MINNESOTA DEPARTMENT OF TRANSPORTATION

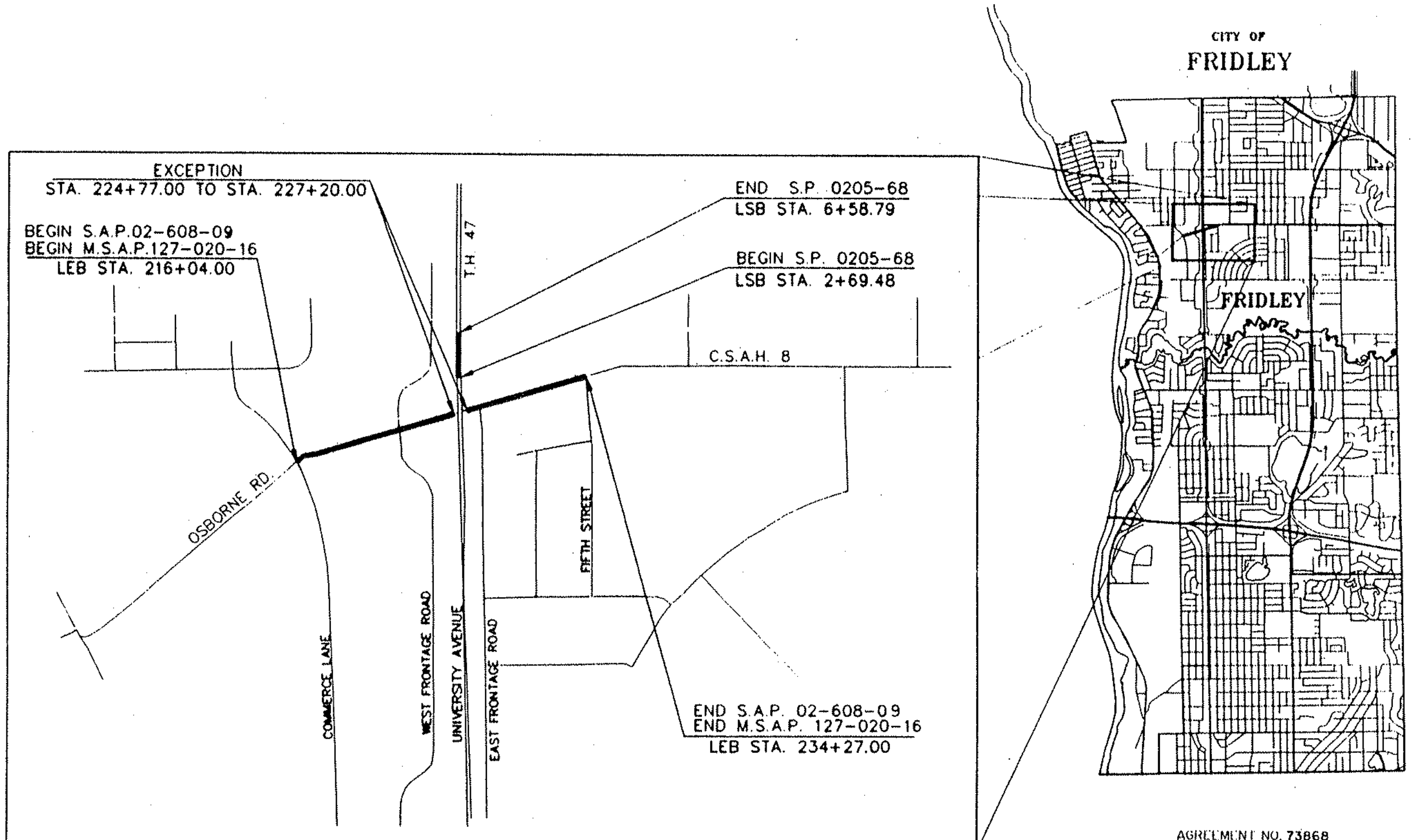
ANOKA COUNTY

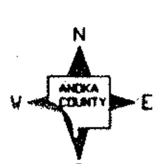
CONSTRUCTION PLAN FOR MILLING, BITUMINOUS OVERLAY, TURN LANE CONSTRUCTION, AND SIGNAL SYSTEM REVISION

LOCATED ON C.S.A.H.8 FROM COMMERCE LANE TO FIFTH STREET, IN THE CITY OF FRIDLEY (GEOGRAPHIC DESCRIPTION)
LOCATED ON T.H. 47 FROM 269' N. OF C.S.A.H. 8 TO 615' N. OF C.S.A.H. 8 E.B., IN THE CITY OF FRIDLEY (GEOGRAPHIC DESCRIPTION)

STATE AID PROJ. NO. 02-608-09				
GROSS LENGTH	1823.00	FEET	0.345	MILES
BRIDGES-LENGTH		FEET		MILES
EXCEPTIONS-LENGTH	243.00	FEET	0.046	MILES
NET LENGTH	1580.00	FEET	0.299	MILES

STATE PROJ. NO. 0205-68				
GROSS LENGTH	389.31	FEET	0.074	MILES
BRIDGES-LENGTH		FEET		MILES
EXCEPTIONS-LENGTH		FEET		MILES
NET LENGTH	389.31	FEET	0.074	MILES





AGREEMENT NO. 73868
ANOKA COUNTY
S.P. 0205-68 (T.H.47=156)
STATE FUNDS
METRO DIVISION

PLAN SYMBOLS

COUNTY LINE
TOWNSHIP OR RANGE LINE
SECTION LINE
QUARTER LINE
SIXTEENTH LINE
RIGHT OF WAY LINE
SLOPE EASEMENT
PRESENT RIGHT OF WAY
PROPERTY LINE
CORPORATE OR CITY LIMITS
RETAINING WALL
RAILROAD
RAILROAD RIGHT OF WAY
RIVER OR CREEK
DRAINAGE DITCH
CULVERT
DROP INLET
GAURD RAIL
BARBED WIRE FENCE
WOVEN WIRE FENCE
CHAIN LINK FENCE
WOOD FENCE
STONE WALL OR FENCE
HEDGE
LOWLAND
TIMBER / ORCHARD / BRUSH / NURSERY
CATTLE GAURD
OVERPASS (Highway Over)
UNDERPASS (Highway Under)
BRIDGE
BUILDING (One Story Frame) F-FRAME C-CONCRETE S-STONE T-TILE B-BRICK ST-STUCCO
RAILROAD CROSSING BELL
RAILROAD CROSSING GATE
MANHOLE
CATCH BASIN
FIRE HYDRANT
CAST IRON MONUMENT
IRON PIN
GRAVEL PIT
SAND PIT
BORROW PIT
ROCK QUARRY

UTILITY SYMBOLS

POWER POLE LINE
TELEPHONE OR TELEGRAPH POLE LINE
JOINT TELEPHONE & POWER ON POWER POLES
ON TELEPHONE POLES
ANCHOR
STEEL TOWER
STREET LIGHT
PEDESTAL (Cable Terminal)
GAS MAIN
WATERMAIN
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

SCALES

PLAN
PROFILE HORIZONTAL
VERTICAL
X-SECTIONS HORIZONTAL
VERTICAL
INDEX MAP

MINN. PROJ. NO.
MINN. PROJ. NO.

GOVERNING SPECIFICATIONS

THE 1988 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" AS AMENDED BY THE "SUPPLEMENTAL SPECIFICATIONS" DATED MAY 2,1994 SHALL GOVERN ALL TRAFFIC CONTROL DEVICES AND SIGNING SHALL CONFORM TO THE MMUTCD, INCLUDING APPENDIX B, DATED NOVEMBER 1992

INDEX

THIS PLAN CONTAINS 11 SHEETS

DESIGN DESIGNATION

ΣN18$_{20}$	2,652,639
R VALUE	60
ADT (1995)=	14,871
Proj. ADT (2015)=	25,281
Proj. HCADT (2015)=	1,896
Soil Factor	NA
10 TON DESIGN	
Shoulder Width	NA

Functional Classification ARTERIAL-HIGH DENSITY
No. of Traffic Lanes 4 No. of Parking Lanes 0
Design Speed 35 MPH
Based on Stopping Sight Distance
Height of eye 3.5' Height of object 0.5'
Design Speed not achieved at: NA
STA TO STA. MPH
STA TO STA. MPH
STA. TO STA. 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

DATE 7/19/95 REG. NO. 20235 ENGR. [signature] DESIGN ENGINEER
DESIGN SQUAD B. HOLM

Recommended for Approval [signature] TRAFFIC SECTION ....19..
Recommended for Approval [signature] CONSTRUCTION ENGINEER 7/ ..19..
Approved 7/19 1995 [signature] ANOKA COUNTY ENGINEER .19.
Approved 7/ 19 [signature] CITY OF FRIDLEY ENGINEER
Recommended for Approval [signature] FOR METRO DIVISION 8/16 1995
Recommended for Approval ....19..
Recommended for Approval [signature] FOR STATE TRAFFIC ENGINEER 8/16 1995
Recommended for Approval [signature] STATE LETTING ENGINEER 9-1 1995
Right of Way Approval [signature] STATE RIGHT OF WAY ENGINEER 9-20 19.95
Approved 9-22 1995 [signature] STATE DESIGN ENGINEER
Recommended for Approval [signature] METRO-ASST. DIVISION ENGINEER-STATE AID 8/16 1995
Recommended for Approval ....19..
Approved [signature] FOR STATE AID ENGINEER 9-1 19.95

STATE AID PROJ. NO. 02-608-09 127-020-16
STATE PROJ. NO. 0205-68 (T.H.47=156) SHEET NO. 1 OF 11 SHEETS

Fed. Project No. _____

STATEMENT OF ESTIMATED QUANTITIES

CHART NO.	NOTE	ITEM NO.	ITEM	UNIT	TOTAL QUANTITIES		ANOKA COUNTY SAP 02-608-09		ST. OF MINN. S.P. 0205-68		CITY OF FRIDLEY MSAP. 127-020-16	
					ESTIMATED	FINAL	ESTIMATED	FINAL	ESTIMATED	FINAL	ESTIMATED	FINAL ⑤
		2021.501	MOBILIZATION	LUMP SUM	1		1					
A		2104.501	REMOVE CURB & GUTTER	LIN FT	384		280				104	
B		2104.505	REMOVE CONCRETE PAVEMENT	SQ YD	284		284					
C		2104.505	REMOVE BITUMINOUS PAVEMENT	SQ YD	238		180		58			
D		2104.511	SAWING CONCRETE PAVEMENT	LIN FT	9		9					
E		2104.513	SAWING BITUMINOUS PAVEMENT	LIN FT	477		75		402			
		2104.523	SALVAGE CASTING	EACH	1		1					
		2105.501	COMMON EXCAVATION	CU YD	813(P)		467(P)		346(P)			
	①	2130.501	WATER	M-GAL	5		5					
		2211.503	AGGREGATE BASE (CV), CL 5A	CU YD	133(P)		69		64			
F		2232.501	MILL BITUMINOUS SURFACE	SQ YD	11048		11048					
D	②⑤	0331.601	2" THICK BITUMINOUS WEARING COURSE	SQ YD	708		34				674	
		2340.508	TYPE 47 WEARING COURSE MIXTURE	TON	1303		1260		43			
		2340.510	TYPE 47 BINDER COURSE MIXTURE	TON	91		46		45			
		2340.514	TYPE 31 BASE COURSE MIXTURE	TON	143		81		62			
		2357.502	BITUMINOUS MATERIAL FOR TACK COAT	GAL	647		594		53			
G		0504.602	RELOCATE HYDRANT & VALVE	EACH	1						1	
		2506.501	CONSTRUCT DRAINAGE STRUCTURE, DESIGN G	LIN FT	2.5		2.5					
I		2506.516	CASTING ASSEMBLY	EACH	2		2					
		2506.521	INSTALL CASTING	EACH	1		1					
H	③	0506.602	RECONSTRUCT MANHOLE	EACH	1						1	
J		2521.501	4" CONCRETE WALK	SQ FT	225		225					
K	④	2531.501	CONCRETE CURB & GUTTER DESIGN B618	LIN FT	114		10				104	
K		2531.501	CONCRETE CURB & GUTTER DESIGN D418	LIN FT	263		263					
L		2531.503	CONCRETE MEDIAN	SQ YD	173		173					
M		0531.602	PEDESTRIAN CURB RAMP	EACH	1		1					
		0565.601	REVISED SIGNAL SYSTEM	LUMP SUM	1		0.5		0.5			
		2575.501	SEEDING	ACRE	0.1				0.1			
		2575.502	SEED MIXTURE NO. 700	POUND	4				4			
N		2575.505	SODDING - TYPE LAWN	SQ YD	338						338	
		2575.511	MULCH MATERIAL - TYPE 1	TON	0.2				0.2			
		2575.519	DISK ANCHORING	ACRE	0.1				0.1			
		2575.532	COMM FERTILIZER - ANALYSIS 10-10-10	POUND	50				50			
		2580.501	TEMPORARY LANE MARKING	RD STA	16		16					

NOTES:

① FOR DUST CONTROL AS DIRECTED BY THE ENGINEER.
② FOR BITUMINOUS PATH CONSTRUCTION.
③ SANITARY SEWER MANHOLE.
④ MODIFIED FOR PEDESTRIAN RAMP CONSTRUCTION.
⑤ SIDEWALK ITEMS ARE LIMITED TO 5\8THS STATE AID PARTICIPATION

BASIS OF PLANNED QUANTITIES

2340	TYPE 47 PLANT MIXED WEARING COURSE AND BINDER COURSE BITUMINOUS MIXTURE 110 LBS./SQ.YD. PER 1" THICKNESS
2340	TYPE 31 PLANT MIXED BASE BITUMINOUS MIXTURE 110 LBS./SQ.YD. PER 1" THICKNESS
2357	BITUMINOUS MATERIAL FOR TACK 0.05 GALLONS PER SQ.YD. PER LIFT APPLIED
2575	MULCH MATERIAL TYPE 1, 2 TONS PER ACRE
2575	COMMERCIAL FERTILIZER, ANALYSIS 10-10-10 500 LBS./ACRE ON ALL SEED AND SOD AREAS
2575	ROADSIDE SEEDING BASED ON HORIZONTAL MEASUREMENT +10% SEED MIXTURE NO. 700, 35 LBS. PER ACRE.

STANDARD PLATES

THESE STANDARD PLATES AS APPROVED BY THE FHWA SHALL APPLY.

PLATE NO.	DESCRIPTION
4005 K	MANHOLE OR CATCH BASIN (ECCENTRIC CONE)
4006 K	MANHOLE OR CATCH BASIN (DESIGN G AND DESIGN H)
4010 G	CONCRETE SHORT CONE & ADJUSTING RING
4011 E	PRECAST CONCRETE BASE
4101 C	RING CASTING FOR MANHOLE OR CATCH BASIN
4110 E	COVER CASTING FOR MANHOLE
4132 E	CATCH BASIN FRAME CASTING (805)
4154 B	GRATE CASTING FOR CATCH BASIN (816)
4180 H	MANHOLE OR CATCH BASIN STEP
7036 D	PEDESTRIAN CURB RAMP (FOR THE HANDICAPPED)
7100 G	CONCRETE CURB & GUTTER (DES. B)
7102 I	CONCRETE CURB & GUTTER (DES. D)
7111 H	INSTALLATION & REINFORCEMENT OF CATCH BASIN CASTINGS
8000 I	STANDARD BARRICADES

SEE TRAFFIC SIGNAL MODIFICATION PLAN SHEETS FOR ADDITIONAL PLATE REFERENCES

FILE NAME: C:\PLOTS\0268808\CHE6808.DWG MM. (07-17-95)

REVISIONS

DATE	BY	DATE	BY

STATEMENT OF ESTIMATED QUANTITIES

CERTIFIED BY Douglas M. Fischer P.E. REG NO. 20235 7/17 19 95

Fed. Project No. _____

CURB & GUTTER REMOVAL (A)

STATION	LOCATION	DESCRIPTION	LIN.FT.
222+46 - 224+94	14'-50'RT LEB	RT. TURN LN.	270
222+10	32'RT LEB	DROP CURB FOR PED	10
216+50	80'LT LEB	DROP CURB FOR PED	13
217+85	62'LT LEB	DROP CURB FOR PED	13
219+05	70'LT LEB	DROP CURB FOR PED	13
220+69	71'LT LEB	DROP CURB FOR PED	13
220+93	71'LT LEB	DROP CURB FOR PED	13
222+30	71'LT LEB	DROP CRUB FOR PED	13
222+32	71'LT LEB	DROP CURB FOR PED	13
		TOTAL	384

CONCRETE REMOVAL (B)

STATION	LOCATION	DESCRIPTION	S.Y.
221+62 - 222+09	13'-26'RT LEB	S.W.	40
222+54 - 222+98	11'-26'RT LEB	S.W.	27
222+90 - 223+37	13'-30'RT LEB	DRIVE	67
223+30 - 223+99	21'-26'RT LEB	S.W.	37
223+91 - 224+37	13'-31'RT LEB	DRIVE	69
224+29 - 225+14	20'-25'RT LEB	S.W.	44
		TOTAL	284

BITUMINOUS REMOVAL (C)

STATION	LOCATION	DESCRIPTION	S.Y.
222+66 - 222+98	11'-20'RT LEB		18
223+30 - 223+98	11'-21'RT LEB		55
224+32 - 225+39	11'-45'RT LEB		107
2+69 - 3+39	12'-24'RT LSB		58
		TOTAL	238

SAWING CONCRETE PAVEMENT (D)

STATION	LOCATION	DESCRIPTION	LIN.FT.
221+62	23' RT LEB	S.W.	5
228+96	13' LT LEB	MEDIAN	4
		TOTAL	9

SAWING BITUMINOUS PAVEMENT (E)

STATION	LOCATION	DESCRIPTION	LIN.FT.
224+94 - 225+35	12'-42'RT LEB		75
2+69 - 6+59	12'-24'RT LSB		402
		TOTAL	477

MILL BITUMINOUS SURFACE (F)

STATION	LOCATION	DESCRIPTION	S.Y.
216+04 - 224+80	LT/RT LEB	WEST OF T.H. 47	6326
227+30 - 234+27	LT/RT LEB	EAST OF T.H. 47	4722
		TOTAL	11048

RELOCATE HYDRANTS (G)

LOCATION		DESCRIPTION	RELOCATE TO	
STATION	LT/RT		STATION	LT/RT
223+92	19.8'RT LEB		223+92	28.0'RT LEB
TOTAL	1			

MODIFY SANITARY SEWER (H)

STATION	LOCATION	DESCRIPTION	EACH
230+97	13'LT LEB	REPLACE CONCENTRIC CONE W/ECCENTRIC CONE	1
		TOTAL	1

CASTING ASSEMBLIES (I)

ASSEMBLY	ITEM	CASTING DETAIL	QUANTITY
A	FRAME	NO. 700-7	1
	COVER	NO. 716	
B	FRAME	NO. 805	1
	GRATE	NO. 816	

CONCRETE WALK (J)

STATION	LOCATION	DESCRIPTION	S.F.
221+62 - 222+07	13'-35'RT LEB	S.W.	225
		TOTAL	225

CURB & GUTTER (K)

STATION	LOCATION	DESCRIPTION	LIN.FT.	
			D418	B618
222+46 - 224+97	25'-55'RT LEB	RT. TURN LN.	263	
222+10	32'RT LEB	DROP CURB FOR PED		10
215+50	80'LT LEB	DROP CURB FOR PED		13
217+85	62'LT LEB	DROP CURB FOR PED		13
219+05	70'LT LEB	DROP CURB FOR PED		13
220+69	71'LT LEB	DROP CURB FOR PED		13
220+93	71'LT LEB	DROP CURB FOR PED		13
222+30	71'LT LEB	DROP CRUB FOR PED		13
222+32	71'LT LEB	DROP CURB FOR PED		13
		TOTAL	263	114

CONCRETE MEDIAN (L)

STATION	LOCATION	DESCRIPTION	S.Y.
228+96 - 231+11	13'-25'LT LEB		173
		TOTAL	173

PEDESTRIAN CURB RAMP (M)

STATION	LOCATION	DESCRIPTION	EACH
222+10	32'RT LEB		1
		TOTAL	1

SODDING (N)

STATION	LOCATION	S.Y.
216+49 - 217+85	70'-72'LT LEB	66
218+15 - 218+82	54'-80'LT LEB	28
219+08 - 220+70	59'-80'LT LEB	72
220+94 - 222+33	60'-81'LT LEB	61
222+92 - 225+45	61'-80'LT LEB	111
	TOTAL	338

2" THICK BITUMINOUS WEAR COURSE (O)

STATION	LOCATION	DESCRIPTION	S.Y.
222+98 - 223+30	25'-30'RT LEB	INPLACE ENT.	16
223+99 - 224+27	25'-31'RT LEB	INPLACE ENT.	18
216+49 - 217+85	80'-66'LT LEB	BIKEWAY	121
218+15 - 218+82	64'-70'LT LEB	BIKEWAY	60
219+08 - 220+70	69'-70'LT LEB	BIKEWAY	144
220+94 - 222+33	70'-71'LT LEB	BIKEWAY	124
222+92 - 225+45	71'-70'LT LEB	BIKEWAY	225
		TOTAL	708

708
- 34
674
+ 16
690

FILE NAME: C:\PW\0205068\CH2S0868.DWG Rev. 07-17-95

DATE	BY	REVISIONS	DATE	BY

TABULATION CHARTS

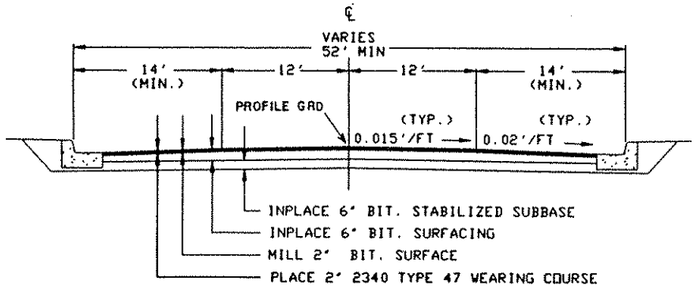
CERTIFIED BY Douglas M Fischer P.E. REG NO. 20235 7/17 19 95

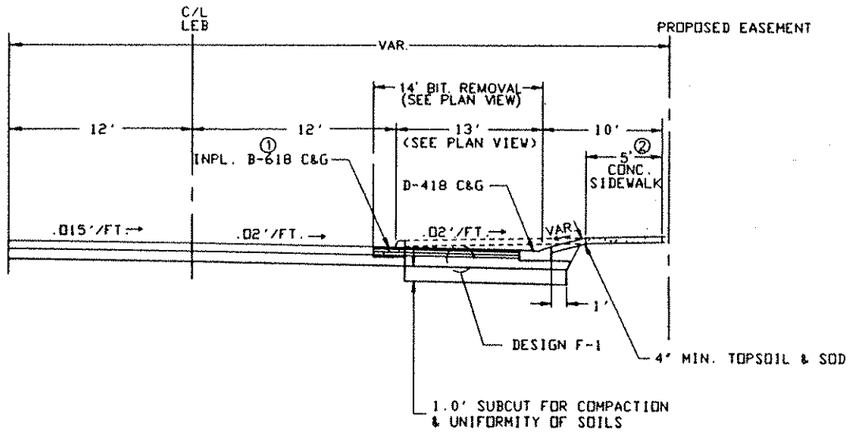
S.P. 0205-68 S.A.P. 02-608-09 MSAP 127-020-16 Sheet No. 3 of 11 Sheets

Fed. Project No. _____

S.A.P. 02-608-09 (CSAH 8)

MILLING AND RESURFACING TYPICAL SECTION



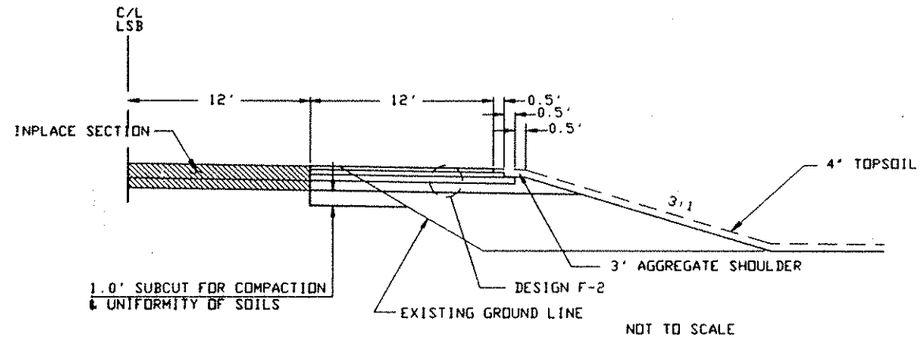


① REMOVE AND DISPOSE OF INPLACE CONCRETE CURB AND GUTTER.
② PROPOSED 4" WALK AND 8" DRIVE BY OTHERS

S.P. 0205-68 (T.H. 47)

LEFT TURN LANE BASE & SURFACING SECTION

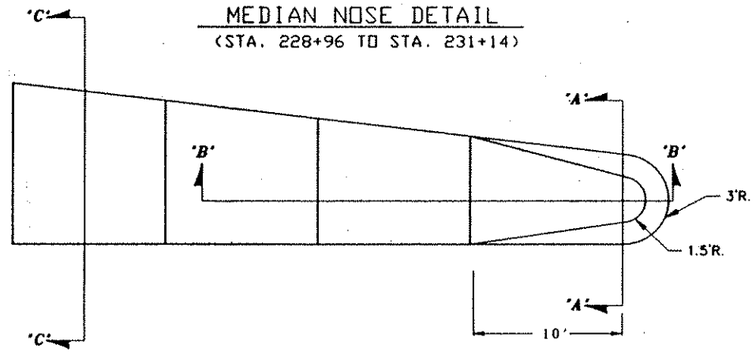
(STA. 2+69 TO STA. 6+15)



NOT TO SCALE

MEDIAN NOSE DETAIL

(STA. 228+96 TO STA. 231+14)



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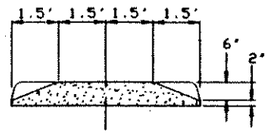

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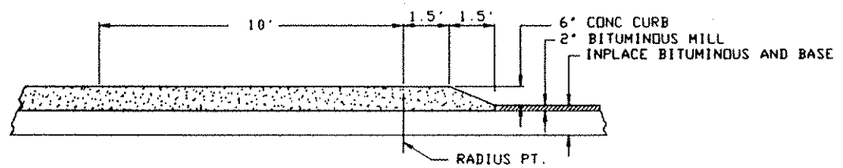

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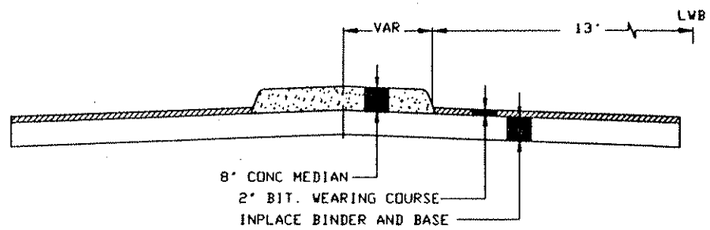

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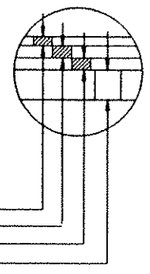
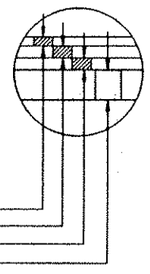


2" TYPE 47 WEAR (47WEA50070X)
2" TYPE 47 BINDER (47BIB50070X)
3 1/2" TYPE 31 (31BBB50000Y)
5" AGGREGATE BASE CLASS 5

DESIGN F-2



1 1/2" TYPE 47 WEAR (47WEA50070X)
1 1/2" TYPE 47 BINDER (47BIB50070X)
2" TYPE 31 (31BBB50000Y)
4" AGGREGATE BASE CLASS 5

NOTE:
NOT TO SCALE

TYPICAL SECTIONS

FILE NAME: C:\SP\0205-68\CH2S-0808.DWG Rev. (07-17-95)

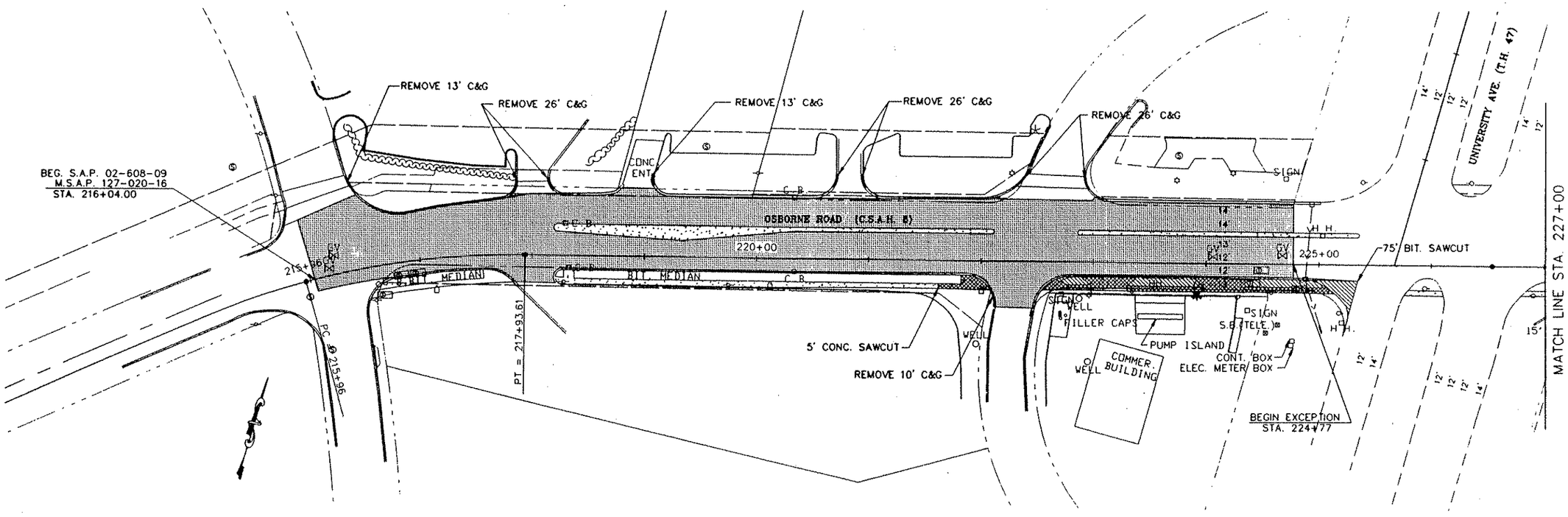
DATE BY DATE 5

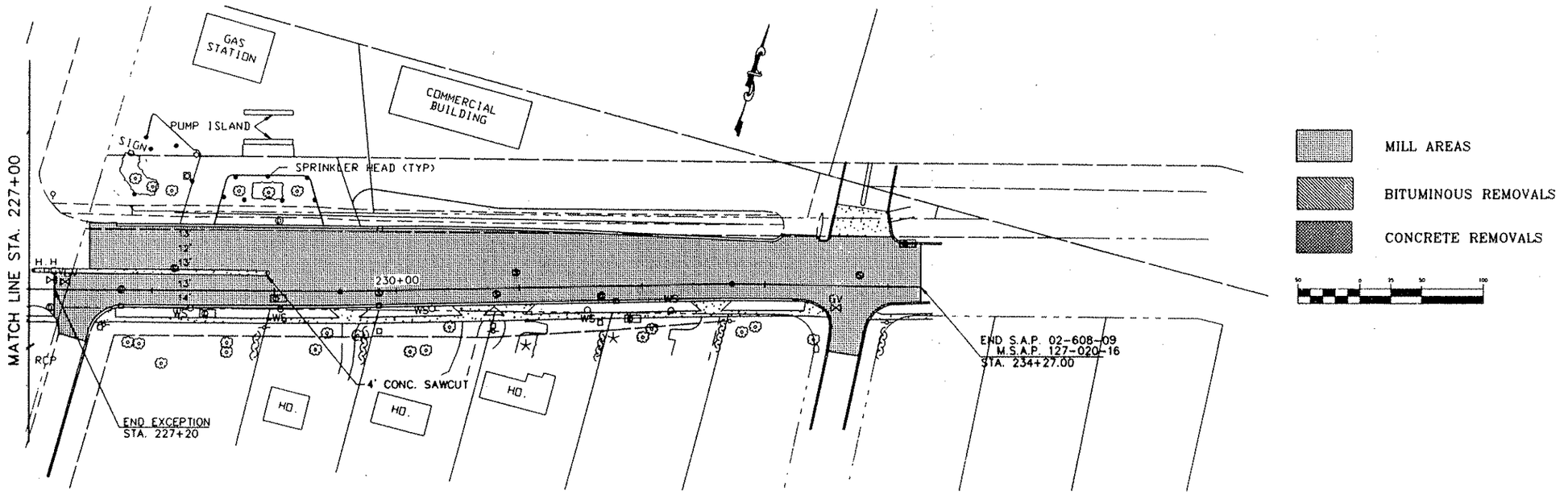
CERTIFIED BY _____ P.E. REG NO. 20235 7/11 19 95

S.P. 0205-68 S.A.P. 02-608-09 MSAP 127-020-16

Sheet No. 4 of 11 Sheets

Fed. Project No. _____





REMOVALS
CSAH 8 LEB
STA 216+04 TO 234+27

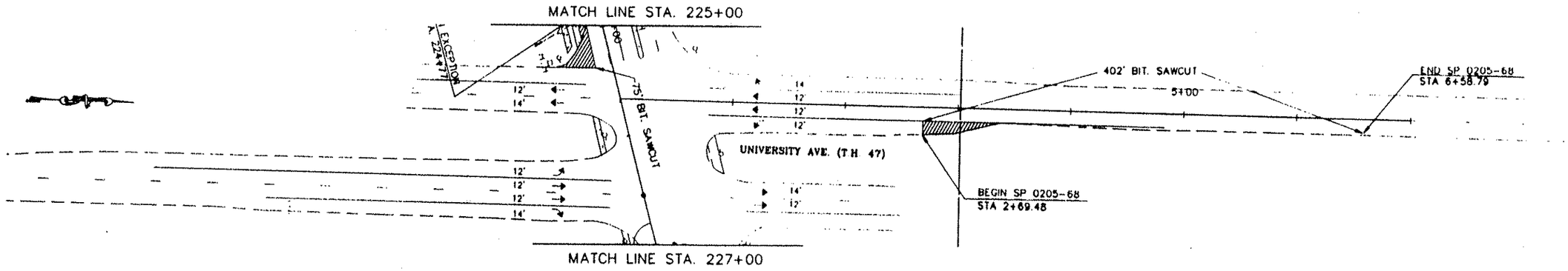
DATE BY DATE BY

CERTIFIED BY Douglas M Fischer P.E. REG NO. 20235 7/17 19 95

S.P. 0205-68 S.A.P. 02-608-09 C.P. 127-020-16

Sheet No. 5 of 11 Sheets

Fed. Project No. _____



BITUMINOUS REMOVALS

0 25 50 100

DATE | BY | DATE | BY

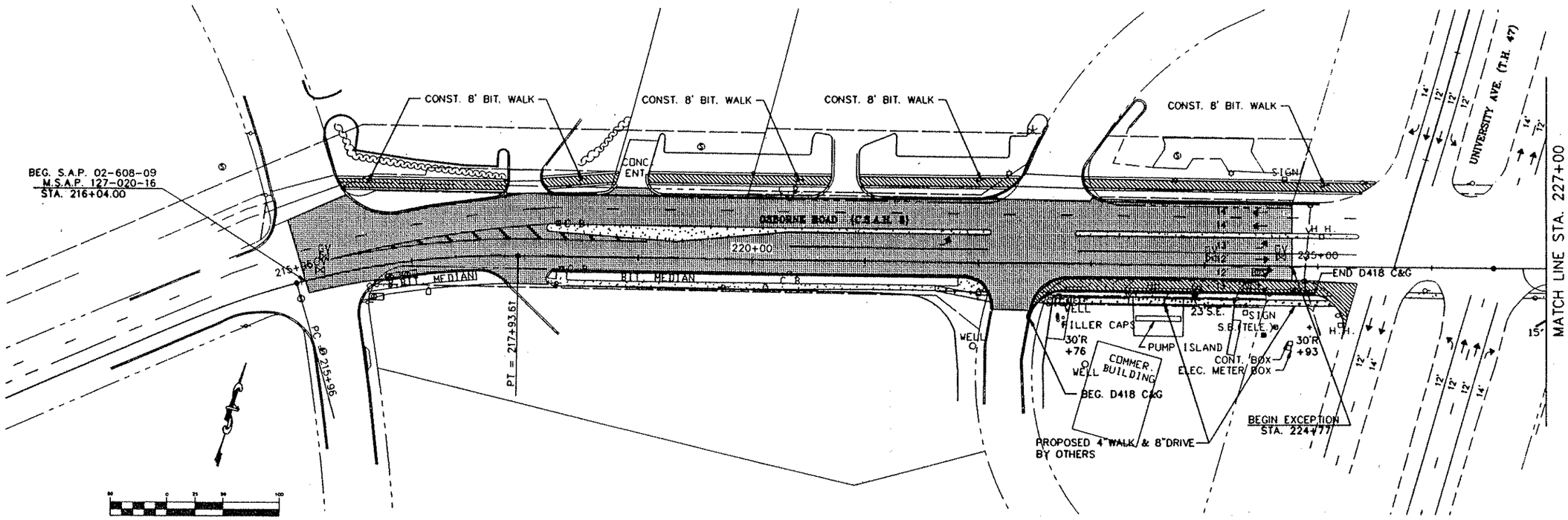
CERTIFIED BY Douglas M. Fincher P.E. REG NO. 20235 9/19 19 95

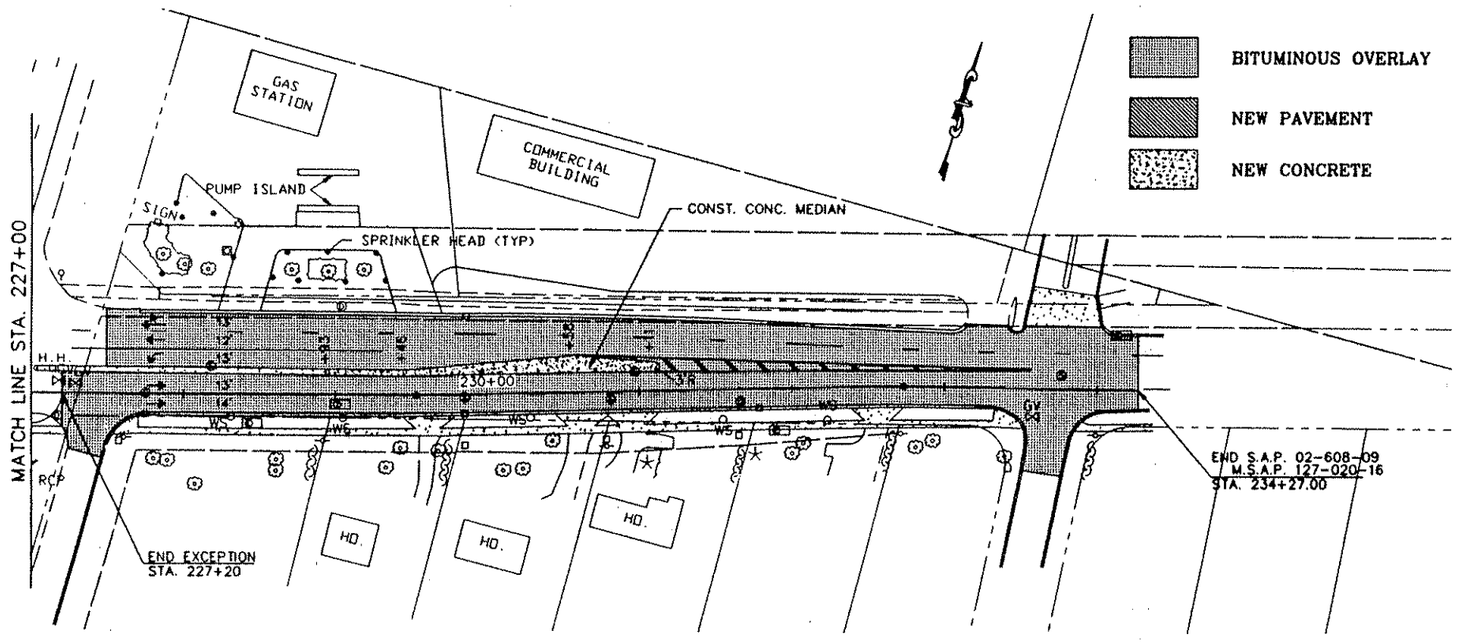
S.P. 0205-68 S.A.P. 02-608-09 C.P. 127-020-16

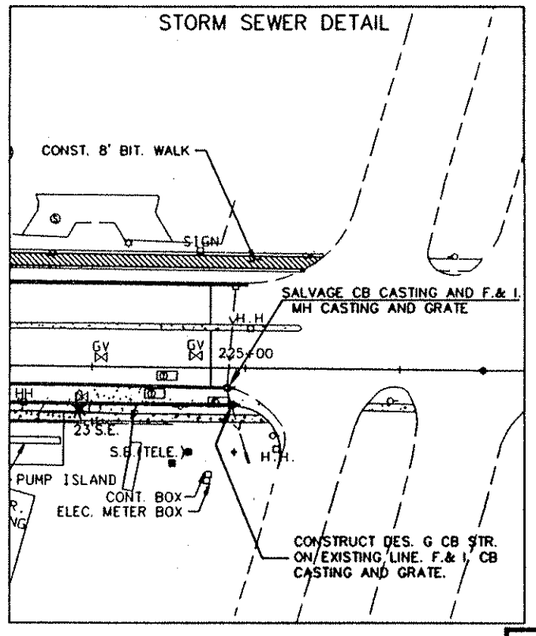
REMOVALS
T.H. 47 LSB
STA 0+00 TO 7+00

Sheet No. 6 of 11 Sheets

Fed. Project No. _____







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DATE	BY	DATE	BY

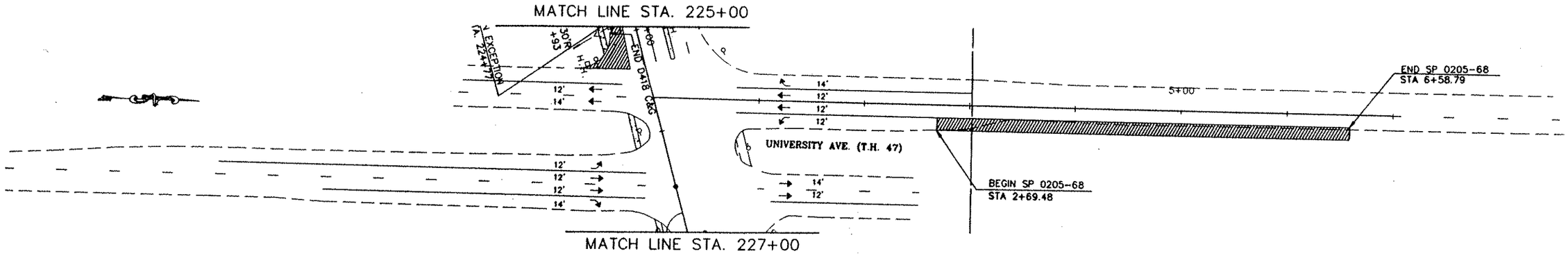
CONSTRUCTION PLAN
CSAH 8 LEB
STA 216+04 TO 234+27

CERTIFIED BY Gordon R. Fuchs P.E. REG NO. 20235 9/11 19 95

S.P. 0205-68 S.A.P. 02-608-09 MSAP 127-020-16

Sheet No. 7 of 11 Sheets

Fed. Project No. _____



NEW PAVEMENT

NEW CONCRETE

50 0 25 50 100

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DATE	BY	DATE	BY

CERTIFIED BY Douglas M Fischer P.E. REG NO. 20235 9/17 19 95

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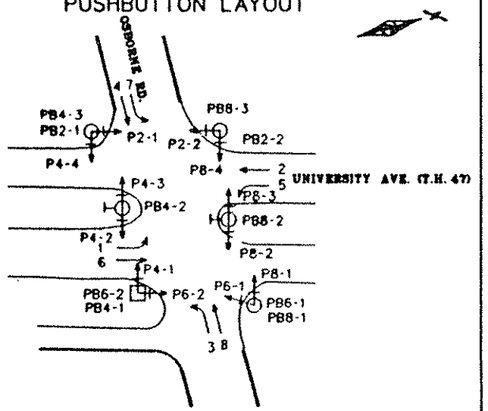
CONSTRUCTION PLAN
TH 47 LSB
STA 0+00 TO 7+00

Sheet No. 8 of 11 Sheets

SIGNAL INDICATION CHART

FACE	PHASE	INDICATION SIZE (IN INCHES) R	Y	G	Y	G
1-1	1	12	12	12		
1-2	1	12	12	12		
2-1	2	12	12	12		
2-2	2	12	12	12		
3-1	3	12	12	12		
3-2	3	12	12	12		
4-1	4	12	12	12		
4-2	4	12	12	12		
4-3	4	12	12	12		
5-1	5	12	12	12		
5-2	5	12	12	12		
6-1	6	12	12	12		
6-2	6	12	12	12		
7-1	7	12	12	12		
7-2	7	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		

CONTROLLER PHASING PEDESTRIAN INDICATION AND PUSHBUTTON LAYOUT



(2) TYPE A35-D40-9
ONE WAY SIGNAL OVERHEAD
* TYPE 10B AT 90°
* TYPE 10B AT 180°
LUMINAIRE AT 15°
EVP ON MAST ARM
2 -SETS PEDESTRIAN INDICATIONS
2 -PEDESTRIAN PUSHBUTTONS
EXTEND INTO H.H.2 1-12/C*12
4-3/C*12, 2-1/C*10

(3) TYPE A35-D40-9
2- ONE WAY SIGNALS OVERHEAD
ONE WAY SIGNAL (TYPE 10A POLE MOUNTED AT 0°)
ONE WAY SIGNAL (TYPE 10B POLE MOUNTED AT 270°)
LUMINAIRE AT 355°
EVP ON MAST ARM
2 -SETS PEDESTRIAN INDICATIONS (1 SET PED. IND. TYPE 30A
1 -PEDESTRIAN PUSHBUTTON MOUNTED AT 90°)
EXTEND INTO H.H.10 2-12/C*12
2-3/C*12, 2-1/C*10

(6) TWO WAY SIGNAL - TYPE 2C
2 -SETS PEDESTRIAN INDICATIONS
2 -PEDESTRIAN PUSHBUTTONS
EXTEND INTO H.H. 5 3" R.S.C.
1-12/C*12, 3-3/C*12

(5) TWO WAY SIGNAL - TYPE 2C
2 -SETS PEDESTRIAN INDICATIONS
2 -PEDESTRIAN PUSHBUTTONS
EXTEND INTO H.H. 13 3" R.S.C.
1-12/C*12, 2-3/C*12

(4) TYPE A35
2- ONE WAY SIGNALS OVERHEAD
ONE WAY SIGNAL (TYPE 10B POLE MOUNTED AT 270°)
ONE WAY SIGNAL (TYPE 10A POLE MOUNTED AT 0°)
EVP ON MAST ARM
2 -SETS PEDESTRIAN INDICATIONS (1 SET PED. IND. TYPE 30A
1 -PEDESTRIAN PUSHBUTTON MOUNTED AT 90°)
EXTEND INTO H.H.11 2-12/C*12
3-3/C*12

(1) TYPE A35-D40-9
ONE WAY SIGNAL OVERHEAD
TWO WAY SIGNAL (TYPE 20D POLE MOUNTED AT 270°)
LUMINAIRE AT 15°
EVP ON MAST ARM
2 -SETS PEDESTRIAN INDICATIONS
2 -PEDESTRIAN PUSHBUTTONS
EXTEND INTO H.H.15 3" R.S.C.
2-12/C*12 , 3-3/C*12, 2-1/C*10

SCALE 30 0 30 60 IN FEET

NOTES:
1) ALL ITEMS OF THIS SIGNAL SYSTEM ARE INPLACE AND SHALL BE USED INPLACE UNLESS OTHERWISE NOTED BY A *. (* = REVISION TO SIGNAL SYSTEM)
2) SEE SPECIAL PROVISIONS FOR COUNTY FURNISHED MATERIALS.
3) SEE SPECIAL PROVISIONS FOR CONTRACTORS RESPONSIBILITY FOR LOCATION OF UTILITIES.
4) SIGNAL SHALL BE PUT FIXED TIME OPERATION DURING CONSTRUCTION.
5) LOOP DETECTORS SHALL BE INSTALLED IN CONDUIT AS SHOWN ON DETAIL SHEET XX.
6) NEW CABLE SHALL BE 2/C#14 WIRE. EXISTING CABLES THAT ARE REUSED SHALL BE RESPLICED IN ADJACENT HANDHOLES.
7) PRIOR TO INSTALLATION OF LOOP DETECTORS, THE CONTRACTOR SHALL CONTACT MN/DOT SIGNAL OPERATIONS ENGINEER AT 797-5047 TO MARK LOCATIONS OF LOOP DETECTORS.
8) REMOVE LANE DESIGNATION SIGNING FROM MAST ARM POLE (6).

DETECTOR CHART

DESIGNATION	PHASE	SIZE IN FT.	FUNCTION	DISTANCE FROM STOP BAR
D2-1	2	1 - 6X6	(1)	425' INPLACE
D2-2	2	1 - 6X6	(1)	425' INPLACE
D6-1	6	1 - 6X6	(1)	410' INPLACE
D6-2	6	1 - 6X6	(1)	410' INPLACE
* D4-1	4	1 - 6X6	(2)	210'
* D4-2	4	1 - 6X6	(2)	210'
* D4-3	4	1 - 6X6	(3)	5'
D4-4	4	2- 6X6	(1)	INPLACE
D4-5	4	2- 6X6	(1)	INPLACE
D7-1	7	MULTIPLE	(1)	——
* D8-1	8	1 - 6X6	(2)	200'
* D8-2	8	1 - 6X6	(2)	200'
D8-3	8	2- 6X6	(3)	INPLACE
D8-4	8	2- 6X6	(1)	INPLACE
D3-1	3	MULTIPLE	(1)	——
D1-1	1	MULTIPLE	(1)	INPLACE
D5-1	5	MULTIPLE	(1)	INPLACE

(1) CALL AND EXTEND
(2) EXTEND ONLY
(3) DELAY CALL IMMED. EXTEND

ELECTRICAL ENG. CERT.
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.
PAUL SUBY
DATE 05/30/95 REG. NO. 16276

* INDICATES REVISIONS TO EXISTING SIGNAL SYSTEM.

S.P. 0205-66
S.A.P. 03-606-09
M.S.A.P. 127-030-16

INTERSECTION LAYOUT
TRUNK HIGHWAY 47 AND
OSBORNE ROAD (CSAH 6)
FRIDLEY, MINNESOTA

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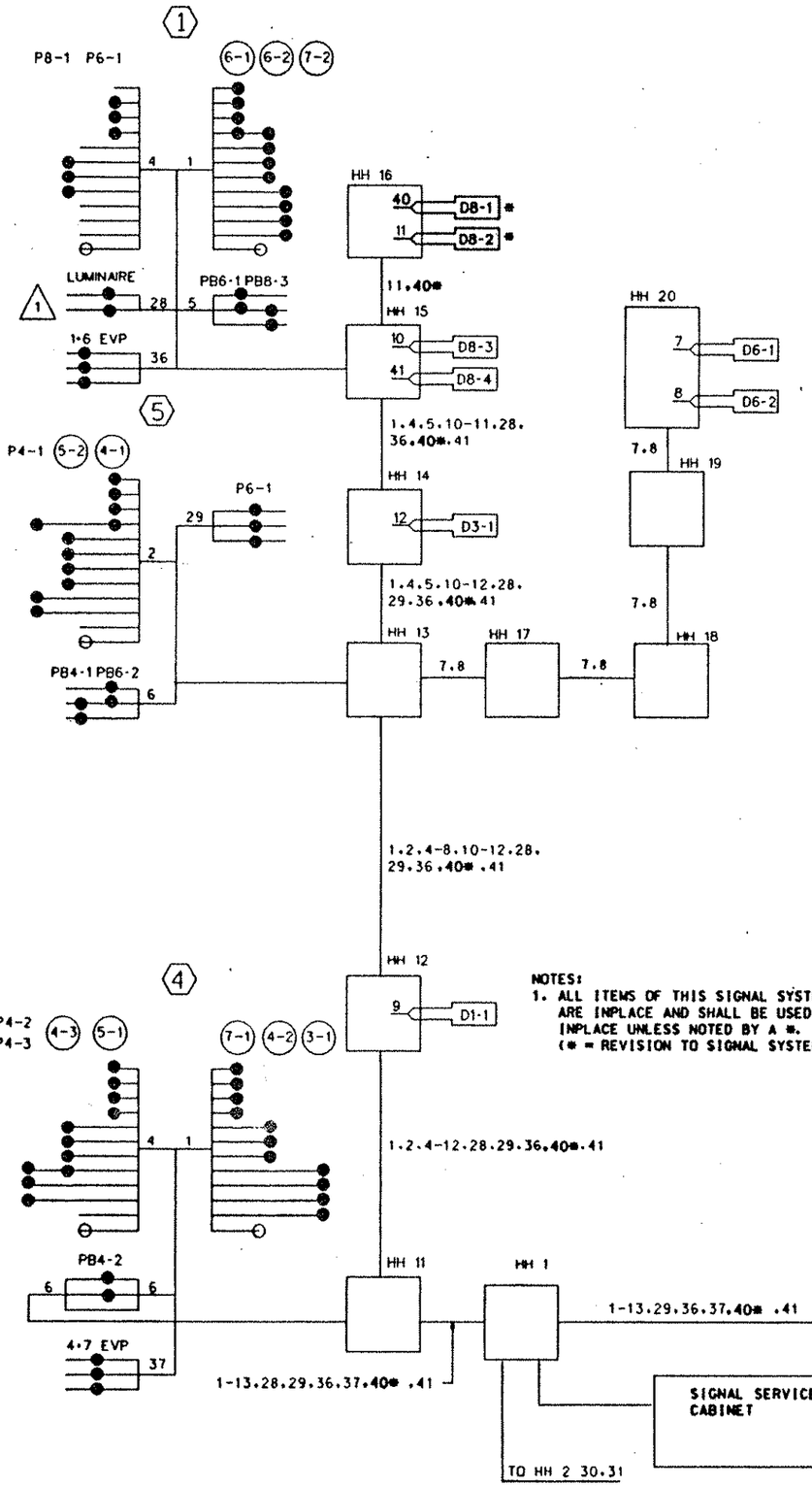
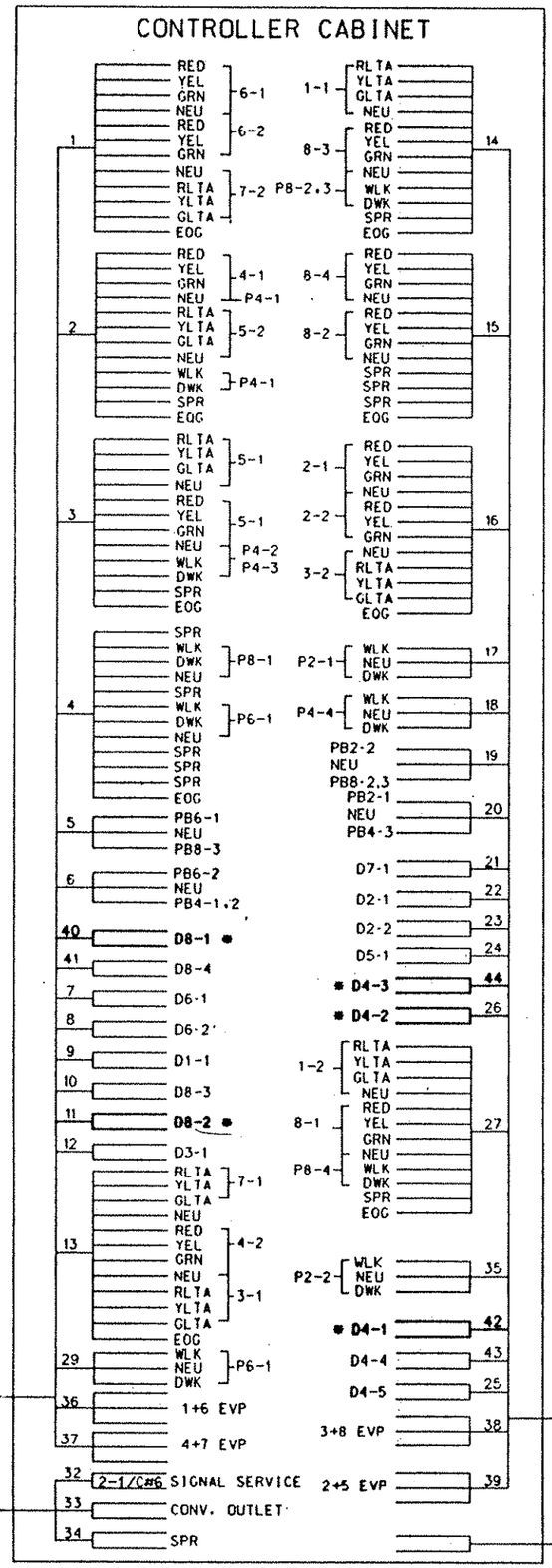
Engineers • Architects • Planners • Surveyors
300 Park Place Center • 6776 Penn Avenue Southwest
Minneapolis, MN 55423-2888 • 612-866-6776

PLAN NO. 9 of 11



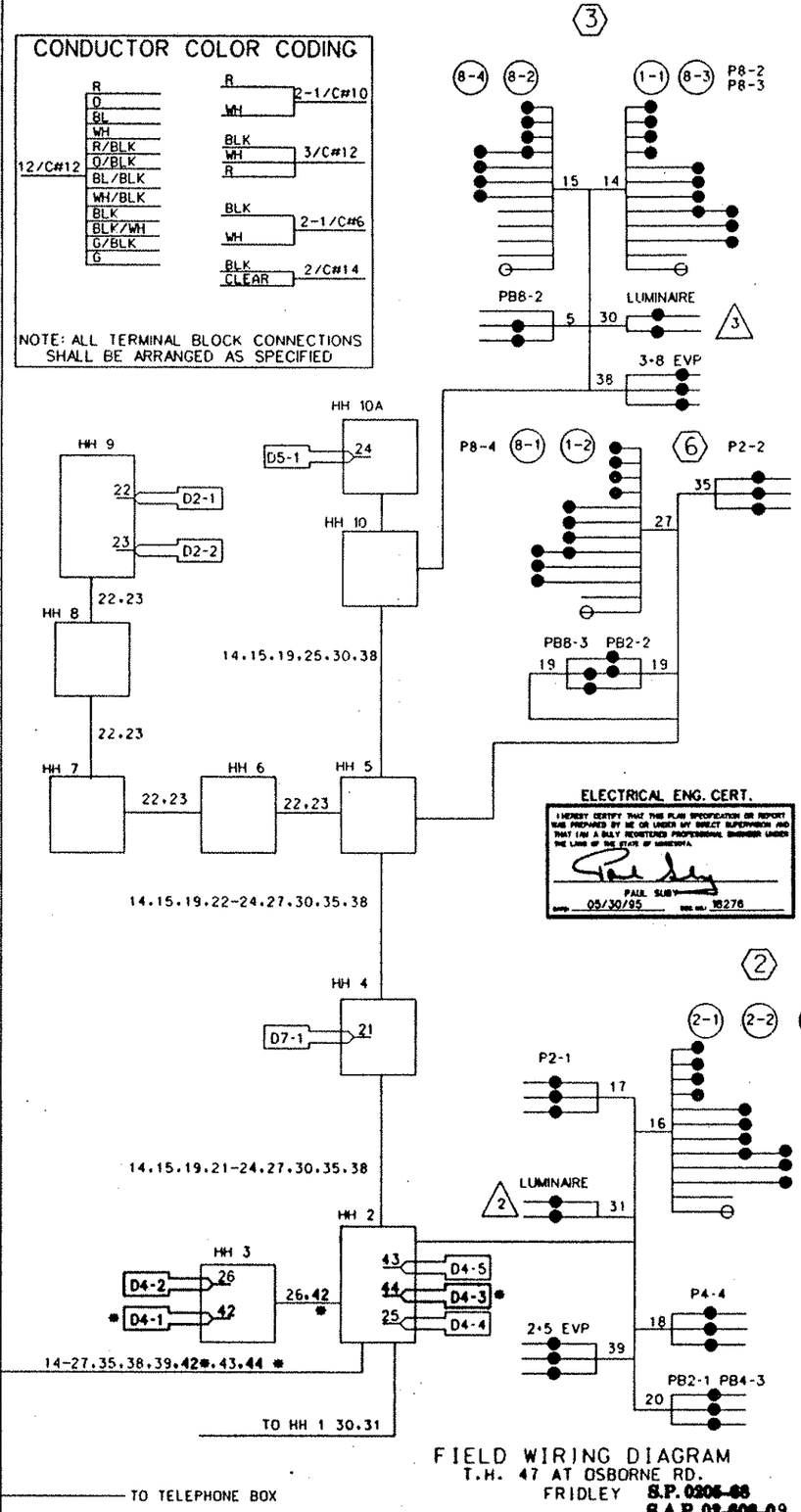


CONDUCTOR COLOR CODING

R	R / WH	2-1/C#10
O		
BL		
WH		
R/BLK	BLK / WH / R	3/C#12
O/BLK		
BL/BLK		
WH/BLK		
BLK	BLK / WH	2-1/C#6
BLK/WH		
G/BLK	BLK / CLEAR	2/C#14
G		

12/C#12

NOTE: ALL TERMINAL BLOCK CONNECTIONS SHALL BE ARRANGED AS SPECIFIED



FIELD WIRING DIAGRAM
T.H. 47 AT OSBORNE RD.
FRIDLEY S.P. 0206-68
S.A.P. 02-606-09
M.S.A.P. 127-020-16

* INDICATES REVISIONS TO EXISTING SIGNAL SYSTEM.

WIRING DIAGRAM
TRUNK HIGHWAY 47 AND
OSBORNE ROAD (CSAH 8)
FRIDLEY, MINNESOTA

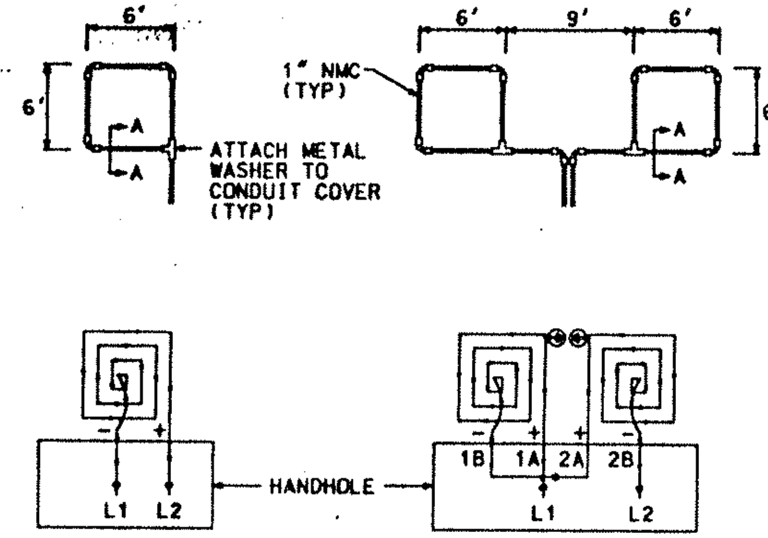
REVISION NO. / DATE / EXPLANATION

SCALE: AS NOTED
PLAN BY: MES
DESIGN BY: CTR
CHECKED BY: RSB
COMM.NO.: 911410
RECORD COPY BY: DATE

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.
ROGER A. SCHEY
DATE 05/30/95 LIC. NO. 18327

Scholen Meyeren & Associates, Inc.
Engineers • Architects • Planners • Surveyors
300 Park Place Center • 5775 Wayzata Boulevard
Minneapolis, MN 55416-1288 • 612-546-5775

PLAN NO.
10 of 11

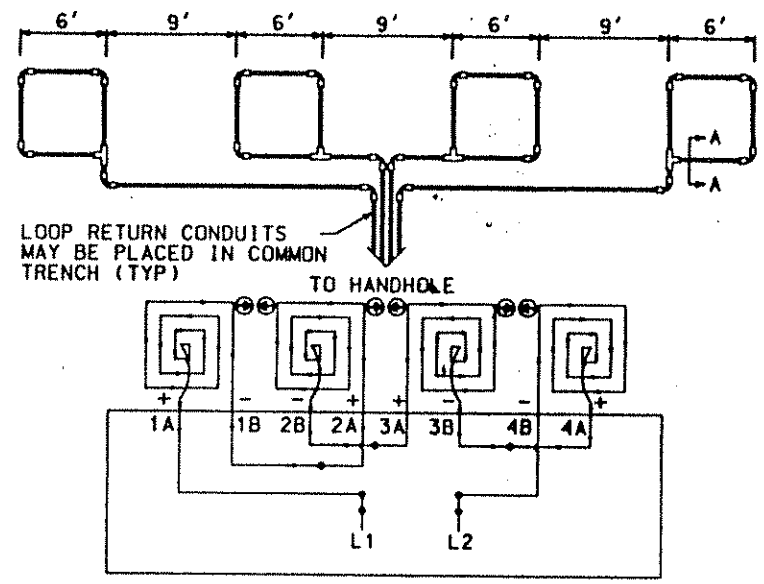


LOOP CONNECTIONS SHALL BE LABELED AND SPLICED IN THE HANDHOLE AS FOLLOWS:

L1 TO 1A
1B TO 2A
2B TO L2

LOOP DETECTOR DETAIL 'A'
(LOOP PHASING FOR SINGLE CONNECTION)

LOOP DETECTOR DETAIL 'B'
(LOOP PHASING FOR SERIES CONNECTION)

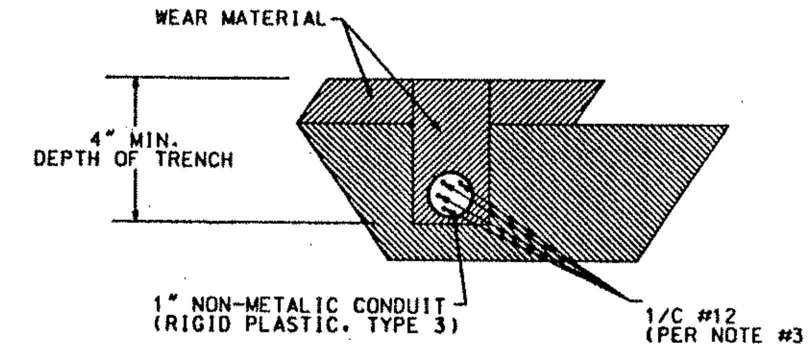


LOOP CONNECTIONS SHALL BE LABELED AND SPLICED IN THE HANDHOLE AS FOLLOWS:

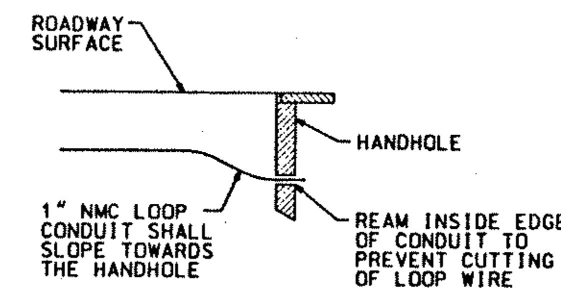
L1 TO 1A
1B TO 2A
2B TO 3A
3B TO 4A
4B TO L2

SPLICE CONTROL CABLE TO L1 & L2 IN HANDHOLE. ALL CONDUCTORS SHALL BE TAGGED IN HANDHOLE (1A, 1B, ECT)

LOOP DETECTOR DETAIL 'C'
(LOOP PHASING FOR SERIES CONNECTION)



SECTION A-A
DETAIL FOR LOOP INSTALLATION IN EXISTING ROADWAY



DRAINAGE DETAIL

LOOP DETECTOR WIRING

1) ALL CORNERS SHALL BE 90° CONDUIT BENDS.
2) CONNECT WIRES IN HANDHOLES USING SPLICE KIT METHOD DESCRIBED IN THE SPECIAL PROVISIONS.
3) LOOP DETECTOR WIRES SHALL BE #12 AWG CROSSED LINKED POLYETHLENE (XLP). SEE SPECIAL PROVISIONS.
4) LOOP LEAD IN WIRES SHALL BE TWISTED A MIN. OF (5) TURNS PER FOOT THROUGH THE CONDUIT TO THE HANDHOLE.
5) NMC DESIGNATES NON-METALLIC CONDUIT (SPEC. 3803)
6) LOOPS 6'x 6' THRU 6'x 14' SHALL HAVE (4) TURNS.
7) LOOPS 6'x 15' AND LARGER SHALL HAVE (2) TURNS.

LEGEND OF SYMBOLS

CONTROLLER AND SERVICE EQUIP. NO's
SIGNAL BASE NO.
SIGNAL FACE NO.
LUMINAIRE NO.
CONTROLLER AND CABINET
CONTROLLER AND CABINET - IN PLACE
HANDHOLE
HANDHOLE - IN PLACE
RIGID STEEL CONDUIT (RSC)
RIGID STEEL CONDUIT (RSC) - IN PLACE
SIGNAL FACE WITH BACKROUND SHIELD
SIGNAL FACE W/O BACKROUND SHIELD
SIGNAL FACE - IN PLACE
PEDESTRIAN INDICATORS
PEDESTRIAN INDICATORS - IN PLACE
PEDESTRIAN PUSH BUTTONS 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 - IN PLACE
STREET LIGHT POLE AND LUMINAIRE
STREET LIGHT POLE AND LUMMINAIRE - IN PLACE
MAST ARM AND LUMMINAIRE
MAST ARM AND LUMMINAIRE - INPLACE
WOOD POLE
WOOD POLE - IN PLACE
SOURCE OF POWER
RAILROAD SIGNAL - IN PLACE
RIGHT OF WAY LINE
CENTERLINE
EDGE OF ROADWAY
SHOULDERLINE
CURB LINE
STOP BAR

ABBREVIATIONS

3-1(EG)	SIGNAL HEAD PHASE "3" - NO. "1"	O	ORANGE
BL	BLUE	O/BLK	ORANGE WITH BLACK TRACER
BL/BLK	BLUE WITH BLACK TRACER	P1-(EG)	PEDESTRIAN INDICATION PHASE "2"-NO. "1"
BLK	BLACK	PB	PUSH BUTTON
BLK/WH	BLACK WITH WHITE TRACER	PB-2(EG)	PUSH BUTTON PHASE "2"-NO. "1"
BR. GR.	BARE GROUND	PEC	PHOTOELECTRIC CELL
CH. SW.	CHECK SWITCH	PED	PEDRESTIAN
CLR	CLEAR	R	RED
D2-1(EG)	DETECTOR PHASE "2" - NO. "1"	R&S	REMOVE AND SALVAGE
DWK	DON'T WALK	R/BLK	RED WITH BLACK TRACER
EQG	EQUIPMENT GROUND	RLTA	RED LEFT TURN ARROW
EVP	EMERGENCY VEHICLE PRE-EMPTION	RRTA	RED RIGHT TURN ARROW
F&I	FURNISH AND INSTALL	RSC	RIGID STEEL CONDUIT
FL	FLASH/FLASHING	SOP	SOURCE OF POWER
G	GREEN	SPR	SPARE
G/BLK	GREEN WITH BLACK TRACER	ST. LHT.	STREET LIGHT
GLTA	GREEN LEFT TURN ARROW	STA	STATION
GRN	GREEN	SW	SWITCH
GR. R.	GROUND ROD	SWD	SWITCHED
GRTA	GREEN RIGHT TURN ARROW	TDW	TELEPHONE DROP WIRE
GTHA	GREEN THRU ARROW	WH	WHITE
HH	HANDHOLE	WH/BLK	WHITE WITH BLACK TRACER
HPS	HIGH PRESSURE SODIUM	WLK	WALK
JB	JUNCTION BOX	YEL	YELLOW
LUM	LUMINAIRE	YLTA	YELLOW LEFT TURN ARROW
NEU	NEUTRAL	YRTA	YELLOW RIGHT TURN ARROW
NMC	NONMETALLIC CONDUIT	YTHA	YELLOW THRU ARROW

MISC. DETAILS
TRUNK HIGHWAY 47 AND OSBORNE ROAD (CSAH 8)
FRIDLEY, MINNESOTA

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