PLANS SYMBOLS

STATE LINE
COUNTY LINE
TOWNSHIP OR RANGE LINE
SECTION LINE
QUARTER LINE
SIXTEENTH LINE
RIGHT OF WAY LINE
PRESENT RIGHT OF WAY LINE
CONTROL OF ACCESS LINE
PROPERTY LINE (Except Land Lines)
VACATED PLATTED PROPERTY
CORPORATE OR CITY LIMITS
TRUNK HIGHWAY CENTER LINE
RETAINING WALL
RAILROAD
RAILROAD RIGHT OF WAY LINE
RIVER OR CREEK
DRY RUN
DRAINAGE DITCH
DRAIN TILE
CULVERT
DROP INLET
GUARD RAIL
BARBED WIRE FENCE
WOVEN WIRE FENCE
CHAIN LINK FENCE
RAILROAD SNOW FENCE
STONE WALL OR FENCE
HEDGE
RAILROAD CROSSING SIGN
RAILROAD CROSSING BELL
ELECTRIC WARNING SIGN
CROSSING GATE
MEANDER CORNER
SLOPE EASEMENT (CONST. LIMITS)

SPRINGS
MARSH
TIMBER — DECIDUOUS / CONIFEROUS
ORCHARD
BRUSH
NURSERY
CATCH BASIN
FIRE HYDRANT
CATTLE GUARD
OVERPASS (Highway Over)
UNDERPASS (Highway Under)
BRIDGE
BUILDING (One Story Frame)
F FRAME C CONCRETE
S STONE T TILE
B BRICK ST STUCCO
IRON PIPE OR ROD
MONUMENT (STONE, CONCRETE, OR METAL)
WOODEN HUB
GRAVEL PIT
SAND PIT
BORROW PIT
ROCK QUARRY

UTILITIES SYMBOLS

POWER POLE LINE
TELEPHONE OR TELEGRAPH POLE LINE
JOINT TELEPHONE AND POWER ON POWER POLES
OR TELEPHONE POLES
ANCHOR
STEEL TOWER
STREET LIGHT
PEDESTAL (TELEPHONE CABLE TERMINAL)
GAS MAIN
WATER MAIN

CONDUIT
TELEPHONE CABLE IN CONDUIT
ELECTRIC CABLE IN CONDUIT
TELEPHONE MANHOLE
ELECTRIC MANHOLE
BURIED TELEPHONE CABLE
BURIED ELECTRIC CABLE
AERIAL TELEPHONE CABLE
SEWER, (SANITARY OR STORM)
SEWER MANHOLE

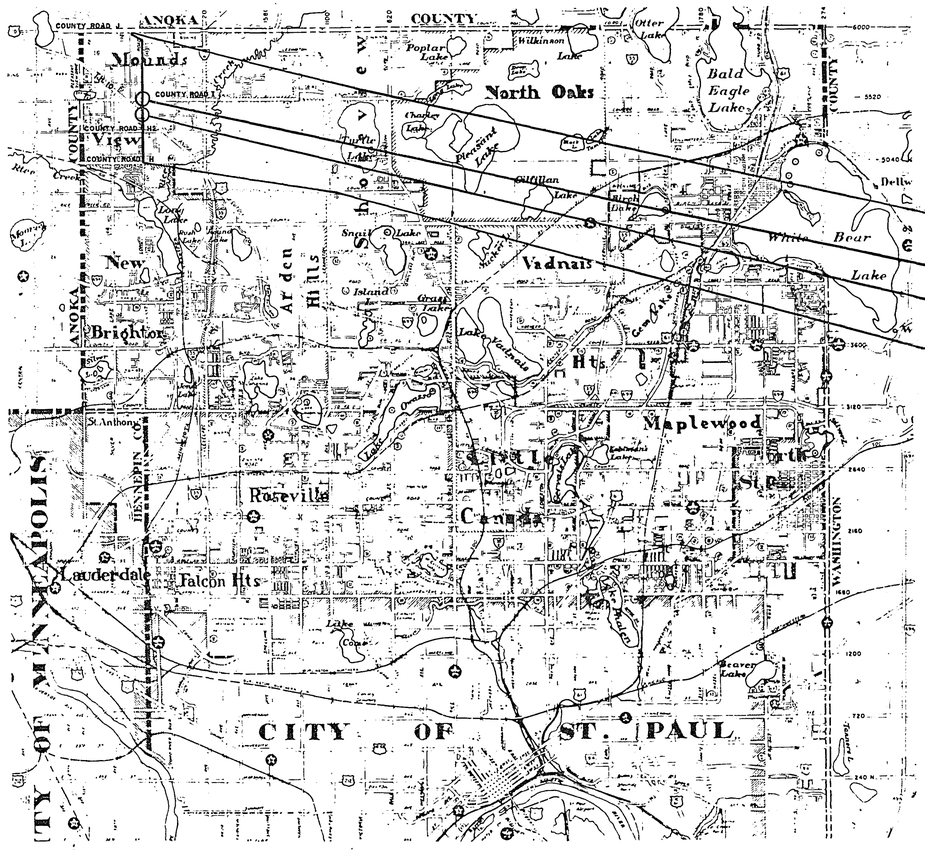
NOTE: SECTION NUMBERS READ FROM THE SOUTH

THE MINNESOTA DEPARTMENT OF TRANPORTATION "STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION," DATED 1988 AND ALL ADDITIONS AND AMENDMENTS THERETO SHALL GOVERN EXCEPT AS MODIFIED BY SPECIFICATION FOR THIS PROJECT

SCALES

PLAN — 0, 20, 40, 60 / 10, 30, 50
PROFILE HORIZ. — 0, 20, 40, 60 / 10, 30, 50
PROFILE VERT. — 0, 10 / 5
CROSS SECTIONS — 0, 20 / 10
LAYOUT MAP — 5,280

GROSS LENGTH	11581	FEET	2.19	MILES
BRIDGE LENGTH	0	FEET	0	MILES
EXCEPTIONS	260	FEET	0.05	MILES
NET LENGTH	11321	FEET	2.14	MILES



RAMSEY COUNTY
DEPARTMENT OF PUBLIC WORKS

CONSTRUCTION PLAN FOR: GRADING, AGGREGATE BASE, BITUMINOUS BASE AND SURFACING, STORM SEWER, CONCRETE CURB AND GUTTER, AND UTILITY IMPROVEMENTS

LONG LAKE ROAD
C.S.A.H. 45

BETWEEN: COUNTY ROAD H (C.S.A.H. 9) & COUNTY ROAD J (C.S.A.H. 1)

FROM: BEGINNING AT THE SOUTHEAST CORNER OF SECTION 7, TOWNSHIP 30 NORTH, RANGE 23 WEST.

TO: A POINT 144.81 FEET SOUTH AND 965.46 FEET WEST OF THE NORTHEAST CORNER OF SECTION 6, TOWNSHIP 30 NORTH, RANGE 23 WEST.

END PROJECT S.A.P. 62-645-10
END PROJECT S.A.P. 146-020-06
STATION 246+61.00

EXCEPTION (C.S.A.H.3) (120')
STA. 183+07 TO STA. 184+27
EXCEPTION (S.T.H.10) (140')
STA. 172+15 TO STA. 173+55

BEGIN PROJECT S.A.P. 62-645-10
BEGIN PROJECT S.A.P. 146-020-06
STATION 130+80.00

S.A.P. NO. 62-645-10
S.A.P. NO. 146-020-06

ACCOUNT NO. 47449

INDEX

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2-3	ESTIMATED QUANTITIES - CONST. NOTES - STD. PLATES
4	TYPICAL SECTIONS
5	CHARTS - REMOVALS,SALVAGES,INSTALLS,SAWCUTS,SILT FENCE
6	UTILITY WORK CHARTS
7	CLEAR AND GRUB CHART
8	ENTRANCE AND OTHER MISCELLANEOUS DETAILS
9	EXISTING STRUCTURES CHART - PUBLIC UTILITIES
10-11	PROPOSED DRAINAGE CHART, SILT FENCE DETAIL, RIPRAP CHART
12	PROPOSED DRAINAGE STRUCTURE DETAILS
13-28	PLAN AND PROFILE SHEETS
29	CITY UTILITY DETAILS
30	CITY PONDING AREA
31	S.T.H. 10 INTERSECTION ELEVATIONS AND HORIZONTAL DATA
32-37	SIGNAL REVISIONS
38-73	CROSS SECTIONS & EARTHWORK SUMMARY
73A	S.T.H. 10 WATERMAIN CROSSING

THIS PLAN CONTAINS 74 SHEETS

RECEIVED
CONSTRUCTION
CONTROL
DONE BY: MR
DATE: 12-3-93

DESIGN DESIGNATION

	CO. RD. H TO CO. RD. H-2 (C.S.A.H. 9) (C.S.A.H. 5)	CO. RD. H-2 TO CO. RD. I (C.S.A.H. 5) (C.S.A.H. 3)	CO. RD. I TO CO. RD. J (C.S.A.H. 3) (C.S.A.H. 1)
PRESENT ADT (1992)	2500	3200	2200
PROJECTED ADT (2012)	3750	4800	3300
FUNCTIONAL CLASS	LOW DENSITY COLLECTOR	LOW DENSITY COLLECTOR	LOW DENSITY COLLECTOR
TRAFFIC LANES	2	2	2
PARKING LANES	2	2	2
DESIGN LOAD	10	10	10
STABILOMETER "R" VALUE	70	70	70
≥ N18 20 YEAR	589,000	754,000	518,400
DESIGN SPEED	30 MPH	40 MPH★	30 MPH

★30 MPH T.H. 10 TO C.R. I

BASED ON STOPPING SIGHT DISTANCE
HEIGHT OF EYE: 3.50 FEET
HEIGHT OF OBJECT: 0.50 FEET

DESIGN SQUAD BJ-SB-DH.-DM DATE 3/92
DRAWN BY SB-DH-DM DATE
CHECKED BY BJ DATE 3/92

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA
DATE 1-30-92 REG NO 14257 ENGR Daniel T. Bahnsen

RECOMMENDED FOR APPROVAL DES TRAFFIC ENGR DATE 1-31-92
RECOMMENDED FOR APPROVAL KMR ENV ENGR DATE 2-3-92
RECOMMENDED FOR APPROVAL DEH MAINT ENGR DATE 1-30-92
RECOMMENDED FOR APPROVAL LKF CONST ENGR DATE 1-30-92
RECOMMENDED FOR APPROVAL DLP DESIGN ENGR DATE 1-30-92
RECOMMENDED FOR APPROVAL JAP R/W ENGR DATE 1-31-92
RECOM'D Wayne Leonard HIGHWAY ENGR DATE 1-30-92
RECOM'D PROGRAM ENGINEER DATE 1/31/92

RECOMMENDED FOR APPROVAL Paul Kirkwold COUNTY ENGINEER DATE 2/4/92
APPROVED Hal Wogaard CHAIR, OF THE RAMSEY COUNTY BOARD DATE 5/5/92
APPROVED CITY OF MOUNDSVIEW DATE 3/10/92
Rec. For APPROVAL DH Mn/DOT Traffic Engr. DATE 4/15/92

MINNESOTA DEPARTMENT OF TRANSPORTATION
RECOMMENDED FOR APPROVAL STATE AUD PLANS ENGINEER DATE 4/14/92
RECOMMENDED FOR APPROVAL DISTRICT STATE AID ENGINEER DATE 4/15/92
APPROVAL STATE AID ENGINEER DATE 4/15/92

PLAN REVISIONS			8/24/92	9,10,14,15,30	BJ.
DATE	SHEET NO.	BY	9/30/92	9,10,14,15,42,43	BJ.
6-MAR.-92	S.T.H. 10 WATERMAIN 73A	LPD-BJ			
4/29/92	2,3,6,11,13-15,19-25,27	B.J.			
6/3/92	25,26	D.H.			
8/14/92	10 & 15 CB231 to CB228	B.J.			

GRADE 146+50 - 151+50

28-126

STATEMENT OF ESTIMATED QUANTITIES

ITEM NO.	CONTRACT ITEM	UNIT	TOTAL ESTIMATED QUANTITIES	TOTAL FINAL QUANTITIES	S.A.P. 62-645-10 RAMSEY COUNTY ESTIMATED QUANTITIES	S.A.P. 62-645-10 RAMSEY COUNTY FINAL QUANTITIES	60% S.A.P. 62-645-10 40% 146-020-06 ESTIMATED QUANTITIES	60% S.A.P. 62-645-10 40% 146-020-06 FINAL QUANTITIES	CITY OF MOUNDS VIEW 100% CITY OF MOUNDS VIEW ESTIMATED QUANTITIES	CITY OF MOUNDS VIEW 100% CITY OF MOUNDS VIEW FINAL QUANTITIES	STORM SEWER ESTIMATED QUANTITIES	STORM SEWER FINAL QUANTITIES
2021.501	MOBILIZATION	LS	1		1.00							
2101.501	CLEARING (P)	ACRE	1.1								1.1	
2101.502	CLEARING	TREE	317		317							
2101.506	GRUBBING (P)	ACRE	1.1								1.1	
2101.507	GRUBBING	TREE	310		310							
2104.501	REMOVE CONCRETE CULVERTS	LF	183		183							
(1) 2104.501	REMOVE METAL CULVERTS	LF	234		234							
(1) 2104.501	REMOVE R.C. PIPE SEWER	LF	2579		2467						112	
2104.501	REMOVE CURB & GUTTER	LF	320		320							
2104.501	REMOVE FLAGSTONE RETAINING WALL	LF	170		170							
2104.501	REMOVE WOOD RETAINING WALL	LF	118		118							
2104.503	REMOVE CONCRETE SIDEWALK	SF	310		310							
(2) 2104.505	REMOVE CONCRETE PAVEMENT	SY	692		692							
2104.509	REMOVE MANHOLES, C.B. OR SURFACE DRAINS	EACH	19		19							
2104.511	SAWING CONCRETE PAVEMENT	LF	395		395							
2104.513	SAWING BITUMINOUS PAVEMENT	LF	2964		2964							
2104.521	SALVAGE CHAIN LINK FENCE	LF	1373		1373							
2104.521	SALVAGE WOODEN FENCE	LF	491		491							
2104.523	SALVAGE 24" R.C. PIPE APRON	EACH	1								1	
2104.523	SALVAGE CASTING ASSEMBLY	EACH	21		21							
2104.523	SALVAGE SIGN WITH TIMBERS	EACH	2		2							
0105.609	GEOTEXTILE FABRIC SPECIAL	SY	159		159							
2105.501	COMMON EXCAVATION (EV) (P)	CY	42716		5887		36829					
2105.505	MUCK EXCAVATION (EV)	CY	41490		11846		29644					
2105.515	UNCLASSIFIED EXCAVATION (EV)	CY	29600								29600	
2105.521	GRANULAR BORROW (LV)	CY	56483		17583		38900					
2105.525	TOPSOIL BORROW (LV)	CY	3346		3346							
2130.501	WATER	M GAL	200		50		150					
(3) 2211.503	AGGREGATE BASE PLACED CL.6 (P)	CY	12809		5425		7384					
2232.501	MILL BITUMINOUS SURFACE - 1.5"	SY	990				990					
2301.503	CONCRETE PVMT. IRREGULAR WIDTH 7"	SY	30		30							
2331.508	TYPE 61 WEARING COURSE MIXTURE	TON	3444		803		2641					
(4) 2331.508	TYPE 31 WEARING COURSE MIXTURE	TON	251		251							
(5) 2331.510	TYPE 31 BINDER COURSE MIXTURE	TON	5236		1470		3766					
2331.514	TYPE 31 BASE COURSE MIXTURE	TON	6934		2035		4899					
(6) 2357.502	BITUMINOUS MATERIAL FOR TACK COAT	GAL	6137		1588		4549					
0411.603	PRECAST MASONRY RETAINING WALL	SF	175		(*) 175							
0412.602	INSTALL WOOD SIGN WITH TIMBERS	EACH	2		2							
0501.602	TRASH GUARD FOR 15" R.C. PIPE APRON	EACH	8								8	
0501.602	TRASH GUARD FOR 18" R.C. PIPE APRON	EACH	1								1	
0501.602	TRASH GUARD FOR 24" R.C. PIPE APRON	EACH	1								1	
0501.602	TRASH GUARD FOR 27" R.C. PIPE APRON	EACH	1								1	
0501.602	TRASH GUARD FOR 44" SPAN R.C. PIPE APRON	EACH	1								1	
0501.602	TRASH GUARD FOR 48" R.C. PIPE APRON	EACH	1								1	
2501.515	15" RC PIPE APRON	EACH	8								8	
2501.515	18" RC PIPE APRON	EACH	1								1	
2501.515	24" RC PIPE APRON	EACH	1								1	
2501.515	27" RC PIPE APRON	EACH	1								1	
2501.515	48" RC PIPE APRON	EACH	1								1	
2501.525	44" SPAN RC PIPE-ARCH APRON	EACH	1								1	
2501.573	INSTALL 24" R.C. PIPE APRON	EACH	1								1	
0502.602	CONNECT TO EXISTING PIPE DRAIN	LF	10								10	
2502.541	4" PERFORATED P.E. PIPE DRAIN	LF	782		782							
0503.602	30" TO 27" R.C. REDUCER PIPE	EACH	1								1	
0503.602	24" TO 30" R.C. INCREASER PIPE	EACH	1								1	
0503.602	30" TO 36" R.C. INCREASER PIPE	EACH	1								1	
0503.605	2" INSULATION	SY	556		556							
2503.521	44" SPAN R.C. PIPE-ARCH SEWER CL IIA	LF	77								77	
2503.541	15" R.C. PIPE SEWER DES. 3006 CL V	LF	7456								7456	
2503.541	18" R.C. PIPE SEWER DES. 3006 CL V	LF	358								358	
2503.541	24" R.C. PIPE SEWER DES. 3006 CL III	LF	486								486	
2503.541	27" R.C. PIPE SEWER DES. 3006 CL III	LF	1954								1954	
2503.541	36" R.C. PIPE SEWER DES. 3006 CL II	LF	682								682	
2503.541	48" R.C. PIPE SEWER DES. 3006 CL II	LF	835								835	
0273.502	4" X 12" SERVICE CONNECTION	EACH	1						1			
0273.503	4" PVC SANITARY SERVICE PIPE	LF	310				275		35			
0273.505	4" PVC RISER PIPE	LF	155				140		15			
0273.507	CONNECT TO INPLACE SAN. SERVICE PIPE	EACH	28				28					
0503.607	BULKHEAD SANITARY SEWER STUB	EACH	2						2			
0503.607	TEMPORARY SANITARY SEWER SERVICE	EACH	5				5					
0504.602	RELOCATE HYDRANT ASSEMBLY	EACH	17		17							
0504.602	ADJUST HYDRANT	EACH	1		1							

(*) 25% S.A.P. 62-645-10
75% S.A.P. 146-020-06

CONSTRUCTION NOTES

- THE CONTRACTOR SHALL COOPERATE WITH RAMSEY COUNTY AS RELATES TO PERPETUATING MONUMENTATION. ADVANCE NOTICE OF ANY DISTURBANCE OF MONUMENTS SHOULD BE MADE TO THE RAMSEY COUNTY SURVEYORS OFFICE AT 298-5278.

- THE CONTRACTOR SHALL OBTAIN FROM THE UTILITY COMPANIES THE EXACT LOCATION OF ANY UNDERGROUND UTILITIES WHICH MAY EXIST WITHIN, OR ADJACENT TO, THE CONSTRUCTION AREA.

- PEDESTRIAN CURB RAMPS SHALL BE INSTALLED AT ALL STREET RADII. THE EXACT LOCATION SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER.

- TOP OF "GRADING GRADE" IS DEFINED AS THE TOP OF THE EMBANKMENT MATERIAL OR THE BOTTOM OF THE AGGREGATE BASE COURSE.

- STRIP TOPSOIL FROM ALL AREAS TO BE DISTURBED BY CONSTRUCTION AND STOCKPILE (IF PRACTICAL) FOR REPLACEMENT LATER AS SLOPE DRESSING.

- PROVIDE FOR REMOVAL AND DISPOSAL OF (OUTSIDE THE CONSTRUCTION ZONE) ANY INPLACE SURFACING AND STRUCTURES THAT WILL INTERFERE WITH CONSTRUCTION.

- FROM A SOILS STANDPOINT, TRAFFIC SHALL BE MAINTAINED NO CLOSER THAN AN IMAGINARY 2:1 LINE DRAWN FROM THE BOTTOM OF ANY EXCAVATION INTERSECTING THE SURFACING.

- THE ORDINARY COMPACTION METHOD SHALL BE USED ON THIS PROJECT.

- PROVIDE DRAINAGE OUTLETS FOR ALL SUBCUTS DURING CONSTRUCTION. DITCHES SHOULD BE DEEPER THAN SUBCUT TO PROVIDE OUTLET DRAINAGE.

- PROVIDE A TACK COAT, SPEC. 2357.2A, BETWEEN BITUMINOUS COURSES.

- WHERE THE PROPOSED SUBCUT IS LOCATED UNDER INPLACE BASE AND BITUMINOUS SURFACING OR CONCRETE PAVEMENT, THE ENDS OF SUBCUT SHALL BE VERTICAL FOR THE DEPTH OF THE BITUMINOUS OR CONCRETE AND 2:1 IN AGGREGATE BASE.

- TAPER ENDS OF SUBCUT TO A 20:1 SLOPE UNLESS OTHERWISE RECOMMENDED.

- UNSUITABLE GRADING MATERIAL SHALL CONSIST OF TOPSOIL, OTHER ORGANIC SOIL, AND DEBRIS.

- SILT FENCE SHALL BE INSTALLED AT ALL FILL SLOPES AND MAY BE REQUIRED AT OTHER LOCATIONS DURING CONSTRUCTION AS DETERMINED BY THE ENGINEER.
(SPEC. 2573, 3886 & 1707: 1803.5)

ASBUILT PLAN
CONFORMING TO
CONST. RECORDS
DONE BY: MR.
DATE: 12-3-93

28-126
REVISED 27-APR.-92 DSH

STATEMENT OF ESTIMATED QUANTITIES

ITEM NO.	CONTRACT ITEM	UNIT	TOTAL ESTIMATED QUANTITIES	TOTAL FINAL QUANTITIES	S.A.P. 62-645-10 RAMSEY COUNTY		60% S.A.P. 62-645-10 40% 146-020-06		CITY OF MOUNDS VIEW 100% CITY OF MOUNDS VIEW		STORM SEWER	
					ESTIMATED QUANTITIES	FINAL QUANTITIES	ESTIMATED QUANTITIES	FINAL QUANTITIES	ESTIMATED QUANTITIES	FINAL QUANTITIES	ESTIMATED QUANTITIES	FINAL QUANTITIES
0504.602	ADJUST VALVE BOX	EACH	25		25							
0504.602	ADJUST CURB BOX	EACH	61		61							
0266.751	1" CURB STOP & BOX	EACH	1						1			
0266.761	CONNECT TO INPLACE WATER SERVICE	EACH	89				37		52			
0504.602	TEMPORARY WATER SERVICE	EACH	7				7					
0266.731	1" CORPORATION STOP	EACH	7				5		2			
0266.930	CONNECT TO INPLACE WATER MAIN	EACH	9		2		4		3			
0504.602	6" C.I.P. WATER MAIN OFFSET	EACH	1				1					
0504.602	8" C.I.P. WATER MAIN OFFSET	EACH	3				3					
0266.601	HYDRANT	EACH	1						1			
0504.602	RELOCATE CURB STOP & BOX	EACH	26						26			
0266.711	1" COPPER SERVICE PIPE	LF	1747				1010		737			
0504.603	6" WATER MAIN D.I.P. CL. 52	LF	342				280		62			
0504.603	12" WATER MAIN D.I.P. CL. 52	LF	1250		350		690		210			
0506.601	TIMBER WEIR STRUCTURE	LS	1								1	
0230.501	BORE 24" STEEL CASING	LF	190						190			
0230.511	JACK 12" D.I.P. CARRIER	LF	190						190			
0266.201	REMOVE AND SALVAGE WATER MAIN	LF	60						60			
0266.506	6" RW GATE VALVE & BOX	EACH	17						17			
0266.512	12" RW GATE VALVE & BOX	EACH	2						2			
0266.712	2" COPPER SERVICE PIPE	LF	25						25			
0266.732	2" CORPORATION STOP	EACH	1						1			
0266.742	12" X 2" SADDLE	EACH	1						1			
0266.906	8" PRESS. TAP W/6" RW GATE VALVE & BOX	EACH	1						1			
0266.912	12" X 12" PRESS. TAP W/12" RW G.V. & BOX	EACH	1						1			
2506.502	CONSTRUCT MANHOLE DES. A OR F	EACH	2								2	
2506.502	CONSTRUCT MANHOLE DES. C OR G	EACH	2								2	
2506.502	CONSTRUCT SURFACE DRAIN DES. C OR G	EACH	10								10	
2506.502	CONSTRUCT SURFACE DRAIN DES. 60-4020	EACH	1								1	
2506.502	CONSTRUCT SURFACE DRAIN DES. 72-4020	EACH	1								1	
2506.502	CONSTRUCT CATCH BASIN DES. SP-1	EACH	1								1	
2506.502	CONSTRUCT CATCH BASIN DES. SP-2	EACH	40								40	
2506.502	CONSTRUCT CATCH BASIN DES. LP-4	EACH	18								18	
2506.502	CONSTRUCT CATCH BASIN DES. LP-4(MOD)	EACH	11								11	
2506.502	CONSTRUCT MANHOLE DES. 54-4020	EACH	1								1	
2506.502	CONSTRUCT MANHOLE DES. 60-4020	EACH	2								2	
2506.502	CONSTRUCT MANHOLE DES. 66-4020	EACH	4								4	
2506.502	CONSTRUCT MANHOLE DES. 72-4020	EACH	2								2	
2506.502	CONSTRUCT MANHOLE DES. 78-4020	EACH	2								2	
2506.502	CONSTRUCT MANHOLE DES. 84-4020	EACH	1								1	
2506.502	CONSTRUCT MANHOLE DES. 96-4020	EACH	3								3	
2506.502	CONSTRUCT MANHOLE DES. 108-4020	EACH	1								1	
2506.502	CONSTRUCT MANHOLE DES. 120-4020	EACH	1								1	
2506.502	CONSTRUCT CATCH BASIN DES. SP2-48-4020	EACH	4								4	
2506.502	CONSTRUCT CATCH BASIN DES. SP2-54-4020	EACH	4								4	
2506.502	CONSTRUCT CATCH BASIN DES. SP2-72-4020	EACH	1								1	
2506.511	RECONSTRUCT MANHOLES	LF	74.2		74.2							
2506.521	INSTALL CASTINGS	EACH	11		11							
2506.522	ADJUST FRAME AND RING CASTINGS	EACH	32		32							
2511.501	RANDOM RIPRAP CLASS II - 9" DEPTH	CY	53.1								53.1	
2511.501	RANDOM RIPRAP CLASS IV - 18" DEPTH	CY	60.5								60.5	
(7) 2521.501	4" CONCRETE WALK	SF	68246		(**)68246							
(8) 2531.501	CONC. CURB & GUTTER DES. B624	LF	22072		(***)22072							
2531.507	6" CONCRETE DRIVEWAY PAVEMENT	SY	1922		1922							
0557.603	INSTALL CHAIN LINK FENCE	LF	1373		1373							
0557.603	INSTALL WOODEN FENCE	LF	491		491							
0563.601	TRAFFIC CONTROL	LS	1		1							
0564.603	4" SOLID LINE WHITE-EPOXY	LF	16759		16759							
0564.603	4" SOLID LINE YELLOW-EPOXY	LF	9401		9401							
0564.603	4" BROKEN LINE WHITE-EPOXY	LF	939		939							
0564.603	4" BROKEN LINE YELLOW-EPOXY	LF	1817		1817							
0565.602	HANDHOLE TYPE C	EACH	6		6							
0565.603	4" RIGID STEEL CONDUIT	LF	162		162							
0565.604	REVISE SIGNAL SYSTEM A	SYSTEM	1		1							
2573.502	SILT FENCE HEAVY DUTY	LF	10340		10340							
2575.501	SEEDING	ACRE	2.33								2.33	
2575.502	SEED MIXTURE SPECIAL	LBS	96								96	
(9) 2575.505	SODDING TYPE LAWN	SY	40156		40156							
2575.511	MULCH MATERIAL TYPE 1	TON	4.7								4.7	
2575.531	COMM. FERT. ANALYSIS 12-12-12	TON	1.4		1.4							
2575.531	COMM. FERT. ANALYSIS 8-32-16	TON	0.3								0.3	
2580.501	TEMPORARY LANE MARKING	RDSTA	115		115							

(**) 71.43% S.A.P. 146-020-06
28.57% LOCAL FUNDS

(***) 1275 L.F. MEDIANS & REPLACEMENT - 100% S.A.P. 62-645-10
20797 L.F. - 25% S.A.P. 62-645-10, 75% S.A.P. 146-020-06

STANDARD DETAIL PLATES

THE FOLLOWING STANDARD PLATES, ADPPROVED BY THE DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION, SHALL APPLY ON THIS PROJECT.

PLATE NO.	DESCRIPTION
0005 A	SPECIFICATION REFERENCE TO STANDARD PLATES
1016 H	CONCRETE PAVEMENTS NON-REINFORCED
1100 P	EXPANSION JOINTS
1141 C	PAVEMENT KEYWAY FOR KEYED JOINT CONSTRUCTION
3000 L	REINFORCED CONCRETE PIPE
3001 B	REINFORCED CONCRETE REDUCER PIPE
3002 B	REINFORCED CONCRETE INCREASER PIPE
3006 F	GASKET JOINT FOR REINFORCED CONCRETE PIPE
3014 J	REINFORCED CONCRETE PIPE ARCH
3100 G	CONCRETE APRON FOR REINFORCED CONCRETE PIPE
3110 G	CONCRETE APRON FOR REINFORCED CONCRETE PIPE-ARCH
3133 B	RIPRAP AT RCP OUTLETS
3145 E	CONCRETE PIPE TIES
4000 I	MANHOLE OR CATCH BASIN DESIGN A
4002 E	MANHOLE OR CATCH BASIN DESIGN C
4005 K	MANHOLE OR CATCH BASIN DESIGN F
4006 K	MANHOLE OR CATCH BASIN DESIGN G
4011 D	PRECAST CONCRETE BASE
4020 E	MANHOLE OR CATCH BASIN FOR USE UNDER TRAFFIC LOADS
4021 D	PRECAST CURB OPENING CATCH BASIN
4101 C	RING CASTING FOR MANHOLE OR CATCH BASIN
4110 E	COVER CASTING FOR MANHOLE
4140 D	SPECIAL GRATE CASTINGS FOR CATCH BASIN
4180 H	MANHOLE OR CATCH BASIN STEP
7000 E	INTEGRANT CURB
7035 J	CONCRETE WALK & CURB RETURNS AT ENTRANCES
7036 C	PEDESTRIAN CURB RAMP FOR THE HANDICAPPED
7100 F	CONCRETE CURB AND GUTTER DESIGN B
7111 G	INSTALLATION & REINFORCEMENT OF CATCH BASIN CASTINGS
7105 C	CONCRETE MEDIAN (MOUNTABLE TYPE)
8110 C	TRAFFIC SIGNAL BRACKETING (POLE MOUNTED)
8115 C	PEDESTRIAN PUSH BUTTON INSTALLATION
8117 F	PRECAST CONCRETE HANDHOLE
8120 H	POLE FOUNDATION (P80 & P90)
8130 D	SAW CUT LOOP DETECTORS
9322 J	CHAIN LINK FENCE

QUANTITY NOTES

(1) REMOVAL OF EXISTING APRONS ARE INCLUDED IN L.F. OF PIPE TO BE REMOVED.
(2) INCLUDES 30 S.Y. OF 7" NON-REINFORCED PAVEMENT AT CO. RD. I INTERSECTION - REMOVE CONCRETE PAVEMENT.
(3) INCLUDES 3082 C.Y. FOR ENTRANCES
(4) FOR ENTRANCES ONLY
(5) INCLUDES 251 TON FOR ENTRANCES
(6) INCLUDES 114 GALLONS FOR ENTRANCES
(7) 1158 S.F. ON MEDIANS - T.H. 10
(8) 205 L.F. D424 AT MEDIANS - T.H. 10
(9) INCLUDES 184 S.Y. SODDING TYPE PASTURE AT FABRIC REINFORCED EMBANKMENT. SEE SPECIAL PROVISIONS.
(10) SHALL INCLUDE GEOTEXTILE FABRIC & GRANULAR CUSHION

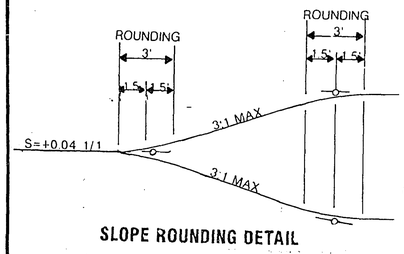
BASIS FOR ESTIMATED QUANTITIES

2211.501 - AGGREGATE BASE - 140 LBS. PER CU. FT.
2331. - BITUMINOUS MIXTURES - 110 LBS. PER SQ. YD. PER INCH THICKNESS
2357.502 - BITUMINOUS MATERIAL FOR TACK COAT ESTIMATED AT 0.05 GAL. PER SQ.YD. PER LIFT
2575.502 - SEED MIXTURE SPECIAL ESTIMATED AT 41 LBS. PER ACRE (FOR POND)
2575.511 - MULCH MATERIAL (TYPE 1) ESTIMATED AT 2 TON PER ACRE (FOR POND)
2575.531 - COMM. FERTILIZER : ANALYSIS 12-12-12 ESTIMATED AT 350 LBS. PER ACRE FOR SOD, ANALYSIS 8-32-16 ESTIMATED AT 200 LBS. PER ACRE FOR POND

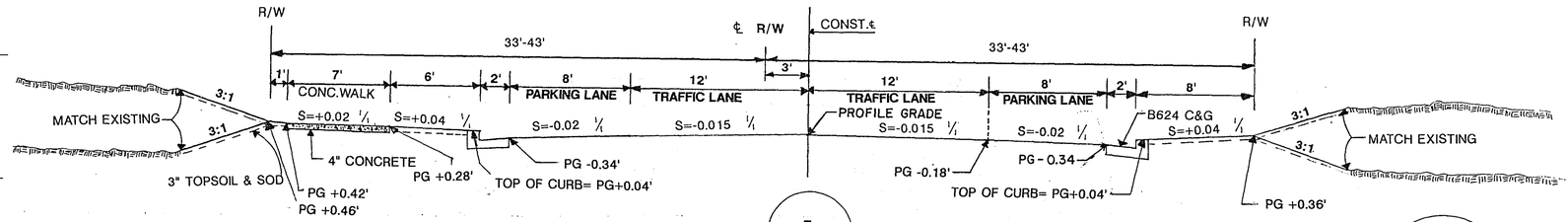
ASBUILT PLAN
CONFORMING TO
CONST. RECORDS
DONE BY: MR
DATE: 12-3-93

REVISED 27-APR.-92 DSH

28-126



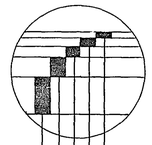
SLOPE ROUNDING DETAIL



A

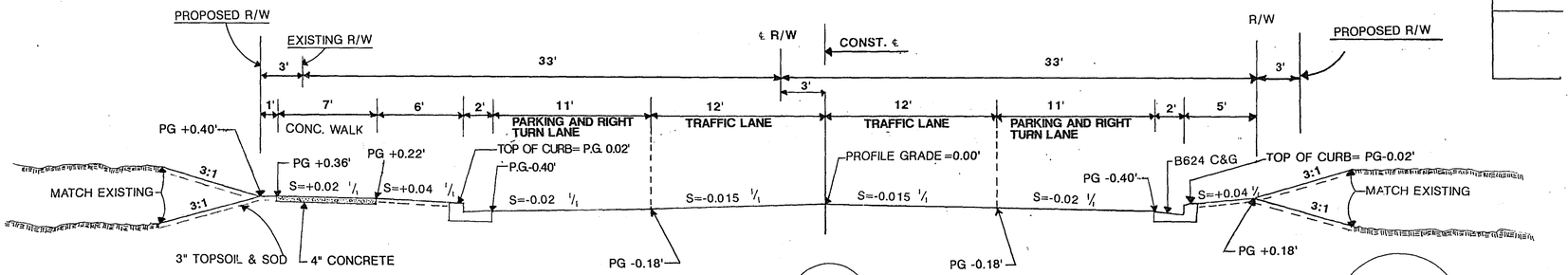
NOTE: 1.5' CLEAR ZONE REQUIRED FROM FACE OF CURB TO ANY FIXED OBJECT.

STA. 130+80 TO STA. 156+80
STA. 184+27 TO STA. 245+00



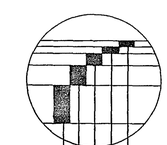
SECTION A

- 1" TYPE 61 WEARING COURSE MIXTURE
- 1 1/2" TYPE 31 BINDER COURSE MIXTURE
- 2" TYPE 31 BASE COURSE MIXTURE
- 5" AGGREGATE BASE CLASS 6
- 1' SUBCUT FOR UNIFORMITY & COMPACTION
- 2' SUBGRADE CORRECTION AT STA. 212+50 TO STA. 215+00 AND STA. 219+00 TO STA. 223+00
- FOR MUCK EXCAVATION SEE PLAN SHEETS



B

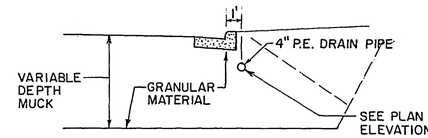
STA. 157+60 TO STA. 183+07
EXCEPTIONS
STA. 172+15 TO STA. 173+55 (S.T.H. 10)
STA. 183+07 TO STA. 184+27 (C.S.A.H. 3)
MUCK EXCAVATION
STA. 158+50 TO STA. 168+00



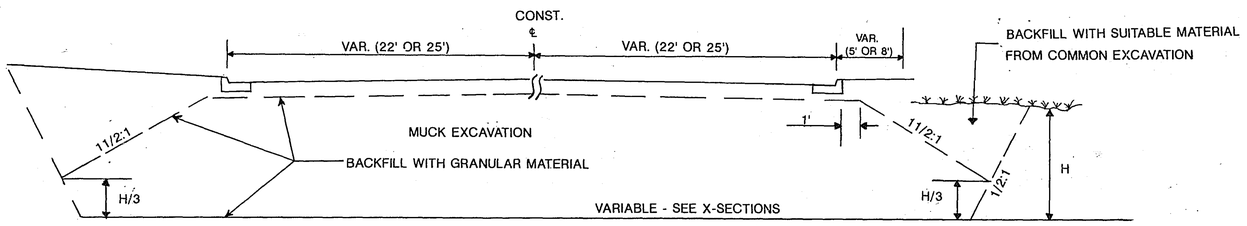
SECTION B

- 1" TYPE 61 WEARING COURSE MIXTURE
- 1 1/2" TYPE 31 BINDER COURSE MIXTURE
- 2 1/2" TYPE 31 BASE COURSE MIXTURE
- 5" AGGREGATE BASE CLASS 6
- 1' SUBCUT FOR UNIFORITY & COMPACTION
- FOR MUCK EXCAVATION SEE PLAN SHEETS

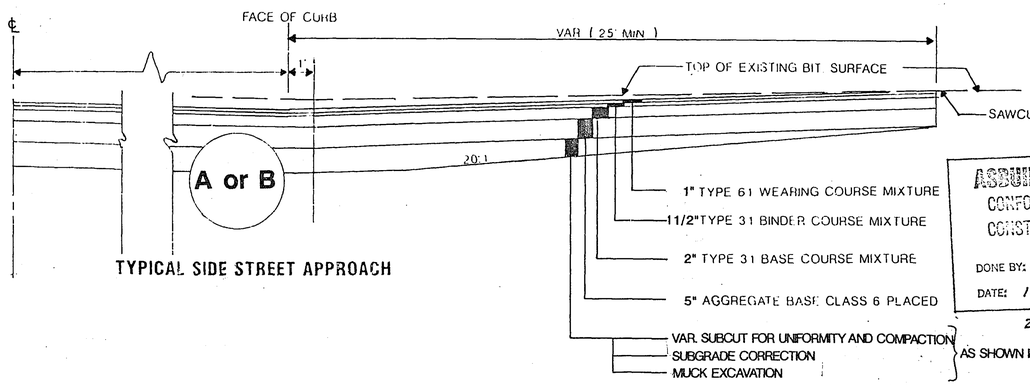
4" P.E. DRAIN PIPE DETAIL



STATION 158+75± TO STATION 165+00±



MUCK EXCAVATION



TYPICAL SIDE STREET APPROACH

ASBUILT PLAN
CONFORMING TO
CONST. RECORDS
DONE BY: MR
DATE: 12-3-93
28-126

TYPICAL SECTIONS

SAWCUT BITUMINOUS PAVEMENT

LOCATION STATION	SAWCUT BITUMINOUS PAVEMENT	REMARKS
	L.F.	
ENTRANCES		
132+61 LT.	16	
132+61 RT.	19	
133+35 LT.	10	
133+46 RT.	12	
134+13 LT.	12	
134+84 LT.	14	
135+62 LT.	15	
135+84 RT.	19	
138+70 RT.	12	
138+81 LT.	12	
139+11 RT.	17	
139+87 LT.	12	
139+91 RT.	17	
141+08 RT.	20	
141+47 RT.	18	
141+92 RT.	12	
142+65 RT.	29	
143+05 LT.	10	
143+05 RT.	18	
144+16 RT.	16	
145+06 RT.	16	
145+42 RT.	16	
151+79 RT.	15	
152+31 RT.	21	
153+56 RT.	16	
153+97 RT.	16	
154+70 RT.	10	
155+68 RT.	13	
169+78 LT.	18	
174+20 RT.	30	
174+80 RT.	50	
177+97 LT.	28	
180+13 RT.	26	
180+91 RT.	20	
181+96 LT.	28	
187+21 LT.	18	
187+58 RT.	20	
188+42 LT.	18	
188+87 LT.	16	
189+10 RT.	12	
189+70 LT.	16	
190+00 RT.	16	
190+76 LT.	16	
190+96 RT.	10	
192+12 LT.	20	
192+97 LT.	19	
194+37 RT.	19	
199+03 RT.	17	
200+18 RT.	12	
200+40 LT.	17	
201+39 RT.	12	
201+67 LT.	12	
202+80 LT.	12	
205+35 LT.	16	
205+76 RT.	10	
206+11 RT.	10	
207+51 LT.	10	
207+69 LT.	12	
210+97 LT.	12	
211+65 RT.	10	
212+06 LT.	10	
212+91 RT.	18	
213+67 LT.	16	
213+76 RT.	21	
216+14 RT.	18	
217+56 LT.	9	
218+60 RT.	13	
221+67 LT.	17	
224+21 LT.	12	
225+29 LT.	12	
226+48 LT.	12	

SAWCUT BITUMINOUS PAVEMENT

LOCATION STATION	SAWCUT BITUMINOUS PAVEMENT	REMARKS
	L.F.	
ENTRANCES (CONT.)		
234+56 LT.	13	
235+34 LT.	16	
241+44 LT.	17	
243+21 LT.	10	
WOODCREST DRIVE		
1+10 LT.	12	
1+75 LT.	18	
4+30 LT.	12	
4+80 LT.	22	
ROADWAYS		
BEGIN PROJECT	160	
WOODCREST DR. W. (137+41)	28	
WOODCREST DR. E. (137+41)	28	
WOODCREST DR.(0+57 - 6+80)	623	
WOODCREST DR.(6+50± LT.)	28	
WOOD DALE DR. (143+99)	21	
RIDGE LANE W. (147+30)	20	
RIDGE LANE E. (147+30)	25	
CO. RD. H-2 W. (157+20)	25	
CO. RD. H-2 E. (157+20)	24	
SCOTLAND COURT (160+93)	27	
MOUNDS VIEW DR. (166+96)	45	
T.H. 10	400	EXCEPTION
BRONSON DR. (175+25)	28	
CO. RD. I	0	EXCEPTION
HILLVIEW RD. W. (196+92)	42	
HILLVIEW RD. E. (196+92)	44	
SHERWOOD RD. W. (210+15)	29	
SHERWOOD RD. E. (210+15)	29	
ARDAN AVE (220+27)	25	
GREENWOOD	30	
END PROJECT	24	
TOTAL	= 2964	

REMOVE CURB & GUTTER

LOCATION STATION	REMOVE CURB & GUTTER	REMARKS
	LIN. FT.	
167+00 LT. MOUNDS VIEW DR.	50	
169+65 LT.	10	
240+50 GREENWOOD	100	
MEDIANS T.H. 10 SE COR.	75	
MEDIANS T.H. 10 NW COR.	85	
TOTALS	= 320	

REMOVE CONCRETE SIDEWALK

LOCATION STATION	REMOVE CONCRETE SIDEWALK	REMARKS
	S.F.	
131+38 TO 131+43 LT. 20'	60	
183+07 - SOUTHSIDE	225	
194+70 RT. 30'	25	
TOTALS	= 310	

SAWCUT CONCRETE PAVEMENT

LOCATION STATION	SAWCUT CONCRETE PAVEMENT	REMARKS
	L.F.	
ENTRANCES		
134+13 RT.	12	
136+88 RT.	12	
140+90 LT.	12	
186+75 LT.	18	
188+42 RT.	12	
190+78 RT.	12	
191+68 RT.	16	
192+80 RT.	20	
193+32 RT.	24	
196+17 LT.	16	
201+97 LT.	12	
217+09 LT.	20	
218+99 LT.	24	
219+58 RT.	20	
221+35 LT.	20	
229+20 LT.	12	
233+39 LT.	16	
CO RD. I RADII	75	
WOODCREST DR.		
3+00± LT.	22	
3+75± LT.	20	
TOTAL	=395	

REMOVE WOODEN RETAINING WALLS

LOCATION STATION	REMOVE WOODEN RET. WALL	REMARKS
	LIN. FT.	
136+34 RT. TO 136+78 RT.	44	23' RT.
152+07 RT.	16	24' RT. TO EAST
186+21 LT. TO 186+43 LT.	30	31' LT. TO WEST
193+05	8	30' LT. TO WEST
200+25 LT. TO 200+30 LT.	20	29' LT. TO WEST
TOTAL	= 118	

REMOVE FLAGSTONE RETAINING WALLS

LOCATION STATION	REMOVE FLAGSTONE RET. WALL	REMARKS
	LIN. FT.	
135+10 RT. TO 135+75 RT.	75	EAST TO ENT.
135+90 RT. TO 136+30 RT.	50	EAST TO ENT.
233+30 LT.	20	
235+70 LT.	25	
TOTAL	= 170	

SALVAGE & INSTALL SIGN

LOCATION STATION	SALVAGE SIGN	INSTALL SIGN	REMARKS
	EACH	EACH	
161+17 LT. 36'	1	1	INC. WOOD TIMBERS
197+45 LT. 32'	1	1	INC. WOOD TIMBERS
TOTALS	= 2	2	

NOTE : EXACT LOCATION TO BE DETERMINED IN THE FIELD BY PROJECT ENGINEER.

REMOVE CONCRETE PAVEMENT

LOCATION STATION	REMOVE CONCRETE PAVEMENT	REMARKS
	S.Y.	
CO. RD. I, S.E. RADIUS	30	
ENTRANCES		
134+15 RT. 20'X12'	27	
136+90 RT. 10'X12'	13	
140+90 LT. 16'X12'	21	
186+80 LT. 20'X18'	40	
190+80 RT. 22'X10'	24	
191+70 RT. 18'X18'	36	
192+90 RT. 26'X22'	64	
193+30 RT. 15'X22'	37	
196+10 LT. 24'X16'	43	
202+00 LT. 16'X10'	18	
217+05 LT. 42'X20'	93	
219+00 LT. 4'X22'	10	
219+50 RT. 16'X20'	36	
221+30 LT. 42'X18'	84	
233+40 LT. 26'X16'	46	
WOODCREST DR.		
3+00 LT. 15'X22'	37	
3+75 LT. 15'X20'	33	
TOTALS	=692	

SILT FENCE CHART

LOCATION STATION	SILT FENCE	REMARKS
	L.F.	
131+85 RT.	40	
131+85 LT.	40	
148+00 TO 166+50 LT.	1850	
157+50 TO 171+50 RT.	1400	
145+23 LT.	30	
175+00 TO 180+00 RT.	1500	
223+50 TO 232+00 RT.	850	
235+78 LT.	40	
239+80 LT.	50	
241+10 LT.	50	
242+00 LT.	40	
244+00 LT.	40	
ARDEN AVE.	450	
184+50 TO 186+25	175	
197+75 TO 200+25 LT.	350	
210+50 TO 214+75 RT.	425	
225+50 TO 226+00 LT.	50	
228+25 TO 245+25 LT.	1700	
233+50 TO 245+25 RT.	1175	
POND (APRON 226A)	85	
TOTAL	=10340	

NOTE : EXACT LOCATION TO BE DETERMINED IN THE FIELD BY PROJECT ENGINEER.

SALVAGE & INSTALL CHAIN LINK FENCE

LOCATION STATION	SALVAGE CHAIN LINK FENCE	INSTALL CHAIN LINK FENCE	REMARKS
	L.F.	L.F.	
135+09 RT. 30' TO EAST	8	8	
145+64 TO 146+43 LT. 46'	20	20	
155+89 TO 156+86 RT. 30'	110	110	
174+74 TO 175+72 LT. 33' TO 50'	130	130	
187+76 RT. 31' TO EAST	6	6	
207+24 LT. 34' TO EAST	4	4	
218+75 TO 219+49 RT. 31'	85	85	
219+74 RT. 31' TO EAST	10	10	
235+50 TO 245+50 RT. 85' TO WEST	1000	1000	
TOTALS	= 1373	1373	

NOTE : EXACT LOCATION TO BE DETERMINED IN THE FIELD BY PROJECT ENGINEER.

SALVAGE & INSTALL WOODEN FENCE

LOCATION STATION	SALVAGE WOODEN FENCE	INSTALL WOODEN FENCE	REMARKS
	L.F.	L.F.	
136+39 TO 136+73 RT. 32'	33	33	
141+27 TO 141+37 RT. 28'	20	20	
141+58 TO 141+69 RT. 28'	20	20	
142+42 TO 142+52 RT. 27'	20	20	
146+07 TO 147+07 RT. 41'	120	120	
152+07 TO 152+21 RT. 21'	20	20	
152+43 TO 152+92 RT. 22'	50	50	
166+06 TO 166+36 LT. 70'	30	30	
195+40 TO 196+00 RT. 29'	60	60	
196+04 TO 196+55 RT. 29'	60	60	
217+65 RT. 28' TO EAST	8	8	
218+71 TO 218+82 LT. 20'	20	20	
219+16 TO 219+26 LT. 20'	20	20	
221+14 TO 221+24 LT. 39'	10	10	
TOTALS	= 491	491	

NOTE : EXACT LOCATION TO BE DETERMINED IN THE FIELD BY PROJECT ENGINEER.

ASBUILT PLAN
CONFORMING TO
CONST. RECORDS
DONE BY: MR
DATE: 12-3-93

28-126

CHARTS

REPLACE SANITARY SERVICE

LOCATION STATION	4"PVC SANITARY SERVICE	4"PVC RISER SERVICE	CONNECT TO EX. SERV.
	L.F.	L.F.	EA.
LONG LAKE ROAD			
139+25 LT.	15	10	2
140+15 LT.	15	10	2
141+22 LT.	15	10	2
142+08 LT.	15	10	2
143+08 LT.	15	10	2
145+50± RT.	25	10	2
149+00± RT.	30	10	2
151+50± RT.	35	10	2
152+50± RT.	35	10	2
153+30± RT.	35	10	2
WOODCREST DRIVE EAST			
2+00± LT.	10	10	2
2+50± LT.	10	10	2
3+50± LT.	10	10	2
4+50± LT.	10	10	2
TOTALS =	275	140	28

NEW SANITARY SERVICE

222+50± LT.	35	15	1-4" X 12" TEE

TEMPORARY SANITARY SERVICE

LOCATION STATION	TEMPORARY SANITARY SERVICE	REMARKS
	EACH	
145+50± RT.	1	
149+00± RT.	1	
151+50± RT.	1	
152+50± RT.	1	
153+30± RT.	1	
TOTALS =	5	

TEMPORARY WATER SERVICES

LOCATION STATION	TEMPORARY WATER SERVICE	REMARKS
	EACH	
143+90 RT.	1	
144+75 RT.	1	
145+65 RT.	1	
148+98 RT.	1	
151+45 RT	1	
152+50 RT.	1	
153+25 RT.	1	
TOTALS =	7	

REPLACE WATER SERVICE

LOCATION STATION	1" TYPE K COPPER	1" CORP. STOP	CONNECT TO EX. SERV.	REMARKS
LONG LAKE ROAD	L.F.	EACH		
138+20± LT.	66		2	
139+20± LT.	66		2	
140+05± LT.	66		2	
141+05± LT.	66		2	
142+16± LT	66		2	
145+65 RT.	20	1	1	
148+98 RT.	20	1	1	
151+45 RT.	20	1	1	
152+50 RT.	20	1	1	
153+25 RT.	20	1	1	
215+84 RT.	60		2	
217+16 RT.	56		2	
218+05 RT.	56		2	
219+14 RT.	56		2	
219+87 RT.	56		2	
220+92 RT.	56		2	
222+68 RT.	56		2	
223+15 RT. 36'		1	SEE NEW WATER MAIN CHART	
WOODCREST DRIVE EAST				
2+00± LT.	46		2	
2+75± LT.	46		2	
3+50± LT.	46		2	
4+30± LT.	46		2	
TOTALS =	1010	6	37	

NEW WATER SERVICE

222+50± LT.	15	1	1 CURB STOP & BOX

RELOCATE OR ADJUST CURB STOP BOX

LOCATION BY SHEET NUMBER	ADJUST CURB STOP	RELOCATE CURB STOP	1" TYPE K COPPER	CONNECT TO EXISTING
1 CURB STOP AT EVERY HOUSE AT R/W AFFECTED BY CONSTRUCTION LIMITS				
	EACH	EACH	LF	EACH
SHEET NO. 13	2	3	30	6
SHEET NO. 14	10			
SHEET NO. 15	6			
SHEET NO. 16	1			
SHEET NO. 17				
SHEET NO. 18				
SHEET NO. 19	9	8	310	16
SHEET NO. 20	8	3	76	6
SHEET NO. 21	7	7	254	14
SHEET NO. 22	6	1	10	2
SHEET NO. 23	8	2	20	4
SHEET NO. 24	3	1	10	2
SHEET NO. 25	1	1	12	2
SHEET NO. 26				
SHEET NO. 27				
SHEET NO. 28				
TOTALS =	61	26	722	52

REPLACE WATERMAIN

LOCATION STATION	REPLACE W/6" DIP CLASS 52	REPLACE W/12" DIP CLASS 52	REMARKS
	L.F.	L.F.	
145+00± TO 147+10± RT. 25'	210		
147+10± RT. 25' TO LT. 45'	70		
147+10± RT. 45' TO RT. 20'		25	
147+10± TO 153+75± RT. 25'		665	
161+50± TO 165+00± RT. 20'		350	
TOTALS =	280	1040	

NEW WATERMAIN

LOCATION STATION	6" DIP CL. 52 L.F.	REMARKS
223+15± LT. 26' TO RT. 36'	62	6" PRESS. TAP W/GATE VALVE
223+15± RT. 36'		6" PLUG
		1" CORP. STOP
223+18± RT. 28'±		6" GV. & BOX
223+20± RT. 28'±		HYDRANT
TOTALS =	62	

NOTE: VERTICAL OFFSET REQUIRED. INCLUDE IN PRICE BID FOR 0504.603 6" DIP BY THE L.F. NO ADDITIONAL COMPENSATION SHALL BE PAID THEREFORE.

ADJUST VALVE BOX

LOCATION STATION	ADJUST VALVE BOX	EXISTING ELEV.	PROFILE GRADE	NEW ELEV.	REMARKS
	EACH				
131+18 RT. 22'	1	904.56	904.05	904±	
137+12 RT. 23'	1	901.44	901.45	901.7±	
143+67 RT. 24'	1	896.13	895.66	895.24	
143+83 RT. 24'	1	896.03	895.58	895.16	
153+77 RT. 22'	1	896.39	896.28	895.94	
156+93 RT. 26'	1	898.42	898.27	898±	
160+81 RT. 16'	1	898.48	898.39	898.11	
167+20 RT. 16'±	1		901.32	901.04	
168+42 RT. 25'	1	903.39	903.67	903.27	
169+65 RT. 5'	1	907.19	908.27	908.22	
171+35 RT. 23'±	1		912.85	912.4±	
180+88 LT. 33'	1	914.75	913.67	913.99	
184+32 LT. 24'	1	910.52	910.79	910.99	
191+99 LT. 23'	1	908.11	907.71	907.87	
196+59 LT. 22'	1	908.16	907.82	908±	
196+61 LT. 34'	1	907.86	907.84	908±	
197+24 LT. 28'	1	908.26	907.83	908±	
197+24 LT. 23'	1	907.96	907.83	908±	
199+21 LT. 25'	1	907.41	907.78	908.06	
209+86 LT. 22'	1	909.21	909.44	909±	
209+92 LT. 33'	1	909.31	909.48	909.5±	
210+48 LT. 22'	1	909.31	909.36	909±	
230+38 RT. 43'	1	906.15	908.67	906.15	
230+38 LT. 20'	1	907.90	908.67	908.75	
230+50 LT. 32'	1	905.80	908.69	909.11	
TOTALS =	25				

CONNECT TO EXISTING WATERMAIN

LOCATION STATION	6"	12"	REMARKS
	EACH	EACH	
145+00± RT. 20'±	1		
147+05± LT. 45'±	1		
147+05± RT. 45'±		1	
153+75± RT. 20'±		1	
161+50± RT. 20'±		1	
165+00± RT. 20'±		1	
TOTALS =	2	4	

OFFSET WATERMAIN

LOCATION STATION	6" CIP	8" CIP		REMARKS
	EACH	EACH		
143+75± LT. 21'	1			
160+80± LT. 52'		1		
220+45± LT. 25'		1		
230+38± RT. 22'		1		
TOTALS =	1	3		

HYDRANT CHART

LOCATION STATION	RELOCATE HYDRANT	F & I 6" GV. & BOX	REMARKS
	EACH	EACH	
131+15 RT. 22'	1	1	
137+08 RT. 22'	1	1	
143+55 RT. 23'	1	1	
150+53 RT. 23'	1	1	
156+92 RT. 26'	1	1	
159+78 RT. 24'	1	1	
162+70 RT. 27'	1	1	
165+60 RT. 25'	1	1	
168+38 RT. 20'	1	1	
174+98 RT. 28'	1		
177+66 LT. 42'			PROTECT
180+51 LT. 27'			ADJUST
196+55 LT. 23'	1	1	
209+83 LT. 21'	1	1	
216+49 LT. 28'	1	1	
219+98 LT. 29'	1	1	
224+46 LT. 27'	1	1	
230+34 LT. 29'	1	1	
234+76 LT. 37'	1	1	
TOTALS =	17	16	

NOTE: ANY DAMAGED HYDRANTS SHALL BE REPLACED WITH WB59 SEE SPECIAL PROVISIONS

QUANTITIES FOR WATERMAIN JACKING AT S.T.H. 10 ARE NOT TABULATED ON THIS SHEET. - SEE SHEET 73A

AS-BUILT PLANS
CONFORMING TO
CONST. RECORDS
DONE BY: MR
DATE: 12-3-93

28-126

REVISED 29-APR.-92 DSH

UTILITY WORK CHARTS

S.A.P. 62-645-10

SHEET 6 OF 73 SHEETS

CLEAR & GRUB CHART

STATION	LOCATION RT./LT.	DESCRIPTION	CLEAR TREE	GRUB TREE
S.A.P. 62-645-10, LONG LAKE ROAD				
131+73	LT. 35'	12" CATALPA	1	1
132+06	RT. 30'	24" ELM	1	1
132+98	RT. 30'	24" SILVER MAPLE	1	1
133+27	RT. 31'	24" SILVER MAPLE	1	1
133+55	RT. 31'	8" & 24" ELM	2	1
134+45	RT. 31'	8" HARD MAPLE	1	1
134+80	RT. 31'	18" CHINESE ELM	1	1
136+22	RT. 30'	4" SPRUCE	1	1
143+68	RT. 25'	6" SPRUCE	1	1
144+33	RT. 30'	6" STUMP	0	1
144+52	RT. 25'	6" HARD MAPLE	1	1
144+76	RT. 31'	6" HARD MAPLE	1	1
146+52	RT. 28'	6" HARD MAPLE	1	1
146+81	RT. 38'	6" SPRUCE	1	1
146+98	RT. 38'	8" SPRUCE	1	1
149+31	RT. 36'	10" WILLOW	1	1
149+38	RT. 30'	8" WILLOW	1	1
150+00	RT. 32'	6" WILLOW	1	1
150+00	RT. 34'	8" WILLOW	1	1
150+00	RT. 36'	10" WILLOW	1	1
150+04	RT. 37'	12" WILLOW	1	1
150+05	RT. 36'	10" WILLOW	1	1
151+60	RT. 41'	18" SILVER MAPLE	1	1
153+02	RT. 30'	10" GREEN ASH	1	1
153+32	RT. 34'	6" SPRUCE	1	1
153+78	RT. 33'	8" GREEN ASH	1	1
154+21	RT. 35'	8" GREEN ASH	1	1
155+13	RT. 32'	6" NORWAY PINE	1	1
155+35	RT. 32'	6" NORWAY PINE	1	1
155+43	RT. 32'	6" NORWAY PINE	1	1
158+40	RT. 35'	4" POPLAR	1	1
158+44	RT. 35'	4" POPLAR	1	1
158+55	RT. 35'	4" POPLAR	1	1
158+78	RT. 35'	4" POPLAR	1	1
158+88	RT. 35'	4" POPLAR	1	1
159+00	RT. 35'	6" POPLAR	1	1
159+08	RT. 36'	6" BOXELDER	1	1
159+51	LT. 71'	6" CRABAPPLE	1	1
161+07	RT. 28'	8" WILLOW	1	1
161+09	RT. 27'	4" WILLOW	1	1
161+10	RT. 29'	5" WILLOW	1	1
161+11	RT. 27'	6" WILLOW	1	1
162+02	RT. 23'	5" COTTONWOOD	1	1
162+04	RT. 21'	8" COTTONWOOD	1	1
162+05	RT. 25'	4" COTTONWOOD	1	1
162+06	RT. 21'	6" COTTONWOOD	1	1
162+11	LT. 77'	4" PINE	1	1
162+38	LT. 77'	4" SPRUCE	1	1
162+47	RT. 26'	12" WILLOW	1	1
162+51	RT. 24'	8" WILLOW	1	1
162+54	RT. 21'	5" WILLOW	1	1
162+93	LT. 77'	4" SPRUCE	1	1
163+01	RT. 23'	5" WILLOW	1	1
163+02	RT. 26'	4" COTTONWOOD	1	1
163+04	RT. 24'	8" COTTONWOOD	1	1
163+04	RT. 22'	4' WILLOW	1	1
163+06	RT. 22'	6" WILLOW	1	1
163+06	LT. 77'	4" SPRUCE	1	1
164+00	RT. 22'	8" WILLOW	1	1
164+01	RT. 21'	6" WILLOW	1	1

CLEAR & GRUB CHART

STATION	LOCATION RT./LT.	DESCRIPTION	CLEAR TREE	GRUB TREE
S.A.P. 62-645-10, LONG LAKE ROAD				
164+10	RT. 38'	8" POPLAR	1	1
164+13	RT. 36'	6" POPLAR	1	1
164+39	RT. 38'	6" POPPLE	1	1
164+43	RT. 38'	6" POPLAR	1	1
164+47	RT. 39'	6" POPLAR	1	1
164+54	RT. 40'	6" POPPLE	1	1
165+54	LT. 44'	8" WILLOW	1	1
165+55	LT. 50'	8" WILLOW	1	1
165+57	LT. 45'	4" WILLOW	1	1
165+66	RT. 33'	(5) 6" WILLOW	5	1
165+68	LT. 67'	(3) 4" WILLOW	3	1
165+73	LT. 43'	8" COTTONWOOD	1	1
165+82	LT. 43'	4" COTTONWOOD	1	1
165+89	LT. 42'	4" COTTONWOOD	1	1
165+95	LT. 41'	4" COTTONWOOD	1	1
166+83	RT. 39'	(2) 4" COTTONWOOD	2	1
167+95	RT. 34'	6" RED OAK	1	1
167+99	RT. 34'	8" RED OAK	1	1
168+14	RT. 32'	8" RED OAK	1	1
168+15	RT. 35'	8" RED OAK	1	1
168+18	RT. 36'	8" RED OAK	1	1
168+20	RT. 33'	6" RED OAK	1	1
168+29	RT. 32'	12" RED OAK	1	1
168+33	RT. 37'	10" RED OAK	1	1
168+49	RT. 39'	6" RED OAK	1	1
168+75	RT. 32'	16" RED OAK	1	1
168+78	RT. 35'	5" BURR OAK	1	1
168+84	RT. 32'	5" BURR OAK	1	1
169+02	RT. 33'	8" RED OAK	1	1
169+03	RT. 36'	8" RED OAK	1	1
169+18	RT. 33'	6" BURR OAK	1	1
169+21	RT. 35'	12" BURR OAK	1	1
169+23	RT. 32'	6" BURR OAK	1	1
169+33	LT. 32'	4" COTTONWOOD	1	1
169+62	RT. 33'	6" RED OAK	1	1
169+82	RT. 34'	6" RED OAK	1	1
170+00	RT. 33'	6" RED OAK	1	1
170+02	RT. 37'	6" RED OAK	1	1
170+03	RT. 37'	6" RED OAK	1	1
170+10	RT. 37'	6" RED OAK	1	1
170+12	RT. 32'	6" RED OAK	1	1
170+14	RT. 35'	6" RED OAK	1	1
170+19	RT. 33'	6" RED OAK	1	1
170+23	RT. 34'	6" RED OAK	1	1
170+23	RT. 36'	4" RED OAK	1	1
170+28	RT. 32'	6" RED OAK	1	1
170+65	LT. 35'	6" BURR OAK	1	1
170+71	LT. 37'	8" RED OAK	1	1
170+87	RT. 33'	18" RED OAK	1	1
170+91	RT. 33'	16" RED OAK	1	1
170+93	LT. 34'	6" RED OAK	1	1
170+93	RT. 33'	12" RED OAK	1	1
170+94	LT. 37'	8" RED OAK	1	1
170+95	LT. 35'	6" RED OAK	1	1
170+99	RT. 32'	12" RED OAK	1	1
176+00	LT. 37'	6" GREEN ASH	1	1
176+53	LT. 36'	10" GREEN ASH	1	1
177+35	RT. 36'	5" BOXELDER	1	1
177+59	RT. 37'	4" CHINESE ELM	1	1
177+68	RT. 30'	(2) 5" CHINESE ELM	2	1
178+05	RT. 33'	10" COTTONWOOD	1	1

CLEAR & GRUB CHART

STATION	LOCATION RT./LT.	DESCRIPTION	CLEAR TREE	GRUB TREE
S.A.P. 62-645-10, LONG LAKE ROAD				
178+12	RT. 31'	10" COTTONWOOD	1	1
178+17	RT. 30'	10" COTTONWOOD	1	1
178+21	RT. 30'	10" COTTONWOOD	1	1
178+24	LT. 34'	5" GREEN ASH	1	1
178+42	RT. 33'	4" CHINESE ELM	1	1
179+13	LT. 35'	4" GREEN ASH	1	1
184+87	LT. 33'	4" ELM	1	1
184+94	LT. 32'	4" ELM	1	1
185+14	LT. 32'	6" ELM	1	1
185+18	LT. 31'	12" ELM	1	1
185+22	LT. 32'	12" ELM	1	1
185+22	LT. 35'	8" ELM	1	1
185+26	LT. 39'	8" SPRUCE	1	1
185+28	LT. 31'	6" BURR OAK	1	1
185+36	LT. 39'	8" SPRUCE	1	1
185+45	LT. 39'	8" SPRUCE	1	1
185+45	RT. 30'	6" WHITE PINE	1	1
185+54	RT. 30'	6" AUST. PINE	1	1
185+59	LT. 39'	8" SPRUCE	1	1
185+69	RT. 30'	5" AUST. PINE	1	1
185+71	LT. 39'	8" SPRUCE	1	1
185+79	LT. 39'	8" SPRUCE	1	1
185+80	RT. 31'	5" BOXELDER	1	1
185+86	LT. 33'	4" ELM	1	1
185+91	LT. 38'	8" SPRUCE	1	1
185+95	LT. 34'	6" ELM	1	1
186+03	LT. 34'	4" BOXELDER	1	1
186+08	LT. 35'	4" BOXELDER	1	1
186+10	LT. 36'	4" BOXELDER	1	1
186+16	RT. 28'	10" ELM	1	1
186+20	RT. 27'	10" ELM	1	1
186+29	RT. 31'	5" ELM	1	1
186+44	RT. 28'	6" ELM	1	1
186+47	RT. 29'	4" ELM	1	1
186+65	RT. 29'	8" ELM	1	1
188+28	RT. 32'	14" WHITE POPPLE	1	1
188+63	RT. 39'	12" CHINESE ELM	1	1
189+34	RT. 30'	(5) 9" CHINESE ELM	5	5
189+82	RT. 26'	4" CHINESE ELM	1	1
190+37	LT. 29'	10" SILVER MAPLE	1	1
191+33	LT. 28'	8" SILVER MAPLE	1	1
192+38	LT. 38'	4" NORWAY MAPLE	1	1
193+90	LT. 30'	14" GREEN ASH	1	1
193+90	RT. 31'	4" SPRUCE	1	1
194+55	RT. 31'	10" SPRUCE	1	1
195+33	RT. 34'	6" SCOTCH PINE	1	1
196+52	RT. 30'	4' JUNIPER	1	1
197+51	LT. 37'	8" ASH	1	1
198+00	LT. 37'	8" ASH	1	1
198+29	RT. 31'	6" WHITE PINE	1	1
199+26	RT. 30'	18" ELM	1	1
199+99	RT. 27'	36' CHINESE ELM	1	1
200+60	RT. 31'	6" JUNIPER	1	1
201+82	LT. 24'	16" CHINESE ELM	1	1
203+14	RT. 33'	20" SILVER MAPLE	1	1
203+28	RT. 34'	12" SILVER MAPLE	1	1
203+41	RT. 29'	12" CATALPA	1	1
204+67	RT. 33'	12" JACK PINE	1	1
205+40	RT. 30'	12" SPRUCE	1	1
205+49	RT. 30'	14" SPRUCE	1	1
205+59	RT. 30'	8" SPRUCE	1	1

CLEAR & GRUB CHART

STATION	LOCATION RT./LT.	DESCRIPTION	CLEAR TREE	GRUB TREE
S.A.P. 62-645-10, LONG LAKE ROAD				
205+88	RT. 28'	14" WHITE PINE	1	1
205+90	RT. 33'	10" WHITE PINE	1	1
206+87	RT. 32'	6" STUMP	0	1
207+08	LT. 33'	8" SILVER MAPLE	1	1
207+26	LT. 33'	(2) 7" CHINESE ELM	2	2
207+57	LT. 57'	6" SPRUCE	1	1
207+57	LT. 43'	6" SPRUCE	1	1
207+71	RT. 31'	6" CHINESE ELM	1	1
207+79	RT. 28'	16" CHINESE ELM	1	1
207+83	LT. 39'	6" SPRUCE	1	1
207+91	RT. 29'	8" SPRUCE	1	1
208+09	LT. 37'	6" SPRUCE	1	1
208+17	RT. 30'	6" SPRUCE	1	1
208+37	RT. 33'	10" SPRUCE	1	1
208+37	LT. 32'	8" SPRUCE	1	1
208+43	LT. 42'	24" RED OAK	1	1
208+48	LT. 32'	8" SPRUCE	1	1
208+58	LT. 33'	8" SPRUCE	1	1
208+89	LT. 38'	12" SPRUCE	1	1
208+95	RT. 32'	12" WHITE OAK	1	1
211+48	RT. 32'	8" SPRUCE	1	1
212+57	RT. 30'	10" ELM	1	1
212+95	LT. 34'	8" ELM	1	1
213+06	LT. 34'	10" ELM	1	1
213+50	RT. 32'	12" ELM	1	1
213+93	RT. 25'	4" ELM	1	1
214+32	LT. 33'	8" ELM	1	1
214+32	LT. 34'	4" ELM	1	1
214+36	LT. 33'	6" ELM	1	1
214+50	LT. 33'	8" ELM	1	1
214+56	LT. 31'	8" ELM	1	1
214+71	LT. 32'	6" ELM	1	1
214+93	LT. 31'	6" ELM	1	1
214+93	LT. 34'	8" ELM	1	1
214+95	LT. 31'	6" ELM	1	1
214+95	LT. 35'	6" ELM	1	1
214+95	LT. 37'	6" ELM	1	1
215+06	LT. 38'	12" ELM	1	1
215+20	LT. 38'	6" ELM	1	1
215+22	LT. 38'	18" ELM	1	1
215+34	RT. 31'	8" CHINESE ELM	1	1
215+52	LT. 34'	10" ELM	1	1
215+54	RT. 34'	20" COTTONWOOD	1	1
215+56	LT. 36'	10" ELM	1	1
215+65	RT. 34'	20" COTTONWOOD	1	1
215+79	RT. 33'	20" COTTONWOOD	1	1
215+87	LT. 31'	10" ELM	1	1
215+91	RT. 33'	6" SILVER MAPLE	1	1
215+97	LT. 33'	8" ELM	1	1
216+08	LT. 34'	10" ELM	1	1
216+32	LT. 33'	10" ELM	1	1
216+34	RT. 32'	6" SILVER MAPLE	1	1
216+37	LT. 33'	12" ELM	1	1
216+72	LT. 32'	30" WHITE POPPLE	1	1
216+80	LT. 34'	16" COTTONWOOD	1	1
216+81	LT. 33'	8" COTTONWOOD	1	1
216+82	LT. 35'	8" COTTONWOOD	1	1
216+86	RT. 32'	18" WHITE POPPLE	1	1
216+89	RT. 32'	20" WHITE POPPLE	1	1
217+02	RT. 32'	26" WHITE POPPLE	1	1
217+55	RT. 32'	20" WHITE POPPLE	1	1

CLEAR & GRUB CHART

STATION	LOCATION RT./LT.	DESCRIPTION	CLEAR TREE	GRUB TREE
S.A.P. 62-645-10, LONG LAKE ROAD				
217+72	RT. 33'	18" ELM	1	1
218+17	RT. 32'	24" ELM	1	1
218+43	LT. 34'	4" SPRUCE	1	1
218+69	LT. 33'	4" SPRUCE	1	1
218+72	LT. 24'	5' JUNIPER	1	1
218+78	RT. 34'	4" SPRUCE	1	1
218+79	LT. 32'	4" GREEN ASH	1	1
219+17	LT. 32'	7" GREEN ASH	1	1
219+29	LT. 32'	10' CEDAR	1	1
219+57	LT. 33'	4" SPRUCE	1	1
219+79	LT. 36'	6" APPLE	1	1
219+86	LT. 30'	6' CEDAR	1	1
219+96	LT. 36'	DYING CHINESE ELM	1	1
220+33	RT. 32'	6' CEDAR	1	1
220+53	RT. 29'	6' CEDAR	1	1
221+21	LT. 42'	(4) 4" CEDAR	4	4
221+80	RT. 31'	24" WILLOW	1	1
221+81	LT. 38'	10" SILVER MAPLE	1	1
221+91	LT. 39'	4" SILVER MAPLE	1	1
222+07	RT. 29'	8' HONEYSUCKLE	1	1
222+16	RT. 30'	8' RUSS. OLIVE	1	1
222+18	RT. 31'	4" POPPLE	1	1
222+20	LT. 36'	6" SILVER MAPLE	1	1
222+21	LT. 40'	6" SILVER MAPLE	1	1
222+24	RT. 31'	10" SCOTCH PINE	1	1
222+26	LT. 35'	6" SILVER MAPLE	1	1
222+90	RT. 25'	4" CHINESE ELM	1	1
223+01	RT. 31'	6" CEDAR	1	1
223+05	RT. 31'	6" CEDAR	1	1
223+38	LT. 41'	8" JACK PINE	1	1
223+87	LT. 42'	4" WHITE PINE	1	1
224+06	RT. 23'	8" RED OAK	1	1
224+06	LT. 44'	8" SPRUCE	1	1
224+07	RT. 23'	8" RED OAK	1	1
224+07	RT. 29'	6" RED OAK	1	1
224+26	RT. 26'	8" WHITE OAK	1	1
224+44	LT. 35'	4" ELM	1	1
224+52	LT. 42'	10" SPRUCE	1	1
224+76	LT. 42'	10" SPRUCE	1	1
225+07	LT. 41'	10" SPRUCE	1	1
225+13	LT. 40'	16" SPRUCE	1	1
226+25	LT. 39'	? CEDAR	1	1
226+72	LT. 34'	8" SPRUCE	1	1
226+93	LT. 34'	16" SPRUCE	1	1
227+02	LT. 35'	12" SPRUCE	1	1
227+80	LT. 44'	4" RED OAK	1	1
228+19	LT. 38'	20" RED OAK	1	1
228+86	LT. 37'	10" BLACK CHERRY	1	1
229+46	LT. 43'	8" RED OAK	1	1
229+48	LT. 43'	12" RED OAK	1	1
229+52	LT. 33'	12" SPRUCE	1	1
230+55	LT. 46'	12" BOXELDER	1	1
230+77	LT. 48'	6" RUSS. OLIVE	1	1
231+71	LT. 38'	4" CHINESE ELM	1	1
231+93	LT. 23'	8" CHINESE ELM	1	1
233+28	LT. 48'	10" SILVER MAPLE	1	1
234+21	LT. 21'	8" ELM	1	1
237+15	LT. 29'	6" ELM	1	1
244+82	LT. 35'	8" ELM	1	1
		TOTAL =	317	310

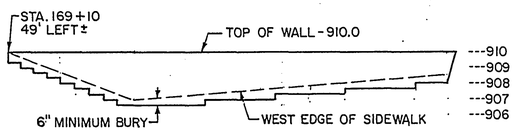
ASPHALT PLAN
CONFORMING TO
CONST. RECORDS
DONE BY: MR
DATE: 12-3-93

28-126

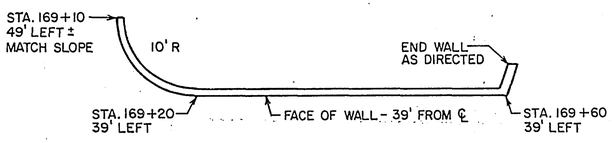
CLEAR AND GRUB CHART

S.A.P. 62-645-10 **SHEET 7 OF 73 SHEETS**

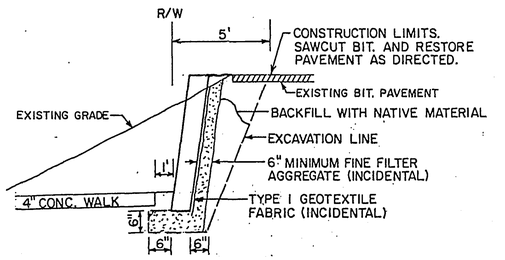
PRECAST MASONRY RETAINING WALL



PROFILE VIEW



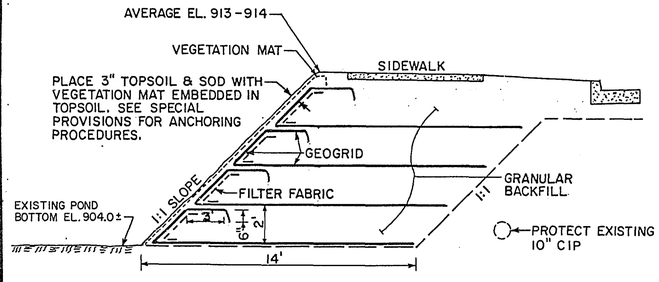
PLAN VIEW



TYPICAL SECTION
(NO SCALE)

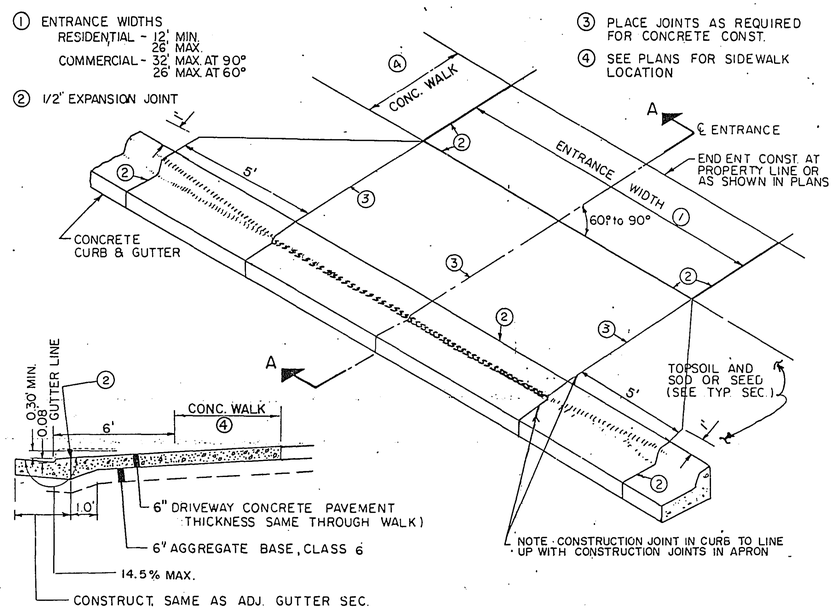
FABRIC REINFORCED EMBANKMENT

SEE SPECIAL PROVISIONS



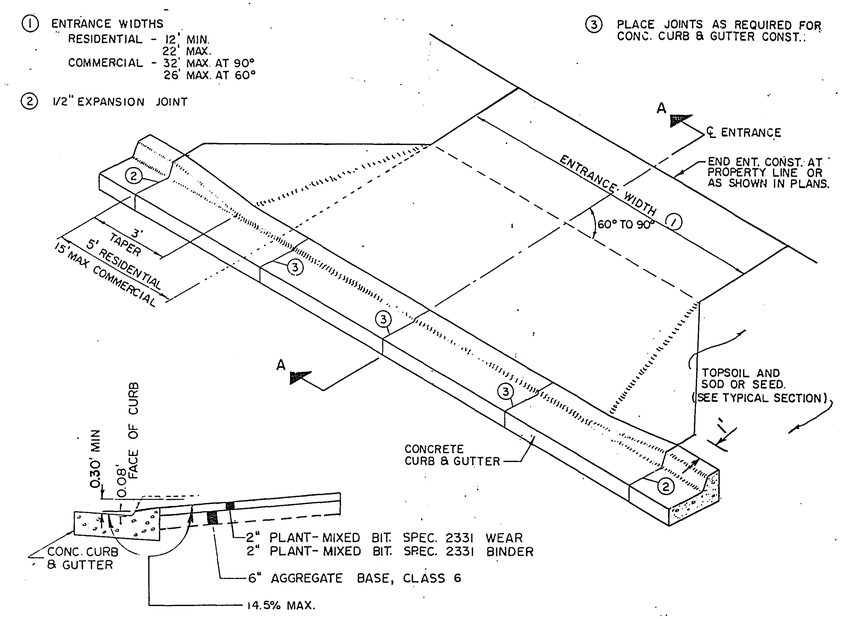
STATION 174+70± TO STATION 175+80±

CONCRETE ENTRANCE DETAIL



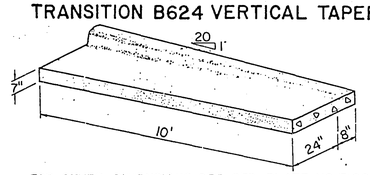
SECTION A-A

BITUMINOUS ENTRANCE DETAIL



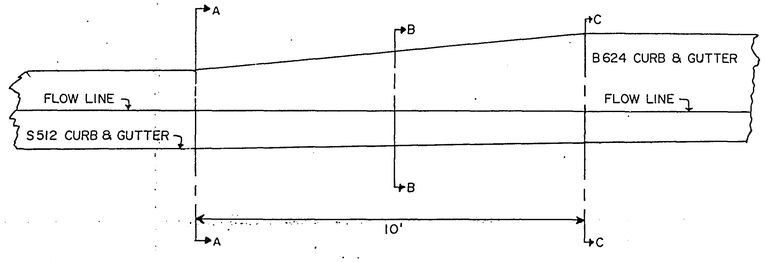
SECTION A-A TYPICAL

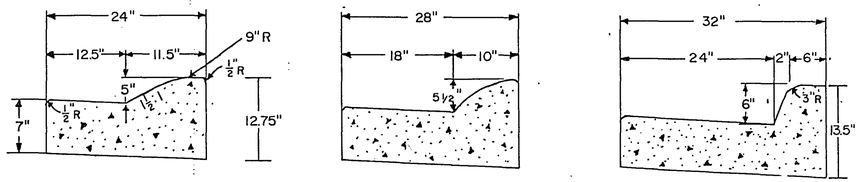
TRANSITION B624 VERTICAL TAPER



FOR OTHER DIMENSIONS SEE STD. PLATE NO. 7100

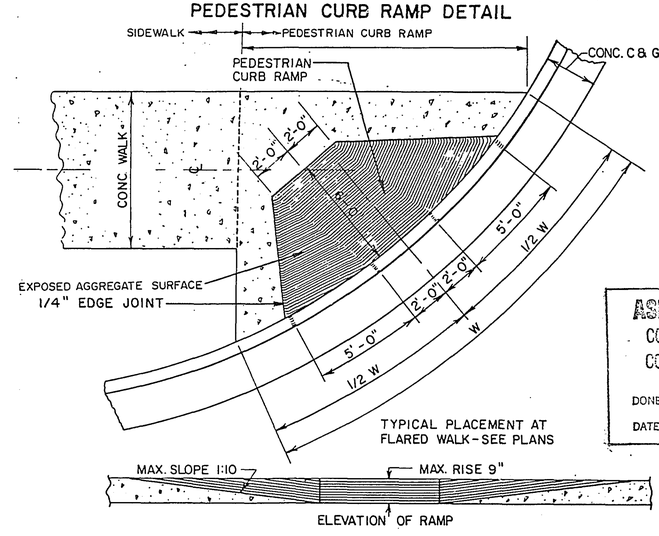
CURB TRANSITION — B624 C&G TO S512 C&G

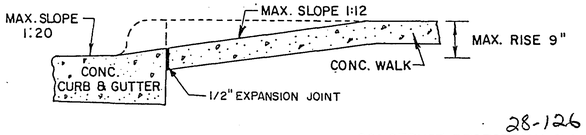




SECTION A-A SECTION B-B SECTION C-C

PEDESTRIAN CURB RAMP DETAIL





ASBUILT PLAN
CONFORMING TO
CONST. REQGTS
DONE BY: MR
DATE: 12-3-93

28-126
CONSTRUCT PEDESTRIAN CURB RAMPS AT ALL STREET RADII - REFERENCE STANDARD PLATE NO. 7036 D

ENTRANCE & CURB RAMP DETAIL

EXISTING STORM SEWER STRUCTURE CHART

STATION SECTION LINE	LOCATION	NO.	TYPE	CASTING ASSEMBLY	ELEVATION PROFILE	ELEVATION ORIGINAL GRATE OR RING	ELEVATION NEW GRATE OR RING	ELEVATION CB,MH OR APRON INVERT	SALVAGE CASTING ASSEMBLY EACH	ADJUST CASTING ASSEMBLY EACH	RECONST. CB OR MH L.F.	INSTALL CASTING ASSEMBLY EACH	F & I R. C. PIPE SEWER 15"	F & I R. C. PIPE SEWER 24"	F & I R. C. PIPE SEWER 27"	DRAINS TO STRUCT. NO.	DRAINS TO INVERT EL.EV.	REMARKS
LONG LAKE ROAD S.A.P. 62-645-10																		
137+62	RT. 73'	6	MH		901.26	900.31	-----	896.39	1				8			212	896.2±	REMOVE, EXTEND PIPE
143+86	LT. 32'	8	CB		895.57	895.13	-----	890.93	1									REMOVE
144+14	LT. 32'	10	CB		895.43	895.13	-----	890.93	1									REMOVE
145+74	LT. 34'	11	SD		894.63	892.62	-----	890.22	1									REMOVE
147+16	RT. 42'	12	CB		893.92	893.75	-----	889.15	1									REMOVE
147+16	LT. 42'	13	CB		893.92	893.54	893.6±	889.14		1								
147+44	RT. 43'	15	CB		893.78	893.41	-----	888.21	1									REMOVE
147+44	LT. 43'	16	CB		893.78	893.62	~~893.8±~~	888.62	1 each	X								(Remove - 8/24/92)
147+45	LT. 23'	17	MH		893.77	893.50	-----	888.50										REMOVE
147+51	LT. 167'	18	MH		893.74	~~896.54~~	-----	889.04	1 each.									(OK- Remove 8/24/92)
163+35	LT. 58'	23	MH		897.13	898.41	-----	891.81										OK
166+54	LT. 49'	--	APRON		900.25	------	-----	895.26						106		251A	893.45	REMOVE, EXTEND PIPE
166+76	LT. 48'	25	CB		900.61	899.73	899.7±	895.4		1								
167+22	LT. 48'	26	CB		901.35	899.92	899.9±	896.3		1								
174+52	LT. 54'	27	SD	A	912.99	908.52	911.5±	904.22	1		3.0							RECONSTRUCT TO MH
177+50	LT. 46'	29	SD		912.50	912.48	-----	904.28										OK
179+61	LT. 50'	31	CB		913.56	912.57	-----	909.07										OK
183+20	RT. 26'	81	CB		-----	910.85	-----	906.85	* 1									REMOVE, INCL. 4' PIPE
188+66	RT. 26'	34B	MH		907.91	908.79	908.0±	901.99			1.0	1						
189+63	RT. 27'	34A	SD	A	907.87	908.13	907.9±	901.03	1		5.8							RECONSTRUCT TO MH
191+32	RT. 25'	36	SD		907.12	907.24	-----	901.24	1						12	264	901.2±	REMOVE, EXTEND PIPE
196+70	LT. 225'	39	CB		907.93	906.72	-----	903.72										OK
197+13	LT. 225'	40	CB		907.94	906.88	-----	903.08										OK
196+70	RT. 100'	41	CB		907.93	907.89	-----	903.79										OK
197+13	RT. 26'	42	MH		907.94	908.20		902.52	1									REMOVE
197+13	RT. 100'	43	CB		907.94	907.82	-----	903.02										OK
214+22	RT. 25'	50	MH		905.41	907.70	-----	901.35	1									REMOVE
218+30	RT. 25'	53	MH		906.03	907.60	-----	900.89	1									REMOVE
220+13	LT. 36'	54	CB		906.12	905.63	-----	901.13	1									REMOVE
220+13	RT. 26'	55	CB		906.12	905.33	-----	900.30	1									REMOVE
220+40	LT. 35'	57	CB		905.98	905.54	-----	902.04	1									REMOVE
222+40	RT. 25'	58	MH		907.01	907.26	-----	898.15	1									REMOVE
231+82	RT. 46'	65	MH		908.10	905.00	-----	898.60										OK
234+56	RT. 36'	68	MH		909.14	907.61	907.6±	898.81		1								
234+98	LT. 39'	69	SD		909.35	905.95	909.0±	899.05			7.2	1						
240+30	LT. 34'	72	MH		909.75	909.77	-----	906.47	1									REMOVE
WOODCREST DRIVE STATION CONST.℄																		
3+93	LT. 20'	75	MH			897.58	-----	893.1	1									REMOVE
4+06	LT. 10'	76	CB			897.75	-----	892.25	1									REMOVE
4+06	RT. 17'	77	CB			897.88	897.88	892.68		1								
6+44	RT. 12'	78	MH			901.75	901.75	885.43		1								
6+66	LT. 16'	80	MH			901.98	901.98	885.18		1								
			TOTALS	=2					21	8	17	2	8	106	12			

Revised per city 8/24/92 →

8/24/92 →

* INDICATES SALVAGED CASTING IS TO BE USED ON STRUCTURE NO. 317

NOTE: STRUCTURES TO BE RECONSTRUCTED SHALL BE EQUIPPED WITH TYPE W ALUMINUM STEPS IN ACCORDANCE WITH MN/DOT STANDARD PLATE 4180

EXISTING UTILITY MANHOLE CHART

STATION SECTION LINE	LOCATION	NO.	TYPE	STR. TYPE	CASTING SIZE	ELEVATION PROFILE	ELEVATION ORIGINAL GRATE OR RING	ELEVATION NEW GRATE OR RING	ELEVATION MH INVERT	ADJUST CASTING ASSEMBLY	RECONST. MH L.F.	INSTALL CASTING ASSEMBLY	REMARKS
LONG LAKE ROAD S.A.P. 62-645-10													
130+64	℄	1	SAN	MH	9"	------	904.26	-----	895.12				OK
130+95	LT. 5'	2	SAN	MH	9"	------	904.35	-----	899.3				OK
134+01	LT. 5'	3	SAN	MH	7"	902.69	903.38	902.55	892.56	1			
137+03	LT. 34'	4	GAS	VAULT	11"	901.26	902.14	901.37	893.9				BY OTHERS
137+40	LT. 5'	5	SAN	MH	7"	901.00	901.28	900.86	893.78	1			
140+68	LT. 5'	7	SAN	MH	9"	898.56	898.85	898.42	875.65	1			
143+99	LT. 5'	9	SAN	MH	7"	895.50	895.43	895.36	876.33	1			
147+25	LT. 5'	14	SAN	MH	9"	~~893.87~~ 894.33	893.89	~~893.73~~ 894.22	876.89	1			
150+58	LT. 5'	19	SAN	MH	7"	~~894.27~~ 894.32	894.82	~~894.13~~ 894.68	877.42	1			PLUG & ABANDON
													STUB
153+89	LT. 5'	20	SAN	MH	7"	896.36	896.64	896.22	877.94	1			PLUG & ABANDON
													STUB
157+15	LT. 5'	21	SAN	MH	7"	898.41	898.60	898.27	878.90		9.9	1	
157+55	LT. 24'	22	TEL	VAULT	10"	898.66	897.80	898.2±	890.60				BY OTHERS
166+16	LT. 30'	24	SAN	MH	7"	899.64	898.44	899.76	DEEP		3.3	1	MWCC
174+94	LT. 1'	28	SAN	MH	7"	912.78	913.21	912.63	903.11	1			
177+81	LT. 1'	30	SAN	MH	7"	912.65	914.15	912.57	901.85		6.6	1	
180+67	LT. 1'	32	SAN	MH	7"	913.84	913.89	913.76	900.79	1			
184+38	LT. 1'	33	SAN	MH	7"	910.73	910.83	910.65	889.32	1			
187+51	LT. 1'	34	SAN	MH	7"	908.01	908.73	907.93	891.42		5.9	1	
190+64	LT. 1'	35	SAN	MH	7"	907.36	907.91	907.28	892.71		5.1	1	
193+79	℄	37	SAN	MH	7"	909.55	908.73	909.49	893.93	1			
196+91	℄	38	SAN	MH	7"	908.14	908.55	908.08	895.35	1			
199+61	℄	44	SAN	MH	7"	908.02	908.89	907.78	898.19		5.6	1	
202+31	℄	45	SAN	MH	7"	909.61	909.65	909.54	899.55	1			
203+20	℄	46	SAN	MH	7"	910.14	910.05	910.08	901.35	1			
206+70	℄	47	SAN	MH	7"	909.71	909.82	909.65	899.72	1			
210+20	℄	48	SAN	MH	7"	909.59	909.67	909.53	895.87	1			
212+62	℄	49	SAN	MH	9"	907.51	908.10	907.45	894.40	1			
215+04	℄	51	SAN	MH	7"	904.48	906.68	904.42	884.28		6.4	1	
217+66	℄	52	SAN	MH	7"	905.71	906.53	905.64	884.63		4.8	1	
220+27	℄	56	SAN	MH	7"	906.05	906.19	905.98	885.19	1			
223+36	RT. 2'	59	SAN	MH	7"	908.58	907.21	908.53	886.61	1			
223+87	RT. 54'	60	SAN	MH	7"	908.88	909.72	-----	887.12				OK
225+18	RT. 54'	61	SAN	MH	7"	909.54	909.43	-----	887.73				OK
227+19	RT. 54'	62	SAN	MH	7"	907.93	908.89	-----	888.49				OK
229+00	RT. 54'	63	SAN	MH	7"	907.90	906.86	-----	889.26				OK
231+15	RT. 59'	64	SAN	MH	7"	908.43	905.21	-----	890.01				OK
232+23	LT. 26'	66	SAN	MH	7"	908.00	908.28	908.28	895.23	1			
233+68	LT. 24'	67	SAN	MH	7"	908.70	908.90	907.84	895.81	1			
235+14	LT. 24'	70	SAN	MH	7"	909.43	907.74	909.51	896.64		9.6	1	
240+25	LT. 61'	71	SAN	MH	7"	909.73	909.39	909.3±	897.09	1			
240+78	LT. 62	73	SAN	MH	7"	909.99	908.51	-----	898.11				OK
WOODCREST DRIVE STATION CONST.℄													
3+29	RT. 3'	74	SAN	MH	9"	-----	898.51	898.5±	874.7±	1			
6+56	RT. 3'	79	SAN	MH	9"	-----	902.03	902.0±	873.25	1			
									TOTALS=	24	57.2	9	

Revised per city 8/24/92 →

REVISED 9/30/92 →

NOTE: STRUCTURES TO BE RECONSTRUCTED SHALL BE EQUIPPED WITH TYPE W ALUMINUM STEPS IN ACCORDANCE WITH MN/DOT STANDARD PLATE 4180

REMOVE R.C. PIPE SEWER

LOCATION STATION	STRUCTURE NUMBER	REMOVE R.C. PIPE SEWER LIN. FT.	REMARKS
197+12 RT. 22' TO LT. 55'	MH 42 TO LT. 55	77	
143+65 TO 147+45 LT.	APRON TO MH17	398	
214+20 LT. 23' TO RT. 22'		45	
214+20 RT. TO 222+38	MH50 TO MH58	818	
ARDAN AVE. WEST	CB57 TO CB55	95	
222+38 TO ARDEN EAST	MH58 TO AP	542	
222+40 TO WEST	MH58 TO WEST	6	
WOODCREST AVENUE	MH6 TO MH75	322	
WOODCREST AVENUE	MH75 TO CB76	16	
WOODCREST AVENUE	CB76 TO MH80	260	
	TOTALS =	2579	
NOTE : REMOVAL OF EXISTING APRON SHALL BE INCLUDED IN PRICE BID FOR ITEM 2104.501 REMOVE PIPE SEWER (RC) BY L.F.			
147+45 LT. 26' TO LT. 43'+	MH17 to CB 16	20	
147+45 LT. 43'± TO LT. 167'±	CB16 to MH18	120	
147+51 LT. 167' TO NORTH	MH18 to APRON	144	

ADDED 8/24/92 BJ

REMOVE C.M. PIPE SEWER

LOCATION STATION	STRUCTURE NUMBER	REMOVE C.M. PIPE SEWER LIN. FT.	REMARKS
147+45 LT. - RT.	MH17 TO CB15	74	48"
	TOTALS =	74	

ASBUILT PLAN
CONFORMING TO CONST. RECORDS
DONE BY: MR
DATE: 12-3-93

REMOVE METAL CULVERTS

LOCATION STATION	REMOVE METAL CULVERTS LIN. FT.	REMARKS
232+02 LT. 35' TO RT. 39'	74	
240+10 LT. 35' TO 240+96 LT. 33'	86	INCLUDES APRONS
MH. 72 TO 240+26 RT. 37'	74	INCLUDES APRON
TOTAL	= 234	

REMOVE CONCRETE CULVERTS

LOCATION STATION	REMOVE CONCRETE CULVERTS LIN. FT.	REMARKS
159+28 LT. 34' TO 159+35 RT. 30'	64	
160+55 LT. 43' TO 161+30 LT. 43'	75	
164+85 LT. 68' TO 165+20 LT. 53'	44	INCLUDES APRONS
TOTAL	= 183	

28-126

REVISED 9/30/92 B.J. P.G. 146+50-151+50
REVISED 8/24/92 B.J. PER City Request.

PIPE REMOVAL CHARTS
EXISTING UTILITY CHART
EXISTING STORM SEWER CHART

S.A.P. 62-645-10

SHEET 9~~8~~ OF 73 SHEETS

9R2

PROPOSED DRAINAGE CHART

SEE PLAN & PROFILE FOR ASBUILTS

SEE PLAN & PROFILE FOR ASBUILT ELEV.

STATION	LOCATION	NO.	TYPE	DESIGN	CASTING ASSEMBLY	ELEVATION PROFILE	ELEVATION NEW GRATE OR RING	ELEVATION CB OR MH INVERT	F & I REINFORCED CONCRETE PIPE SEWER 15"	18"	24"	27"	36"	44" SPAN	48"	DRAINS TO STRUCTURE NO.	DRAINS TO INVERT ELEV.	REMARKS
LONG LAKE ROAD S.A.P. 62-645-10																		
131+85	RT. 33'	201	SD	C OR G	D	903.65	~~903.5±~~ NOT USED	899.53	11							202	899.42	
131+85	RT. 21.5'	202	CB	SP-2	B	903.65	903.14	899.40	43							203	898.97	
131+85	LT. 21.5'	203	CB	SP-2	B	903.65	903.11	898.05 9.14	192							206	897.99	
~~131+85~~	~~LT. 39'~~	~~204~~	~~SD~~	~~C OR G~~	~~D~~	~~903.65~~	~~903.5±~~	~~899.50~~	~~17~~							203	899.33	ELIMINATED
133+77	RT. 22.5'	205	CB	~~LP4M~~ SP2	C	902.60	902.63	898.40	49							206	897.99	CHANGED DUE TO PIPELINE CONFLICT
133+77	LT. 23.5'	206	CB	LP4	C	902.60	902.67	897.05	324							208	896.34	
137+01	RT. 21.5'	207	CB	SP-2	B	901.39	900.85	896.77	43							208	896.34	
137+01	LT. 21.5'	208	CB	SP-2	B	901.39	900.85	896.30 5.86	54							211	895.74	
137+26	LT. 46'	209	CB	SP-2	B	901.14	900.91	896.32	30							210	896.02	
137+55	LT. 46'	210	CB	SP-2	B	900.85	900.71	896.00	25							211	895.75	
137+55	LT. 21.5'	211	MH	66-4020	A	900.85	900.46	886.54 8.40				92				212	886.36	
137+55	RT. 71'	212	CB	SP2-48-4020	B	900.85	900.24	886.36				336				213	885.70	
WOODCREST STATION																		
4+06	LT. 12'	213	CB	SP2-48-4020	B	898.3±	897.7±	885.70				210				213A	885.28	
6+17±	LT. 16'±	213A	MH	120-4020	A	901.5±	901.1	885.28				48				80	885.18	BUILD OVER EX. 24" RCP
140+50	RT. 21.5'	214	CB	SP-2	B	898.65	898.27	894.10	43							215	893.67	
140+50	LT. 21.5'	215	CB	SP2-48-4020	B	898.65	898.11	887.13				297				211	886.54	
143+55	RT. 21.5'	216	CB	SP-2	B	895.72	895.18	891.23	43							217	890.80	
143+55	LT. 21.5'	217	CB	SP2-48-4020	B	895.72	895.18	887.73				306				215	887.13	
143+83	LT. 46.5'	218	CB	SP-2	B	895.58	895.42	891.18	38							217	890.80	
144+11	LT. 46.5'	219	CB	SP-2	B	895.44	895.34	891.36	27							218	891.25	
145+72	LT. 40'	220	SD	C OR G	D	894.64	892.84	889.30	17							221	889.13	
145+72	LT. 25'	221	MH	54-4020	A	894.64	894.80	888.16				216				217	887.73	
146+89	RT. 21.5'	222	CB	SP-2	B	894.05	893.81	889.60	43							223	889.17	
146+89	LT. 21.5'	223	CB	SP2-54-4020	B	894.05	893.51	885.35				118				221	888.16	
147+16	RT. 47'	224	CB	SP-2	B	893.92	893.51	889.14	27							225	888.90	
147+43	RT. 47'	225	CB	SP2-54-4020	B	893.78	893.31	888.21								---	------	BUILD OVER EX. 27" RCP
147+45	LT. 26'	225A	~~MH~~	~~108-4020~~ SEE BELOW	~~A~~	~~893.77~~	~~893.42~~	~~888.50~~				~~76~~				~~225~~	~~888.2±~~	
SIZE REVISED 8/24/92 SEE BELOW		225A										~~56~~				~~223~~	~~888.39~~	
147+65	RT. 47'	226	APRON	15"	-	893.67	------	891.0±	17							225	889.25	F & I TRASH GUARD
~~148+92~~	~~LT. 154'~~	~~226A~~	~~APRON~~	~~27"~~	-	~~893.23~~	------	~~889.6±~~				~~187~~				~~225A~~	~~888.63~~	~~F & I TRASH GUARD~~
REVISED 9/30/92	~~148+72~~ 15H2	RT. 22.5'	227+R	CB	~~LP4M~~ SP2	C	~~893.10~~ 894.26	~~893.24~~ 894.87	~~890.20~~ 890.85	49							228	~~890.04~~ 890.71	~~CHANGE DUE TO PIPELINE~~ CONFLICT
	~~148+72~~ 15H2	LT. 23.5'	228+R	CB	LP4	C	~~893.10~~ 894.26	~~893.26~~ 894.87	~~890.50~~ 891.15	37	127						225A	888.87	
REVISED 8/14/92 PER CITY	~~152+08~~	~~LT. 88'~~	~~230~~	~~APRON~~	~~18"15"~~	-	~~895.22~~	------	~~890.66~~								~~OUTLET~~	------	~~F & I TRASH GUARD & RIPRAP~~
	~~152+08~~	~~LT. 21.5'~~	~~231~~	~~CB~~	~~SP-2~~	~~B~~	~~895.22~~	~~894.68~~	~~891.0±~~	~~33661~~							~~228 230~~	~~890.66~~	~~889.31~~
REVISED 9/30/92	~~152+08~~	~~RT. 21.5'~~	~~232~~	~~CB~~	~~SP-2~~	~~B~~	~~895.22~~	~~894.68~~	~~891.25~~	~~43~~							~~231~~	~~891.04~~ 8.67	
	154+25	LT. 21.5'	233	CB	SP-2	B	896.58	896.04	892.12	38	216						~~231~~ 228R	~~891.04~~	
	154+25	RT. 21.5'	234	CB	SP-2	B	896.58	896.04	892.58	79							233	892.16	
	155+80	LT. 193'	235	APRON	15"	-	897.59	------	~~889.6±~~ ← 892.03								OUTLET	------	F & I TRASH GUARD & RIPRAP
	157+34	LT. 185'	236	MH	C OR G	A	898.53	897.0±	894.10	148							235	889.6±	VERIFY T.C. IN FIELD
	157+39	RT. 57'	237	CB	SP-2	B	898.56	898.8±	895.35	242							236	894.14	
	156+96	RT. 57'	238	CB	SP-2	B	898.29	898.8±	895.60	70	43						237	895.39	
	159+36	RT. 40'	239	APRON	15"	-	899.11	------	895.44	86							240	892.68	F & I TRASH GUARD
	159+25	LT. 50'	240	MH	66-4020	A	899.17	898.21	891.27	39				76			241	891.16	
	158+51	LT. 50'	241	SD	60-4020	A	899.27	897.01	891.10	32				150			242	890.93	
	157+63	LT. 172'	242	SD	72-4020	D	898.71	896.54	890.03	1.06					77		243	890.80	
	156+78	LT. 172'	243	APRON	44" SPAN	-	898.18	------	890.80	73							OUTLET	------	F & I TRASH GUARD & RIPRAP
	161+13	LT. 52.5'	244	MH	60-4020	A	898.23	898.51	891.56	67				187			240	891.27	
	163+12	LT. 62.5'	245	MH	60-4020	A	897.23	896.21	891.65	75				200			244	891.55	
	160+58	RT. 24.5'	246	CB	SP-2	B	898.50	897.90	894.95	70	49						247	894.71	
	160+58	LT. 24.5'	247	CB	SP-2	B	898.50	897.90	894.62	52	284						249	893.25	
	163+42	RT. 25.5'	248	CB	~~LP4M~~ SP2	C	897.12	897.11	893.58	31	55						249	893.25	CHANGE DUE TO PIPELINE CONFLICT
	163+42	LT. 26.5'	249	CB	LP4	C	897.12	897.13	893.21	05	34						250	893.00	
	163+66	LT. 59'	250	APRON	15"	-	897.20	------	893.00	2.90							OUTLET	------	F & I TRASH GUARD & RIPRAP
	164+81	LT. 70'	251	APRON	24"	-	898.27	------	892.86	56							OUTLET	------	F & I TRASH GUARD & RIPRAP
	165+53	LT. 54'	251A	MH	66-4020	A	898.94	898.5±	893.37			67					251	892.86	
	165+65	LT. 24.5'	252	CB	SP-2	B	899.05	898.45	894.26	3.66	32						251A	893.94	
	165+65	RT. 24.5'	253	CB	SP-2	B	899.05	898.45	894.79	48	49						252	894.30	
	167+50	LT. 24.5'	254	CB	SP-2	B	901.81	901.21	897.00	6.91	185						252	894.30	
	167+50	RT. 24.5	255	CB	SP-2	B	901.81	901.21	897.58	33	49						254	897.04	
	170+00	LT. 24.5'	256	CB	SP-2	B	909.58	908.08	905.80	4.76	250						254	897.04	
										3321					355			
									SUBTOTALS=	~~3088~~	0	67	1942	613	~~77~~	----		

REVISED 8/14/92 B.J. FUTURE BY OTHERS

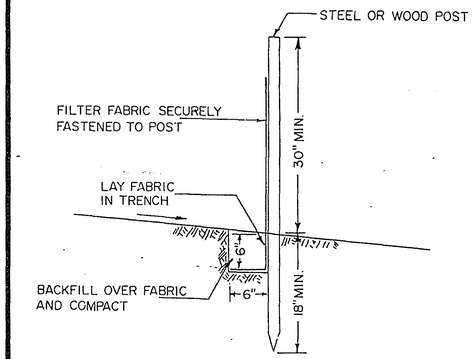
CASTING ASSEMBLY : A = RING CASTING MN/DOT NO. 700-7 , STANDARD PLATE 4101 C
COVER CASTING MN/DOT NO. 716 , STANDARD PLATE 4110 E
B = NEENAH 3067V OR EQUIVALENT , SEE DETAIL SHEET 12
C = MN/DOT STANDARD PLATE 4021 D
D = RING CASTING MN/DOT NO. 700-7 , STANDARD PLATE 4101 C
GRATE CASTING MN/DOT NO. 720 , STANDARD PLATE 4140 D

REVISED 9/30/92

REVISIONS 8/24/92 BJ.

ADDED 8/24/92 B.J.	147+45	LT. 26'	225A	MH	72-4020	A	~~893.77~~ 94.32	~~893.42~~ 96	888.50				76				225	888.2±	STRUCTURE SIZE REVISED
													56				223	888.39	" " "
	147+45	LT. 43'	318	CB	72-4020	REMARKS	-	~~893.81~~ 893.81	~~888.58~~ 888.74						20		225A	888.5±	INSTALL SAL. FROM CB 16
	147+51	LT. 167'	319	MH	90-4020	REMARKS	-	896.81	889.04						120		318	888.6±	INSTALL SAL. FROM MH 18
	148+92	LT. 167'	320	APRON	44" SPAN	-	-	-	889.6±						138		319	889.04	F & I TRASH GUARD

NOTE: ALL STRUCTURES SHALL BE EQUIPPED WITH TYPE W ALUMINUM STEPS IN ACCORDANCE WITH MN/DOT STANDARD PLATE 4180.



SEE CHART ON SHEET 5 FOR LOCATIONS.
SILT FENCE SHALL BE HEAVY DUTY PER 3886.2A.

SILT FENCE INSTALLATION

ASBUILT PLAN CONFORMING TO CONST. RECORDS
DONE BY: M.R.
DATE: 12-3-93

RIPRAP CHART

STATION	APRON NO.	APRON SIZE	RIPRAP CL. II	RIPRAP CL. IV	GRANULAR CUSHION	GEOTEXTILE FABRIC (IV)
~~152+08~~	~~230~~	~~18"~~		~~4.4 CY~~	~~2.2 CY~~	~~11 SY±~~
150+67	TIMBER WEIR	—	27 CY		13.5 CY	110 SY±
151+64	LEFT 328'	—	11.1 CY		5.6 CY	60 SY±
155+84	235	15"		8.9 CY	4.5 CY	9 SY±
156+22	LEFT 169'	—	15 CY		7.5 CY	77 SY±
156+78	243	44" SPAN		13.2 CY	6.6 CY	34 SY±
163+66	250	15"		3.5 CY	1.7 CY	9 SY±
164+81	251	24"		6.9 CY	3.5 CY	18 SY±
230+95	299	15"		3.5 CY	1.7 CY	9 SY±
* 4+66	293B	48"		20.1 CY	10.1 CY	49 SY±
TOTALS			53.1 CY	~~60.5~~ CY	~~56.9~~ CY	~~386~~ SY±

REVISED 8/14/92 PER CITY

* ARDAN AVE. STATIONING
RIPRAP SHALL BE INSTALLED PER STD. PLATE 3133 AND SPEC. 3601, EXCEPT THAT A GRANULAR CUSHION (9") AND GEOTEXTILE FABRIC (TYPE IV, SPEC. 3733) SHALL BE REQUIRED. PAYMENT FOR GRANULAR CUSHION AND THE GEOTEXTILE SHALL BE INCLUDED IN THE PRICE BID FOR ITEM 2511.501.

28-126
RIPRAP CHART

REVISED PROFILE GRADE 146+50-151+50 9/30/92.
REVISED MH 225A to APRON 320 8/24/92 B.J.
REVISED CB 231 to CB 228 8/14/92 B.J.

SILT FENCE INSTALLATION

PROPOSED DRAINAGE CHART

S.A.P. 62-645-10

SHEET ~~10~~ 10R2 OF 73 SHEETS

PROPOSED DRAINAGE CHART — SEE PLAN & PROFILE FOR ASBUILTS

STATION	LOCATION	NO.	TYPE	DESIGN	CASTING ASSEMBLY	ELEVATION PROFILE	ELEVATION NEW GRATE OR RING	ELEVATION CB, MH, OR APRON INVERT	F & I REINFORCED CONCRETE PIPE SEWER 15"	18"	24"	27"	36"	44"SPAN	48"	DRAINS TO STRUCTURE NO.	DRAINS TO INVERT ELEV.	REMARKS
LONG LAKE ROAD S.A.P. 62-645-10																		
173+88±	RT. 24'±	257	MH	78-4020	A	913.16	912.3±	904.2±										BUILD OVER EX. 18" RCP-A
174+67±	LT. 72'±	257A	~~APRON~~ SD	15"	-	912.92	------	908.5±	12							27	908.0±	F & I TRASH GUARD — CHANGED TO SWALE DRAIN
176+50	RT. 25.5'	258	CB	~~LP4M~~ SP2	C	912.06	912.05	907.50	262							257	904.88	CHANGE DUE TO UTILITY CONFLICT
176+50	LT. 26.5'	258A	CB	LP4	C	912.06	912.07	908.09	55							258	907.54	
178+50	RT. 24.5'	259	CB	SP-2	B	913.00	912.40	908.54	200							258	907.54	
178+50	LT. 24.5'	260	CB	SP-2	B	913.00	912.40	909.07	49							259	908.58	
188+07	LT. 23.5'	261	CB	LP4	C	907.66	907.73	903.53	49							262	903.04	
188+07	RT. 22.5'	262	CB	~~LP4M~~ SP2	C	907.66	907.71	903.00	59							34B	902.41	MAKE SUITABLE CONNECTION — CHANGE DUE TO PIPELINE CONFLICT
191+23	LT. 23.5'	263	CB	LP4	C	907.10	907.17	903.09	49							264	902.60	
191+23	RT. 22.5'	264	CB	SPECIAL 1	C	907.10	907.15	901.2±								---	------	BUILD OVER EX. 27" RCP
196+30	LT. 21.5'	265	CB	SP-2	B	907.63	907.09	903.25	43							266	903.03	
196+30	RT. 21.5'	266	CB	SP2-54-4020	B	907.63	907.09	902.3±								---	------	BUILD OVER EX. 27" RCP
197+12	RT. 22'	266A	MH	72-4020	A	907.95	907.55	902.50								266	902.3±	REPLACES MH. 42
197+12	LT. 55'±	----	PIPE	-------		907.95	------	------					69			266A	902.5±	PLUS 2 INCREASERS
198+06	LT. 23.5'	267	CB	LP4	C	907.16	907.23	903.25	49							268	903.00	
198+06	RT. 22.5'	268	CB	~~LP4M~~ SP2	C	907.16	907.21	902.96	93							266A	902.5±	
199+40	LT. 40'	269	SD	C OR G	D	907.90	906.5±	904.08	16							270	904.00	
199+40	LT. 24'	270	MH	66-4020	A	907.90	908.02	903.95	133							267	903.29	
199+73	RT. 30'	271	SD	C OR G	D	908.09	907.5±	904.32	64							270	904.00	
201+00	RT. 21.5'	272	CB	SP-2	B	908.84	908.30	905.05	43							273	904.84	
201+00	LT. 21.5'	273	CB	SP-2	B	908.84	908.30	904.80	160							270	904.00	
206+22	RT. 22.5'	274	CB	~~LP4M~~ SP2	C	909.52	909.57	905.66	49							275	905.17	CHANGE DUE TO PIPELINE CONFLICT
206+20	LT. 23.5'	275	CB	~~LP4~~ SP2	C	909.52	909.59	905.13	263							277	903.82	CHANGE DUE TO UTILITY CONFLICT
208+84	RT. 22.5'	276	CB	~~LP4M~~ SP2	C	908.84	908.89	904.29	49							277	903.80	CHANGED DUE TO PIPLINE CONFLICT
208+84	LT. 23.5'	277	CB	LP4	C	908.84	908.91	903.78	146							278	903.06	
210+30	LT. 21'	278	MH	A OR F	A	909.51	909.13	903.02	200							280	902.34	
212+30	RT. 21.5'	279	CB	SP-2	B	907.84	907.30	902.77	43							280	902.34	
212+30	LT. 21.5'	280	CB	SP-2	B	907.84	907.30	902.30	191							281	901.34	
214+21	LT. 24'	281	MH	C OR G	A	905.42	905.54	901.30		90						282	900.94	BUILD OVER EX. 15" RCP
215+11	LT. 23.5'	282	CB	LP4	C	904.47	904.54	900.90		49						283	900.70	
215+11	RT. 22.5'	283	CB	LP4M	C	904.47	904.52	900.68		219						285	899.58	
217+30	LT. 21.5'	284	CB	SP-2	B	905.53	904.99	900.74	43							285	900.31	
217+30	RT. 21.5'	285	CB	~~SP2-54-4020~~	B	905.53	904.99	899.56			313					286	899.00	
220+43	RT. 16'	286	MH	96-4020	A	905.97	905.69	898.41							93	290	898.22	
220+15	LT. 46'	287	CB	SP-2	B	906.11	905.6±	902.00	28							288	901.72	
220+43	LT. 46'	288	CB	SP2-72-4020	B	905.97	905.5±	898.47							62	286	898.41	
220+43	LT. 46-70	---	STUB	----	-	905.97	------	898.50							24	288	898.47	
221+16	LT. 23.5'	289	CB	LP4	C	905.60	905.67	901.40	44							290	900.96	
221+36	RT. 16'	290	MH	96-4020	A	905.53	905.25	898.22							103	292	898.02	
221+36	RT. 22.5'	291	CB	LP4M	C	905.53	905.58	901.04	8							290	900.96	
222+39	RT. 16'	292	MH	84-4020	A	907.00	906.72	898.02							111	293	897.75	
223+50	RT. 16'	293	MH	96-4020	A	908.70	908.42	897.75							225	293A	897.20	
223+95	LT. 21.5'	294	CB	SP-2	B	908.92	908.38	903.90	43							295	903.47	
223+95	RT. 21.5'	295	CB	SP-2	B	908.92	908.38	903.43	45							293	903.00	
227+85	LT. 23.5'	296	CB	LP4	C	907.29	907.36	903.15	49							297	902.66	
227+85	RT. 22.5'	297	CB	LP4M	C	907.29	907.34	902.62	317							298	901.04	
231+00	RT. 25'	298	MH	78-4020	A	908.51	908.67	901.00	73							299	898.60	
230+95	RT. 104'	299	APRON	15"	-	908.53	------	898.60								OUTLET	------	F & I TRASH GUARD & RIPRAP
230+50	LT. 53'	300	SD	C OR G	D	908.69	904.5±	901.49	90							298	901.04	
232+05	LT. 43'	301	APRON	15"	-	908.00	------	904.3±	14							302	904.10	F & I TRASH GUARD
232+15	LT. 23.5'	302	CB	LP4	C	907.99	908.06	904.06	50							303	903.56	
232+15	RT. 23.5'	303	CB	LP4	C	907.99	908.06	903.50	118							298	902.32	
235+76	LT. 40'	304	APRON	15"	-	909.74	------	907.0±	18							305	905.25	F & I TRASH GUARD
235+60	LT. 21.5'	305	CB	SP-2	B	909.66	909.12	901.52	43							306	901.40	
235+60	RT. 21.5'	306	CB	SP-2	B	909.66	909.12	901.30	110							68	900.75	MAKE SUITABLE CONNECTION
237+75	LT. 26'	307	MH	A OR F	A	910.73	910.93	902.63	213							305	901.56	
239+82	LT. 45'	308	SD	C OR G	D	909.56	908.0±	903.94	20							309	903.74	
239+81	LT. 23.5'	309	CB	LP4	C	909.56	909.63	903.70	206							307	902.67	
239+80	RT. 23.5'	310	CB	LP4	C	909.56	909.63	904.23	49							309	903.74	
240+90	LT. 29.5'	311	CB	SP-2	B	910.03	909.3±	904.29	110							309	903.74	
240+98	LT. 46'	312	SD	C OR G	D	910.04	908.0±	904.58	18							311	904.33	
242+00	LT. 23.5'	313	CB	LP4	C	909.66	909.73	904.88	109							311	904.33	
242+00	LT. 41'	314	SD	C OR G	D	909.66	909.0±	905.08	16							313	904.92	
242+00	RT. 23.5'	315	CB	LP4	C	909.66	909.73	905.17	49							313	904.92	
244+00	LT. 40'	316	SD	C OR G	D	910.60	909.0±	905.92	200							313	904.92	
183+21	RT. 26.5'	317	CB	SP-2	B	911.67	910.8±	906.8±								---	------	BUILD OVER EX. 15" RCP
ARDAN AVE. STATION																		
2+41	LT. 17'	293A	MH	72-4020	A	906±	906±	897.20							217	293B	896.63	
4+66	LT. 22'	293B	APRON	48"	-	----	----	896.63								OUTLET	------	F & I TRASH GUARD & RIPRAP
							SUBTOTAL	THIS SHEET	4360	358	313	0	69	0	835			
							SUBTOTAL	SHEET 9	8	0	106	12	0	0	0			
							SUBTOTAL	SHEET 10	3088	0	67	1942	613	77	0			
CASTING ASSEMBLY: SEE SHEET 10							PROJECT	TOTAL	7456	358	486	1954	682	77	835			

NOTE: ALL STRUCTURES SHALL BE EQUIPPED WITH TYPE W ALUMINUM STEPS IN ACCORDANCE WITH MN/DOT STANDARD PLATE 4180.

28-126

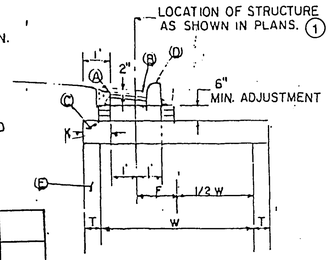
PROPOSED DRAINAGE CHART

S.A.P. 62-645-10 — **SHEET 11 OF 73 SHEETS**

CATCH BASIN DESIGN SP2-W"-4020

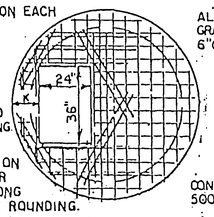
NOTES:

(A) ELEVATION OF STRUCTURE COMPUTED AT THIS LOCATION.
(B) NORMAL GUTTER GRADE.
(C) SEE COVER DETAIL.
(D) CASTING ASSEMBLY - SEE DETAIL FOR DESIGN SP-2
(E) CATCH BASIN - DESIGN 4020 SEE STD. PL. NO. 4020.



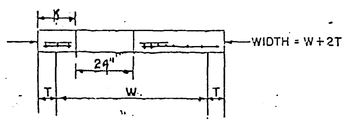
STRUCTURE DIMENSION CHART

W	48"	54"	72"	
K	14"	14"	13"	
F	3"	7"	18"	



NOTES

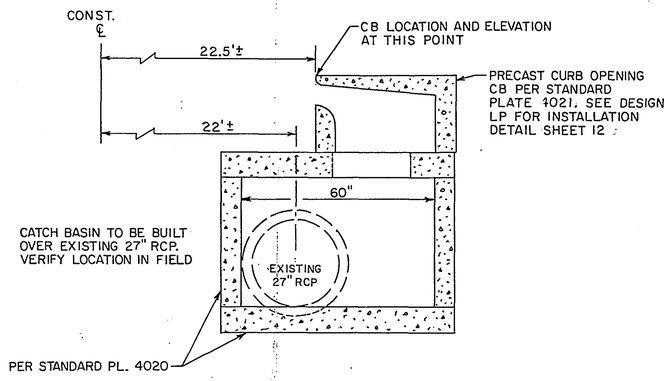
(1) CENTER OF STRUCTURE FOR STAKING PURPOSES SHALL BE LOCATION OF STRUCTURE AS SHOWN IN PLANS, PLUS DISTANCE F.

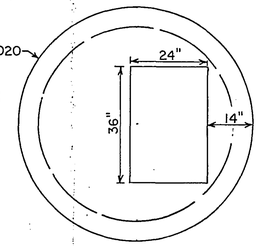


CATCH BASIN COVER SLAB

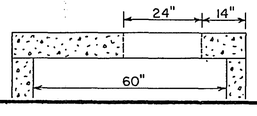
CATCH BASIN DESIGN SPECIAL 1

C.B. 264

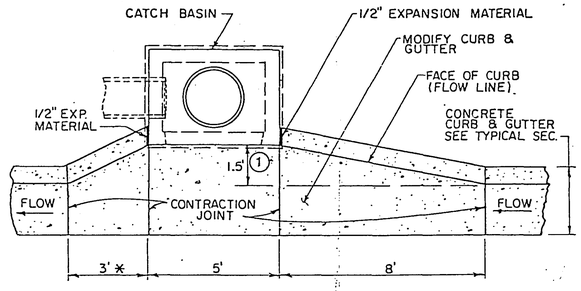




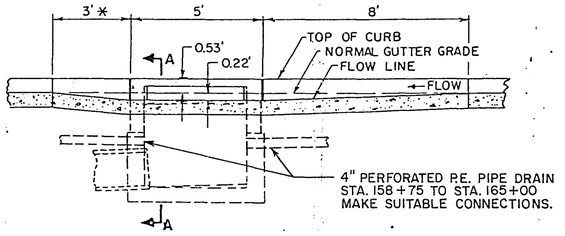
COVER SLAB DETAIL



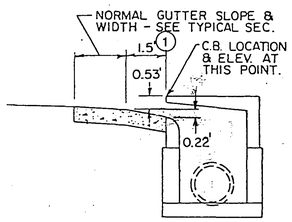
CURB OPENING CATCH BASIN - DESIGN LP INSTALLATION DETAIL & L.P. MODIFIED (1)



PLAN VIEW



ELEVATION (AT FLOW LINE)



SECTION A-A

NOTES:

* DIMENSION SHALL BE 8' WHEN STRUCTURE INSTALLED AT LOW POINT IN GRADE

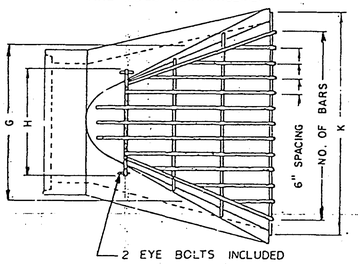
CATCH BASIN - DESIGN LP - SEE MN/DOT STD. PL. NO. 4021

TOP OF CATCH BASIN SHALL BE INSTALLED AT SAME SLOPE AS BLVD. GRADES AND TOP OF CURB GRADE . EACH SIDE OF STRUCTURE.

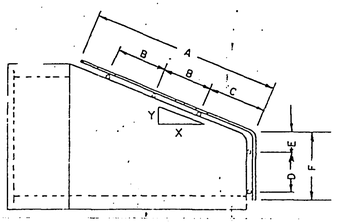
ELEVATION OF STRUCTURE IS COMPUTED AT LOCATION SHOWN IN SEC. A-A AT ℄ OF C.B. OPENING.

(1) LP MODIFIED SHALL HAVE ONLY A 0.5' SETBACK FROM FACE OF CURB

3/4" BARS FOR TRANSVERSE AND EDGE REINFORCEMENT



2 EYE BOLTS INCLUDED



1/2" BARS FOR LONGITUDINAL INTERIOR BARS, WELD EACH INTERSECTION.

CONTRACTOR SHALL FURNISH SUITABLE LOCKING DEVICE APPROVED BY ENGINEER.

SIZE	NO. OF BARS	X-Y SLOPE	A	B	C	D	E	F	G	H	K
12"	5	3 to 1	24	7	6	5	2	8	24		30
15"	6	"	24	7	6	6	2	10	26		34
18"	7	"	24	7	6	6	3	12	28		40
21"	9	"	36	11	10	7	3	12	34		50
24"	9	"	44	14	12	10	4	16	36		52
27"	10	"	50	16	14	10	4	16	38		58
30"	11	"	56	18	16	12	4	18	42		64
36"	13	"	64	20	20	12	4	18	48		76
42"	15	"	68	22	20	16	8	26	60		88
48"	16	"	76	24	24	14	10	28	62		92
54"	17	2:1 to 1	76	24	24	16	12	32	68		96

TRASH GUARD (GALVANIZED)
(FOR CONCRETE APRON)

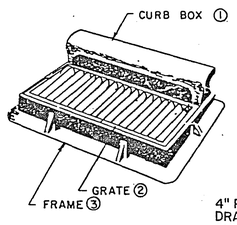
CASTING ASSEMBLY
(FOR DESIGN SPECIAL 2 CATCH BASIN)

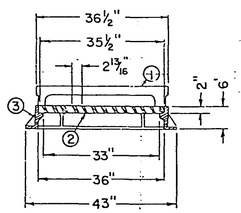
NOTES.

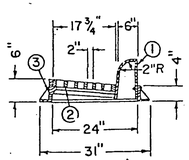
MATERIALS CAST GRAY IRON, CLASS 30, MN/DOT SPEC. REFERENCE 3321

CURB BOX HEIGHT SHALL BE ADJUSTABLE 6" TO 9"

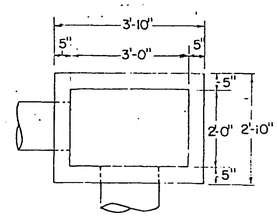
SEE CATCH BASIN-DESIGN SPECIAL 2 DETAIL FOR CASTING INSTALLATION DETAIL.



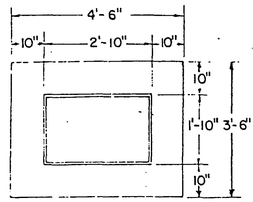




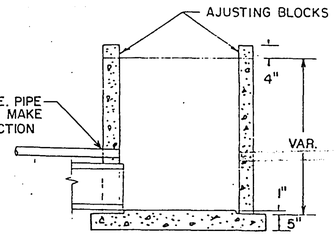
CATCH BASIN - DESIGN SP-2



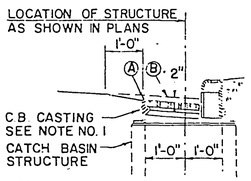
CATCH BASIN PLAN



BASE SLAB PLAN



SECTIONAL VIEW
CATCH BASIN & BASE SLAB



INSTALLATION DETAIL

NOTES

1. TO BE USED WITH NEENAH R-3067-V OR EQUAL.
2. PIPE CUT-OUTS, TO BE LOCATED WHERE REQUIRED.
3. ALTERNATE CAST-IN-PLACE BASE SLAB CAN BE USED.
4. INSTALL AS PER MN/DOT STANDARD PLATE NO. 7111
5. REINFORCEING: SINGLE LINE STEEL WIRE FABRIC.
   WALL = W3.5 X W3.0 HAVING AN AREA OF NOT LESS THAN .21 SQ. IN. PER FOOT OF HEIGHT.
   BASE = W4.0 X W4.0 HAVING AN AREA OF NOT LESS THAN .16 SQ. IN. PER FOOT OF HEIGHT.
6. ALTERNATE CONSTRUCTION - THE CATCH BASIN MAY BE CONSTRUCTED OF BLOCKS OR BRICKS CONFORMING TO THE REQUIREMENTS OF MN/DOT SPEC. 2506 AND AS DIRECTED BY THE ENGINEER.

ASBUILT PLAN
CONFORMING TO
CONST. RECORDS
DONE BY: MR
DATE: 12-3-93

28-126

STORM SEWER DETAILS

BEGIN S.A.P. 62-645-10
STA. 130+80.0

COUNTY ROAD H

MATCH B624 C & G TO BIT. CURB AS DIRECTED, 57' LT.

DRAINAGE EASEMENT

SECTION LINE

CONST. C/L

LONG LAKE ROAD

WILLIAMS PIPELINE

REMOVE CONCRETE WALK

RELOCATE HYDRANT ASSEMBLY F.B.I. 6" GATE VALVE & BOX

MATCH B624 C & G TO BIT. CURB AS DIRECTED 57' RT.

RELOCATE CURB STOP & BOX

PROPOSED WILLIAMS PIPELINE LOCATION

MATCH EXISTING CONCRETE

REMOVE FLAGSTONE WALL

REMOVE TIMBER WALL

RELOCATE HYDRANT ASSEMBLY F.B.I. GATE VALVE & BOX (6")

REPLACE WATER SERVICE

PROTECT FENCE

PROTECT C-L FENCE

WATER DEPT.

MATCH LINE

END B624 C & G WITH VERTICAL TAPER, LT. 57' SEE DETAIL SHEET 8

END B624 C & G WITH VERTICAL TAPER, RT. 57' SEE DETAIL SHEET 8

WOODCREST DRIVE

SEE SHEET 27 FOR WOODCREST DRIVE

5046 5051 5054 5055 5060 5061 5064 5067 5074 5075 5083 5084 5091 5092 2595

CB 202 CB 203 CB 205 CB 206 CB 207 CB 208 CB 209 CB 210 CB 211 CB 212

SD 201 SD 203 SD 204

MH 1 MH 2 MH 3 MH 4 MH 5 MH 6

① SAWCUT CONCRETE
② SAWCUT BITUMINOUS
③ SALVAGE & INSTALL
④ ADJUST CURB STOP BOX

0' 30' 100'
SCALE

8' X 8' X 2" POLYSTYRENE INSULATION

902.65 902.73 903.27 903.25

PVC +55.00 EL 902.65
50 FT VC
M= 0.09
PVI +05.00 EL 902.73
PVC +65.00 EL 903.27
HIGH POINT +88.8 EL 903.38
PVI +90.00 EL 903.50
PVT +15.00 EL 903.25
PVC +75.00 EL 899.65
50 FT VC
M= 0.03
PVI +00.00 EL 899.40

00.591%
+00.909%
01.000%
1.79

20.7%

191
102 LF 15" RCP Δ 0.50%

318
324 LF 15" RCP Δ 0.50%

50 FT VC
M= 0.12

1' SUBCUT FOR UNIFORMITY AND COMPACTION

43 LF 15" RCP Δ 1.0%

54 LF 15" RCP Δ 1.0%

332
297 LF 27" RCP Δ 0.198%

17 LF 15" RCP Δ 1.0%
43 LF 15" RCP Δ 1.0%
11 LF 15" RCP Δ 1.0%

47
43 LF 15" RCP Δ 1.0%

30 LF 15" RCP Δ 1.0%
25 LF 15" RCP Δ 1.0%

EXISTING 8" SANITARY SEWER
EXISTING 2" SANITARY SEWER

CB 203 Rt 903.22 | 899.05 | 897.14
CB 206 Rt 902.40 | 897.89 | 897.85
CB 205 Rt 902.17 | 898.48 | 898.37
CB 202 Rt 903.14 | 899.23 | 898.97
SD 201 Rt 902.89 | 899.42 | 897.54
CB 208 Rt 902.27 | 896.32 | 896.51
CB 209 Rt 902.40 | 896.62 | 896.00
MH 211 Rt 902.87 | 895.75 | 894.92
CB 207 Rt 902.13 | 896.30 | 896.34
MH 5 | 896.34 | 896.30
MH 6 | 896.30 | 893.74
MH 211 | 886.62 | 888.54
MH 211 | 886.54 | 886.62

895.16 | 893.80 | 899.50 | 899.33 | 899.73 | 899.55 | 899.40 | 899.45 | 892.56 | 896.34 | 893.94 | 891.28 | 975.06

910 905 900 895 890 885 880 875 870

130 131 132 133 134 135 136 137 138 139

CONFORMING TO CONST. RECORDS
DONE BY: MJR
DATE: 12-3-93

28-126

REVISED 4/29/92 CITY UTILITIES

S.A.P. 62-645-10

SHEET 13 OF 73 SHEETS

5115 5127 5135 5155 5108 5114 5120 5126 5132 5138

REPLACE SAN. SEWER SERVICE -
REPLACE WATER SERVICE -
REPLACE SAN. SEWER SERVICE -
REPLACE WATER SERVICE -
REPLACE SAN. SEWER SERVICE -
REPLACE WATER SERVICE -
REPLACE SAN. SEWER SERVICE -

Sanitary service to #5143 in way

WOODALE DRIVE

END B624 C & G WITH VERTICAL TAPER, 57' LT. SEE DETAIL SHEET 8

RIDGE LANE

SEE SHEET 30 FOR PONDING

CONNECT TO EXISTING 6" WATERMAIN

END B624 C & G WITH VERTICAL TAPER, 57' LT. SEE DETAIL SHEET 8

SEE SHEETS 9R, 10R, 15R, & 30R FOR STORM SEWER CHANGES FROM RIDGE LANE TO CoRdH2 8/24/92 B.J.

377 LF 15" RCP FROM CB 228R TO MH 225A

PROTECT

REMOVE

REMOVE

CB 215 CB 214 CB 216 CB 217 CB 218 CB 219 CB 220 CB 221 CB 222 CB 223 CB 224 CB 225 CB 226

MH 7 MH 8 MH 9 MH 10 MH 14 MH 15 MH 16 MH 17 MH 225A MH 226

SECTION LINE

CONST. C/L LONG LAKE ROAD

OFFSET 6" CIP WATERMAIN

WILLIAMS PIPELINE

PROPOSED WILLIAMS PIPELINE LOCATION

CONNECT TO EXISTING 6" WATERMAIN

REPLACE 6" CIP WATERMAIN WITH 6" DIP WATERMAIN

CONNECT TO EXISTING 12" WATERMAIN

END B624 C & G WITH VERTICAL TAPER, 57' RT. SEE DETAIL SHEET 8

DRAINAGE EASEMENT

REPLACE 12" CIP WATERMAIN WITH 12" DIP WATERMAIN

RELOCATE HYDRANT ASSEMBLY, F. & I. 6" GATE VALVE & BOX

PROVIDE TEMPORARY WATER SERVICE 5144

PROVIDE TEMPORARY WATER SERVICE 5200

PROVIDE TEMPORARY SAN. SEWER SERVICE

REPLACE SAN. SEWER SERVICE - 5206

PROVIDE TEMPORARY WATER SERVICE

REPLACE WATER SERVICE

PROTECT

① SAWCUT CONCRETE
② SAWCUT BITUMINOUS
③ SALVAGE & INSTALL
④ ADJUST CURB STOP BOX

0' 30' 100' SCALE

8' X 8' X 2" POLYSTYRENE INSULATION

PVT -125.00 EL 899.27
-00.500%
PVC +75.00 EL 896.53
PVT +00.00 EL 898.40
PVT +25.00 EL 898.10
1.79'
50 FT VC M= 0.04
1' SUBCUT FOR UNIFORMITY AND COMPACTION
332 207 LF 27" RCP Δ 0.198%
304 306 LF 27" RCP Δ 0.197%
2 L.F. 4" PERF. P.E. PIPE IN CB. 215
43 LF 15" RCP Δ 1.0%
EXISTING 12" SANITARY SEWER
875.65
16 LF 15" RCP Δ 0.50%
43 LF 15" RCP Δ 1.0%
PVT +25.00 EL 895.67
PVT +00.00 EL 896.00
PVC 75.00 EL 896.30
2.5 L.F. 4" PE RF. PE. PIPE IN CB. 217
END 1' SUBCUT FOR UNIFORMITY & COMPACTION BEGIN MUCK EXCAVATION STA. 144+00
20:1
REMOVE
EAST INV. 888.13
WEST INV. 886.83
215 215 LF 27" RCP Δ 0.197%
-00.501%
PVC +65.00 EL 894.18
PVT +15.00 EL 894.18
VC=50' M=.06'
LOW PT. = 894.11
EXISTING 48" CMP
EXISTING 27" RCP
EXISTING 8" RCP
118 LF 27" RCP Δ 0.197%
MUCK EXCAVATION
WEST INV. 884.29
43 LF 15" RCP Δ 1.0%
REMOVE MH 17
327 LF 15" RCP
187 LF 27" RCP
Δ 0.50% + APRON
BUILD OVER EXISTING 27" RCP
SEE NEXT SHEET FOR 15" RCP FROM CB 228 TO MH 225A
EXISTING 12" SANITARY SEWER
REPLACE 6" CIP WATERMAIN WITH 6" DIP CL.52 STA. 145+00 TO STA. 147+05±, PLUS 65 LF ± TO THE WEST
REPLACE 12" CIP WATERMAIN WITH 12" DIP CL.52 WATERMAIN STA. 147+05± TO STA. 153+75±
27 LF 15" RCP Δ 0.50% + APRON
15 LF 15" RCP Δ 7.60% + APRON
2528

CORRECTED AS PER AS BUILT CONDITIONS TO CONST. RECORDS
DONE BY: M.R.
DATE: 12-3-93

REVISED 4/29/92 CITY UTILITIES
REVISED 9/30/92 B.J.
REVISED 8/24/92 PER CITY B.J.

28-126

S.A.P. 62-645-10

SHEET 14R OF 73 SHEETS

14R2

45' DRAINAGE ESMT.

AP 226A

ELIMINATED FROM PLANS 8/24/92
SEE SHEET 30R FOR REVISIONS B.J.

0' 30' 100'
SCALE

SEE SHEET 30 FOR PONDING THIS SHEET

AP 230

ELIMINATE 81 LF 15" RCP & APRON AT CITY REQUEST (FUTURE WORK)

~~FURNISH & INSTALL 336 L.F. 15" RCP @ 0.45%~~
~~CB 231 to CB 228 PER CIP & SEH~~

① SAWCUT CONCRETE
② SAWCUT BITUMINOUS
③ SALVAGE & INSTALL
④ ADJUST CURB STOP BOX
8' X 8' X 2" POLYSTYRENE INSULATION

CB. 228 | CB 228R | CB. 231 | CB. 233 | CB. 232 | CB. 234 | CB 227R | CB 228R

LONG LAKE ROAD

SECTION LINE

MH 19 | MH 20

149 150 151 152 153 154 155 156

CONSTRUCT BULKHEAD & ABANDON SEWER STUB

REPLACE 12" CIP WATERMAIN WITH 12" DIP WATERMAIN CL. 52

WILLIAMS PIPELINE

CONST. C/L

CONNECT TO EXISTING 12" WATERMAIN

CONSTRUCT BULKHEAD & ABANDON SEWER STUB

WOOD POSTS | GRAVEL | BIT. | CONST. LIMITS

PROVIDE TEMPORARY WATER SERVICE
REPLACE WATER SERVICE
PROVIDE TEMPORARY SAN. SEWER SERVICE
REPLACE SAN. SEWER SERVICE

CONST. LIMITS
SALVAGE WOOD POSTS WITHIN CONST. LIMITS
PLACE TOPSOIL & SOD WITHIN CONST. LIMITS

RELOCATE HYDRANT ASSEMBLY, F. & I. 6" GATE VALVE & BOX

PROPOSED WILLIAMS PIPELINE LOCATION

REMOVE TIMBER WALL TO R/W

150+50 | 153+31

PROVIDE TEMPORARY WATER SERVICE
REPLACE WATER SERVICE
F. & I. 1" CORPORATION STOP
PROVIDE TEMPORARY SAN. SEWER SERVICE
REPLACE SAN. SEWER SERVICE

5244 | 5250 | 5256

PROVIDE TEMPORARY WATER SERVICE
REPLACE WATER SERVICE
PROVIDE TEMPORARY SAN. SEWER SERVICE
REPLACE SAN. SEWER SERVICE

4" to 6" Wye and 6" PVC Sewer Lines

SAN SEWER MAIN 151+19

AP 236A | AP 230 | AP 235

81 LF 15" RCP @ 0.50% PLUS APRON

43 LF 15" RCP @ 0.50%

~~10X LF 12" RCP @ 0.50% + APRON~~

V.C. = 50'
M = .063
HIGH PT. = 895.40

~~50 LF VC M= 0.07~~

PVC 149+48 EL 895.34
PT 149+98 EL 895.34
PVC 150+00 EL 895.35
PVT 150+50 EL 895.40

PVC 149+73 EL 895.46
PVT 149+98 EL 895.34

TC 894.91
PVC 151+00 EL 894.83
PT 151+25 EL 894.70
PVT 151+50 EL 894.82

+00.501% | -.50% | +00.630% | -.79%

~~377.27 LF 15" RCP @ 0.50%~~

FROM CB 228R TO MH 235A = 377 L.F. 15" RCP @ .79%
~~FURNISH & INSTALL 336 L.F. 15" RCP @ 0.45%~~

V.C. = 50' M = .071'
LOW PT. = 894.77
8/14/92 B.J.

303 LF 15" RCP @ .49% CB 233 TO CB 228R
216 LF 15" RCP @ 0.50%

MUCK EXCAVATION | MUCK EXCAVATION

1' SUBCUT FOR UNIFORMITY AND COMPACTION

END MUCK EXCAVATION STA. 155+50
BEGIN 1' SUBCUT FOR UNIFORMITY & COMPACTION

REPLACE 12" CIP WATERMAIN WITH 12" DIP WATERMAIN (MINIMUM 7' COVER)
STA. 147+05± TO STA. 153+75±

EXISTING 21" SANITARY SEWER

TC 894.50 CB 228R | STA 151+22 | CB 227R TC 894.12

49 LF 15" RCP @ 0.50%

43 LF 15" RCP @ 1.0%

CB 233 TC 893.18 | CB 234 TC 893.77

~~888.87~~ 52 | ~~888.50~~ | ~~889.54~~ | ~~889.79~~ 890.96 | 891.13 | ~~890.67~~ 79 | ~~889.50~~ | ~~890.77~~ 80 | ~~891.00~~ | ~~891.04~~ | ~~891.25~~ | 892.12 .38 | 892.16 | ~~892.17~~ .38 | 892.59 .79 | ~~889.00~~ 892.03 | 877.42 | 877.94

910 905 900 895 890 885 880 875 870

REVISED 9/30/92 B.J.
REVISED 8/14/92 CB 231 to CB228 B.J.
REVISED 4/29/92 CITY UTILITIES B.J.

CONFORMED TO CONSTRUCTED
DONE BY: MR
DATE: 12-5-93

28-126

S.A.P. 62-645-10

SHEET ~~15~~ 15R2 OF 73 SHEETS

PROJECT=LNGLK ALT= 1 REV= 3 SGR=GRID FORM=FORMAT1 DATE=12/18/1991

AP 235 | MH. 236 | SD-242 | AP. 243 | 22' BIT. | 22' BIT. | COUNTY ROAD H2 | 43' | 33' | 22' | 22' | WOOD SIGN | 35'R | 8"/12" | END B624 C & G WITH 10' VERTICAL TAPER, LT. 70' SEE DETAIL SHEET 8 | SD 241 | MH. 240 | MH 22 | 25' | 157 | 158 | SECTION LINE | 159 | 160 | 161 | 162 | 163 | 164 | 165 | CONST. C/L | LONG LAKE ROAD | WILLIAMS PIPELINE | RELOCATE HYDRANT ASSEMBLY F & I 6" GATE VALVE & BOX | 15' X 15' R/W ACQUISITION | CB 238 | CB 237 | TAPER TO MATCH EXISTING AS DIRECTED | PROPOSED WILLIAMS PIPELINE LOCATION | AP 239 | 20' DRAINAGE EASEMENT | 12" Sleeve | 12" RW GATE VALVE | PERFORATED P.E. PIPE DRAIN | RELOCATE HYDRANT ASSEMBLY F & I 6" GATE VALVE & BOX | PROPOSED | 161+45 | SCALE | 162+75 | CONNECT TO EXISTING 12" CIP WATERMAIN STA. 165+00± | CONST. LIMITS | PROPOSED WILLIAMS PIPELINE LOCATION | 4" PERFORATED P.E. PIPE DRAIN | REPLACE 12" CIP WATERMAIN WITH 12" DIP WATERMAIN CL. 52 | CONNECT TO EXISTING 12" CIP WATERMAIN | SCOTLAND COURT | TRANSITION B624 C & G TO EXISTING SEE DETAIL SHEET 8 | OFFSET 8" CIP WATERMAIN | CONST. LIMITS | PROTECT OUTLET STRUCTURE & WEIR | AP 250 | AP 251 | MH 23 | MH. 245 | MH 244 | RELOCATE WOOD PLANTER & SIGN | PROPOSED R/W | CB. 247 | CB. 247A | CB. 248 | CB. 249 | 4" PERFORATED P.E. PIPE DRAIN

END B624 C & G WITH 10' VERTICAL TAPER, RT. 70' SEE DETAIL SHEET 8

③ SALVAGE & INSTALL
④ ADJUST CURB STOP BOX

8' X 8' X 2" POLYSTYRENE INSULATION

existing waterman | 156+82 | 6" D.I.P. | 6" D.I.P. | 76 L.F. 6" D.I.P.

STA. 158+50 END SUBCUT FOR UNIFORMITY & COMPACTION, BEGIN MUCK EXCAVATION

STA. 158+78 RIGHT, BEGIN 4" PERFORATED P.E. PIPE DRAIN

4' SUBCUT FOR UNIFORMITY AND COMPACTION

88 ~~78~~ LF 44" SPAN RCP-A Δ 0.15% PLUS APRON

EXISTING 12" SANITARY SEWER

140 ~~150~~ LF 36" RCP Δ 0.15%

89 ~~78~~ LF 36" RCP Δ 0.15%

188 ~~187~~ LF 36" RCP Δ 0.15%

241 ~~242~~ LF 15" RCP Δ 0.50%

64 ~~48~~ LF 15" RCP Δ 3.3± PLUS APRON

SEE PREVIOUS SHEET FOR APRO.I 235

PVC -50.00 EL 889.26 | PVI +75.00 EL 899.42 | HIGH POINT +77.85 EL 899.35 | PVT +100.00 EL 895.29

49 LF 15" RCP Δ 0.50%

92 LF

4" PERFORATED P.E. PIPE DRAIN, RIGHT SIDE ONLY

284 LF 15" RCP Δ 0.50%

192 LF

MUCK EXCAVATION

REMOVE APRON & CONSTRUCT MH

60 LF 15" RCP

55 LF 15" RCP Δ 0.50%

84 LF 15" RCP Δ 0.50% PLUS APRON

4" PERFORATED P.E. PIPE DRAIN, RIGHT AND LEFT SIDE CB 248 South 274 | CB 248 to CB 249 | CB 249 to 163+00±

4" PERFORATED P.E. PIPE DRAIN CB 246 to 159+38 RIGHT SIDE 6' N from MH 240

200 LF 36" RCP Δ 0.15%

PVC -25.00 EL 898.01 | PVI +50 EL 898.01 | PVT +75 EL 897.92 | PVC -25.00 EL 897.99 | PVI +50 EL 898.01 | PVT +75 EL 897.92

-00.630% | -00.501% | +0.5% | -00.630%

REPLACE 12" CIP WATERMAIN WITH 12" DIP WATERMAIN CL. 52 STA. 161+50± TO STA. 165+00± (MINIMUM 7' COVER)

STA. 165+00 END 4" PERFORATED P.E. PIPE DRAIN BOTH SIDES

AS-BUILT PLAN CONFORMING TO CONST. RECORDS DONE BY: MR DATE: 12-3-93

910 | 905 | 900 | 895 | 890 | 885 | 880 | 875 | 870

PROJECT-LNGLK ALT- 1 REV- 3 SGR-GRID FORM-FORMAT1 DATE-12/13/1991

REVISED 8/18/93 GRADE STA. 161+25 to 167+06 B.J. 28-126

S.A.P. 62-645-10

SHEET 16 OF 73 SHEETS

16R

PROTECT PLANTER AND SIGN

MOUNDSVIEW DRIVE

CONST. LIMITS

TRANSITION B624 C & G TO EXISTING, LT. 70' SEE DETAIL SHEET 8

BEGIN WALL STA. 169+10 49 LT.±

END WALL 169+60

REMOVE LANDSCAPE TIMBERS INCLUDE IN PRICE BID FOR COMMON EXCAVATION

END B624 C & G WITH 10' VERTICAL TAPER SEE DETAIL SHEET 8

PRECAST MASONRY RETAINING WALL SEE DETAIL SHEET 8

MATCH B624 C & G TO EXISTING AS DIRECTED

END B624 C & G STA. 171+60

END 4" CONCRETE WALK STA. 172+32±

SEE SHEETS 32-37 FOR TRAFFIC SIGNAL REVISIONS

EXCEPTION STH 10

MH 251A

PROPOSED R/W

25'R

CB. 252

CB. 254

CB. 256

SECTION LINE

CONST. C/L

LONG LAKE ROAD

CB 251

CB. 255

WILLIAMS PIPELINE

BUILD OVER EXISTING RCP

MH 257

RELOCATE HYDRANT ASSEMBLY, F. & I. 6" GATE VALVE & BOX

PROPOSED WILLIAMS PIPELINE LOCATION

SEE SHEET 31 FOR HORIZONTAL AND VERTICAL INFORMATION AT INTERSECTION

MMCC INTERCEPTOR SEWER

existing G.V. STA. 168+38

SCALE 0' 30' 100'

S.T.H. 10

BIT.

REMOVE APRON AND MAKE SUITABLE CONNECTION AS DIRECTED.

REMOVE APRON AND PLUG AS DIRECTED

106 LF 24" RCP Δ 1.71%

67 LF 24" RCP Δ 0.70% PLUS APRON

49 LF 15" RCP Δ 1.0%

82 LF 15" RCP Δ 1.0%

185 LF 15" RCP Δ 1.48%

250 LF 15" RCP Δ 3.18%

MUCK EXCAVATION

END MUCK EXCAVATION STATION 168+00
BEGIN 1' SUBCUT FOR UNIFORMITY & COMPACTION

1' SUBCUT FOR UNIFORMITY & COMPACTION

VARIABLE

VAR.

50 FT VC M= 0.13

138 FT VC M= 0.44

50 FT VC M= 0.04

MATCH EXISTING STATION 172+15±

MATCH EXISTING STATION 173+55±

BUILD MH OVER EXISTING 18" RCP-A

ASPHALT PLAN CONFORMING TO CONST. RECORDS

DONE BY: MR

DATE: 12-3-93

Vc=40

M=0.0169875

Revised 8/18/93 GRADE STA. 161+25 to 167+06 BJ.

28-126

S.A.P. 62-645-10

SHEET 17 OF 73 SHEETS

17R

PROJECT-LNGLK ALT-1 REV-3 SGR-GRID FORM-FORMAT1 DATE-12/09/1991

SHOPPING MALL
2553 - 2557

2535

2520

BEGIN 4" CONCRETE WALK STA. 174+46±

STATION 174+70± TO STATION 175+80± PLACE FABRIC REINFORCEMENT - SEE SPECIAL PROVISIONS & DETAIL SHEET 8

AP 257A

BEGIN B624 C & G STA. 174+90

BEGIN B624 C & G WITH 10' VERTICAL TAPER SEE DETAIL SHEET 8

PLACE TOPSOIL & SOD AS DIRECTED

CONSTRUCT BIT. CURB

CONST. LIMITS

REMOVE EXISTING PAVEMENT & BIT. CURB, INCLUDE WORK IN THE COST OF COMMON EXCAVATION

MATCH EXISTING CURB AS DIRECTED

PROTECT

SALVAGE WOOD FENCE

CB 258A

CB 259

CB 260

CB 28

CB 29

CB 30

CB 31

MH 28

MH 30

MH 32

SECTION LINE

CONST. C/L

PROPOSED R/W

ADJUST HYDRANT

PROTECT

MATCH EXISTING CURB AS DIRECTED

+27 BEGIN TAPER LEFT 25

PROTECT

CONST. LIMITS

RELOCATE HYDRANT ASSEMBLY

PROPOSED R/W

TEST WELL

BR. PIPE

PROTECT

BEGIN B624 C & G STA. 174+15

20' x 20' PROPOSED R/W ACQUISITION

20' x 20' PROPOSED R/W ACQUISITION

TRANSITION B624 C & G TO EXISTING, 50' RT. SEE DETAIL SHEET 8

BRONSON DR.

CONC.

BIT.

SEE SHEET 31A FOR ADDITIONAL CITY WATERMAIN WORK AT BRONSON DRIVE

PROPOSED R/W

CONST. LIMITS

PROPOSED WILLIAMS PIPELINE LOCATION

WILLIAMS PIPELINE

CONST. LIMITS

① SAWCUT CONCRETE

② SAWCUT BITUMINOUS

③ SAWCUT & INSTALL

8' X 8' X 2" POLYSTYRENE INSULATION

SCALE 0' 30' 100'

RECONSTRUCT TO MH - 30.0 LF

12" RCP 15 LF @ 8% PLUS APRON

262 LF 15" RCP Δ 1.0%

EXISTING 18" RCPA

55 LF 15" RCP Δ 1.0%

50 FT VC M= 0.06

200 LF 15" RCP Δ 0.50%

48 LF 15" RCP Δ 1.0%

50 FT VC M= 0.09

EXISTING 8" SANITARY SEWER

1' SUBCUT FOR UNIFORMITY AND COMPACTION

-00.500%

+00.500%

-00.864%

1.83

ASSUMED FOR CONFORMING TO CONST. READINGS

DONE BY: AR

DATE: 12-3-93

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S.A.P. 62-645-10

SHEET 18 OF 73 SHEETS

PROJECT-LNGBLK ALT- 1 REV- 3 SGR-GRID FORM-FORMAT1 DATE-12/09/1991

PROJECT=LNGLK ALT= 1 REV= 3 SGR=GRID FORM=FORMAT1 DATE=12/09/1991

COUNTY ROAD I

LONG LAKE ROAD

7700 7720 7730 7740 7750 7760 7780 7800

RELOCATE CURB STOP & BOX

+07 END TAPER LEFT 27' MATCH EXISTING C & G

+27 BEGIN TAPER LEFT MATCH EXISTING C&G

4" CONC. WALK STA. 184+06 LT. 32'

4" RSC JACKED

HH 3 HH 4 HH 5 HH 6

6" CIP

EXCEPTION 183+07 TO 184+27

SAWCUT & REMOVE PAVEMENT AS DIRECTED

CONSTRUCT 7" NONREINFORCED CONC. PVMT. WITH INTEGRAL B6 CURB AS DIRECTED

REMOVE & REPLACE CONCRETE WALK AS DIRECTED

CB 317

CONST. LIMITS

REMOVE TIMBER WALL

SAVE

SCALE 0' 30' 100'

SECTION LINE

CONST. C/L

WILLIAMS PIPELINE

PROPOSED WILLIAMS PIPELINE LOCATION

CB 262

RELOCATE CURB STOP & BOX

7753 7767 7777 7787 7797 7801 7809 7817

RELOCATE CURB STOP & BOX

2" PVC PIPE DRAIN, CONNECT TO CB 264. SEE DETAIL BELOW. PAYMENT SHALL BE MADE AS ITEM NO. 0502.602

- ④ ADJUST CURB STOP BOX
- ① SAWCUT CONCRETE
- ② SAWCUT BITUMINOUS
- ③ SALVAGE & INSTALL
- 8' X 8' X 2" POLYSTYRENE INSULATION

2525

EXCEPTION

REMOVE CB 81 & 4'± 15" RCP. BUILD CB 317 OVER EXISTING 15" RCP

1' SUBCUT FOR UNIFORMITY AND COMPACTION

CB 261 CB 262 CB 263 CB 264

46 49 LF 15" RCP Δ 1.0%

47 49 LF 15" RCP Δ 1.0%

59 LF 15" RCP Δ 1.0%

REMOVE 6± LF 2" PVC

10 LF 2" PVC W/2 - 45° BENDS

12 LF 27" RCP

4" PERFORATED PE PIPE No. SO. LT & RT

1" PERFORATED PE PIPE No. SO, LT & RT

MAKE SUITABLE CONNECTION

EXISTING 15" RCP

EXISTING 27" RCP

EXISTING 8" SANITARY SEWER

BUILD OVER EX. 27" RCP

REMOVE CB 36

CONFORMING TO CONST. RECORDS

DONE BY: MR

DATE: 12-2-92

50 FT VC M= 0.09

50 FT VC M= 0.06

50 FT VC M= 0.10

PVC -75.00 EL 907.80

PVT +25.00 EL 907.71

PVC +35.00 EL 906.01

PVT +10.00 HIGH POINT +10.00 EL 906.07

PVT +35.00 EL 906.01

PVC +07.00 EL 907.15

PVT +57.00 EL 907.28

LOW POINT 906.77 EL 907.66

LOW POINT +23.42 EL 907.10 PVT +32.00 EL 907.02

-00.864% -00.871% +00.500% -00.500% +01.023%

1.79' 1.79'

20:1

REVISED 4/29/92 CITY UTILITIES

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S.A.P. 62-645-10

SHEET 19 OF 73 SHEETS

PROJECT=LNGLK ALT= 1 REV= 3 SGR=GRID FORM=FORMAT1 DATE=12/09/1991

7840 7846 7852 7858 7954

RELOCATE CURB STOP & BOX

RELOCATE CURB STOP & BOX

SAVE

REMOVE TIMBER WALL TO R/W

CONST. LIMITS

SAVE

END B624 C & G WITH 10' VERTICAL TAPER, LT. 57' SEE DETAIL SHEET 8

RELOCATE HYDRANT ASSEMBLY, F. & I. GATE VALVE & BOX

FROM MH 266A TO STA. 197+12 LEFT 55± REMOVE 77± LF 24" RCP AND LAY 69± LF OF NEW 36" RCP AT SAME GRADE, PLUS ONE 36" TO 30" INCREASER AND ONE 30" TO 24" INCREASER TO MATCH EXISTING 24" RCP.

HOCKEY RINK

HOCKEY RINK TO BE RELOCATED BY OTHERS

SCALE 0' 30' 100'

SALVAGE TIMBER PLANTER & SIGN

CONST. LIMITS

DRAINAGE EASEMENT

SD. 269

REMOVE TIMBER WALL WITHIN CONST. LIMITS

CB. 267

MH. 270

CB. 272

192 193 194 195 196 197 198 199 200 201

LONG LAKE ROAD

SECTION LINE

CONST. C/L

WILLIAMS PIPELINE

MH 266A

CB. 265 CB. 266 CB. 268

HILLVIEW ROAD

END B624 C & G WITH VERTICAL TAPER, RT. 57' SEE DETAIL SHEET 8

PROPOSED WILLIAMS PIPELINE LOCATION

CONST. LIMITS

RELOCATE CURB STOP & BOX

7829 7841 7853 7865 7901 7945 7955

SD. 271

10' DRAINAGE EASEMENT

CONST. LIMITS

① SAWCUT CONCRETE
② SAWCUT BITUMINOUS
③ SALVAGE & INSTALL
8' X 8' X 2" POLYSTYRENE INSULATION
④ ADJUST CURB STOP BOX

920 915 910 905 900 895

+01.023% -01.454% +01.000% -01.000% +00.590%

PVC +115.00 EL 909.91

HIGH POINT +35.55 EL 910.02

FVI +40.00 EL 910.17

PVT +65.00 EL 909.81

PVC +65.00 EL 907.94

50 FT VC M= 0.15

PVT +65.00 EL 907.73

PVI +92.00 EL 908.15

PVC +75.00 EL 907.32

50 FT VC M= 0.10

PVT +25.00 EL 907.22

50 FT VC M= 0.18

PVI +25.00 EL 907.46

LOW POINT +29.93 EL 907.63

PVT +00.00 EL 907.07

LOW POINT +06.45 EL 907.16

69 LF 36" RCP @ 0.2%±

30" TO 36" INCREASER

24" TO 30" INCREASER

MATCH EXISTING ELEVATION

43 LF 15" RCP @ 0.50%

45 LF 15" RCP @ 0.50%

139 LF 15" RCP @ 0.50%

169 LF 15" RCP @ 0.50%

4" PERFORATED P.E. PIPE C.B. 269 N.E.S. C.B. 267 N.E.S.

18 LF 15" RCP @ 0.50%

64 LF 15" RCP @ 0.50%

43 LF 15" RCP @ 0.50%

REMOVE MH 42 AND BUILD MH 266A IN SAME LOCATION. MAKE CONNECTIONS TO EXISTING PIPES TO THE SOUTH AND EAST.

BUILD OVER EX. 27" RCP

REMOVE 12" RCP

93 LF 15" RCP @ 0.50%

EXISTING 27" RCP

1' SUBCUT FOR UNIFORMITY AND COMPACTION

EXISTING 8" SANITARY SEWER

893.93

895.34

898.21

1.79'

1.79'

903.25 .32 903.03 .60 902.3± 902.86 3.34 903.00 .03 903.25 .38 903.29 .33 903.95 4.04 904.00 .04 904.00 904.00 .31 904.00 903.95 904.04 904.32 904.84 .91 904.80 .91 905.86 905.22

AS-BUILT PLANS
REVISED AS NECESSARY
CONFORMING TO
CONST. REVISIONS
DONE BY: MF
DATE: 12-5-93

REVISED 4/29/92 CITY UTILITIES

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S.A.P. 62-645-10

SHEET 20 OF 73 SHEETS

7964 7970 7990 8010 8030 8038 8046 8060 8072

RELOCATE CURB STOP & BOX

SAVE

MATCH TO EXISTING CONC.

PROTECT FENCE

CONST. LIMITS

LONG LAKE ROAD

SECTION LINE

CONST. C/L

WILLIAMS PIPELINE

CB. 272 CB. 274 CB. 275 CB. 276 CB. 277

202 203 204 205 206 207 208 209

MH 45 MH 46 MH 47

22' 33' 3'

SAVE 12" PINE

PROPOSED WILLIAMS PIPELINE LOCATION

RELOCATE CURB STOP & BOX

MATCH TO EXISTING CONC.

CONST. LIMITS

① SAWCUT CONCRETE
② SAWCUT BITUMINOUS
③ SALVAGE & INSTALL
④ ADJUST CURB STOP BOX

4' WIDE X 2" POLYSTYRENE INSULATION

7975 7977 8011 8035 8041 8071

0' 30' 100'
SCALE

1' SUBCUT FOR UNIFORMITY AND COMPACTION

EXISTING 8" SANITARY SEWER

PVC +70.00 EL 910.43

PVI +95.00 EL 910.58
HIGH POINT +97.12 EL 910.51

PVT +20.00 EL 910.46

PVC +95.00 EL 909.58

PVT +45.00 EL 909.98

PVC +10.00 EL 909.91

PVI +35.00 EL 910.04
HIGH POINT +28.00 EL 909.96

PVT +60.00 EL 909.82

PVC +55.00 EL 908.97

PVI +80.00 EL 908.75
LOW POINT +83.66 EL 908.34

+00.590% -00.498% +00.504% -00.890%

1.79

50 FT VC M= 0.06
50 FT VC M= 0.07
50 FT VC M= 0.09
50 FT VC M= 0.10

901.33 899.56 899.69

CB 272 EL 909.14 CB 274 EL 908.43 CB 275 EL 908.38 CB 276 EL 908.06 CB 277 EL 908.06

46 LF 15" RCP Δ .0%
905.13 905.17 905.66 905.88 .31

47 LF 15" RCP Δ 1.0%
903.78 903.88 904.29 .86 .86

252 LF 15" RCP Δ 0.50%
905.13 903.88 903.78 .31 .10 .94

920 915 910 905 900 895

201 202 203 204 205 206 207 208 209

REVISED 4/29/92 CITY UTILITIES

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S.A.P. 62-645-10

SHEET 21 OF 73 SHEETS

PROJECT=LNGBLK ALT= 1 REV= 3 SGR=GRID FORM=FORMAT1 DATE=12/11/1991

④ ADJUST CURB STOP BOX
① SAWCUT CONCRETE
② SAWCUT BITUMINOUS
③ SALVAGE & INSTALL
2" POLYSTYRENE INSULATION

SCALE 0' 30' 100'

F. & I. 6" GATE VALVE & BOX RELOCATE HYDRANT ASSEMBLY

SHERWOOD

END B624 C & G WITH VERTICAL TAPER, LT. 57' SEE DETAIL SHEET 8

RELOCATE CURB STOP & BOX

PROTECT FENCE

PROTECT APRON

RELOCATE HYDRANT ASSEMBLY, F. & I. 6" GATE VALVE & BOX

CONST. LIMITS

LONG LAKE ROAD

SECTION LINE

CONST. C/L

WILLIAMS PIPELINE

REMOVE RCP

REPLACE WATER SERVICE

PROPOSED WILLIAMS PIPELINE LOCATION

END B624 C & G WITH VERTICAL TAPER, RT. 57' SEE DETAIL SHEET 8

LAPORT DR.

GRAVEL

WOOD FENCE

8100 8132 8140 8150 8214 8085 8101 8121 8135 8145 8205 8217

MH 278 CB 280 MH 281 CB 282 CB 283 CB 284 CB 285 MH 279

210 211 212 213 214 215 216 217 218

209 210 211 212 213 214 215 216 217 218

PVT +05.00 EL 908.91 | PVI +15.00 EL 909.63 | PVC +25.00 EL 907.89 | PVI +50.00 EL 907.68 | PVT +75.00 EL 907.35 | PVC +75.00 EL 904.71 | PVT +23.00 EL 904.51

+00.652% -00.830% -01.320% +00.500%

1.79

146 LF 15" RCP Δ 0.49%

200 LF 15" RCP Δ 0.34%

191 LF 15" RCP Δ 0.50%

90 LF 18" RCP Δ 0.40%

49 LF 18" RCP Δ 0.40%

218 LF 18" RCP Δ 0.50%

43 LF 15" RCP Δ 1.0%

312 LF 24" RCP Δ 0.18%

43 LF 15" RCP Δ 1.0%

50 FT VC M= 0.03

50 FT VC M= 0.11

1' SUBCUT FOR UNIFORMITY AND COMPACTION

STATION 212+50 BEGIN 2' SUBGRADE CORRECTION

STATION 215+00 END 2' SUBGRADE CORRECTION, BEGIN MUCK EXCAVATION

MUCK EXCAVATION

REMOVE MH

BUILD OVER EX. 15" RCP

PLUG AND ABANDON

55 LF 8" ARMCO

4" PERFORATED P.E. PIPE 49 LF FROM MH. 281 towards Apron 2818

4" PERFORATED P.E. PIPE MH50 to 213+25 Rt. & CB 282 to 213+20 Lt

4" PERFORATED P.E. PIPE CB 283 to 214+25 RT CB 283 to CB. 285 RT CB 282 to CB. 284 LT

4" PERFORATED P.E. PIPE CB 285 to 217+77 Rt CB 285 to 218+10 RT

AS BUILT PLAN CONFORMING TO POINT SOURCES

DONE BY: MR

DATE: 12-3-93

REVISED 4/29/92 CITY UTILITIES

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S.A.P. 62-645-10

SHEET 22 OF 73 SHEETS

PROJECT-LNGLK ALT- 1 REV- 3 SGR-GRID FORM-FORMAT1 DATE-12/11/1991

STA. 222+50± INSTALL NEW WATER AND SANITARY SEWER SERVICES. PAYMENT SHALL BE MADE AT BID PRICE FOR APPROPRIATE PAY ITEMS. EXACT LOCATION SHALL BE DETERMINED IN THE FIELD.

8' X 8' X 2" POLYSTYRENE INSULATION

① SAWCUT CONCRETE

② SAWCUT BITUMINOUS

③ SALVAGE & INSTALL

④ ADJUST CURB STOP BOX

8230 8225 8239 8247 8250 8260 8271 8283 8330

END B624 C & G WITH 10' VERTICAL TAPER, LT. 57' SEE DETAIL SHEET 8

JORDAN AVE.

RELOCATE CURB STOP & BOX

RELOCATE HYDRANT ASSEMBLY. F. & I. 6" GATE VALVE & BOX

CONST. LIMITS

CONC.

BIT.

CB. 287

CB. 289

CB. 294

CB. 295

OFFSET 8" CIP WATERMAIN

NEW SERVICES

SAVE

PROTECT WALL & FENCE

PROTECT FENCE

REPLACE WATER SERVICE

MH-286

MH. 290

MH. 292

MH. 293

SECTION LINE

LONG LAKE ROAD

CHAIN LINK FENCE

WILLIAMS PIPELINE

CONST. LIMITS

PROPOSED WILLIAMS PIPELINE LOCATION

STATION 223+15±
1 EACH - 6" PRESSURE WYE 6"RW GV & BOX
62 LF - 6" DIP CLASS 52
1 EACH - HYDRANT
1 EACH - 6" GATE VALVE & BOX
1 EACH - 6" PLUG
1 EACH - CORPORATION STOP
(EXACT LOCATIONS TO BE DETERMINED IN THE FIELD)
VERTICAL OFFSET REQUIRED

MATCH LINE

DRAINAGE EASEMENT

PROTECT

CONST. LIMITS

CLOSE ENTRANCE

CONSTRUCT BIT. ENTRANCE AS DIRECTED

PLACE 4" CLASS 1 AGGREGATE SURFACE (MN/DOT SPEC. 3138) PAYMENT SHALL BE MADE AS 2211.503 AGGREGATE BASE, CL6, PLACED (ESTIMATED 70 CY PLACED)

SEE SHEET NO. 28 FOR STORM SEWER REPLACEMENT

MUCK EXCAVATION

STATION 219+00 END MUCK EXCAVATION, BEGIN 2' SUBGRADE CORRECTION

STATION 223+00 END 2' SUBGRADE CORRECTION, BEGIN 1' SUBCUT FOR UNIFORMITY & COMPACTION

AS BUILT PLAN CONFORMING TO CONST. RECORDS
DONE BY: MR
DATE: 12-9-93

REVISED 4/29/92 CITY UTILITIES

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S.A.P. 62-645-10

SHEET 23 OF 73 SHEETS

8' X 8' X 2" POLYSTYRENE INSULATION
① SAWCUT CONCRETE
② SAWCUT BITUMINOUS
E & INSTALL
T CURB STOP BOX
DRAINAGE EASEMENT

8340
8360
Relocate hydrant Sta 230+34 Lt
RELOCATE CURB STOP & BOX
SAVE
CONST. LIMITS
GRAVEL
CB 296
RELOCATE HYDRANT ASSEMBLY, F & I, 6" GATE VALVE & BOX
8" CIP
20'
50
300
202
DRAINAGE EASEMENT
15'
AP 301
CONST. LIMITS
CONC.
MH 67
234
233
232
CB 302
CB 303
SURVEY P.I.
228
SECTION LINE
229
230
231
CONST. C/L
WILLIAMS PIPELINE
LONG LAKE ROAD
OFFSET 8" CIP WATERMAIN
P.C.
MH 298
CB 297
CONST. LIMITS
PROPOSED WILLIAMS PIPELINE LOCATION
REMOVE CMP CULVERT
MH 62
MH 63
MH 64
MH 65
AP 299
0' 30' 100'
SCALE
S.T.H. 610

C/L CURVE DATA
PC = STA. 230+33.25
PI = STA. 233+60.63
PT = STA. 236+56.11
Δ = 43° 35' 22"
D = 6° 59' 54"
T = 327.38'
L = 622.86'
R = 818.72'

14 LF 15" RCP PLUS APRON Δ 1.0%
73 LF 15" RCP PLUS APRON Δ 3.04%
50 LF 15" RCP Δ 1.0%
96 LF 15" RCP Δ 0.50%
118 LF 15" RCP Δ 1.0%
315 LF 15" RCP Δ 0.50%
1' SUBCUT FOR UNIFORMITY AND COMPACTION
50 FT VC M= 0.12
50 FT VC M= 0.07
50 FT VC M= 0.06
-01.315%
+00.571%
-00.503%
+00.501%
PVC +25.00 EL 908.62
PVT +50.00 HIGH POINT EL 908.76 +11.58 EL 909.68
PVT +75.00 EL 908.63
PVC +90.00 EL 908.06
PVT +40.00 EL 908.06
PVC +90.00 EL 907.82
PVT +75.00 EL 907.28 LOW POINT +4.86 EL 907.28
PVT +15.00 EL 907.83 LOW POINT +5.05 EL 907.39
903.18
902.66
902.62
901.49
901.04
901.00
898.60
904.32
904.10
904.06
903.56
903.50
898.86
895.28
895.81
890.01
905
900
920
915
910
895
890
227
228
229
230
231
232
233
234

AS-BUILT PLAN
CONFORMING TO CONST. RECORDS
DONE BY: MR
DATE: 12-3-93

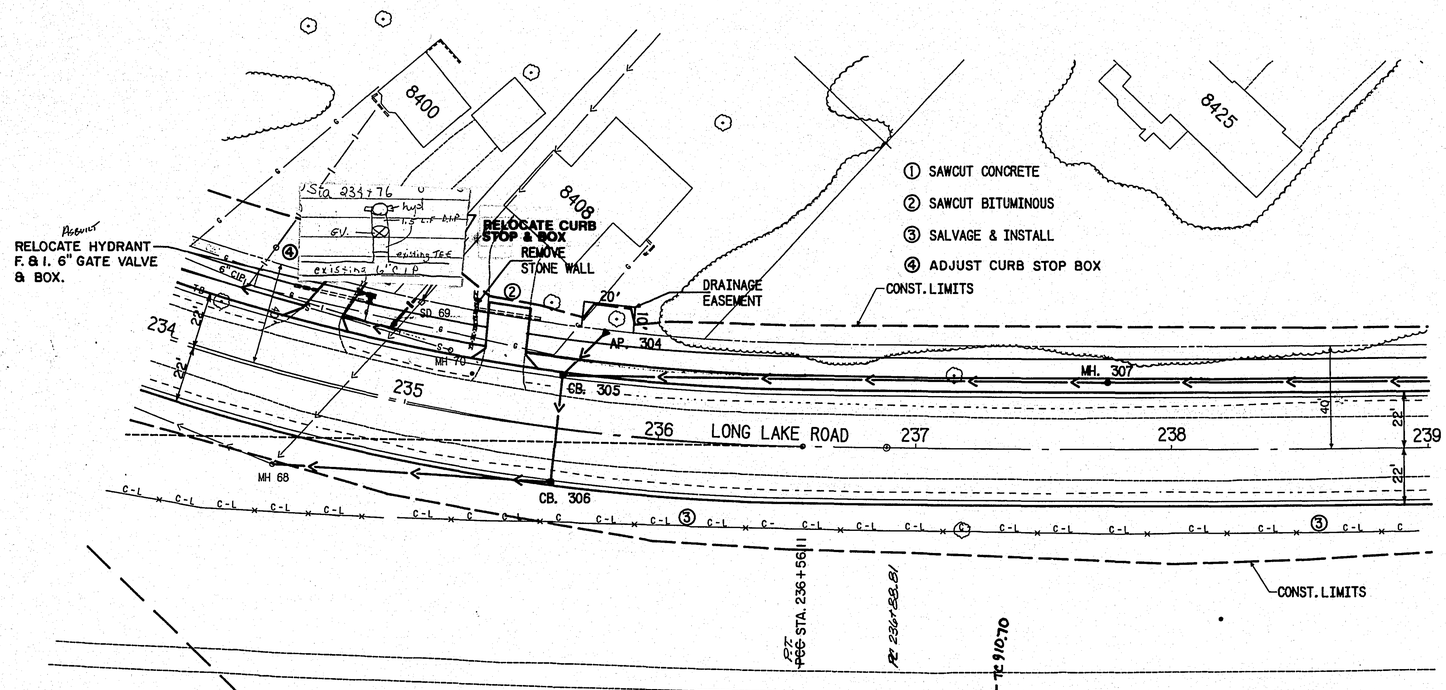
REVISED 4/29/92 CITY UTILITIES

28-126

S.A.P. 62-645-10

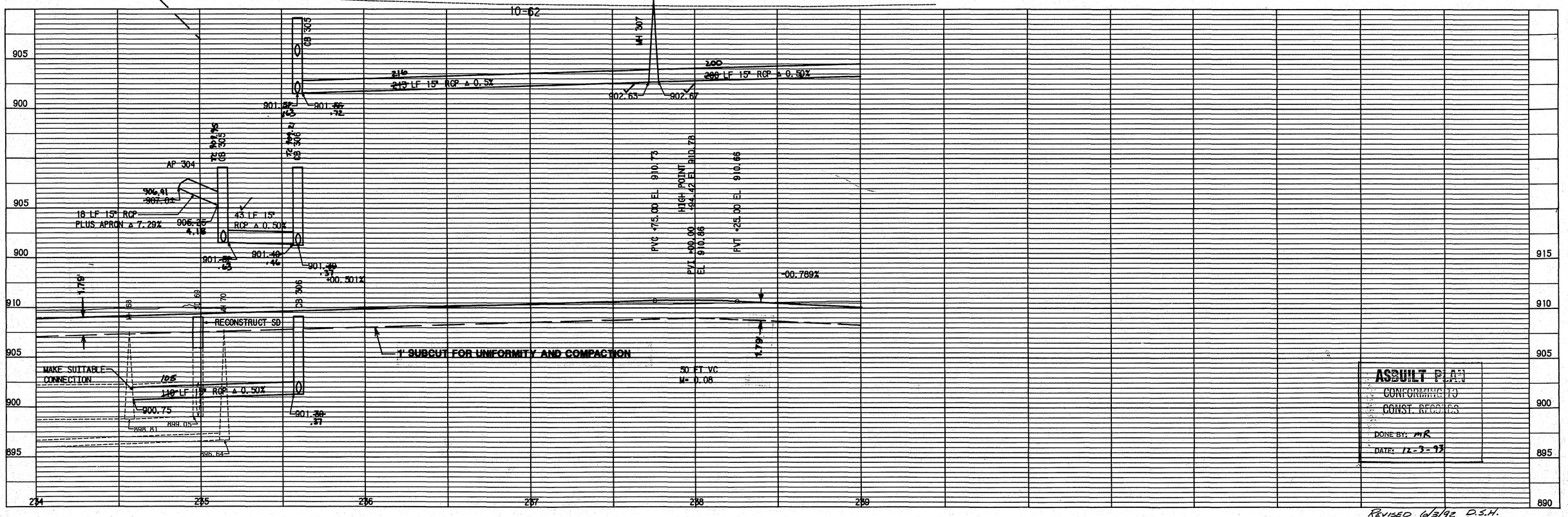
SHEET 24 OF 73 SHEETS

PROJECT=LNGLK ALT= 1 REV= 3 SGR=GRID FORM=FORMAT1 DATE=12/11/1991



CURVE DATA

PC = STA. ~~236+56.11~~	236+88.81
PI = STA. ~~241+38.97~~	241+38.82
PT = STA. ~~246+20.49~~	245+87.76
Δ = ~~7°23'58"~~	6°-47'-58"
D = ~~6°46'02"~~	0°-45'-23"
T = ~~482.86'~~	450.00'
L = ~~964.38'~~	898.95'
R = ~~7467.44'~~	7575.13'



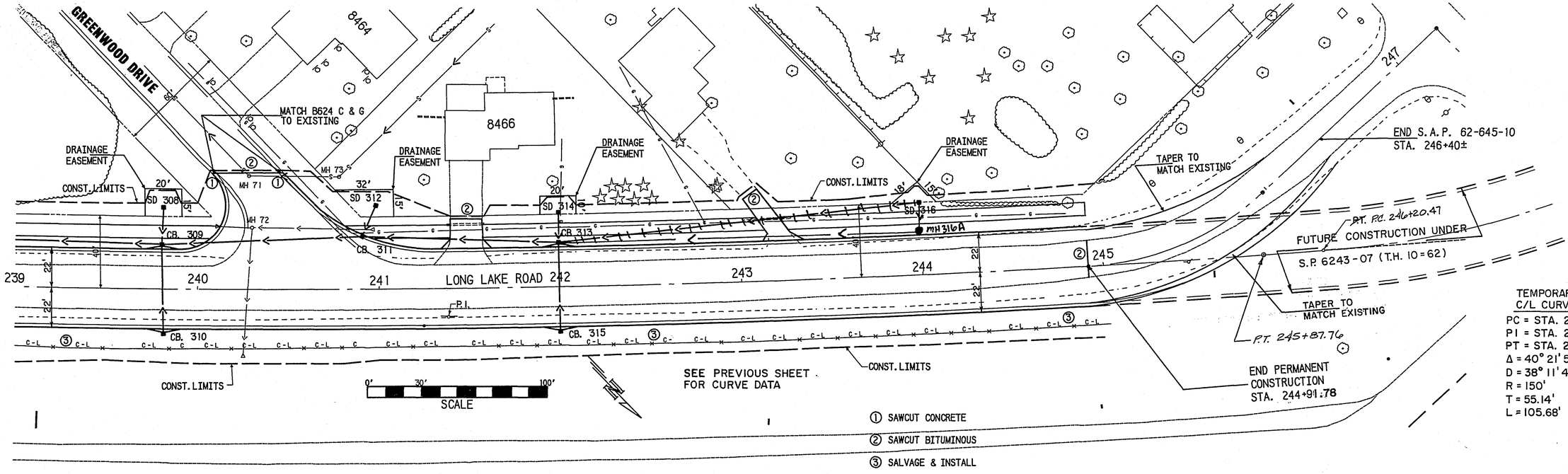
ASBUILT PLAN
CONFORMING TO CONST. REQUIRES
DONE BY: MR
DATE: 12-3-93

Revised 6/3/92 D.S.H.

28-126

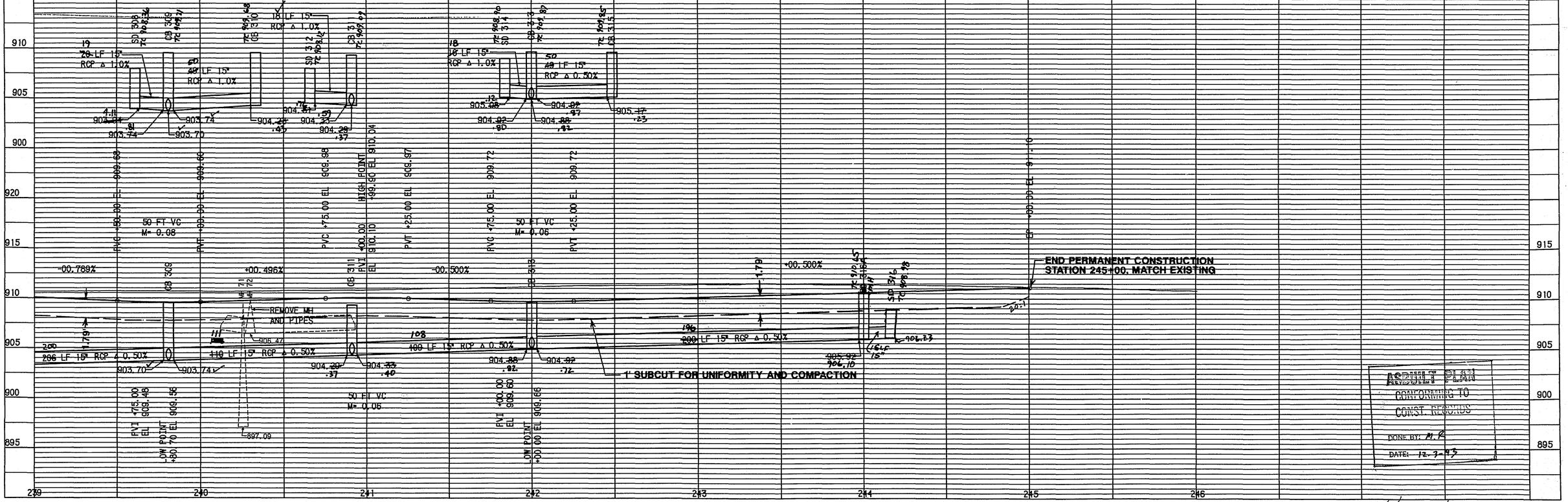
S.A.P. 62-645-10 **SHEET 25 OF 73 SHEETS**

PROJECT=LNGLK ALT= 1 REV= 1 SCR=GRID FORM=FORMAT1 DATE=12/04/1991



TEMPORARY CONST. C/L CURVE DATA

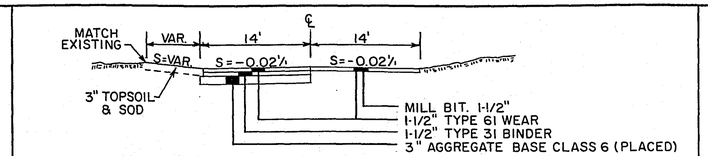
PC = STA. 244 + 91.78
PI = STA. 245 + 46.92
PT = STA. 245 + 97.46
Δ = 40° 21' 58"
D = 38° 11' 43"
R = 150'
T = 55.14'
L = 105.68'



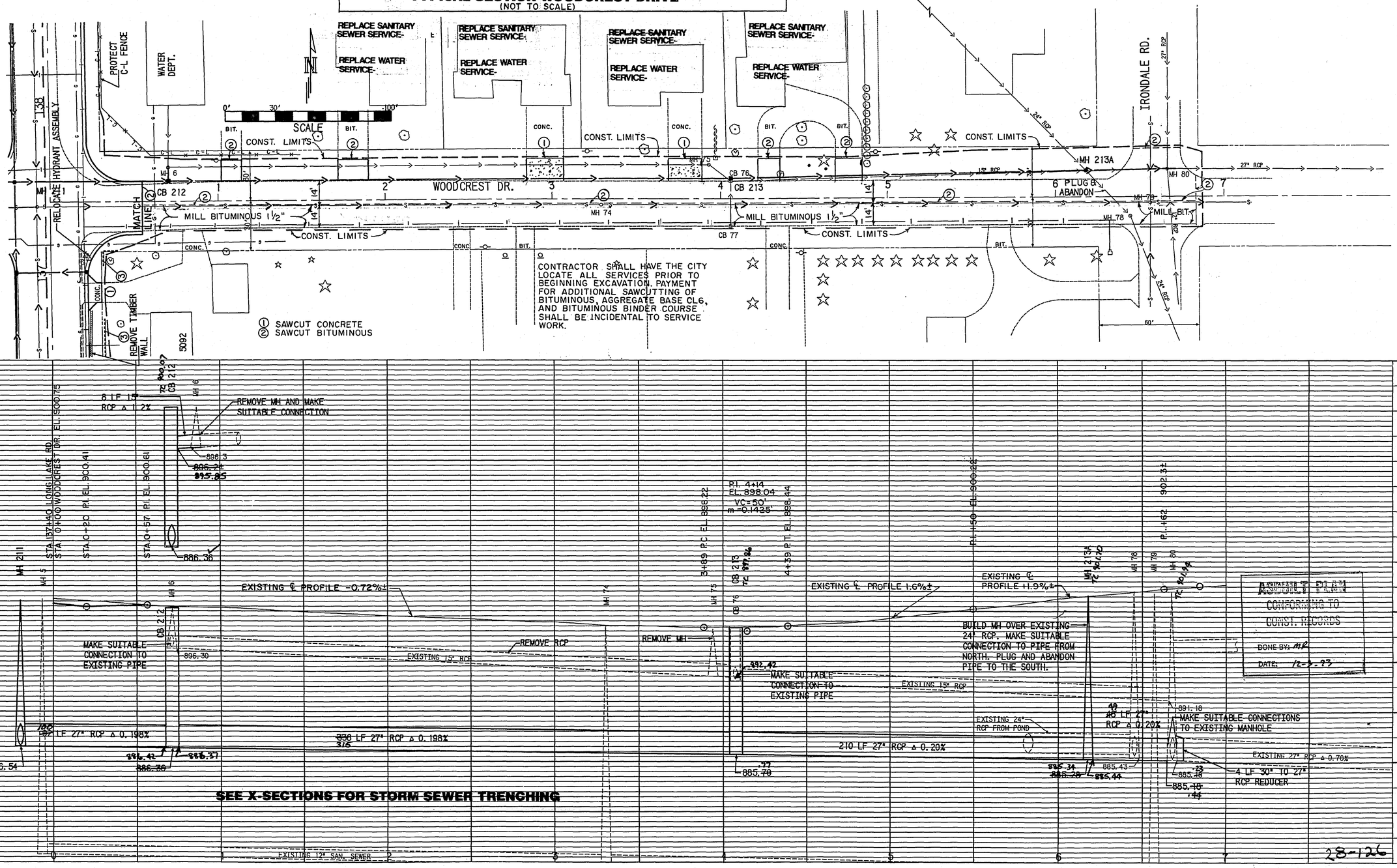
PROJECT=LNGLK ALT= 1 REV= 1 SGR=GRID FORM=FORMAT1 DATE=12/12/1991

Revised 6/3/92 D.S.H. 28-126

S.A.P. 62-645-10 **SHEET 26 OF 73 SHEETS**



TYPICAL SECTION WOODCREST DRIVE
(NOT TO SCALE)



REVISED 4/29/92 CITY UTILITIES

S.A.P. 62-645-10

WOODCREST DRIVE

SHEET 27 OF 73 SHEETS

28-126

PROJECT-LNG*BLK ALT- 1 REV- 1 SGR-GRID FORM-FORMAT1 DATE-12/04/1991

VILLAGE OF MOUNDS VIEW

CONST. LIMITS

PROTECT

CB. 295

MH 60

STA. 0+00 ARDEN STORM SEWER
STA. 223+50 LONG LAKE RD. CONST. ℄

CONST. LIMITS

MATCH LINE

DIRT ENT.

30' DRAINAGE EASEMENT

REMOVE

MH 293A

TOPSOIL & SOD

AP 293B

MH. 295

PLACE 4" CLASS I AGGREGATE SURFACE (MN/DOT SPEC. 3138)
PAYMENT SHALL BE MADE AS ITEM 2211.503 AGGREGATE BASE, CL 6, PLACED
(ESTIMATED 70 CY PLACED)

ARDAN AVE.

223

LONG LAKE ROAD

MH. 292

MH 55

8283

WOODLAWN DR.

N

0' 30' 100'
SCALE

MH 293
Fl. +20 EL. 903.36 EDGE OF BIT. UNINCUS
Fl. +85 EL. 903.6±
R.I. +40 EL. 906.1±
R.I. +90 EL. 905.6±
-1.6%
-0.05%
GRADE TO MATCH EXISTNG
AP 293B
225 LF 48" RCP @ 0.25%
~~217~~ 221 LF 48" RCP PLUS APRON @ 0.25%
897.75
897.20
.39
897.13
896.83

925 920 915 910 905 900 895 890 885

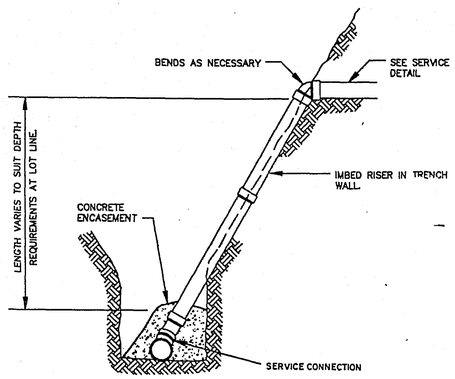
0 1 2 3 4 5

ASBUILT
CONFORMING TO
CONST. RECORDS
DONE BY: MR
DATE: 12-3-93

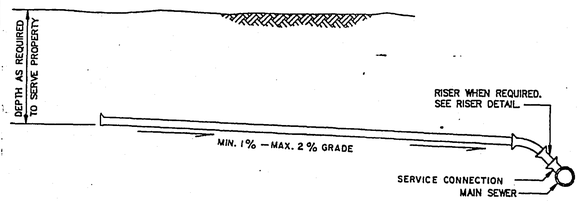
28-126

S.A.P. 62-645-10 **SHEET 28 OF 73 SHEETS**

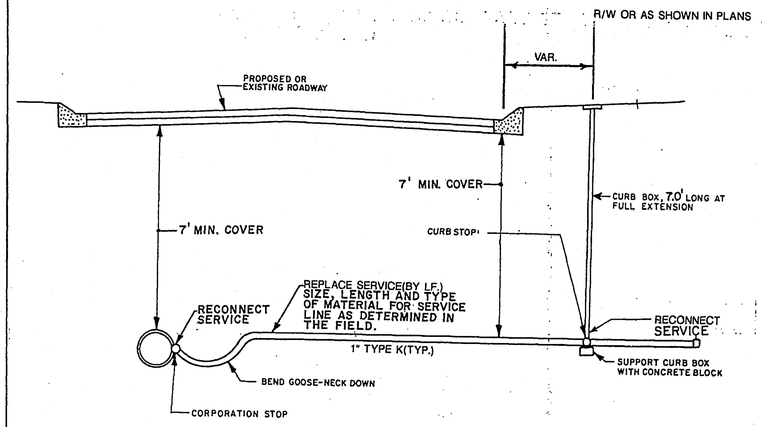
PROJECT=LNGLK ALT= 1 REV= 3 SGR=GRID FORM=FORMAT1 DATE=12/16/1991



SANITARY SEWER RISER

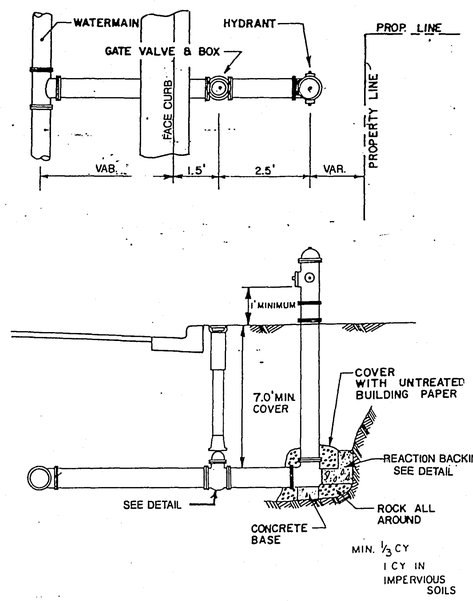


SANITARY SEWER SERVICE



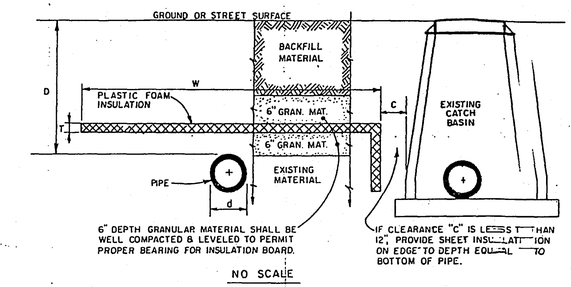
NOTE: LOCATION OF EXISTING CURB STOP BOXES SHALL BE VERIFIED IN THE FIELD BY THE CITY PRIOR TO EXCAVATION

WATER SERVICE DETAIL



SEE SPECIAL PROVISIONS FOR MATERIAL&CONST.REQUIREMENTS

HYDRANT DETAIL



NO SCALE

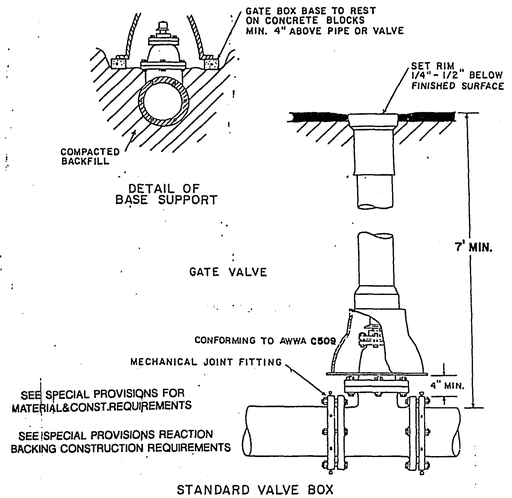
INSULATION SHALL BE OF 1" OR 2" THICK BOARDS OF EXTRUDED OR EXPANDED POLYSTYRENE PLASTIC FOAM SPECIFICALLY DESIGNED FOR USE IN UNDERGROUND CONSTRUCTION AND HAVING A MINIMUM COMPRESSIVE STRENGTH OF 35 PSI. SPECIAL NOTE IS TO BE TAKEN THAT THIS TYPE IS DIFFERENT THAN THE TYPE USED IN ORDINARY BUILDING CONSTRUCTION. THE INSULATION BOARD SHALL COMPLY WITH ASTM-D 1621.

REQUIREMENTS FOR WIDTH AND THICKNESS OF PLASTIC FOAM INSULATION, PLACED 6" ABOVE TOP OF PIPE FOR VARIOUS PIPE DEPTHS.

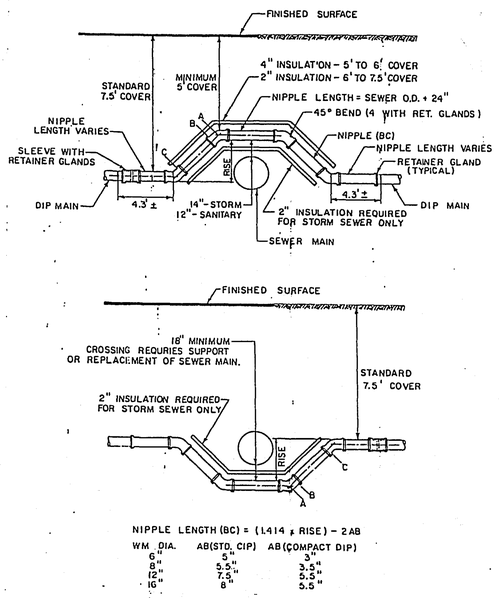
"D" DEPTH TO TOP OF PIPE	"W" COMPUTE WIDTH OF INSULATION REQUIRED	"T" THICKNESS OF INSULATION REQUIRED
2 ft. TO 3 ft.	d + 15 ft. = _____	4 in.
3 ft. TO 4 ft.	d + 13 ft. = _____	3 in.
4 ft. TO 5 ft.	d + 11 ft. = _____	3 in.
5 ft. TO 6 ft.	d + 6 ft. = _____	2 in.
6 ft. TO 7 ft.	d + 4 ft. = _____	2 in.
7 ft. (ASSUMED FROST LINE)		0

d = DIAMETER OF PIPE TO NEAREST FOOT.

INSULATION DETAIL



GATE VALVE - DETAIL



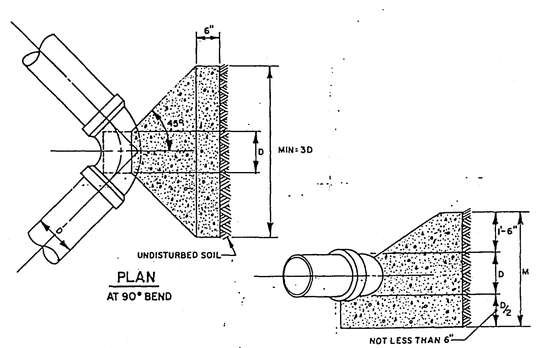
NIPPLE LENGTH (BC) = (1.414 x RISE) – 2AB

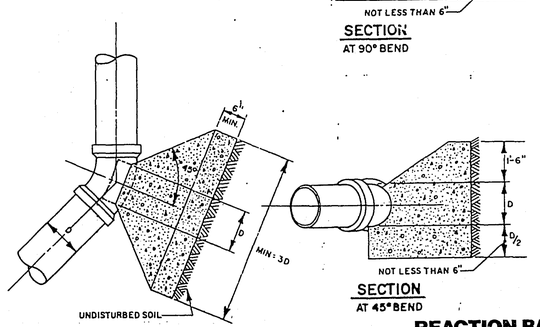
WM DIA.	AB(STD. CIP)	AB(COMPACT DIP)
6"	5"	3"
8"	5.5"	3.5"
12"	7.5"	5.5"
16"	8"	5.5"

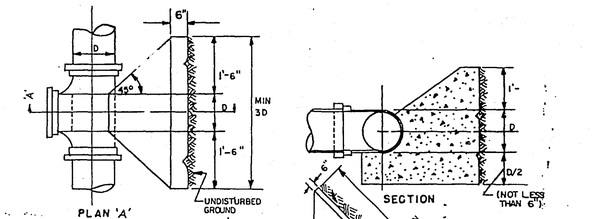
NOTE.

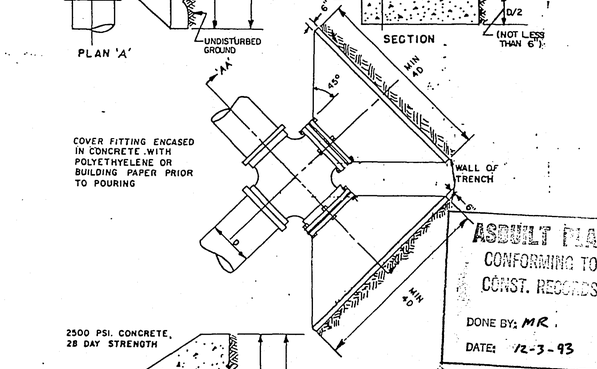
WATER MAIN OFFSETS

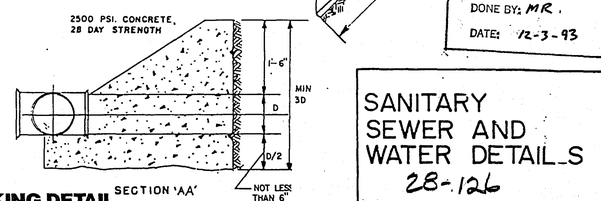
PAYMENT FOR WATERMAIN OFFSETS SHALL BE MADE AS NO.0504.602 OFFSET WATERMAIN, BY THE EACH, WHICH SHALL INCLUDE ALL WORK & MATERIALS REQUIRED









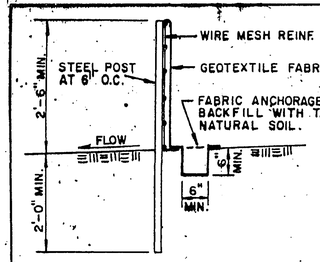


REACTION BACKING DETAIL

ASBUILT PLAN
CONFORMING TO
CONST. RECORDS
DONE BY: MR
DATE: 12-3-93

SANITARY SEWER AND WATER DETAILS
28-126

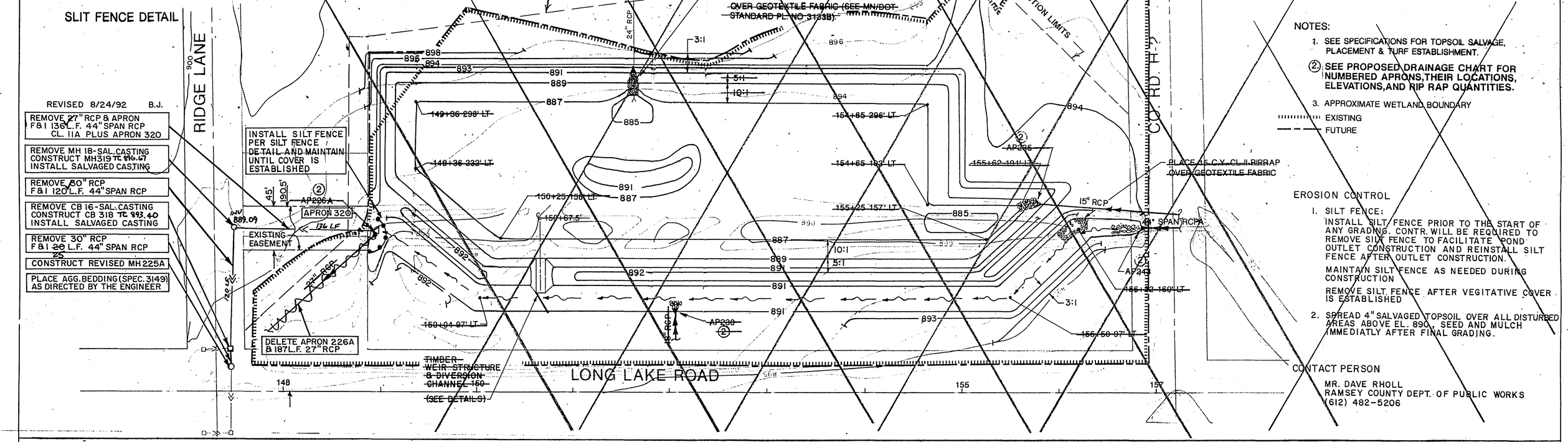
S.A.P. 62-645-10



SLIT FENCE DETAIL

REVISED 8/24/92 B.J.

- REMOVE 27" RCP & APRON F&I 136 L.F. 44" SPAN RCP CL. IIA PLUS APRON 320
- REMOVE MH 18-SAL. CASTING CONSTRUCT MH319 TC 890.67 INSTALL SALVAGED CASTING
- REMOVE 60" RCP F&I 120 L.F. 44" SPAN RCP
- REMOVE CB 16-SAL. CASTING CONSTRUCT CB 318 TC 893.40 INSTALL SALVAGED CASTING
- REMOVE 30" RCP F&I 20 25 L.F. 44" SPAN RCP
- CONSTRUCT REVISED MH225A
- PLACE AGG. BEDDING (SPEC. 3149) AS DIRECTED BY THE ENGINEER



0 50 100
SCALE

NOTES:

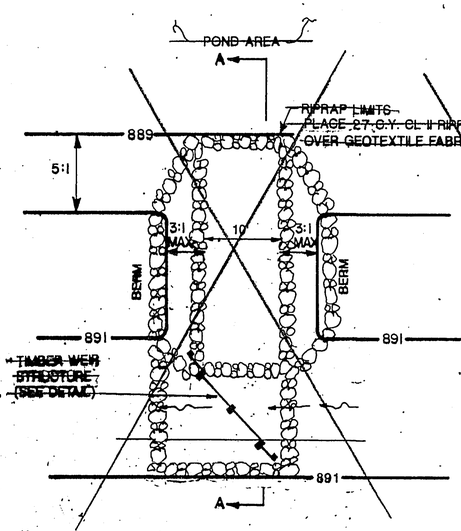
1. SEE SPECIFICATIONS FOR TOPSOIL SALVAGE, PLACEMENT & TURF ESTABLISHMENT.
2. SEE PROPOSED DRAINAGE CHART FOR NUMBERED APRONS, THEIR LOCATIONS, ELEVATIONS, AND RIP RAP QUANTITIES.
3. APPROXIMATE WETLAND BOUNDARY
   - EXISTING
   - FUTURE

EROSION CONTROL

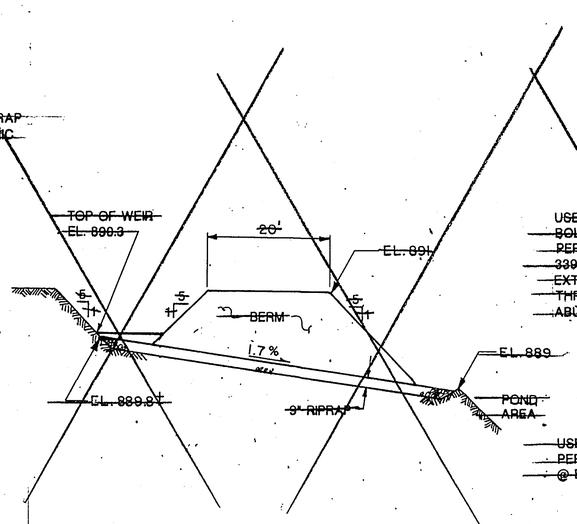
1. SILT FENCE:
   INSTALL SILT FENCE PRIOR TO THE START OF ANY GRADING. CONTR. WILL BE REQUIRED TO REMOVE SILT FENCE TO FACILITATE POND OUTLET CONSTRUCTION AND REINSTALL SILT FENCE AFTER OUTLET CONSTRUCTION.
   MAINTAIN SILT FENCE AS NEEDED DURING CONSTRUCTION
   REMOVE SILT FENCE AFTER VEGITATIVE COVER IS ESTABLISHED
2. SPREAD 4" SALVAGED TOPSOIL OVER ALL DISTURBED AREAS ABOVE EL. 890, SEED AND MULCH IMMEDIATLY AFTER FINAL GRADING.

CONTACT PERSON

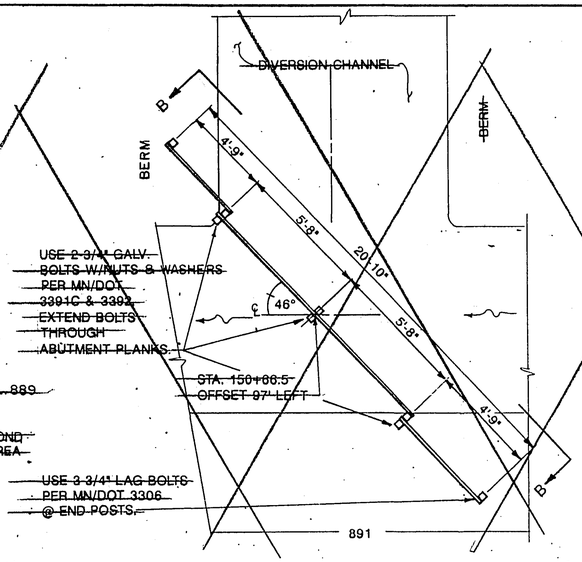
MR. DAVE RHOLL
RAMSEY COUNTY DEPT. OF PUBLIC WORKS
(612) 482-5206



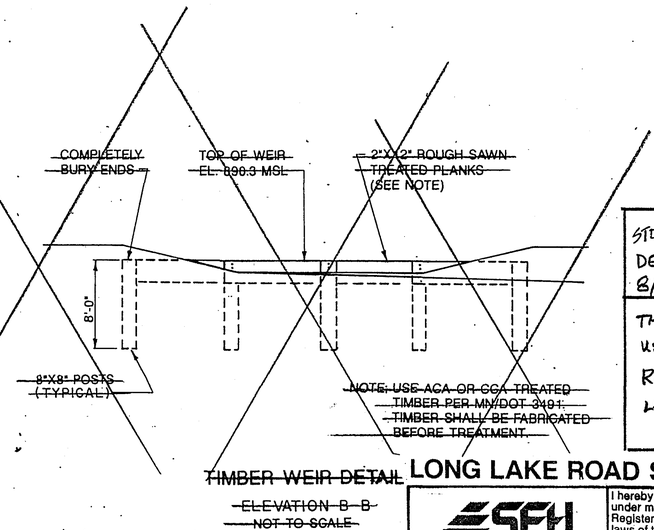
DIVERSION CHANNEL DETAIL
PLAN VIEW
NOT TO SCALE



DIVERSION CHANNEL DETAIL
SECTION A-A
NOT TO SCALE



TIMBER WEIR DETAIL
PLAN VIEW
NOT TO SCALE



TIMBER WEIR DETAIL
ELEVATION B-B
NOT TO SCALE

AS BUILT PLAN
CONFORMING TO CONST. RECORDS
DONE BY: M.R.
DATE: 12-3-93

8/24/92
STORMWATER POND DELETED FROM PLANS 8/92 BY THE CITY.
THIS SHEET IS TO BE USED FOR STORMSEWER REVISIONS AT RIDGE LANE & LONG LAKE ROAD.
B.J.

Revised 8/24/92 B.J.
Revised 2/20/92

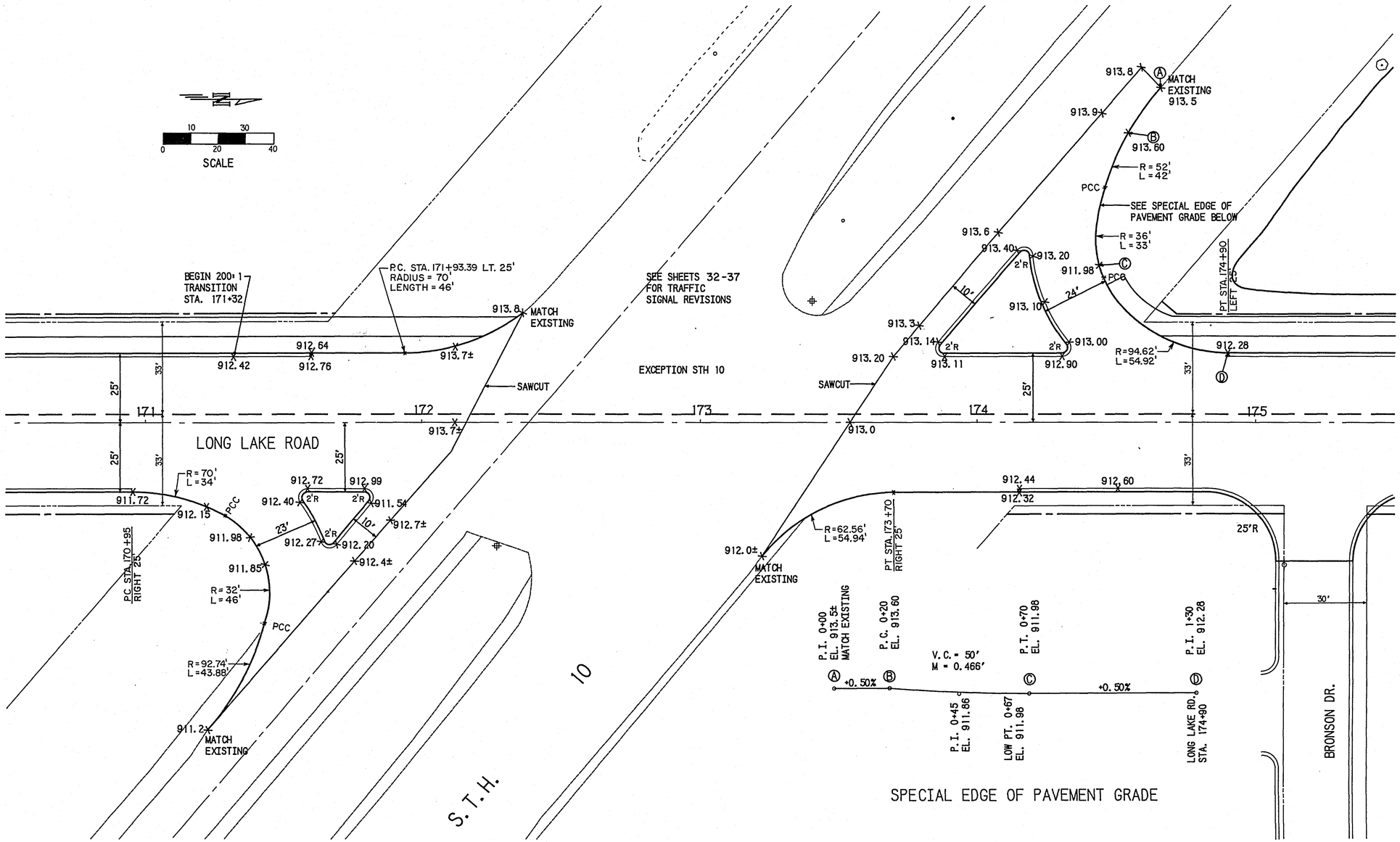
LONG LAKE ROAD STORMWATER POND

ENGINEERS & ARCHITECTS & PLANNERS
FILE NO. 89271

I hereby certify that this plan was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Minnesota
John C. Ramsey 28-126
Date 2-20-92 Reg No. 21142

S.A.P. 62-645-10

SHEET 30 OF 73 SHEETS



SPECIAL EDGE OF PAVEMENT GRADE

ASBUILT PLAN
CONFORMING TO
CONST. RECORDS
DONE BY: MR
DATE: 12-3-93

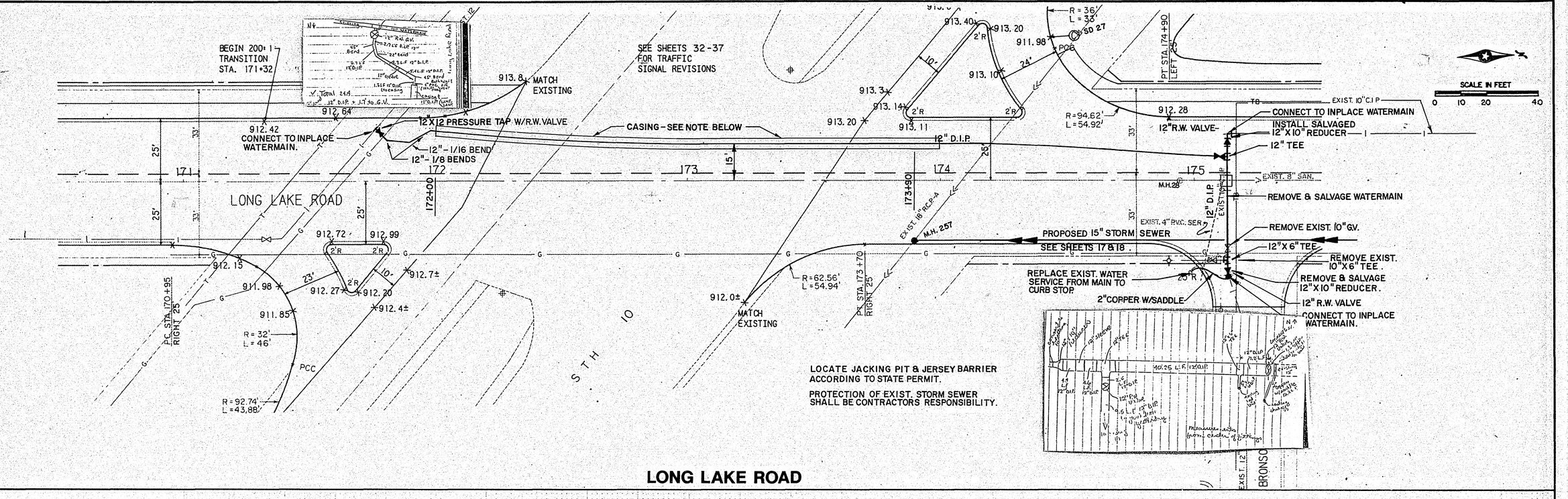
28-126

S.T.H. 10 INTERSECTION ELEVATIONS AND HORIZONTAL DATA

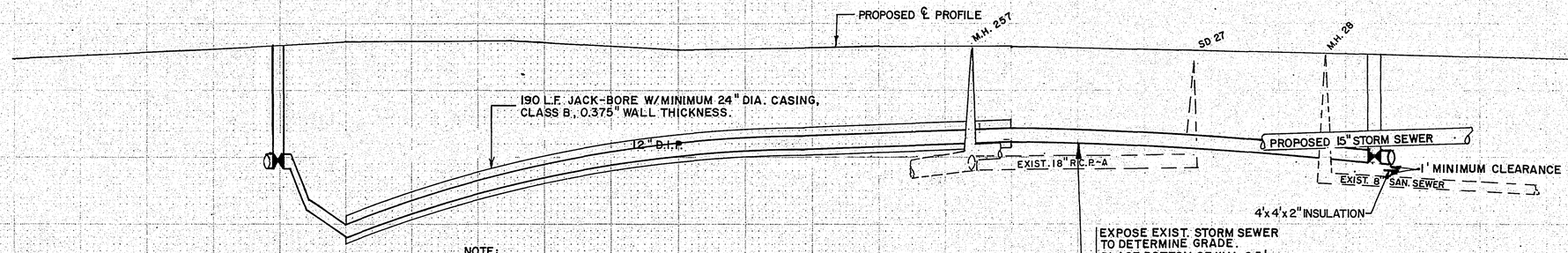
S.A.P. 62-645-10

SHEET 31 OF 73 SHEETS

BASE | OVERLAY | DRG. NO.



LONG LAKE ROAD



ASBUILT PLAN
CONFORMING TO CONST. RECORDS
DONE BY: MR
DATE: 12-3-93

FINAL PLAN
CONFORMING TO CONST. RECORDS
DATE 10-6-92

28-126

NO.	BY	DATE	REVISIONS	ITEM	DESIGN	CHECKED

I hereby certify that this plan was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the state of Minnesota
Timothy C. Hamm
Date 2-25-92 Reg No. 19574

SEH ENGINEERS ■ ARCHITECTS ■ PLANNERS

MOUNDS VIEW, MINNESOTA

S.T.H. 10 WATERMAIN CROSSING

FILE NO. 92303
DATE 2-25-92
31A / 73

LEGEND OF SYMBOLS

SIGNAL BASE No. ③
SIGNAL FACE No. (2-4)
CONTROLLER AND CABINET
CONTROLLER AND CABINET – INPLACE
HANDHOLE
HANDHOLE – INPLACE
CONDUIT
CONDUIT – INPLACE
SIGNAL FACE
SIGNAL FACE WITH BACKGROUND SHIELD
SIGNAL FACE – INPLACE
PEDESTRIAN INDICATIONS
PEDESTRIAN INDICATIONS – INPLACE
PEDESTRIAN PUSH BUTTON ON PEDESTAL OR POLE
PEDESTRIAN PUSH BUTTON STATION
TRAFFIC SIGNAL PEDESTAL
TRAFFIC SIGNAL PEDESTAL – INPLACE
TRAFFIC SIGNAL POLE AND MAST ARM
TRAFFIC SIGNAL POLE AND MAST ARM – INPLACE
MAST ARM AND LUMINAIRE
MAST ARM AND LUMINAIRE – INPLACE
WOOD POLE
WOOD POLE – INPLACE
SOURCE OF POWER
EMERGENCY VEHICLE PRE–EMPTION DETECTOR

VEHICLE DETECTION

NO.	SIZE	FUNCTION	LOC.	
D1–1	MULTIPLE	1	5'	
D2–1	6'x 6'	4	475'	
D2–2	6'x 6'	4	475'	
D4–1	2–6'x 6'	3	180'	F&I
D4–2	6'x 6'	2	90'	F&I
D4–3	6'x 6'	1	5'	F&I
D5–1	MULTIPLE	1	5'	
D6–1	6'x 6'	4	475'	
D6–2	6'x 6'	4	475'	
D8–1	2–6'x 6'	3	250'	F&I
D8–2	6'x 6'	2	100'	F&I
D8–3	6'x 6'	1	5'	F&I
D4-4	6'x 20'	2	5'	F&I
D4-5	6'x 20'	2	5'	F&I
D8-4	6'x 20'	2	5'	F&I
D8-5	6'x 20'	2	5'	F&I

LOC. = DISTANCE FROM STOP LINE TO DETECTOR.
1 = CALL & EXTEND
2 = DELAYED CALL–IMMEDIATE EXTEND
3 = EXTEND ONLY
4 = CALL AND EXTEND/SYSTEM DETECTORS

INPLACE

SIGNAL INDICATION CHART

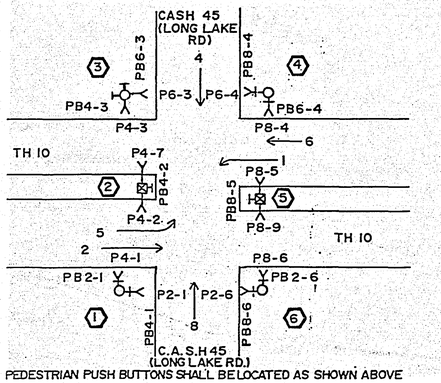
FACE	PHASE	INDICATION SIZE					
		R	Y	G	<–R	<–Y	<–G
1–1	1				12"	12"	12"
2–1	2	12"	12"	12"			
2–2	2	12"	12"	12"			
2–3	2	12"	12"	12"			
4–1	4	12"	12"	12"			
4–2	4	12"	12"	12"			
4–3	4	12"	12"	12"			
4–4	4	12"	12"	12"			
5–1	5				12"	12"	12"
6–1	6	12"	12"	12"			
6–2	6	12"	12"	12"			
6–3	6	12"	12"	12"			
8–1	8	12"	12"	12"			
8–2	8	12"	12"	12"			
8–3	8	12"	12"	12"			
8–4	8	12"	12"	12"			

SIGNAL SYSTEM OPERATION

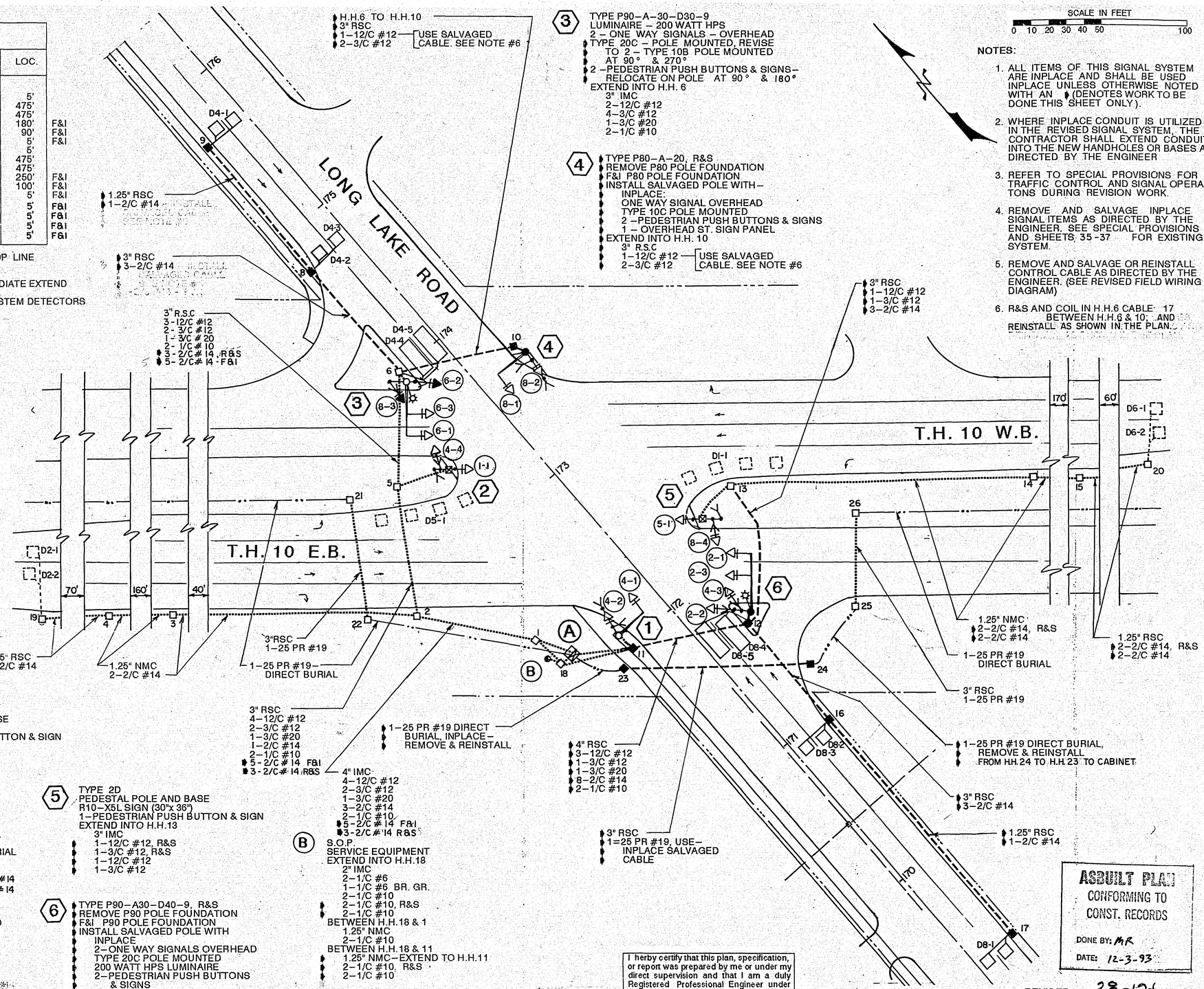
THE SIGNAL SYSTEM FLASH MODE IS ALL RED.

PHASES 1 AND 5 ARE PROTECTED LEFT TURNS.

REVISED CONTROLLER PHASING, PEDESTRIAN INDICATIONS AND PUSH BUTTONS



PEDESTRIAN PUSH BUTTONS SHALL BE LOCATED AS SHOWN ABOVE



③ TYPE P90–A–30–D30–9
LUMINAIRE – 200 WATT HPS
2 – ONE WAY SIGNALS – OVERHEAD
TYPE 20C – POLE MOUNTED, REVISE TO 2 – TYPE 10B POLE MOUNTED AT 90° & 270°
2 –PEDESTRIAN PUSH BUTTONS & SIGNS– RELOCATE ON POLE AT 90° & 180°
EXTEND INTO H.H. 6
3" IMC
2–12/C #12
4–3/C #12
1–3/C #20
2–1/C #10

④ TYPE P80–A–20, R&S
REMOVE P80 POLE FOUNDATION
F&I P80 POLE FOUNDATION
INSTALL SALVAGED POLE WITH– INPLACE:
ONE WAY SIGNAL OVERHEAD
TYPE 10C POLE MOUNTED
2 –PEDESTRIAN PUSH BUTTONS & SIGNS
1 – OVERHEAD ST. SIGN PANEL
EXTEND INTO H.H. 10
3" R.S.C
1–12/C #12 — USE SALVAGED
2–3/C #12 — CABLE. SEE NOTE #6

② TYPE 2D
PEDESTAL POLE AND BASE
R10–X5L SIGN (30"x 36")
1–PEDESTRIAN PUSH BUTTON & SIGN
EXTEND INTO H.H.5
3" IMC
3–12/C #12
2–3/C #12

Ⓐ CONTROLLER AND CABINET
2–3" IMC STUBOUTS
2–25 PR #19 DIRECT BURIAL
REMOVE & REINSTALL
1–25 PR #19 DIRECT BURIAL
EXTEND INTO H.H.1
4" IMC
4–12/C #12 F&I-5-2/C #14
2–3/C #12 R&S-3-2/C #14
1–3/C #20
3–2/C #14
EXTEND INTO H.H.11
4" IMC, INPLACE–EXTEND IMC INTO H.H.11
4–12/C #12, R&S
3–3/C #12, R&S
2–3/C #20, R&S
6–2/C #14, R&S
4–12/C #12
3–3/C #12
2–3/C #20
8–2/C #14
EXTEND INTO H.H.18
3" IMC
2–1/C #6
1–1/C #6 BR. GR.

⑤ TYPE 2D
PEDESTAL POLE AND BASE
R10–X5L SIGN (30"x 36")
1–PEDESTRIAN PUSH BUTTON & SIGN
EXTEND INTO H.H.13
3" IMC
1–12/C #12, R&S
1–3/C #12, R&S
1–12/C #12
1–3/C #12

⑥ TYPE P90–A30–D40–9, R&S
REMOVE P90 POLE FOUNDATION
F&I P90 POLE FOUNDATION
INSTALL SALVAGED POLE WITH INPLACE
2–ONE WAY SIGNALS OVERHEAD
TYPE 20C POLE MOUNTED
200 WATT HPS LUMINAIRE
2–PEDESTRIAN PUSH BUTTONS & SIGNS
1–OVERHEAD ST. SIGN PANEL
EXTEND INTO H.H.12
3" R.S.C.
2–12/C #12
2–3/C #12
1–3/C #20
2–1/C #10

Ⓑ S.O.P.
SERVICE EQUIPMENT
EXTEND INTO H.H.18
2" IMC
2–1/C #6
1–1/C #6 BR. GR.
2–1/C #10
2–1/C #10, R&S
2–1/C #10
BETWEEN H.H.18 & 1
1.25" NMC
2–1/C #10
BETWEEN H.H.18 & 11
1.25" NMC–EXTEND TO H.H.11
2–1/C #10, R&S
2–1/C #10

① TYPE P80–A–20
ONE WAY SIGNAL – OVERHEAD
TYPE 10C – POLE MOUNTED
2 –PEDESTRIAN PUSH BUTTONS & SIGNS
EXTEND INTO H.H. 11
3" IMC
1–12/C #12
2–3/C #12
1–3/C #20

SCALE IN FEET
0 10 20 30 40 50 100

NOTES:

1. ALL ITEMS OF THIS SIGNAL SYSTEM ARE INPLACE AND SHALL BE USED INPLACE UNLESS OTHERWISE NOTED WITH AN ◗ (DENOTES WORK TO BE DONE THIS SHEET ONLY).
2. WHERE INPLACE CONDUIT IS UTILIZED IN THE REVISED SIGNAL SYSTEM, THE CONTRACTOR SHALL EXTEND CONDUIT INTO THE NEW HANDHOLES OR BASES AS DIRECTED BY THE ENGINEER
3. REFER TO SPECIAL PROVISIONS FOR TRAFFIC CONTROL AND SIGNAL OPERATIONS DURING REVISION WORK.
4. REMOVE AND SALVAGE INPLACE SIGNAL ITEMS AS DIRECTED BY THE ENGINEER. SEE SPECIAL PROVISIONS AND SHEETS 35–37 FOR EXISTING SYSTEM.
5. REMOVE AND SALVAGE OR REINSTALL CONTROL CABLE AS DIRECTED BY THE ENGINEER. (SEE REVISED FIELD WIRING DIAGRAM)
6. R&S AND COIL IN H.H.6 CABLE: 17 BETWEEN H.H.6 & 10; AND REINSTALL AS SHOWN IN THE PLAN.

I herby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Minnesota.
Daniel E. Soler
Date 2/7/92 Reg. No. 20452

ASBUILT PLAN
CONFORMING TO CONST. RECORDS
DONE BY: MR
DATE: 12-3-93

REVISED 28-126

INTERSECTION LAYOUT
LONG LAKE ROAD & T.H. 10
SYSTEM A

S.A.P. No. 62–645–10 Sheet No. 32 of 73 Sheets

CONTROLLER CABINET

1: RED 4-1, YEL 4-1, GRN 4-1, NEU 4-1 P4-1, RED 4-2, YEL 4-2, GRN 4-2, NEU 4-2, WLK P4-1, DWK P4-1, SPR, EOG

2: SPR, WLK P8-6, DWK P8-6, NEU P8-6, SPR, WLK P2-6, DWK P2-6, NEU P2-6 2-3, RED 2-3, YEL 2-3, GRN 2-3, EOG

3: RED 2-1, YEL 2-1, GRN 2-1, NEU 2-1 2-2, RED 2-2, YEL 2-2, GRN 2-2, NEU 4-3, RED 4-3, YEL 4-3, GRN 4-3, EOG

4: RLTA 5-1, YLTA 5-1, GLTA 5-1, NEU 5-1, RED 8-4, YEL 8-4, GRN 8-4, NEU 8-4 P8-5 P8-9, WLK P8-5 P8-9, DWK P8-5 P8-9, SPR, EOG

5: WLK P2-1, NEU P2-1, DWK P2-1

6: PB2-1, NEU, PB4-1

7: EVP CABLE

8: EVP CABLE

9: PB8-5 PB8-6, NEU, PB2-6 — D8-2

10: D8-2

57: D8-4

11: D8-1

12: D8-3

13: D1-1

1-1 RLTA, 1-1 YLTA, 1-1 GLTA, 1-1 NEU, 4-4 RED, 4-4 YEL, 4-4 GRN, 4-4 NEU, SPR, SPR, SPR, EOG → 14

P4-7 P4-3 WLK, P4-7 P4-3 DWK, P4-2 WLK, P4-7 P4-2 P4-3 NEU, P4-2 DWK, 6-3 RED, 6-3 YEL, 6-3 P6-3 P6-4 NEU, P6-3 P6-4 WLK, P6-3 P6-4 DWK, 6-3 GRN, EOG → 15

6-1 RED, 6-1 YEL, 6-1 GRN, 6-1 6-2 NEU, 6-2 RED, 6-2 YEL, 6-2 GRN, 8-3 NEU, 8-3 RED, 8-3 YEL, 8-3 GRN, EOG → 16

8-1 RED, 8-1 YEL, 8-1 GRN, 8-1 NEU, 8-2 RED, 8-2 YEL, 8-2 GRN, P8-4 8-2 NEU, P8-4 WLK, P8-4 DWK, SPR, EOG → 17

PB6-3 PB6-4 NEU, PB8-4 → 18

PB4-2 PB4-3 NEU, SPR → 19

D4-3 → 58

D4-1 → 20

D4-4 → 59

D4-2 → 21

D4-3 → 22

D5-1 → 23

EVP CABLE → 26

SIGNAL SERVICE → 27

D2-1 → 50

D2-2 → 51

D6-1 → 52

D6-2 → 53

INTERCONNECT TO SYSTEM "B" → 54

INTERCONNECT TO SYSTEM "D" → 55

54 — TO SYSTEM "B"

55 — TO SYSTEM "D"

NOTE:

1) ▲ =NEW CABLE. ALL OTHERS ARE INPLACE.

CONDUCTOR COLOR CODING

12/C*12: R, O, BL, WH, R/BLK, O/BLK, BL/BLK, WH/BLK, BLK, BLK/WH, G/BLK, G

BLK, WH — 2-1/C*6, 2-1/C*10

R, WH, BLK — 3/C*12

R OR O, WH OR YEL, BLK OR BL — 3/C*20

BLK, CLEAR — 2/C*14

NOTE: ALL TERMINAL BLOCK CONNECTIONS SHALL BE ARRANGED AS SPECIFIED ABOVE

(1)

4-1 4-2 P4-1 — P2-1

5

PB2-1 PB4-1

1

6

FUTURE EVP DETECTOR

7

1,2,3,4,5,6,7,8,9,10,11,12,13,52 ,53, 56, 57

H.H.11

28

2,3,4,8,9,12,13,28,52 ,53, 10, 11, 56,57-TO H.H.12 SEE SHEET 34

(2)

P4-2 P4-7

1-1 4-4

15 15

14

19 19

PB4-2

D5-1

H.H.18

27

27,28,29

27 SIGNAL SERVICE — S.O.P. — STREET LIGHT SERVICE 28,29

GROUND ROD

H.H.1

29

14,15,16,17,18,19,20,21,22,23, 26,50 ,51 , 58,59

H.H.2

14,15,16,17,18,19,20,21,22,23, 26,29,50 ,51 , 58,59

H.H.5

23

14,15,16,17,18,19,20,21,22,23,26,29 58,59

15,16,17,18,19,20,21,22,26,29 58,59 TO H.H.6 SEE SHEET 34

H.H.19

50 51 50 ,51

D2-1 D2-2

H.H.4

50 ,51

H.H.3

50 ,51

ASBUILT PLAN
CONFORMING TO CONST. RECORDS
DONE BY: MR
DATE: 12-3-93

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Minnesota.
Daniel S. Solin
Date 2/7/92 Reg. No. 20452

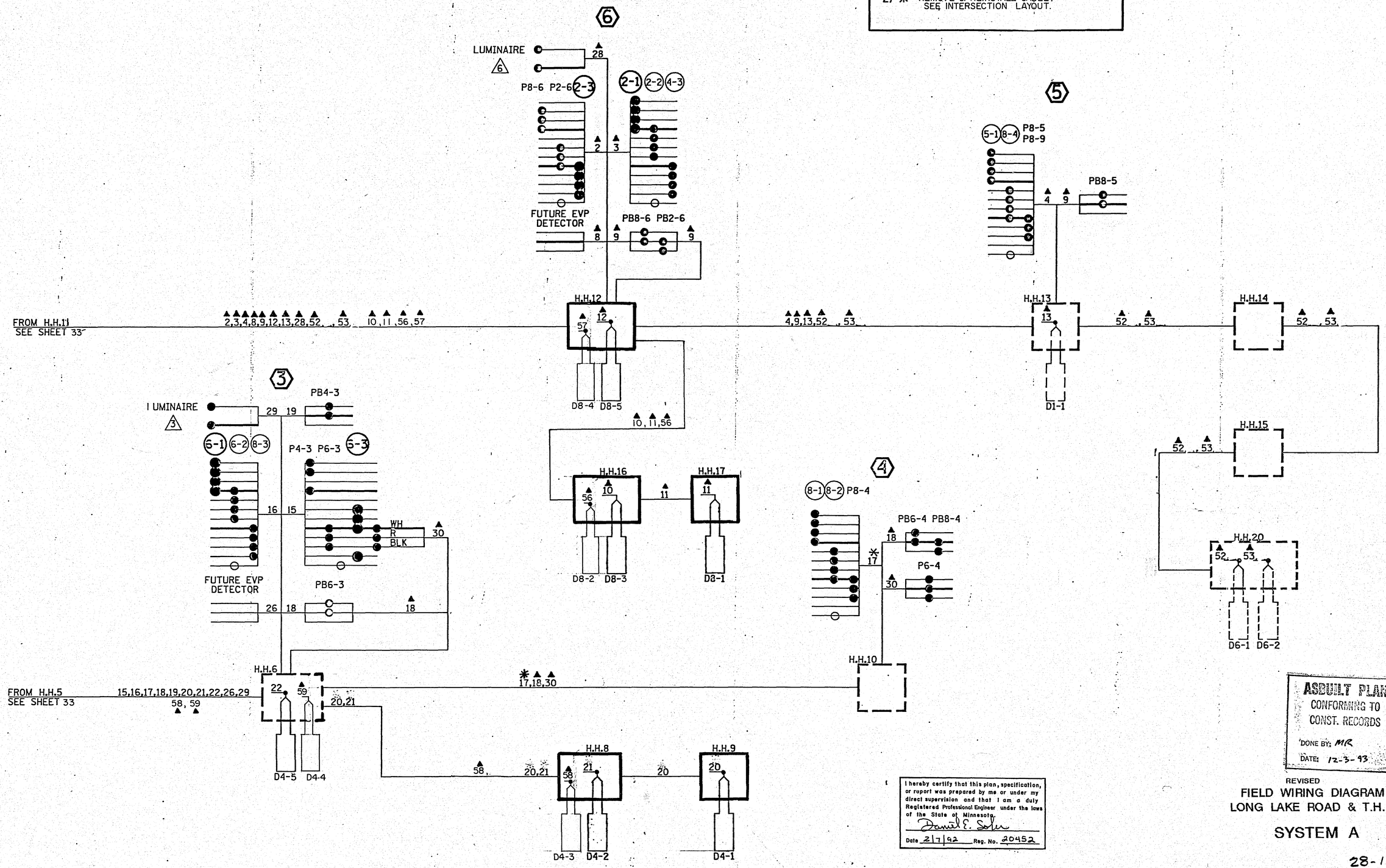
REVISED
FIELD WIRING DIAGRAM
LONG LAKE ROAD & T.H. 10

SYSTEM A

28-126

NOTE:

1) ▲ = NEW CABLE, ALL OTHERS ARE INPLACE.
2) ✳ = REMOVE & REINSTALL CABLE. SEE INTERSECTION LAYOUT.



ASBUILT PLAN
CONFORMING TO
CONST. RECORDS
DONE BY: MR
DATE: 12-3-93

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Minnesota.
Daniel E. Soler
Date 2/7/92 Reg. No. 20452

REVISED

FIELD WIRING DIAGRAM
LONG LAKE ROAD & T.H. 10

SYSTEM A

28-126

S.A.P. No. 62-645-10 | Sheet No. 34 of 73 Sheets

NOTES:

(*1) ALL ITEMS OF THIS SIGNAL SYSTEM ARE INPLACE AND SHALL BE USED INPLACE UNLESS OTHERWISE NOTED WITH AN * (* = WORK TO BE DONE).

2) SEE SPECIAL PROVISIONS FOR STATE FURNISHED EQUIPMENT.

3) ALL PEDESTRIAN INDICATIONS SHALL BE 9" X 9"

(*4) ALL NEW SIGNAL FACES SHALL HAVE BACKGROUND SHIELDS.

(*5) ALL NEW SIGNAL FACES SHALL BE 12" 3 SECTION R-Y-G.

(*6) A MID-MAST ARM MOUNT SHALL BE LOCATED 12' FROM THE END OF THE MAST ARM AT POLES 3 AND 6.

(*7) A 3/4" HALF COUPLING, 3/4" PIPE NIPPLE AND CAPPED CONDUIT OUTLET BODY FOR EMERGENCY VEHICLE PRE-EMPTION SHALL BE FURNISHED AND INSTALLED APPROXIMATELY 4' FROM THE END OF THE MAST ARM AT POLES 3 AND 6.

8) SUFFICENT 3/C#20 WIRE TO REACH THE END OF THE MAST ARM SHALL BE COILED IN POLES 1, 3, AND 6

(*9) FOR SIGN DETAILS SEE SHEET 14.

(*10) PAINT ALL NEW AND EXISTING ITEMS OF THIS SIGNAL SYSTEM.

(*11) ALL NEW HANDHOLES SHALL BE PVC HANDHOLES WITH CONCRETE COVERS, SEE SPECIAL PROVISIONS.

LOOP DETECTORS

NUMBER	SIZE	FUNCTION	LOCATION	REMARKS
DI-1	MULTIPLE	1	5'	INPLACE
*D2-1	6' X 6'	4	475'	F. & I.
*D2-2	6' X 6'	4	475'	F. & I.
D4-1	6' X 6'	2	180'	INPLACE
D4-2	6' X 6'	2	90'	INPLACE
*D4-3	2-6' X 20'	1	5'	F. & I.
D5-1	MULTIPLE	1	5'	INPLACE
*D6-1	6' X 6'	4	475'	F. & I.
*D6-2	6' X 6'	4	475'	F. & I.
D8-1	6' X 6'	2	250'	INPLACE
D8-2	6' X 6'	2	100'	INPLACE
*D8-3	2-6' X 20'	1	5'	F. & I.

LOCATION = DISTANCE FROM STOP LINE TO DETECTOR

LOOP DETECTOR FUNCTIONS

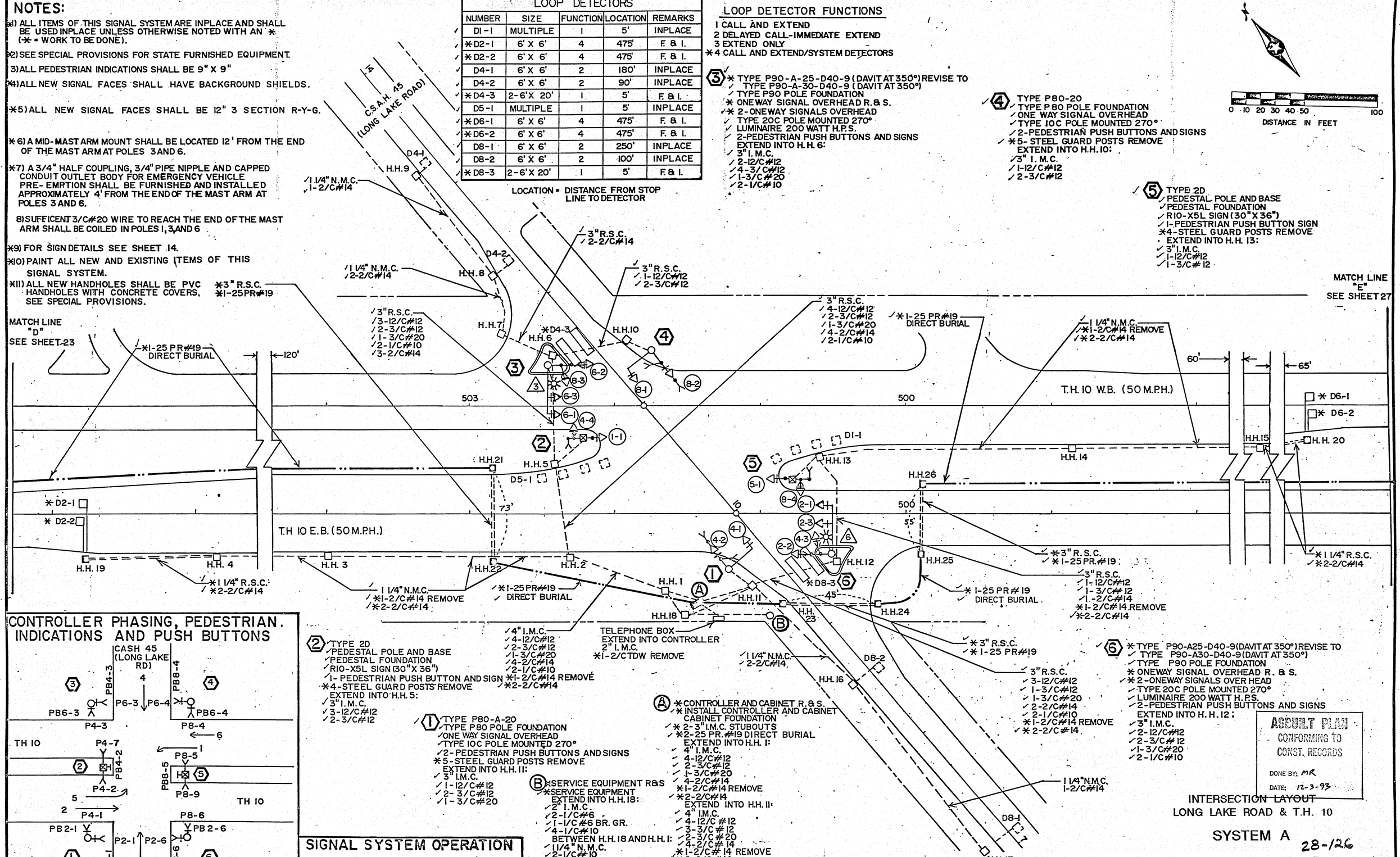
1 CALL AND EXTEND
2 DELAYED CALL-IMMEDIATE EXTEND
3 EXTEND ONLY
*4 CALL AND EXTEND/SYSTEM DETECTORS

0 10 20 30 40 50 100
DISTANCE IN FEET

(3) * TYPE P90-A-25-D40-9 (DAVIT AT 350°) REVISE TO
TYPE P90-A-30-D40-9 (DAVIT AT 350°)
TYPE P90 POLE FOUNDATION
* ONE WAY SIGNAL OVERHEAD R. & S.
* 2-ONE WAY SIGNALS OVERHEAD
TYPE 20C POLE MOUNTED 270°
LUMINAIRE 200 WATT H.P.S.
2-PEDESTRIAN PUSH BUTTONS AND SIGNS
EXTEND INTO H. H. 6:
3" I. M. C.
2-12/C#12
4-3/C#12
1-3/C#20
2-1/C#10

(4) TYPE P80-20
TYPE P80 POLE FOUNDATION
ONE WAY SIGNAL OVERHEAD
TYPE 10C POLE MOUNTED 270°
2-PEDESTRIAN PUSH BUTTONS AND SIGNS
*5- STEEL GUARD POSTS REMOVE
EXTEND INTO H.H. 10:
3" I. M. C.
1-12/C#12
2-3/C#12

(5) TYPE 2D
PEDESTAL POLE AND BASE
PEDESTAL FOUNDATION
R10-X5L SIGN (30" X 36")
1-PEDESTRIAN PUSH BUTTON SIGN
*4-STEEL GUARD POSTS REMOVE
EXTEND INTO H.H. 13:
3" I.M.C.
1-12/C#12
1-3/C#12



(2) TYPE 2D
PEDESTAL POLE AND BASE
PEDESTAL FOUNDATION
R10-X5L SIGN (30" X 36")
1- PEDESTRIAN PUSH BUTTON AND SIGN
*4-STEEL GUARD POSTS REMOVE
EXTEND INTO H.H. 5:
3" I.M.C.
3-12/C#12
2-3/C#12

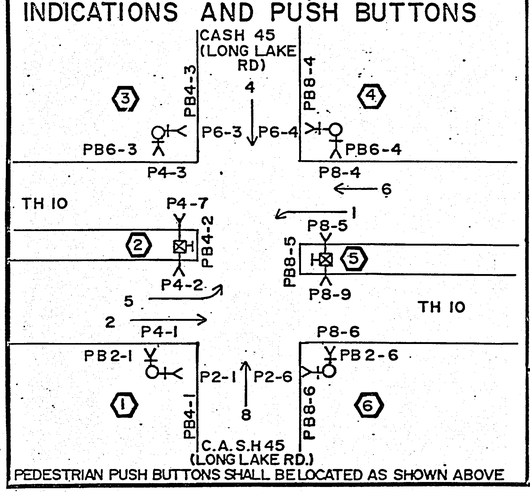
(1) TYPE P80-A-20
TYPE P80 POLE FOUNDATION
ONE WAY SIGNAL OVERHEAD
TYPE 10C POLE MOUNTED 270°
2-PEDESTRIAN PUSH BUTTONS AND SIGNS
*5-STEEL GUARD POSTS REMOVE
EXTEND INTO H.H. 11:
3" I.M.C.
1-12/C#12
2-3/C#12
1-3/C#20

(A) *CONTROLLER AND CABINET R. & S.
*INSTALL CONTROLLER AND CABINET CABINET FOUNDATION
*2-3" I.M.C. STUBOUTS
*2-25 PR.#19 DIRECT BURIAL EXTEND INTO H.H. 1:
4" I.M.C.
4-12/C#12
2-3/C#12
1-3/C#20
4-2/C#14
*1-2/C#14 REMOVE
*2-2/C#14
EXTEND INTO H.H. 11:
4" I.M.C.
4-12/C#12
3-3/C#12
2-3/C#20
4-2/C#14
*1-2/C#14 REMOVE
*2-2/C#14
EXTEND INTO H.H. 18:
3" I.M.C.
2-1/C#6
1-1/C#6 BR. GR.

(B) *SERVICE EQUIPMENT R&S
*SERVICE EQUIPMENT EXTEND INTO H.H. 18:
2" I.M.C
2-1/C#6
1-1/C#6 BR. GR.
4-1/C#10
BETWEEN H.H. 18 AND H.H. 1:
1 1/4" N.M.C.
2-1/C#10
BETWEEN H.H. 18 AND H H. 11:
2" I.M.C
2-1/C#10

(6) * TYPE P90-A25-D40-9 (DAVIT AT 350°) REVISE TO
TYPE P90-A30-D40-9 (DAVIT AT 350°)
TYPE P90 POLE FOUNDATION
* ONEWAY SIGNAL OVERHEAD R. & S.
*2-ONEWAY SIGNALS OVER HEAD
TYPE 20C POLE MOUNTED 270°
LUMINAIRE 200 WATT H.P.S.
2-PEDESTRIAN PUSH BUTTONS AND SIGNS
EXTEND INTO H. H. 12:
3" I.M.C.
2-12/C#12
2-3/C#12
1-3/C#20
2-1/C#10

CONTROLLER PHASING, PEDESTRIAN INDICATIONS AND PUSH BUTTONS



PEDESTRIAN PUSH BUTTONS SHALL BE LOCATED AS SHOWN ABOVE

SIGNAL SYSTEM OPERATION

THE SIGNAL SYSTEM FLASH MODE IS ALL RED.

PHASES 1 AND 5 ARE PROTECTED LEFT TURNS.

AS BUILT PLAN
CONFORMING TO CONST. RECORDS
DONE BY: MR
DATE: 12-3-93

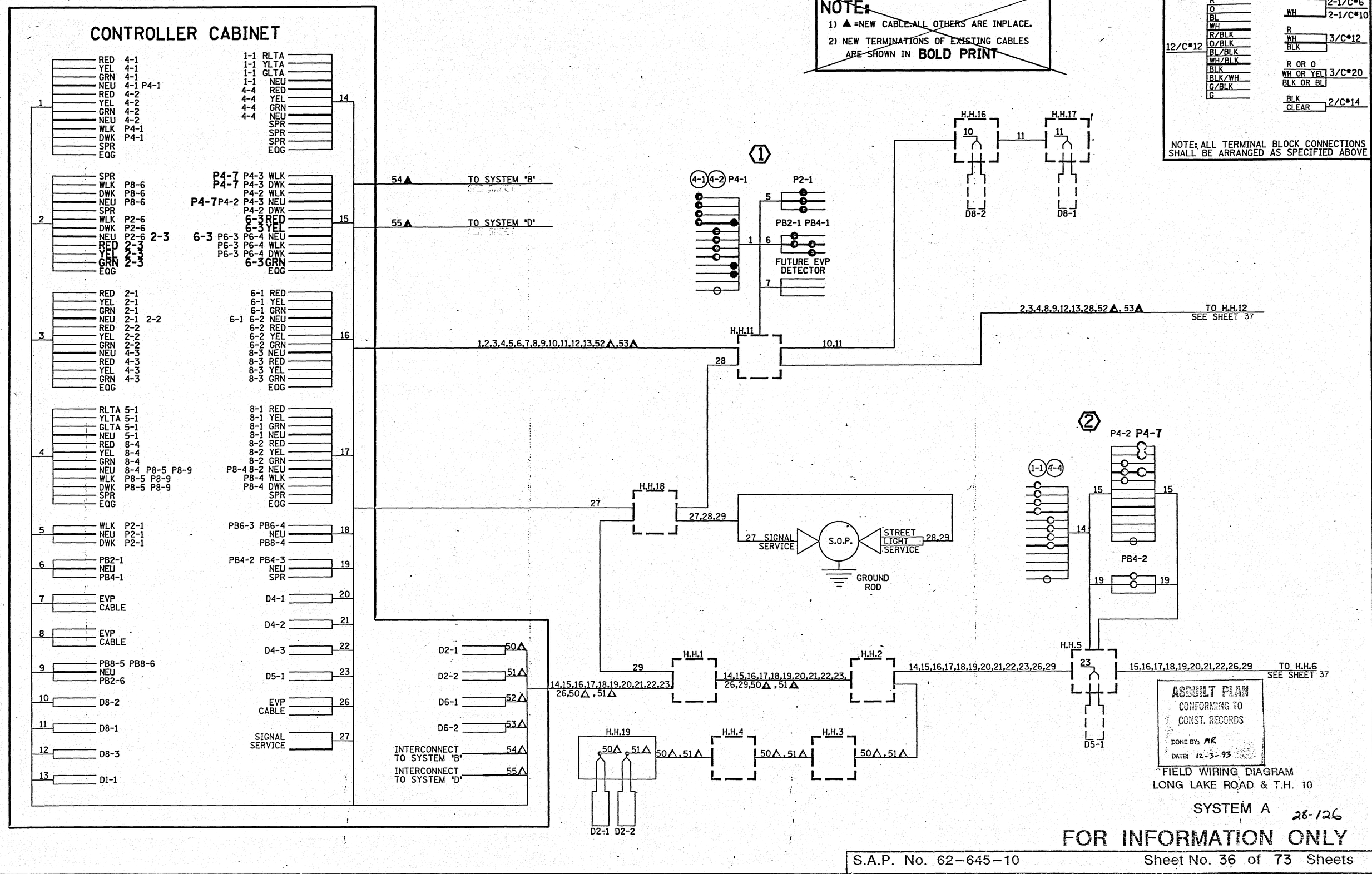
INTERSECTION LAYOUT
LONG LAKE ROAD & T.H. 10

SYSTEM A 28-126

FOR INFORMATION ONLY

S.A.P. No. 62-645-10

Sheet No. 35 of 73 Sheets

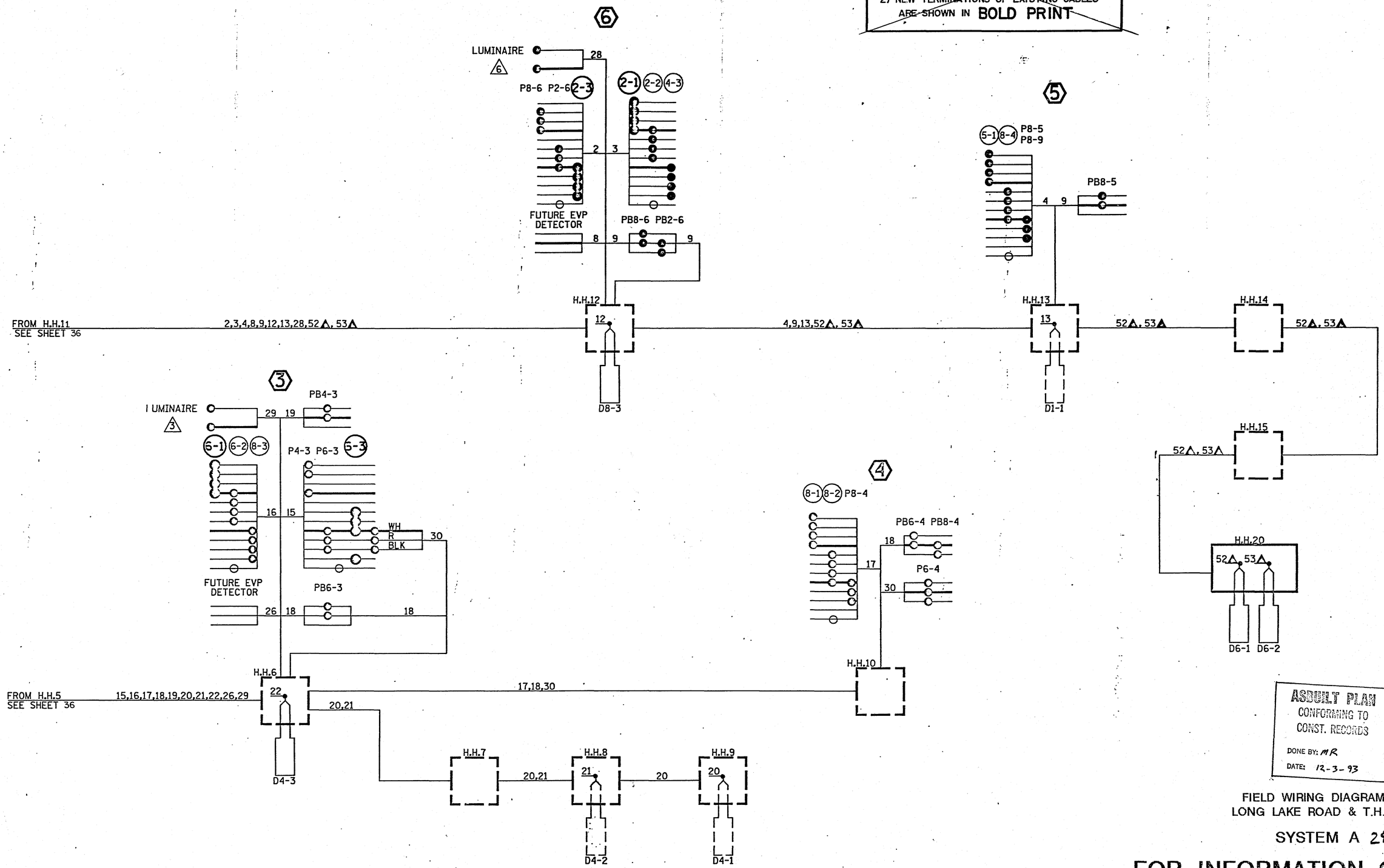


FIELD WIRING DIAGRAM
LONG LAKE ROAD & T.H. 10

SYSTEM A 28-126

FOR INFORMATION ONLY

NOTE:
1) △ = NEW CABLE, ALL OTHERS ARE INPLACE.
2) NEW TERMINATIONS OF EXISTING CABLES ARE SHOWN IN **BOLD PRINT**



ASBUILT PLAN
CONFORMING TO
CONST. RECORDS
DONE BY: MR
DATE: 12-3-93

FIELD WIRING DIAGRAM
LONG LAKE ROAD & T.H. 10

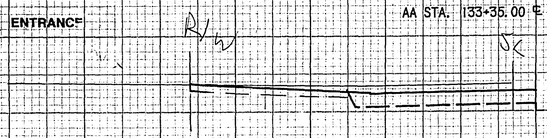
SYSTEM A 28-126

FOR INFORMATION ONLY

EXCAVATION EMBANKMENT

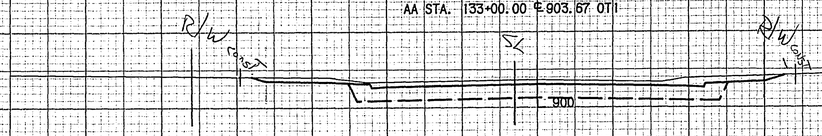
A STA. 133+35.00 ℄ 900.97 SCT1
A STA. 133+35.00 ℄ 902.76 DES4
AA STA. 133+35.00 ℄ OT1

ENTRANCE



71 22

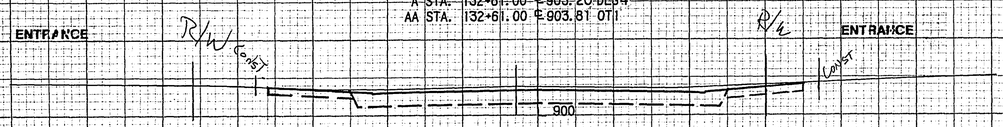
A STA. 133+00.00 ℄ 901.18 SCT1
A STA. 133+00.00 ℄ 902.97 DES4
AA STA. 133+00.00 ℄ 903.67 OT1



215 70

A STA. 132+61.00 ℄ 901.41 SCT1
A STA. 132+61.00 ℄ 903.20 DES4
AA STA. 132+61.00 ℄ 903.81 OT1

ENTRANCE



187 78

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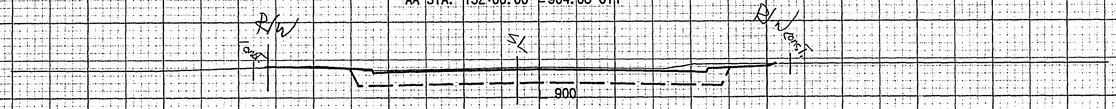
AA STA. 132+00.00 ℄ 904.08 OT1



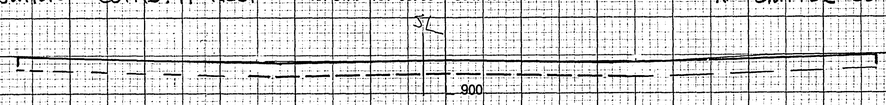
242 122

A STA. 131+50.00 ℄ 902.09 SCT1
A STA. 131+50.00 ℄ 903.88 DES3
AA STA. 131+50.00 ℄ 904.55 OT1

194 100

A STA. 131+00.00 ℄ 902.36 SCT1
A STA. 131+00.00 ℄ 904.15 DES
AA STA. 131+00.00 ℄ 904.40 OT1

N. GUTTER CO. RD. H WEST



291 156

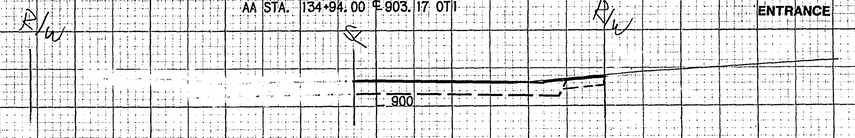
BEGIN CONSTRUCTION 130+80 EL. 902.47 SCT1 904.26 DES4
AA STA. 130+80.00 ℄ 904.22 OT1

145 80

A STA. 134+94.00 ℄ 901.60 SCT1
A STA. 134+94.00 ℄ 903.38 DES3
AA STA. 134+94.00 ℄ 903.17 OT1

EXC EMBANKMENT

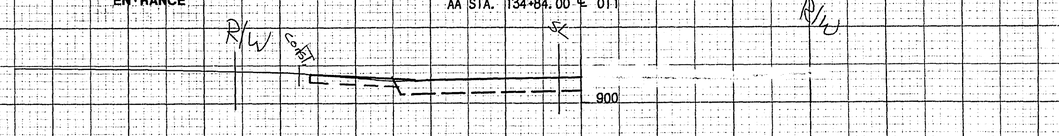
ENTRANCE



35 23

A STA. 134+84.00 ℄ 901.60 SCT1
A STA. 134+84.00 ℄ 903.38 DES3
AA STA. 134+84.00 ℄ OT1

ENTRANCE



130 78

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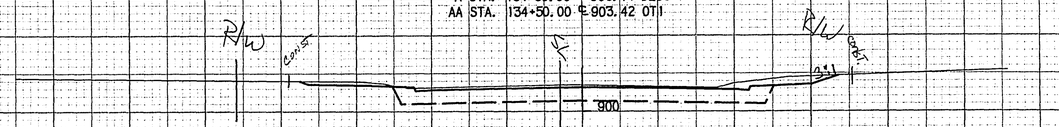
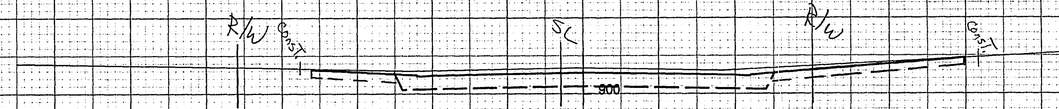


173 74

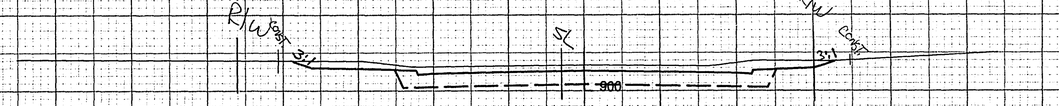
A STA. 134+13.00 ℄ 901.02 SCT1
A STA. 134+13.00 ℄ 902.80 DES3
AA STA. 134+13.00 ℄ 903.41 OT1

ENTRANCE



71 26

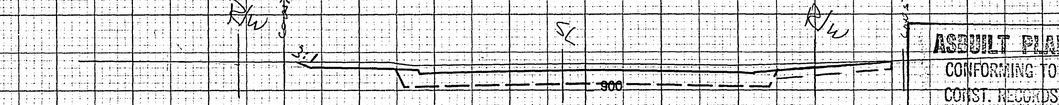
A STA. 134+00.00 ℄ 900.91 SCT1
A STA. 134+00.00 ℄ 902.69 DES3
AA STA. 134+00.00 ℄ 903.38 OT1



285 100

A STA. 133+50.00 ℄ 900.89 SCT1
A STA. 133+50.00 ℄ 902.68 DES4
AA STA. 133+50.00 ℄ 903.56 OT1

ENTRANCE



AS BUILT PLAN
CONFORMING TO
CONST. RECORDS
DONE BY: MR
DATE: 24 11-3-93 8

A STA. 133+46.00 ℄ 900.91 SCT1
A STA. 133+46.00 ℄ 902.70 DES4
AA STA. 133+46.00 ℄ 903.57 OT1

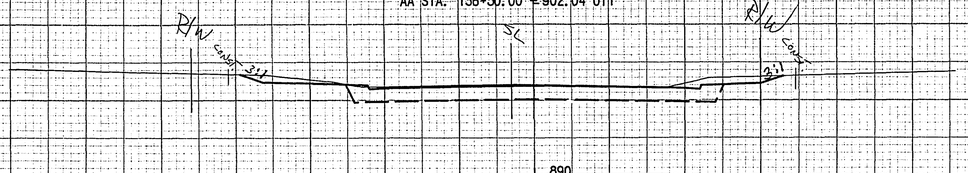
ENTRANCE

STA. 130+80.00 TO 134+94.00 SCALE = 10 X 10

28-126

EXCAVATION EMBANKMENT

A STA. 136+50.00 ℄ 900.12 SCT1
A STA. 136+50.00 ℄ 901.90 DES3
AA STA. 136+50.00 ℄ 902.04 OT1



215 100

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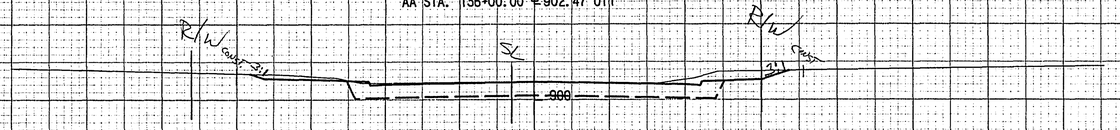
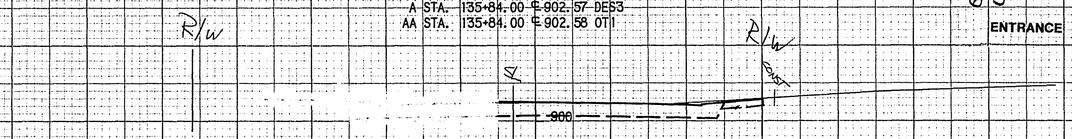
AA STA. 136+00.00 ℄ 902.47 OT1



A STA. 135+84.00 ℄ 900.78 SCT1
A STA. 135+84.00 ℄ 902.57 DES3
AA STA. 135+84.00 ℄ 902.58 OT1

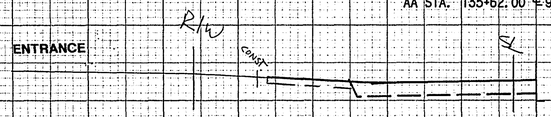
65 32

ENTRANCE



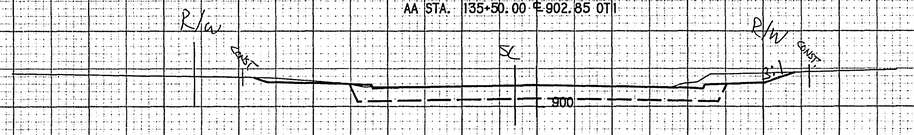
A STA. 135+62.00 ℄ 901.00 SCT1
A STA. 135+62.00 ℄ 902.78 DES3
AA STA. 135+62.00 ℄ 902.78 OT1

ENTRANCE



130 68

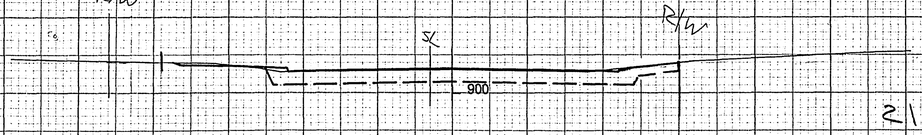
A STA. 135+50.00 ℄ 901.12 SCT1
A STA. 135+50.00 ℄ 902.90 DES3
AA STA. 135+50.00 ℄ 902.85 OT1



193 100

A STA. 135+00.00 ℄ 901.58 SCT1
A STA. 135+00.00 ℄ 903.36 DES3
AA STA. 135+00.00 ℄ 903.14 OT1

ENTRANCE

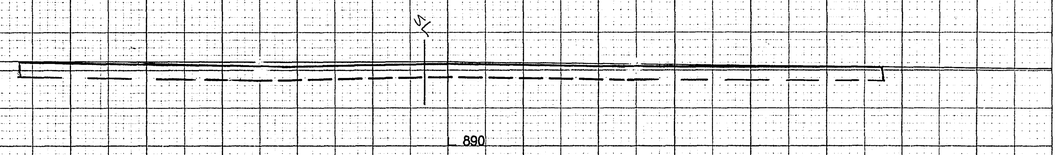


21 12

WOODCREST DRIVE

EXCAVATION EMBANKMENT

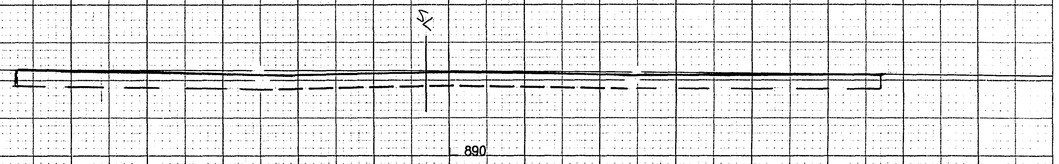
A STA. 137+56.00 ℄ 899.06 SCT1
A STA. 137+56.00 ℄ 900.84 DES3
AA STA. 137+56.00 ℄ 901.10 OT1



℄ WOODCREST DRIVE

121 63

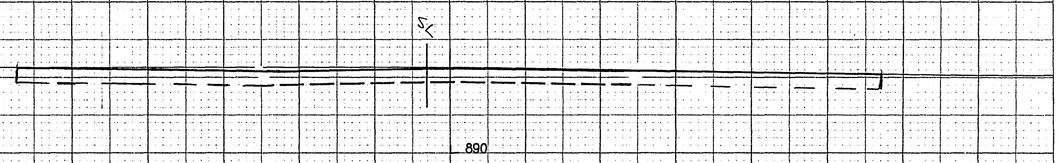
A STA. 137+41.00 ℄ 899.21 SCT1
A STA. 137+41.00 ℄ 900.99 DES3
AA STA. 137+41.00 ℄ 901.17 OT1



WOODCREST DRIVE

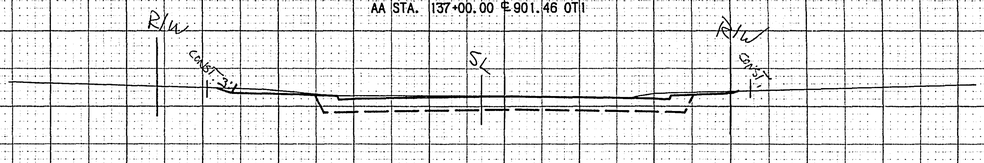
123 63

A STA. 137+26.00 ℄ 899.36 SCT1
A STA. 137+26.00 ℄ 901.14 DES3
AA STA. 137+26.00 ℄ 901.32 OT1



155 81

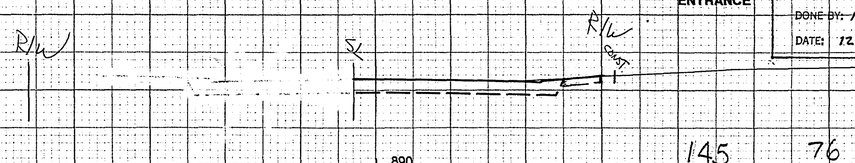
A STA. 137+00.00 ℄ 899.62 SCT1
A STA. 137+00.00 ℄ 901.40 DES3
AA STA. 137+00.00 ℄ 901.46 OT1



44 24

A STA. 136+88.00 ℄ 899.74 SCT1
A STA. 136+88.00 ℄ 901.53 DES3
AA STA. 136+88.00 ℄ 901.57 OT1

ENTRANCE



145 76

28-126

AS BUILT PLAN
CONFORMING TO
CONST. RECORDS
DONE BY: MR
DATE: 12-3-93

STA. 135+00.00 TO 137+56.00 SCALE = 10 X 10

MINN. RAMSEY COUNTY **S.A.P. 62-645-10** SHEET 39 OF 73 SHEETS

EXCAVATION EMBANKMENT

A STA. 139+00.00 ℄ 897.65 SCT1
A STA. 139+00.00 ℄ 899.44 DES3
AA STA. 139+00.00 ℄ 900.04 OT1

ENTRANCE

A STA. 138+81.00 ℄ 897.81 SCT1
A STA. 138+81.00 ℄ 899.59 DES3
AA STA. 138+81.00 ℄ 900.25 OT1

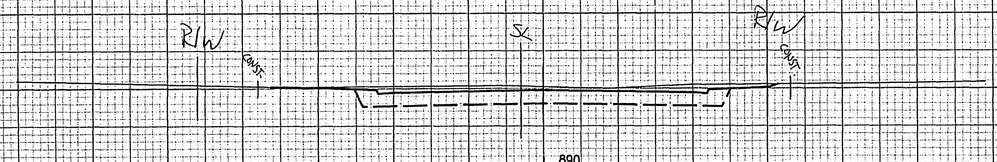
143 60

A STA. 138+70.00 ℄ 897.92 SCT1
A STA. 138+70.00 ℄ 899.71 DES3
AA STA. 138+70.00 ℄ 900.27 OT1

ENTRANCE

95 40

A STA. 138+50.00 ℄ 898.12 SCT1
A STA. 138+50.00 ℄ 899.91 DES3
AA STA. 138+50.00 ℄ 900.38 OT1



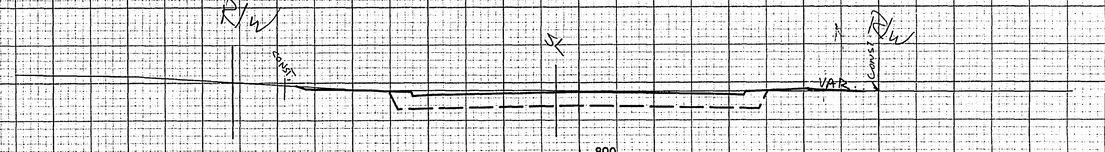
230 109

A STA. 138+00.00 ℄ 898.62 SCT1
A STA. 138+00.00 ℄ 900.39 DES3
AA STA. 138+00.00 ℄ 900.72 OT1

268 145

EXCAVATION EMBANKMENT

A STA. 140+50.00 ℄ 896.87 SCT1
A STA. 140+50.00 ℄ 898.65 DES3
AA STA. 140+50.00 ℄ 898.81 OT1



211 100

A STA. 140+00.00 ℄ 897.12 SCT1
A STA. 140+00.00 ℄ 898.90 DES3
AA STA. 140+00.00 ℄ 899.20 OT1

231 100

A STA. 139+87.00 ℄ 897.19 SCT1
A STA. 139+87.00 ℄ 898.97 DES3
AA STA. 139+87.00 ℄ 899.32 OT1

ENTRANCE

A STA. 139+50.00 ℄ 897.37 SCT1
A STA. 139+50.00 ℄ 899.15 DES3
AA STA. 139+50.00 ℄ 899.57 OT1

182 78

A STA. 139+11.00 ℄ 897.57 SCT1
A STA. 139+11.00 ℄ 899.36 DES3
AA STA. 139+11.00 ℄ 900.03 OT1

ENTRANCE

52 22

ASPHALT PLAN
CONFORMING TO
CONST. RECORDS
DONE BY: MR
DATE: 12-3-93

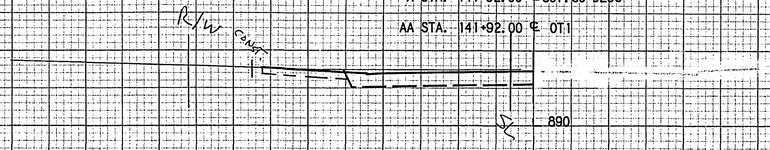
28-126

STA. 138+00.00 TO 140+50.00 SCALE = 10 X 10

HENN CO. MINN. RAMSEY COUNTY **S.A.P. 62-645-10** SHEET 40 OF 73 SHEETS

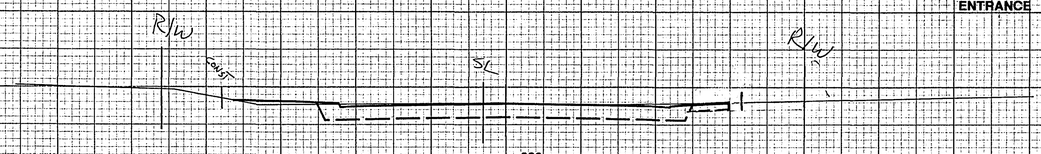
ENTRANCE

A STA. 141+92.00 ℄ 895.52 SCT1
A STA. 141+92.00 ℄ 897.30 DES3
AA STA. 141+92.00 ℄ 0T1



EXCAVATION 193 EMBANKMENT 102

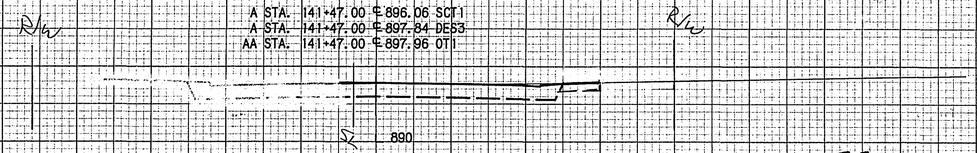
A STA. 141+50.00 ℄ 896.02 SCT1
A STA. 141+50.00 ℄ 897.81 DES3
AA STA. 141+50.00 ℄ 897.87 0T1



ENTRANCE 12 6

ENTRANCE

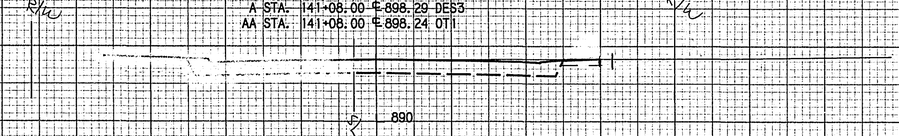
A STA. 141+47.00 ℄ 896.06 SCT1
A STA. 141+47.00 ℄ 897.84 DES3
AA STA. 141+47.00 ℄ 897.96 0T1



155 78

ENTRANCE

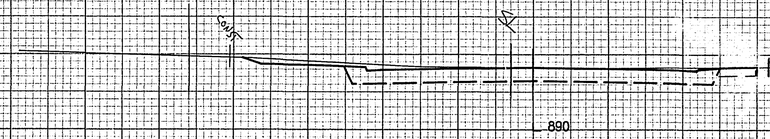
A STA. 141+08.00 ℄ 896.50 SCT1
A STA. 141+08.00 ℄ 898.29 DES3
AA STA. 141+08.00 ℄ 898.24 0T1



32 16

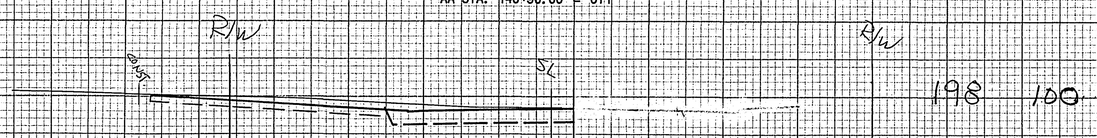
ENTRANCE

A STA. 141+00.00 ℄ 896.58 SCT1
A STA. 141+00.00 ℄ 898.56 DES3
AA STA. 141+00.00 ℄ 898.41 0T1



ENTRANCE

A STA. 140+90.00 ℄ 896.65 SCT1
A STA. 140+90.00 ℄ 898.44 DES3
AA STA. 140+90.00 ℄ 0T1



198 100

A STA. 143+89.00 ℄ 893.77 SCT1
A STA. 143+89.00 ℄ 895.55 DES3
AA STA. 143+89.00 ℄ 0T1

EXCAVATION EMBANKMENT
R/W 66 33

175 106

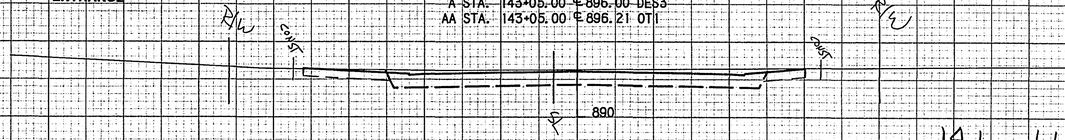
A STA. 143+50.00 ℄ 893.97 SCT1
A STA. 143+50.00 ℄ 895.75 DES3
AA STA. 143+50.00 ℄ 895.85 0T1

170 110

ENTRANCE

ENTRANCE

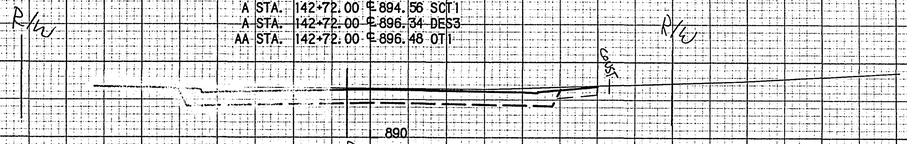
A STA. 143+05.00 ℄ 894.22 SCT1
A STA. 143+05.00 ℄ 896.00 DES3
AA STA. 143+05.00 ℄ 896.21 0T1



141 66

ENTRANCE

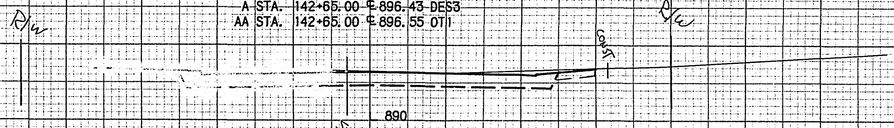
A STA. 142+72.00 ℄ 894.56 SCT1
A STA. 142+72.00 ℄ 896.34 DES3
AA STA. 142+72.00 ℄ 896.48 0T1



27 14

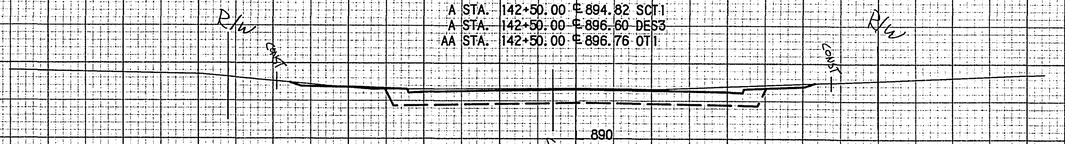
ENTRANCE

A STA. 142+65.00 ℄ 894.64 SCT1
A STA. 142+65.00 ℄ 896.43 DES3
AA STA. 142+65.00 ℄ 896.55 0T1



59 30

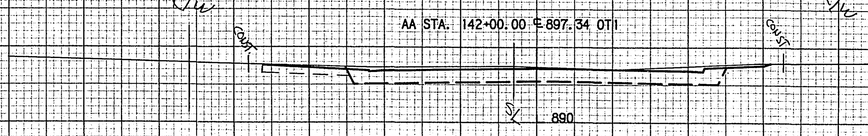
A STA. 142+50.00 ℄ 894.82 SCT1
A STA. 142+50.00 ℄ 896.60 DES3
AA STA. 142+50.00 ℄ 896.76 0T1



206 100

ENTRANCE

A STA. 142+00.00 ℄ 895.42 SCT1
A STA. 142+00.00 ℄ 897.20 DES3
AA STA. 142+00.00 ℄ 897.34 0T1



AS BUILT PLAN
CONFORMING TO
CONST. RECORDS
DONE BY: MR
DATE: 12-3-93
28-126

STA. 140+90.00 TO 143+89.00 SCALE = 10 X 10

HENN. CO., MINN. RAMSEY COUNTY **S.A.P. 62-645-10** SHEET 41 OF 73 SHEETS

	EMB	MUCK EXCAVATION	GRANULAR
A STA. 145+50.00 ℄ 894.75 DES3 AA STA. 145+50.00 ℄ 894.55 OT1			
AS BUILT MUCK	28	226	182
ENTRANCE			
A STA. 145+42.00 ℄ 894.79 DES3 AA STA. 145+42.00 ℄ 894.30 OT1			
	39	539	457
ENTRANCE			
A STA. 145+06.00 ℄ 894.97 DES3 AA STA. 145+06.00 ℄ 894.51 OT1			
	6	86	72
ENTRANCE			
A STA. 145+00.00 ℄ 895.00 DES3 AA STA. 145+00.00 ℄ 894.55 OT1			
AS BUILT MUCK	40	553	442
A STA. 144+50.00 ℄ 895.24 DES3 AA STA. 144+50.00 ℄ 894.73 OT1			
AS BUILT MUCK	13	235	149
ENTRANCE			
A STA. 144+16.00 ℄ 895.42 DES3 AA STA. 144+16.00 ℄ 895.20 OT1			
+ 00 BEGIN MUCK EXCAVATION			
A STA. 144+00.00 ℄ 893.72 SCT1			
℄ WOODDALE DRIVE			
A STA. 144+00.00 ℄ 895.50 DES3 AA STA. 144+00.00 ℄ 895.33 OT1			
	4	98	47

	EMB	MUCK EXCAVATION	GRANULAR
RADIUS A STA. 147+50.00 ℄ ~~893.75~~ DES3 (894.35) AA STA. 147+50.00 ℄ 894.04 OT1			
RADIUS AS BUILT MUCK			
A STA. 147+41.00 ℄ ~~893.79~~ DES3 (894.31) AA STA. 147+41.00 ℄ 893.88 OT1			
		246	220
℄ RIDGE LANE A STA. 147+30.00 ℄ ~~893.85~~ DES3 (894.25) AA STA. 147+30.00 ℄ 893.84 OT1			
		338	308
A STA. 147+18.00 ℄ ~~893.91~~ DES3 (894.18) AA STA. 147+18.00 ℄ 893.89 OT1			
		360	333
		28	473	413
RADIUS A STA. 147+00.00 ℄ ~~894.00~~ DES3 (894.12) AA STA. 147+00.00 ℄ 894.09 OT1			
RADIUS AS BUILT MUCK			
		152	1082	878
A STA. 146+50.00 ℄ 894.26 DES3 (OK) AA STA. 146+50.00 ℄ 894.06 OT1			
AS BUILT MUCK			
		144	1006	802
A STA. 146+00.00 ℄ 894.49 DES3 AA STA. 146+00.00 ℄ 894.12 OT1			
AS BUILT MUCK			
		138	909	701

ASBUILT PLAN
CONFORMING TO
CONST. RECORDS
DONE BY: MR
DATE: 12-3-93

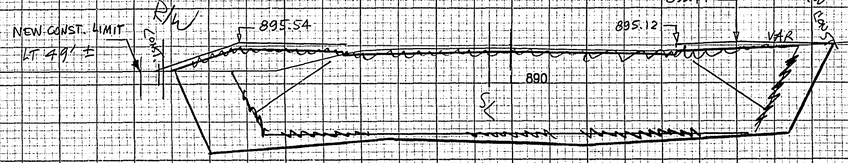
DATE REVISED 9-30-92
BJ

STA. 144+00.00 TO 147+50.00 SCALE 1" = 10' X 10

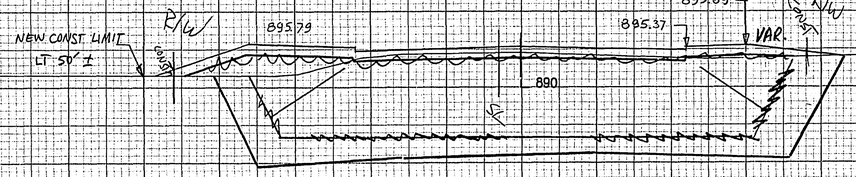
HENN. CO. MINN. RAMSEY COUNTY **S.A.P. ~~62-645-10~~ 28-126** SHEET ~~42~~ OF 73 SHEETS

4.2R2

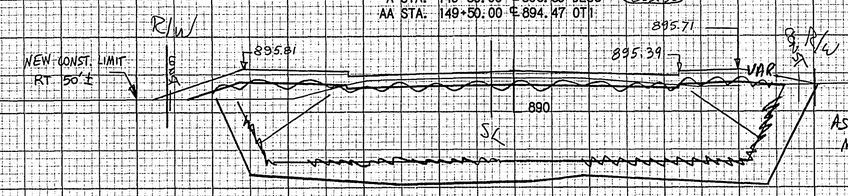
A STA. 150+50.00 ℄ 894.21 DES3 (895.08)
AA STA. 150+50.00 ℄ 894.69 OTI



A STA. 150+00.00 ℄ 893.90 DES3 (895.33)
AA STA. 150+00.00 ℄ 894.63 OTI

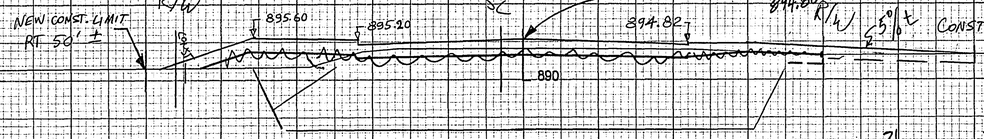


A STA. 149+50.00 ℄ 893.59 DES3 (895.35)
AA STA. 149+50.00 ℄ 894.47 OTI



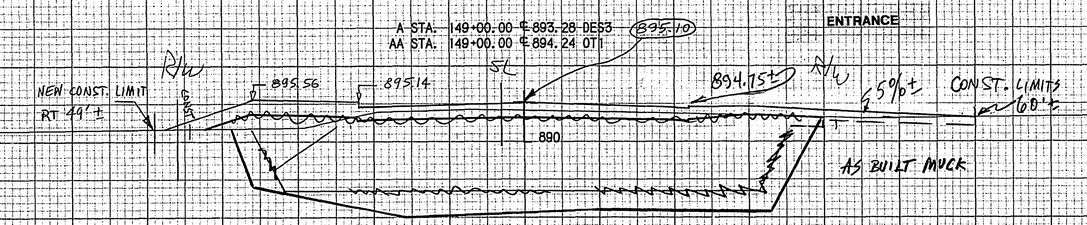
A STA. 149+12.00 ℄ 893.35 DES3 (895.16)
AA STA. 149+12.00 ℄ 894.22 OTI

ENTRANCE

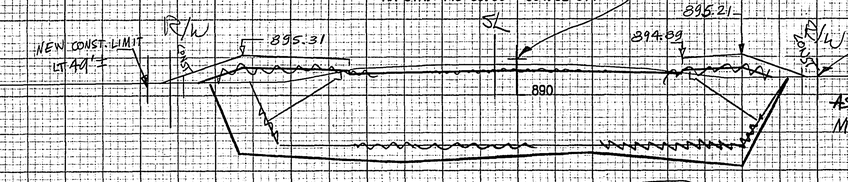


A STA. 149+00.00 ℄ 893.28 DES3 (895.10)
AA STA. 149+00.00 ℄ 894.24 OTI

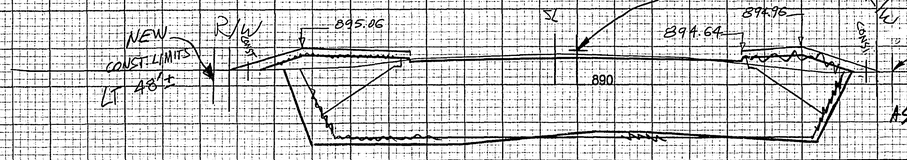
ENTRANCE



A STA. 148+50.00 ℄ 893.24 DES3 (894.85)
AA STA. 148+50.00 ℄ 894.02 OTI

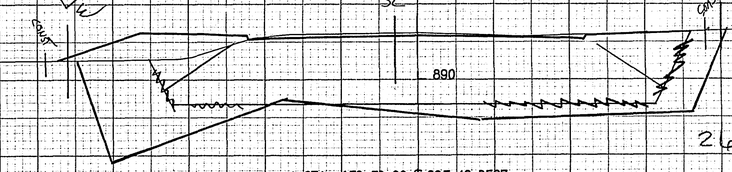


A STA. 148+00.00 ℄ 893.49 DES3 (894.60)
AA STA. 148+00.00 ℄ 893.99 OTI



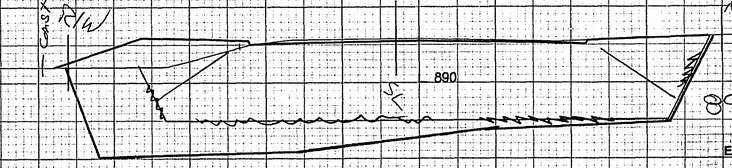
	EMB	MUCK EXCAVATION	GRANULAR
	281	1390	1116
AS BUILT MUCK	276	1366	1069
	251	1316	1035
AS BUILT MUCK	134	978	786
	26	309	253
	157	1264	1019
AS BUILT MUCK	113	1224	1049

A STA. 153+00.00 ℄ 895.80 DES3
AA STA. 153+00.00 ℄ 896.22 OTI



AS BUILT MUCK 266 1232 971

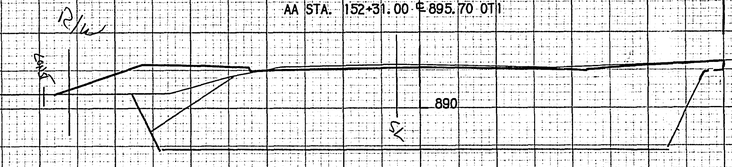
A STA. 152+50.00 ℄ 895.48 DES3
AA STA. 152+50.00 ℄ 895.77 OTI



AS BUILT MUCK 89 522 422

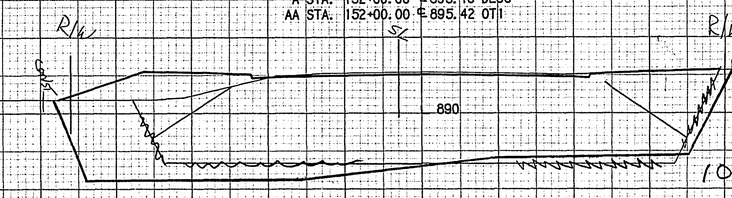
ENTRANCE

A STA. 152+31.00 ℄ 895.36 DES3
AA STA. 152+31.00 ℄ 895.70 OTI



152 906 747

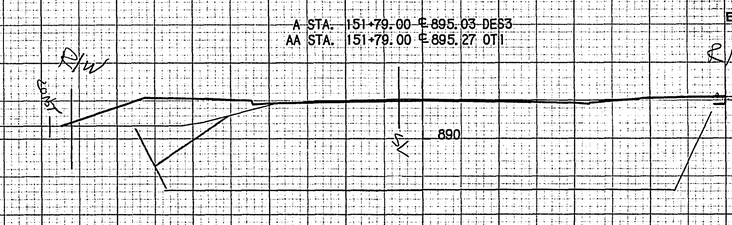
A STA. 152+00.00 ℄ 895.16 DES3
AA STA. 152+00.00 ℄ 895.42 OTI



AS BUILT MUCK 103 622 479

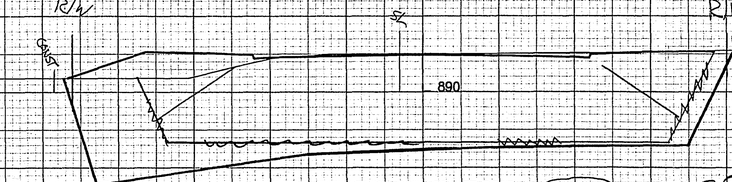
ENTRANCE

A STA. 151+79.00 ℄ 895.03 DES3
AA STA. 151+79.00 ℄ 895.27 OTI



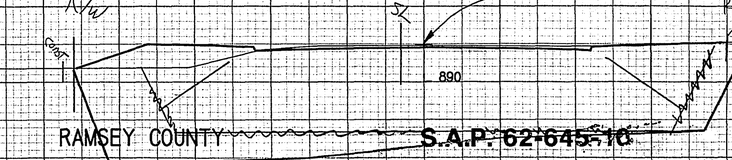
ASBUILT PLAN
CONFORMING TO
CONST. RECORDS
DONE BY: MR
DATE: 12-3-93

A STA. 151+50.00 ℄ 894.85 DES3 (OE)
AA STA. 151+50.00 ℄ 895.00 OTI



AS BUILT MUCK 135 838 691

A STA. 151+00.00 ℄ 894.53 DES3 (894.83)
AA STA. 151+00.00 ℄ 894.79 OTI



DATE REVISED 9-30-92
BJ

AS BUILT MUCK 28-126

	EMB	MUCK EXCAVATION	GRANULAR
	280	1425	1155

STA. 148+00.00 TO 153+00.00 SCALE = 10 X 10

RAMSEY COUNTY S.A.P. 62-645-10 SHEET 43 OF 73 SHEETS
43R2

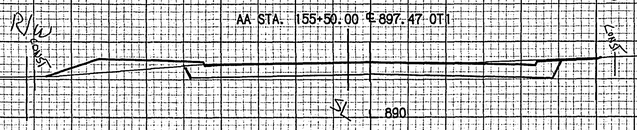
W. CO. MINN.

EMB | MUCK EXCAVATION | GRANULAR

+ 50 END MUCK EXCAVATION

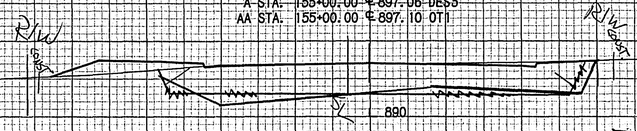
BEGIN 1' SUBCUT U&C

A STA. 155+50.00 ℄ 897.37 DES3
AA STA. 155+50.00 ℄ 897.47 OT1



85 295 205

A STA. 155+00.00 ℄ 897.06 DES3
AA STA. 155+00.00 ℄ 897.10 OT1

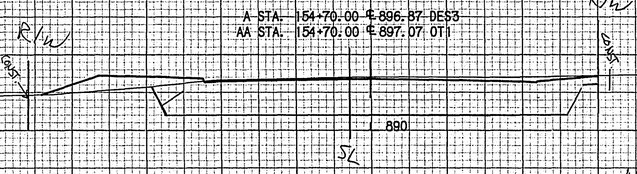


AS BUILT MUCK

58 268 218

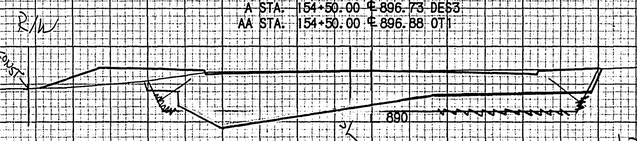
ENTRANCE

A STA. 154+70.00 ℄ 896.87 DES3
AA STA. 154+70.00 ℄ 897.07 OT1



40 216 167

A STA. 154+50.00 ℄ 896.73 DES3
AA STA. 154+50.00 ℄ 896.88 OT1

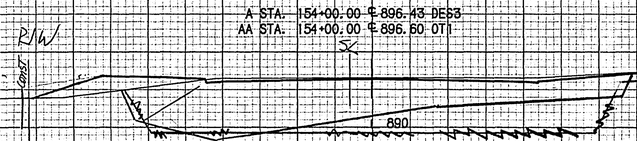


AS BUILT MUCK

137 717 531

ENTRANCE

A STA. 154+00.00 ℄ 896.43 DES3
AA STA. 154+00.00 ℄ 896.60 OT1

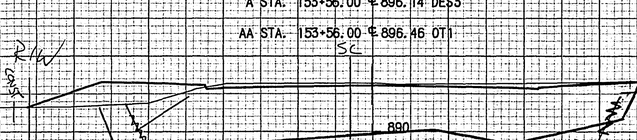


AS BUILT MUCK

117 763 603

ENTRANCE

A STA. 153+56.00 ℄ 896.14 DES3
AA STA. 153+56.00 ℄ 896.46 OT1



AS BUILT MUCK

191 1121 917

A STA. 157+36.00 ℄ 896.72 SCT1
A STA. 157+36.00 ℄ 898.54 DES3
AA STA. 157+36.00 ℄ 898.71 OT1

EXCAVATION | EMBANKMENT

137 68

℄ CO. RD. H2

A STA. 157+20.00 ℄ 896.62 SCT1
A STA. 157+20.00 ℄ 898.44 DES3
AA STA. 157+20.00 ℄ 898.73 OT1

135 89

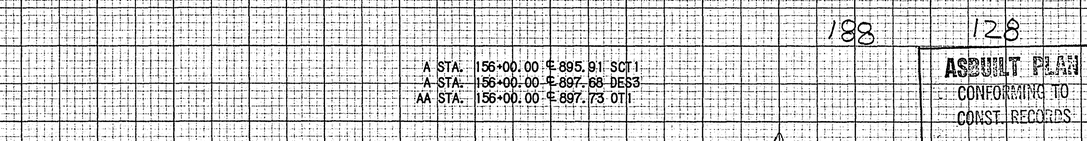
A STA. 157+00.00 ℄ 896.54 SCT1
A STA. 157+00.00 ℄ 898.32 DES3
AA STA. 157+00.00 ℄ 898.27 OT1

211 170

A STA. 156+50.00 ℄ 896.22 SCT1
A STA. 156+50.00 ℄ 898.00 DES3
AA STA. 156+50.00 ℄ 898.01 OT1

188 128

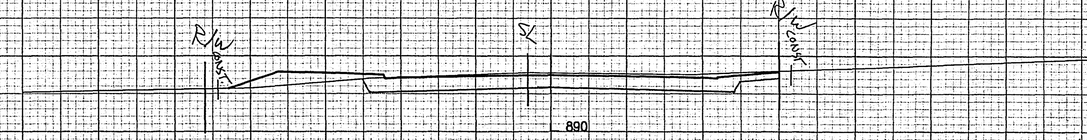
A STA. 156+00.00 ℄ 895.91 SCT1
A STA. 156+00.00 ℄ 897.68 DES3
AA STA. 156+00.00 ℄ 897.73 OT1



116 88

A STA. 155+68.00 ℄ 897.48 DES3
AA STA. 155+68.00 ℄ 897.73 OT1

ENTRANCE



66 54 28-126

ASBUILT PLAN
CONFORMING TO
CONST. RECORDS
DONE BY: MR
DATE: 12-3-93

STA. 153+56.00 TO 157+36.00 SCALE - 10 X 10

HENN. CO., MINN. | RAMSEY COUNTY | S.A.P. 62-645-10 | SHEET 44 OF 73 SHEETS

EXC	EMB	MUCK EXC	GRAN
	453	398	492
	519	327	454
	502	282	372
	544	188	220
	104	867	
	156	816	
	83	115	

A STA. 160+00.00 ℄ 898.79 DES3
AA STA. 160+00.00 ℄ 897.78 OT1

A STA. 159+50.00 ℄ 899.04 DES3
AA STA. 159+50.00 ℄ 898.04 OT1

A STA. 159+00.00 ℄ 899.29 DES3
AA STA. 159+00.00 ℄ 898.25 OT1

+50 BEGIN MUCK EXCAVATION

A STA. 158+50.00 ℄ 899.25 DES3
AA STA. 158+50.00 ℄ 898.18 OT1

A STA. 158+00.00 ℄ 897.13 SCT1
A STA. 158+00.00 ℄ 898.94 DES3
AA STA. 158+00.00 ℄ 898.17 OT1

A STA. 157+50.00 ℄ 898.81 SCT 1
A STA. 157+50.00 ℄ 898.83 DES3
AA STA. 157+50.00 ℄ 898.48 OT1

END SWALE - STA 157+50
SD - 896.05

MATCH B

MATCH A

REVISED 899.04 (+1.9)

A STA. 163+50.00 ℄ 897.13 DES3
AA STA. 163+50.00 ℄ 897.33 OT1

REVISED 898.79 (+1.51)

A STA. 163+00.00 ℄ 897.28 DES3
AA STA. 163+00.00 ℄ 897.23 OT1

REVISED 898.54 (+1.01')

A STA. 162+50.00 ℄ 897.53 DES3
AA STA. 162+50.00 ℄ 897.15 OT1

REVISED 898.29 (+0.5')

A STA. 162+00.00 ℄ 897.79 DES3
AA STA. 162+00.00 ℄ 897.34 OT1

REVISED 898.10 (+.06)

A STA. 161+50.00 ℄ 898.04 DES3
AA STA. 161+50.00 ℄ 897.66 OT1

GRADE REVISION 8/18/93 STA. 161+25

SCOTLAND COURT

A STA. 160+93.00 ℄ 898.33 DES3
AA STA. 160+93.00 ℄ 897.86 OT1

SWALE - Begin Sta 160+74, ELEV. 899.21
END STA 158+50 ELEV. 897.06
GRADE 1.0%

A STA. 160+50.00 ℄ 898.54 DES3
AA STA. 160+50.00 ℄ 897.77 OT1

	EMB	MUCK EXCAVATION	GRANULAR
	197	1050	972
	257	1099	1052
	274	941	933
	243	778	782
	153	773	706
	194	463	450

ASBUILT PLAN
CONFORMING TO CONST. RECORDS
DONE BY: MR
DATE: 12-3-93

STA. 157+50.00 TO 163+50.00 SCALE - 10 X 10

	EMBANKMENT	MUCK EXCAVATION	GRANULAR
REVISED 900.54 (+0.35')			
A STA. 166+50.00 ℄ 900.19 DES3			
AA STA. 166+50.00 ℄ 899.35 OT1			
	116	219	243
REVISED 900.29 (+0.87')			
A STA. 166+00.00 ℄ 899.42 DES3			
AA STA. 166+00.00 ℄ 898.68 OT1			
	173	244	266
REVISED 900.04 (+1.14')			
A STA. 165+50.00 ℄ 898.90 DES3			
AA STA. 165+50.00 ℄ 897.90 OT1			
	155	583	626
REVISED 899.79 (+1.35')			
A STA. 165+00.00 ℄ 898.44 DES3			
AA STA. 165+00.00 ℄ 897.67 OT1			
	132	748	730
REVISED 899.57 (+1.56')			
A STA. 164+50.00 ℄ 897.98 DES3			
AA STA. 164+50.00 ℄ 897.51 OT1			
	116	748	659
REVISED 899.29 (+1.78')			
A STA. 164+00.00 ℄ 897.51 DES3			
AA STA. 164+00.00 ℄ 897.51 OT1			
	131	839	738

168 + 00 END MUCK EXCAVATION

	EMBANKMENT	MUCK EXCAVATION	GRANULAR
A STA. 167+50.00 ℄ 901.81 DES3			
AA STA. 167+50.00 ℄ 901.39 OT1			
	42	380	322
	29	431	412
A STA. 167+24.00 ℄ 901.39 DES3			
AA STA. 167+24.00 ℄ 901.02 OT1			
END GRADE REVISION STA. 167+06			
REVISED 901.00 (+0.00')	21	520	484
A STA. 167+00.00 ℄ 901.00 DES3			
AA STA. 167+00.00 ℄ 900.26 OT1			
	4	86	81
REVISED 900.94 (+0.01')			
A STA. 166+96.00 ℄ 900.93 DES3			
AA STA. 166+96.00 ℄ 900.30 OT1			
	20	390	373
REVISED 900.72 (+0.09')			
A STA. 166+77.00 ℄ 900.63 DES3			
AA STA. 166+77.00 ℄ 899.78 OT1			
	55	359	355

℄ MOUNDSVIEW DRIVE

ASBUILT PLAN
CONFORMING TO
CONST. RECORDS
DONE BY: MR
DATE: 12-3-93

STA. 164+00.00 TO 167+50.00 SCALE = 10 X 10

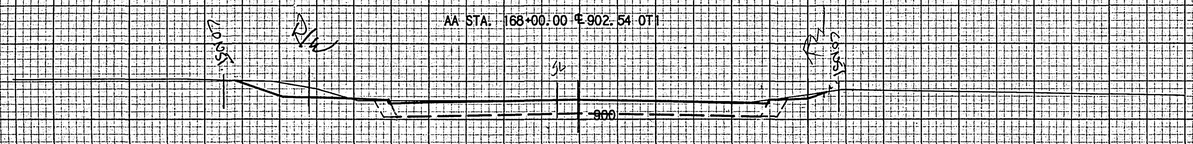
28-126

MINN. DOT | RAMSEY COUNTY | S.A.P. 62-645-10 | SHEET 46 OF 73 SHEETS
REVISED 8/18/93 BV | 46R

A STA. 168+00.00 ℄ 900.80 SCT1

A STA. 168+00.00 ℄ 902.62 DES3

AA STA. 168+00.00 ℄ 902.54 OT1



ASBUILT PLAN
CONFORMING TO
CONST. RECORDS
DONE BY: MR
DATE: 12-3-93

28-126

STA. 168+00.00 SCALE = 10 X 10

HENN. CO., MINN. RAMSEY COUNTY **S.A.P. 62-645-10** SHEET 47 OF 73 SHEETS

EXCAVATION EMBANKMENT

S.T.H. 10

A STA. 170+00.00 ℄ 907.76 SCT1
A STA. 170+00.00 ℄ 909.59 DES3
AA STA. 170+00.00 ℄ 907.88 OT1

20 49

A STA. 169+80.00 ℄ 907.01 SCT1
A STA. 169+80.00 ℄ 908.83 DES3
AA STA. 169+80.00 ℄ 907.62 OT1

ENTRANCE

+60' END PRECAST MASONRY RETAINING WALL LEFT 39'

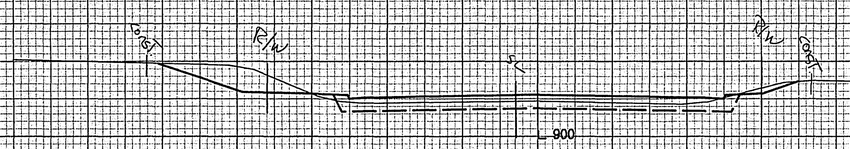
46 74

A STA. 169+50.00 ℄ 905.89 SCT1
A STA. 169+50.00 ℄ 907.72 DES3
AA STA. 169+50.00 ℄ 906.39 OT1

+10 BEGIN PRECAST MASONRY RETAINING WALL LEFT 49'±

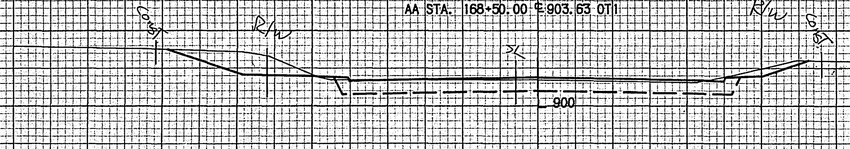
140 122

A STA. 169+00.00 ℄ 904.01 SCT1
A STA. 169+00.00 ℄ 905.84 DES3
AA STA. 169+00.00 ℄ 904.99 OT1



195 115

A STA. 168+50.00 ℄ 902.14 SCT1
A STA. 168+50.00 ℄ 903.97 DES3
AA STA. 168+50.00 ℄ 903.63 OT1



187 115

BEGIN B624 C&G
STA. 174+90

A STA. 174+50.00 ℄ 911.18 SCT1
A STA. 174+50.00 ℄ 913.00 DES3
AA STA. 174+50.00 ℄ 913.05 OT1

EXCAVATION EMBANKMENT

S.T.H. 10

BEGIN B624 C&G
STA. 174+15

A STA. 174+00.00 ℄ 911.31 SCT1
A STA. 174+00.00 ℄ 913.0± DES3
AA STA. 174+00.00 ℄ 912.73 OT1

MATCH EXISTING

END EXCEPTION STATION 173+55± MATCH EXISTING

BEGIN EXCEPTION STATION 172+15± MATCH EXISTING

A STA. 172+00.00 ℄ 911.82 SCT1
A STA. 172+00.00 ℄ 913.6± DES3
AA STA. 172+00.00 ℄ 913.46 OT1

S.T.H. 10

MATCH EXISTING

A STA. 171+50.00 ℄ 911.22 SCT1
A STA. 171+50.00 ℄ 913.04 DES3
AA STA. 171+50.00 ℄ 912.33 OT1

S.T.H. 10

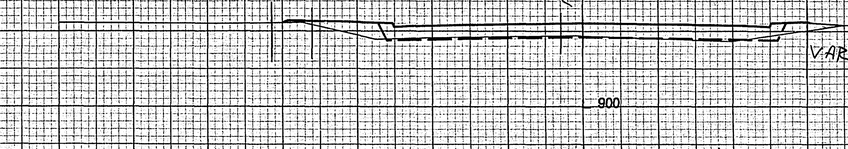
MATCH EXISTING

A STA. 171+00.00 ℄ 910.51 SCT1
A STA. 171+00.00 ℄ 912.32 DES3
AA STA. 171+00.00 ℄ 911.04 OT1

TURN LANE TH.10

A STA. 170+50.00 ℄ 909.37 SCT1
A STA. 170+50.00 ℄ 911.19 DES3
AA STA. 170+50.00 ℄ 909.59 OT1

43 172



ASBUILT PLAN
CONFORMING TO
CONST. RECORDS
DONE BY: MR
DATE: 12-3-73

17 163

28-126

STA. 168+50.00 TO 174+50.00 SCALE: 1" = 10' X 10'

HENN. CO., MINN. RAMSEY COUNTY **S.A.P. 62-645-10** SHEET 48 OF 73 SHEETS

EXCAVATION EMBANKMENT

A STA. 175+50.00 ℄ 910.68 SCT1
A STA. 175+50.00 ℄ 912.49 DES3
AA STA. 175+50.00 ℄ 912.93 OT1

102 106

A STA. 175+34.00 ℄ 910.76 SCT1
A STA. 175+34.00 ℄ 912.58 DES3
AA STA. 175+34.00 ℄ 913.07 OT1

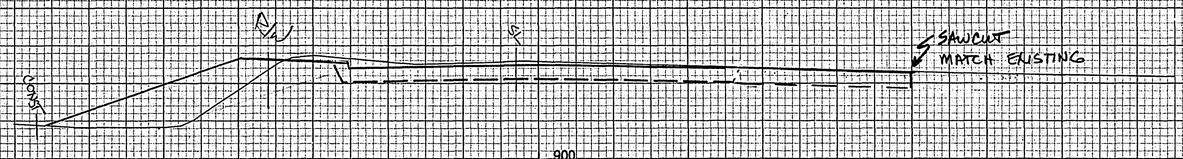
64 68

A STA. 175+25.00 ℄ 910.80 SCT1
A STA. 175+25.00 ℄ 912.63 DES3
AA STA. 175+25.00 ℄ 913.01 OT1

BRONSON DRIVE

64 69

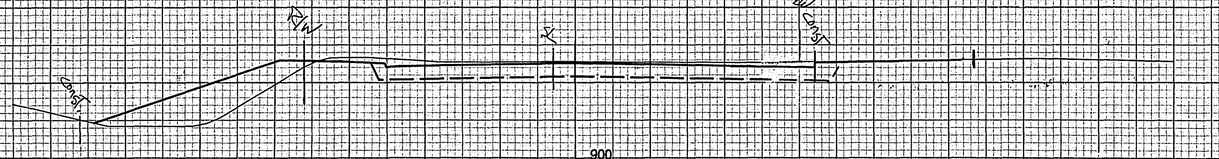
A STA. 175+16.00 ℄ 910.85 SCT1
A STA. 175+16.00 ℄ 912.67 DES3
AA STA. 175+16.00 ℄ 913.09 OT1



96 109

A STA. 175+00.00 ℄ 910.93 SCT1
A STA. 175+00.00 ℄ 912.74 DES3
AA STA. 175+00.00 ℄ 912.93 OT1

RADIUS BRONSON DRIVE

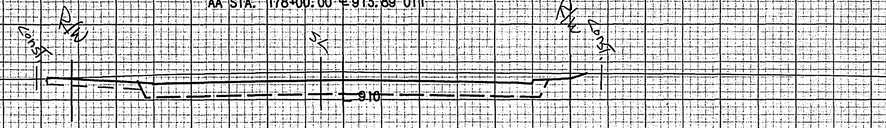


201 202

EXCAVATION EMBANKMENT

A STA. 178+00.00 ℄ 910.93 SCT1
A STA. 178+00.00 ℄ 912.75 DES3
AA STA. 178+00.00 ℄ 913.89 OT1

ENTRANCE

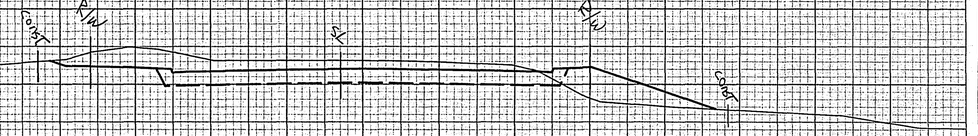


323 156

A STA. 177+50.00 ℄ 910.68 SCT1
A STA. 177+50.00 ℄ 912.51 DES3
AA STA. 177+50.00 ℄ 913.56 OT1

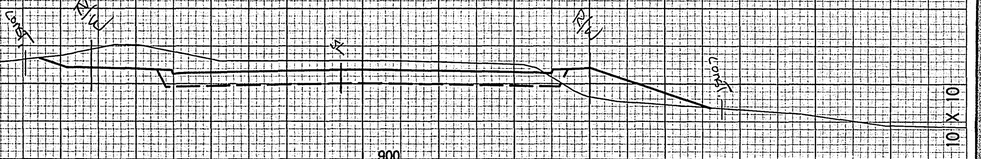
322 205

A STA. 177+00.00 ℄ 910.43 SCT1
A STA. 177+00.00 ℄ 912.25 DES3
AA STA. 177+00.00 ℄ 913.36 OT1



344 205

A STA. 176+50.00 ℄ 910.24 SCT1
A STA. 176+50.00 ℄ 912.07 DES3
AA STA. 176+50.00 ℄ 913.22 OT1



367 172

A STA. 176+00.00 ℄ 910.43 SCT1
A STA. 176+00.00 ℄ 912.25 DES3
AA STA. 176+00.00 ℄ 913.14 OT1

316 219

AS BUILT PLAN
CONFORMING TO
CONST. RECORDS
DONE BY: M.R
DATE: 12-3-97

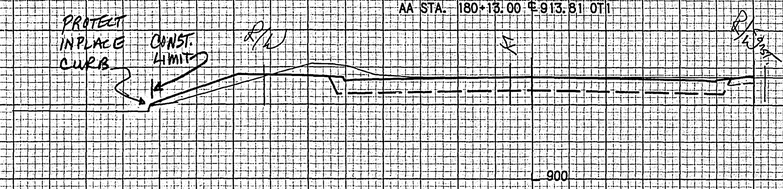
STA. 175+00.00 TO 178+00.00 SCALE: 1" = 10' X 10'

28-126

HENNEPIN CO., MINN. RAMSEY COUNTY **S.A.P. 62-645-10** SHEET 49 OF 73 SHEETS

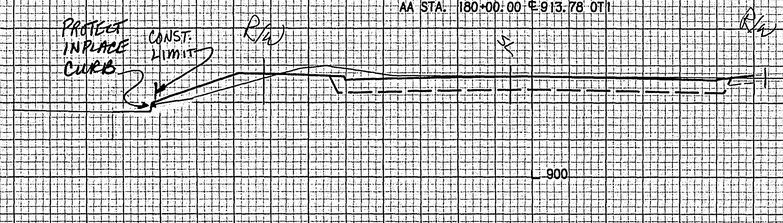
EXCAVATION EMBANKMENT

A STA. 180+13.00 ℄912.00 SCT1
A STA. 180+13.00 ℄913.81 DES3
AA STA. 180+13.00 ℄913.81 OT1



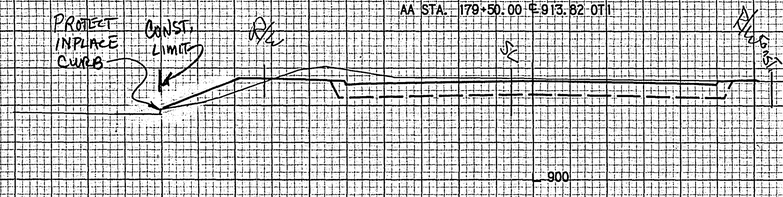
60 43

A STA. 180+00.00 ℄911.93 SCT1
A STA. 180+00.00 ℄913.75 DES3
AA STA. 180+00.00 ℄913.78 OT1



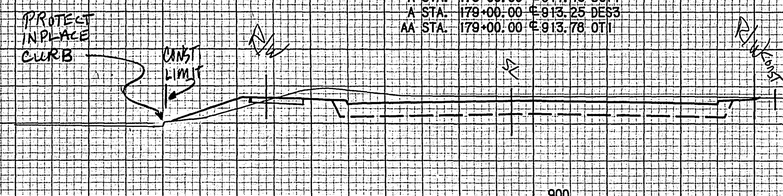
259 168

A STA. 179+50.00 ℄911.68 SCT1
A STA. 179+50.00 ℄913.50 DES3
AA STA. 179+50.00 ℄913.82 OT1



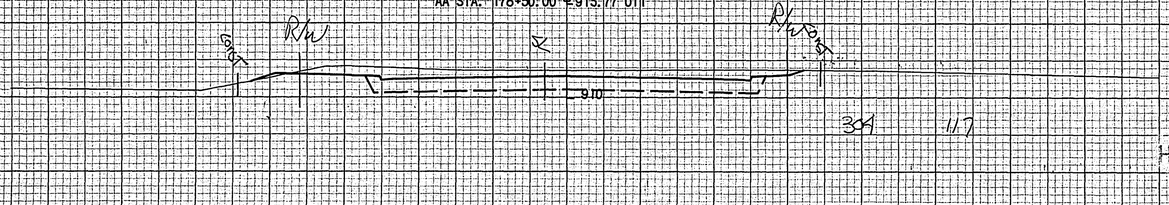
283 158

A STA. 179+00.00 ℄911.43 SCT1
A STA. 179+00.00 ℄913.25 DES3
AA STA. 179+00.00 ℄913.78 OT1



272 135

A STA. 178+50.00 ℄911.18 SCT1
A STA. 178+50.00 ℄913.00 DES3
AA STA. 178+50.00 ℄913.77 OT1



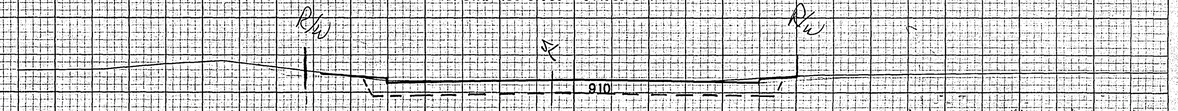
304 117

EXCEPTION CO. RD. 1

TO MATCH TO EXISTING CONC. PVMT.

EXCAVATION EMBANKMENT

A STA. 183+07.00 ℄911.78 DES3
AA STA. 183+07.00 ℄911.69 OT1



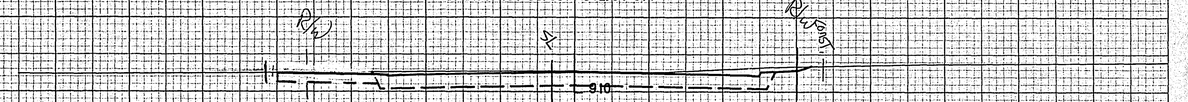
A STA. 182+50.00 ℄910.45 SCT1
A STA. 182+50.00 ℄912.28 DES3
AA STA. 182+50.00 ℄912.39 OT1

258 140

270 124

ENTRANCE

A STA. 181+96.00 ℄910.92 SCT1
A STA. 181+96.00 ℄912.74 DES3
AA STA. 181+96.00 ℄912.94 OT1



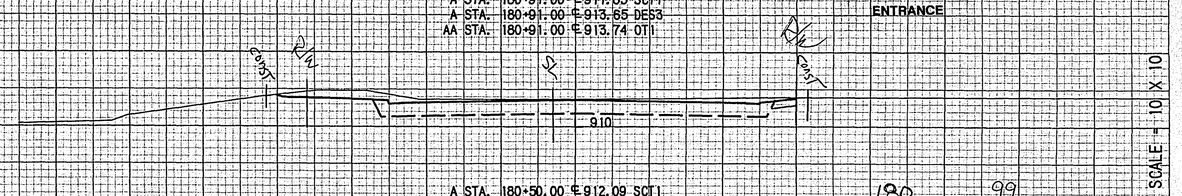
227 105

A STA. 181+50.00 ℄911.32 SCT1
A STA. 181+50.00 ℄913.14 DES3
AA STA. 181+50.00 ℄913.14 OT1

291 135

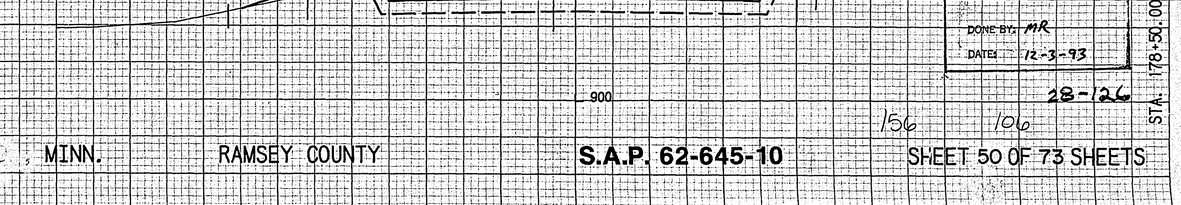
A STA. 180+91.00 ℄911.83 SCT1
A STA. 180+91.00 ℄913.65 DES3
AA STA. 180+91.00 ℄913.74 OT1

ENTRANCE



A STA. 180+50.00 ℄912.09 SCT1
A STA. 180+50.00 ℄913.91 DES3
AA STA. 180+50.00 ℄913.72 OT1

180 99



156 106

ASBUILT PLAN
CONFORMING TO
CONST. RECORDS
DONE BY: MR
DATE: 12-3-93

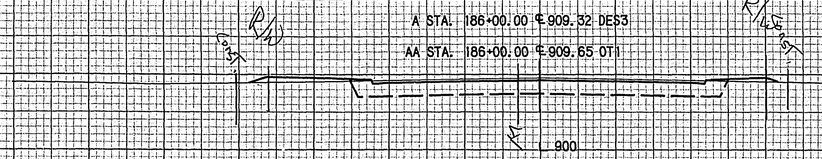
28-126

STA. 178+50.00 TO 183+07.00 SCALE = 10 X 10

HENNEPIN MINN. RAMSEY COUNTY **S.A.P. 62-645-10** SHEET 50 OF 73 SHEETS

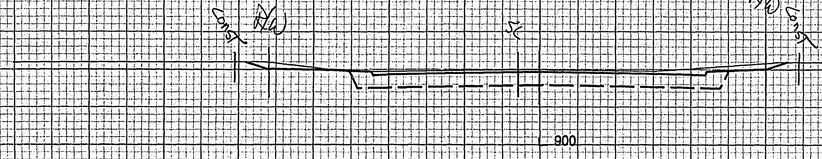
EXCAVATION EMBANKMENT

A STA. 186+00.00 ℄ 907.54 SCT1
A STA. 186+00.00 ℄ 909.32 DES3
AA STA. 186+00.00 ℄ 909.65 OT1



218 106

A STA. 185+50.00 ℄ 907.98 SCT1
A STA. 185+50.00 ℄ 909.77 DES3
AA STA. 185+50.00 ℄ 910.04 OT1



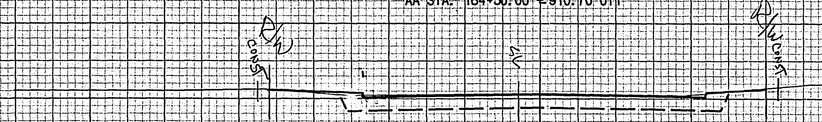
219 104

+02 END TAPER LT. 22'

A STA. 185+00.00 ℄ 908.41 SCT1
A STA. 185+00.00 ℄ 910.19 DES3
AA STA. 185+00.00 ℄ 910.32 OT1

190 110

A STA. 184+50.00 ℄ 908.85 SCT1
A STA. 184+50.00 ℄ 910.63 DES3
AA STA. 184+50.00 ℄ 910.70 OT1



+42 END TAPER RT. 22'

86 52

+27 BEGIN TAPER LT. 27'
MATCH EXISTING CURB

A STA. 184+27.00 ℄ 909.05 SCT1
A STA. 184+27.00 ℄ 910.83 DES3
AA STA. 184+27.00 ℄ 911.02 OT1

+27 BEGIN TAPER RT. 21'
MATCH EXISTING CURB

END EXCEPTION STA. 184 + 27

EXCAVATION EMBANKMENT

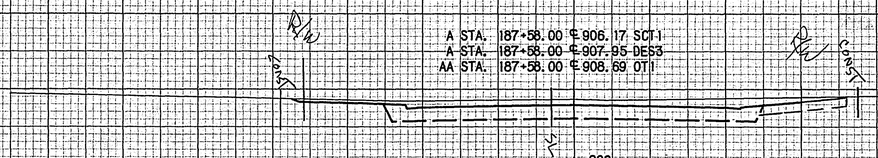
A STA. 187+83.00 ℄ 905.96 SCT1
A STA. 187+83.00 ℄ 907.74 DES3
AA STA. 187+83.00 ℄ 908.56 OT1

ENTRANCE

150 50

ENTRANCE

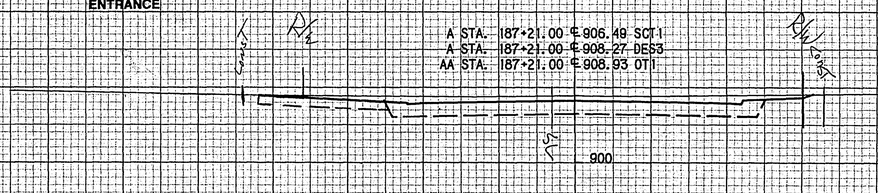
A STA. 187+58.00 ℄ 906.17 SCT1
A STA. 187+58.00 ℄ 907.95 DES3
AA STA. 187+58.00 ℄ 908.69 OT1



220 74

ENTRANCE

A STA. 187+21.00 ℄ 906.49 SCT1
A STA. 187+21.00 ℄ 908.27 DES3
AA STA. 187+21.00 ℄ 908.93 OT1



110 44

A STA. 187+00.00 ℄ 906.67 SCT1
A STA. 187+00.00 ℄ 908.44 DES3
AA STA. 187+00.00 ℄ 908.93 OT1

118 52

ENTRANCE

A STA. 186+75.00 ℄ 906.89 SCT1
A STA. 186+75.00 ℄ 908.67 DES3
AA STA. 186+75.00 ℄ 909.09 OT1

126 52

A STA. 186+50.00 ℄ 907.11 SCT1
A STA. 186+50.00 ℄ 908.89 DES3
AA STA. 186+50.00 ℄ 909.25 OT1

224 111

ASBUILT PLAN
CONFORMING TO
CONST. RECORDS
DONE BY: MR
DATE: 12-3-93

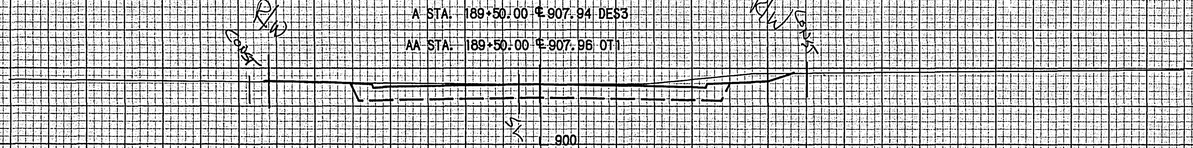
28-126

STA. 184+27.00 TO 187+83.00 SCALE - 10 X 10

SHEET CO. MINN. RAMSEY COUNTY **S.A.P. 62-645-10** SHEET 51 OF 73 SHEETS

EXCAVATION EMBANKMENT

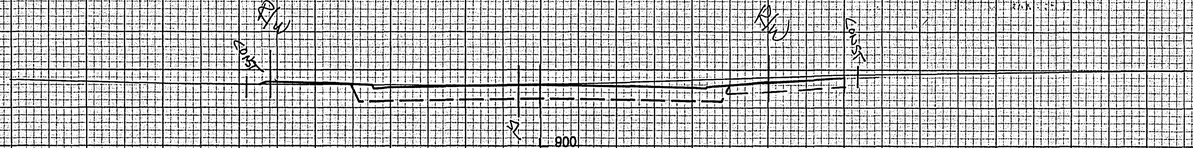
A STA. 189+50.00 ℄ 906.15 SCT1
A STA. 189+50.00 ℄ 907.94 DES3
AA STA. 189+50.00 ℄ 907.96 OT1



199 84

A STA. 189+10.00 ℄ 906.29 SCT1
A STA. 189+10.00 ℄ 908.08 DES3
AA STA. 189+10.00 ℄ 908.22 OT1

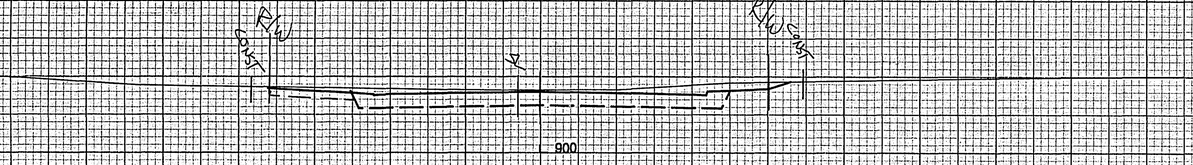
ENTRANCE



A STA. 188+87.00 ℄ 906.23 SCT1
A STA. 188+87.00 ℄ 908.02 DES3
AA STA. 188+87.00 ℄ 908.21 OT1

124 48

ENTRANCE



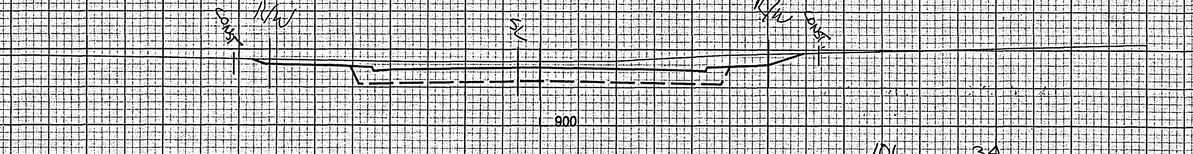
288 90

A STA. 188+42.00 ℄ 906.01 SCT1
A STA. 188+42.00 ℄ 907.79 DES3
AA STA. 188+42.00 ℄ 908.49 OT1

ENTRANCE ENTRANCE

282 84

A STA. 188+00.00 ℄ 905.89 SCT1
A STA. 188+00.00 ℄ 907.67 DES3
AA STA. 188+00.00 ℄ 908.42 OT1



106 34

ENTRANCE

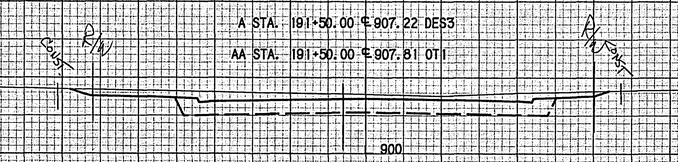
A STA. 191+70.00 ℄ 905.63 SCT1
A STA. 191+70.00 ℄ 907.41 DES3
AA STA. 191+70.00 ℄ 908.03 OT1

ENTRANCE

EXCAVATION EMBANKMENT

120 40

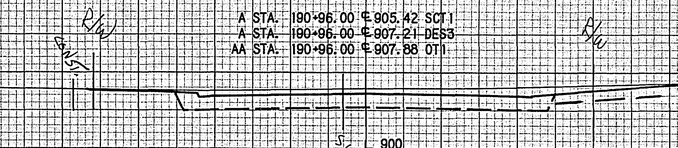
A STA. 191+50.00 ℄ 905.43 SCT1
A STA. 191+50.00 ℄ 907.22 DES3
AA STA. 191+50.00 ℄ 907.81 OT1



334 108

ENTRANCE

A STA. 190+96.00 ℄ 905.42 SCT1
A STA. 190+96.00 ℄ 907.21 DES3
AA STA. 190+96.00 ℄ 907.88 OT1

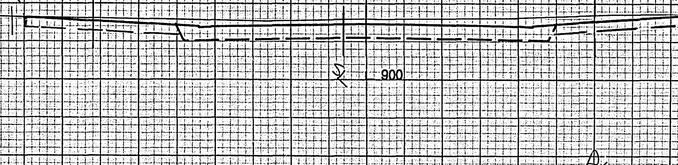


328 92

ENTRANCE

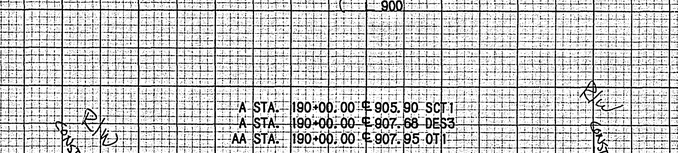
A STA. 190+80.00 ℄ 905.50 SCT1
A STA. 190+80.00 ℄ 907.28 DES3
AA STA. 190+80.00 ℄ 907.97 OT1

ENTRANCE



181 60

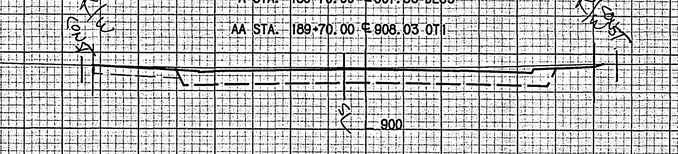
A STA. 190+50.00 ℄ 905.65 SCT1
A STA. 190+50.00 ℄ 907.43 DES3
AA STA. 190+50.00 ℄ 907.72 OT1



273 107

A STA. 190+00.00 ℄ 905.90 SCT1
A STA. 190+00.00 ℄ 907.68 DES3
AA STA. 190+00.00 ℄ 907.95 OT1

ENTRANCE



132 64

ENTRANCE

A STA. 189+70.00 ℄ 906.05 SCT1
A STA. 189+70.00 ℄ 907.83 DES3
AA STA. 189+70.00 ℄ 908.03 OT1

93 40

ASPHALT PLAN
CONFORMING TO
CONST. RECORDS
DONE BY: MR
DATE: 12-3-93

28-126

STA. 188+00.00 TO 191+70.00 SCALE 1" = 10' X 10'

HENNEPIN CO. MINN. RAMSEY COUNTY **S.A.P. 62-645-10** SHEET 52 OF 73 SHEETS

EXCAVATION EMBANKMENT

167 70

A STA. 192+97.00 ℄ 906.93 SCT1
A STA. 192+97.00 ℄ 908.71 DES3
AA STA. 192+97.00 ℄ 908.72 OT1

ENTRANCE

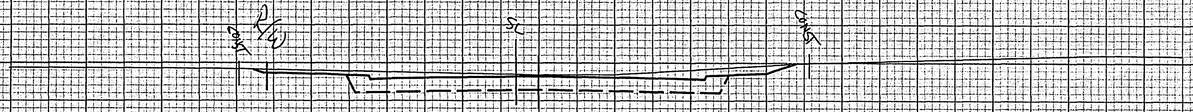
95 34

A STA. 192+80.00 ℄ 906.75 SCT1
A STA. 192+80.00 ℄ 908.54 DES3
AA STA. 192+80.00 ℄ 908.65 OT1

ENTRANCE

172 60

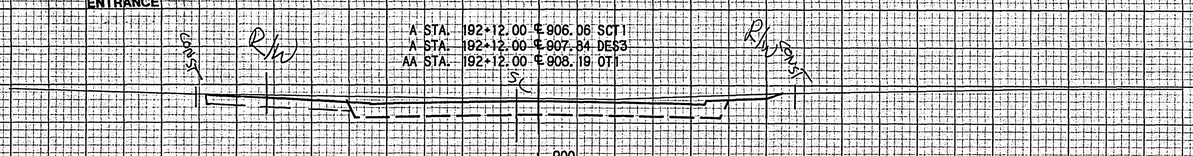
A STA. 192+50.00 ℄ 906.45 SCT1
A STA. 192+50.00 ℄ 908.23 DES3
AA STA. 192+50.00 ℄ 908.37 OT1



222 76

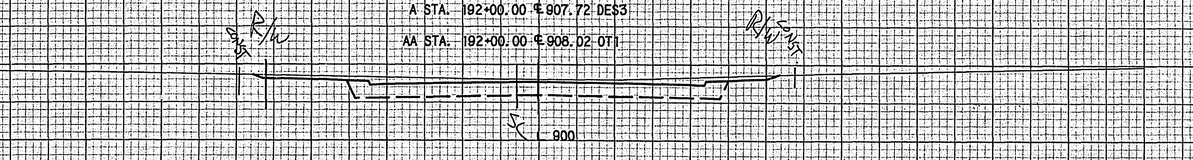
ENTRANCE

A STA. 192+12.00 ℄ 906.06 SCT1
A STA. 192+12.00 ℄ 907.84 DES3
AA STA. 192+12.00 ℄ 908.19 OT1



70 24

A STA. 192+00.00 ℄ 905.94 SCT1
A STA. 192+00.00 ℄ 907.72 DES3
AA STA. 192+00.00 ℄ 908.02 OT1

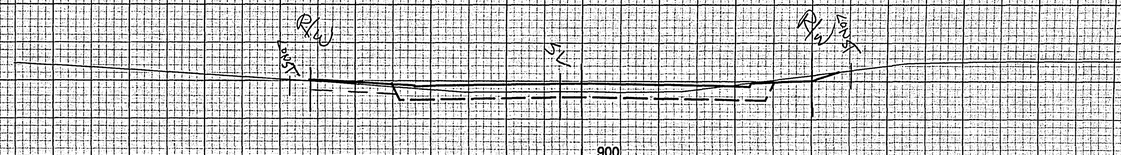


184 60

ENTRANCE

A STA. 194+78.00 ℄ 907.84 SCT1
A STA. 194+78.00 ℄ 909.62 DES3
AA STA. 194+78.00 ℄ 908.58 OT1

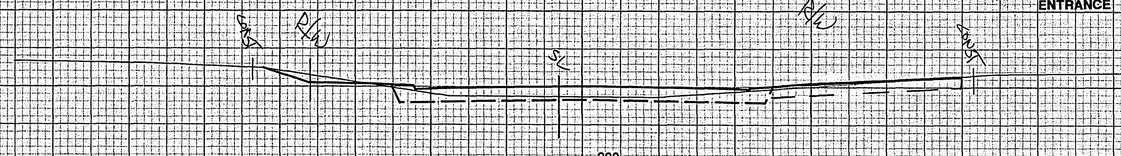
EXCAVATION EMBANKMENT



111 82

A STA. 194+37.00 ℄ 908.24 SCT1
A STA. 194+37.00 ℄ 910.02 DES3
AA STA. 194+37.00 ℄ 908.64 OT1

ENTRANCE



98 74

A STA. 194+00.00 ℄ 907.98 SCT1
A STA. 194+00.00 ℄ 909.77 DES3
AA STA. 194+00.00 ℄ 908.62 OT1

68 46

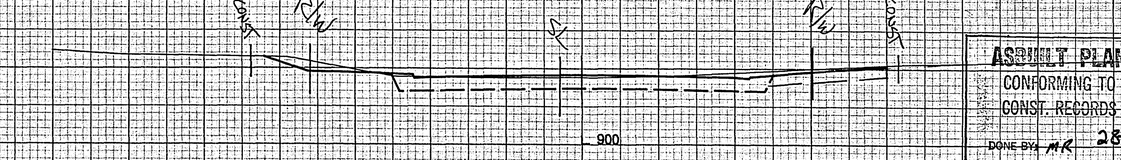
A STA. 193+77.00 ℄ 907.75 SCT1
A STA. 193+77.00 ℄ 909.53 DES3
AA STA. 193+77.00 ℄ 908.71 OT1

ENTRANCE

188 90

A STA. 193+32.00 ℄ 907.29 SCT1
A STA. 193+32.00 ℄ 909.07 DES3
AA STA. 193+32.00 ℄ 908.80 OT1

ENTRANCE



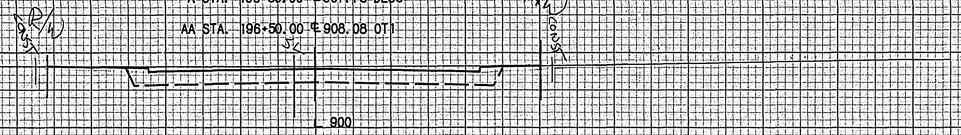
AS BUILT PLAN
CONFORMING TO
CONST. RECORDS
DONE BY: MR 28-126
DATE: 12-3-93

STA. 192+00.00 TO 194+78.00 SCALE - 10 X 10

MINN. RAMSEY COUNTY **S.A.P. 62-645-10** SHEET 53 OF 73 SHEETS

EXCAVATION EMBANKMENT

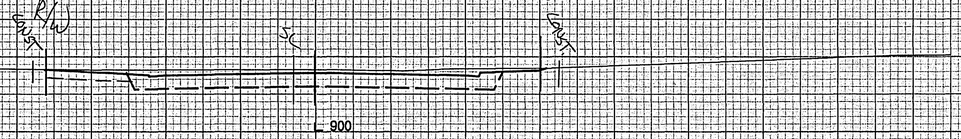
A STA. 196+50.00 ℄ 905.95 SCT1
A STA. 196+50.00 ℄ 907.73 DES3
AA STA. 196+50.00 ℄ 908.08 OT1



128 66

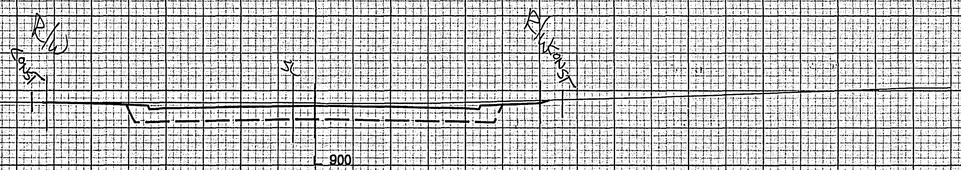
ENTRANCE

A STA. 196+17.00 ℄ 905.89 SCT1
A STA. 196+17.00 ℄ 907.67 DES3
AA STA. 196+17.00 ℄ 908.13 OT1



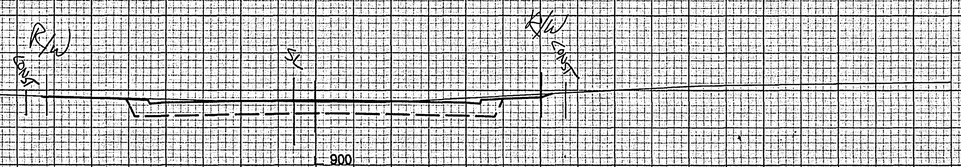
81 34

A STA. 196+00.00 ℄ 906.06 SCT1
A STA. 196+00.00 ℄ 907.85 DES3
AA STA. 196+00.00 ℄ 908.28 OT1



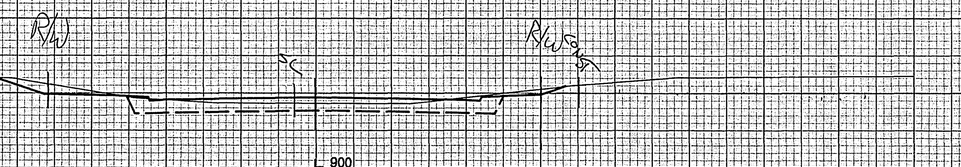
220 100

A STA. 195+50.00 ℄ 906.79 SCT1
A STA. 195+50.00 ℄ 908.58 DES3
AA STA. 195+50.00 ℄ 908.34 OT1



181 100

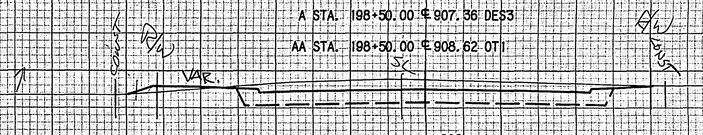
A STA. 195+00.00 ℄ 907.52 SCT1
A STA. 195+00.00 ℄ 909.30 DES3
AA STA. 195+00.00 ℄ 908.49 OT1



61 44

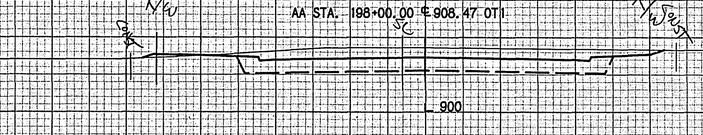
HOCKEY RINK

A STA. 198+50.00 ℄ 905.59 SCT1
A STA. 198+50.00 ℄ 907.36 DES3
AA STA. 198+50.00 ℄ 908.62 OT1



283 120

A STA. 198+00.00 ℄ 905.39 SCT1
A STA. 198+00.00 ℄ 907.17 DES3
AA STA. 198+00.00 ℄ 908.47 OT1

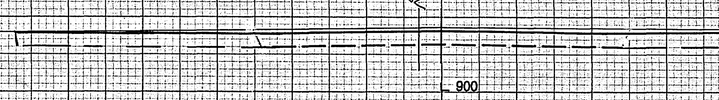


274 107

A STA. 197+50.00 ℄ 905.79 SCT1
A STA. 197+50.00 ℄ 907.57 DES3
AA STA. 197+50.00 ℄ 908.47 OT1

266 119

A STA. 197+13.00 ℄ 906.16 SCT1
A STA. 197+13.00 ℄ 907.94 DES3
AA STA. 197+13.00 ℄ 908.41 OT1



119 58

A STA. 197+00.00 ℄ 906.29 SCT1
A STA. 197+00.00 ℄ 908.07 DES3
AA STA. 197+00.00 ℄ 908.32 OT1

71 36

℄ HILLVIEW ROAD

A STA. 196+92.00 ℄ 906.37 SCT1
A STA. 196+92.00 ℄ 908.15 DES3
AA STA. 196+92.00 ℄ 908.43 OT1

195 98

A STA. 196+70.00 ℄ 906.15 SCT1
A STA. 196+70.00 ℄ 907.93 DES3
AA STA. 196+70.00 ℄ 908.34 OT1

119 64

ASBUILT PLAN
CONFORMING TO
CONST. RECORDS
DONE BY: MR
DATE: 12-3-93

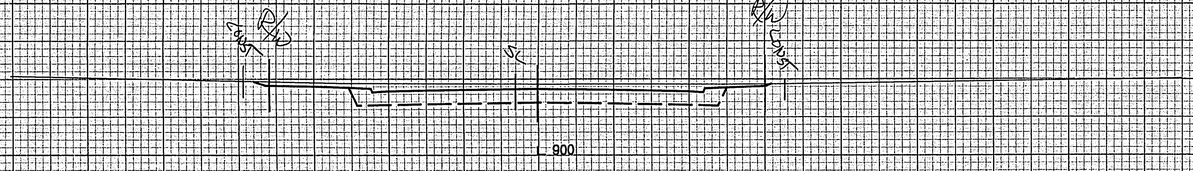
28-126

STA. 195+00.00 TO 198+50.00 SCALE = 10 X 10

MINN. RAMSEY COUNTY **S.A.P. 62-645-10** SHEET 54 OF 73 SHEETS

A STA. 200+50.00 ℄ 906.76 SCT1
A STA. 200+50.00 ℄ 908.55 DES3
AA STA. 200+50.00 ℄ 909.14 OT1

EXCAVATION EMBANKMENT

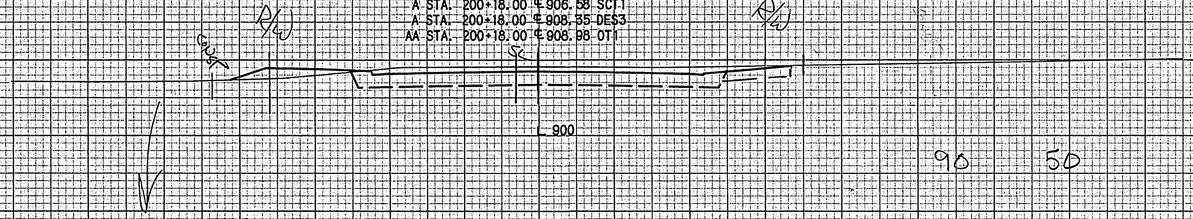


A STA. 200+40.00 ℄ 906.71 SCT1
A STA. 200+40.00 ℄ 908.49 DES3
AA STA. 200+40.00 ℄ 909.18 OT1

ENTRANCE 56 20

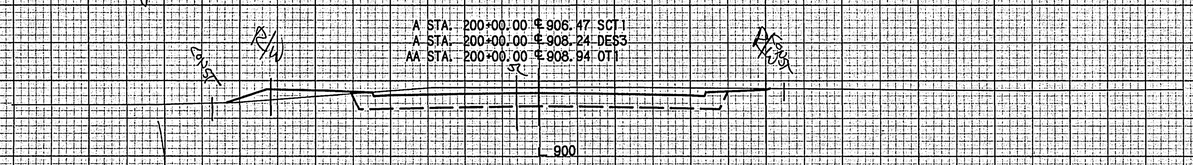
ENTRANCE 120 53

A STA. 200+18.00 ℄ 906.58 SCT1
A STA. 200+18.00 ℄ 908.35 DES3
AA STA. 200+18.00 ℄ 908.98 OT1



90 50

A STA. 200+00.00 ℄ 906.47 SCT1
A STA. 200+00.00 ℄ 908.24 DES3
AA STA. 200+00.00 ℄ 908.94 OT1

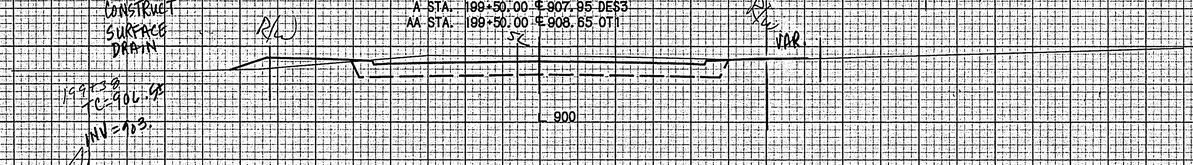


233 132

A STA. 199+50.00 ℄ 906.18 SCT1
A STA. 199+50.00 ℄ 907.95 DES3
AA STA. 199+50.00 ℄ 908.65 OT1

CONSTRUCT SURFACE DRAIN

199+38 ℄ 906.95
INV = 903.

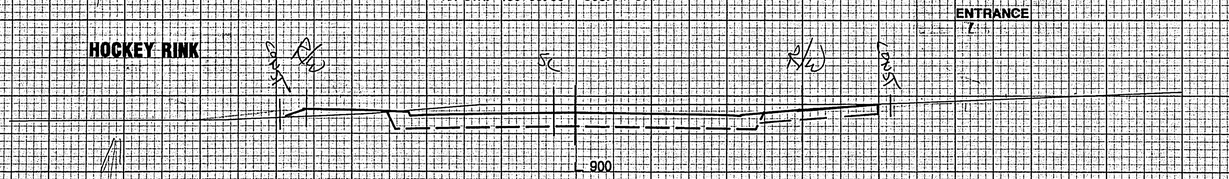


288 122

A STA. 199+00.00 ℄ 905.88 SCT1
A STA. 199+00.00 ℄ 907.67 DES3
AA STA. 199+00.00 ℄ 908.71 OT1

ENTRANCE

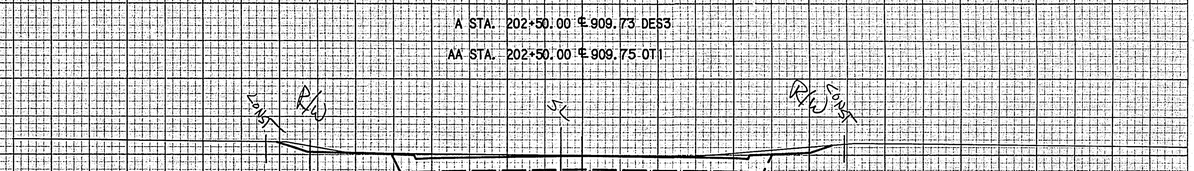
HOCKEY RINK



305 122

A STA. 202+50.00 ℄ 907.94 SCT1
A STA. 202+50.00 ℄ 909.73 DES3
AA STA. 202+50.00 ℄ 909.75 OT1

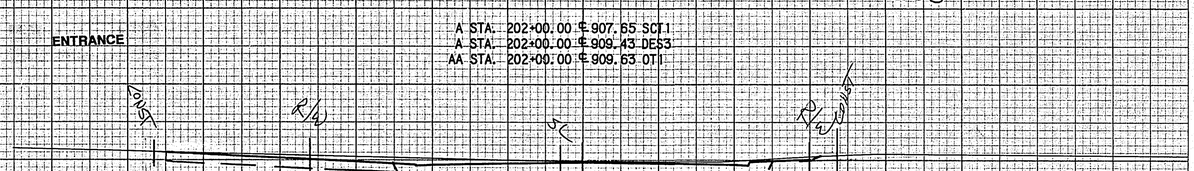
EXCAVATION EMBANKMENT



235 100

ENTRANCE

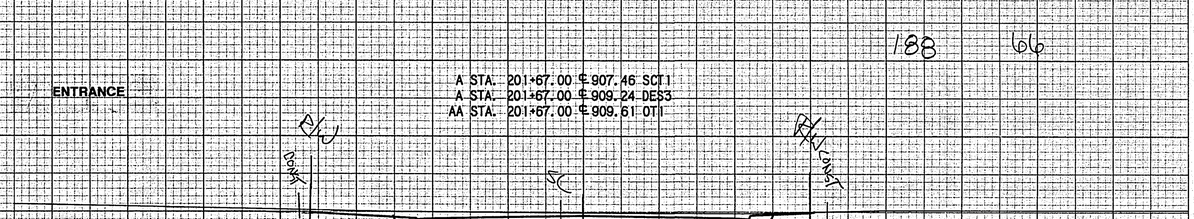
A STA. 202+00.00 ℄ 907.65 SCT1
A STA. 202+00.00 ℄ 909.43 DES3
AA STA. 202+00.00 ℄ 909.63 OT1



188 66

ENTRANCE

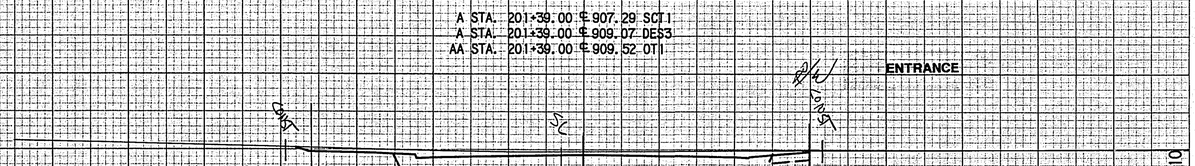
A STA. 201+67.00 ℄ 907.46 SCT1
A STA. 201+67.00 ℄ 909.24 DES3
AA STA. 201+67.00 ℄ 909.61 OT1



158 56

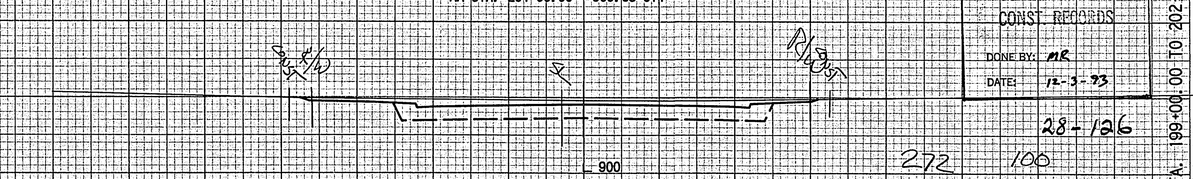
A STA. 201+39.00 ℄ 907.29 SCT1
A STA. 201+39.00 ℄ 909.07 DES3
AA STA. 201+39.00 ℄ 909.52 OT1

ENTRANCE



206 78

A STA. 201+00.00 ℄ 907.06 SCT1
A STA. 201+00.00 ℄ 908.84 DES3
AA STA. 201+00.00 ℄ 909.38 OT1



272 100

AS BUILT PLAN
CONFORMING TO
CONST. RECORDS
DONE BY: MR
DATE: 12-3-93

28-126

STA. 199+00.00 TO 202+50.00 SCALE 1" = 10' X 10'

A STA. 203+83.00 ℄ 908.71 SCT1
A STA. 203+83.00 ℄ 910.50 DES3
AA STA. 203+83.00 ℄ 909.89 OT1

EXCAVATION EMBANKMENT

ENTRANCE

℄ 900

33 20

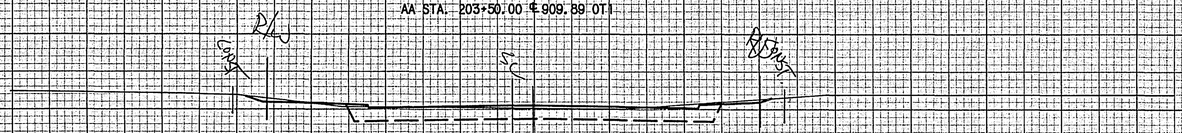
A STA. 203+73.00 ℄ 908.67 SCT1
A STA. 203+73.00 ℄ 910.45 DES3
AA STA. 203+73.00 ℄ 909.97 OT1

ENTRANCE

℄ 900

75 46

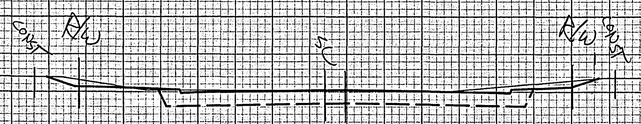
A STA. 203+50.00 ℄ 908.53 SCT1
A STA. 203+50.00 ℄ 910.32 DES3
AA STA. 203+50.00 ℄ 909.89 OT1



℄ 900

188 100

A STA. 203+00.00 ℄ 908.24 SCT1
A STA. 203+00.00 ℄ 910.02 DES3
AA STA. 203+00.00 ℄ 909.96 OT1

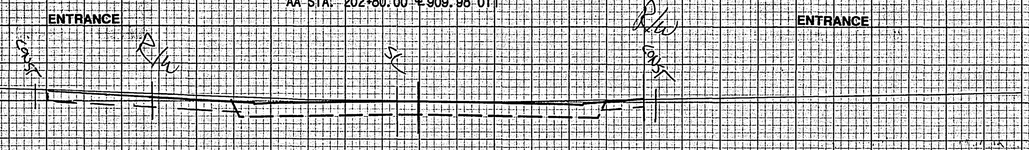


℄ 900

96 40

A STA. 202+80.00 ℄ 908.12 SCT1
A STA. 202+80.00 ℄ 909.90 DES3
AA STA. 202+80.00 ℄ 909.98 OT1

ENTRANCE ENTRANCE



℄ 900

138 60

A STA. 205+76.00 ℄ 907.90 SCT1
A STA. 205+76.00 ℄ 909.68 DES3
AA STA. 205+76.00 ℄ 910.14 OT1

EXCAVATION EMBANKMENT

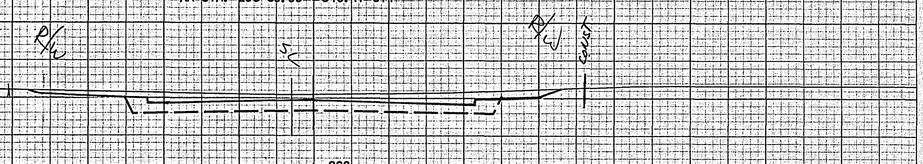
ENTRANCE

137 48

℄ 900

150 52

A STA. 205+50.00 ℄ 908.03 SCT1
AA STA. 205+50.00 ℄ 910.17 OT1

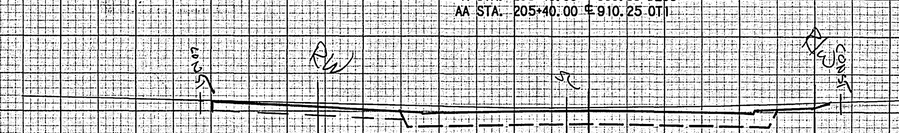


℄ 900

61 20

ENTRANCE

A STA. 205+40.00 ℄ 908.08 SCT1
A STA. 205+40.00 ℄ 909.86 DES3
AA STA. 205+40.00 ℄ 910.25 OT1



℄ 900

211 80

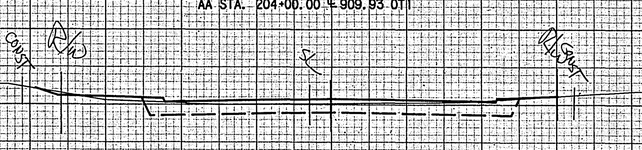
A STA. 205+00.00 ℄ 908.28 SCT1
A STA. 205+00.00 ℄ 910.06 DES3
AA STA. 205+00.00 ℄ 910.10 OT1

℄ 900

+49 ℄ ENTRANCE
MATCH @ 40' LT.

374 213

A STA. 204+00.00 ℄ 908.73 SCT1
A STA. 204+00.00 ℄ 910.52 DES3
AA STA. 204+00.00 ℄ 909.93 OT1



℄ 900

59 36

AS BUILT PLAN
CONFORMING TO
CONST. RECORDS
DONE BY: MR
DATE: 12-3-93

28-126

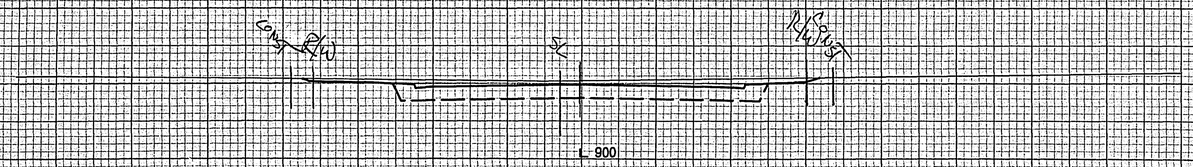
STA. 202+80.00 TO 205+76.00 SCALE 1" = 10' X 10'

HENN. CO., MINN. RAMSEY COUNTY **S.A.P. 62-645-10** SHEET 56 OF 73 SHEETS

A STA. 206+00.00 ℄ 907.78 SCT1

A STA. 206+00.00 ℄ 909.57 DES3

AA STA. 206+00.00 ℄ 910.09 OT1



ASBUILT PLAN
CONFORMING TO
CONST. RECORDS
DONE BY: M.R.
DATE: 12-3-93

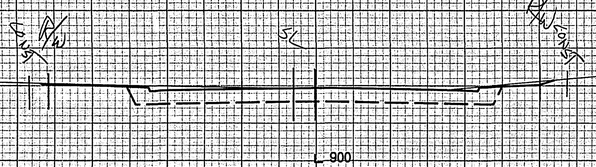
28-126

STA. 206+00.00 SCALE - 10 X 10

HENN. CO. MINN. RAMSEY COUNTY **S.A.P. 62-645-10** SHEET 57 OF 73 SHEETS

A STA. 207+00.00 ℄ 908.08 SCT1
A STA. 207+00.00 ℄ 909.86 DES3
AA STA. 207+00.00 ℄ 909.78 OT1

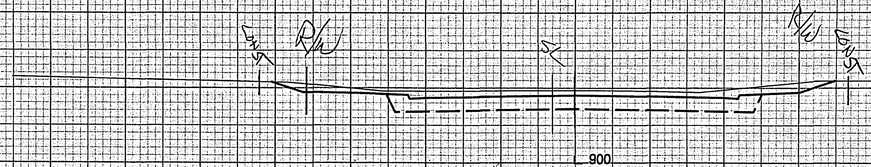
EXCAVATION EMBANKMENT



116 50

A STA. 208+50.00 ℄ 907.24 SCT1
A STA. 208+50.00 ℄ 909.03 DES3
AA STA. 208+50.00 ℄ 909.72 OT1

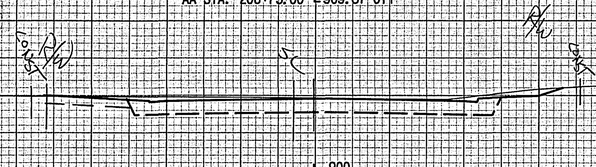
EXCAVATION EMBANKMENT



254 100

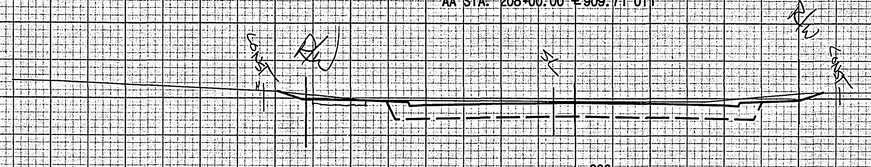
ENTRANCE

A STA. 206+75.00 ℄ 907.96 SCT1
A STA. 206+75.00 ℄ 909.74 DES3
AA STA. 206+75.00 ℄ 909.87 OT1



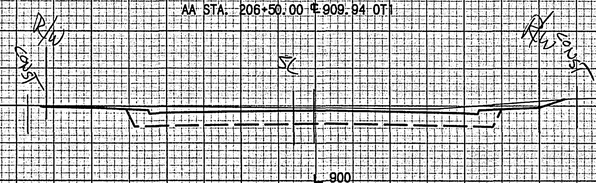
115 50

A STA. 208+00.00 ℄ 907.68 SCT1
A STA. 208+00.00 ℄ 909.47 DES3
AA STA. 208+00.00 ℄ 909.71 OT1



195 92

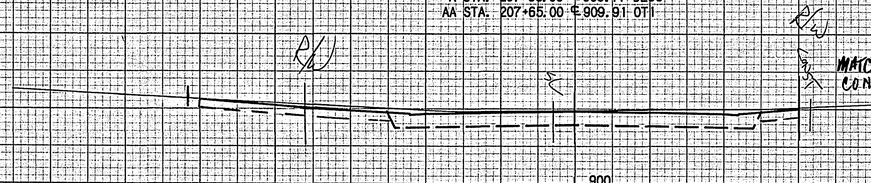
A STA. 206+50.00 ℄ 907.83 SCT1
A STA. 206+50.00 ℄ 909.61 DES3
AA STA. 206+50.00 ℄ 909.94 OT1



194 78

ENTRANCE

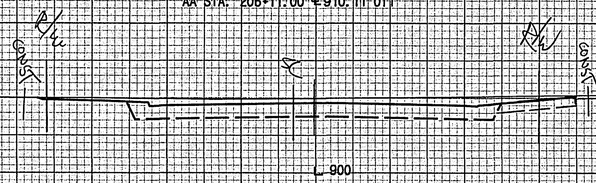
A STA. 207+65.00 ℄ 907.99 SCT1
A STA. 207+65.00 ℄ 909.77 DES3
AA STA. 207+65.00 ℄ 909.91 OT1



89 45

ENTRANCE

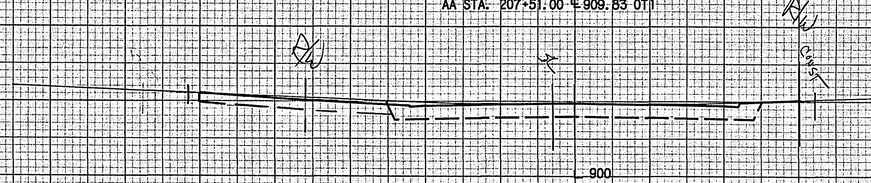
A STA. 206+11.00 ℄ 907.75 SCT1
A STA. 206+11.00 ℄ 909.53 DES3
AA STA. 206+11.00 ℄ 910.11 OT1



61 22

ENTRANCE

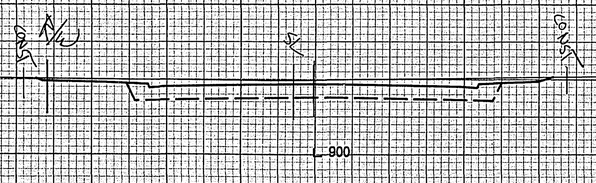
A STA. 207+51.00 ℄ 908.11 SCT1
A STA. 207+51.00 ℄ 909.89 DES3
AA STA. 207+51.00 ℄ 909.83 OT1



295 164

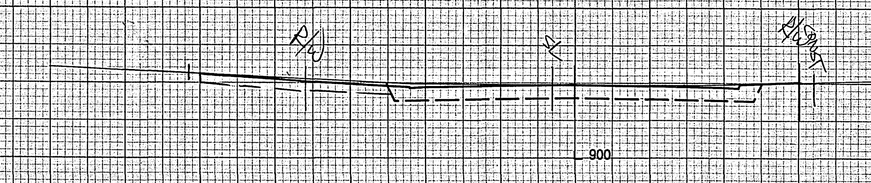
ENTRANCE

A STA. 206+00.00 ℄ 907.78 SCT1
A STA. 206+00.00 ℄ 909.57 DES3
AA STA. 206+00.00 ℄ 910.09 OT1



ENTRANCE

A STA. 207+50.00 ℄ 908.11 SCT1
A STA. 207+50.00 ℄ 909.89 DES3
AA STA. 207+50.00 ℄ 909.86 OT1



249 130

ASBUILT PLAN
CONFORMING TO
CONST. RECORDS
DONE BY: MR.
DATE: 12-3-93

28-126

STA. 206+00.00 TO 208+50.00 SCALE: 1" = 10' X 10'

HENN. CO. MINN. RAMSEY COUNTY **S.A.P. 62-645-10** SHEET 58 OF 73 SHEETS

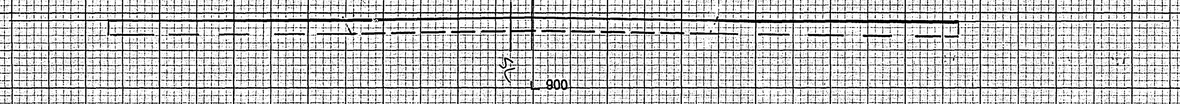
EXCAVATION EMBANKMENT

℄ SHERWOOD ROAD

A STA. 210+15.00 ℄ 907.85 SCT1
A STA. 210+15.00 ℄ 909.63 DES3
AA STA. 210+15.00 ℄ 909.51 OT1

121 66

A STA. 210+00.00 ℄ 907.75 SCT1
A STA. 210+00.00 ℄ 909.53 DES3
AA STA. 210+00.00 ℄ 909.57 OT1

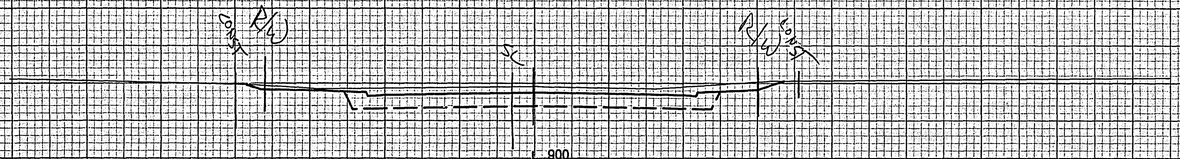


370 204

A STA. 209+50.00 ℄ 907.43 SCT1
A STA. 209+50.00 ℄ 909.21 DES3
AA STA. 209+50.00 ℄ 909.56 OT1

236 109

A STA. 209+00.00 ℄ 907.10 SCT1
A STA. 209+00.00 ℄ 908.89 DES3
AA STA. 209+00.00 ℄ 909.72 OT1



170 54

A STA. 208+73.00 ℄ 907.08 SCT1
A STA. 208+73.00 ℄ 908.86 DES3
AA STA. 208+73.00 ℄ 909.84 OT1

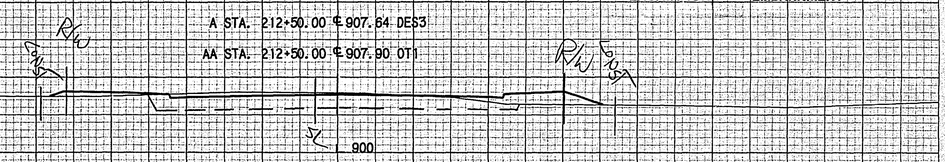
ENTRANCE

146 46

+ 50 BEGIN SUBGRADE CORRECTION

EXCAVATION EMBANKMENT

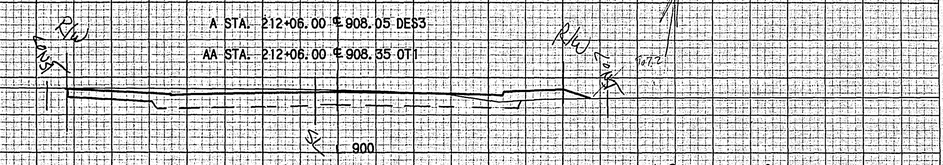
A STA. 212+50.00 ℄ 907.64 DES3
AA STA. 212+50.00 ℄ 907.90 OT1



198 107

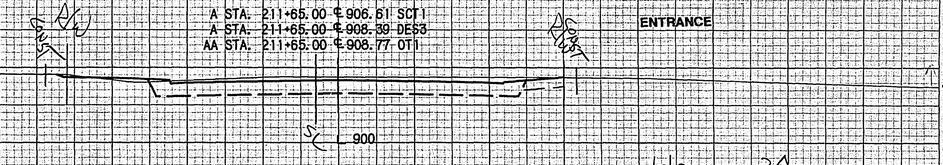
ENTRANCE

A STA. 212+06.00 ℄ 908.05 DES3
AA STA. 212+06.00 ℄ 908.35 OT1



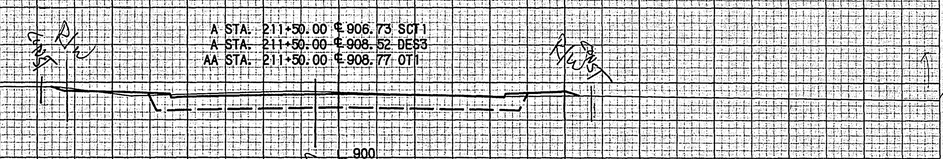
184 90

A STA. 211+65.00 ℄ 906.61 SCT1
A STA. 211+65.00 ℄ 908.39 DES3
AA STA. 211+65.00 ℄ 908.77 OT1



66 34

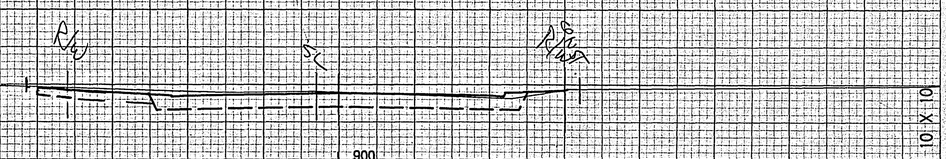
A STA. 211+50.00 ℄ 906.73 SCT1
A STA. 211+50.00 ℄ 908.52 DES3
AA STA. 211+50.00 ℄ 908.77 OT1



245 121

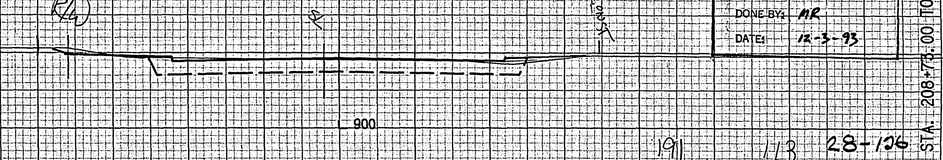
ENTRANCE

A STA. 210+97.00 ℄ 907.17 SCT1
A STA. 210+97.00 ℄ 908.95 DES3
AA STA. 210+97.00 ℄ 909.08 OT1



202 99

A STA. 210+50.00 ℄ 907.56 SCT1
A STA. 210+50.00 ℄ 909.34 DES3
AA STA. 210+50.00 ℄ 909.16 OT1



191 113 28-126

AS BUILT PLAN
CONFORMING TO
CONST. RECORDS
DONE BY: MR
DATE: 12-3-93

STA. 208+73.00 TO 212+50.00 SCALE: 1" = 10' X 10'

HENN. CO. ; MINN. RAMSEY COUNTY SHEET 59 OF 73 SHEETS

+ 00 END SUBGRADE CORRECTION ~ BEGIN MUCK EXCAVATION

	EXCAVATION	EMBANKMENT	GRANULAR
A STA. 215+00.00 ℄ 904.50 DES3 AA STA. 215+00.00 ℄ 906.54 OT1	492	16	178
A STA. 214+50.00 ℄ 905.04 DES3 AA STA. 214+50.00 ℄ 906.83 OT1	400	32	178
A STA. 214+00.00 ℄ 905.70 DES3 AA STA. 214+00.00 ℄ 907.01 OT1	180	16	85
ENTRANCE A STA. 213+76.00 ℄ 906.01 DES3 AA STA. 213+76.00 ℄ 907.00 OT1	68	3	32
ENTRANCE A STA. 213+67.00 ℄ 906.14 DES3 AA STA. 213+67.00 ℄ 907.22 OT1	500	29	238
ENTRANCE A STA. 213+00.00 ℄ 907.02 DES3 AA STA. 213+00.00 ℄ 907.55 OT1	65	5	32
ENTRANCE A STA. 212+91.00 ℄ 907.14 DES3 AA STA. 212+91.00 ℄ 907.66 OT1	248	27	146

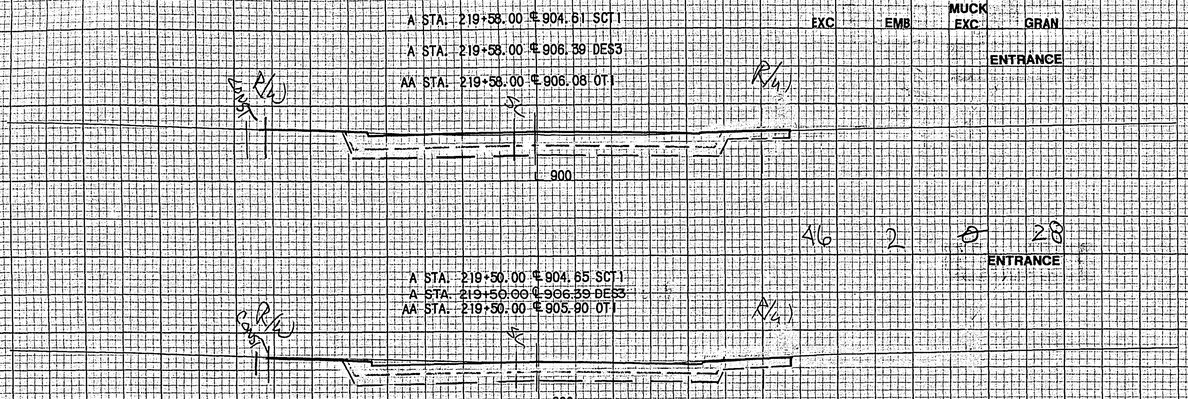
	EMBANKMENT	MUCK EXCAVATION	GRANULAR
ENTRANCE A STA. 217+56.00 ℄ 905.66 DES3 AA STA. 217+56.00 ℄ 906.47 OT1	4	96	66
ENTRANCE A STA. 217+50.00 ℄ 905.63 DES3 AA STA. 217+50.00 ℄ 906.34 OT1	26	635	437
ENTRANCE A STA. 217+09.00 ℄ 905.43 DES3 AA STA. 217+09.00 ℄ 906.41 OT1	33	876	594
ENTRANCE A STA. 216+50.00 ℄ 905.13 DES3 AA STA. 216+50.00 ℄ 906.36 OT1	20	535	349
ENTRANCE A STA. 216+14.00 ℄ 904.96 DES3 AA STA. 216+14.00 ℄ 906.30 OT1	12	204	133
ENTRANCE A STA. 216+00.00 ℄ 904.88 DES3 AA STA. 216+00.00 ℄ 906.47 OT1	50	635	378
A STA. 215+50.00 ℄ 904.64 DES3 AA STA. 215+50.00 ℄ 906.51 OT1	26	556	260

ASBUILT PLAN
CONFORMING TO
CONST. RECORDS
DONE BY: A.R.
DATE: 12-3-93

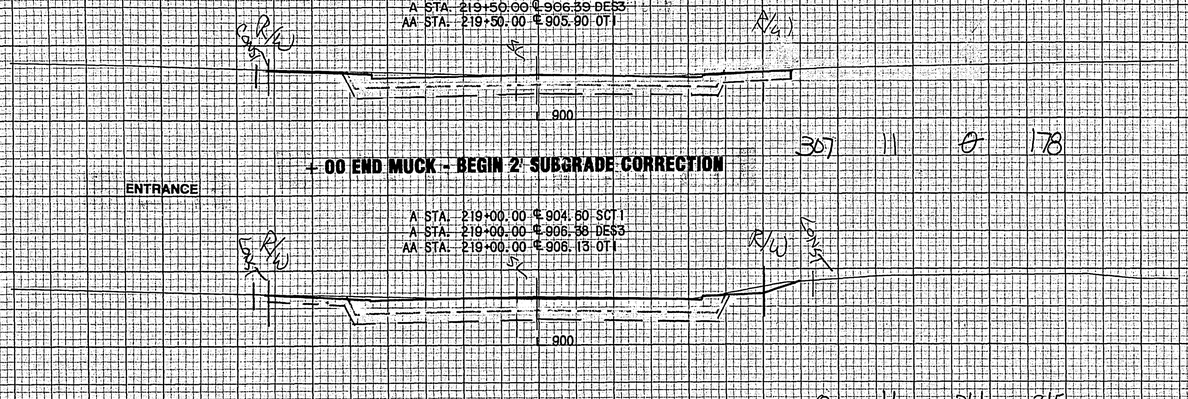
28-126

STA. 212+91.00 TO 217+56.00 SCALE = 10' X 10'

HENN. CO. MINN. RAMSEY COUNTY **S.A.P. 62-645-10** SHEET 60 OF 73 SHEETS



EXC	EMB	MUCK EXC	GRAN
		ENTRANCE	
46	2	0	28

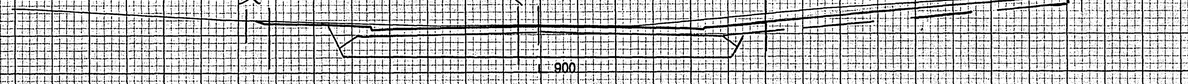


307	11	0	178

+00 END MUCK - BEGIN 2' SUBGRADE CORRECTION

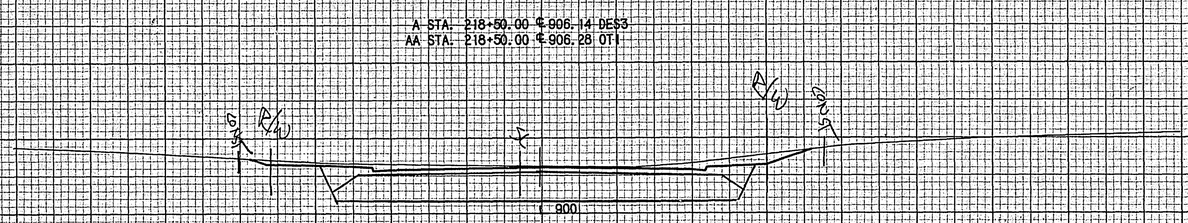
ENTRANCE

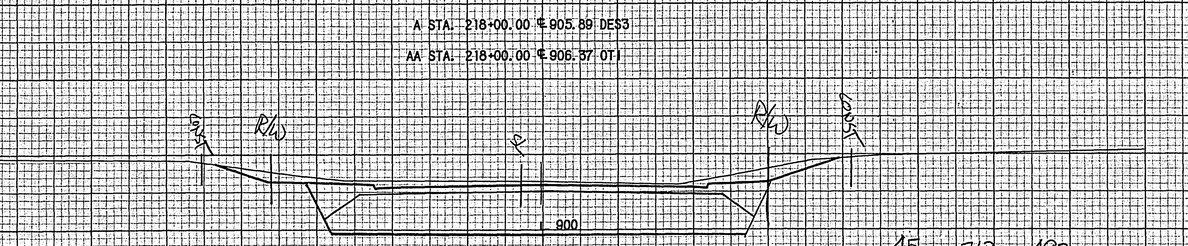
0	11	366	215



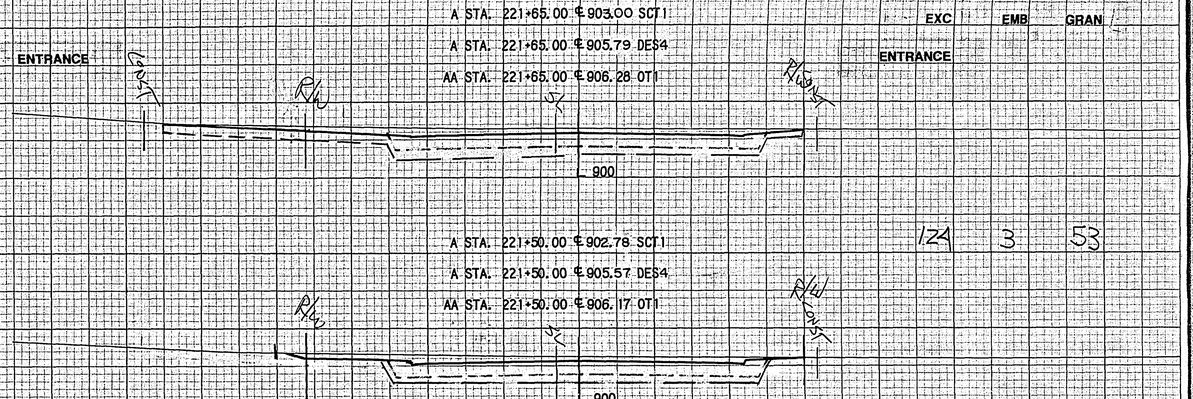
ENTRANCE

0	50	847	557

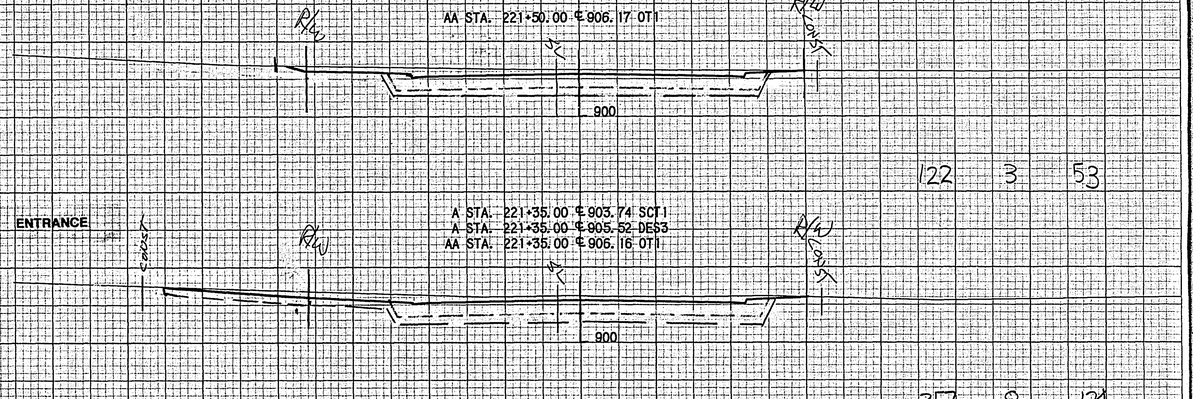




45	713	492	



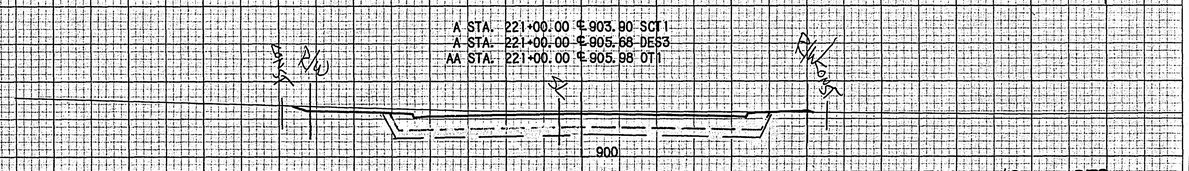
EXC	EMB	GRAN
124	3	53



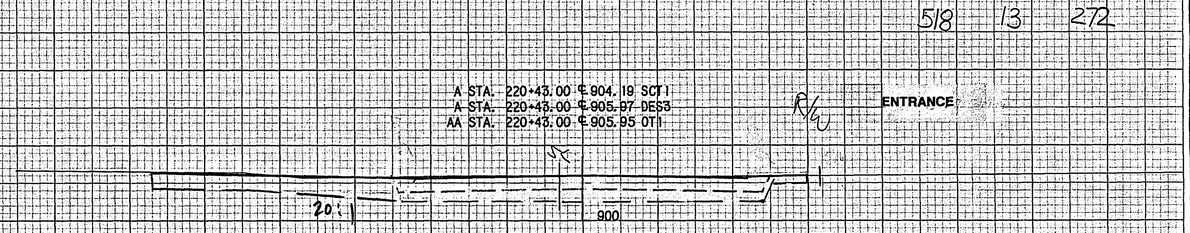
122	3	53

ENTRANCE

257	8	124

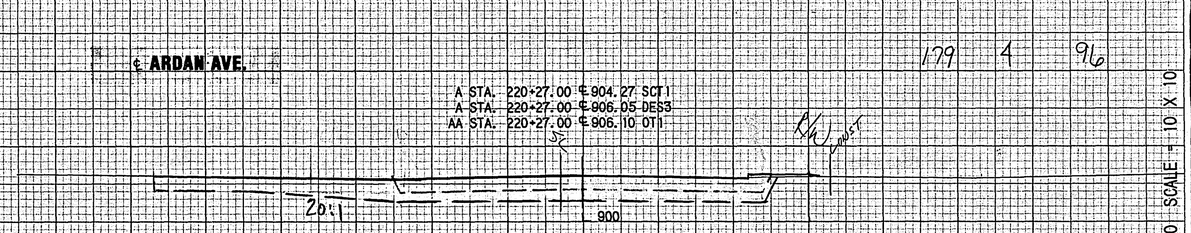


518	13	272

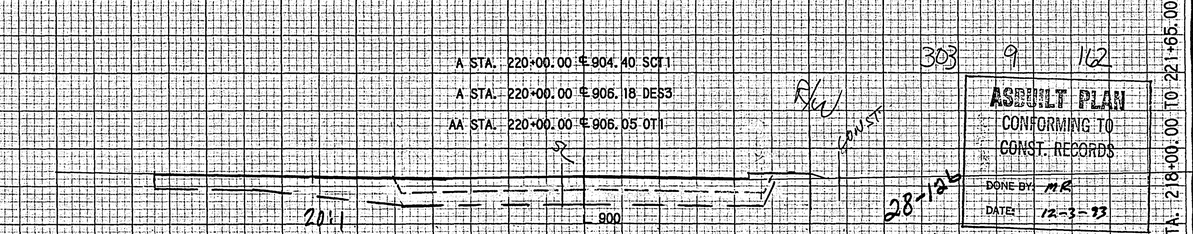


℄ ARDAN AVE.

179	4	96



303	9	162



363	13	201

AS-BUILT PLAN
CONFORMING TO
CONST. RECORDS
DONE BY: MR
DATE: 12-3-73

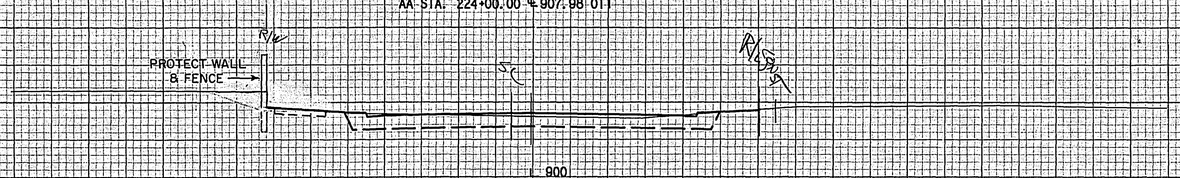
28-18

STA. 218+00.00 TO 221+65.00 SCALE = 10 X 10

HENN. CO. MINN. RAMSEY COUNTY **S.A.P. 62-645-10** SHEET 61 OF 73 SHEETS

EXCAVATION EMBANKMENT GRANULAR

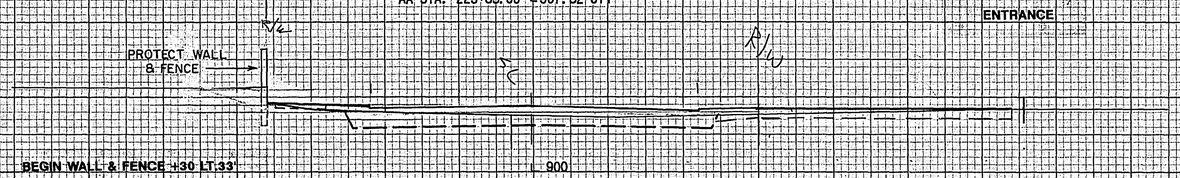
A STA. 224+00.00 ℄ 907.16 SCT1
A STA. 224+00.00 ℄ 908.95 DES4
AA STA. 224+00.00 ℄ 907.98 OT1



184 107

A STA. 223+55.00 ℄ 906.93 SCT1
A STA. 223+55.00 ℄ 908.72 DES4
AA STA. 223+55.00 ℄ 907.52 OT1

ENTRANCE



BEGIN WALL & FENCE +30 LT.33'

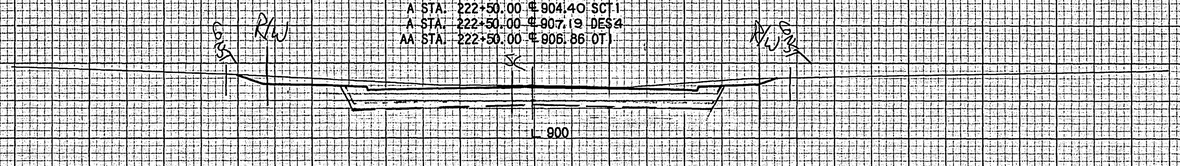
+ 00 END SUBGRADE CORRECTION - 1 SUBCUT U&C

A STA. 223+00.00 ℄ 905.28 SCT1
A STA. 223+00.00 ℄ 908.07 DES4
AA STA. 223+00.00 ℄ 907.12 OT1

268 110

377 111 178

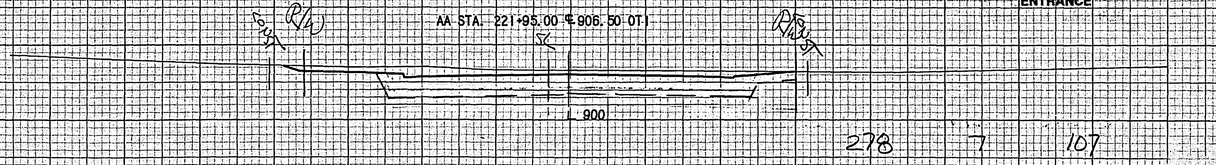
A STA. 222+50.00 ℄ 904.40 SCT1
A STA. 222+50.00 ℄ 907.19 DES4
AA STA. 222+50.00 ℄ 906.86 OT1



561 12 196

A STA. 221+95.00 ℄ 903.43 SCT1
A STA. 221+95.00 ℄ 906.22 DES4
AA STA. 221+95.00 ℄ 906.50 OT1

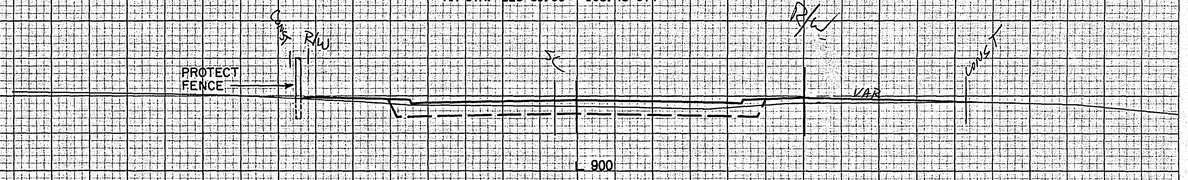
ENTRANCE



278 7 107

A STA. 225+50.00 ℄ 907.91 SCT1
A STA. 225+50.00 ℄ 909.70 DES4
AA STA. 225+50.00 ℄ 908.48 OT1

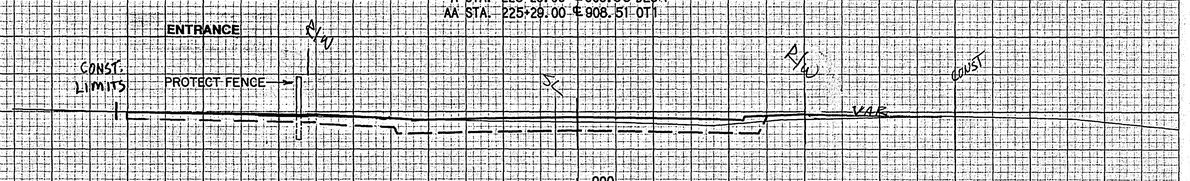
EXCAVATION EMBANKMENT



62 51

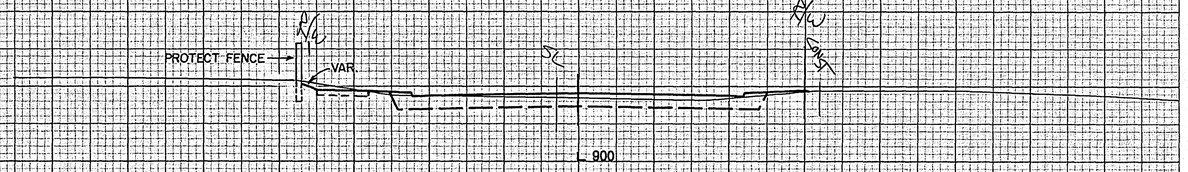
A STA. 225+29.00 ℄ 907.81 SCT1
A STA. 225+29.00 ℄ 909.60 DES4
AA STA. 225+29.00 ℄ 908.51 OT1

ENTRANCE



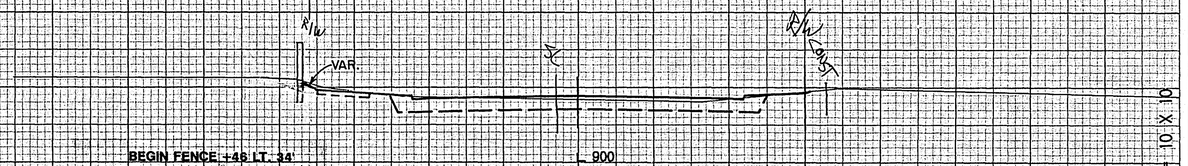
90 64

A STA. 225+00.00 ℄ 907.66 SCT1
A STA. 225+00.00 ℄ 909.45 DES4
AA STA. 225+00.00 ℄ 908.38 OT1



156 113

A STA. 224+50.00 ℄ 907.41 SCT1
A STA. 224+50.00 ℄ 909.20 DES4
AA STA. 224+50.00 ℄ 908.22 OT1



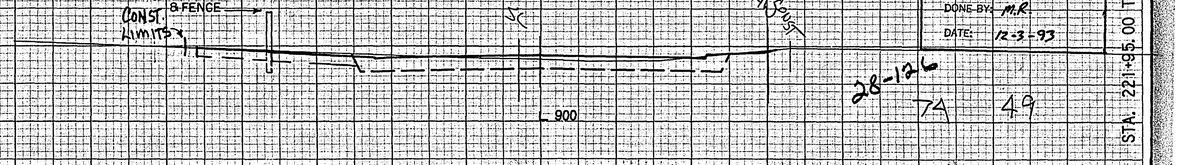
BEGIN FENCE +46 LT. 34'

END WALL & FENCE +45 LT.33'

102 64

A STA. 224+21.00 ℄ 907.27 SCT1
A STA. 224+21.00 ℄ 909.06 DES4
AA STA. 224+21.00 ℄ 908.12 OT1

ENTRANCE



26-126
74 49

ASBUILT PLAN
CONFORMING TO
CONST. RECORDS
DONE BY: MR
DATE: 12-3-93

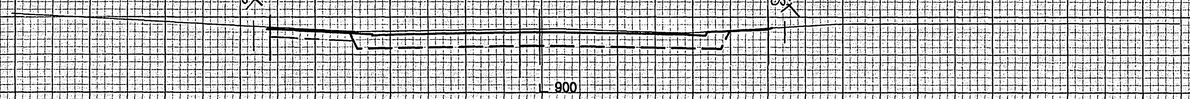
STA. 221+95.00 TO 225+50.00 SCALE = 10 X 10

HENN CO., MINN. RAMSEY COUNTY **S.A.P. 62-645-10** SHEET 62 OF 73 SHEETS

EXCAVATION EMBANKMENT

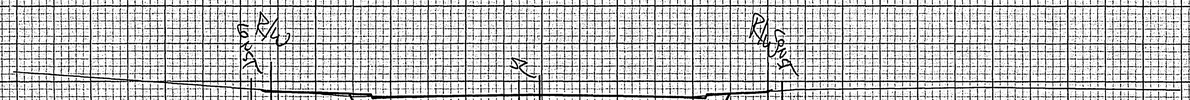
A STA. 227+24.00 ℄ 906.08 SCT1
A STA. 227+24.00 ℄ 907.86 DES3
AA STA. 227+24.00 ℄ 908.28 OT1

ENTRANCE



98 48

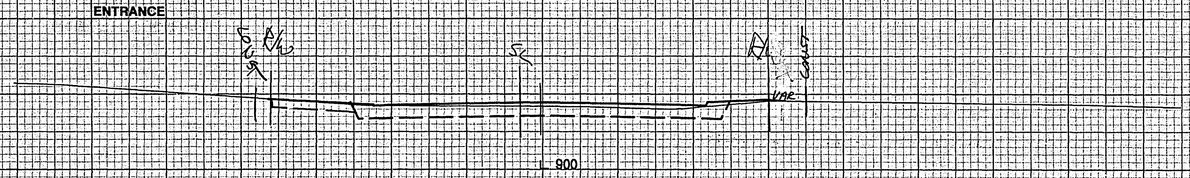
A STA. 227+00.00 ℄ 906.40 SCT1
A STA. 227+00.00 ℄ 908.18 DES3
AA STA. 227+00.00 ℄ 908.19 OT1



181 102

A STA. 226+50.00 ℄ 907.06 SCT1
A STA. 226+50.00 ℄ 908.84 DES3
AA STA. 226+50.00 ℄ 908.34 OT1

ENTRANCE



7 5

A STA. 226+48.00 ℄ 907.09 SCT1
A STA. 226+48.00 ℄ 908.87 DES3
AA STA. 226+48.00 ℄ 908.30 OT1

ENTRANCE

148 106

END FENCE +33 LT. 34'

A STA. 226+00.00 ℄ 907.70 SCT1
A STA. 226+00.00 ℄ 909.49 DES4
AA STA. 226+00.00 ℄ 908.50 OT1

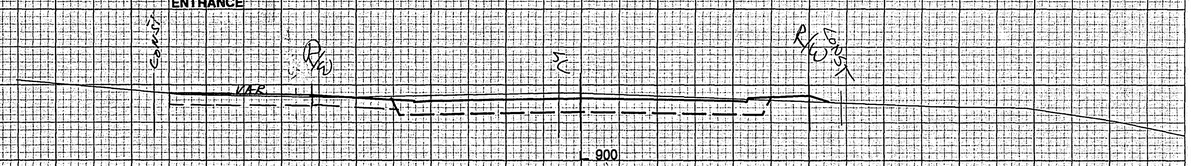
ENTRANCE

139 125

EXCAVATION EMBANKMENT

A STA. 229+20.00 ℄ 906.24 SCT1
A STA. 229+20.00 ℄ 908.02 DES3
AA STA. 229+20.00 ℄ 908.77 OT1

ENTRANCE

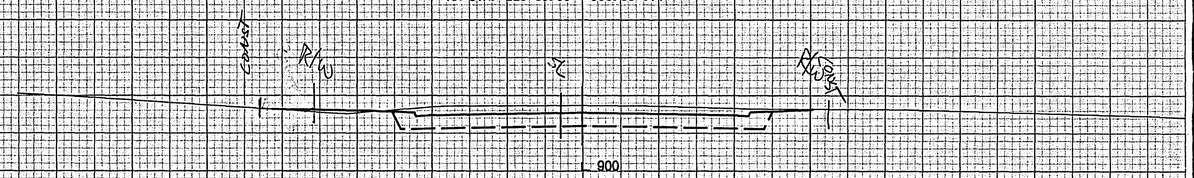


93 45

A STA. 229+00.00 ℄ 906.12 SCT1
A STA. 229+00.00 ℄ 907.90 DES3
AA STA. 229+00.00 ℄ 908.58 OT1

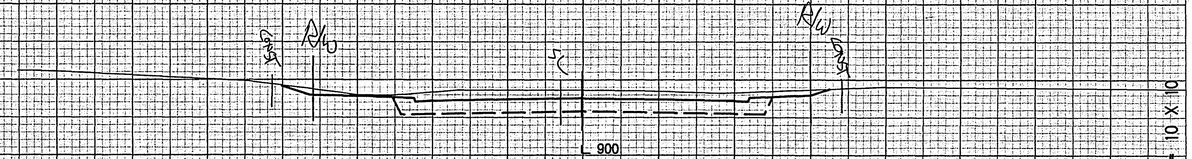
229 111

A STA. 228+50.00 ℄ 905.84 SCT1
A STA. 228+50.00 ℄ 907.62 DES3
AA STA. 228+50.00 ℄ 908.56 OT1



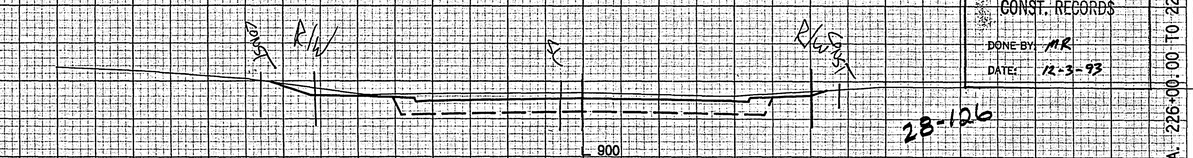
263 110

A STA. 228+00.00 ℄ 905.55 SCT1
A STA. 228+00.00 ℄ 907.34 DES3
AA STA. 228+00.00 ℄ 908.38 OT1



257 112

A STA. 227+50.00 ℄ 905.74 SCT1
A STA. 227+50.00 ℄ 907.52 DES3
AA STA. 227+50.00 ℄ 908.27 OT1



120 55

ASBUILT PLAN
CONFORMING TO
CONST. RECORDS
DONE BY: MR
DATE: 12-3-93

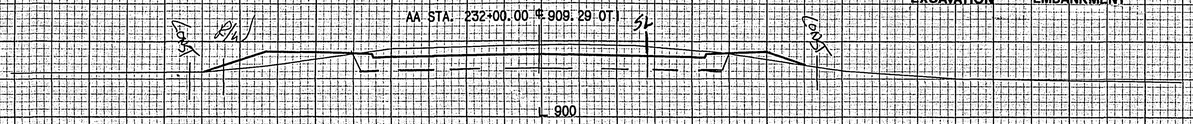
28-126

STA. 226+00.00 TO 229+20.00 SCALE: 1" = 10' X 10'

HENN. CO MINN. RAMSEY COUNTY **S.A.P. 62-645-10** SHEET 63 OF 73 SHEETS

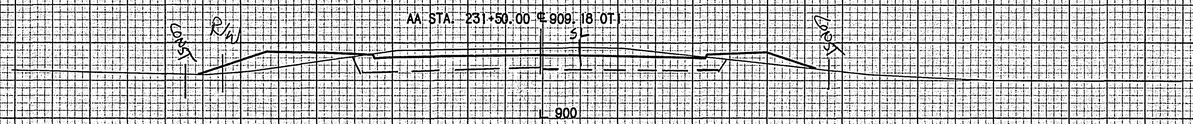
EXCAVATION EMBANKMENT

A STA. 232+00.00 ℄ 908.01 DES3
AA STA. 232+00.00 ℄ 909.29 OT1



218 176

A STA. 231+50.00 ℄ 908.25 DES3
AA STA. 231+50.00 ℄ 909.18 OT1



205 121

ENTRANCE

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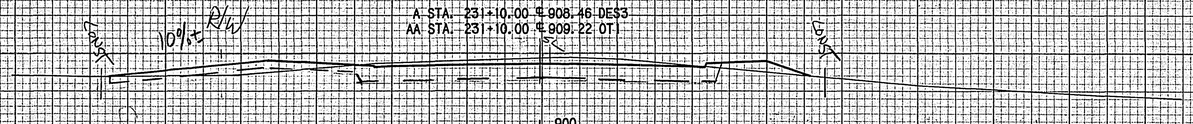
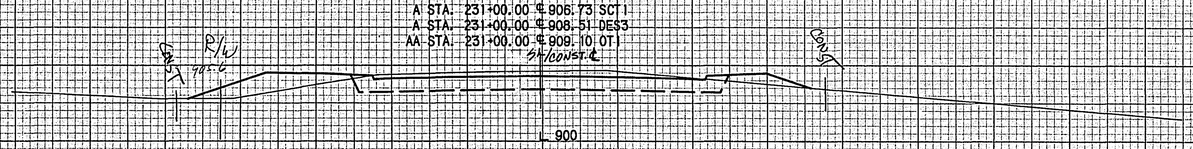
AA STA. 231+10.00 ℄ 909.22 OT1



51 32

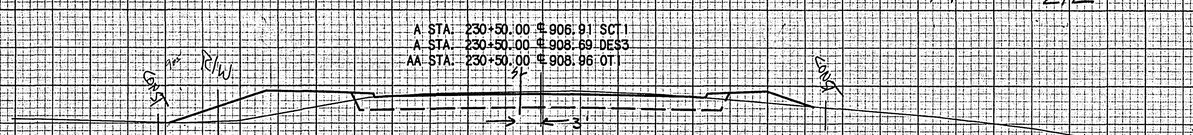
SUBCUT U&C TO STA. 245 + 00

A STA. 231+00.00 ℄ 906.73 SCT1
A STA. 231+00.00 ℄ 908.51 DES3
AA STA. 231+00.00 ℄ 909.10 OT1



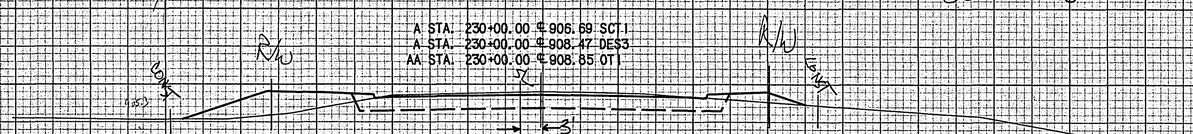
190 212

A STA. 230+50.00 ℄ 906.91 SCT1
A STA. 230+50.00 ℄ 908.69 DES3
AA STA. 230+50.00 ℄ 908.96 OT1



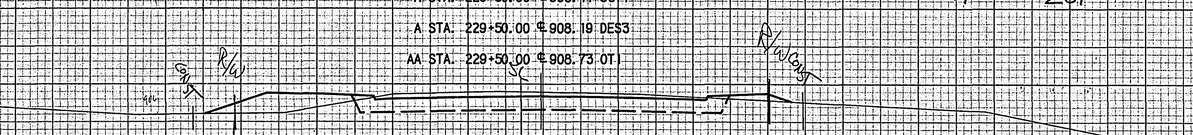
180 230

A STA. 230+00.00 ℄ 905.69 SCT1
A STA. 230+00.00 ℄ 908.47 DES3
AA STA. 230+00.00 ℄ 908.85 OT1



191 201

A STA. 229+50.00 ℄ 906.41 SCT1
A STA. 229+50.00 ℄ 908.19 DES3
AA STA. 229+50.00 ℄ 908.73 OT1

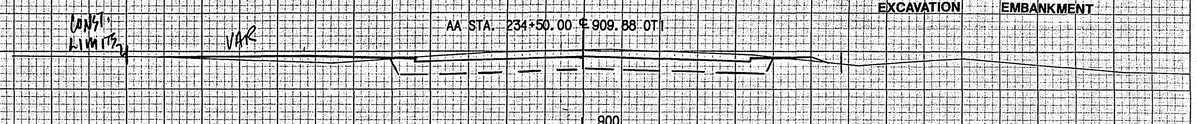


138 84

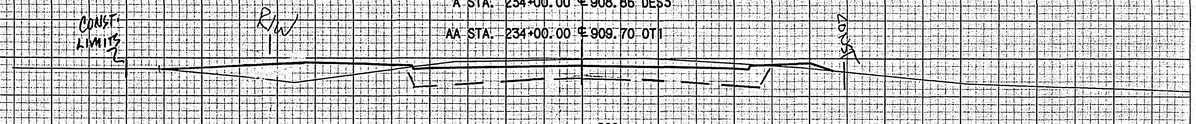
EXCAVATION EMBANKMENT

CONST. LIMITS

A STA. 234+50.00 ℄ 909.88 OT1



A STA. 234+00.00 ℄ 908.86 DES3
AA STA. 234+00.00 ℄ 909.70 OT1



243 134

R/W

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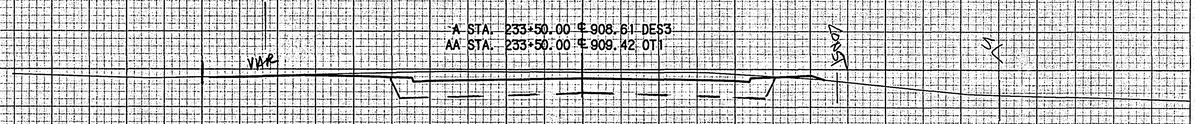
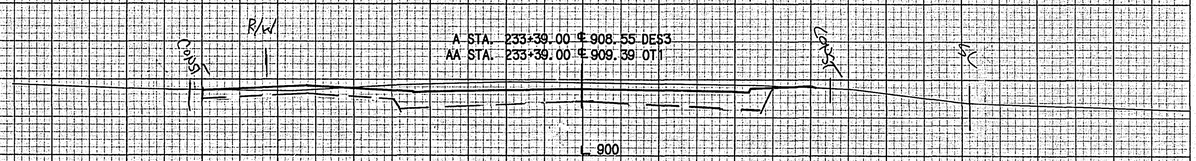


60 23

ENTRANCE

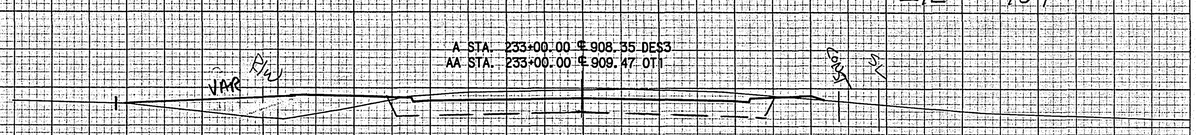
R/W

A STA. 233+39.00 ℄ 908.55 DES3
AA STA. 233+39.00 ℄ 909.39 OT1



212 107

A STA. 233+00.00 ℄ 908.35 DES3
AA STA. 233+00.00 ℄ 909.47 OT1



259 146

ENTRANCE

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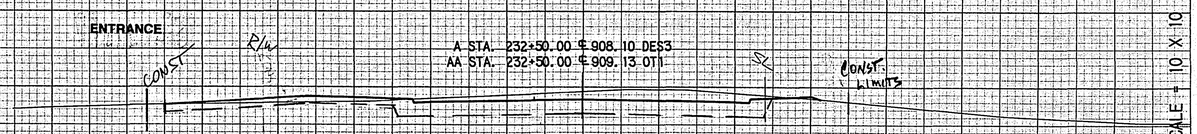
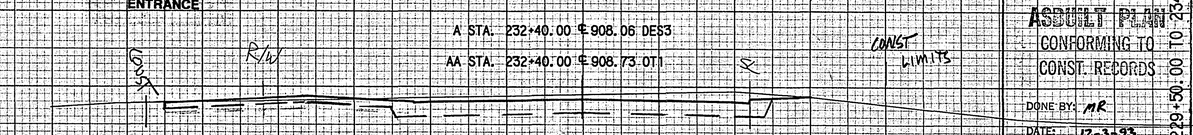
AA STA. 232+50.00 ℄ 909.13 OT1



56 22

ENTRANCE

A STA. 232+40.00 ℄ 908.06 DES3
AA STA. 232+40.00 ℄ 908.73 OT1



211 107

AS BUILT PLAN
CONFORMING TO
CONST. RECORDS
DONE BY: MR
DATE: 12-3-93

28-126

STA. 229+50.00 TO 234+50.00 SCALE: 1" = 10'

HENN. CO., MINN. RAMSEY COUNTY S.A.P. 62-645-10 SHEET 64 OF 73 SHEETS

EXCAVATION EMBANKMENT

A STA. 236+00.00 ℄ 909.86 DES3
AA STA. 236+00.00 ℄ 910.04 OT1

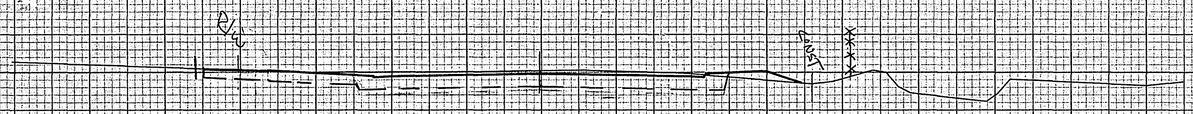
212 155

A STA. 235+50.00 ℄ 909.61 DES3
AA STA. 235+50.00 ℄ 909.98 OT1

68 40

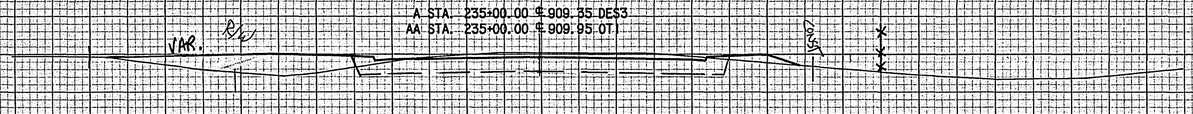
A STA. 235+34.00 ℄ 909.53 DES3
AA STA. 235+34.00 ℄ 909.94 OT1

ENTRANCE



138 107

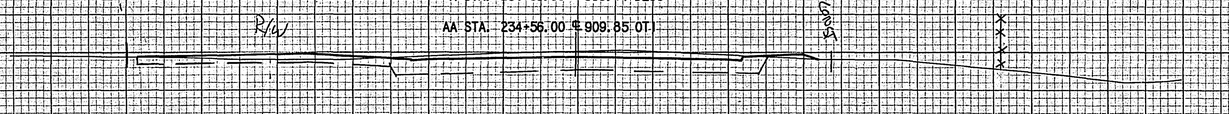
A STA. 235+00.00 ℄ 909.35 DES3
AA STA. 235+00.00 ℄ 909.95 OT1



213 135

ENTRANCE

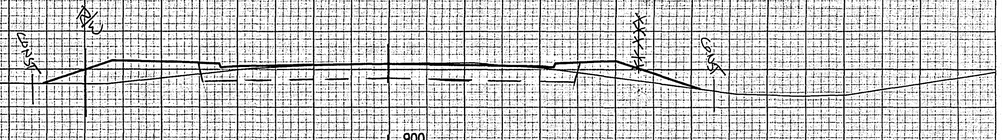
A STA. 234+56.00 ℄ 909.14 DES3
AA STA. 234+56.00 ℄ 909.85 OT1



292 152

A STA. 238+50.00 ℄ 910.46 DES3
AA STA. 238+50.00 ℄ 910.52 OT1

EXCAVATION EMBANKMENT



142 235

A STA. 238+00.00 ℄ 910.77 DES3
AA STA. 238+00.00 ℄ 910.34 OT1

28 219

A STA. 237+50.00 ℄ 910.61 DES3
AA STA. 237+50.00 ℄ 910.31 OT1

162 195

A STA. 237+00.00 ℄ 910.36 DES3
AA STA. 237+00.00 ℄ 910.28 OT1

182 206

A STA. 236+50.00 ℄ 910.11 DES3
AA STA. 236+50.00 ℄ 910.18 OT1

28-126
196 187

ASBUILT PLAN
CONFORMING TO
CONST. RECORDS
DONE BY: M.R.
DATE: 12-3-93

SCALE: 1" = 10' X 10'
STA. 234+56.00 TO 238+50.00

HENN. CO., MINN. RAMSEY COUNTY **S.A.P. 62-645-10** SHEET 65 OF 73 SHEETS

EXCAVATION EMBANKMENT

A STA. 240+80.00 ℄ 910.00 DES3
AA STA. 240+80.00 ℄ 910.79 OT1

188 108

A STA. 240+50.00 ℄ 909.85 DES3
AA STA. 240+50.00 ℄ 910.71 OT1

GREENWOOD DRIVE

292 201

A STA. 240+00.00 ℄ 909.59 DES3
AA STA. 240+00.00 ℄ 910.63 OT1

235 188

A STA. 239+50.00 ℄ 909.67 DES3
AA STA. 239+50.00 ℄ 910.63 OT1

219 176

A STA. 239+00.00 ℄ 910.07 DES3
AA STA. 239+00.00 ℄ 910.59 OT1

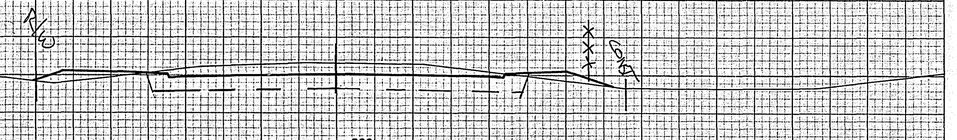
184 202

EXCAVATION EMBANKMENT

A STA. 243+00.00 ℄ 910.09 DES3
AA STA. 243+00.00 ℄ 911.36 OT1

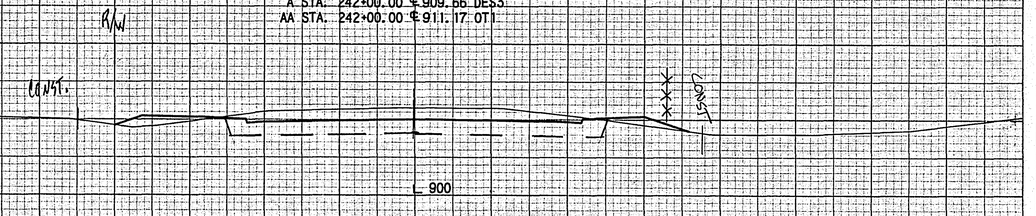
271 14A

A STA. 242+50.00 ℄ 909.84 DES3
AA STA. 242+50.00 ℄ 911.30 OT1



304 134

A STA. 242+00.00 ℄ 909.66 DES3
AA STA. 242+00.00 ℄ 911.17 OT1



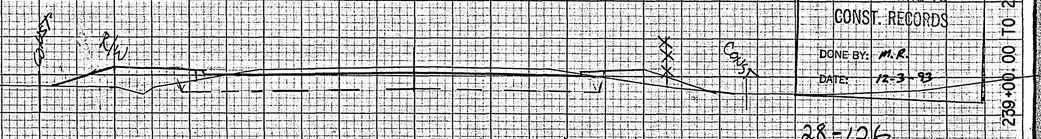
344 196

ENTRANCE

A STA. 241+44.00 ℄ 909.88 DES3
AA STA. 241+44.00 ℄ 911.03 OT1

253 148

A STA. 241+00.00 ℄ 910.04 DES3
AA STA. 241+00.00 ℄ 910.84 OT1



111 76

ASBUILT PLAN
CONFORMING TO
CONST. RECORDS
DONE BY: M.R.
DATE: 12-3-93

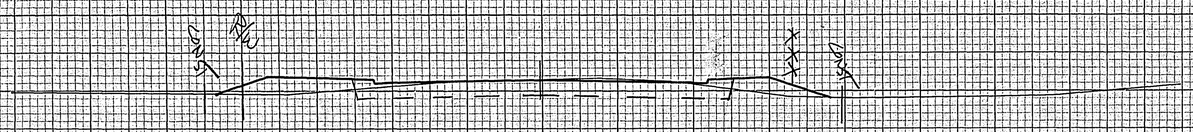
28-126

STA. 239+00.00 TO 243+00.00 SCALE = 10 X 10

HENN. CO., MINN. RAMSEY COUNTY SHEET 66 OF 73 SHEETS

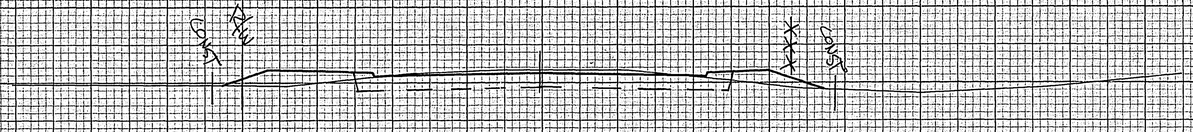
TAPER TO MATCH EXISTING AS DIRECTED
END PERMANENT CONSTRUCTION 245+00

	EXCAVATION	EMBANKMENT
A STA. 245+00.00 ℄ 911.09 DES3		
AA STA. 245+00.00 ℄ 911.14 OT)		



206 178

A STA. 244+50.00 ℄ 910.85 DES3		
AA STA. 244+50.00 ℄ 911.27 OT)		



221 169

A STA. 244+00.00 ℄ 910.59 DES3		
AA STA. 244+00.00 ℄ 911.53 OT)		

216 163

A STA. 243+50.00 ℄ 910.34 DES3		
AA STA. 243+50.00 ℄ 911.43 OT)		

184 82

ENTRANCE	A STA. 243+21.00 ℄ 910.21 DES3	
	AA STA. 243+21.00 ℄ 911.38 OT)	

141 57

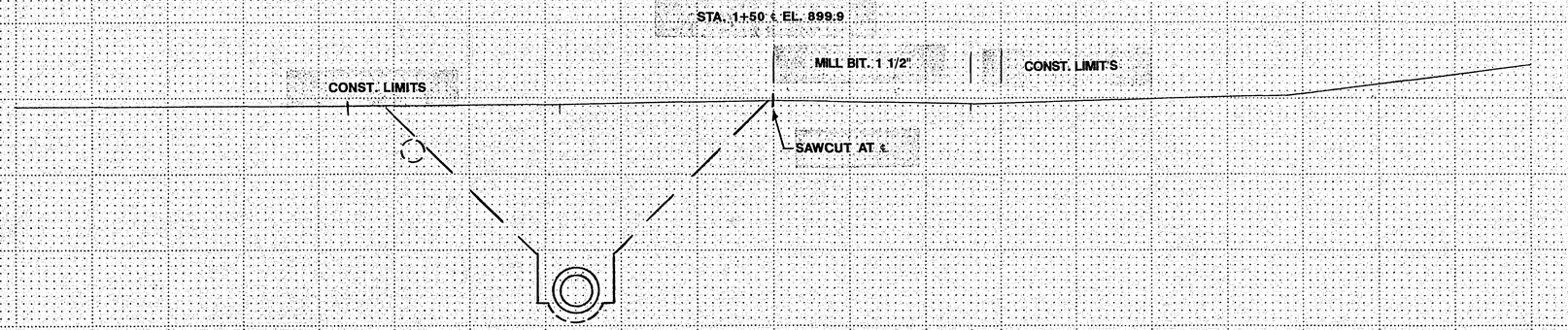
AS BUILT PLAN
CONFORMING TO
CONST. RECORDS
DONE BY: M.K
DATE: 12-3-93

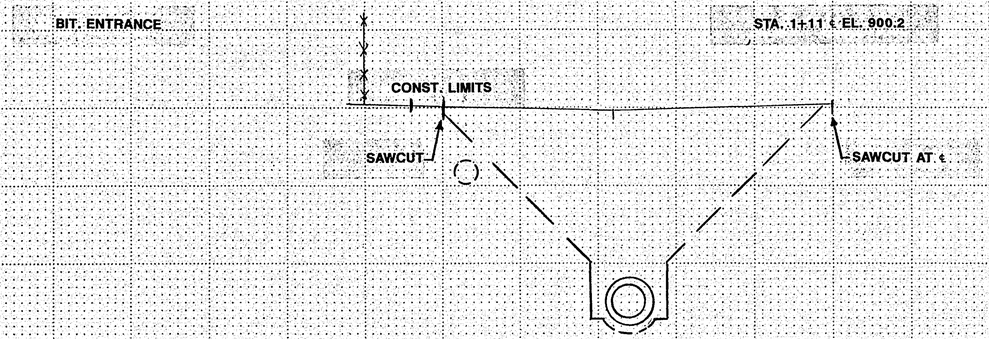
STA. 243+21.00 TO 245+00.00 SCALE = 10 X 10

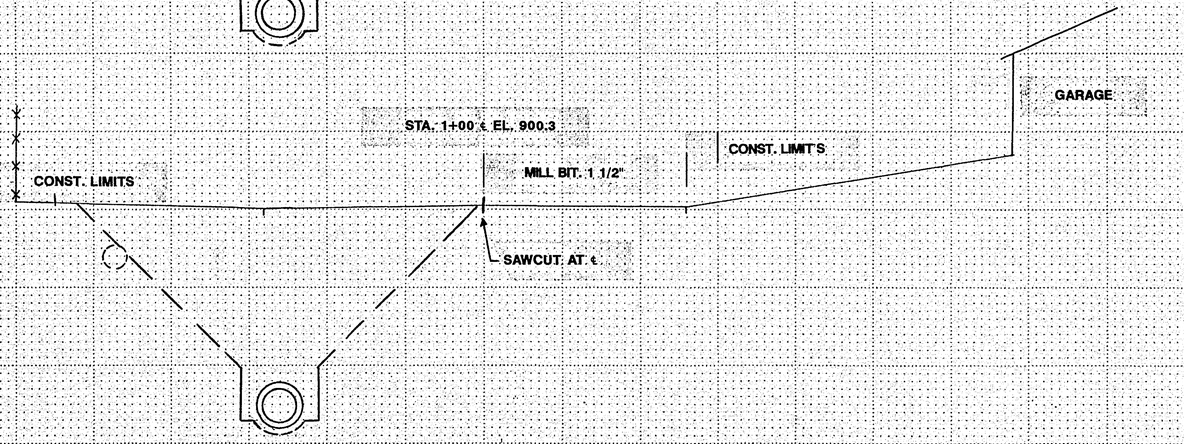
28-126

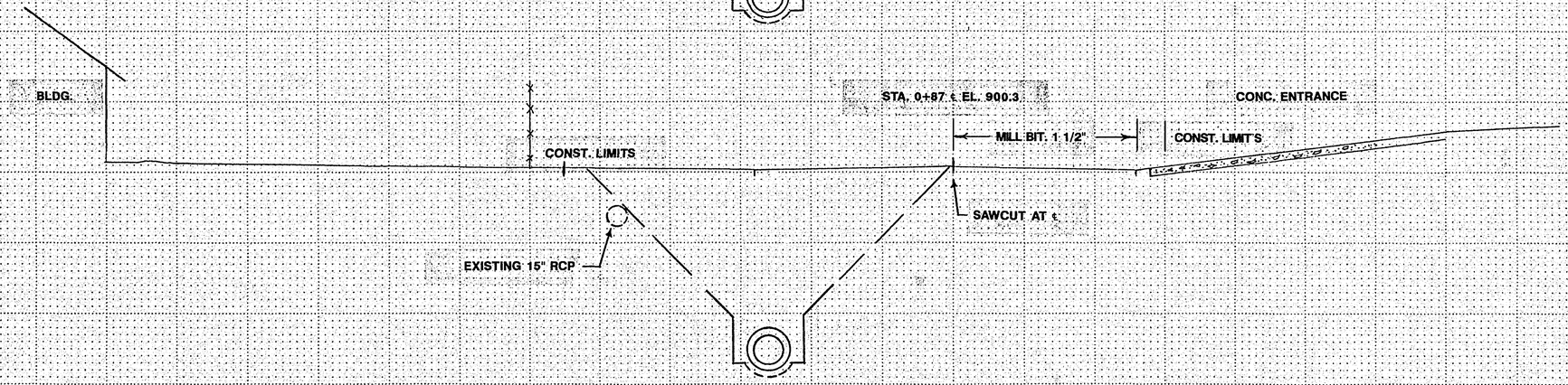
HENN. CO. MINN. RAMSEY COUNTY S.A.P. 62-645-10 SHEET 67 OF 73 SHEETS

Fed. Proj. No.









AS BUILT PLAN
CONFORMING TO
CONST. RECORDS
DONE BY: M.R.
DATE: 12-3-93

28-126

SCALE = 5 X 5

WOODCREST DRIVE

S.A.P. NO. 62 - 645 -10

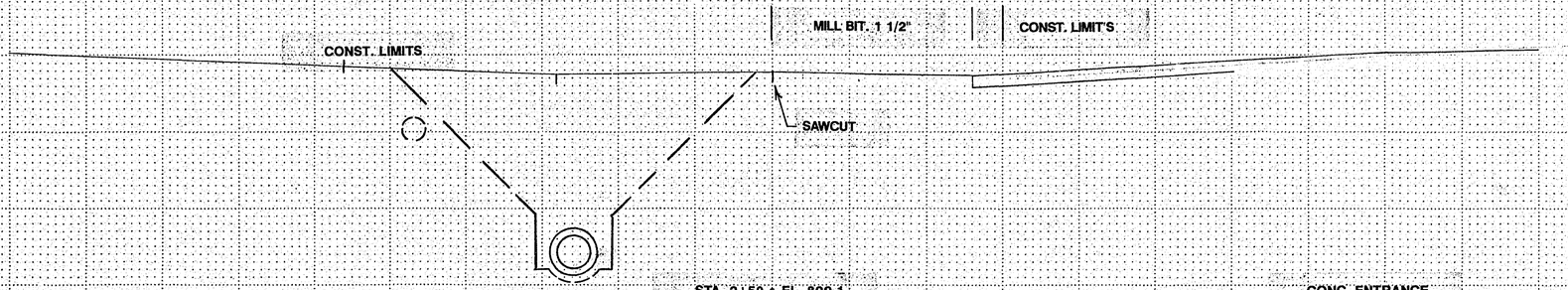
Sheet No. 68 of 73 Sheets

Copy Equipment Form #1 (3/87)

Fed. Proj. No.

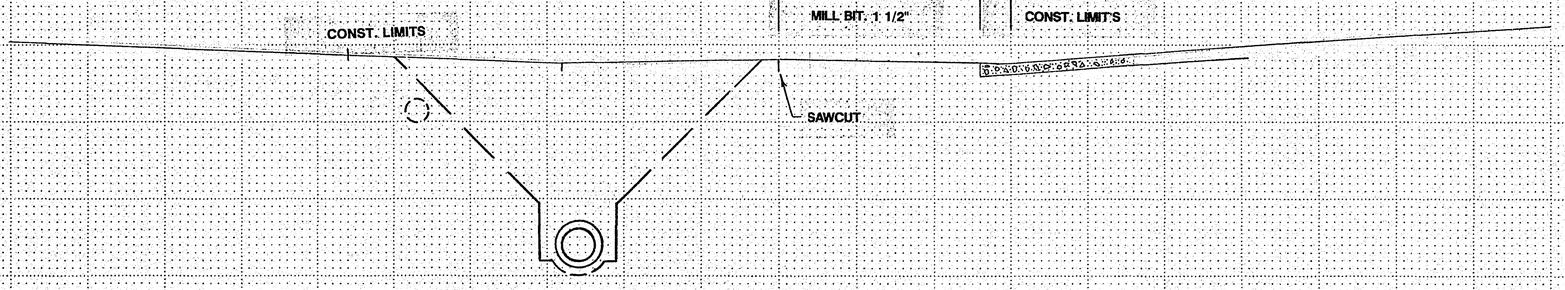
STA. 2+87 ℄ EL. 898.9

BIT. ENTRANCE

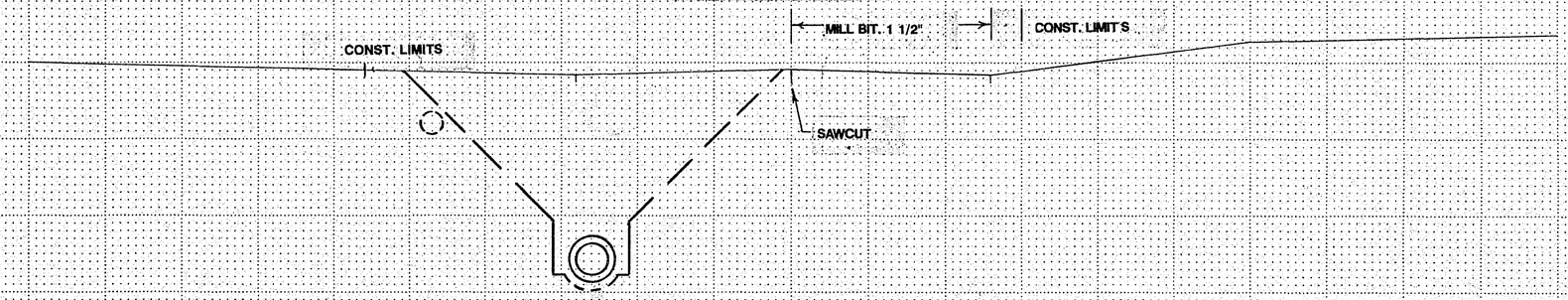


STA. 2+50 ℄ EL. 899.1

CONC. ENTRANCE

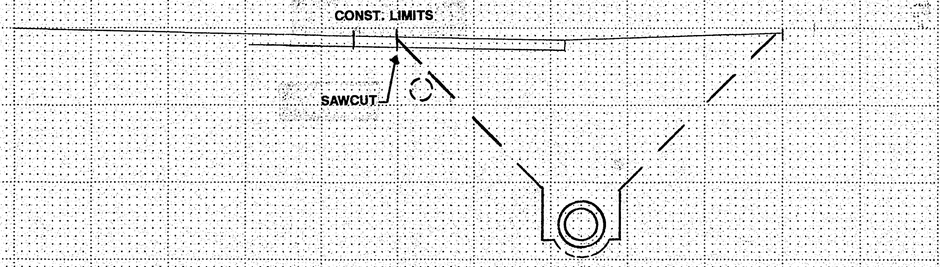


STA. 2+00 ℄ EL. 899.5



BIT. ENTRANCE

STA. 1+84 ℄ EL. 899.6



SCALE = 5 X 5

ASBUILT PLAN
CONFORMING TO
CONST. RECORDS
DONE BY: M.R.
DATE: 12-3-93

28-126

WOODCREST DRIVE

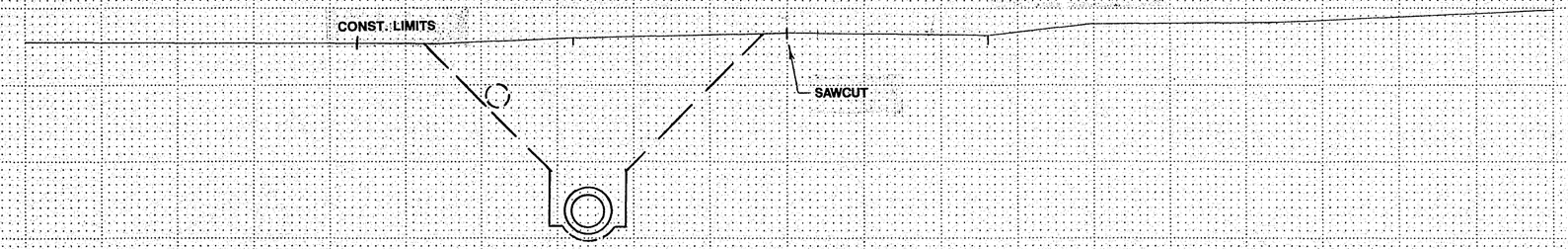
S.A.P. NO. 62 - 645 -10

Sheet No. 69 of 73 Sheets

Copy Equipment Form #1 - 1975

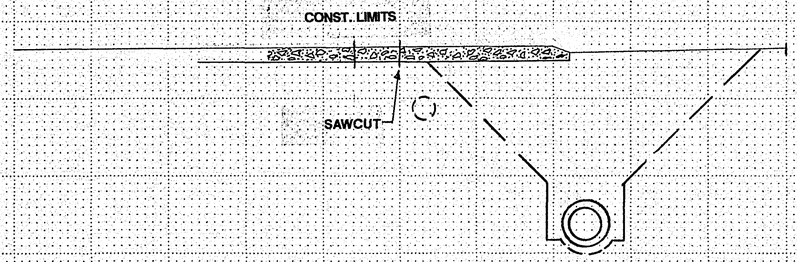
Fed. Proj. No.

STA. 4+00 ℄ EL. 898.3

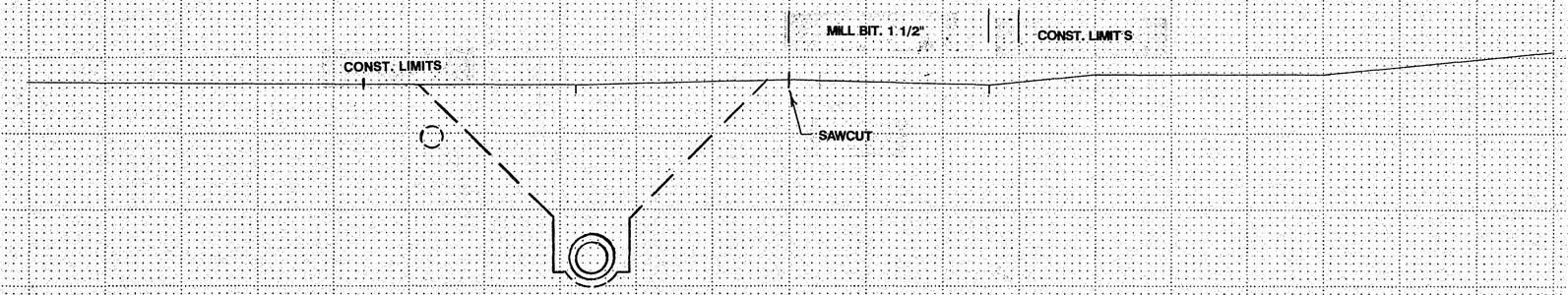


CONC. ENTRANCE

STA. 3+82 ℄ EL. 898.3

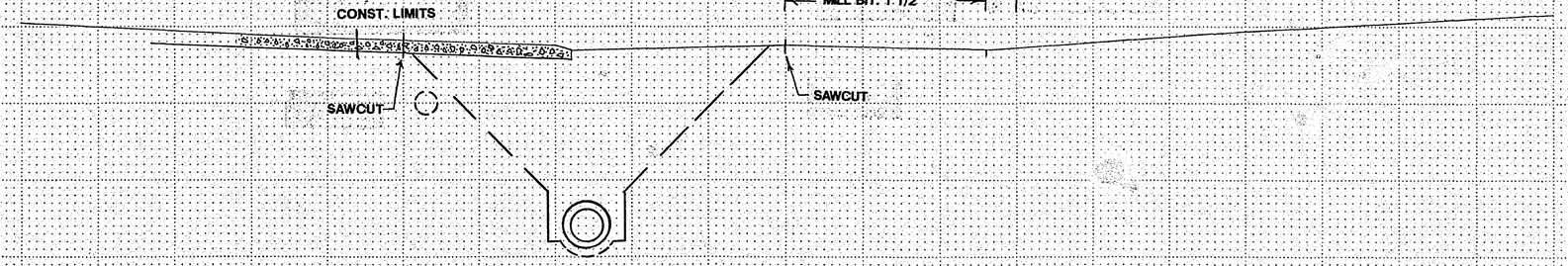


STA. 3+50 ℄ EL. 898.5



CONC. ENTRANCE

STA. 3+00 ℄ EL. 898.8



AS-BUILT PLAN
CONFORMING TO
CONST. RECORDS
DONE BY: M.R.
DATE: 12-3-97

28-126

SCALE = 5 X 5

WOODCREST DRIVE

S.A.P. NO. 62 - 645 -10

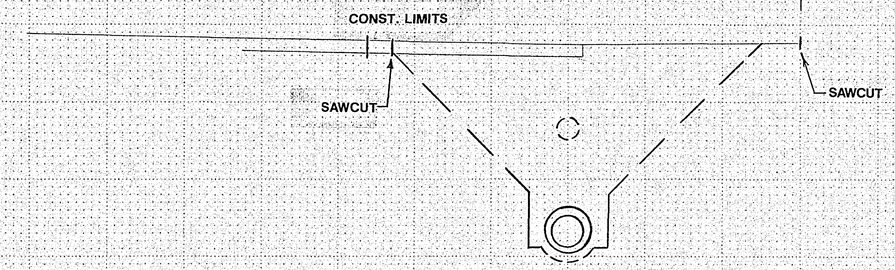
Sheet No. 70 of 73 Sheets

Copy Equipment Form #1 10-1-75

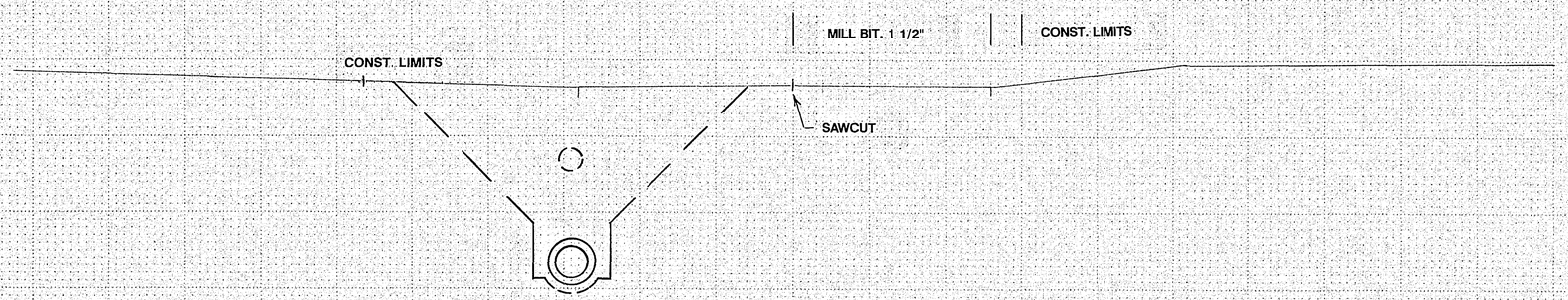
Fed. Proj. No.

BIT. ENTRANCE

STA. 4+80 ℄ EL. 898.9

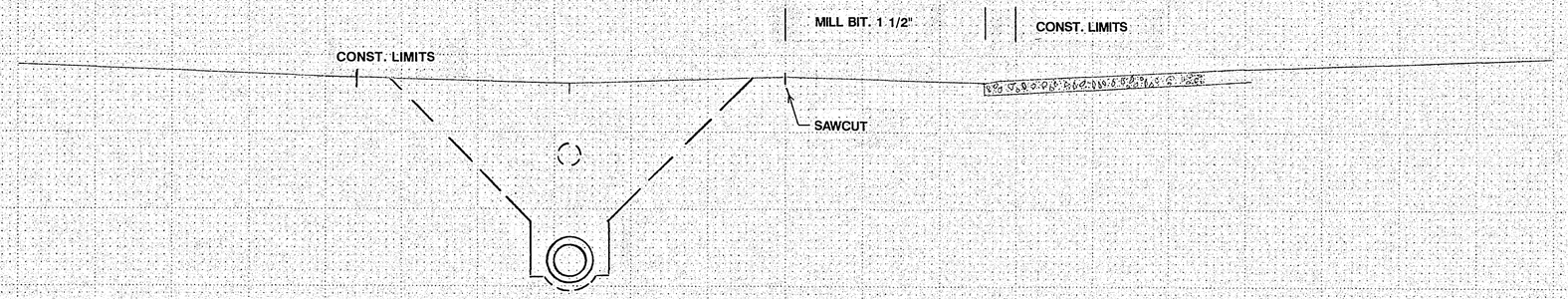


STA. 4+50 ℄ EL. 898.6



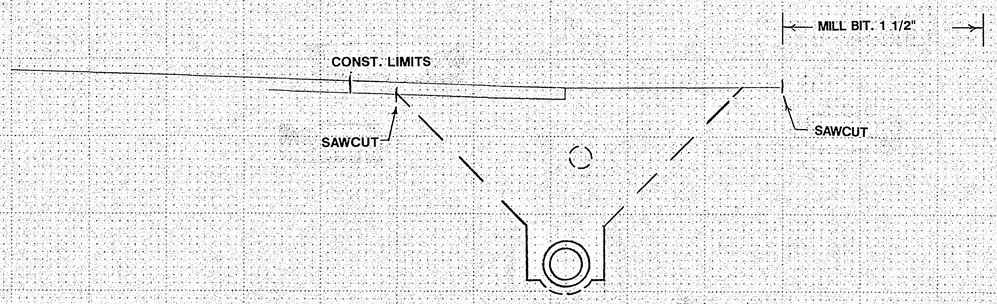
STA. 4+37 ℄ EL. 898.5

CONC. ENTRANCE



BIT. ENTRANCE

STA. 4+32 ℄ EL. 898.4



ASBUILT PLAN
CONFORMING TO
CONST. RECORDS
DONE BY: MR
DATE: 8 12-3-93

28-126

SCALE = 5 X 5

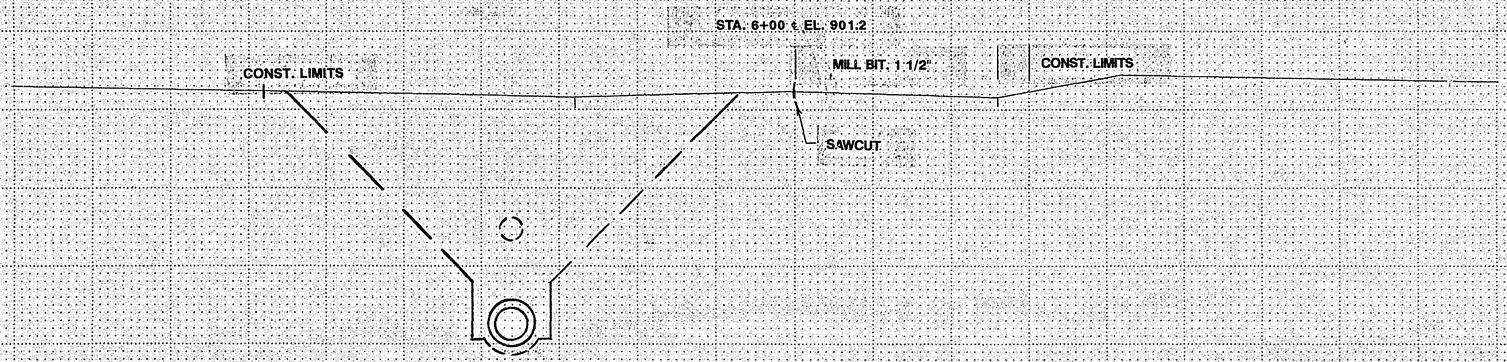
WOODCREST DRIVE

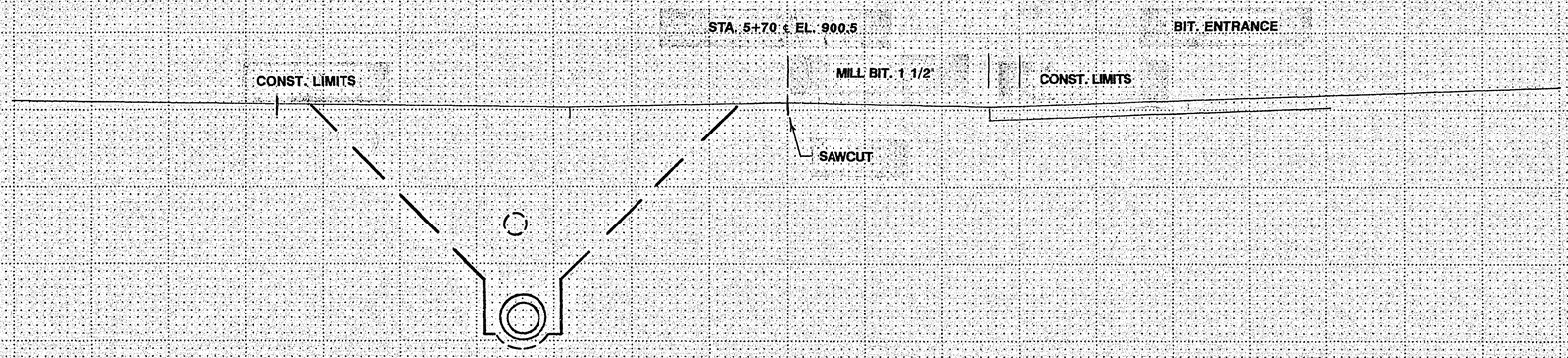
S.A.P. NO. 62 - 645 -10

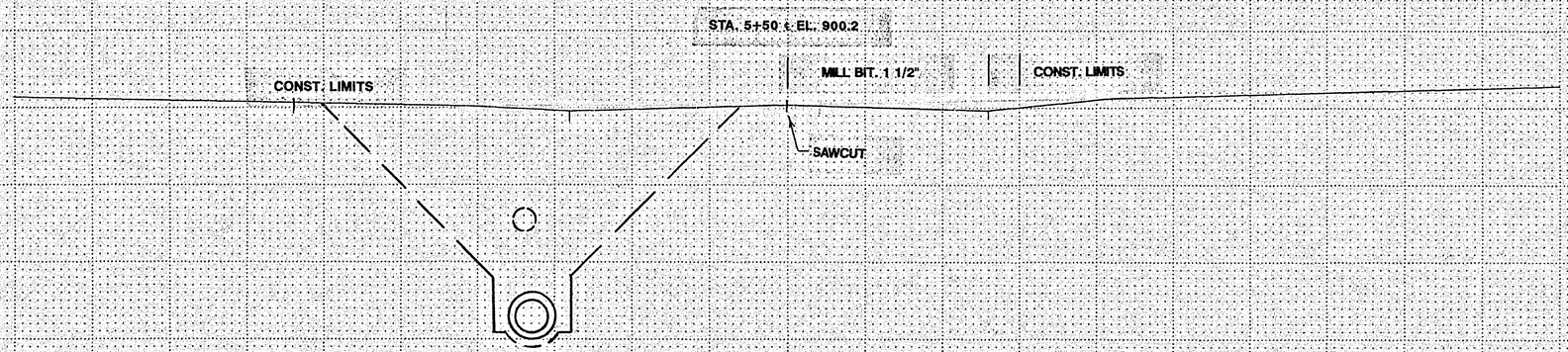
Sheet No. 71 of 73 Sheets

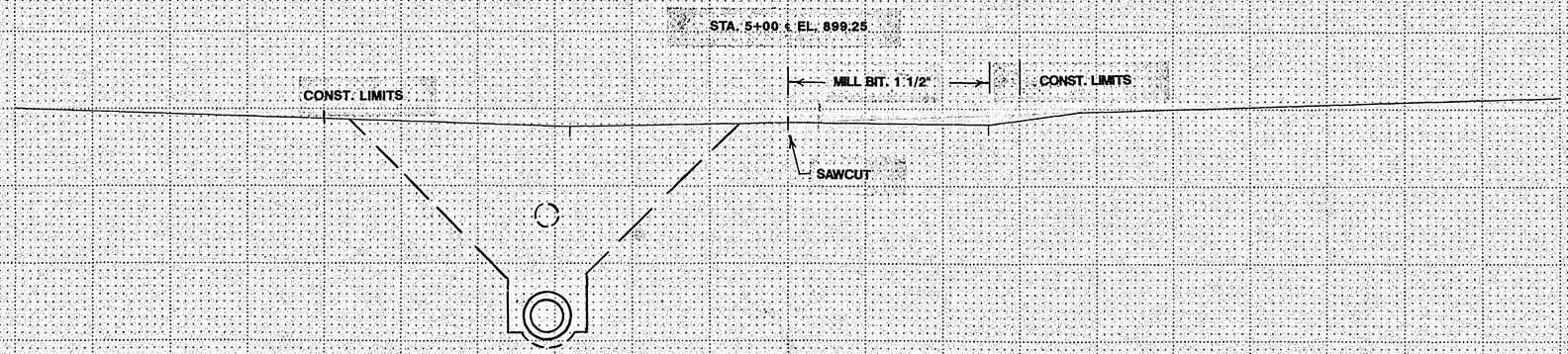
Cross Sections Plan #1

Fed. Proj. No.









ASBUILT PLAN
CONFORMING TO
CONST. RECORDS
DONE BY: MR
DATE: 12-3-93

28-126

SCALE = 5 X 5

WOODCREST DRIVE

S.A.P. NO. 62 - 645 -10

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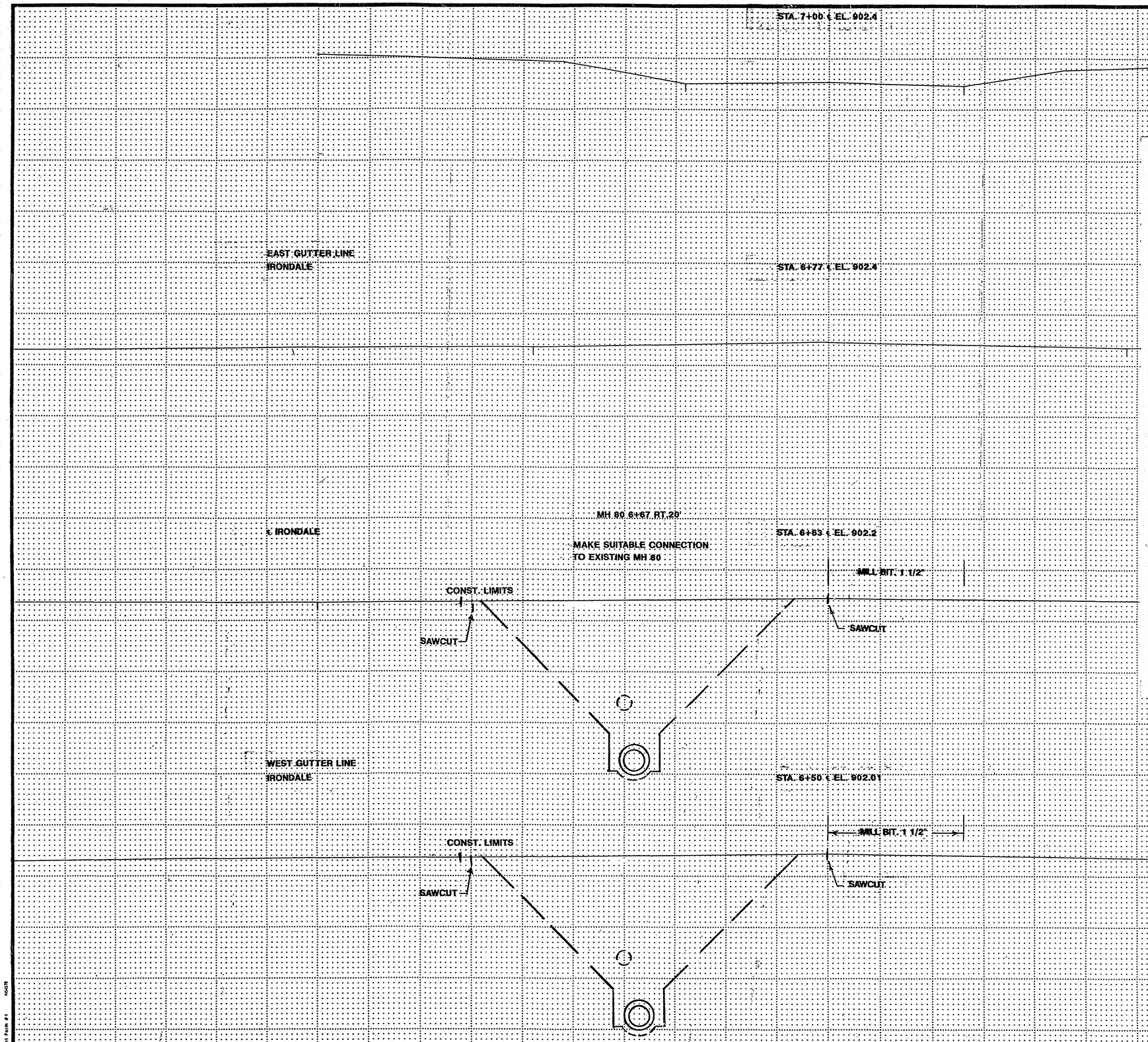
Fed. Proj. No.



EARTHWORK SUMMARY

SOUTH SEGMENT – County Road "H" to Trunk Highway 10
Sta. 130+80 to Sta 172+15 (4,135 L.F.)

COMMON EXCAVATION			=	7965 CY	(Inc. 1191 CY Bit. Surface)
MUCK EXCAVATION			=	36026 CY	
GRANULAR MATERIAL					
MUCK	31131	x 1.5	=	46697 CY	
EMBANKMENT					
REGULAR FILL	10274				(6108 CY H–2 TO T.H. 10)
U & C	3971				(943 CY H–2 TO T.H. 10)
	14245	x 1.3	=	18519 CY	

NORTH SEGMENT – Trunk Highway 10 to County Road "J"
Sta. 173+55 to Sta 245+00 (7,145 L.F.)

COMMON EXCAVATION			=	34751 CY	(Inc. 2089 CY Bit. Surface)
MUCK EXCAVATION			=	5464 CY	
GRANULAR MATERIAL					
MUCK	3482				
SUBGRADE CORR.	2537				
	6019	x 1.5	=	9028 CY	
EMBANKMENT					
REGULAR FILL	5217				(1023 CY T.H. 10 TO I)
U & C	11456				(1818 CY T.H. 10 TO I)
	16673	x 1.3	=	21675 CY	

TOTAL EXCAVATION	*42716 CY*	
LESS BITUMINOUS	*–3280 CY*	
	39436 CY	
TOTAL EMBANKMENT	*40194 CY*	
SHORTAGE	*–758 CY*	
GRANULAR MATERIAL	*55725 CY*	*(LV)*
PLUS SHORTAGE EMB.	*758 CY*	
	56483 CY	*(LV)*

AS BUILT PLAN
CONFORMING TO
CONST. RECORDS
DONE BY: M.K.
DATE: 12-3-93

28-126

SCALE = 5' X 5

WOODCREST DRIVE

S.A.P. NO. 62 - 645 -10

Sheet No. 73 of 73 Sheets

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