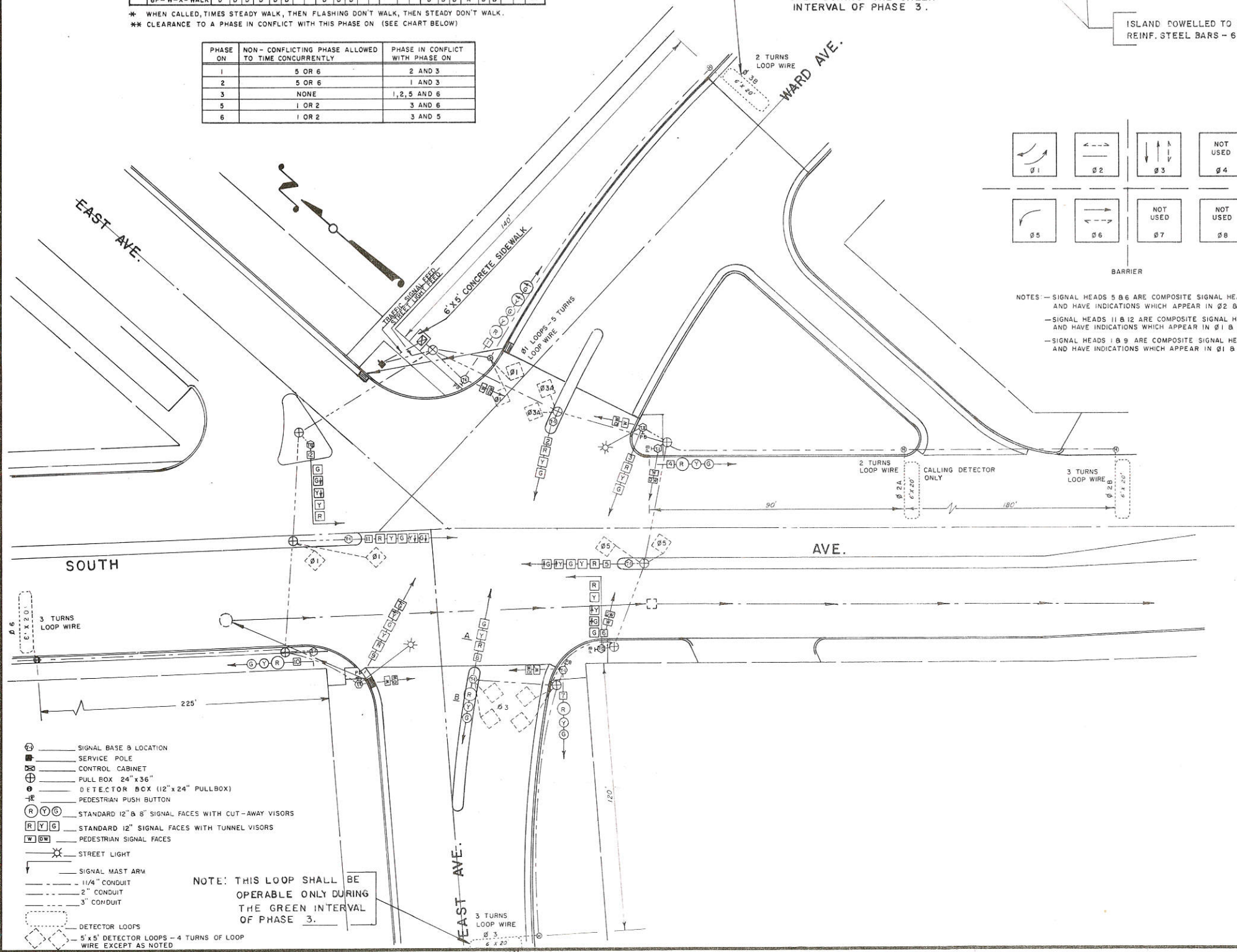
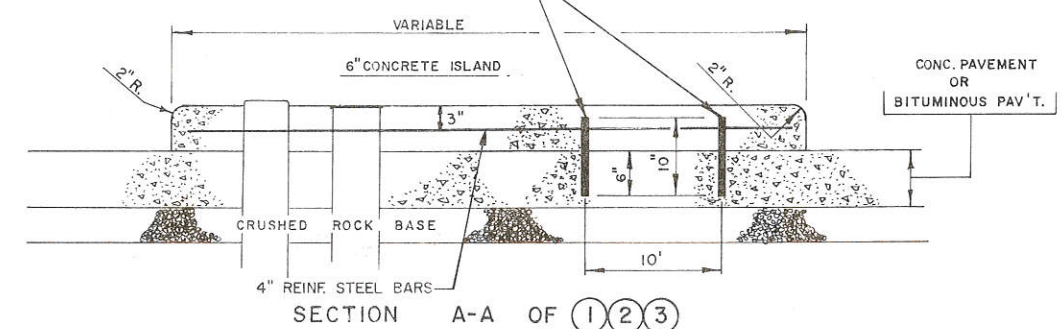
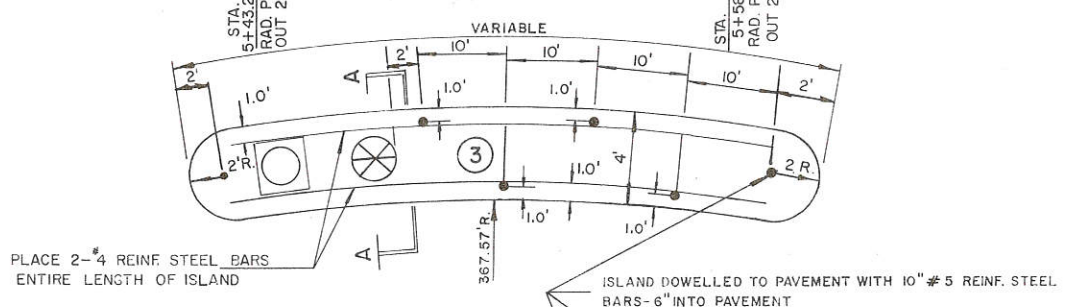
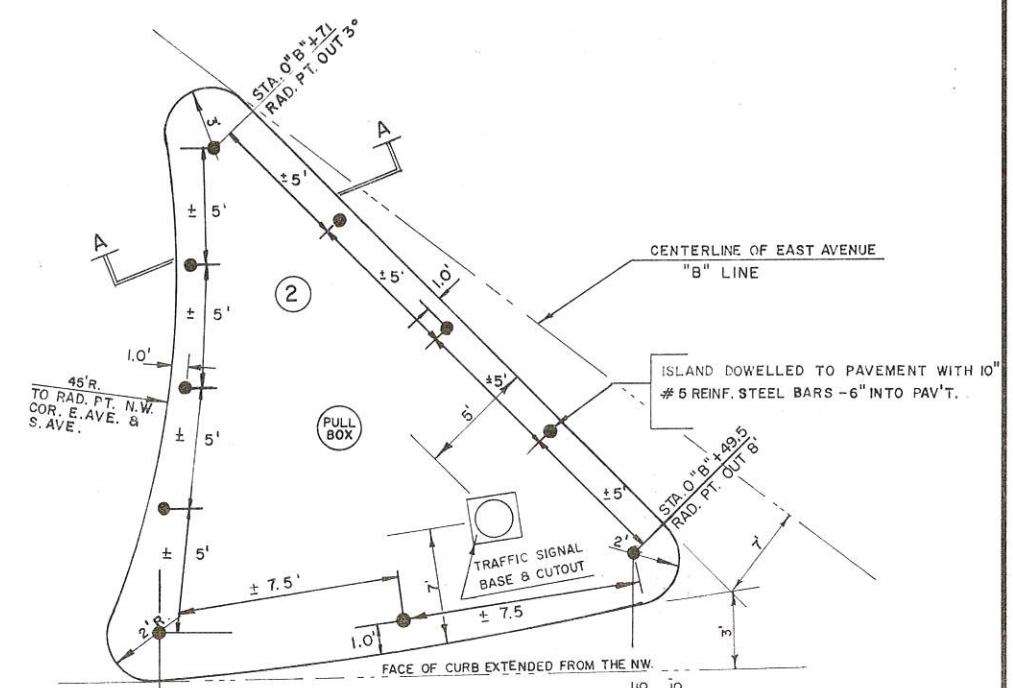
* WHEN CALLED, TIMES STEADY WALK, THEN FLASHING DON'T WALK, THEN STEADY DON'T WALK.
** CLEARANCE TO A PHASE IN CONFLICT WITH THIS PHASE ON (SEE CHART BELOW)

PHASE ON	NON-CONFLICTING PHASE ALLOWED TO TIME CONCURRENTLY	PHASE IN CONFLICT WITH PHASE ON
1	5 OR 6	2 AND 3
2	5 OR 6	1 AND 3
3	NONE	1, 2, 5 AND 6
5	1 OR 2	3 AND 6
6	1 OR 2	3 AND 5

NOTE: THIS LOOP SHALL BE OPERABLE ONLY DURING THE GREEN INTERVAL OF PHASE 3.



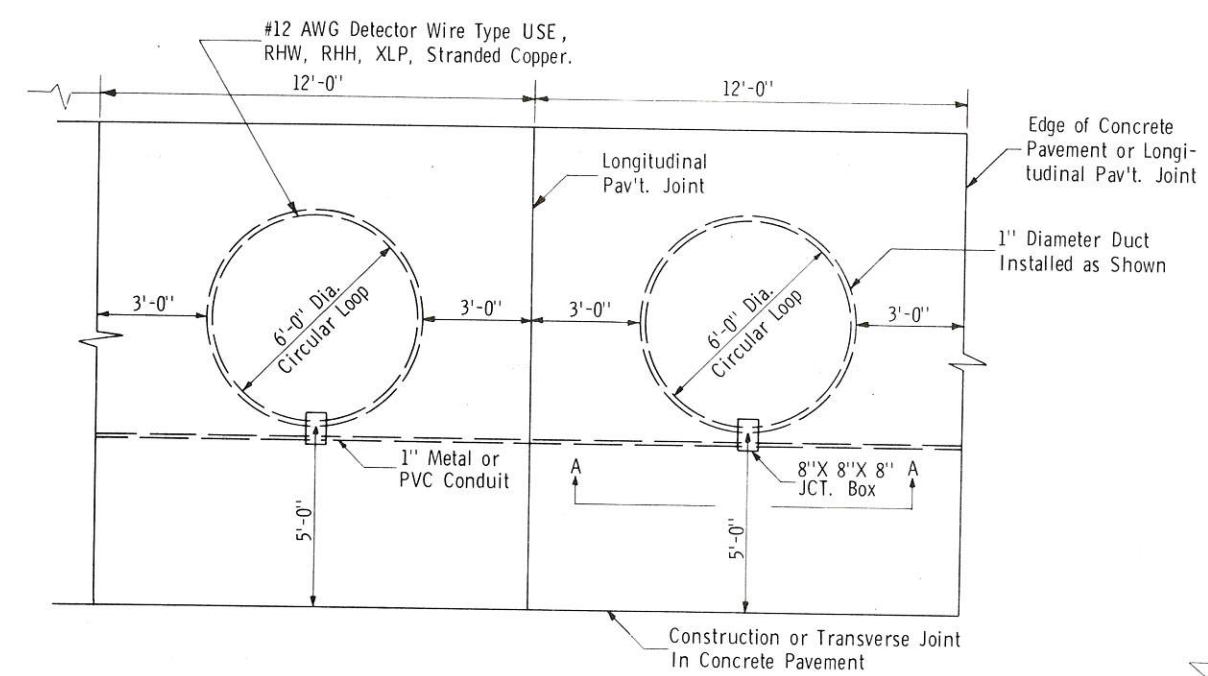
NOTES - SIGNAL HEADS 5 & 6 ARE COMPOSITE SIGNAL HEADS AND HAVE INDICATIONS WHICH APPEAR IN φ 2 & φ 5
- SIGNAL HEADS 11 & 12 ARE COMPOSITE SIGNAL HEADS AND HAVE INDICATIONS WHICH APPEAR IN φ 1 & φ 6
- SIGNAL HEADS 1 & 9 ARE COMPOSITE SIGNAL HEADS AND HAVE INDICATIONS WHICH APPEAR IN φ 1 & φ 3



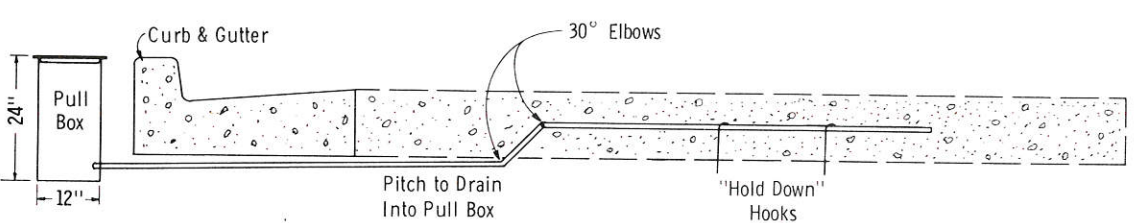
- ⊕ SIGNAL BASE B LOCATION
- ⊕ SERVICE POLE
- ⊕ CONTROL CABINET
- ⊕ PULL BOX 24" x 36"
- ⊕ DETECTOR BOX (12" x 24" PULL BOX)
- ⊕ PEDESTRIAN PUSH BUTTON
- ⊕ STANDARD 12" x 8" SIGNAL FACES WITH CUT-AWAY VISORS
- ⊕ STANDARD 12" SIGNAL FACES WITH TUNNEL VISORS
- ⊕ PEDESTRIAN SIGNAL FACES
- ⊕ STREET LIGHT
- ⊕ SIGNAL MAST ARM
- 1 1/4" CONDUIT
- 2" CONDUIT
- 3" CONDUIT
- ⊕ DETECTOR LOOPS
- ⊕ 5' x 5' DETECTOR LOOPS - 4 TURNS OF LOOP WIRE EXCEPT AS NOTED

NOTE: THIS LOOP SHALL BE OPERABLE ONLY DURING THE GREEN INTERVAL OF PHASE 3.

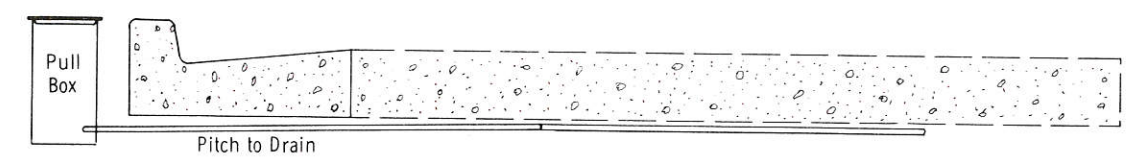
STATE PROJECT NUMBER	SHEET NO.
5991-5-12	2.3
INSTALLATION DETAILS FOR POLY-ENCASED DETECTOR LOOP WIRE RACEWAY IN CONCRETE PAVEMENT	



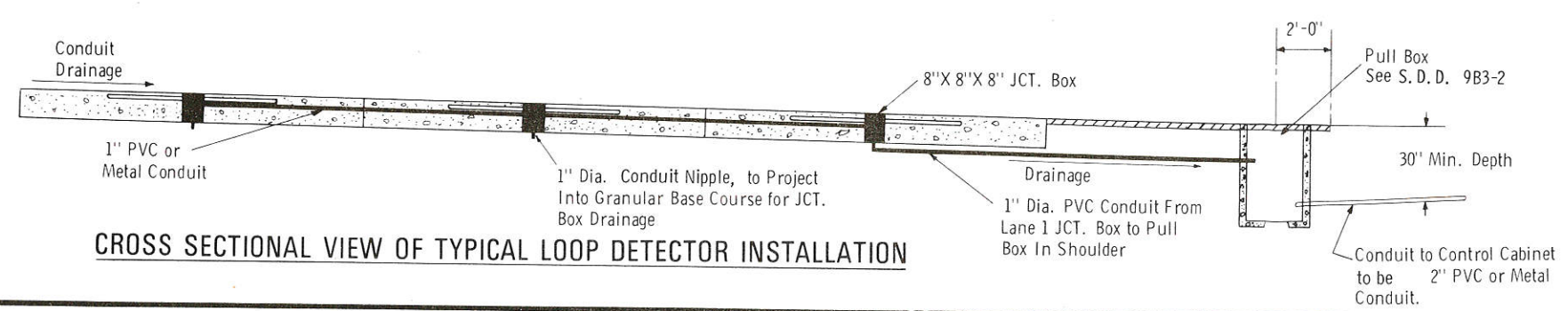
TYPICAL PLAN OF LOOP DETECTOR INSTALLATION



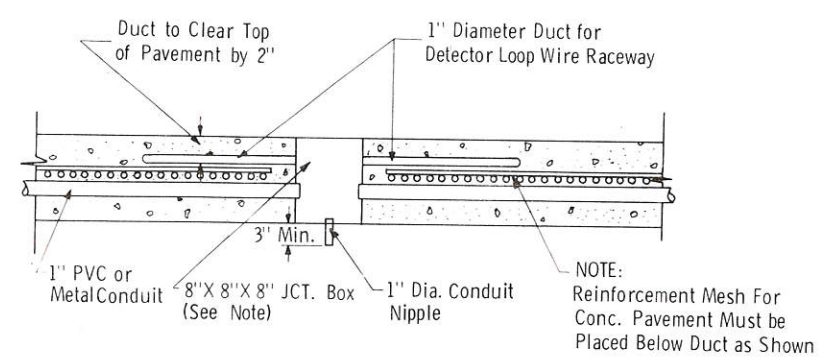
TYPICAL INSTALLATION IN PAVEMENT WITHOUT REINFORCING MATERIAL



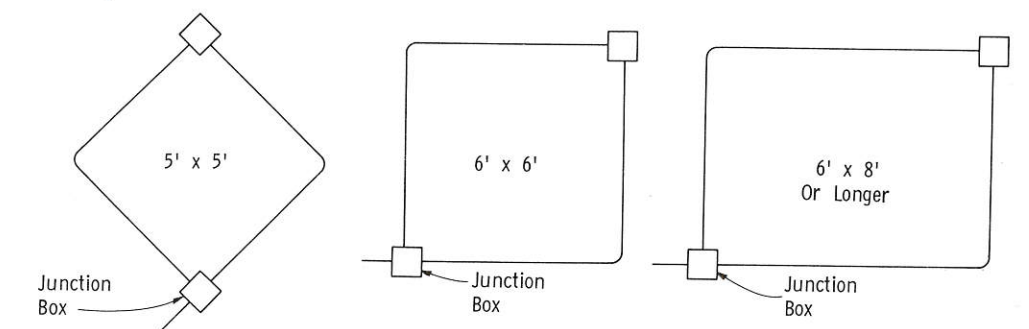
TYPICAL INSTALLATION IN BELOW PAVEMENT



CROSS SECTIONAL VIEW OF TYPICAL LOOP DETECTOR INSTALLATION



TYPICAL ELEVATION AT LOOP DETECTORS SECTION A-A



TYPICAL LOOP CONFIGURATION
All Elbows shall be 90°

GENERAL NOTES

The junction box shall be YR08X08X08, cast iron, galvanized, by O. Z. Mfg. Co., or approved equal, with cover plate. The cover is to be H.D. galvanized and attached to the junction box with stainless steel countersunk screws. A gasket shall be used with the installation of the cover to make the junction box watertight.

Points of PVC or duct entrance into the junction boxes shall be concrete and moisture tight. Drain each junction box with a 1" conduit nipple, extending a minimum of 3" into the base course.

Led-plate shall be used on all bolt and metallic conduit threads before installation.

Single loop installations shall have the duct or PVC pitched to drain to the pull box.

If loop wire is not installed before loop duct is placed in concrete pavement, a No. 12 galvanized pull wire shall be installed in the conduit.

Detector leads shall be identified with their associated loop by use of water proof tags.

Lead-in wire from the loop to a pull box shall be twisted at least 3 turns per foot before installation.

All loops of 5' x 5' dimensions placed in the pavement shall have 4 turns of wire installed. If more turns are required, it will be so noted on the plans.

Wire installed in the loop of duct shall be installed in one, non-spliced, continuous length.

Splices of loop wire to lead-in wire shall be made only in pull boxes or junction boxes. Splices shall be made as soon as possible after wires are installed. If a splice to the lead-in wire cannot be made the day that the wire is installed, the wire ends shall be sealed with tar or scotchkote to keep water out of the insulating jacket of the wire.

In the case of single loops, splices shall be made in the pull box near the side of the road. Where 2 or more loops are side by side across the pavement, splices may be made in the junction boxes in the pavement.

Pertinent details from Plate No. S.D.D. 9B4-3, "Installation of Loop Wires", and Plate No. S.D.D. 9B3-2, "Traffic Signal and Traffic Counter Details", apply to this detail sheet.

ESTIMATE OF QUANTITIES

CONTRACT NO. 1 GRADING, BASE AND P.C. CONCRETE SURFACING
AND TRAFFIC SIGNALS.

STATE PROJECT NUMBER

5991-5-12

SHEET NO.

3

STATION TO STATION	NET LENGTH OF CENTER LINE	CLEARING	GRUBBING	REMOVING PAVEMENT	REMOVING BITUMINOUS SURFACE	REMOVING CURB & GUTTER	REMOVING CONCRETE SIDEWALK	REMOVING CATCH BASINS	CRUSHED AGGREGATE BASE COURSE	CONCRETE PAVEMENT 7-INCH	CONCRETE PAVEMENT 9-INCH	CONCRETE DRIVEWAY	CONCRETE CURB, TYPE "A"	CONCRETE SIDEWALK 4-INCH	CONCRETE SIDEWALK 6-INCH	REINFORCED CONCRETE PIPE, CLASS III, STORM SEWER, 12-INCH	CATCH BASINS, TYPE 1	RECONSTRUCTING MANHOLES	CATCH BASIN COVERS, TYPE "A"	CATCH BASIN COVERS, TYPE "H"	MANHOLE COVERS, TYPE J	ADJUSTING CATCH BASIN COVERS	ADJUSTING MANHOLE COVERS	METAL CONDUIT, 1-1/4 INCH
0 + 37 - 11 + 47	1110	54	54	4481	1048	1219	422	7	1300	33	5866	270	1527	3830	432	154	5	3	3	2	3	1	9	940
	1110	54	54	4481	1048	1219	422	7	1300	33	5866	270	1527	3830	432	154	5	3	3	2	3	1	9	940

METAL CONDUIT, 2-INCH	METAL CONDUIT, 3-INCH	TOPSOIL	SEEDING	TRAFFIC CONTROL	TRAFFIC CONTROL DEVICES	GRADING	CONCRETE SAFETY ISLANDS	CONCRETE CURB & GUTTER, 30-INCH, SPECIAL	BITUMINOUS CONCRETE SURFACING	REMOVING PAVEMENT MARKINGS	FIELD OFFICE, TYPE "A"	MOBILIZATION	UNCLASSIFIED EXCAVATION	FURNISHING TRAFFIC SIGNAL CONTROLLER, CABINET & DETECTOR AMPLIFIERS	FURNISHING STANDARD SIGNAL HEADS WITH TUNNEL VISORS	TRAFFIC SIGNAL BASE TYPE I	TRAFFIC SIGNAL BASE TYPE II	TRAFFIC SIGNAL CONTROLLER CABINET BASE TYPE 2	PULL BOXES 12" x 24"	PULL BOXES 24" x 36"	DETECTOR LOOPS
61313 L.F.	61315 L.F.	62501 S.Y.	63002 LB.	64301 L.S.	90001 L.S.	90002 L.S.	90003 S.F.	90004 L.F.	90005 TON	90006 L.F.	64201 L.S.	61910 L.S.	20503 C.Y.	90007 L.S.	90008 L.S.	90009 EACH	90010 EACH	90011 EACH	90012 EACH	90013 EACH	90014 L.S.
158	339	600	11	1	1	1	5037	555	415	700	1					8	4	1	6	9	1
158	339	600	11	1	1	1	5037	555	415	700	1					8	4	1	6	9	1

DETAIL SUMMARY SHEET OF MISCELLANEOUS QUANTITIES

5991-5-12

3A

CLEARING AND GRUBBING

Station	Location	Clearing In. Diam.	Grubbing In. Diam.
7+63	45' Lt.	29	29
7+79	43' Lt.	25	25

CRUSHED AGGREGATE BASE COURSE

Station	Station	Location	Cu. Yds.
0+37	- 6+91.5	C/L	640
0+37	- 1+30	Intersec. Lt	15
0+37	- 5+50	Area Behind	
		Curb Lt & Rt	24
3+08	- 3+48	Alley Lt.	5
5+00	- 6+70	Intersec Lt.	74
5+50	- 6+50	Intersec Rt	14
6+91.5	- 11+47	Rt.	96
6+91.5	- 10+83	Lt.	32
10+13	- 10+33	C/L	13
10"A"+67	- 1"A"+75	C/L	137
Ward Avenue Cutoff		C/L	58
10"C"+48	- 11"C"+53	C/L	89
Driveways		Lt. & Rt.	51
Undistributed		-	52

REMOVING CATCH BASINS

Station	Location	Each
5+22	20' Rt.	1
5+27	39' Lt.	1
5+98	58' Lt.	1
6+69	21' Rt.	1
6+76	21' Lt.	1
9+76	21' Lt.	1
9+76	21' Rt.	1

REMOVING PAVEMENT

Station	Station	Location	Sq. Yds.
0+37	- 6+00	C/L	2690
6+00	- 6+91.5	C/L	458
0+45	- 1+30	Driveway Lt	7
0+45	- 1+07	Lt.	99
1+42	- 3+69	Driveway Rt.	17
2+96	- 3+24	Driveway Lt.	126
3+82	- 4+16	Driveway Rt.	17
4+53	- 4+89	Driveway Lt.	19
5+20	- 6+70	Intersection Lt.	652
5+57	- 6+37	Intersection Rt.	118
8+12	- 8+51	Driveway Lt.	61
8+91	- 9+31	Driveway Lt.	61
9+40	- 9+72	Driveway Lt.	48
10+13	10+33	C/L	89

REMOVING BITUMINOUS SURFACE

Station	Station	Location	Sq. Yds.
0+79	- 1+07	Driveway Rt.	6
2+96	- 3+24	Driveway Rt.	45
6+75	- 7+20	Driveway Rt.	110
10+25	- 10+68	Driveway Rt.	76
10"A"+78	- 11"A"+75	Ward Ave. C/L	474
10"C"+38	- 11"C"+53	East Ave. C/L	337

REMOVING CURB & GUTTER

Station	Station	Location	Lin. Ft.
0+55	- 1+15		
6+91.5	- 10+83	17th St. Lt. & Rt.	35
6+91.5	- 11+47	Lt.	391
10"A"+78	- 1"A"+75	Lt. & Rt.	456
10"C"+38	- 10"C"+68	Rt.	194
10"C"+38	- 11"C"+53	Lt.	30
			113

REMOVING CONCRETE SIDEWALK

Station	Station	Location	Sq. Yds.
0+42	-	Lt.	18
0+52	- 5+69	Rt.	343
1+25	-	Lt.	6
3+02	- 3+50	Lt.	32
5+10	-	Lt.	23

CONCRETE PAVEMENT, 9 Inch

Station	Station	Location	Sq. Yds.
0+37	- 0+53	C/L	85
0+37	- 1+30	Intersec Lt	78
0+53	- 3+31	C/L	1714
3+31	- 6+91.5	C/L	2524
5+00	- 6+70	Intersec Lt	489
5+50	- 6+50	Intersec. Rt	233
6+91.5	- 8+08	Rt	109
6+91.5	- 8+88	Lt	377
8+08	- 11+47	Rt	76
8+88	- 10+83	Lt	89
10+13	- 10+33	C/L	

CONCRETE PAVEMENT, 7 Inch

Station	Station	Location	Sq. Yds.
3+08	- 3+48	Alley Lt.	33

CONCRETE DRIVEWAYS

Station	Station	Location	Sq. Yds.
0+37	-	Lt.	3
0+74	- 1+14	Rt.	11
2+18	- 2+35	Lt.	5
2+91	- 3+31	Rt.	13
3+50	- 3+70	Lt.	7
3+81	- 4+21	Lt.	13
5+10	-	Lt.	3
6+83	- 7+33	Rt	11
8+11	- 8+51	Lt	56
8+90	- 9+30	Lt	58
9+41	- 9+71	Lt	45
10+24	- 10+69	Rt	45

CONCRETE CURB, TYPE A

Station	Station	Location	Lin. Ft.
0+37	- 0+74	Radius Lt	36
1+14	- 2+90	Rt.	177
1+18	- 2+18	Lt.	104
2+35	- 3+08	Lt	73
3+30	- 5+43	Rt.	213
3+48	- 3+51	Lt.	3
3+61	- 3+71	Lt.	10
4+21	- 5+00	Lt.	78
5+00	-	Radius Lt	34
5+43	-	Radius Rt	25
6+00	-	Radius Lt	58
6+40	-	Radius Rt	24
6+58	- 6+81	Rt.	23
6+65	-	Radius Lt	18
6+68	- 7+64	Lt.	96
7+32	- 10+22	Rt.	292
8+02	- 8+11	Lt.	9
8+53	- 8+90	Lt.	37
9+33	- 9+42	Lt.	9
9+71	- 10+83	Lt.	111
10+68	- 11+47	Rt	79

CATCH BASINS

Station	Location	Type	Grate F/L Elev.	Pipe Discharge Elev.	Depth	Cover Type	Remarks
5+20	38' Lt	1	74.10	70.72	4.0	A	-
5+69	53' Rt	1	73.90	70.06	4.5	A	-
6+25	63' Lt	1	74.10	71.56	3.2	A	-
10+21	22' Lt	1	72.37	68.53	4.5	H	Modify top of C.B. to fit a Type H cover.
10+21	27' Rt	1	72.35	67.66	5.4	H	Modify top of C.B. to fit a Type H cover. Modify top of C.B. to fit a Type H cover.

METAL CONDUIT

Station - Station	Location	1 1/4" Dia.	2" Dia.	3" Dia.
2+03 - 5+43	40' Rt	340'	-	-
5+40 - -	40' Rt	-	40'	-
5+45 - -	C/L	-	-	80'
5+46 - -	2' Rt	-	22'	-
5+49 - -	36' Lt	-	-	57'
5+50 - -	36' Lt	-	-	-
5+87 - -	61' Lt	88'	-	-
5+97 - -	63' Lt	-	17'	-
6+00 - -	58' Lt	-	-	50'
6+38 - -	39' Lt	-	-	42'
6+38 - -	55' Rt	-	39'	-
6+57 - -	41' Rt	-	7'	-
6+68 - -	12' Rt	-	7'	-
6+68 - -	C/L	-	-	110'
6+75 - 9+45	37' Lt	270'	-	-
6+76 - -	30' Lt	-	19'	-
0"A"+62 - 1"A"+76	26' Lt	127'	-	-
10"C"+53 - 11"C"+71	30' Rt	115'	-	-

BITUMINOUS CONCRETE SURFACING

Station - Station	Location	Bit. Conc. Tons	Pav't. Thickness
0+37 - 5+50	Area behind curb Lt & Rt	19	2"
0+55	Lt (17th St.)	3	3"
6+83 - 7+33	Driveway Rt.	5	3"
10+25 - 10+70	Driveway Rt	9	3"
0"A"+67 - 1"A"+75	C/L	229	7"
Ward Ave. Cutoff	C/L	69	7"
10"C"+48 - 11"C"+53	C/L	62	3"
Undistributed	-	19	-

RECONSTRUCT MANHOLES

Station	Location	Number	Manhole Cover Type
6+70	26' Rt	1	J
9+77	26' Rt	1	J
5+16	20' Lt	1	J

DETAIL SUMMARY SHEET OF MISCELLANEOUS QUANTITIES

REINFORCED CONCRETE PIPE, CLASS III, STORM SEWER, 12 IN.

CONCRETE CURB & GUTTER, 30 INCH, SPECIAL

Station -	Station	Location	Lin. Ft.
0+52	-	Radius Lt.	19
1+13	-	Radius Lt.	10
0"A"+67	- 1"A"+75	Lt.	114
0"A"+67	- 1"A"+20	Rt.	53
10"C"+48	- 10"C"+66	Rt.	20
10"C"+48	- 11"C"+53	Lt.	102
Ward Avenue Cutoff	-	-	237

Lin.

Station - Station Location Location

Station	Station	Location	Location	Each
5+18	-	-	Lt	18
5+21	-	-	Rt	10
5+21	- 5+69	-	Rt.	54
6+00	- 6+25	-	Lt.	24
10+21	-	-	C/L	48

CONCRETE SIDEWALK, 4 INCH

Station -	Station	Location	Sq. Ft.
0+37	- 0+49	Lt.	114
0+45	-	Handicap Ramp Lt	40
0+52	- 0+75	Rt.	138
1+12	- 2+93	Rt.	1086
1+18	- 1+30	Lt.	54
1+20	-	Handicap Ramp Lt	60
3+00	- 3+10	Lt.	54
3+29	- 5+62	Rt.	1410
3+37	- 3+50	Lt.	54
5+00	- 5+12	Lt.	114
5+10	-	Handicap Ramp Lt	45
5+63	-	Handicap Ramp Rt	15
5+80	- 6+00	Lt.	156
5+80	-	Controller Stand Lt	30
5+85	-	Handicap Ramp Lt	40
6+40	- 6+58	Rt.	135
6+40	-	Handicap Ramp Rt.	20
6+64	- 6+83	Lt.	230
6+64	-	Handicap Ramp Lt.	35

ADJUSTING MANHOLE COVERS

Station	Station	Location	Each
1+19	-	12' Rt	1
1+27	-	C/L	1
5+11	-	25' Lt	1
5+21	-	29' Rt	1
5+97	-	15' Rt	1
6+00	-	C/L	1
0"A"+39	-	10' Rt	1
0"A"+90	-	15' Rt	1
1"A"+00	-	12' Rt	1

ADJUSTING CATCH BASIN COVERS

Station	Station	Location	Each
5+73	-	55' Lt	1

CONCRETE SIDEWALK, 6 INCH

Station -	Station	Location	Sq. Ft.
0+76	- 1+12	Rt.	216
2+93	- 3+29	Rt.	216

CONCRETE SAFETY ISLANDS

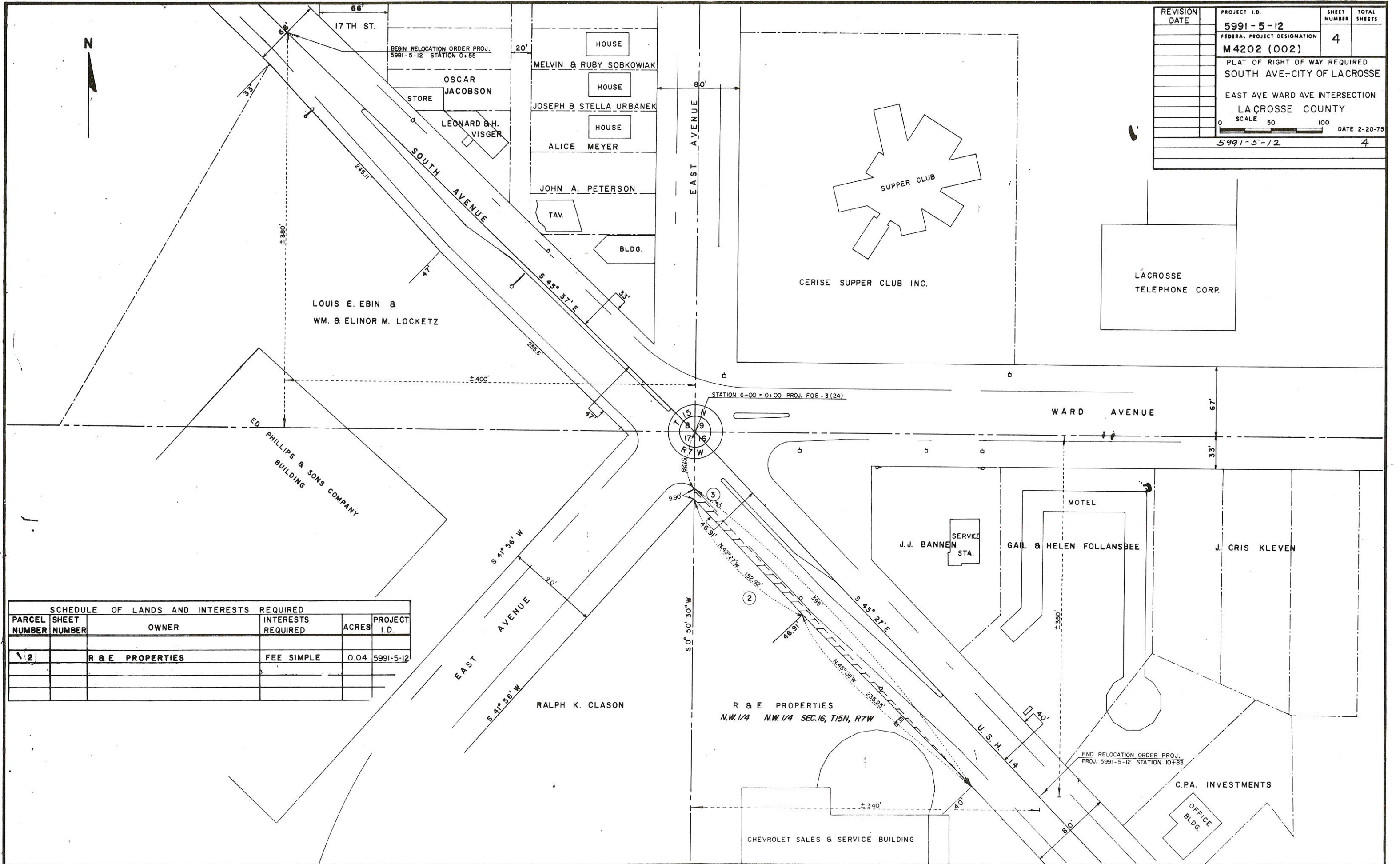
Station -	Station	Location	Sq. Ft.
1+35	- 5+70	C/L	2319
5+50	-	Lt.	304
6+58	- 8+04	C/L	581
8+08	- 10+10	C/L	1399
0"A"+48	- 1"A"+05	C/L	237
10"C"+48	- 10"C"+98	C/L	197

TOPSOIL & SEED

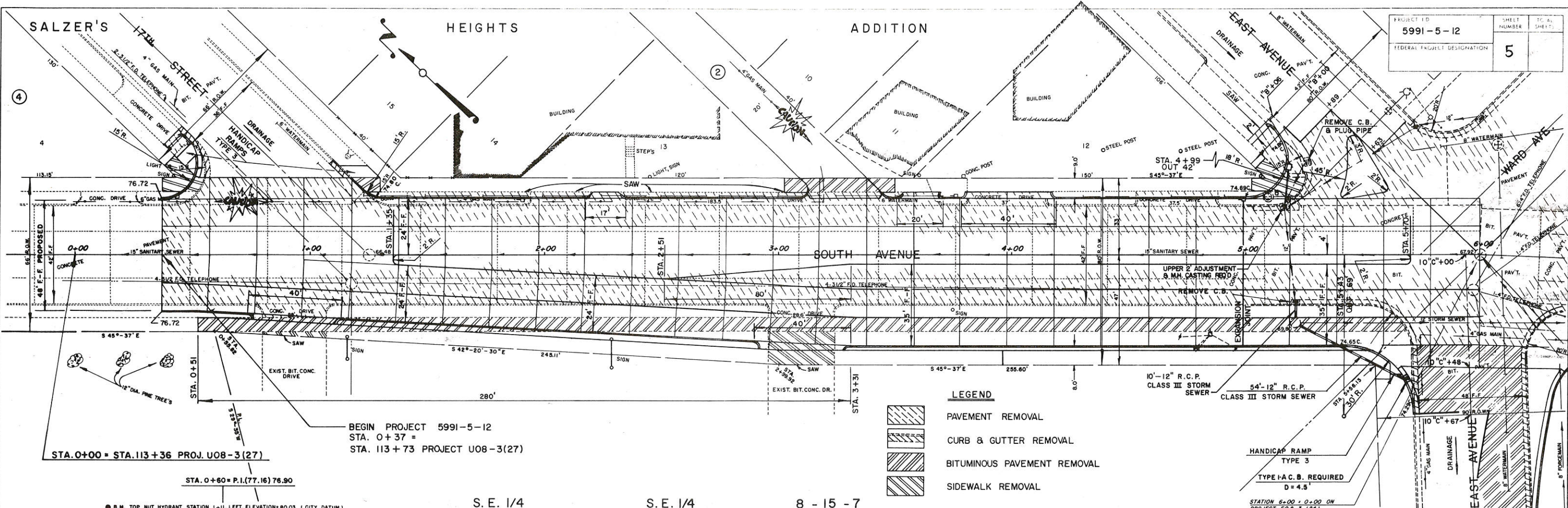
Station -	Station	Location	Topsoil S.Y.	Seed #4 Lbs.
0+37	- 5+50	Rt.	158	2.8
0+37	-	Lt.	15	0.3
1+20	-	Lt.	4	0.1
6+00	-	Lt.	15	0.3
7+00	-	Island Lt	133	2.5
6+50	- 11+48	Rt.	138	2.5
8+00	- 10+83	Lt.	57	1.1
0"A"+67	- 1"A"+75	Lt.	40	0.7
10"C"+48	- 11"C"+53	Lt & Rt	40	0.7



REVISION DATE	PROJECT I.D.	SHEET NUMBER	TOTAL SHEETS
	5991-5-12	4	
FEDERAL PROJECT DESIGNATION			
M4202 (002)			
PLAT OF RIGHT OF WAY REQUIRED			
SOUTH AVE-CITY OF LACROSSE			
EAST AVE WARD AVE INTERSECTION			
LACROSSE COUNTY			
SCALE 0 50 100		DATE 2-20-75	
5991-5-12		4	



SCHEDULE OF LANDS AND INTERESTS REQUIRED					
PARCEL NUMBER	SHEET NUMBER	OWNER	INTERESTS REQUIRED	ACRES	PROJECT I.D.
2		R & E PROPERTIES	FEE SIMPLE	0.04	5991-5-12



BEGIN PROJECT 5991-5-12
 STA. 0+37 =
 STA. 113+73 PROJECT U08-3(27)

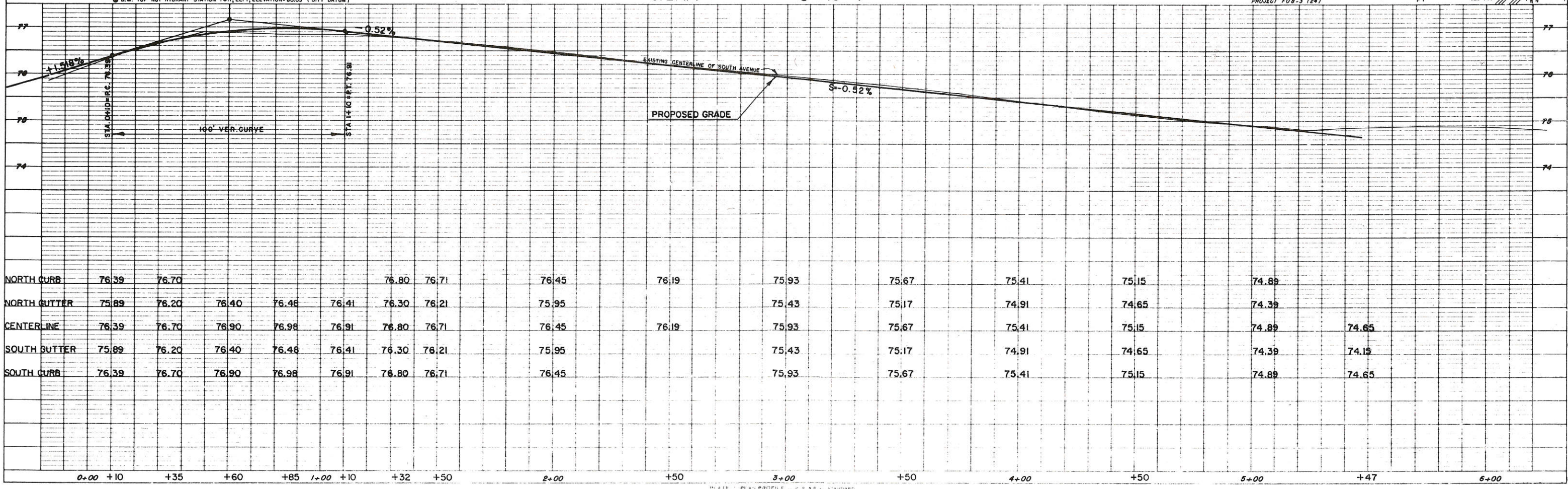
STA. 0+00 = STA. 113+36 PROJ. U08-3(27)

STA. 0+60 = P.I. (77.16) 76.90

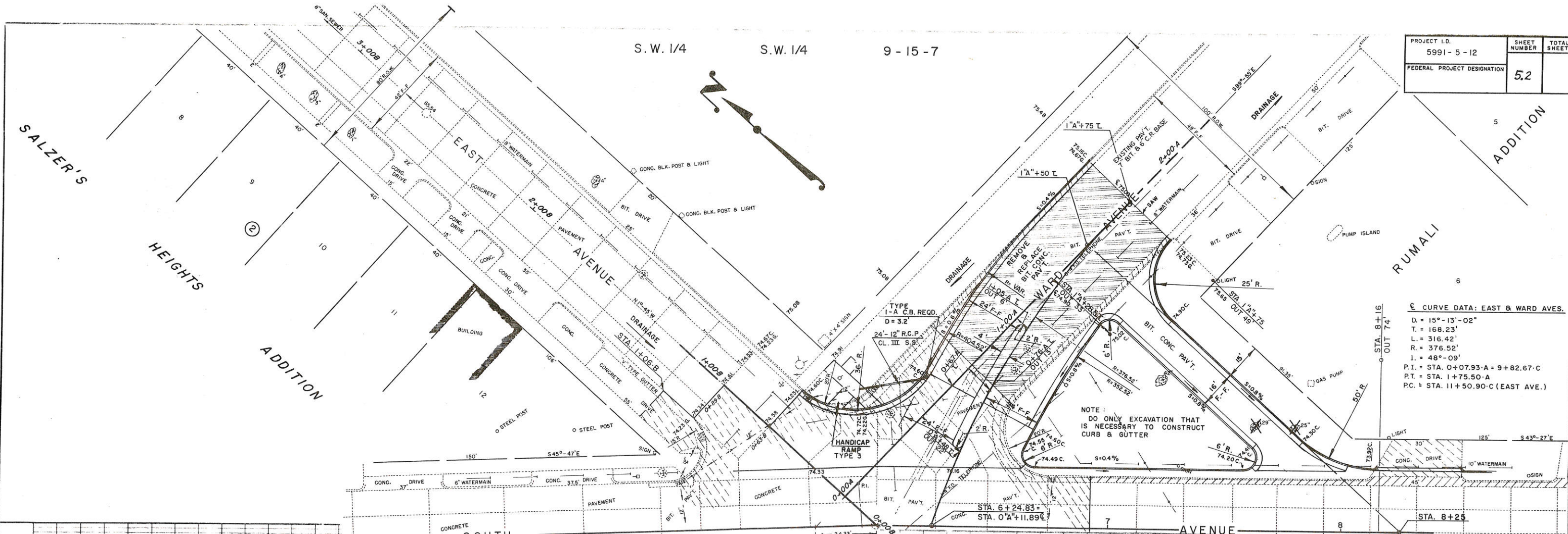
- LEGEND**
- PAVEMENT REMOVAL
 - CURB & GUTTER REMOVAL
 - BITUMINOUS PAVEMENT REMOVAL
 - SIDEWALK REMOVAL

HANDICAP RAMP
 TYPE 3
 TYPE I+C.B. REQUIRED
 D = 4.5'

S. E. 1/4 S. E. 1/4 8 - 15 - 7

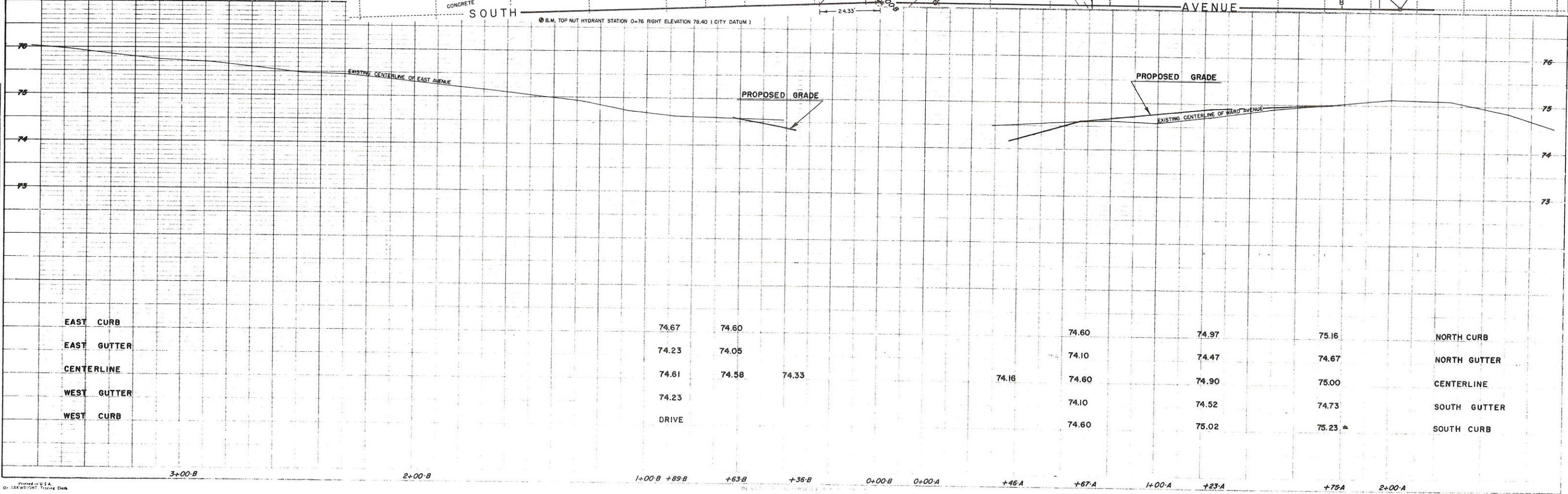


PROJECT I.D. 5991-5-12	SHEET NUMBER 5.2	TOTAL SHEETS
FEDERAL PROJECT DESIGNATION		



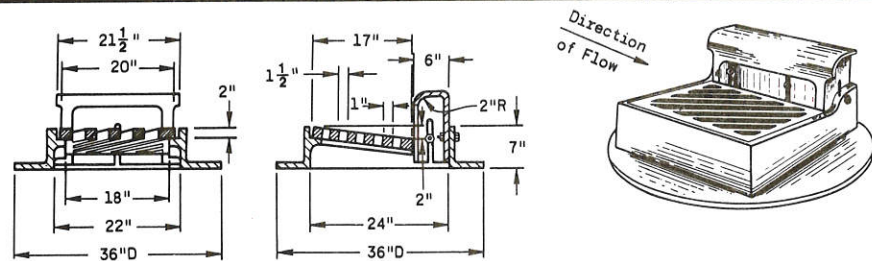
⊕ CURVE DATA: EAST & WARD AVES.
 D. = 15°-13'-02"
 T. = 168.23'
 L. = 316.42'
 R. = 376.52'
 I. = 48°-09'
 P.I. = STA. 0+07.93-A = 9+82.67-C
 P.T. = STA. 1+75.50-A
 P.C. = STA. 11+50.90-C (EAST AVE.)

NOTE:
DO ONLY EXCAVATION THAT IS NECESSARY TO CONSTRUCT CURB & GUTTER



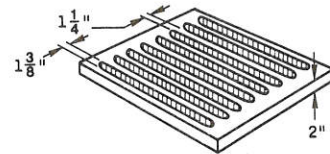
PLAN	DATE
BY	
CHECKED	
NO.	

PROFILE	DATE
BY	
CHECKED	
NO.	

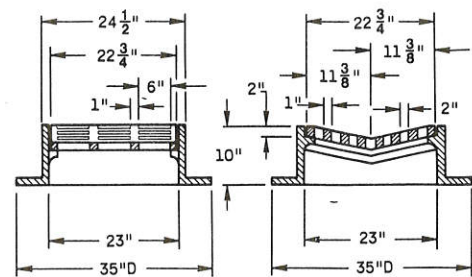


TYPE "A"

(Approximate Weight 405 lbs.)
 Frame Weight 250 lbs.
 Grate Weight 85 lbs.
 Box Weight 70 lbs.

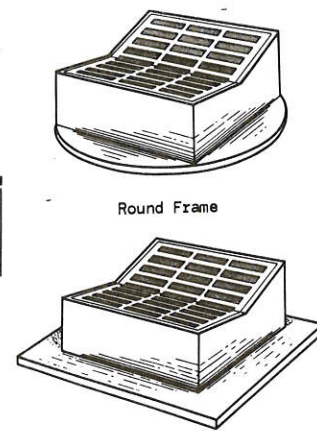


ALTERNATE TYPE GRATE *
 (Longitudinal Slots)
 Approximate Weight 100 lbs.

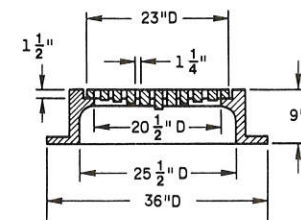


TYPE "B"

(Approximate Weight 395 lbs.)
 Frame Weight 285 lbs.
 Grate Weight 110 lbs.

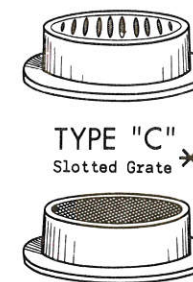


Alternate Frame
 (Square type)
 35" Square



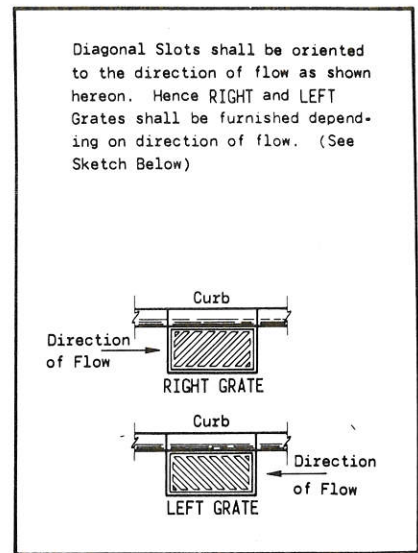
TYPE "C" - TYPE "J"

Frame Weight 250 lbs.
 Slotted Grate Weight 125 lbs.
 Solid Cover Weight 150 lbs.

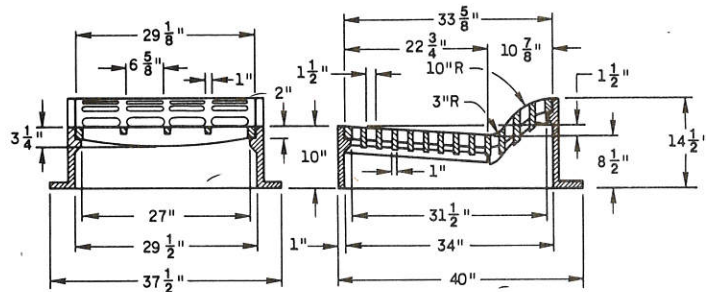


TYPE "C"
 Slotted Grate *

TYPE "J"
 Solid Cover

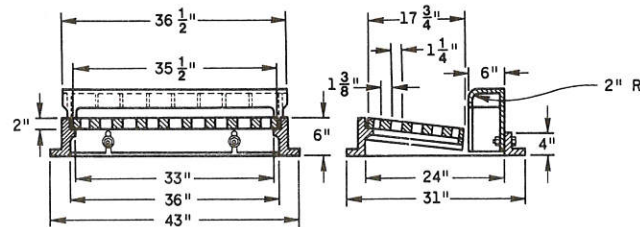


Diagonal Slots shall be oriented to the direction of flow as shown hereon. Hence RIGHT and LEFT Grates shall be furnished depending on direction of flow. (See Sketch Below)

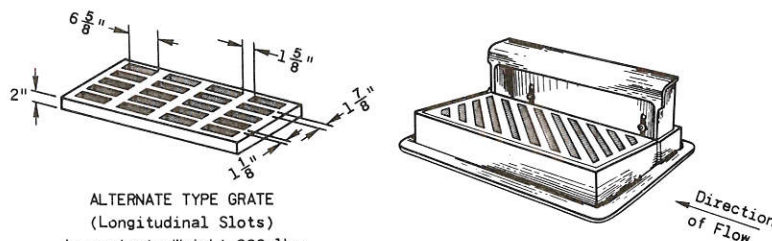


TYPE "F"

(Approximate Weight 850 lbs.)
 Frame 515 lbs.
 Back grate 160 lbs.
 Front grate 175 lbs.



NOTE: Curb Box height adjustable 6" to 9"

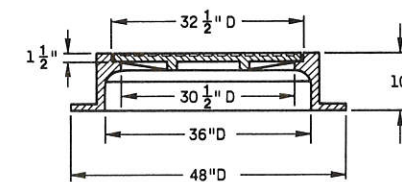


ALTERNATE TYPE GRATE
 (Longitudinal Slots)
 Approximate Weight 200 lbs.

TYPE "H"

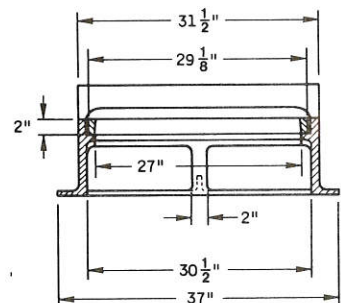
(Approximate Weight 510 lbs.)
 Frame Weight 220 lbs.
 Grate Weight 175 lbs.
 Box Weight 115 lbs.

* CAUTION: DO NOT USE GRATES WITH LONGITUDINAL SLOTS WHERE BICYCLE TRAFFIC IS PERMITTED.



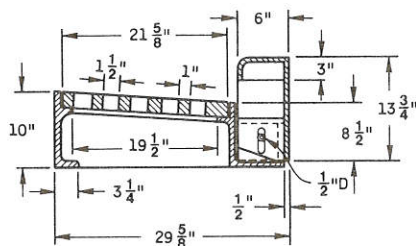
TYPE "K"

(Approximate Weight 785 lbs.)



TYPE "WM"

(Approximate Weight 670 lbs.)
 Frame Weight 350 lbs.
 Grate Weight 185 lbs.
 Box Weight 135 lbs.



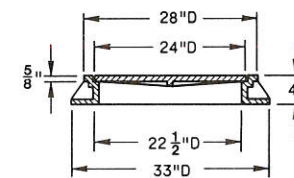
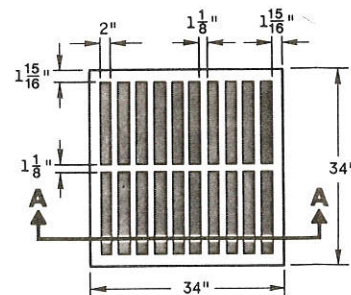
NOTE: Curb Box height adjustable 6" to 9"



SECTION A-A

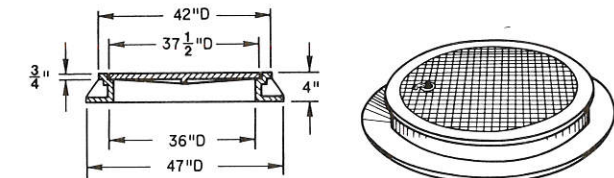
TYPE "MS" *

(Approximate Grate Weight 285 lbs.)



TYPE "L"

(Approximate Weight 220 lbs.)



TYPE "M"

(Approximate Weight 535 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.

All Catch Basin, Manhole and Inlet Covers which are placed in vehicular traffic areas shall be "Non-Rocking" type.

Adjustment of the cover to grade may be accomplished by the use of mortar and brick, or by Precast Concrete Grade Rings (AASHTO Designation M-199). Maximum adjustment shall be 8 inches.

Curb box height to be adjusted 4 to 9 inches, unless otherwise noted, after the form is in place.

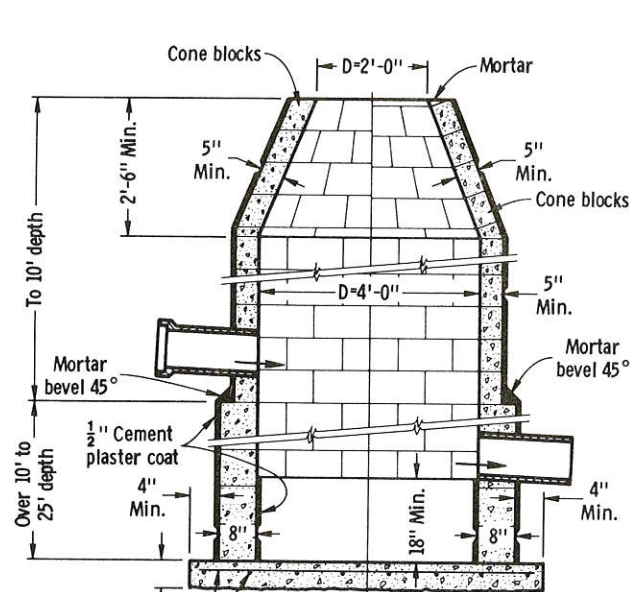
The actual weight of covers may vary within 5 percent, plus or minus, of the approximate weight.

**CATCH BASIN
 MANHOLE AND
 INLET COVERS**

State of Wisconsin
 Department of Transportation
 Division of Highways

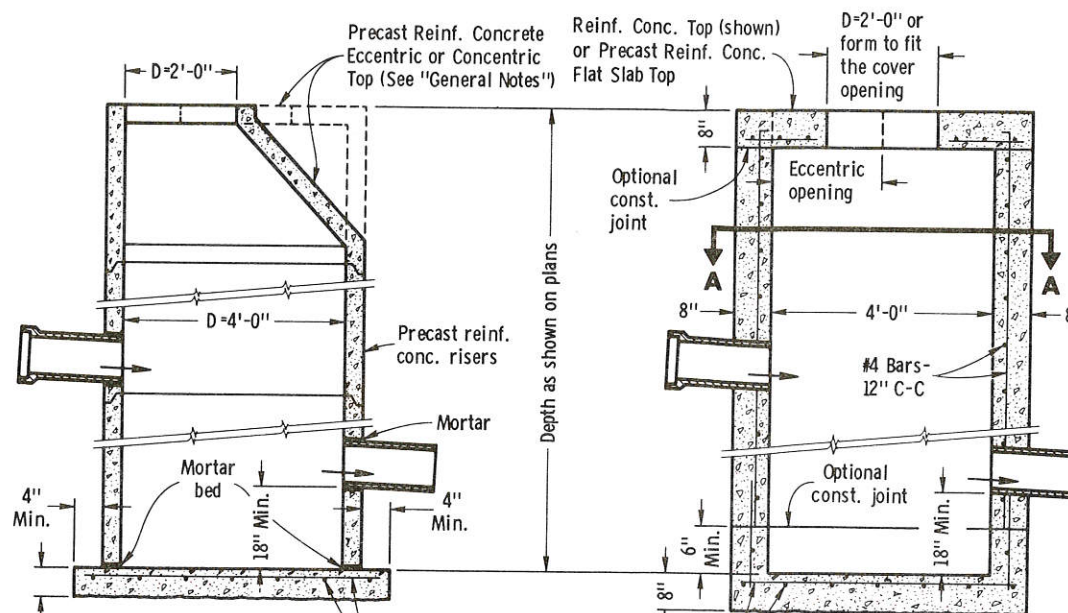
RECOMMENDED FOR APPROVAL:
 12-3-75
 DATE
 APPROVED
 12-9-75
 DATE

J.C. Heinal
 CHIEF OF FACILITIES DEVELOPMENT
M. J. Siedler
 STATE HIGHWAY ENGINEER

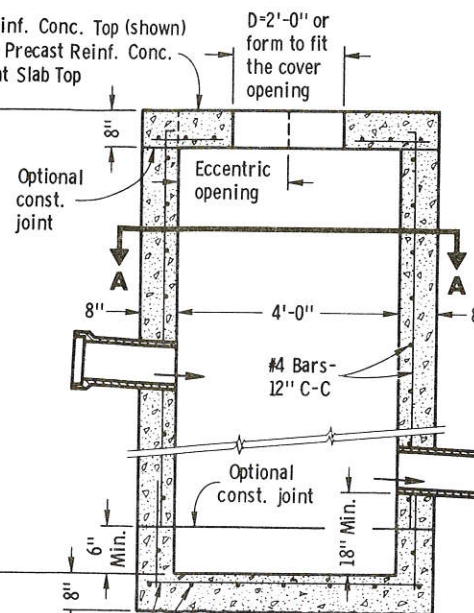


#4 Bars-12" C-C to 10' depth
6" C-C over 10' to 25' depth
See "General Notes" for appli-
cation of concentric top.

CONCRETE BLOCK

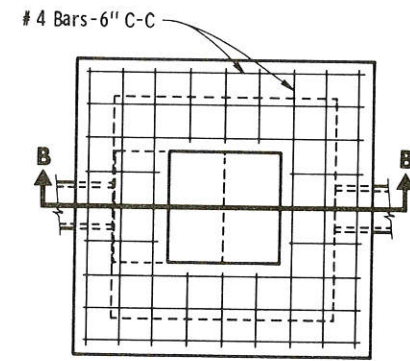


PRECAST REINFORCED CONCRETE

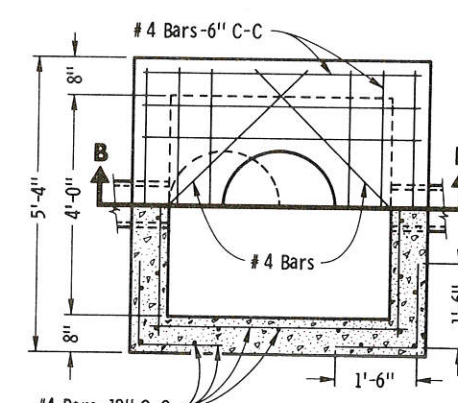


SECTION B-B
REINFORCED CONCRETE

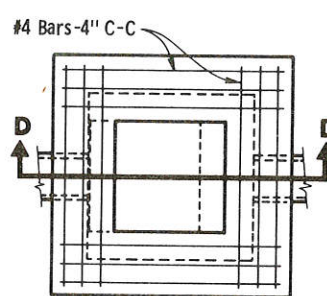
CATCH BASINS TYPE 1



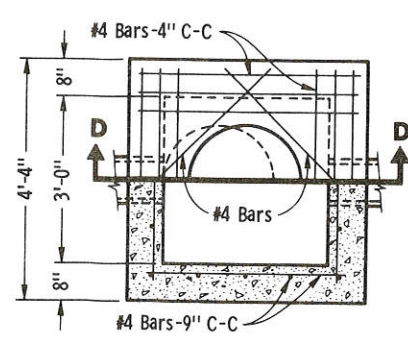
PLAN VIEW SHOWING
ALTERNATE OPENING



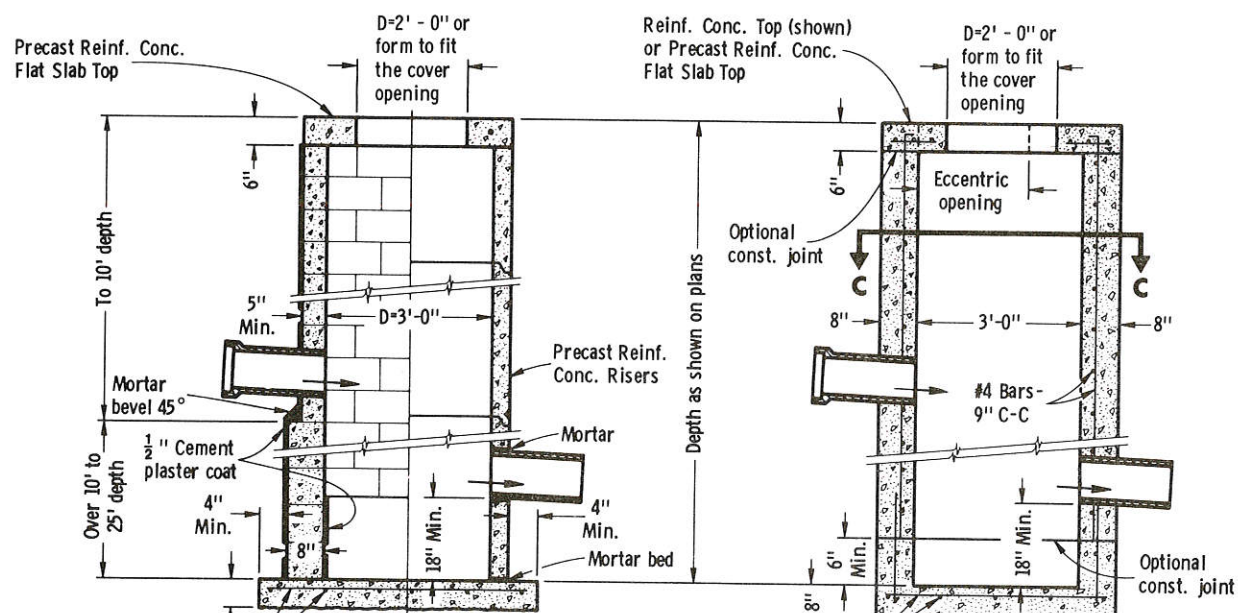
HALF SECTION A-A



PLAN VIEW SHOWING
ALTERNATE OPENING



HALF SECTION C-C



#4 Bars-12" C-C to 10' depth
9" C-C over 10' to 25' depth

CONCRETE
BLOCK

PRECAST
REINFORCED
CONCRETE

#4 Bars-12" C-C to 10' depth
9" C-C over 10' to 25' depth

SECTION D-D
REINFORCED CONCRETE

CATCH BASINS TYPE 2

GENERAL NOTES

Details of construction, materials and workmanship not shown on this drawing shall conform to the pertinent requirements of the Standard Specifications and 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 drainage structures are designated on the plans as "Manholes 1 - C", "Catch Basins 1 - B", "Inlets 1 - 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 Cone Tops (Eccentric or Concentric) or Precast Reinforced Concrete Flat Slab Tops may be used on concrete block structures. The Cone Tops shall be installed on a bed of mortar.

Eccentric Cone Tops may be used on all structures, and Concentric Cone Tops shall be used only on structures 5 feet or less in depth, unless otherwise directed by the Engineer.

Steps meeting the following requirements shall be installed in all structures over 5 feet in depth: 16 inch C-C maximum spacing; project a minimum clear distance of 4 inches from the wall at the point of embedment; minimum length of 10 inches; minimum wall embedment of 3 inches; and be capable of supporting a concentrated load of 300 lbs. Ferrous metal steps not painted or treated to resist corrosion shall have a minimum cross sectional dimension of 1 inch.

Solid Aluminum steps shall have a minimum cross sectional dimension of 0.75 inch. Aluminum surfaces to be embedded in concrete shall be given one coat of suitable quality paint, such as zinc chromate primer conforming to federal specification TT-P-645 or equivalent. Steps of approved Polypropylene plastic coated reinforcement bar will be acceptable.

All bar steel reinforcement shall be embedded 2 inches clear unless otherwise shown or noted.

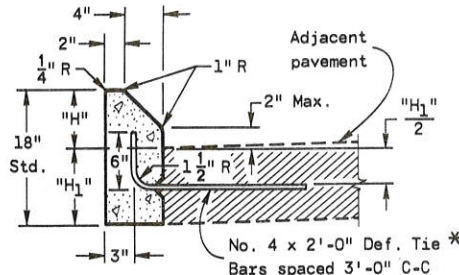
Precast Reinforced Concrete Risers may be placed with tongue up or down.

CATCH BASINS TYPE 1 & 2

State of Wisconsin
Department of Transportation
Division of Highways

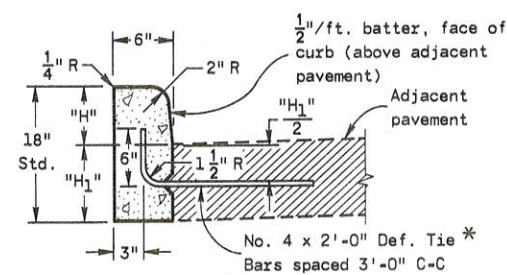
RECOMMENDED FOR APPROVAL:
DATE 12-3-75
APPROVED 12-9-75
DATE

J.C. Heanial
CHIEF OF FACILITIES DEVELOPMENT
H.J. Siedler
STATE HIGHWAY ENGINEER



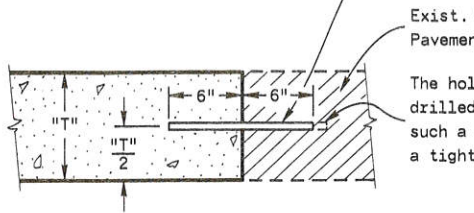
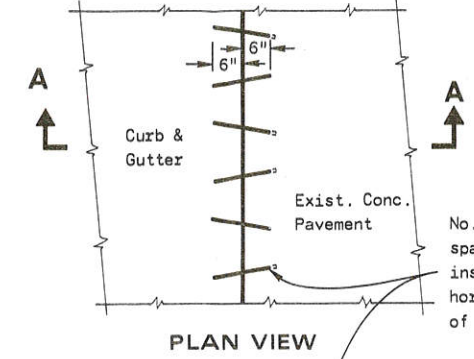
"H" = 6" Max. and 4" Min. and shall be 6" unless otherwise shown on the plans.
 "H₁" = Same as adjacent pavement thickness for rigid pavement and 12" for non-rigid pavement (Tie Bars omitted).

TYPE "G"
 (INCLUDING TIE BARS)
MOUNTABLE CONCRETE CURB

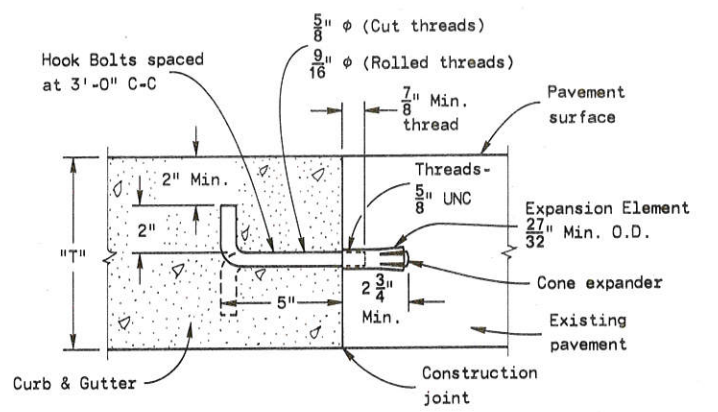


"H" = 9" Max. and 3 1/2" Min. and shall be 6" unless otherwise shown on the plans.
 "H₁" = Same as adjacent pavement thickness for rigid pavement and 12" for non-rigid pavement (Tie Bars omitted).

TYPE "A"
 (INCLUDING TIE BARS)
CONCRETE CURB



SECTION A - A
ALTERNATE TIE BAR INSTALLATION



HOOK BOLT

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.

Joints shall not be sealed in Concrete Curb, or Concrete Curb & Gutter.

*Where Concrete Curb or Concrete Curb & Gutter is poured adjacent to existing pavement, a "Hook Bolt" or "Alternate Tie Bar Installation" shown on this sheet is required.

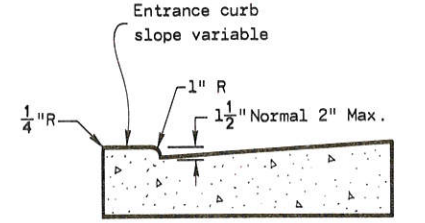
INTEGRAL CURB ALTERNATE
 Unless otherwise specified in the contract, Integral Curb may be built as an alternative to Curb & Gutter.

Integral Curb shall be measured and paid for as Curb & Gutter.

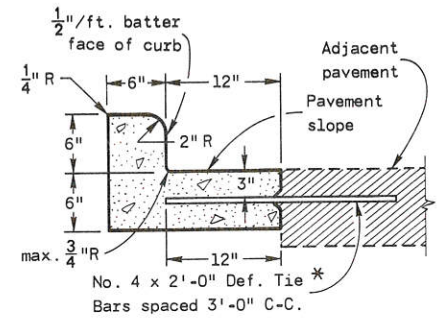
Pavement reinforcing steel and load transfer dowels will not be required within the pay limits of Integral Curb.

Contraction, construction or expansion joints shall be continuous through the Integral Curb.

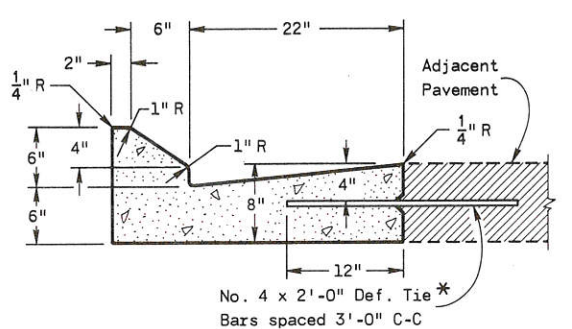
"T" = Pavement thickness.



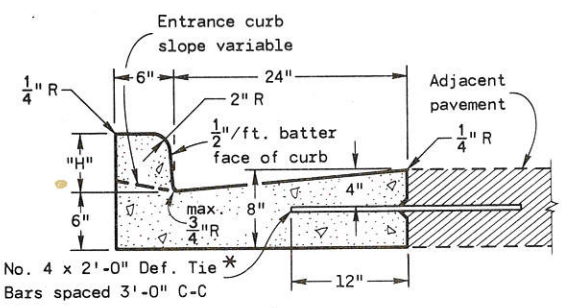
ALTERNATE ENTRANCE CURB
 (When directed by the Engineer)



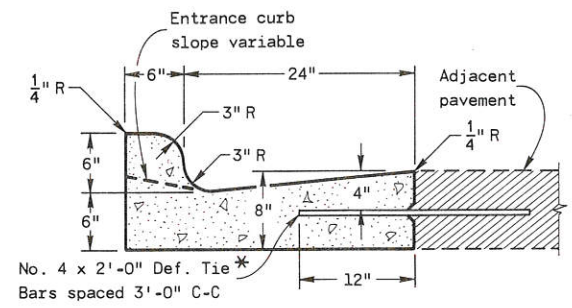
TYPE "A"
 (INCLUDING TIE BARS)
CONCRETE CURB & GUTTER 18"



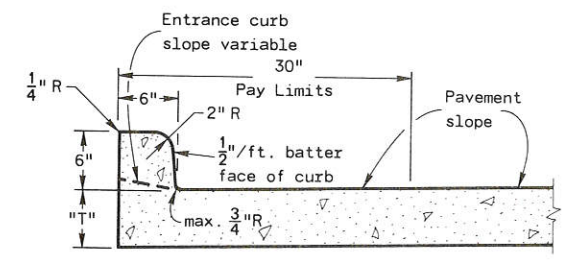
TYPE "J"
 (EXCLUDING TIE BARS)
MOUNTABLE CONCRETE CURB & GUTTER 30"



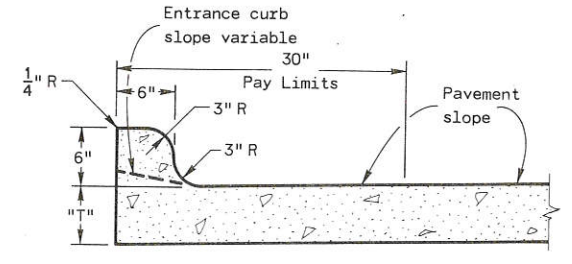
TYPE "A"
 (INCLUDING TIE BARS)
CONCRETE CURB & GUTTER 30"



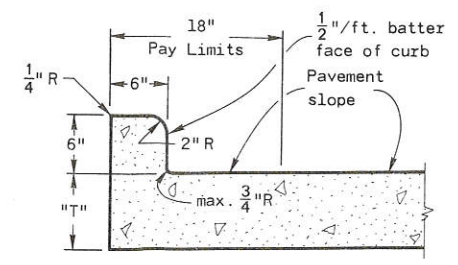
TYPE "D"
 (EXCLUDING TIE BARS)
CONCRETE CURB & GUTTER 30"



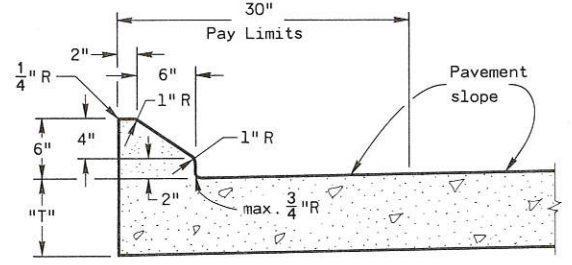
TYPE "A" AND "D"
INTEGRAL CURB ALTERNATE 30"



TYPE "K" AND "L"
CONCRETE CURB & GUTTER



INTEGRAL CURB ALTERNATE 18"



INTEGRAL CURB ALTERNATE MOUNTABLE 30"

**CONCRETE CURB,
 CONCRETE CURB & GUTTER,
 OR INTEGRAL CURB**

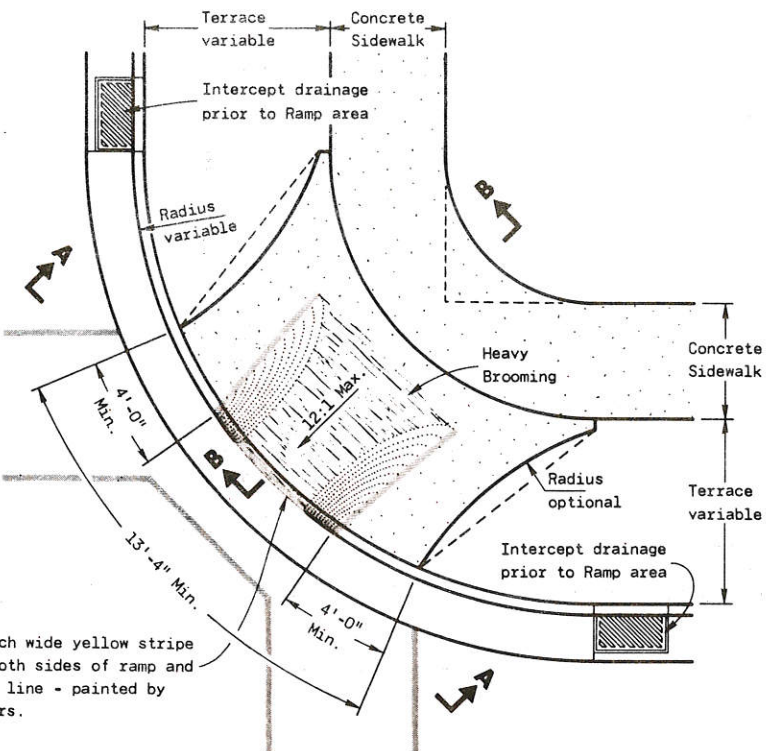
State of Wisconsin
 Department of Transportation
 Division of Highways

APPROVED
 11-9-76
 DATE

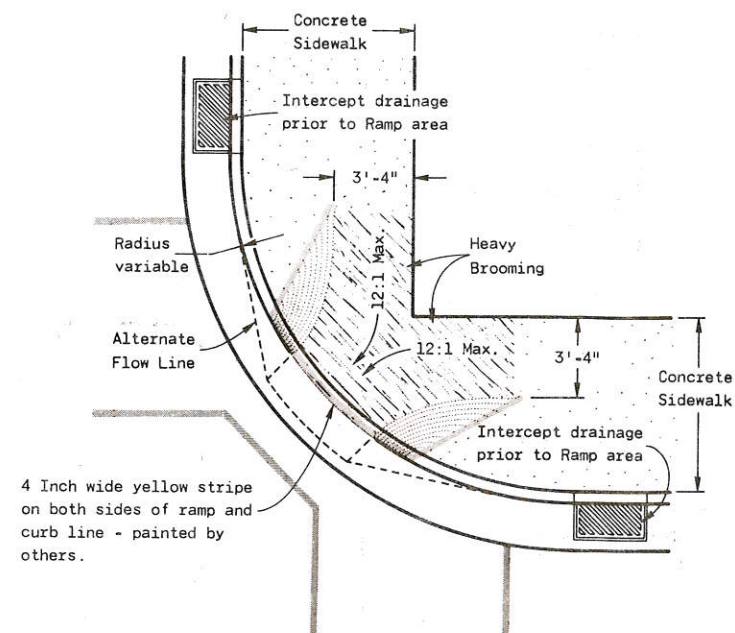
APPROVED
 11-12-76
 DATE

D. J. Strand
 CHIEF OF FACILITIES DEVELOPMENT

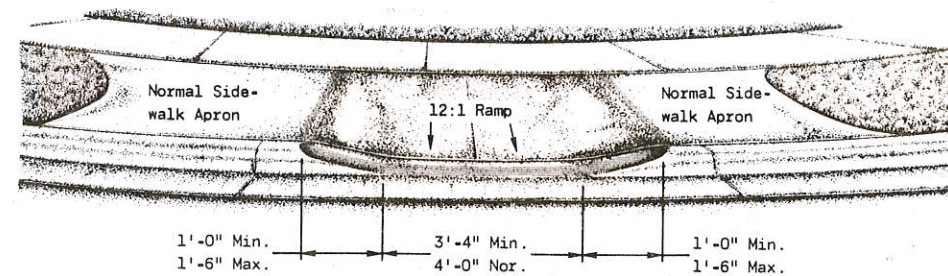
W. J. Sadler
 STATE HIGHWAY ENGINEER



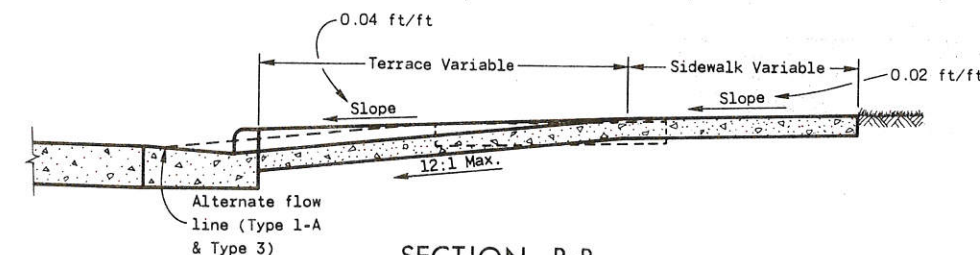
PLAN VIEW
TYPE 1 RAMP
(CENTER OF CORNER RADIUS)



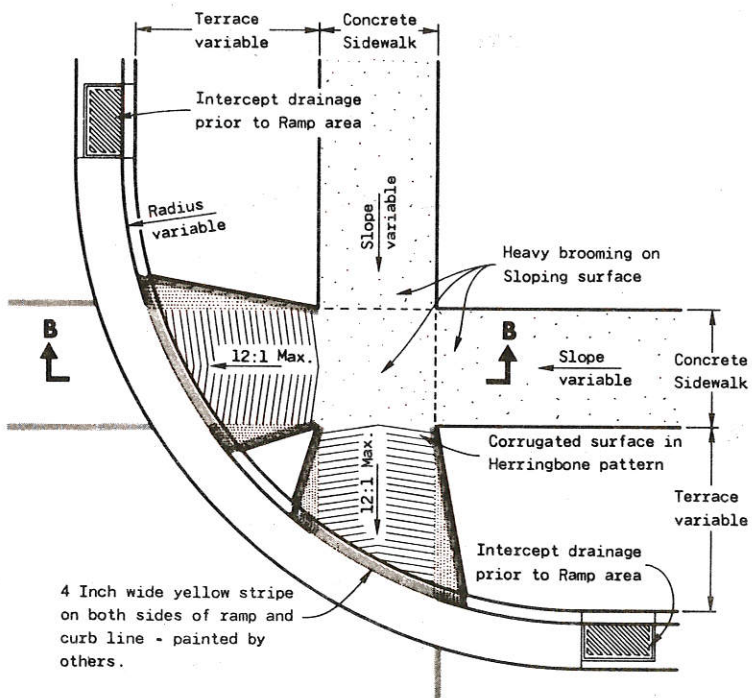
PLAN VIEW
TYPE 1-A RAMP
(NO TERRACE)



VIEW A-A

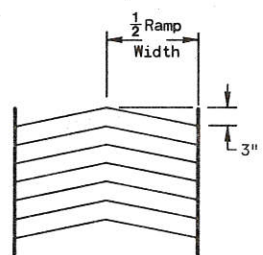


SECTION B-B

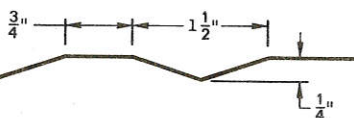


PLAN VIEW
TYPE 2 RAMP
(ON LINE WITH SIDEWALK)

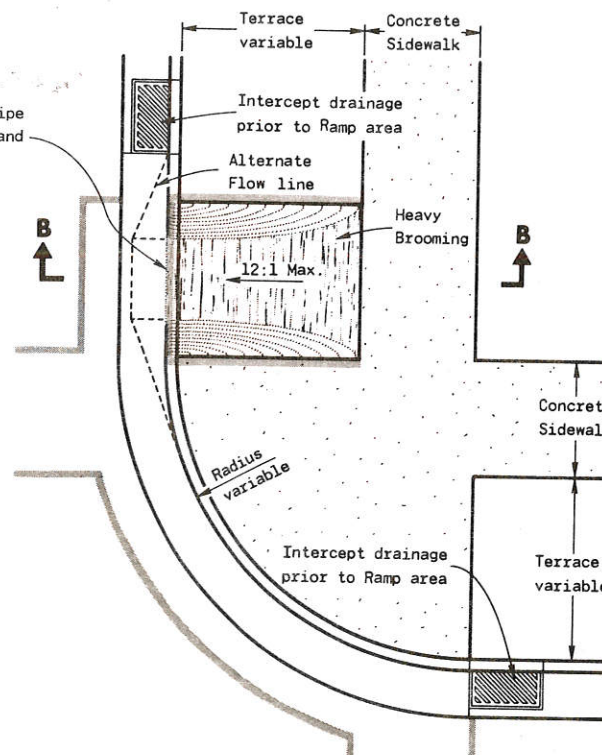
4 Inch wide yellow stripe on both sides of ramp and curb line - painted by others.



DETAIL OF
HERRINGBONE PATTERN



DETAIL OF
SURFACE CORRUGATION



PLAN VIEW
TYPE 3 RAMP
(OUTSIDE OF CROSSWALK AREA)

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.

Ramps shall be built at 12:1 or flatter. When necessary, the Sidewalk elevation may be lowered to meet the high point on the Ramp.

Type 1 or Type 1-A Ramps shall have a normal Sidewalk apron and Curb on both sides of Ramp. Entire Curb radius shall not be made into Ramp.

Curb Ramps shall be measured and paid for as Concrete Sidewalk and Concrete Curb and Gutter.

Section 66.616, Wisconsin Statutes requires Curb Ramping for handicapped persons. This law also states that "the Ramp shall be either bordered on both sides and the Curb line with a four inch wide yellow stripe, or the surface treatment on the Ramp shall have integral coloration".

The paint stripe alternate is shown to alert users of this drawing of the requirement for delineation of the Ramp. The paint stripes will be applied by state or municipal signing crews unless otherwise indicated by Special Provision.

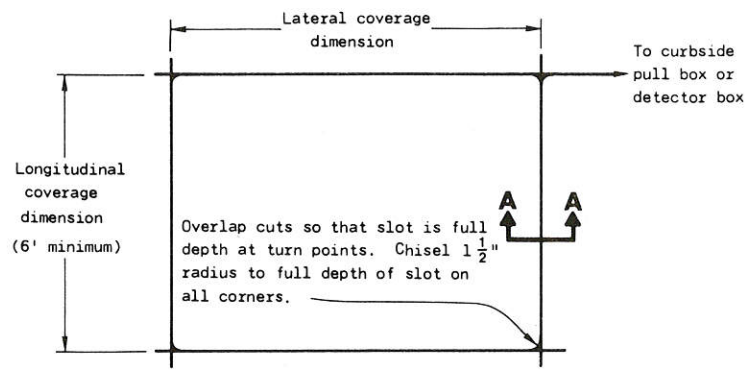
**CURB RAMPS FOR
HANDICAPPED PERSONS**

State of Wisconsin
Department of Transportation
Division of Highways

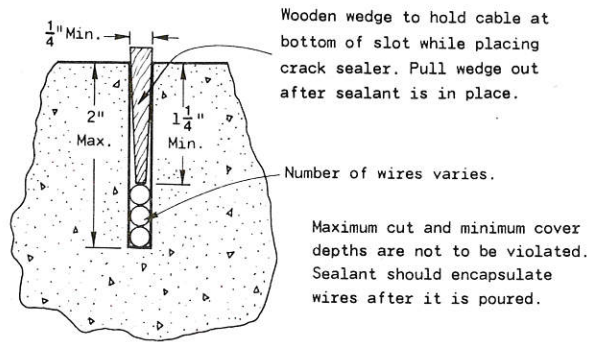
RECOMMENDED FOR APPROVAL:
12-16-75 DATE
I. C. Henning CHIEF OF FACILITIES DEVELOPMENT
APPROVED:
12-18-75 DATE
H. J. Siedler STATE HIGHWAY ENGINEER

LOOP PERIMETER **	NO. OF TURNS ***
Up to 40 feet	3
40 to 160	2
160 and up	1

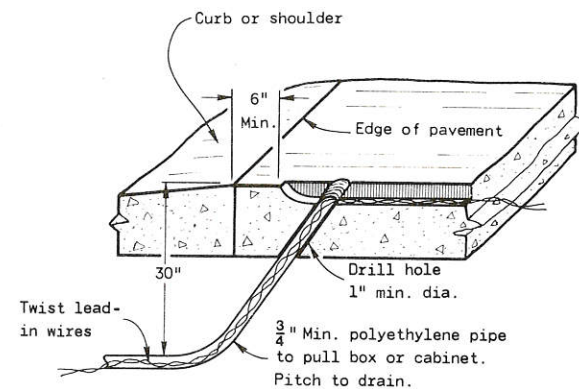
** Maintain 6 foot minimum dimension in direction of travel.
 *** Or according to plans or special provisions.



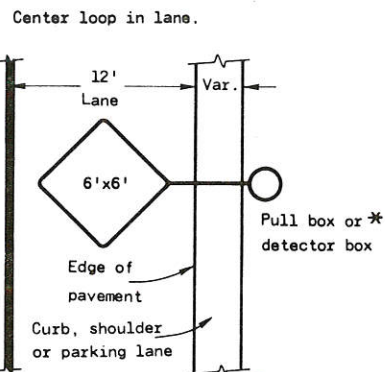
LOOP SLOT CONSTRUCTION



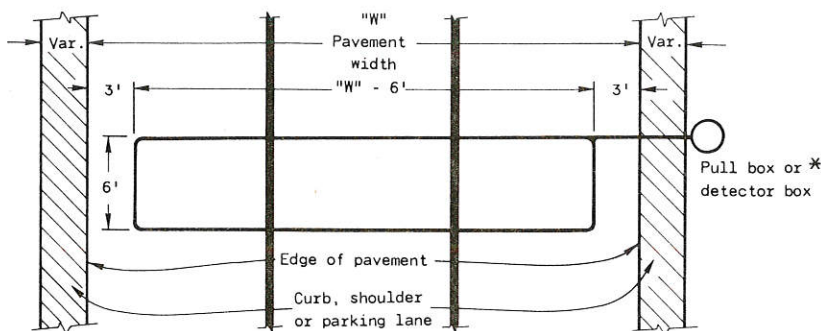
**SECTION A-A
 LOOP AND LEAD-IN
 WIRES IN PAVEMENT**



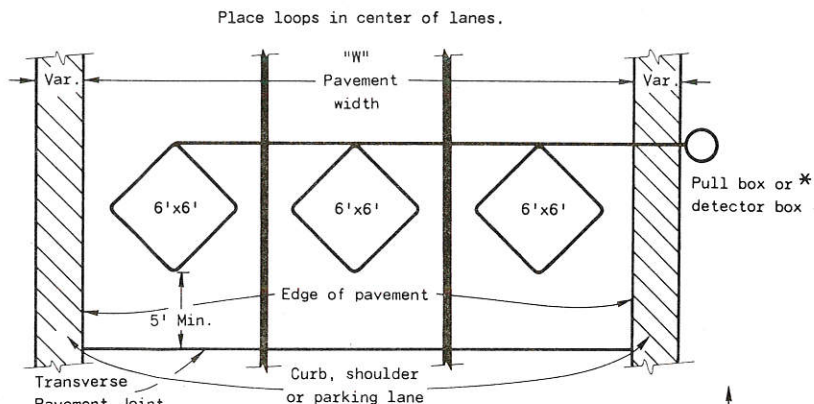
LOOP LEAD-IN WIRES



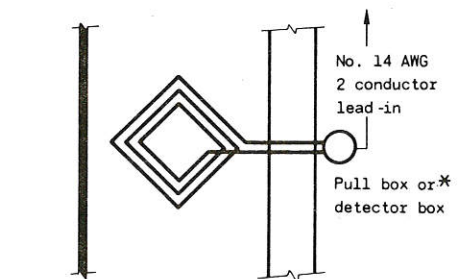
LOOP SLOT PLAN



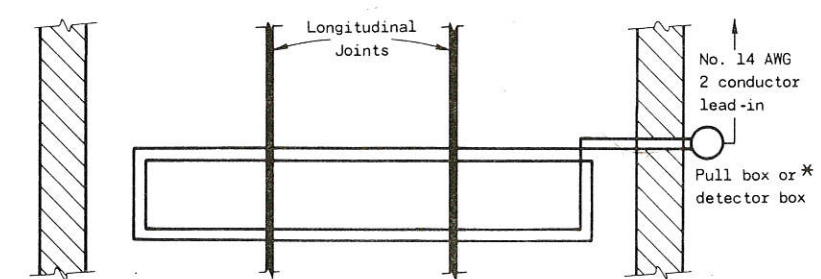
LOOP SLOT PLAN



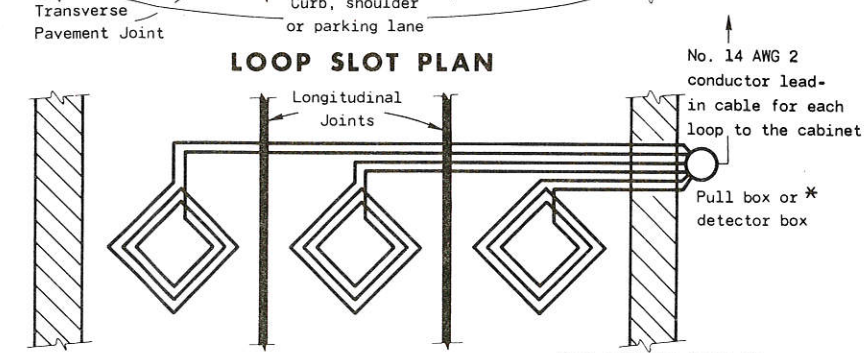
LOOP SLOT PLAN



**LOOP WIRE LAY
 CONSTRUCTION DETAILS**



**LOOP WIRE LAY
 CONSTRUCTION DETAILS**



**LOOP WIRE LAY
 CONSTRUCTION DETAILS**

NOTES

The slots in the pavement shall be cut to dimension with a saw and cleaned free of dirt, dust and debris prior to installation of the wire.
 Loop wire shall be No. 12 AWG, Type USE, RHW, RHH or XLP stranded copper.
 To prevent damage to wire insulation during installation, use a dull object (preferably wood) to push the wire down into the slot.
 After placing the wire in the slot, fill the slot with an asphaltic material. Refer to Section 409.2.5 of the State of Wisconsin Standard Specifications for Road and Bridge Construction, Edition of 1975. An epoxy type sealant may be used if approved by the Engineer, only when asphaltic material is unavailable.
 Each loop circuit shall be continuous, without splices, and free from grounds. The resistance to ground and between adjacent loops shall be infinity as determined with a megger.
 If a pull box or detector box is not provided outside of the curb or edge of pavement at a point where wires from the loop extend through the pavement, the wires should then be brought through the bottom of the pavement and just under the lower edge of the curb back side. A small hole should be dug under the curb at this point so that a splice kit (epoxy type) may be used to waterproof the splice that connects wires from the loop to the lead wires which eventually terminate in the control cabinet. Splice kits must also be used when the splice is made in a pull box.

Two conductor, No. 14 AWG, shielded cable shall be used from the splice connection at the curb to the control cabinet except as noted in the next paragraph.
 2/C - No. 14 (19x27), 0.032 polyethylene, black and clear color codes, cabled with 1x No. 16 AWG stranded tinned copper drain wire, aluminum polyester shield, 0.035 chrome vinyl jacket as manufactured by Belden (No. 8720), or 2/C - No. 14-7x bare copper, 0.047 XLP, printed color code, cabled with 1x No. 16-7x tinned copper drain wire, aluminum mylar tape, 0.047 PVC jacket as manufactured by Okonite, shall be used. These cables are polyethylene insulated.

Belden 8720 is not direct burial cable. It must be placed in non-metallic duct or metal conduit. Okonite cable is direct burial and it is not necessary to place this direct burial cable in non-metallic duct or metal conduit.

The two single conductor loop wires must be twisted together at a rate of three twists per foot from the pavement edge to the splice or to its connection with loop lead-in cable. If the distance from the pavement edge to the control cabinet is less than 75 feet, the loop lead wires may be left long enough to reach the control cabinet. However, the single conductor wires must then be twisted at least three turns per foot all the way to the control cabinet. In this instance a splice is not used.

It is recommended that these twisted single conductor pairs shall be installed in non-metallic duct or metal conduit. Lead-in wires along curbs shall be buried 30 inches deep or tucked under the curb for protection from stakes, posts or any other objects that can be driven into the ground.

Lead-in wires at the point where a splice is made shall be cut to the shortest possible length. This will eliminate additional loops caused by folding of the excess wire, which can cause improper operation of detector amplifiers.

A splice for a two conductor cable consists of two soldered joints enclosed in a single splice kit. Each wire shall be soldered and insulated from one another.

* See Standard Detail Drawing entitled "Traffic Signal and Traffic Counter Details" for pull box or detector box details.

DETAILS FOR THE INSTALLATION OF
 TRAFFIC SIGNAL AND TRAFFIC COUNTER
 DETECTOR LOOP WIRES
 IN PAVEMENT IN PLACE

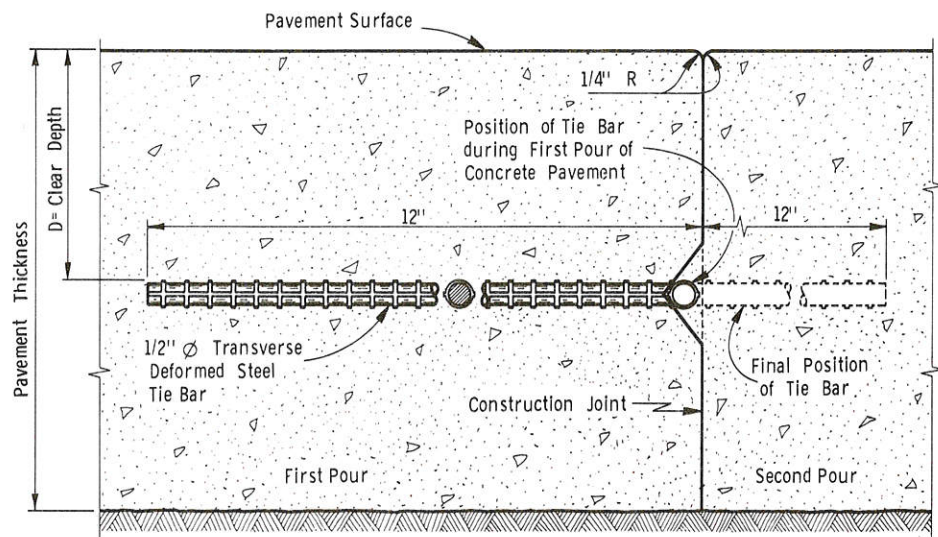
State of Wisconsin
 Department of Transportation
 Division of Highways

RECOMMENDED FOR APPROVAL:
 DATE 3-3-75
 APPROVED DATE 3-4-75
 CHIEF OF FACILITIES DEVELOPMENT
 STATE HIGHWAY ENGINEER

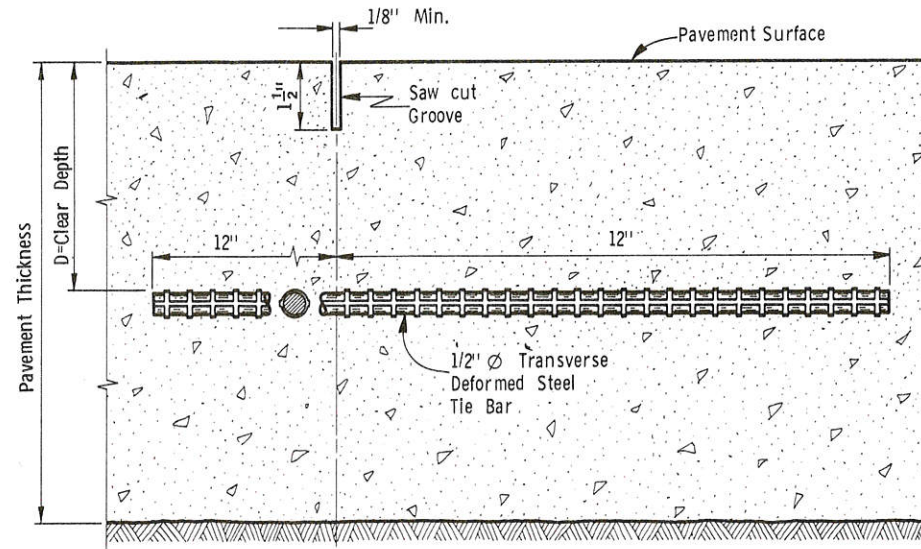
**TRAFFIC SIGNAL SINGLE LANE
 DETECTION LOOP**

**TRAFFIC SIGNAL MULTIPLE LANE
 MASS DETECTION LOOP**

**TRAFFIC COUNTER STATION
 MULTIPLE LANE DETECTION LOOP**

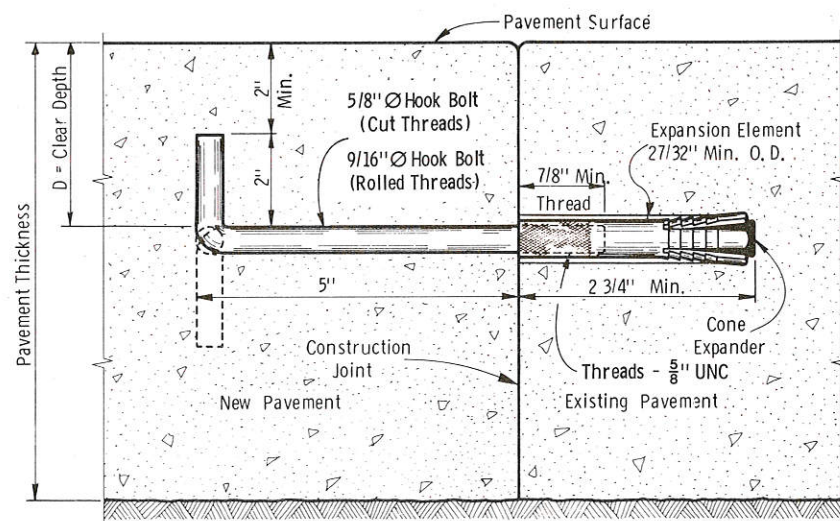


SECTION
CONSTRUCTION JOINT
(TIE BAR)

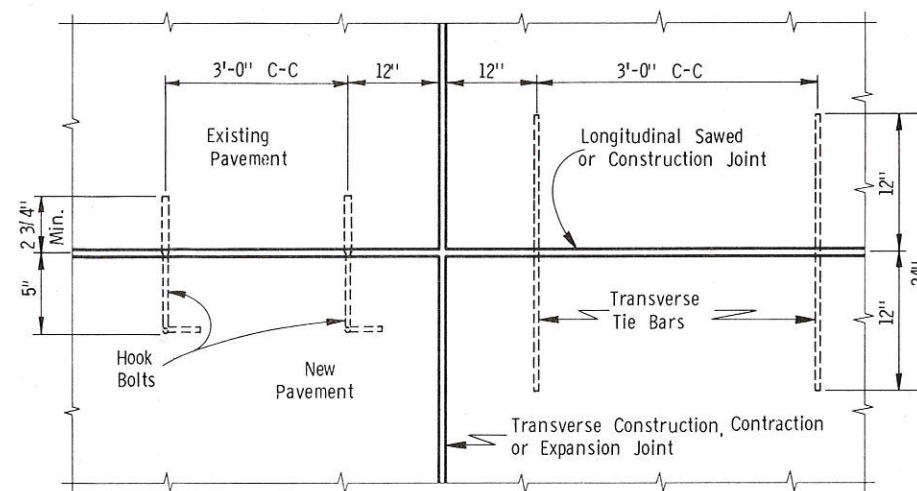


SECTION
SAWED JOINT
(TIE BAR)

Pavement Thickness	"D"	
	Tie Bar	Hook Bolt
8"	2 - 4 3/4"	4 - 4 3/4"
9"	2 - 5 1/2"	4 - 5 1/2"
10"	2 - 5 3/4"	4 - 5 3/4"



SECTION
CONSTRUCTION JOINT
(HOOK BOLT)



PLAN VIEW
Showing Location Details for
Hook Bolts and Tie Bars

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.

Hook Bolts shall be used only when specified in the contract plans.

The Hook Bolts shall conform to ASTM specification A 307, except that the requirements of paragraph 1 (c) shall not apply.

The Expansion Anchor shall be an internally threaded anchor which consists of an externally slit Expansion Element and a single Cone Expander. The Expansion Element shall contain a minimum of three grips. The Expansion Element shall be threaded in such a manner as to prevent the machine bolt from coming in contact with the Cone Expander at any time.

The Expansion Anchor shall be set in existing pavement according to manufacturer's instructions. The holes shall be of the recommended diameter and depth and shall be drilled by methods recommended by the manufacturer of the particular anchor. The drilled holes shall be left rough, not reamed, and free from any drill dust.

Alternate designs of construction joint installations may be used upon written approval of the Engineer.

Longitudinal Joints shall not be sealed.

Tie Bars shall be placed at the required location by devices or methods approved by the Engineer.

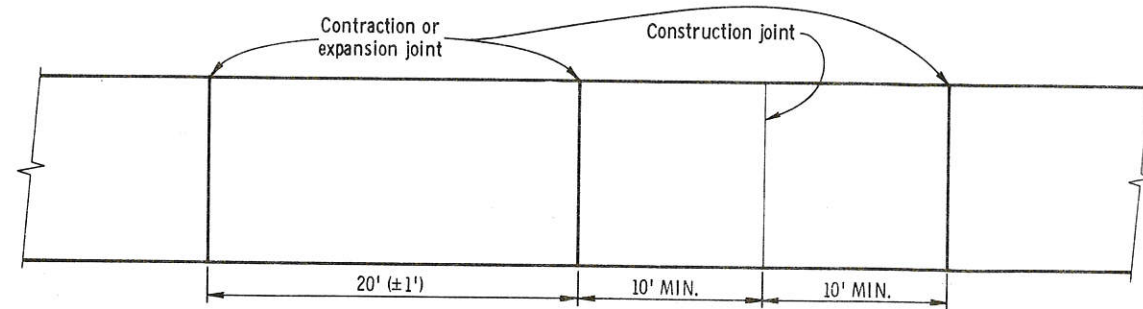
LONGITUDINAL JOINTS
CONCRETE PAVEMENT

State of Wisconsin
Department of Transportation
Division of Highways

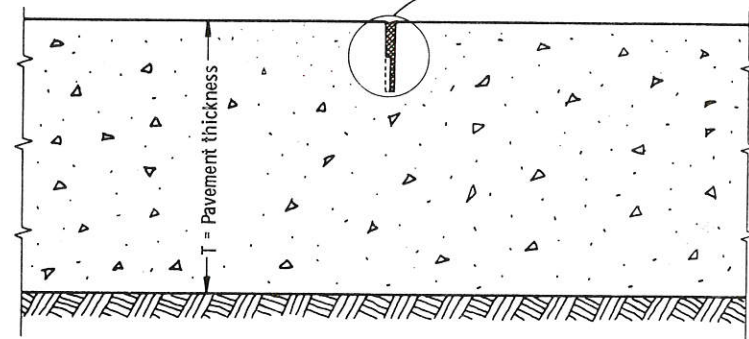
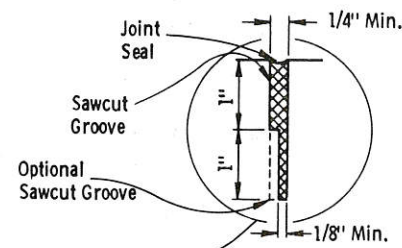
RECOMMENDED FOR APPROVAL:
DATE 5/23/72
APPROVED
DATE 5/24/72

L. C. Horned
CHIEF DESIGN ENGINEER

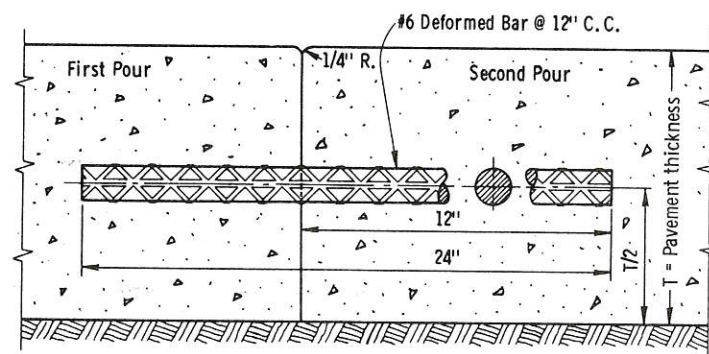
S. L. Hicks
STATE HIGHWAY ENGINEER



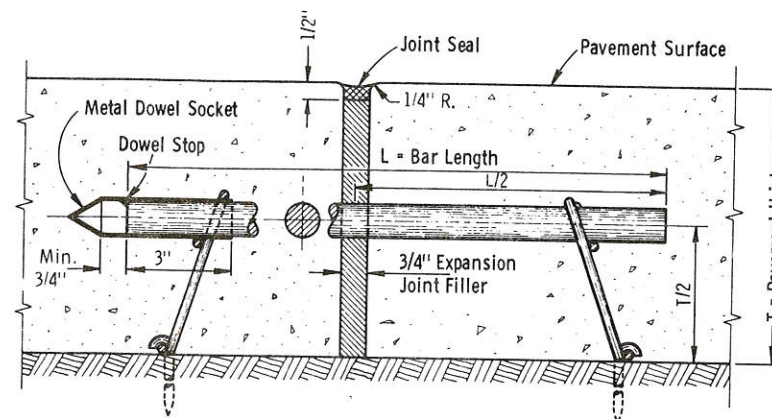
SCHMATIC SHOWING JOINT LOCATIONS



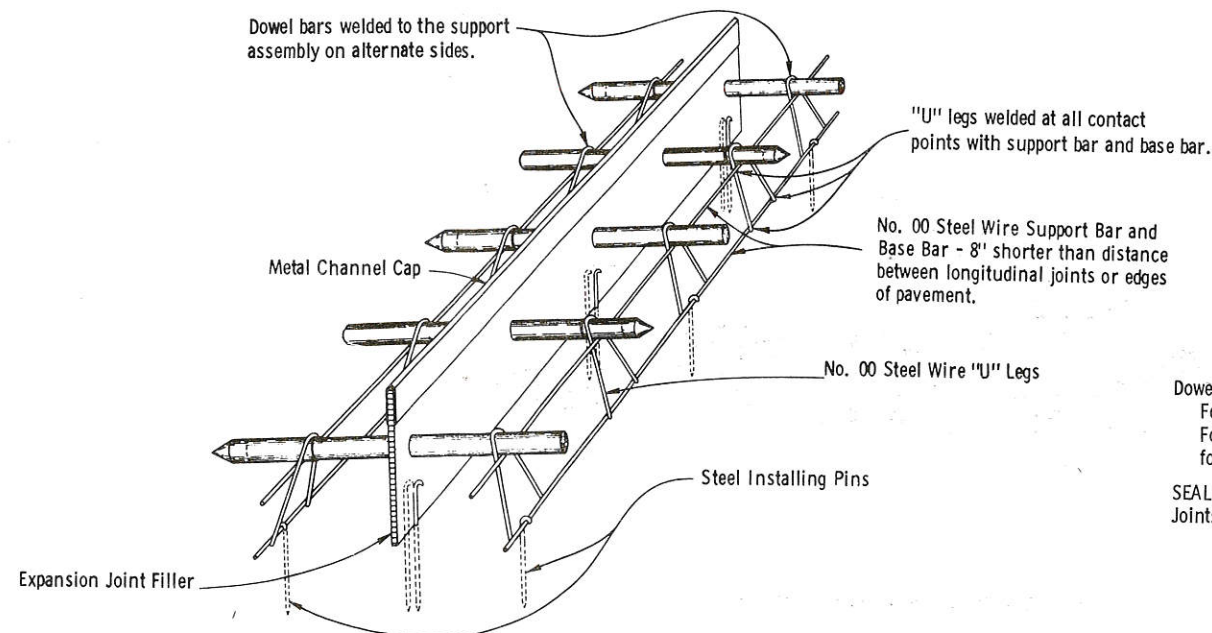
CONTRACTION JOINT



CONSTRUCTION JOINT



EXPANSION JOINT



INSTALLING DEVICE FOR LOAD TRANSFER DOWELS AND EXPANSION JOINT ASSEMBLY

GENERAL NOTES

Details of construction not shown on this drawing shall conform to the pertinent requirements of the Standard Specifications and the applicable Special Provisions. Steel installing pins of sufficient number, length and rigidity shall be used to prevent movement of the joint assembly during construction operations.

ALTERNATE DESIGNS

Alternate designs for load transfer dowels at expansion joints and appurtenances other than shown here may be used upon written approval of the Engineer.

CONTRACTION JOINTS

Contraction joints shall be installed at 20' (± 1') spacing from adjacent contraction or expansion joints, except that lesser spacings shall be used:

1. At locations or spacing indicated on the plans.
2. As extensions of transverse joints or cracks in abutting pavement lanes.
3. At locations designated by the Engineer where there are manholes or other fixtures in the pavement.

CONSTRUCTION JOINTS

Construction joints shall be installed a minimum of 10' from the nearest joint.

Deformed bars shall be spaced at 12" C-C and 6" from the edge of pavement.

Deformed bars may be inserted after the concrete has been poured.

EXPANSION JOINTS

Expansion joints are required only at structure approaches and/or where shown on the plans. Locations may be shifted to avoid stationary fixtures in the pavement.

Expansion joint filler shall be secured with sufficient number of steel pins to prevent horizontal movement during the placing of concrete.

DOWEL BARS

Dowel bars shall be spaced at 12" C-C and 6" from the edge of pavement.

Dowel bars shall have at least one end sawed and be free of all burrs and protruding edges.

Dowel bars having one end sawed and one end sheared shall be oriented so that the sheared end is welded to the support assembly and the sawed end remains free.

Metal dowel socket (CAP), 1 1/8" or 1 5/8" Dia., 24 gauge, closed on one end shall be placed alternately on the free end of each dowel bar for proper pavement expansion.

Dowel bars shall be installed in accordance with the plans and the section of the Standard Specifications entitled 'TRANSVERSE JOINTS IN CONCRETE PAVEMENT' except as hereinafter provided.

Dowel bars shall be coated by one of the following processes:

1. Type I - Adhesive thermoplastic resin system coating in accordance with Federal Specification L - C530 B except the coating thickness shall be 17 mils nominal (± 3 mils) and the adhesive thickness shall be 4 mils nominal (+ 4 mils, - 1 mil), or
2. Type II - Thermosetting epoxy system in accordance with Federal Specification L - C530B except the total minimum thickness shall be 10 mils. The bars shall be coated with SAE # 140 oil or similar lubricant after installing in the support assembly.

The ends of the dowel bars need not be coated.

Coating of the welds where the dowel bars are attached to the support assembly is not required.

Selection of Type I or Type II coating is optional; however, one type shall be used throughout the project.

Dowel Bar Dimensions:

- For 7" P. C. Pavement = 1" ø x 18"
- For 8" P. C. Pavement = 1" ø x 18"
- For 9" P. C. Pavement = 1 1/4" ø x 18"

SEALING JOINTS

Joints shall be sealed as shown.

TRANSVERSE JOINTS IN NON-REINFORCED CONCRETE PAVEMENT

State of Wisconsin
Department of Transportation
Division of Highways

RECOMMENDED FOR APPROVAL:

6-12-73
DATE

J.C. Henning
CHIEF OF FACILITIES DEVELOPMENT

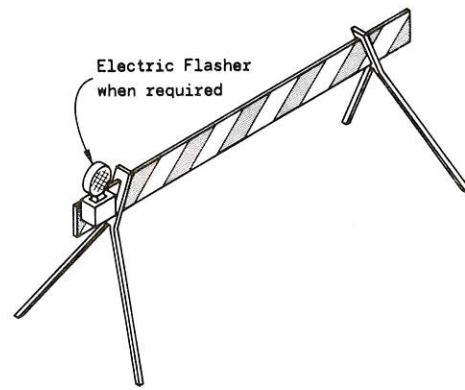
APPROVED
6-19-73
DATE

W.J. Siedler
STATE HIGHWAY ENGINEER

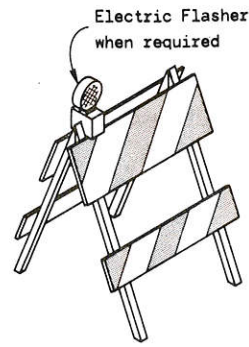
TABLE OF BARRICADE CHARACTERISTICS

BARRICADE TYPE	I	II	III
Height	3' Minimum		5' Minimum
*Rail Width	8" Minimum to 12" Maximum		
Rail Length	2' Minimum to variable Maximum		
** Stripe Width	6" at 45° Angle		
Stripe Colors	Reflectorized Orange & White		

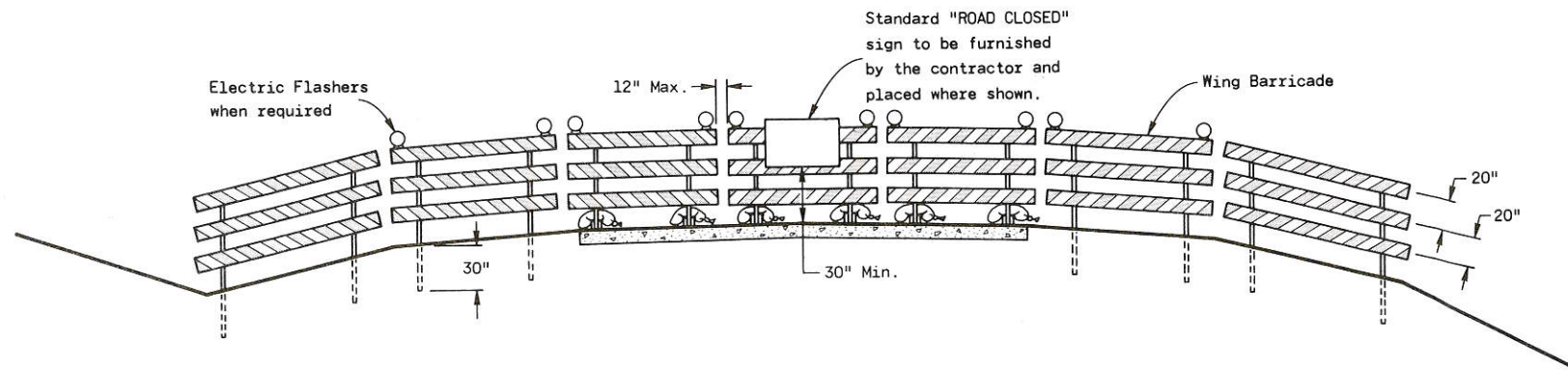
* Nominal dimensions when barricade is constructed of lumber.
 ** May be 4" for rail lengths less than 3'.



TYPICAL TYPE I BARRICADE



TYPICAL TYPE II BARRICADE



TYPICAL INSTALLATION SHOWING TYPE III BARRICADE

CONSTRUCTION BARRICADES



R11-2
 48" x 30"
 Black Lettering on Reflective
 White Background
 Letter Series "D"
 Letter height 8"



W20-3
 48" x 48"
 Black Lettering on Reflective
 Orange Background
 Letter Series "D"
 Letter height 7"

STANDARD SIGNS-TYPE II

GENERAL NOTES

The contractor shall furnish, erect and maintain Barricades and Signs. Details regarding location, spacing, dimensions, fabrication, material, sign lettering, lighting devices and color of Barricades and Signs shall conform to this drawing, the Wisconsin Manual on Uniform Traffic Control Devices, the Standard Specifications, Special Provisions and/or plans.

Type III Barricades and Signs shall be erected at the termini of projects and at other road or street locations where it is necessary to control or eliminate public access to the construction area.

Type I and II Barricades shall be used on projects when traffic is to be maintained through the construction area.

The actual field location of barricade installations and advance signs shall be as directed by the Engineer.

Each barricade shall have the name and telephone number of a person responsible for 24 hour emergency service printed in letters at least 3/4 inch in height.

CONSTRUCTION BARRICADES
 & STANDARD SIGNS

State of Wisconsin
 Department of Transportation
 Division of Highways

APPROVED
 10-1-76
 DATE

D. J. Thand
 CHIEF OF FACILITIES DEVELOPMENT

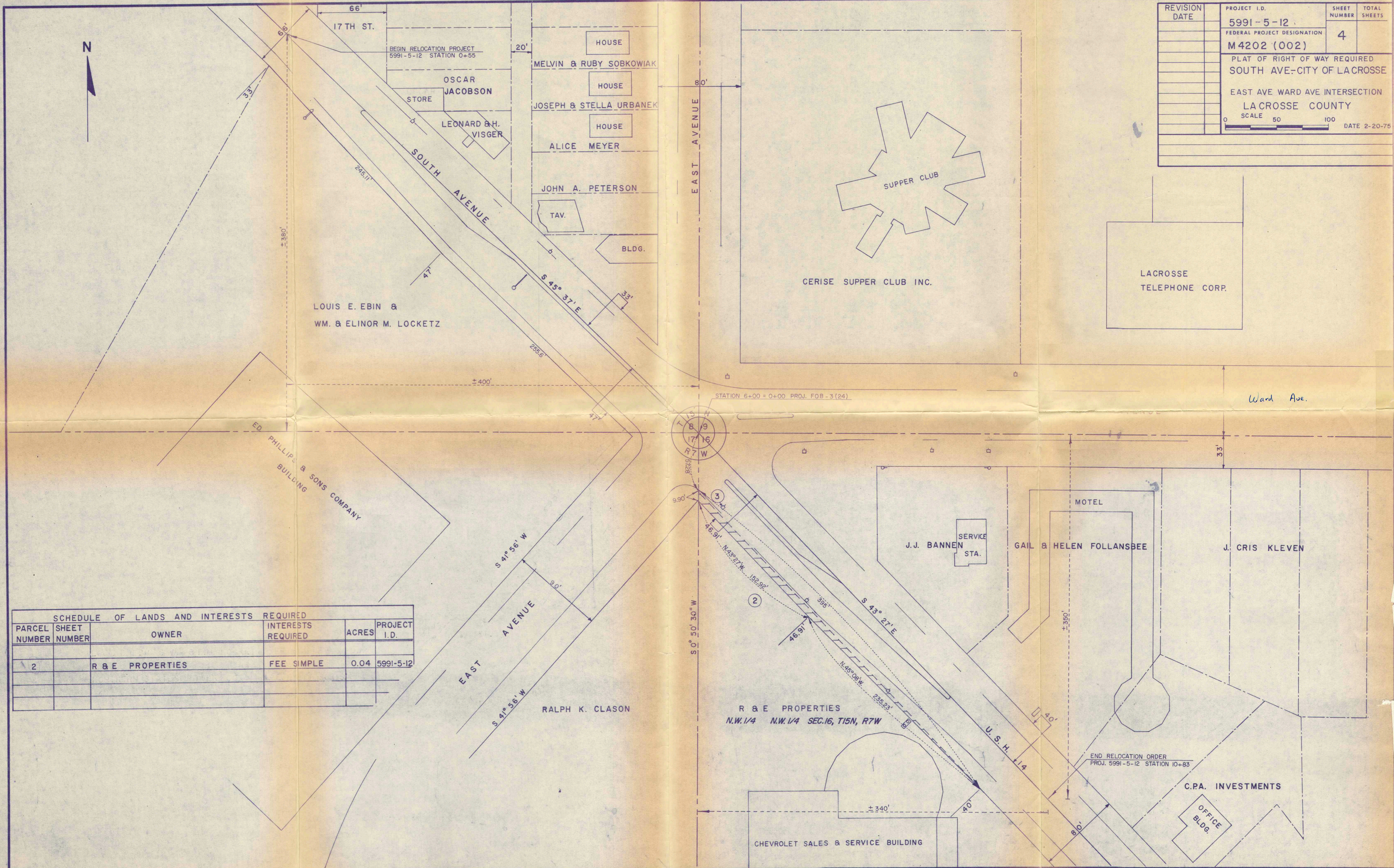
APPROVED
 10-1-76
 DATE

H. J. Siedler
 STATE HIGHWAY ENGINEER

236



REVISION DATE	PROJECT I.D.	SHEET NUMBER	TOTAL SHEETS
	5991-5-12	4	
FEDERAL PROJECT DESIGNATION			
M4202 (002)			
PLAT OF RIGHT OF WAY REQUIRED			
SOUTH AVE-CITY OF LACROSSE			
EAST AVE WARD AVE INTERSECTION			
LACROSSE COUNTY			
SCALE		DATE 2-20-75	
0 50 100			



SCHEDULE OF LANDS AND INTERESTS REQUIRED					
PARCEL NUMBER	SHEET NUMBER	OWNER	INTERESTS REQUIRED	ACRES	PROJECT I.D.
2		R & E PROPERTIES	FEE SIMPLE	0.04	5991-5-12

Ward Ave.

STATION 6+00 = 0+00 PROJ. FOB - 3 (24)

END RELOCATION ORDER
PROJ. 5991-5-12 STATION 10+83