

CONVENTIONAL SIGNS

STATE LINE	-----	TIMBER	.....
COUNTY LINE	-----	BRUSH	.....
TOWNSHIP OR RANGE LINE	-----	ORCHARD	.....
SECTION LINE	-----	ROCK LEDGE	.....
QUARTER LINE	-----	SAND	.....
SIXTEENTH LINE	-----	EDGE OF CUT	.....
RIGHT-OF-WAY LINE	-----	TOE OF EMBANKMENT	.....
PRESENT ROAD $\frac{1}{2}$ IN. LINE	-----	CATCH BASIN	.....
LIMITED ACCESS	-----	MANHOLE	.....
PROPERTY LINE (Except Land Lines)	-----	DROP INLET	.....
VACATED PLATTED PROPERTY	-----	FIRE HYDRANT	.....
CORPORATE OR CITY LIMITS	-----	ARC LAMP	.....
TRUNK HIGHWAY CENTER LINE	-----	OTHER LAMP (state kind)	.....
RETAINING WALL	-----	RAILROAD CROSSING SIGN	.....
STEAM RAILROAD	-----	RAILROAD CROSSING BELL	.....
ELECTRIC RAILROAD	-----	ELECTRIC WARNING SIGN	.....
RAILROAD RIGHT-OF-WAY LINE	-----	CROSSING GATE	.....
CREEK	-----	CATTLE GUARD	.....
RAPIDS OR WATERFALL	-----	OVERHEAD (Highway Over)	.....
DRY RUN	-----	UNDERPASS (Highway Under)	.....
DRAINAGE DITCH	-----	ABUTMENT, WALL & PIER	.....
HIGH TENSION LINE	-----	BRIDGE	.....
POWER POLE LINE	-----	CULVERT	.....
TELEPHONE OR TELEGRAPH LINE	-----	BUILDING (One Story Frame)	.....
TELEPHONE CONDUIT	-----	C-CONCRETE S-STONE T-TILE S-BRICK ST-STUCCO	.....
GUARD RAIL	-----	HEDGE	.....
WIRE FENCE	-----	IRON PIPE	.....
RAILROAD SNOW FENCE	-----	STONE MONUMENT	.....
BOARD OR HIGHWAY SNOW FENCE	-----	WOOD STAKE OR HUB	.....
STONE WALL OR FENCE	-----	MEANDER CORNER	.....
GAS MAIN	-----		
WATER PIPE	-----		
SEWER PIPE	-----		
DRAIN TILE	-----		
GRAVEL PIT	-----		
SAND PIT	-----		
CLAY PIT	-----		
ROCK QUARRY	-----		
SPRINGS	-----		
MARSH	-----		

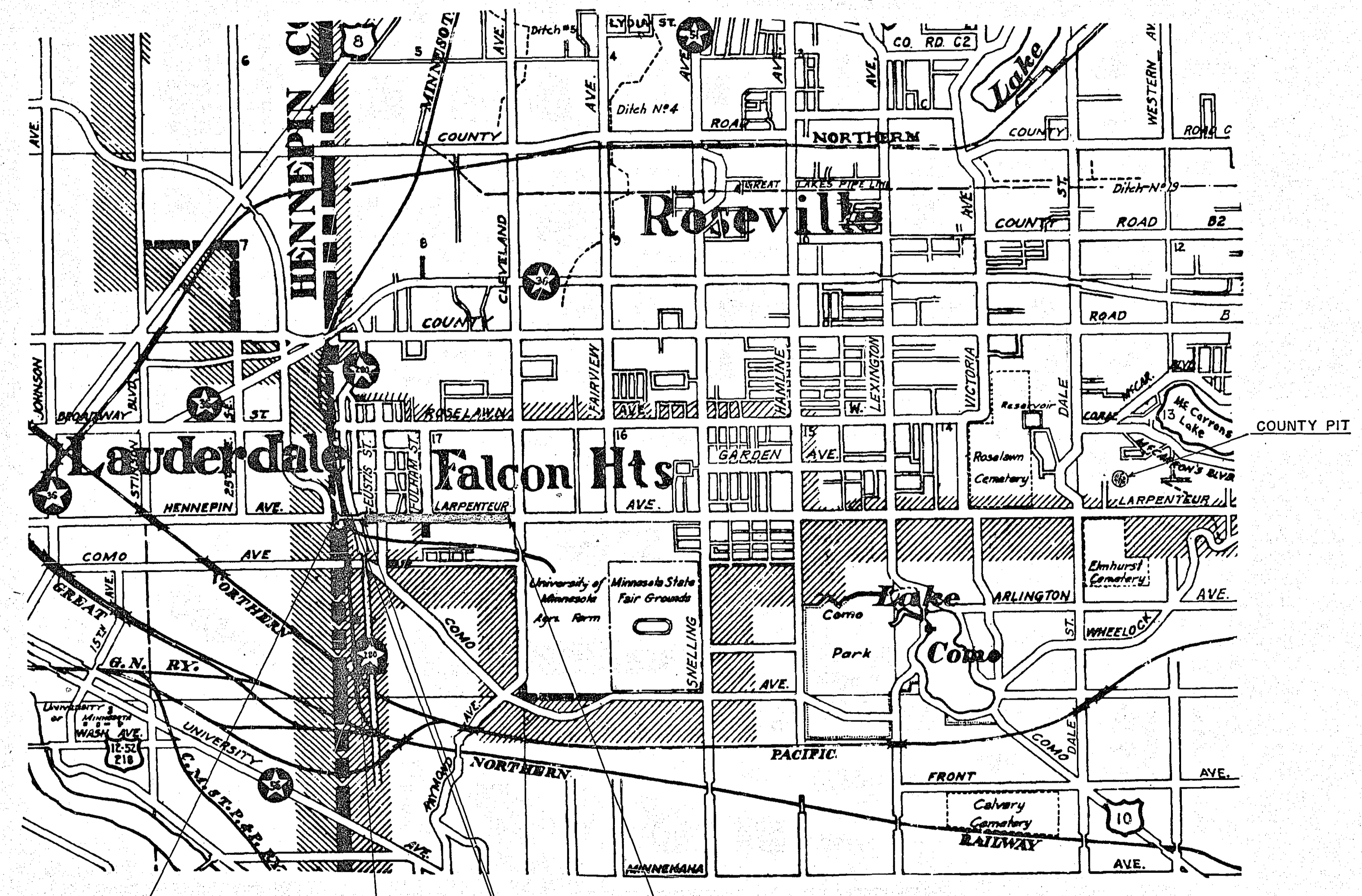
OFFICE OF COUNTY ENGINEER
RAMSEY COUNTY

CONSTRUCTION PLAN FOR GRADING AND PAVING
LARPENTEUR AVENUE
FROM WEST COUNTY LINE TO CLEVELAND AVE.
FROM SOUTHWEST COR. SEC. 17, T. 29 N., R. 23 W. TO 100' WEST OF SOUTHEAST COR. SEC. 17, T. 29 N., R. 23 W.
S.P. 62-630-02 U 083-1 (2)

GROSS LENGTH	5181.8 FEET	0.981 MILES
BRIDGES-LENGTH	0.0 FEET	0.00 MILES
EXCEPTIONS-LENGTH	564.3 FEET	0.107 MILES
NET LENGTH	4617.5 FEET	0.874 MILES

SHEET NO.	INDEX	DESCRIPTION
1	TITLE SHEET	
2	ESTIMATED QUANTITIES	
3	PANEL LAYOUT, SIDEWALK & MEDIAN DETAILS	
4	TYPICAL SECTIONS	
5-6	PLAN & PROFILE	
7	SEWER, UTILITIES, RETAINING WALL & STEP LAYOUTS	
8	TRAFFIC SIGNAL	
9-19	CROSS SECTIONS	

PLAN, 1 inch = 100 Feet
PROFILE, Horiz. 1 inch = 100 Feet. Vert. 1 inch = 10 Feet.
WORKING PLANS - Horiz. - AS NOTED
Vert. - AS NOTED
Cross-Sections 1 inch = 10 Feet
LAYOUT, 1 inch = 2640 Feet



BEG. OF PROJ. S.P. 62-630-02 U-083-1 (2) STA. 0+00
EXCEPTION STA. 3+09.3 TO STA. 4+18.6
EXCEPTION STA. 5+03 TO STA. 9+58
END OF PROJ. S.P. 62-630-02 U-083-1 (2) STA. 51+81.8

SPECIFICATIONS

THE "SPECIFICATIONS FOR HIGHWAY CONSTRUCTION" DATED MAY 1, 1959 AND SUBMITTED FOR APPROVAL BY THE DIVISION ENGINEER OF THE BUREAU OF PUBLIC ROADS ON MARCH 26, 1959 SHALL GOVERN.

DESIGN SPEED 50 MPH
EXCEPT STA. 0+00 TO STA. 6+00-35 MPH

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.
Henry S. Brennan COUNTY ENGINEER REG. NO. 818 DATE

RECOMMENDED FOR APPROVAL *Raymond J. Brennan* COUNTY ENGINEER DATE 2/18/60
APPROVED *E. A. O'Neil* VICE-CHAIRMAN OF RAMSEY COUNTY BOARD DATE 2/18/60
MINNESOTA HIGHWAY DEPARTMENT

RECOMMENDED FOR APPROVAL *John J. Brennan* DATE 3/21/60
ASS'T DISTRICT ENGINEER

RECOMMENDED FOR APPROVAL *Louis A. Hoffman* DATE 3/21/60
APPROVED *B. M.* STATE AID ENGINEER DATE

Rev. of Plans for Center

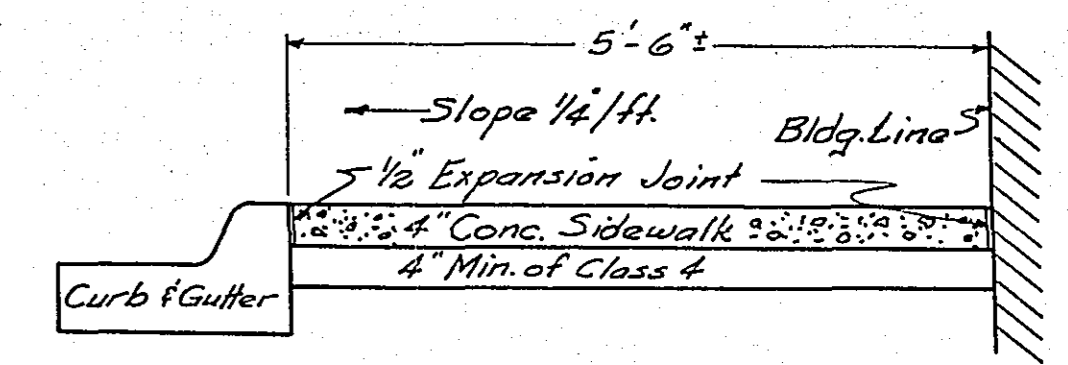
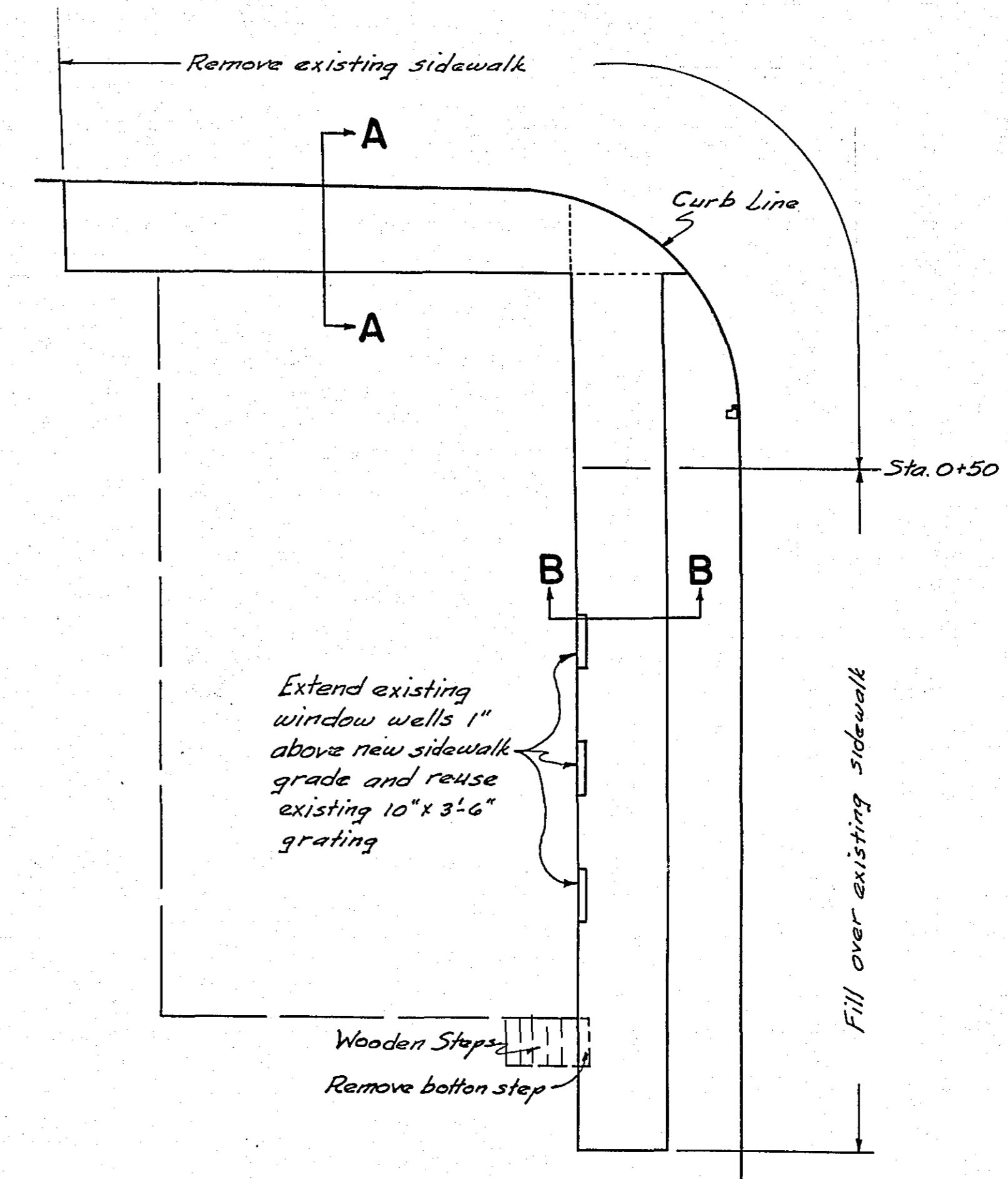
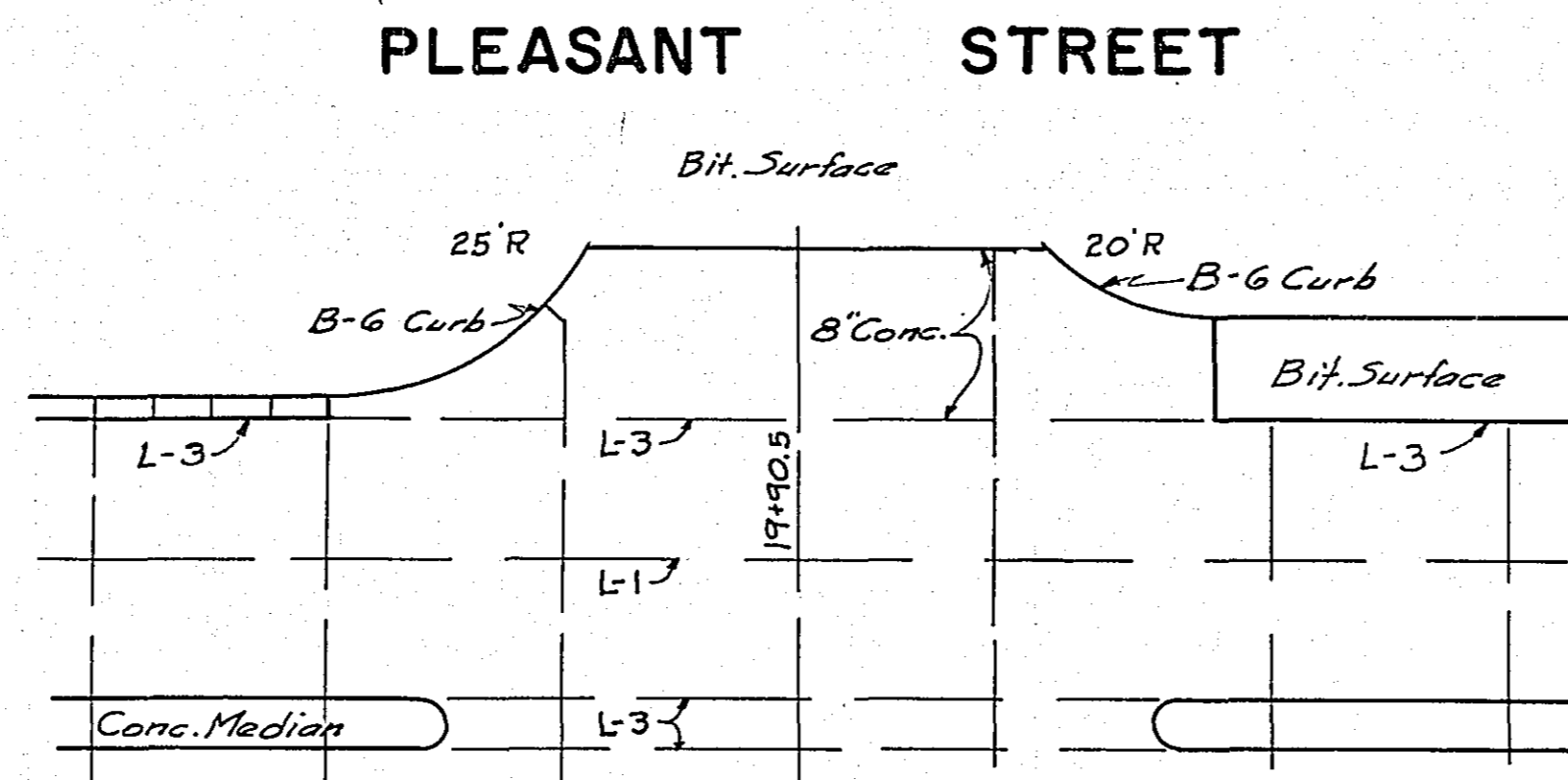
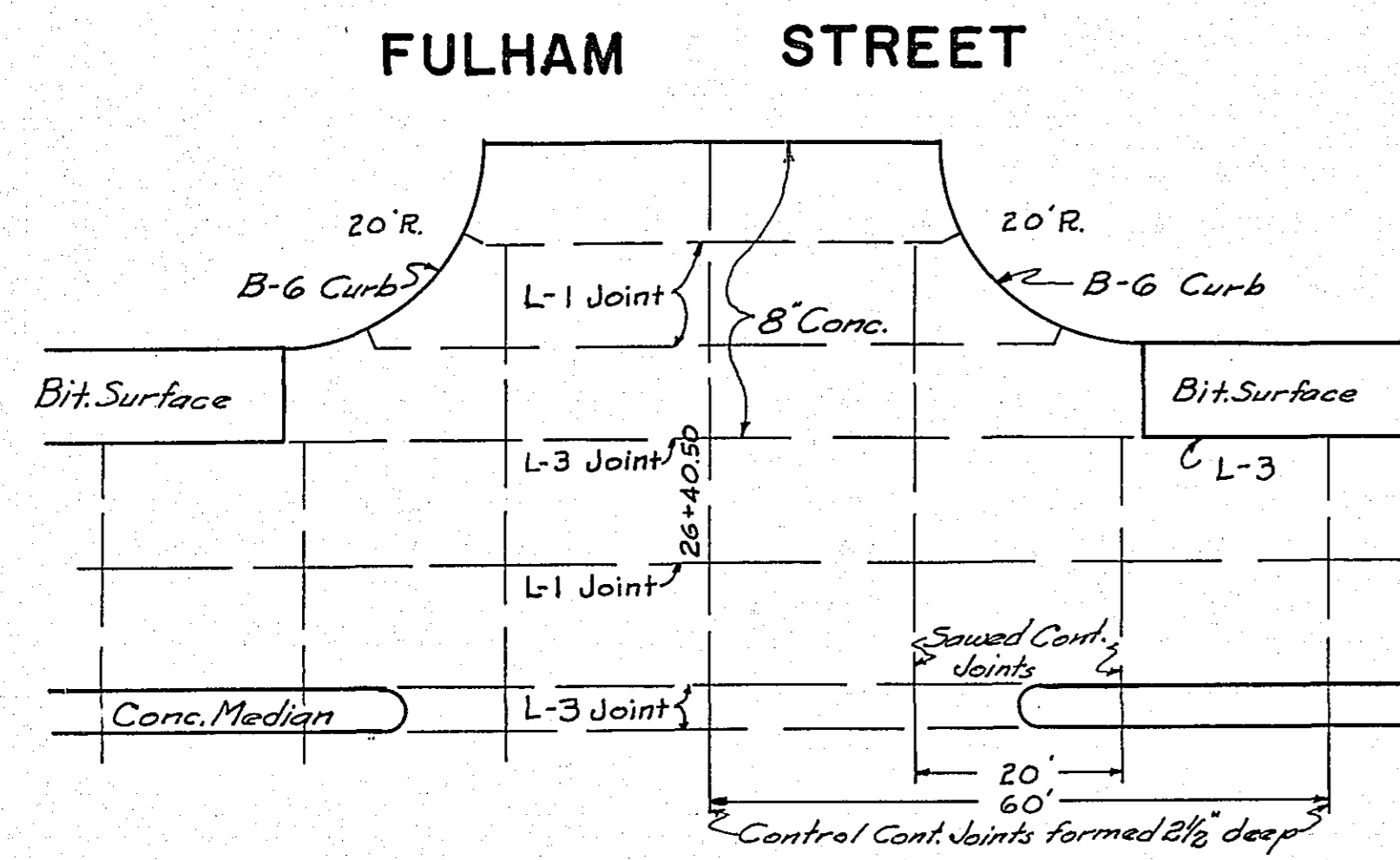
May 2

ESTIMATED QUANTITIES			
SPEC. NO.	DESCRIPTION	UNIT	TOTAL ESTIMATED QUANTITIES
2101.502	CLEARING	TREE	63
2101.507	GRUBBING	TREE	63
2104.501	REMOVE PORTABLE CULVERTS	L.F.	100
2104.502	REMOVE PAVEMENT	SQ. YD.	10,335
2104.504	REMOVE CURB	L.F.	42
2104.506	REMOVE SIDEWALK	SQ. YD.	84
2104.510	REMOVE FENCE (4 STRAND BARB WIRE & WOOD POSTS)	L.F.	441
2104.510	REMOVE FENCE (CHAIN LINK, STEEL FABRIC, STEEL POSTS)	L.F.	1055
2104.512	REMOVE DROP INLET	STRUCTURE	2
2104.517	REMOVE BLOCK PAVEMENT SURFACING	SQ. YD.	532
2105.501	CLASS "A" EXCAVATION	CU. YD.	37,089
2116.504	GRAVEL BACKFILL IN PLACE	CU. YD. (V.M.)	15,100
2116.512-8	NON PERFORATED METAL PIPE 8"	L.F.	30
2116.513-8	PERFORATED METAL PIPE 8"	L.F.	70
2201.527	GRAVEL SUBBASE IN PLACE (CLASS 4)	CU. YD. (V.M.)	4600
2202.527	GRAVEL BASE IN PLACE (CLASS 5)	CU. YD. (V.M.)	5692
2301.511	CONCRETE PAVEMENT (STD. STR. 8" THICK)	SQ. YD.	1372
2301.511	" " (STD. STR. 9" " ")	SQ. YD.	23,521
2301.511	" " (ENT. 7" " ")	SQ. YD.	175
2301.521	" " (H.E. 9" " ")	SQ. YD.	750
2301.531	REINFORCEMENT BARS	POUND	17,560
2301.549	CONCRETE TREATING OIL	GAL.	1705
2341.501	BITUMINOUS MATERIAL FOR PRIME COAT	GAL.	2641
2341.502	" " " TACK COAT	GAL.	48
2341.504	" " " MIXTURE	TON	60
2341.505	" " " FOR FOG SEAL	GAL.	96
2341.511	" " MIXTURE 2" WEARING COURSE	TON	982
2341.513	PLANT-MIXED BITUMINOUS BASE 3" THICK	TON	180
2341.531	AGGREGATE FOR FOG SEAL COAT	CU. YD. (V.M.)	5
2421.517	STONE MASONRY (SQUARED STONE)	CU. YD.	36
2501.511-15	F&I C.M. PIPE CULVERT 15"	L.F.	28
2501.521-18	F&I S.C. PIPE CULVERT 18" CLASS 2	L.F.	72
2501.522-22	F&I S.C. PIPE ARCH CULVERT 22" SPAN	L.F.	96
2503.512-12	F&I R.C. PIPE SEWER 12" CLASS 2	L.F.	54
2503.512-15	F&I R.C. PIPE SEWER 15" "	L.F.	312
2503.512-18	" " " " 18" "	L.F.	196
2501.511-12	" " C.M. PIPE CULVERT 12" "	L.F.	12
2503.531-22	F&I R.C.P. ARCH SEWER PIPE 22" SPAN	L.F.	180
2503.531-29	" " " " 29" SPAN	L.F.	80
2506.506	CONSTRUCT MANHOLES DESIGN A OR F	L.F.	940
2506.807	" " CATCH BASINS DESIGN C OR G	L.F.	24,80
2506.511	RECONSTRUCT MANHOLES	L.F.	9
2506.516	F&I CASTING ASSEMBLIES	ASSEMBLY	6
2506.522	ADJUST FRAME AND RING CASTINGS	ASSEMBLY	6
2506.521	INSTALL CASTING	ASSEMBLY	1
2515.531-12	F&I METAL APRONS FOR C.M.P. CULVERT 12"	APRON	2
2515.531-15	" " " " 15" "	APRON	2
2515.532-22	F&I APRONS FOR C.M.P. CULVERT - ARCH - 22" SPAN	APRON	2
2515.54H8	F&I CONC. APRONS FOR S.C.P. CULV. 18"	APRON	2
2521.501	CONCRETE WALK 4" THICK	SQ. FT.	666
2531.501	CONCRETE CURB & GUTTER DESIGN B. 624	L.F.	1365
2531.502	" " DESIGN B6	L.F.	903
2531.503	" " MEDIAN	SQ. YD.	1947
2535.501	BITUMINOUS CURB	L.F.	1931
557.621	RESET FENCE (4 STRAND BARB WIRE & WOOD POSTS)	L.F.	200
557.621	RESET FENCE (CHAIN LINK, STEEL FABRIC, STEEL POSTS)	L.F.	1017
2574.501	ROADSIDE SEEDING	ACRE	2.5
2574.511	SEED (CLASS 15)	POUND	300
2576.501	SODDING	SQ. YD.	3000
2421.516	CONCRETE	CU. YD.	18.5
2461.501	CONCRETE STEPS, GRADE A, MIX NO. 3A15	CU. YD.	1.2
2565.501	FULL TRAFFIC, ACTUATED TRAFFIC CONTROL SYSTEM	SIGNAL SYSTEM	1

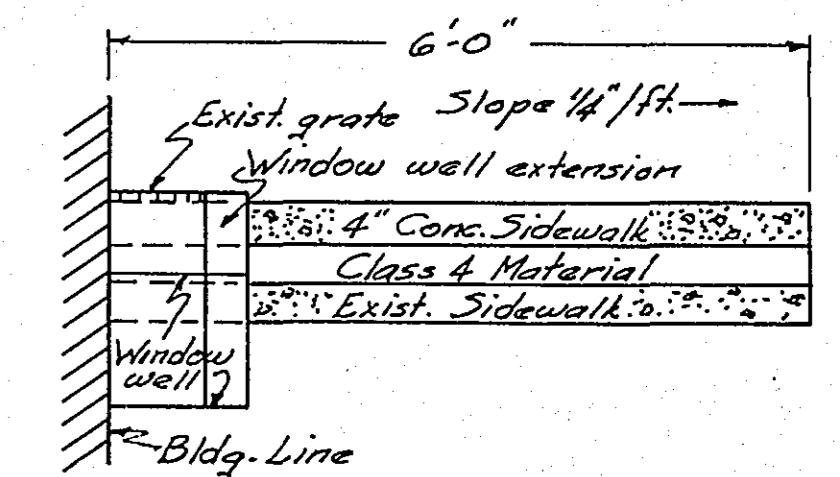
DRAINAGE										STRUCTURES									
STATION	LOCATION	NO	TYPE	DESIGN	CONST HEIGHT LIN. FT.	F&I CASTING ASSEMBLY	ELEVATION		ADJUST CASTING ASSEMBLY	RECONSTRUCT M.H. OR C.B. LIN. FT.	F&I REINFORCED CONCRETE PIPE SEWER					F&I APRON	INSTAL CASTING ASSEMBLY	REMARKS	
							GRATE OR RING	OUTLET			12"	15"	18"	22"	24"				TO STRUCTURE NO
9+92.5	22'RT	1	M.H.																
13+18	16'RT	2	M.H.																
13+37	51'LT	3	M.H.	A	4.0		959.00	955.00+									C.B. 4		
13+40	37'LT	4	C.B.	C	3.8		958.70	954.66										M.H. 5	
13+44	27'LT	5	M.H.	A	5.6		959.25	953.50										TO SO. END	
13+62	27'RT	6	C.B.	C	5.4		959.50	953.86										M.H. 5	
15+71	14'RT	7	M.H.																
16+24	27'RT	8	C.B.	C	5.2		964.35	959.10										TO C.B. 6	
16+24	27'LT	9	C.B.	C	4.4		964.20	959.60										TO C.B. 8	
19+00	27'LT	10	C.B.	C	5.8		966.50	960.50										TO BEG TO END	
19+89.5	12'RT	11	M.H.															F&I ECCENTRIC CONE	
32+33	62'RT	12	M.H.																
36+00	42'RT	13	M.H.															CONFORM TO SLOPE	
39+14	37'RT	14	M.H.																
40+10	32'RT	15	M.H.																
42+86	31'RT	16	M.H.																

5 FRAME CASTING 801, GRATE 810, CURB BOX 8218
1 RING CASTING 700-9" COVER CASTING 712

STANDARD DETAIL PLATES	
1010C	CONCRETE PAVEMENT 9" UNIFORM X 24'
1035C	BRIDGE APPROACH PANEL 24' PAVEMENT
1100D	EXPANSION JOINTS
1120E	CONTRACTION JOINTS
1140E	LONGITUDINAL JOINTS
1141A	PAVEMENT FOR KEYED JOINT CONSTRUCTION
1150E	CONSTRUCTION OF HEADER JOINT
3000B	REINFORCED CONCRETE PIPE
3014	REINFORCED CONCRETE PIPE ARCH
3100B & 3102A	CONCRETE APRON FOR REINFORCED CONCRETE PIPE
3110 & 3112	CONCRETE APRON FOR REINFORCED CONCRETE PIPE ARCH
3122A	METAL APRON FOR C.M. PIPE ARCH CULVERTS
3123A	METAL APRON FOR C.M. PIPE
4000D 4002C 4005D 4006C	MANHOLE OR CATCH BASINS
4101A	RING CASTING FOR MANHOLE OR CATCH BASIN
4111C	COVER CASTING FOR MANHOLE
4126B	CATCH BASIN FRAME CASTING
4149B	GRATE CASTING FOR CATCH BASIN
4161C	CURB BOX CASTING FOR CATCH BASIN
4180D	MANHOLE STEP CASTING
7020C	CONCRETE CURB
7035D	CURB RETURNS AT ENTRANCES
7065B	BITUMINOUS CURB
7100C	CONCRETE CURB AND GUTTER
7111B	CURB AND GUTTER CONSTRUCTION AT CATCH BASIN
7200B	CONCRETE WALK
8000A, & 8009	STANDARD BARRICADE
8003 TO 8008A	ADVANCE WARNING SIGN
8110 TO 8116	TRAFFIC SIGNALS STANDARD PLATES
9102A	SODDING AT PIPE CULVERT END
8113	DETECTOR PLATES - MAGNETIC DETECTORS



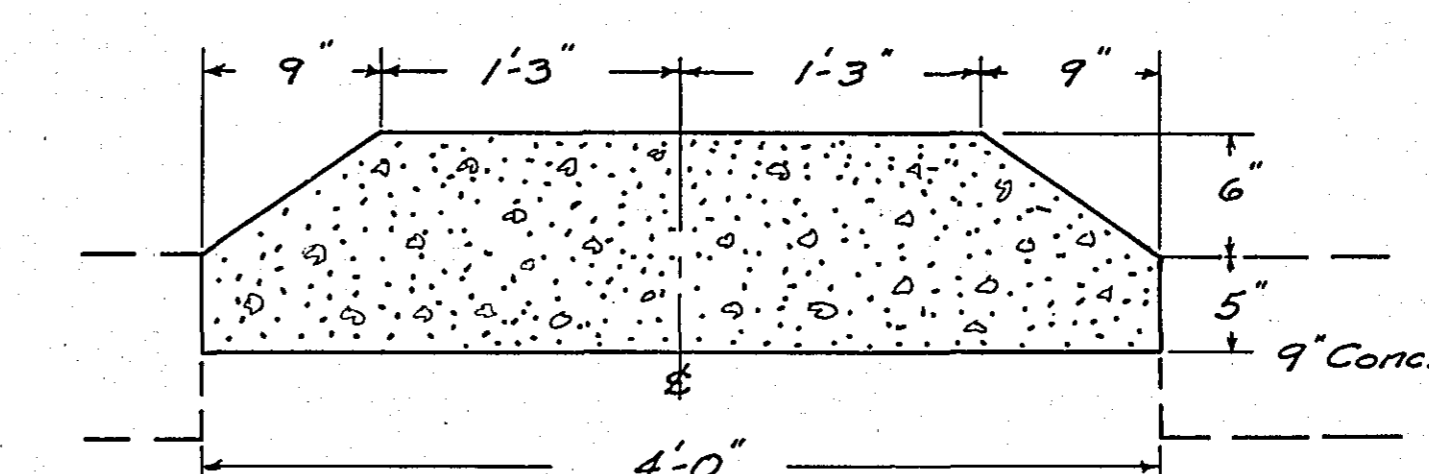
SECTION A-A
SCALE: 1/2" = 1'0"



SECTION B-B
SCALE: 1/2" = 1'0"

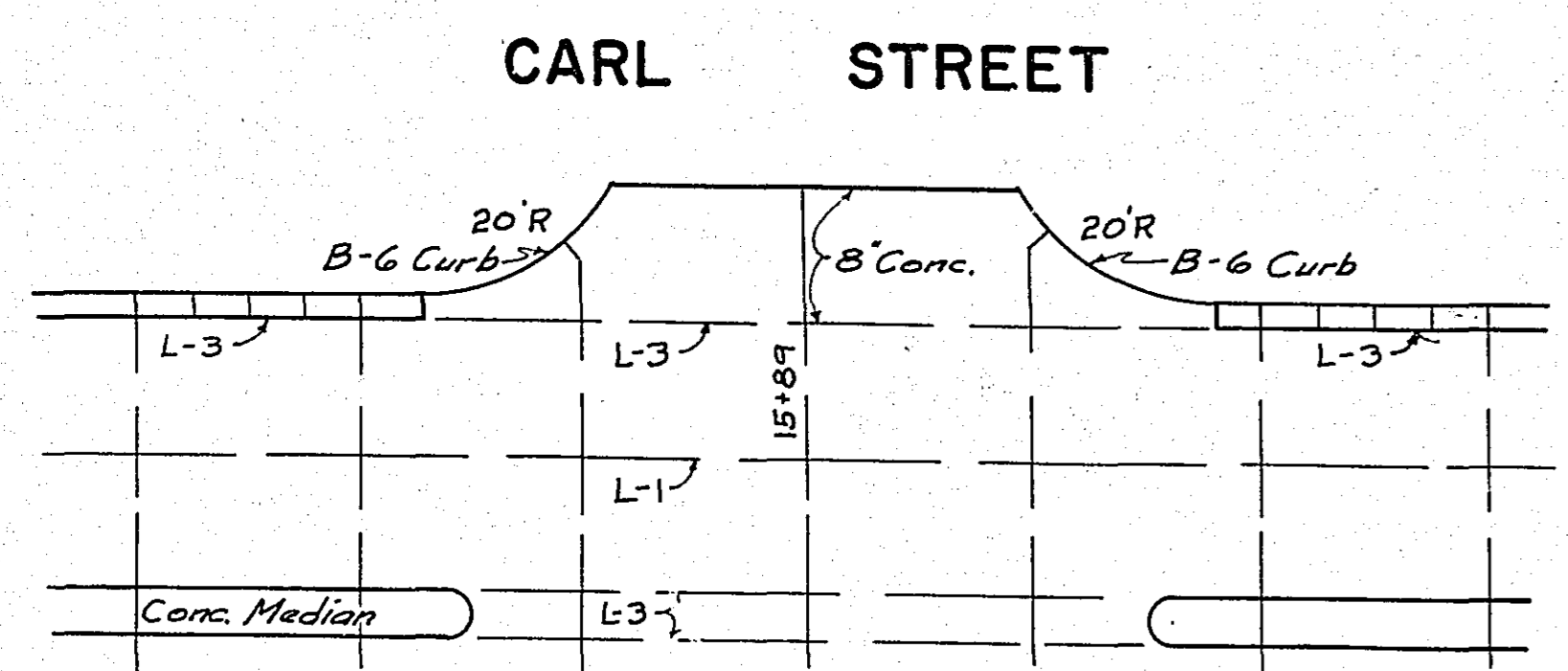
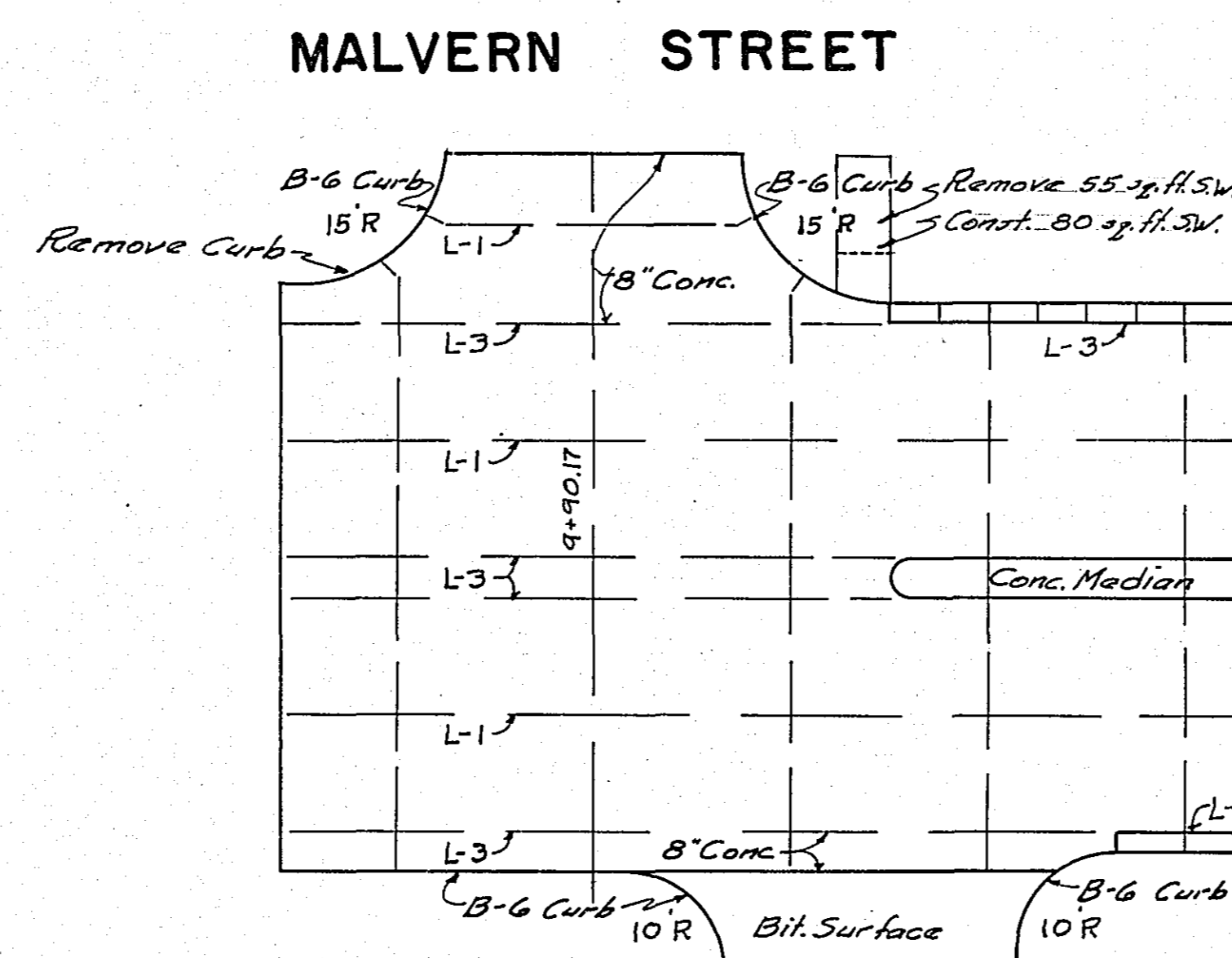
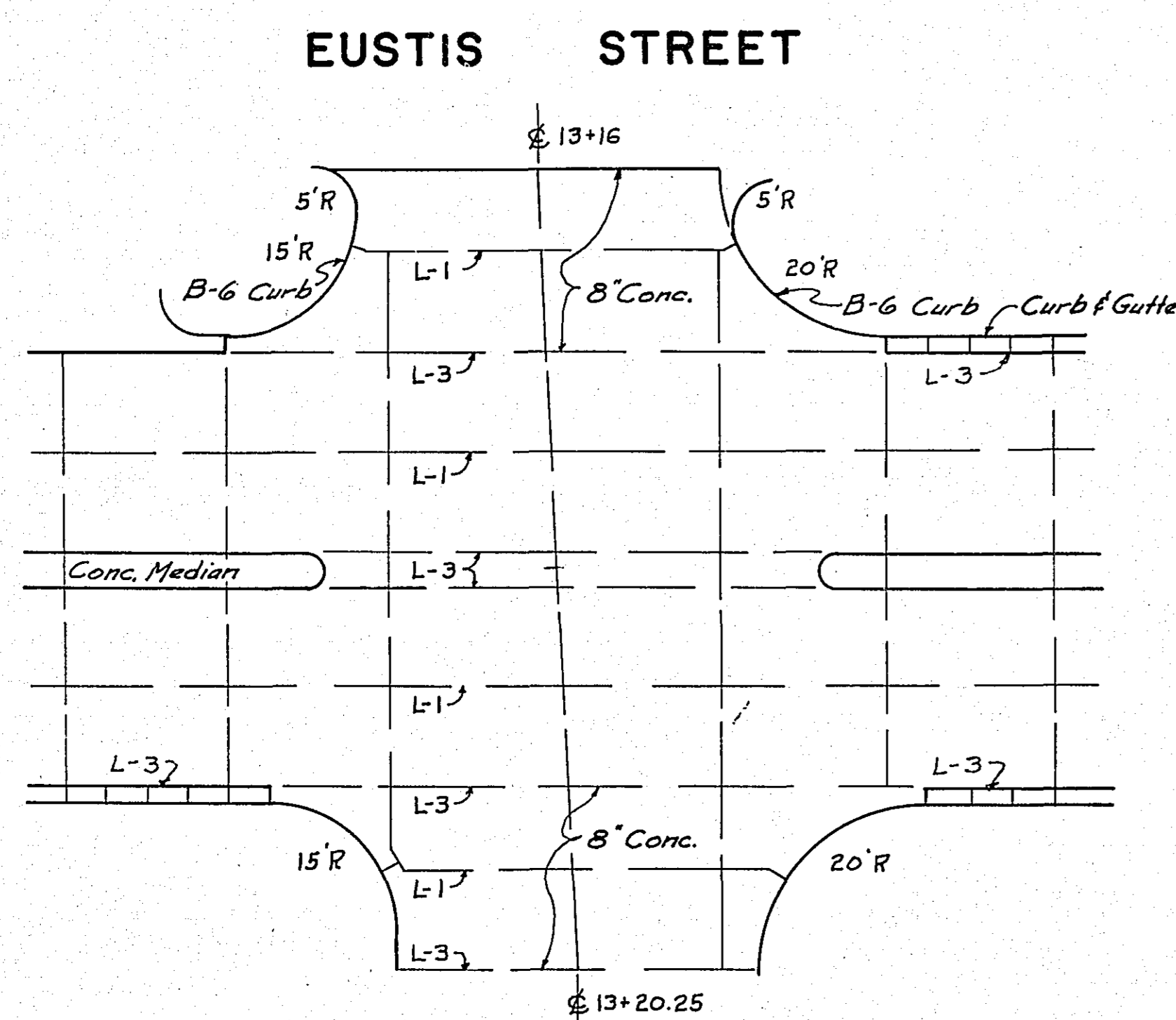
All Class 4 Material included for payment with quantity of Item 2201.527 Sand/Gravel Sub Base in place

—SIDEWALK—
SOUTHWEST COR. OF LARPEUR AVE. AND EUSTIS ST.
SCALE: 1" = 10'



Place one 4" dia. hole in Median approximately 4" from all Median ends.

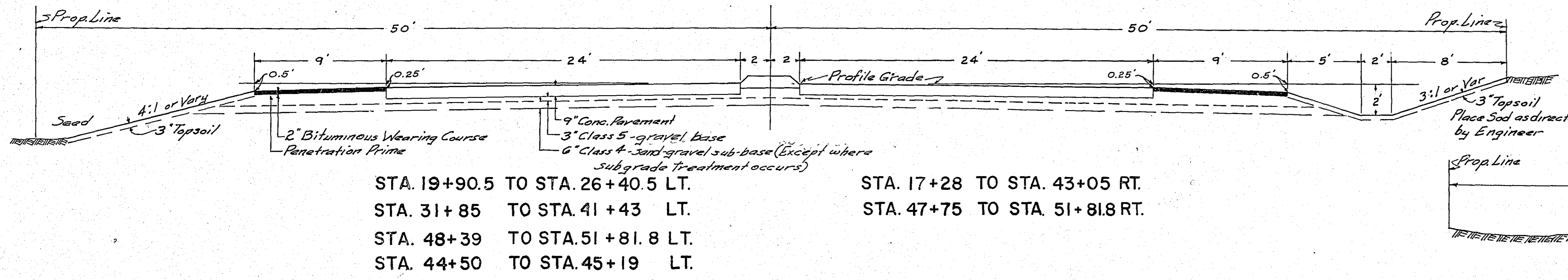
DETAIL OF MEDIAN
SCALE: 1" = 1'0"



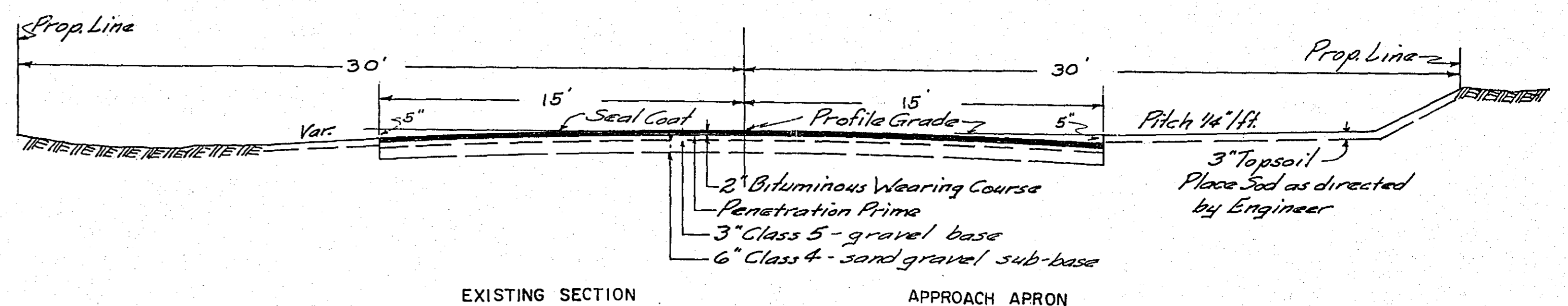
PANEL LAYOUT
STREET INTERSECTIONS
SCALE: 1" = 20'

TYPICAL

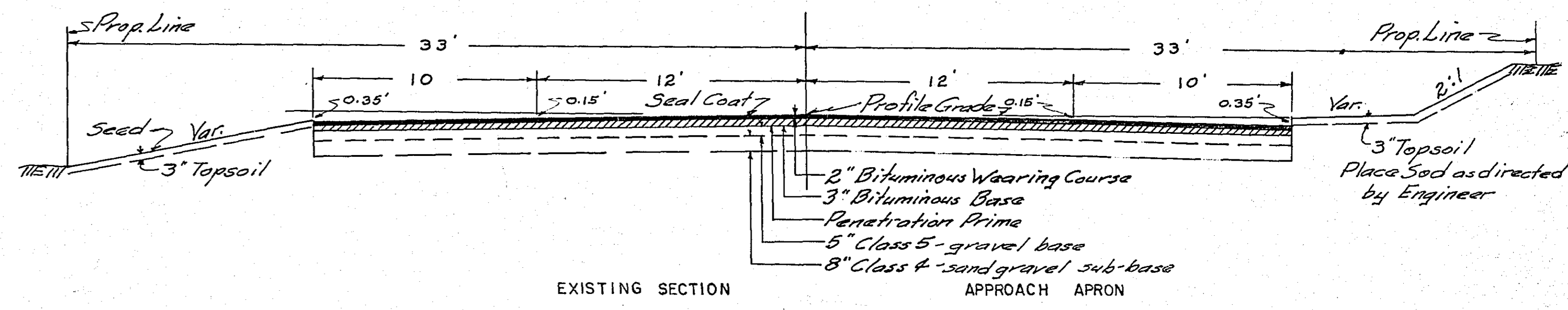
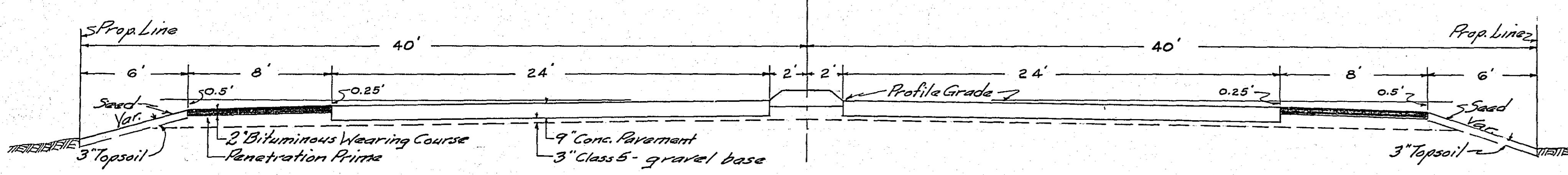
SECTIONS



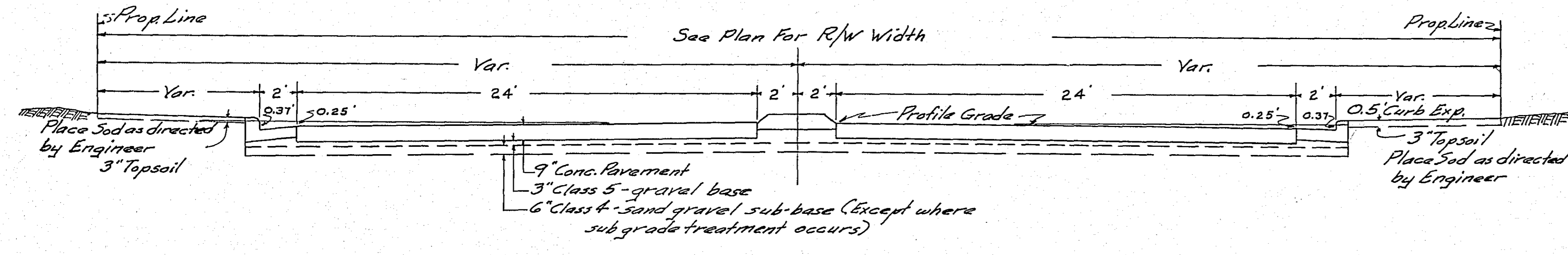
NOTE:
 Fulham and Pleasant Street Sections to vary as shown on the cross sections to make the transition from the approach apron to existing section at end of grade change.



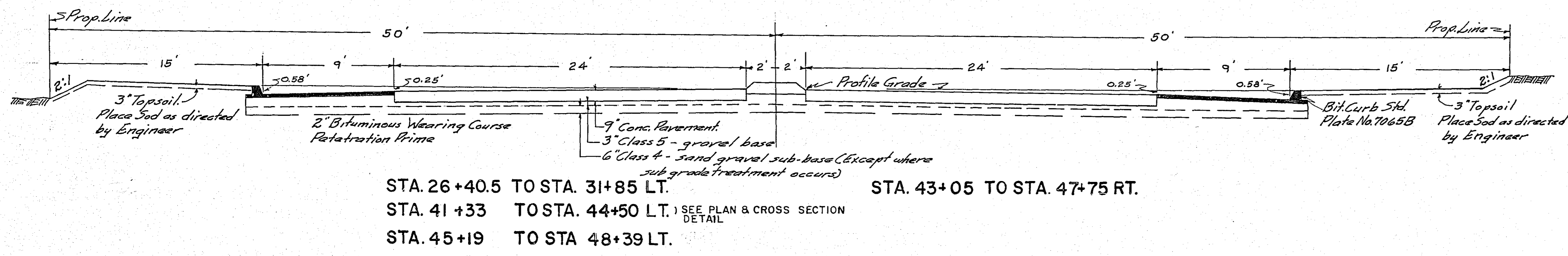
PLEASANT ST.



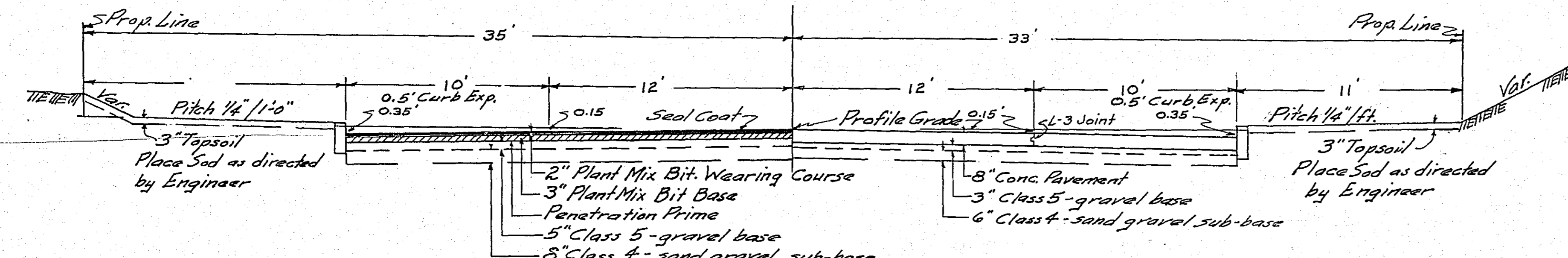
FULHAM ST.

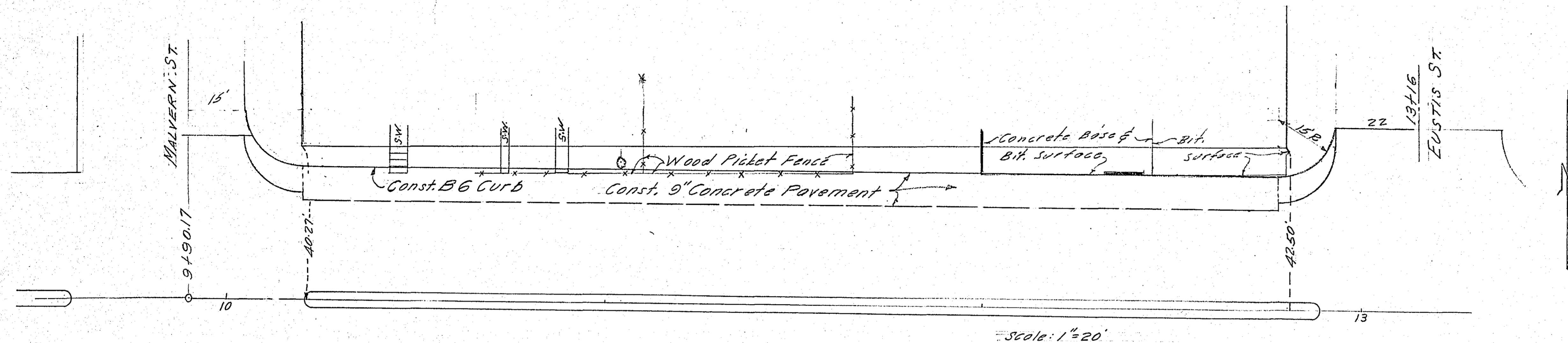


NOTE:
 Place 1/2" x 10'-0" Bars 2'-0" c-c in Pavement over lateral trench excavations.
 Bituminous Material
 Wearing Course - Plant Mix.
 Base Course - Plant Mix.
 All slopes must conform to Right of Way where there are no slope easements.
 Excavation for sub-grade correction shall be as shown on Profile & Cross Section sheets.
 All class 4 sand-gravel sub-base shall be obtained from County Pit.

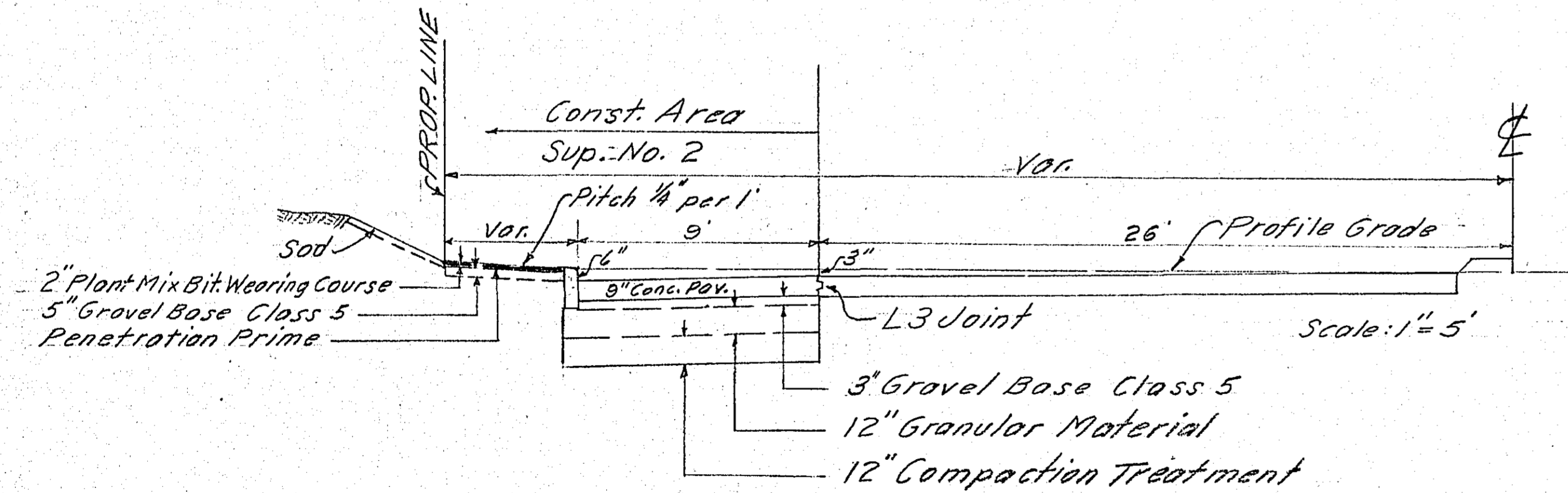


LARPEUTEUR AVE.

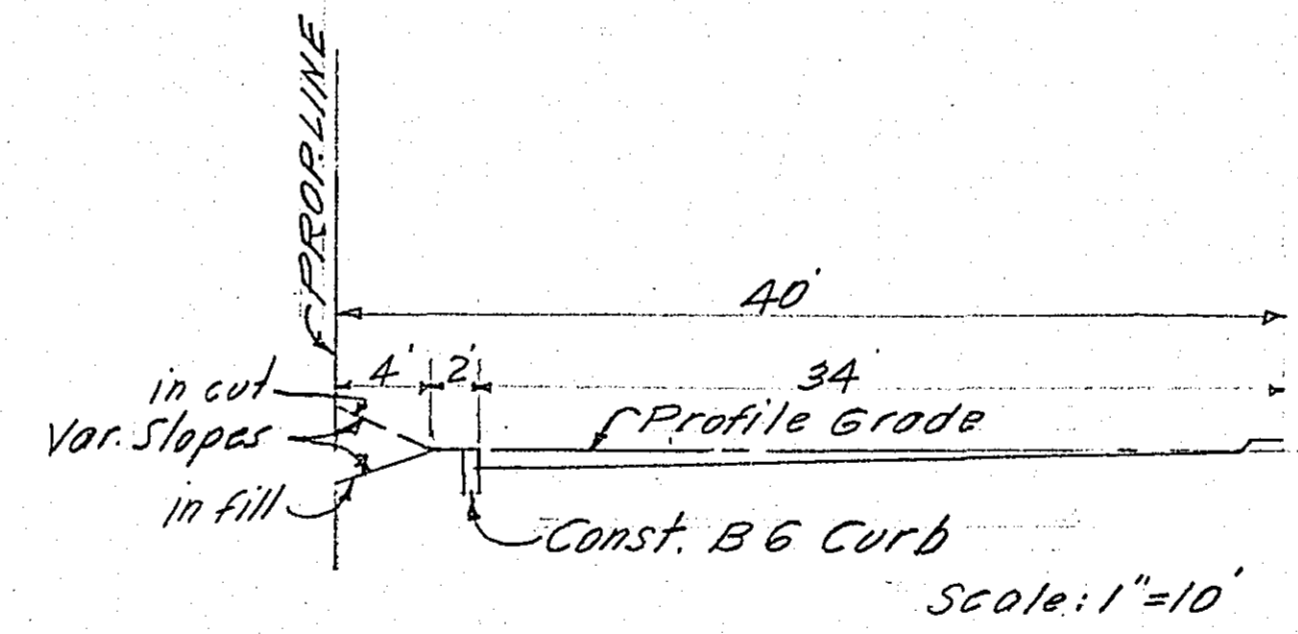




Scale: 1"=20'



PARKING LANE PLAN
FROM MALVERN ST. TO EUSTIS ST.
STA. 9+90.17 STA. 13+16



CONCRETE CURB PLAN
RT. & LT. STA. 0+00 TO STA. 3+09.3

ESTIMATED QUANTITIES			
SPEC. NO.	DESCRIPTION	UNIT	TOTAL ESTIMATED QUANTITIES
DECREASE ITEMS			
2301.511	CONCRETE PAVEMENT (STD. STR. 7" THICK)	SQUARE YARD	31.5
2531.501	CONCRETE CURB & GUTTER DESIGN B 624	LINEAR FOOT	259
2531.502	CONCRETE CURB DESIGN B 6	LINEAR FOOT	7
2576.501	SODDING	SQUARE YARD	199
INCREASE ITEMS			
2101.502	CLEARING	TREE	1
2101.507	GRUBBING	TREE	1
2104.502	REMOVE PAVEMENT (CONCRETE)	SQUARE YARD	35
2104.506	REMOVE SIDEWALK	SQUARE YARD	8
2104.510	REMOVE FENCE (WOOD PICKET)	LINEAR FOOT	104
2105.501	CLASS A EXCAVATION	CUBIC YARD	389
2116.504	GRAVEL BACKFILL IN PLACE	CUBIC YARD (V.M.)	88
2576.501	SODDING	SQUARE YARD	100
2202.527	GRAVEL BASE IN PLACE (CLASS 5)	CUBIC YARD (V.M.)	59
2301.511	CONCRETE PAVEMENT (STD. STR. 9" THICK)	SQUARE YARD	238
2301.521	CONCRETE PAVEMENT (H.E. STR. 9" THICK)	SQUARE YARD	44
2301.549	CONCRETE TREATING OIL	GALLON	17
557.621	RESET FENCE (WOOD PICKET)	LINEAR FOOT	104
2341.504	BITUMINOUS MATERIAL FOR MIXTURE	TON	1.6
2341.511	BITUMINOUS MATERIAL FOR WEARING COURSE	TON	34
2531.502	CONCRETE CURB DESIGN B 6	LINEAR FOOT	877
2461.501	CONCRETE STEPS, GRADE A, MIX NO. 3A15	CUBIC YARD	0.5
2341.501	BITUMINOUS MATERIAL FOR PRIME COAT	GALLON	95
2104.504	REMOVE CURB	LINEAR FOOT	18

OFFICE OF
RAMSEY COUNTY ENGINEER
HARRY S. BRONSON
PARKING LANE AND CURB PLAN
LARPENTEUR AVENUE
S.P. 62-630-02 U 083-1 (2)

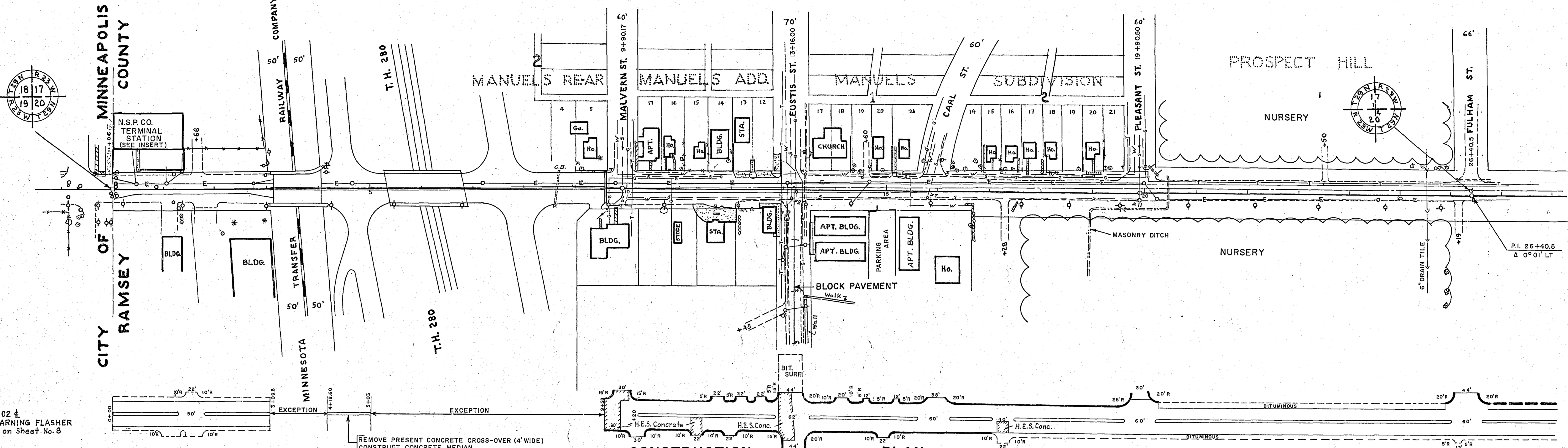
SUPPLEMENTAL TO PLAN SHEET NO. 4 & 5
JULY 26, 1960

CONST. BRIDGE APPROACH PANEL
STA. 2+80.10 TO STA. 3+09.30

TELEPHONE CABLE ACROSS LARPENTEUR AVE.
AT MALVERN ST. TO BE ABANDONED.

STA. 13+38 LT. 32.5'
INP. SIDE DRAIN
REMOVE STRUCTURE

STA. 13+38 RT. 32.5'
INP. SIDE DRAIN
REMOVE STRUCTURE



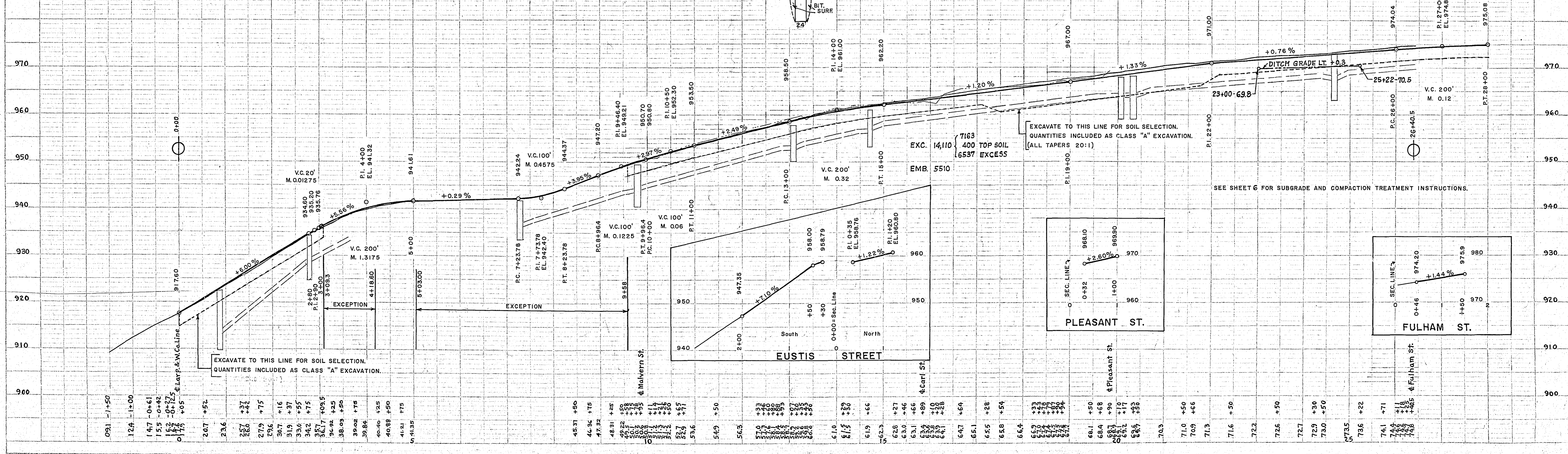
CONSTRUCTION

PLAN

STA. 0+02 &
INSTALL WARNING FLASHER
See detail on Sheet No. 8

REMOVE PRESENT CONCRETE CROSS-OVER (4' WIDE)
CONSTRUCT CONCRETE MEDIAN.

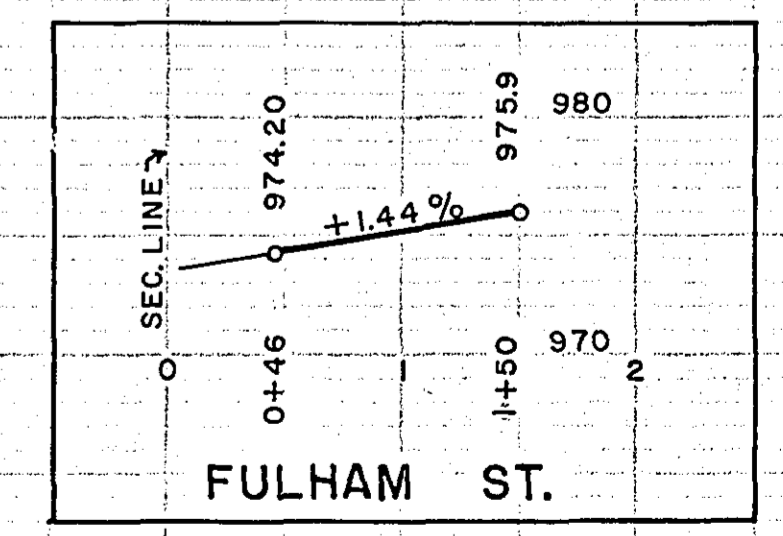
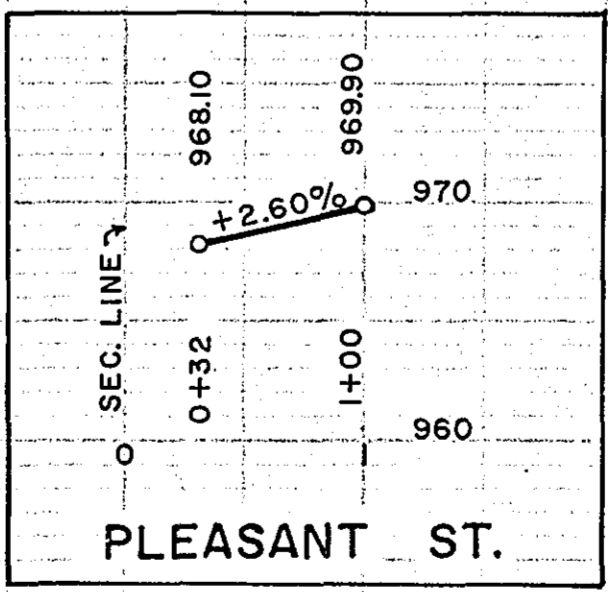
B.M. Top Mont. Larpeigneur Ave. & W.Co. Line Elev. 916.10
B.M. Top Hyd. N.W. Cor. Malvern St. & Larpeigneur Ave. Elev. 952.76
B.M. Top Hyd. N.E. Cor. Carl St. & Larpeigneur Ave. Elev. 966.45
B.M. Top Hyd. N.W. Cor. Pleasant St. & Larpeigneur Ave. Elev. 970.52
B.M. Top Iron Mont. At Fulham St. & Larpeigneur Ave. Elev. 974.50



EXCAVATE TO THIS LINE FOR SOIL SELECTION.
QUANTITIES INCLUDED AS CLASS "A" EXCAVATION.

EXCAVATE TO THIS LINE FOR SOIL SELECTION.
QUANTITIES INCLUDED AS CLASS "A" EXCAVATION.
(ALL TAPERS 20:1)

SEE SHEET 6 FOR SUBGRADE AND COMPACTION TREATMENT INSTRUCTIONS.



PLAN

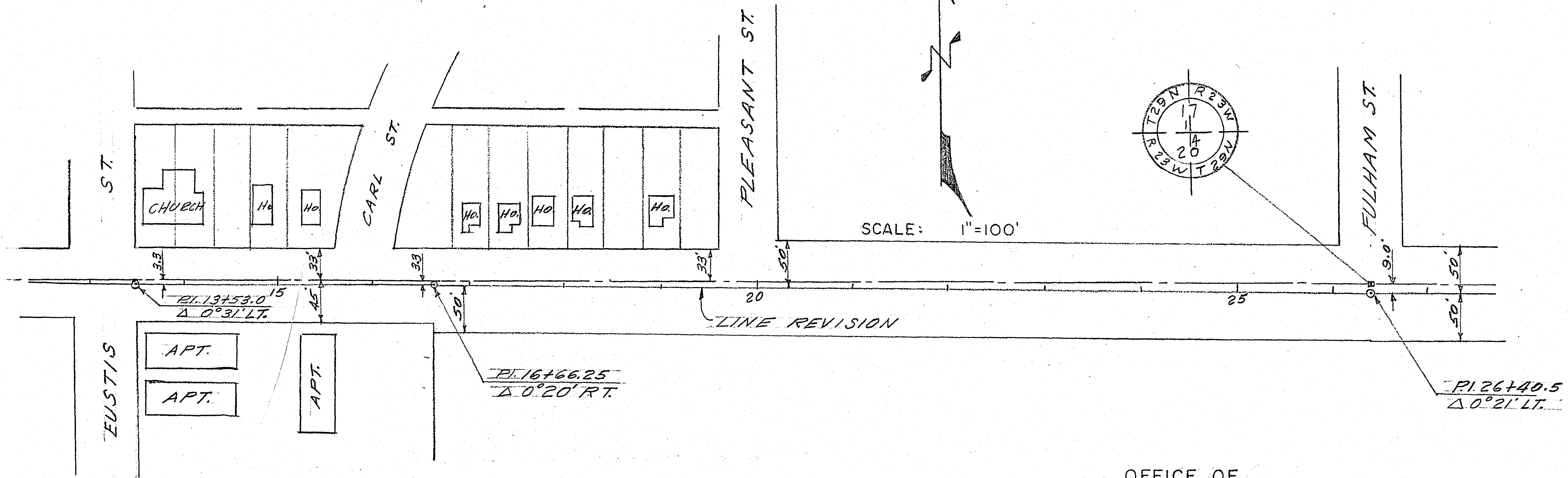
DATE	BY
16 17 18 19 20	
REVISIONS	
1. NOTE BOOK, DRAWING CHECKED, ALIGNED, CHECKED, NO.	

PROFILE

DATE	BY
16 17 18 19 20	
REVISIONS	
1. NOTE BOOK, DRAWING CHECKED, ALIGNED, CHECKED, NO.	

PLATE 11 PLAN-PROFILE (S.A.M.) S.D. STANDARD
MINNAPOLIS & ST. LOUIS, NOV. 1930
R. & E. Co. 250 348-HED

979017: Eustis St Pl. on Sec. Line



OFFICE OF
 RAMSEY COUNTY ENGINEER
 HARRY S. BRONSON

LINE REVISION
LARPENTEUR AVENUE

S.P. 62-630-02 U 083-1 (2)
 FROM EUSTIS ST. TO FULHAM ST.
 STA. 13+53.0 STA. 26+40.5
 SUPPLEMENTAL TO PLAN SHEET NO. 5
 MAY 15, 1960

STA. 30+25 LT. 35' TO RT. 35'
F. & I. 8" X 70' PERFORATED C.M. PIPE DRAIN
STA. 30+25 RT. 35' TO RT. 65'
F. & I. 8" X 30' C.M. PIPE DRAIN

STA. 32+79 ±
F. & I. 18" X 96" S.C.P. ARCH. CULVERT
F. & I. 2 APRONS

STA. 34+86 ENT. LT.
F. & I. 15" X 28' C.M. PIPE CULVERT
F. & I. 2 APRONS

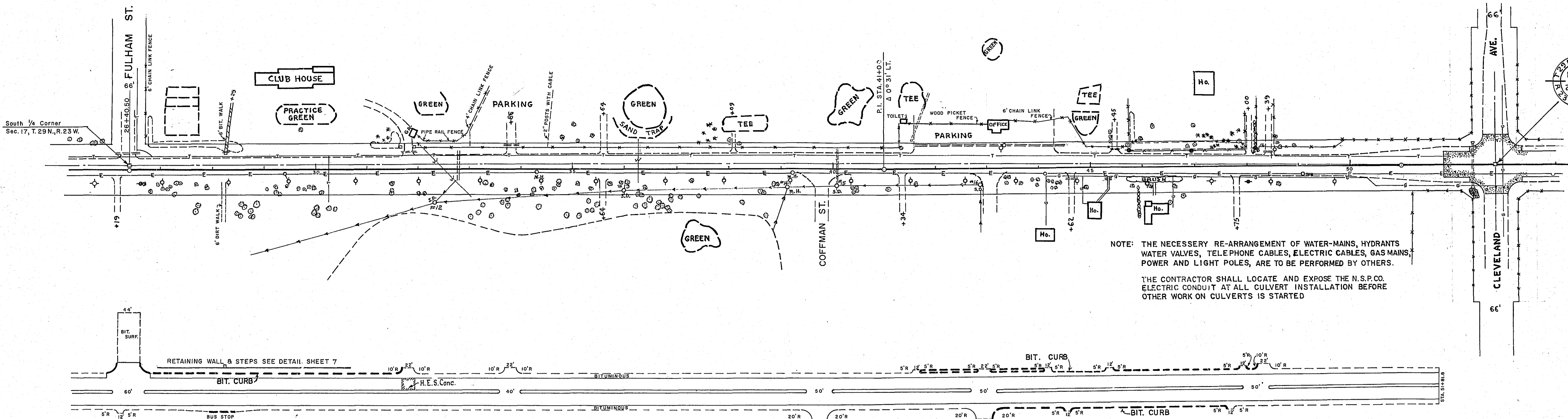
STA. 40+09 ±
F. & I. 18" X 72' S.C.P. CULVERT
F. & I. 1 APRON
STA. 40+09 FROM M.H. TO 41' RT.
F. & I. 12" X 6' C.M.
F. & I. 1 APRON

STA. 41+62 LT. 35' TO STA. 44+50 LT. 35'
INP. 18" X 28' C.M. PIPE AND SURFACE DRAIN
O.K. LEAVE.

STA. 45+15 LT.
CONST. BITUMINOUS SPILLWAY.

REMOVE FLASHER STA. 51+82 ±
RELOCATE PULL BOX
SEE SHEET 8 FOR DETAILS.

PLAN
NOTE: THE NECESSARY RE-ARRANGEMENT OF WATER MAINS, HYDRANTS, TELEPHONE CABLES, ELECTRIC CABLES, GAS MAINS, POWER AND LIGHT POLES, ARE TO BE PERFORMED BY OTHERS.
THE CONTRACTOR SHALL LOCATE AND EXPOSE THE N.S.P.CO. ELECTRIC CONDUIT AT ALL CULVERT INSTALLATION BEFORE OTHER WORK ON CULVERTS IS STARTED.



CONSTRUCTION PLAN

B.M. TOP OF IRON MONT.
SO. 1/4 COR. SEC. 17 T. 29 N., R. 23 W.
ELEV. 974.43

B.M. TOP OF HYD.
LT. OF STA. 32+02
ELEV. 978.35

STA. 31+96 TO STA. 41+33
REMOVE FENCE 950 L.F.
REPLACE FENCE 937 L.F.

STA. 44+89 TO STA. 45+69
REMOVE FENCE 106 L.F.
REPLACE FENCE 80 L.F.

STA. 45+69 TO STA. 50+10
REMOVE FENCE 441 L.F.
REPLACE FENCE 200 L.F.

B.M. TOP OF N.W. COR.
LOWER STEP OF SCHOOL HOUSE
ELEV. 979.69

COMPACTION TREATMENT

STA. 0+00 TO STA. 3+09
EXCAVATE 2.5' BELOW PROFILE GRADE. BACKFILL TO WITHIN 1.0' OF PROFILE GRADE WITH SUITABLE MATERIAL FROM LOCAL AND ADJACENT CUTS OR FROM COUNTY PIT. BACKFILL FROM 1.0' TO 9' BELOW PROFILE GRADE WITH CLASS 5 MATERIAL.

COMPACTION TREATMENT
STA. 38+75 TO STA. 44+50 PLUS TAPERS
EXCAVATE 3.5' BELOW PROFILE GRADE. BACKFILL TO WITHIN 1.5' OF PROFILE GRADE WITH SUITABLE MATERIAL OBTAINED FROM LOCAL AND ADJACENT CUTS. BACKFILL FROM 1.5' TO 10' BELOW PROFILE GRADE WITH CLASS 4 MATERIAL. BACKFILL FROM 1.0' TO 9' BELOW PROFILE GRADE WITH CLASS 5 MATERIAL.

COMPACTION TREATMENT

STA. 9+58 TO STA. 17+10
STA. 22+15 TO STA. 29+85
STA. 36+90 TO STA. 38+55
STA. 44+70 TO STA. 47+10
STA. 49+40 TO STA. 50+00
EXCAVATE 2.5' BELOW PROFILE GRADE. BACKFILL TO WITHIN 1.5' OF PROFILE GRADE WITH SUITABLE MATERIAL OBTAINED FROM LOCAL AND ADJACENT CUTS. BACKFILL FROM 1.5' TO 10' BELOW PROFILE WITH CLASS 4 MATERIAL. BACKFILL FROM 1.0' TO 9' BELOW PROFILE GRADE WITH CLASS 5 MATERIAL.

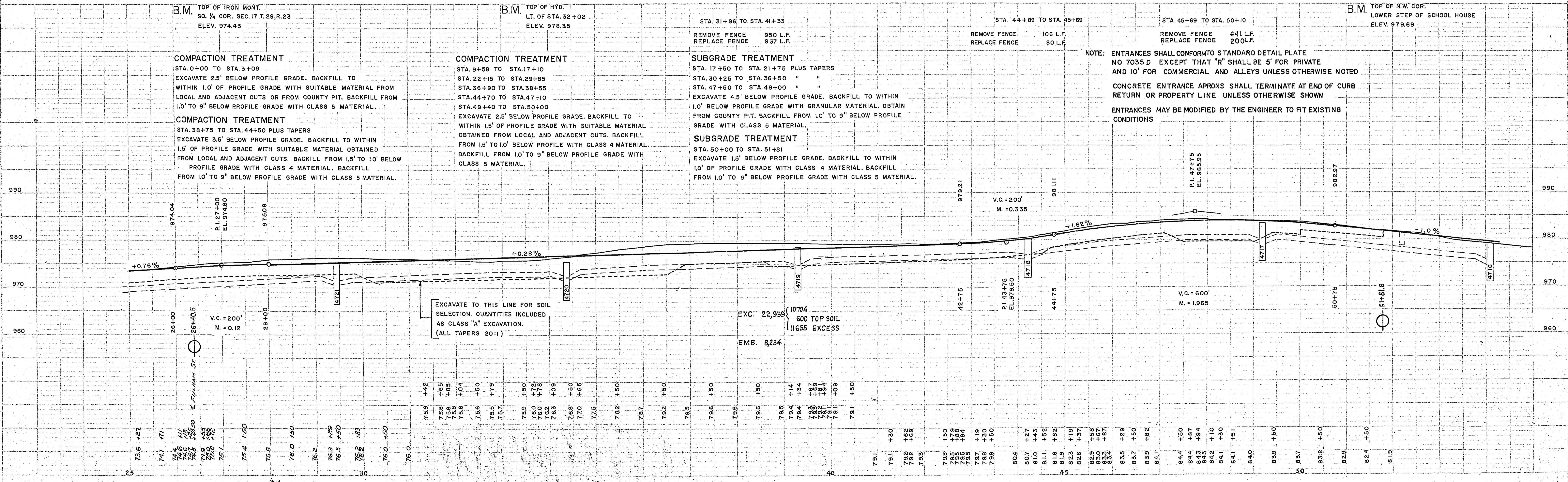
SUBGRADE TREATMENT

STA. 17+50 TO STA. 21+75 PLUS TAPERS
STA. 30+25 TO STA. 36+50 " "
STA. 47+50 TO STA. 49+00 " "
EXCAVATE 4.5' BELOW PROFILE GRADE. BACKFILL TO WITHIN 1.0' BELOW PROFILE GRADE WITH GRANULAR MATERIAL. OBTAIN FROM COUNTY PIT. BACKFILL FROM 1.0' TO 9' BELOW PROFILE GRADE WITH CLASS 5 MATERIAL.

SUBGRADE TREATMENT

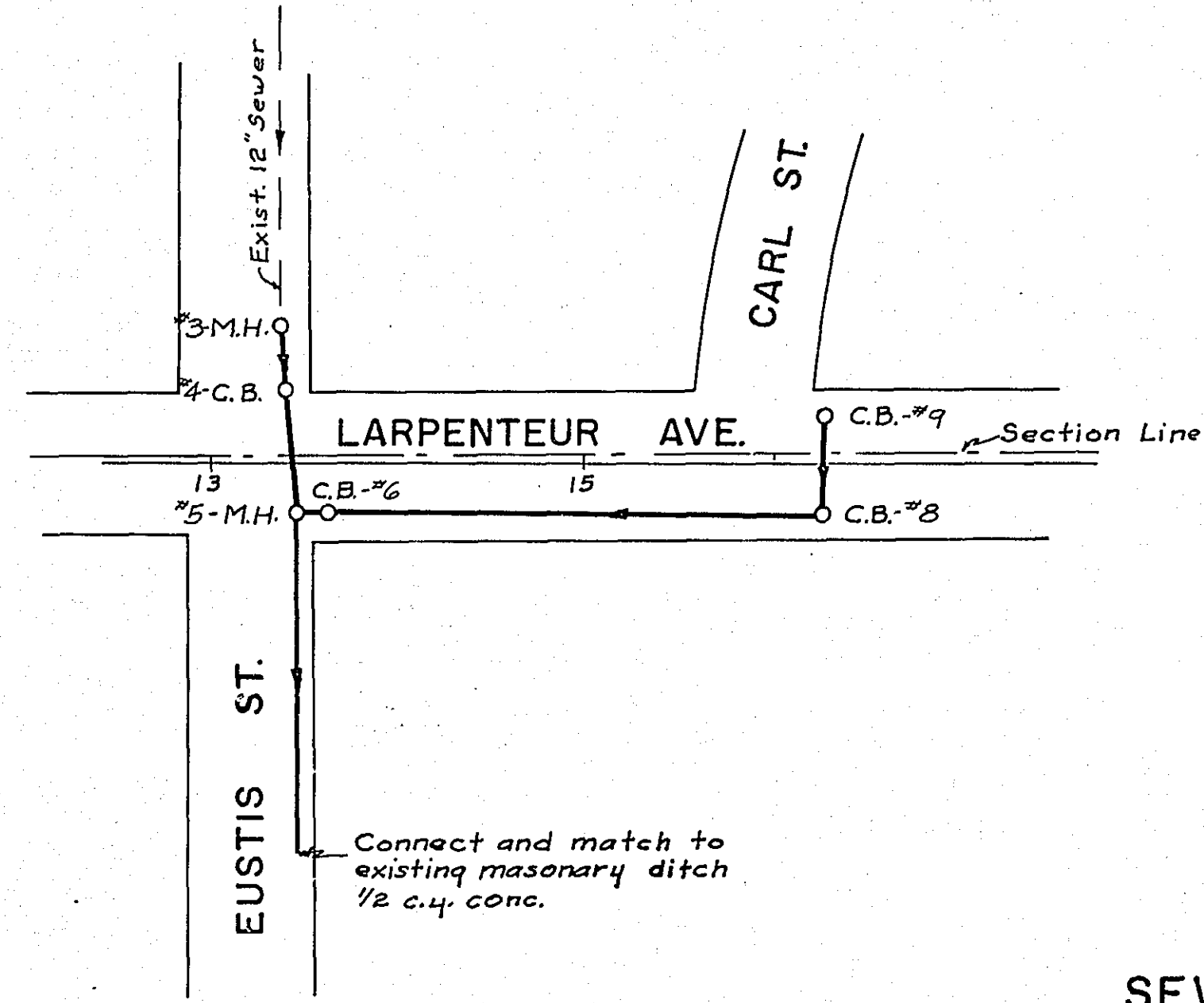
STA. 50+00 TO STA. 51+81
EXCAVATE 1.5' BELOW PROFILE GRADE. BACKFILL TO WITHIN 1.0' OF PROFILE GRADE WITH CLASS 4 MATERIAL. BACKFILL FROM 1.0' TO 9' BELOW PROFILE GRADE WITH CLASS 5 MATERIAL.

NOTE: ENTRANCES SHALL CONFORM TO STANDARD DETAIL PLATE NO 7035D EXCEPT THAT "R" SHALL BE 5' FOR PRIVATE AND 10' FOR COMMERCIAL AND ALLEYS UNLESS OTHERWISE NOTED
CONCRETE ENTRANCE APRONS SHALL TERMINATE AT END OF CURB RETURN OR PROPERTY LINE UNLESS OTHERWISE SHOWN
ENTRANCES MAY BE MODIFIED BY THE ENGINEER TO FIT EXISTING CONDITIONS



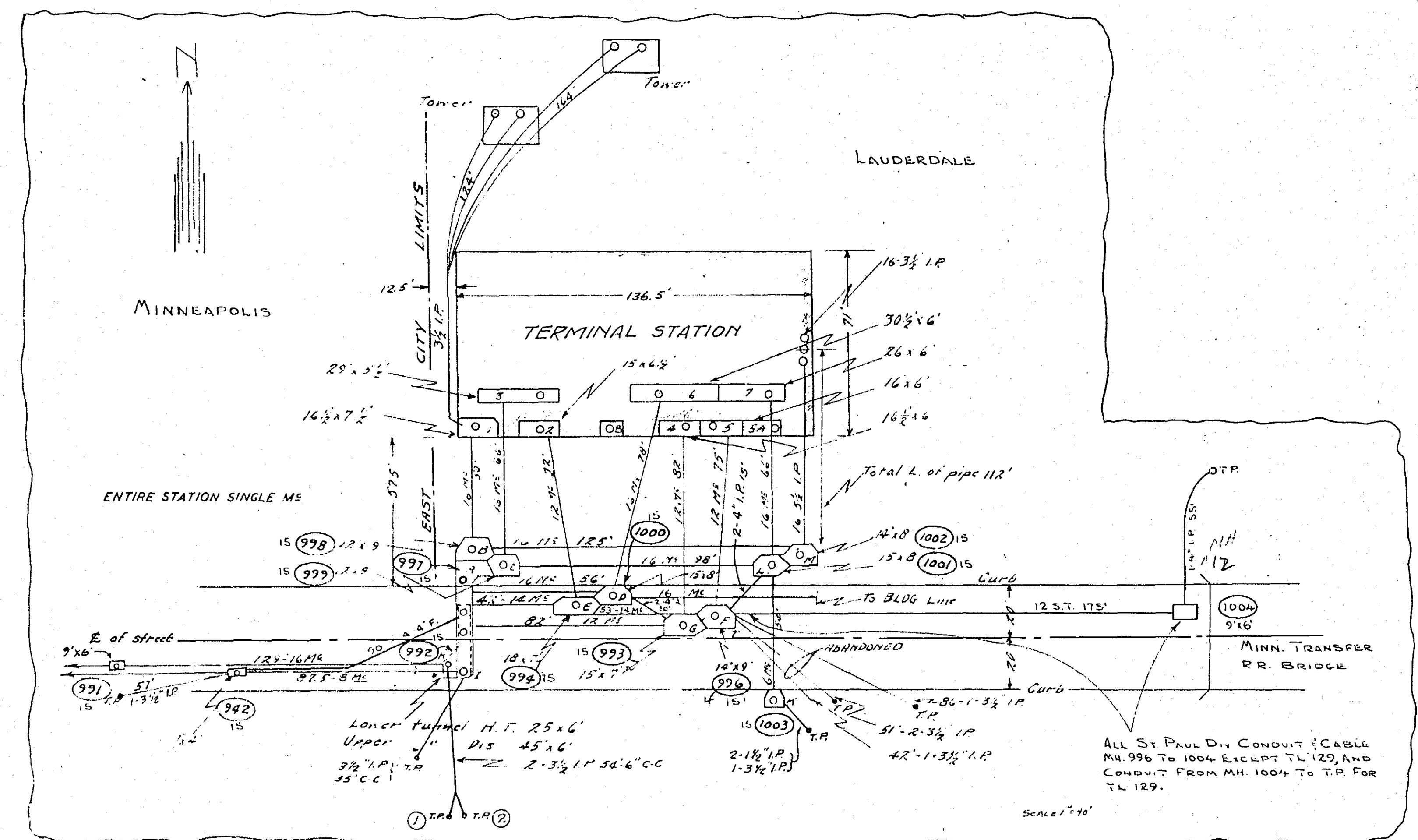
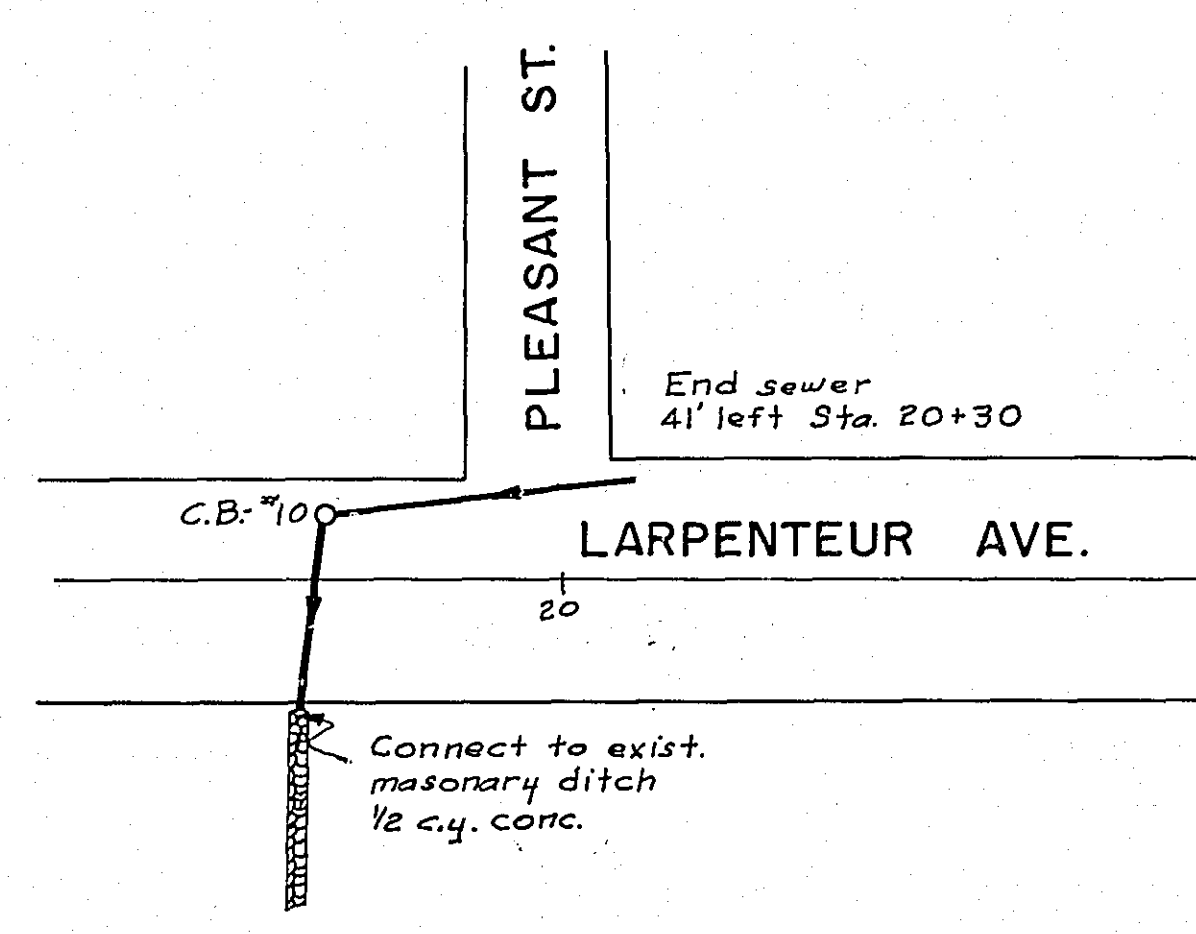
PROFILE
NOTE: THE NECESSARY RE-ARRANGEMENT OF WATER MAINS, HYDRANTS, TELEPHONE CABLES, ELECTRIC CABLES, GAS MAINS, POWER AND LIGHT POLES, ARE TO BE PERFORMED BY OTHERS.
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PLAN
 NOTE BOOK
 NO.



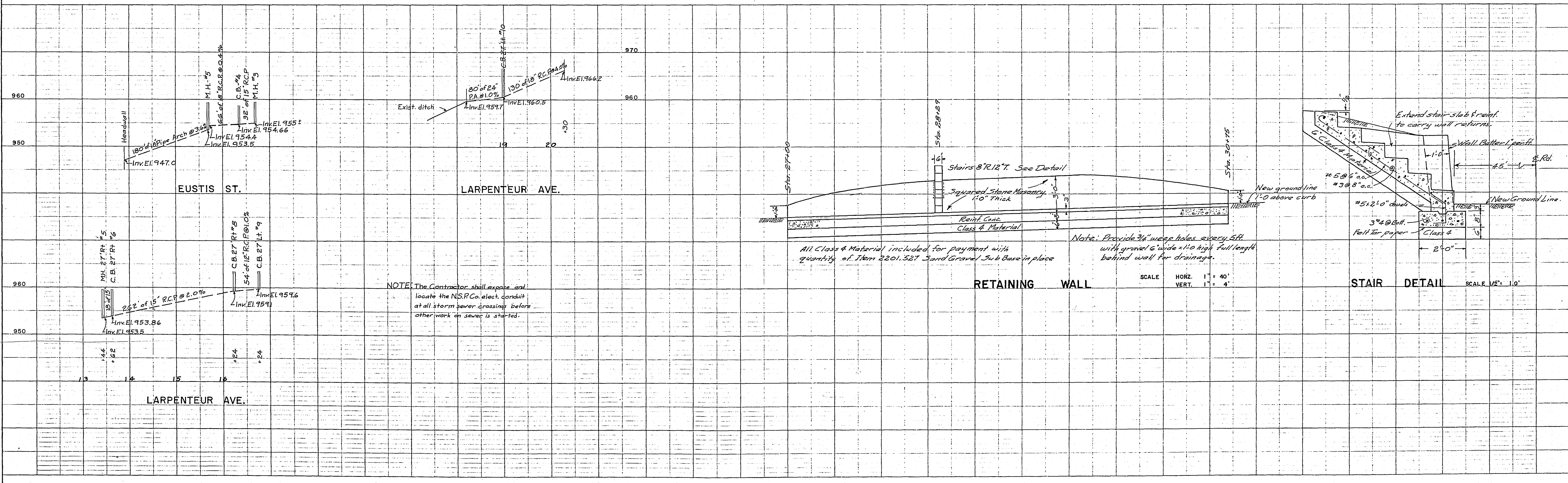
SEWER DETAILS

SCALE: HORIZ. 1" = 100'
 VERT. 1" = 10'



NORTHERN STATES POWER CO. UTILITIES LAYOUT

PROFILE
 NOTE BOOK
 NO.



NOTE: The Contractor shall locate and locate the N.S.P. Co. elect. conduit at all storm sewer crossings before other work on sewer is started.

All Class 4 Material included for payment with quantity of Item 2201.327 Sand Gravel Sub Base in place

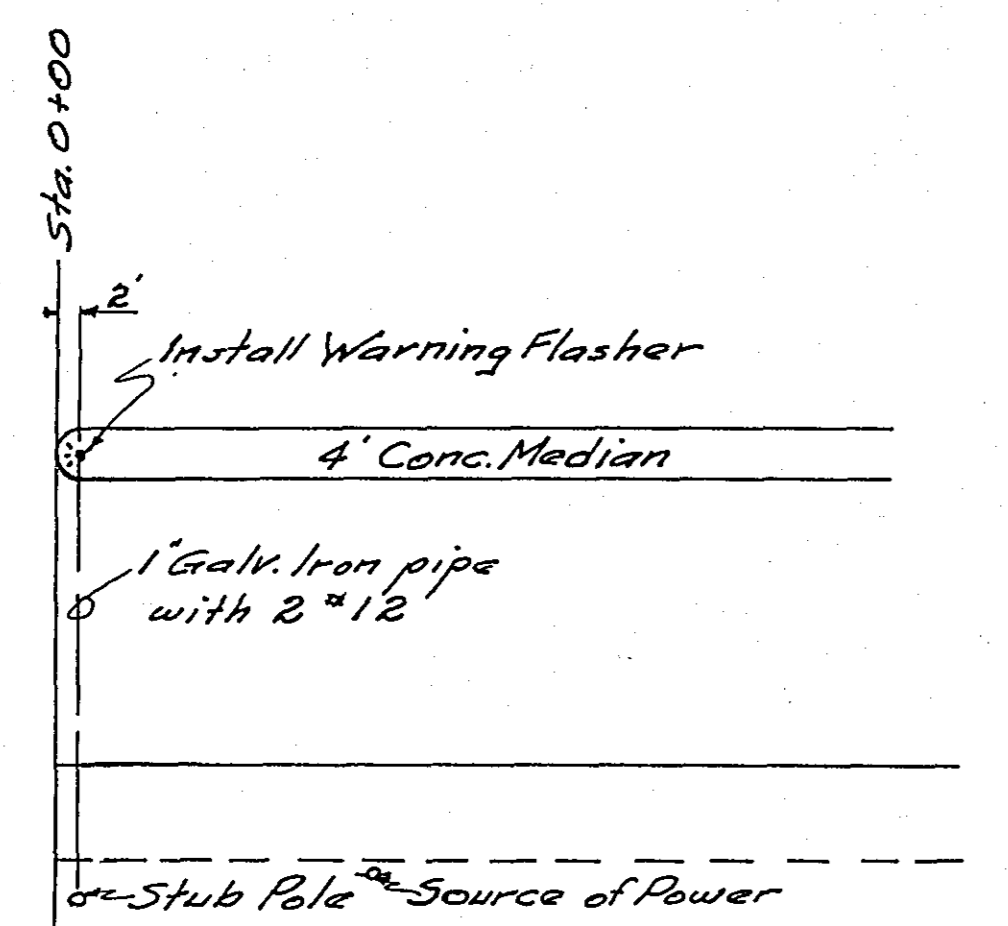
Note: Provide 3" weep holes every 5ft with gravel 6" wide x 12" high full length behind wall for drainage.

RETAINING WALL

STAIR DETAIL

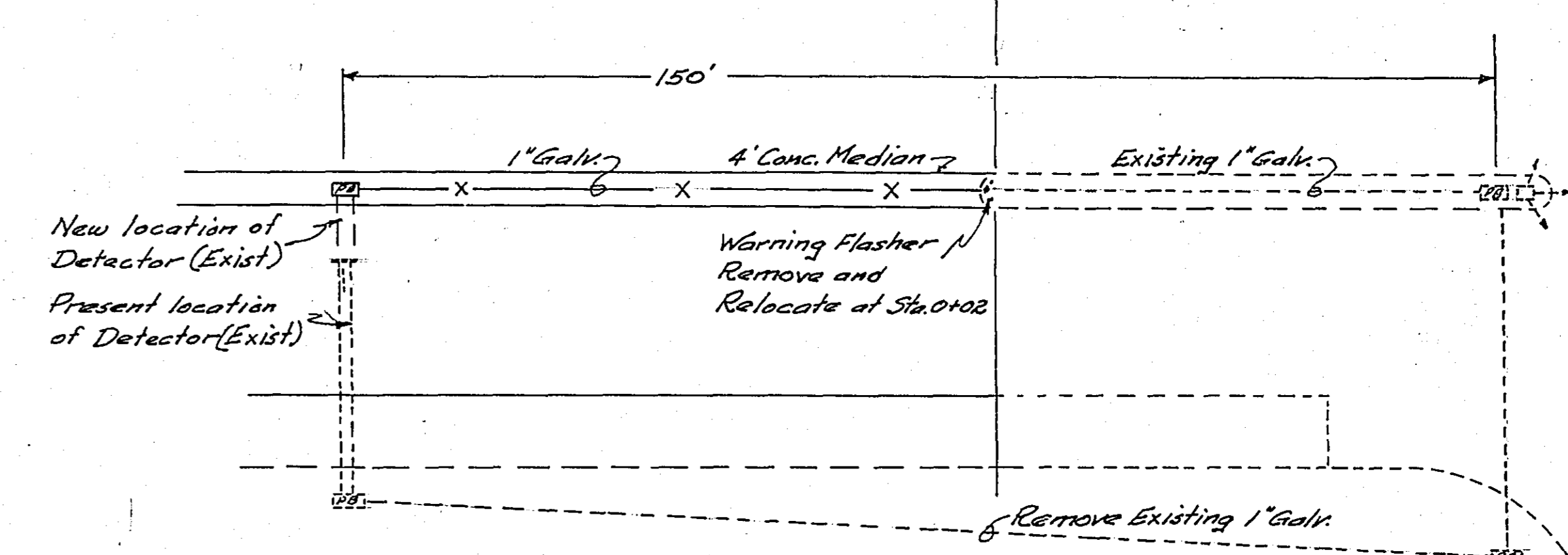
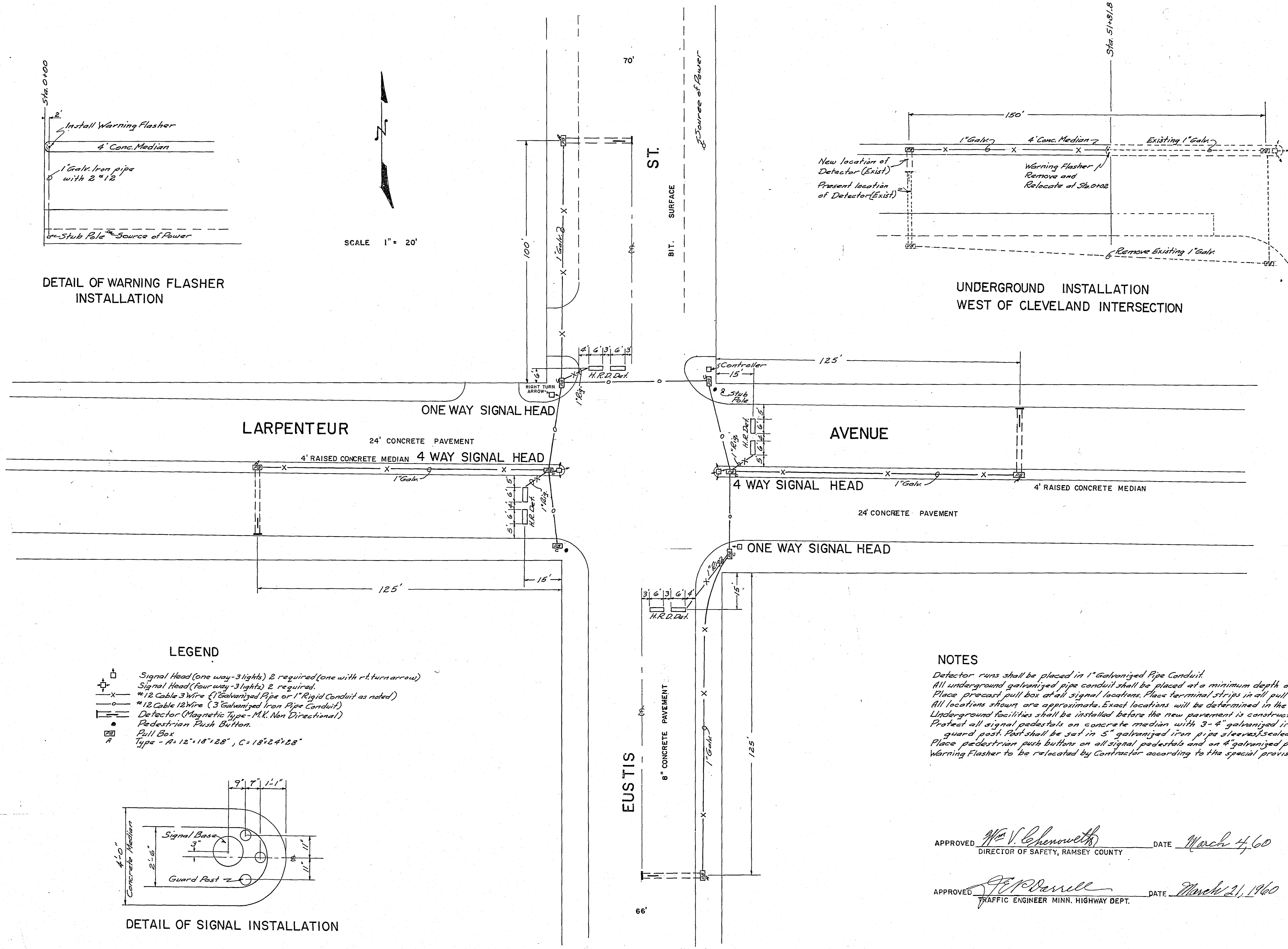
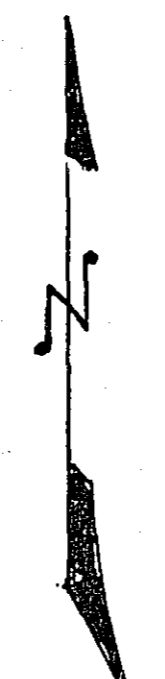
SCALE HORIZ. 1" = 40'
 VERT. 1" = 4'

SCALE 1/2" = 10'



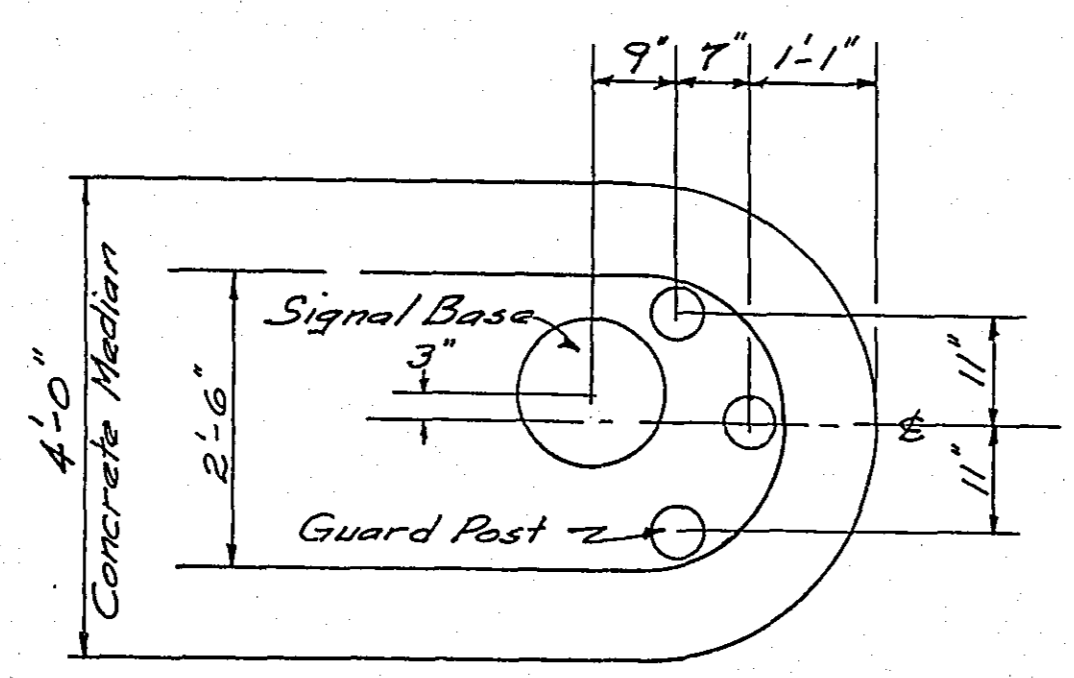
DETAIL OF WARNING FLASHER INSTALLATION

SCALE 1" = 20'



UNDERGROUND INSTALLATION WEST OF CLEVELAND INTERSECTION

- LEGEND**
- Signal Head (one way-3 lights) 2 required (one with rt. turn arrow)
 - Signal Head (four way-3 lights) 2 required.
 - #12 Cable 3 Wire (1 Galvanized Pipe or 1 Rigid Conduit as noted)
 - #12 Cable 12 Wire (3 Galvanized Iron Pipe Conduit)
 - Detector (Magnetic Type - M.K. Non Directional)
 - Pedestrian Push Button.
 - Pull Box
 - Type - A = 12" x 18" x 28", C = 18" x 24" x 28"



DETAIL OF SIGNAL INSTALLATION

NOTES

Detector runs shall be placed in 1" Galvanized Pipe Conduit.
 All underground galvanized pipe conduit shall be placed at a minimum depth of 18"
 Place precast pull box at all signal locations. Place terminal strips in all pull boxes.
 All locations shown are approximate. Exact locations will be determined in the field.
 Underground facilities shall be installed before the new pavement is constructed.
 Protect all signal pedestals on concrete median with 3-4 galvanized iron pipe (7 1/2" with 4" exp.)
 guard post. Post shall be set in 5" galvanized iron pipe sleeves sealed with sulfur.
 Place pedestrian push buttons on all signal pedestals and on 4 galvanized post at open corners.
 Warning Flasher to be relocated by Contractor according to the special provisions.

APPROVED *W. V. Chenoweth* DATE March 4, 60
 DIRECTOR OF SAFETY, RAMSEY COUNTY

APPROVED *J. P. Danell* DATE March 21, 1960
 TRAFFIC ENGINEER MINN. HIGHWAY DEPT.