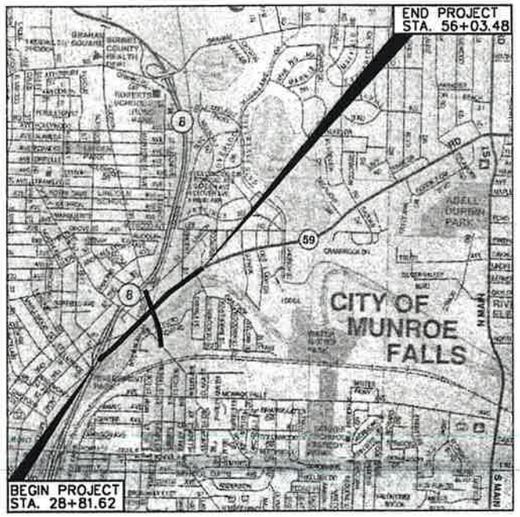
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
SUM-59-4.93
ROADWAY IMPROVEMENTS
CITY OF CUYAHOGA FALLS
SUMMIT COUNTY



LOCATION MAP

SCALE IN MILES

0 1 2

LAT. 41°09'15"
LONG. 81°28'30"

Portion to be Improved
Other Roads

DESIGN DESIGNATION

	HUDSON DRIVE	FRONT STREET
CURRENT A.D.T. (2005)	= 13,316	= 22,571
DESIGN YEAR A.D.T. (2025)	= 14,837	= 26,845
D.H.V.	= 1,621	= 2,167
D	= 55%	= 55%
T24	= 1.0%	= 1.0%
DESIGN SPEED	= 25 mph	= 25 mph
LEGAL SPEED	= 25 mph	= 25 mph
FUNCTIONAL CLASSIFICATION	= MINOR COLLECTOR	= URBAN ARTERIAL

DESIGN EXCEPTIONS

DESIGN FEATURE	APPROVAL DATE	SHEET NOS.
NONE		

INDEX OF SHEETS

PROJECT DESCRIPTION

WIDENING AND RECONSTRUCTION OF 0.52 MILES OF FRONT STREET AND 0.32 MILES OF HUDSON DRIVE INCLUDING NEW CURB AND SIDEWALK, RESURFACING, DRAINAGE, LIGHTING, NEW TRAFFIC SIGNALS, SIGNING AND PAVEMENT MARKINGS.

1997 SPECIFICATIONS

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS.

APPROVED _____

DATE _____ SERVICE DIRECTOR, CITY OF CUYAHOGA FALLS

APPROVED _____

DATE _____ CITY OF CUYAHOGA FALLS ENGINEER

Sheet 53 P+P
Sheet 7 x-Section

UNDERGROUND UTILITIES
2 WORKING DAYS
BEFORE YOU DIG
...800-362-2764 (Toll Free)
OHIO UTILITIES PROTECTION SERVICE
NON-MEMBERS
MUST BE CALLED DIRECTLY

PLANS PREPARED BY

URS

Akron Cleveland Columbus

564 White Pond Drive
Akron, Ohio 44320-1100
(330) 836-9111

STATE OF OHIO
JEFFREY A. NOBLE
E-62195
REGISTERED
PROFESSIONAL ENGINEER

Jeffrey A Noble 1-16-03

Jeffrey A. Noble REG. ENGINEER No. 62195

STANDARD CONSTRUCTION DRAWINGS

BP-1.1	7/28/00	RM-4.2	1/18/02	DM-1.1	7/20/01	TC-41.20	1/19/01	TC-85.10	04/19/02	HL-10.11	4/19/02
BP-2.1	7/28/00	RM-5.1M	1/03/96	DM-1.3	7/20/01	TC-41.40	1/18/02	TC-85.20	5/01/00	HL-10.12	4/19/02
BP-2.2	7/28/00			DM-3.1	7/20/01	TC-42.20	4/20/01			HL-10.13M	5/01/95
BP-2.4	7/28/00	CB-1.1	7/20/01	DM-4.2	7/20/01	TC-52.10	4/20/01	MT-95.31	04/19/02	HL-30.11	4/19/02
BP-3.1	7/28/00	CB-2.1	7/20/01	DM-4.3	7/20/01	TC-52.20	4/20/01	MT-95.32	04/19/02	HL-30.22	4/19/02
BP-4.1	7/28/00	CB-2.2	7/20/01	DM-4.4	7/20/01	TC-71.10	4/19/02	MT-97.10	04/19/02	HL-60.12	7/20/01
BP-5.1	7/28/00	CB-2.3	7/20/01			TC-81.20	5/01/00				
BP-7.1	7/28/00	CB-4.2	7/20/01	TC-16.20	1/19/01	TC-82.10	4/19/02	MT-105.10M	04/25/94		
RM-1.1	4/29/99	MH-1.2	7/20/01	TC-21.10	1/19/01	TC-83.10	5/01/00	MT-105.11M	04/25/94		
RM-2.1M	7/12/95			TC-21.20	1/19/01	TC-83.20	5/01/00				

SUPPLEMENTAL SPECIFICATIONS

802	7/19/02
806	9/09/97
830	10/21/98
870	3/27/01
877	4/13/99
1003	8/14/95

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED:

_____ _____
DIVISION ADMINISTRATOR DATE

FEDERAL PROJECT NO. TE21-G010 (588)
PID NO. 20891
CONSTRUCTION PROJECT NO.
RAILROAD INVOLVEMENT
METRO REGIONAL TRANSIT AUTHORITY

SUM - 59-4.93

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FOR REFERENCE TIES SEE SHEET 2A.

BEGIN WORK
STA. 51+53.24

END WORK
STA. 112+00.00

BEGIN WORK
STA. 105+92

BEGIN PROJECT
STA. 28+81.62
FED. PROJ. NO.

BEGIN WORK
STA. 248+50.00

END WORK
END PROJECT
STA. 56+03.48
FED. PROJ. NO.

CUYAHOGA FALLS

GAYLORD GROVE

SECOND STREET

FRONT STREET

W. BAILEY ROAD

E. BAILEY ROAD

EDISON ST.

HUDSON DRIVE

VINCENT ST.

LANDON DR.

METRO REGIONAL TRANSIT AUTHORITY

CUYAHOGA RIVER

RAMP M

MATCHLINE A-A

City of Cuyahoga Falls

Village of Silver Lake

STA. 5+71.07 ℄ EXIST. R/W BAILEY RD.= STA. 42+83.66 ℄ EXIST. R/W SECOND ST.

EX. MON. FND. STA. 111+71.69 ℄ EXIST. R/W HUDSON DR. DEFLECTION = 1°31'02" RT. (NO CURVE) N 541198.415 E 2282851.664

PT STA. 107+59.54 BACK ℄ SURV. & CONST. HUDSON DR. = PT STA. 107+59.40 AHEAD ℄ EXIST. R/W HUDSON DR.

STA. 108+70.92 ℄ EXIST. R/W HUDSON DR. = STA. 50+00 ℄ EXIST. R/W EDISON ST.

STA. 110+76.73 ℄ EXIST. R/W HUDSON DRIVE = STA. 50+00 ℄ EXIST. R/W SECOND STREET

PRC STA. 38+30.25 ℄ SURVEY & CONSTRUCTION FRONT ST.= STA. 9+88.31 ℄ EXIST. R/W W.BAILEY RD.

EX. MON. FND. STA. 106+83.42 ℄ EXIST. R/W HUDSON DR. STA. 106+83.71, 3.88 LT. ℄ SURV. & CONST. HUDSON DR. DEFLECTION = 0°00'41" LT. (NO CURVE) N 540810.090 E 2283032.260

STA. 52+99.08 ℄ EXIST. R/W FRONT ST. = STA. 9+87.90 ℄ EXIST. R/W VINCENT ST.

STA. 34+43.99 ℄ SURVEY & CONSTRUCTION FRONT ST. = STA. 34+43.99, 6.00' LT. ℄ EXIST. R/W FRONT ST. N 540148.590 E 2282431.620

EX. MON. FND. PI STA. 10+00 ℄ EXIST. R/W W.BAILEY RD.= STA. 38+31.94 ℄ EXIST. R/W FRONT ST. DEFLECTION = 0°02'27" LT. (NO CURVE) N 540423.521 E 2282705.400

EX. MON. FND. PT STA. 102+68.08 ℄ EXIST. R/W HUDSON DR. STA. 102+67.36, 5.48 LT. ℄ SURV. & CONST. HUDSON DR. N 540433.456 E 2283207.327

STA. 40+40.64 ℄ EXIST. R/W FRONT ST. = STA. 45+80.82 ℄ EXIST. R/W EDISON ST.

PRC STA. 106+67.91 ℄ SURVEY & CONSTRUCTION HUDSON DRIVE = STA. 43+35.80 ℄ SURVEY & CONSTRUCTION FRONT ST.

STA. 100+29.91 ℄ EXIST. R/W-E. BAILEY RD.= STA. 0+00.00 ℄ EXIST. R/W GAYLORD GROVE N 540105.922 E 2283046.119

STA. 100+88.68 ℄ SURVEY & CONST. HUDSON DRIVE = STA. 2+57.44 ℄ EXIST. R/W GAYLORD GROVE

EX. MON. FND. STA. 98+00.65 ℄ EXIST. R/W E.BAILEY RD. N 539936.479 E 2283200.550

STA. 95+28.46 ℄ EXIST. R/W E.BAILEY RD. = PC STA. 95+28.43 ℄ EXIST. R/W HUDSON DR.

PC STA. 95+28.43 ℄ EXIST. R/W HUDSON DR. = PC STA. 95+28.43 ℄ SURV. & CONST. HUDSON DR.

EX. MON. FND. STA. 93+02.47 ℄ EXIST. R/W E.BAILEY RD. N 539568.279 E 2283536.129

STA. 56+10.44 BACK ℄ SURVEY & CONST. FRONT ST. = PT STA. 56+06.98 AHEAD ℄ EXIST. FRONT ST. R/W N 541563.867 E 2284039.881

(A) EXIST. ℄ RAMP M
P.I. STA. 252+73.44
Δ = 16° 35' 20"
R = 572.96'
T = 83.53'
L = 165.89'
E = 6.06'
e_{max} = 0.041
Dc = 10° 00' 00"

(B) EXIST. ℄ SECOND STREET
P.I. STA. 47+97.39
Δ = 45° 34' 44"
R = 305.58'
T = 128.39'
L = 243.09'
E = 25.88'
e_{max} = NC
Dc = 18° 44' 59"

(1) ℄ SURVEY & CONSTRUCTION SECOND STREET
P.I. STA. 52+83.31
Δ = 45° 33' 41"
R = 309.71'
T = 130.07'
L = 246.28'
E = 26.20'
e_{max} = 0.020
Dc = 18° 30' 00"

(2) ℄ SURVEY & CONSTRUCTION FRONT STREET
P.I. STA. 37+77.65
Δ = 6° 01' 55"
R = 1000.00'
T = 52.69'
L = 105.28'
E = 1.39'
e_{max} = NC
Dc = 05° 43' 46"

(3) ℄ SURVEY & CONSTRUCTION FRONT STREET
P.I. STA. 38+82.58
Δ = 5° 59' 28"
R = 1000.00'
T = 52.33'
L = 104.56'
E = 1.37'
e_{max} = NC
Dc = 05° 43' 46"

(4) ℄ SURVEY & CONSTRUCTION FRONT STREET
P.I. STA. 46+61.90
Δ = 9° 00' 22"
R = 1273.24'
T = 100.28'
L = 200.14'
E = 3.94'
e_{max} = NC
Dc = 04° 30' 00"

(5) ℄ SURVEY & CONSTRUCTION FRONT STREET
P.I. STA. 54+27.33
Δ = 7°37'59"
R = 750.63'
T = 50.07'
L = 100.00'
E = 1.67'
e_{max} = NC
Dc = 07° 37' 59"

(C) ℄ EXIST. R/W FRONT STREET
P.I. STA. 46+98.52
Δ = 9° 00' 21"
R = 1275.31'
T = 100.44'
L = 200.46'
E = 3.95'
e_{max} = NC
Dc = 04° 29' 34"

(D) ℄ EXIST. R/W FRONT STREET
P.I. STA. 55+07.27
Δ = 7° 40' 00"
R = 1492.44'
T = 100.00'
L = 199.70'
E = 3.35'
e_{max} = NC
Dc = 03° 50' 21"

(E) ℄ EXIST. R/W HUDSON DRIVE
P.I. STA. 97+67.95
Δ = 49° 23' 22"
R = 520.87'
T = 239.52'
L = 448.99'
E = 52.43'
e_{max} = NC
Dc = 11° 00' 00"

(F) ℄ EXIST. R/W HUDSON DRIVE
P.I. STA. 101+26.65
Δ = 31° 58' 21"
R = 520.88'
T = 149.22'
L = 290.66'
E = 20.95'
e_{max} = NC
Dc = 10° 54' 59"

(G) ℄ EXIST. R/W GAYLORD GROVE
P.I. STA. 2+44.96
Δ = 23° 36' 12"
R = 933.09'
T = 194.96'
L = 384.39'
E = 20.15'
e_{max} = NC
Dc = 06° 08' 26"

(H) ℄ EXIST. R/W VINCENT STREET
P.I. STA. 8+03.08
Δ = 11° 43' 57"
R = 500.00'
T = 51.37'
L = 102.39'
E = 2.63'
e_{max} = NC
Dc = 11° 27' 33"

(6) ℄ SURVEY & CONSTRUCTION HUDSON DRIVE
P.I. STA. 97+58.63
Δ = 47°41'08"
R = 520.87'
T = 230.20'
L = 433.51'
E = 48.60'
e_{max} = NC
Dc = 11° 00' 00"

(7) ℄ SURVEY & CONSTRUCTION HUDSON DRIVE
P.I. STA. 101+51.26
Δ = 30°16'09"
R = 700.00'
T = 189.33'
L = 369.81'
E = 25.15'
e_{max} = NC
Dc = 08° 11' 06"

(8) ℄ SURVEY & CONSTRUCTION HUDSON DRIVE
P.I. STA. 106+22.03
Δ = 5°15'42"
R = 1000.00'
T = 45.95'
L = 91.83'
E = 1.06'
e_{max} = NC
Dc = 05° 43' 46"

(9) ℄ SURVEY & CONSTRUCTION HUDSON DRIVE
P.I. STA. 107+13.76
Δ = 5°15'00"
R = 1000.00'
T = 45.85'
L = 91.63'
E = 1.05'
e_{max} = NC
Dc = 05° 43' 46"

1 INCH = 100 ft.

CALCULATED | CHECKED

SCHEMATIC PLAN

SUM - 59-4.93

2
171

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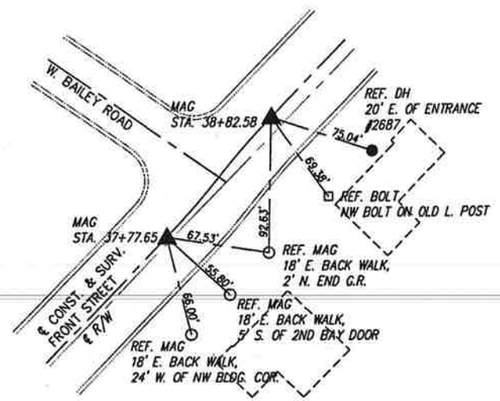
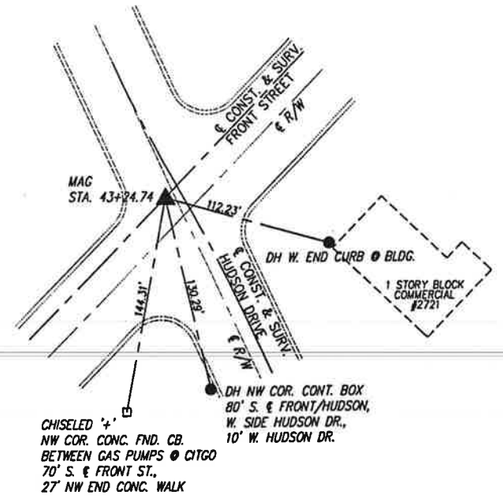
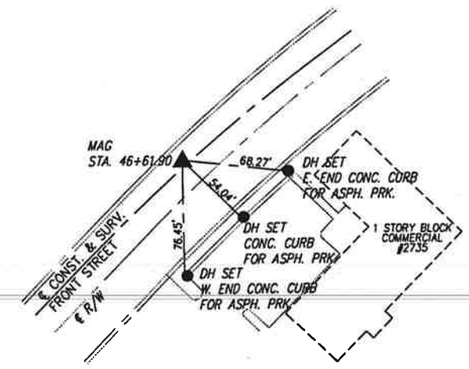


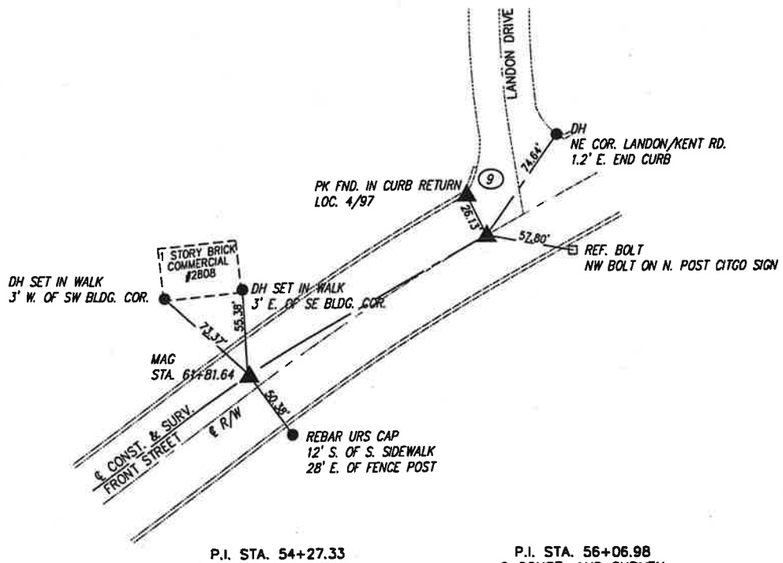
P.I. STA. 37+77.65 AND
P.I. STA. 38+82.58 ℄ CONST.
& SURVEY FRONT STREET



P.I. STA. 43+24.74
℄ CONST. AND SURVEY
FRONT STREET

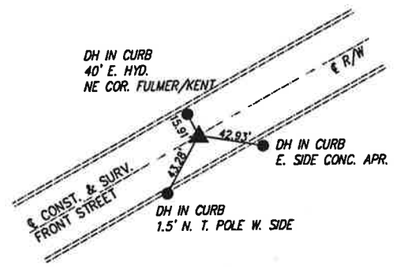


P.I. STA. 46+61.90
℄ CONST. AND SURVEY
FRONT STREET



P.I. STA. 54+27.33
℄ CONST. AND SURVEY
FRONT STREET

P.I. STA. 56+06.98
℄ CONST. AND SURVEY
FRONT STREET



P.I. STA. 61+81.64
℄ CONST. AND SURVEY
FRONT STREET

SURVEY REFERENCE TIES

SUM - 59-4.93

2A
171

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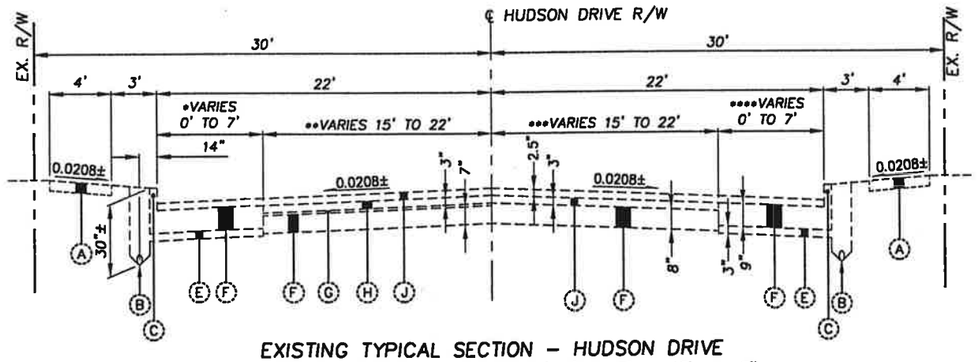
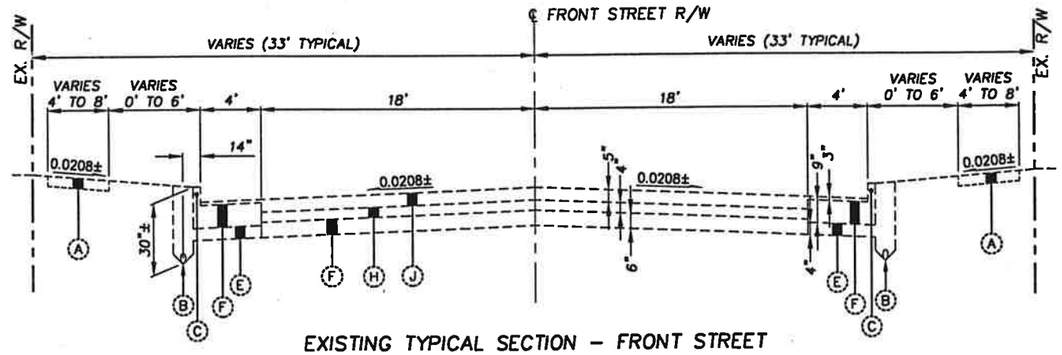


EXISTING TYPICAL SECTION – HUDSON DRIVE

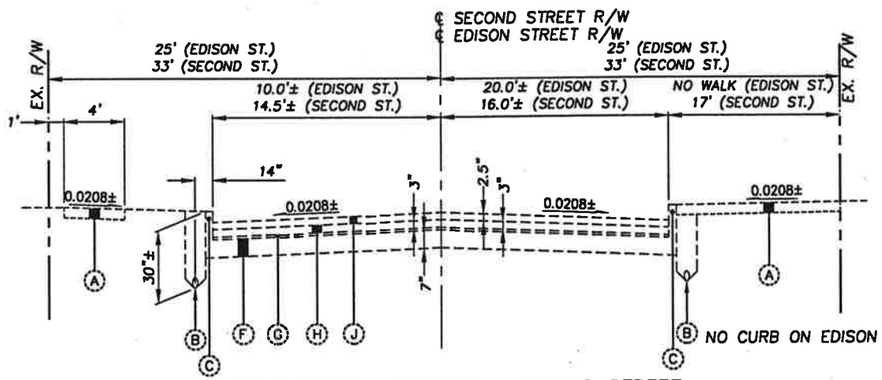
STA. 106+73.39 TO STA. 108+50.86 (• 7', •• 15', ••• 15', •••• 7')
STA. 108+50.86 TO STA. 110+76.73 (• 0', •• 22', ••• 15', •••• 7')
STA. 110+76.73 TO STA. 112+00 (• 1', •• 21', ••• 21', •••• 1')



EXISTING TYPICAL SECTION – FRONT STREET

STA. 28+00 TO STA. 58+00

SEE PLAN SHEETS FOR EXISTING WALK WIDTHS AND LOCATIONS



EXISTING TYPICAL SECTION – SECOND STREET

STA. 48+00 TO STA. 49+78

EXISTING TYPICAL SECTION – EDISON STREET

STA. 46+25 TO STA. 49+65

SEE PLAN SHEET FOR EXISTING WALK WIDTHS AND LOCATIONS.

EXISTING LEGEND

- (A) 4" CONCRETE SIDEWALK
- (B) 4" UNDERDRAIN
- (C) 6" INTEGRAL CONCRETE CURB
- (D) LONGITUDINAL JOINT
- (E) AGGREGATE SUBBASE (Depth As Shown)
- (F) REINFORCED CONCRETE PAVEMENT (Depth As Shown)
- (G) 1" SAND
- (H) BRICK (Thickness As Shown)
- (J) ASPHALT CONCRETE (Depth As Shown)
- (K) CONCRETE CURB & GUTTER
- (L) CONCRETE CURB, TYPE 6

EXISTING PAVEMENT COMPOSITION

THE EXISTING PAVEMENT COMPOSITIONS HAVE BEEN DETERMINED USING SELECT PAVEMENT CORINGS AND EXISTING RECORDS. THE CONTRACTOR WILL BE PERMITTED TO TAKE PAVEMENT CORINGS WITH THE APPROVAL OF THE CITY OF CUYAHOGA FALLS TO CONFIRM THE BUILD-UP. THE CONTRACTOR WILL BE REQUIRED TO REMOVE ANY PAVEMENT SPECIFIED FOR REMOVAL UNDER ITEM 202 – PAVEMENT REMOVED REGARDLESS OF THE COMPOSITION WITHOUT ADDITIONAL COMPENSATION.

CALCULATED | CHECKED

EXISTING TYPICAL SECTIONS

SUM - 59-4.93

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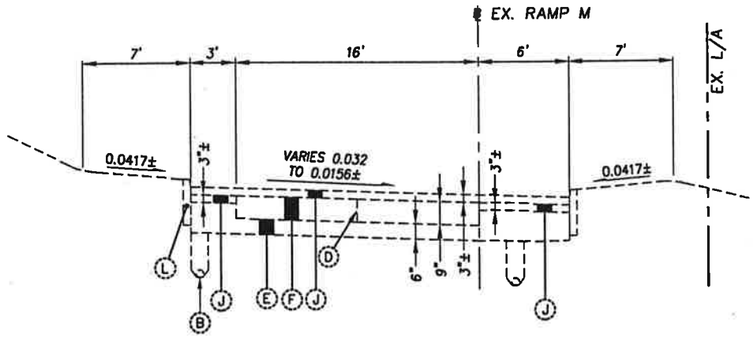
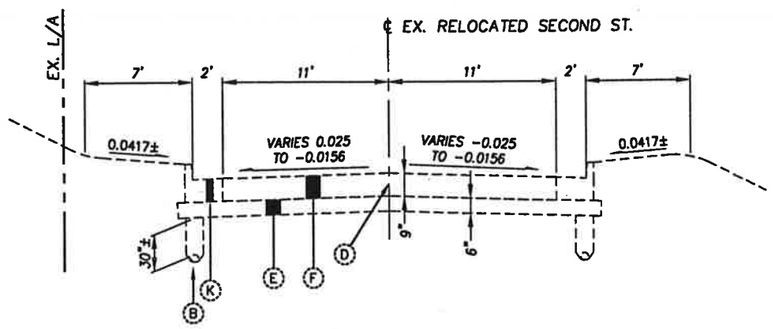


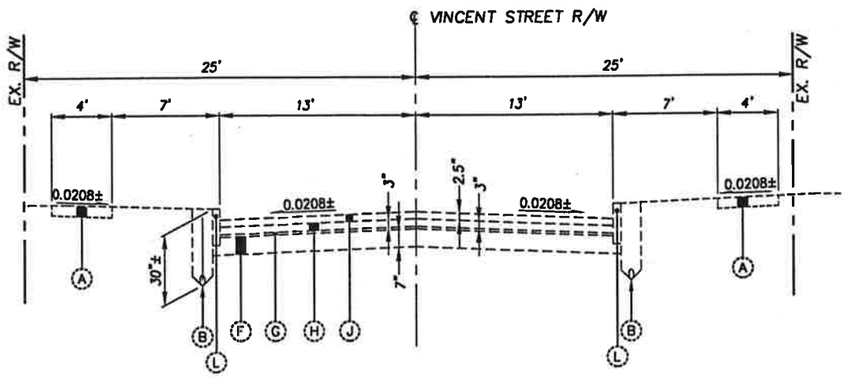
EXISTING TYPICAL SECTION – RAMP M (S.R. 8 NB OFF–RAMP TO FRONT ST.)

STA. 246+00 TO STA. 251+89



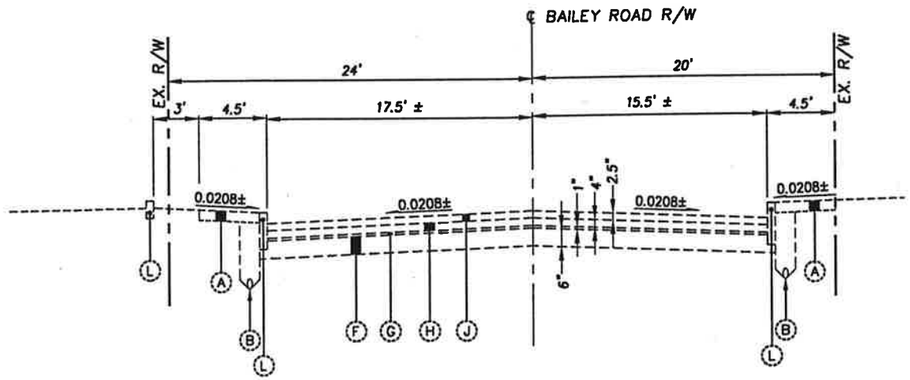
EXISTING TYPICAL SECTION – RELOCATED SECOND ST.

STA. 50+02 TO STA. 54+23



EXISTING TYPICAL SECTION – VINCENT STREET

STA. 6+00 TO STA. 9+80



EXISTING TYPICAL SECTION – BAILEY ROAD

STA. 6+00 TO STA. 9+80

EXISTING LEGEND

- Ⓐ 4" CONCRETE SIDEWALK
- Ⓑ 4" UNDERDRAIN
- Ⓒ 6" INTEGRAL CONCRETE CURB
- Ⓓ LONGITUDINAL JOINT
- Ⓔ AGGREGATE SUBBASE (Depth As Shown)
- Ⓕ REINFORCED CONCRETE PAVEMENT (Depth As Shown)
- Ⓖ 1" SAND
- Ⓗ BRICK (Thickness As Shown)
- Ⓙ ASPHALT CONCRETE (Depth As Shown)
- Ⓚ CONCRETE CURB & GUTTER
- Ⓛ CONCRETE CURB, TYPE 6

EXISTING PAVEMENT COMPOSITION

THE EXISTING PAVEMENT COMPOSITIONS HAVE BEEN DETERMINED USING SELECT PAVEMENT CORINGS AND EXISTING RECORDS. THE CONTRACTOR WILL BE PERMITTED TO TAKE PAVEMENT CORINGS WITH THE APPROVAL OF THE CITY OF CUYAHOGA FALLS TO CONFIRM THE BUILD–UP. THE CONTRACTOR WILL BE REQUIRED TO REMOVE ANY PAVEMENT SPECIFIED FOR REMOVAL UNDER ITEM 202 – PAVEMENT REMOVED REGARDLESS OF THE COMPOSITION WITHOUT ADDITIONAL COMPENSATION.

CALCULATED | CHECKED

EXISTING TYPICAL SECTIONS

SUM - 59-4.93

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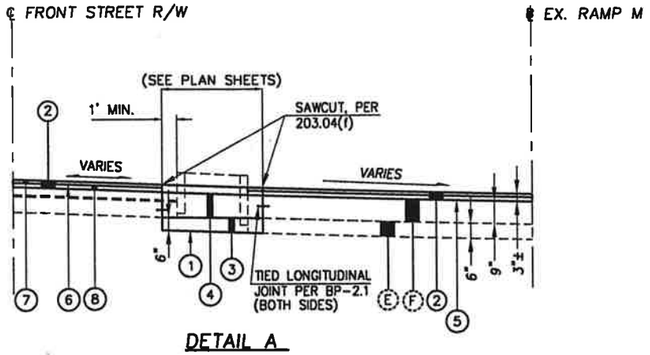
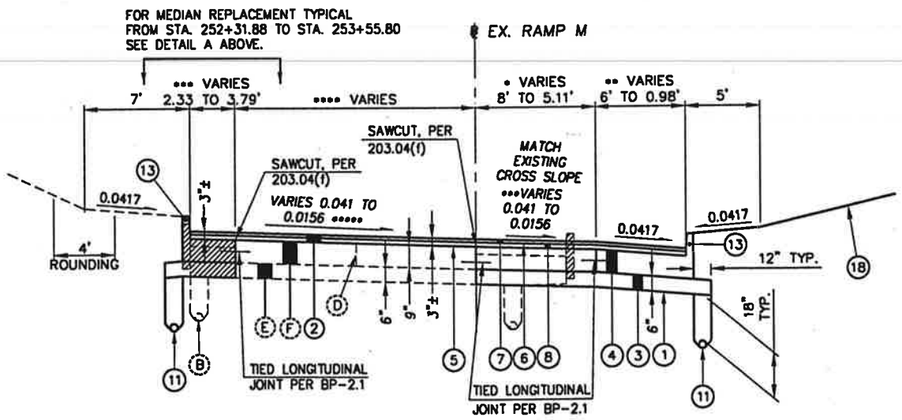


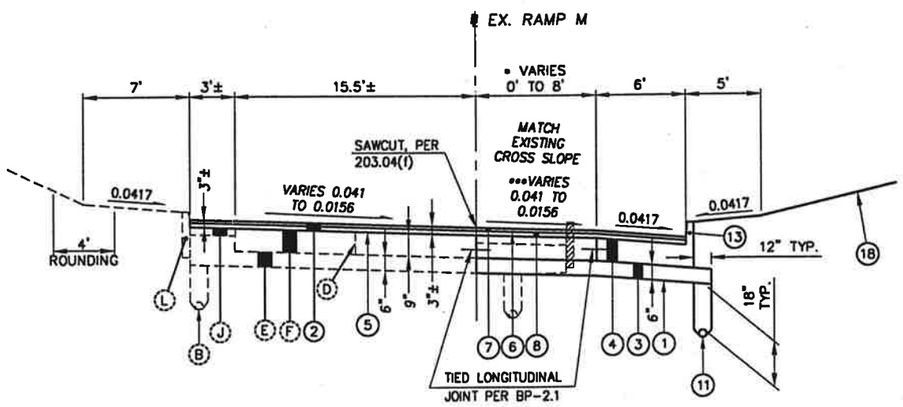
DETAIL A



PROPOSED TYPICAL SECTION – RAMP M (S.R. 8 NB OFF-RAMP TO FRONT ST.)

STA. 251+56.58 TO STA. 251+89.91, • 8.00', •• 6.00', ••• VARIES 2.33' TO 3.00', •••• VARIES 14.67' TO 14.00', L = 33.41'
STA. 251+89.91 TO STA. 251+99.38, • 8.00', •• VARIES 6.00' TO 5.92', ••• VARIES 2.12' TO 2.46', •••• VARIES 14.88' TO 14.62', L = 9.47'
STA. 251+99.38 TO STA. 252+16.07, • VARIES 8.00' TO 7.70' (ALONG CURVE), •• VARIES 5.92' TO 5.72', ••• VARIES 2.46' TO 3.09', •••• VARIES 14.62' TO 14.36', L = 16.69'
STA. 252+16.07 TO STA. 252+31.88, • VARIES 7.70' TO 7.42' (ALONG CURVE), •• VARIES 5.72' TO 5.28' (ALONG CURVE), ••• VARIES 3.09' TO 3.79', •••• VARIES 14.36' TO 14.02', L = 15.81'
STA. 252+31.88 TO STA. 253+55.80, • VARIES 7.42' TO 5.11' (ALONG CURVE), •• VARIES 5.28' TO 0.98' (ALONG CURVE), •••• VARIES 14.02' TO 13.15', L = 123.92'

••••• SEE PAVEMENT DETAILS FOR SUPERELEVATION TRANSITION



PROPOSED TYPICAL SECTION – RAMP M (S.R. 8 NB OFF-RAMP TO FRONT ST.)

STA. 250+50 TO STA. 251+50, • VARIES 0.00' TO 8.00', L = 100'
STA. 251+50 TO STA. 251+56.58, • 8.00', L = 6.58'

••• SEE PAVEMENT DETAILS FOR SUPERELEVATION TRANSITION

LEGEND

1. ITEM 203 – SUBGRADE COMPACTION
2. ITEM 254 – PAVEMENT PLANING, BITUMINOUS (Variable, 3" Average Depth)
3. ITEM 304 – AGGREGATE BASE (Depth As Shown)
4. ITEM 305 – 9" CONCRETE BASE, AS PER PLAN
5. ITEM 407 – TACK COAT (Applied @ 0.075 Gallons/S.Y.)
6. ITEM 407 – TACK COAT FOR INTERMEDIATE COURSE (Applied @ 0.040 Gallons/S.Y.)
7. ITEM 448 – 1 1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22
8. ITEM 448 – 1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22
9. ITEM 448 – ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22 (VARIABLE DEPTH LEVELING COURSE)
10. ITEM 451 – 9" REINFORCED CONCRETE PAVEMENT
11. ITEM 605 – 4" SHALLOW PIPE UNDERDRAINS WITH FABRIC WRAP, AS PER PLAN
12. ITEM 608 – 6" CONCRETE WALK
13. ITEM 830 – CURB, TYPE 2B, AS PER PLAN
14. ITEM 830 – CURB, TYPE 6
15. ITEM 830 – COMBINATION CURB & GUTTER, TYPE 2
16. ITEM 830 – CURB, TYPE 2A
17. NOT USED
18. ITEM 870 – SEEDING AND MULCHING
19. ITEM 301 – BITUMINOUS AGGREGATE BASE, PG64-22 (9")

- (A) 4" CONCRETE SIDEWALK
- (B) 4" UNDERDRAIN
- (C) 6" INTEGRAL CONCRETE CURB
- (D) LONGITUDINAL JOINT
- (E) AGGREGATE SUBBASE (Depth As Shown)
- (F) REINFORCED CONCRETE PAVEMENT (Depth As Shown)
- (G) 1" SAND
- (H) BRICK (Thickness As Shown)
- (J) ASPHALT CONCRETE (Depth As Shown)
- (K) CONCRETE CURB & GUTTER
- (L) CONCRETE CURB, TYPE 6
- REMOVAL ITEMS

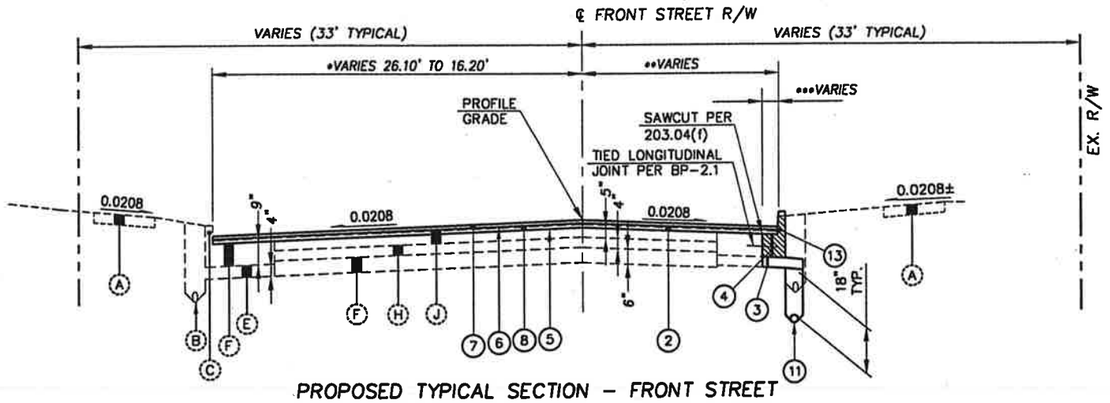
CALCULATED | CHECKED

TYPICAL SECTIONS

SUM - 59-4.93

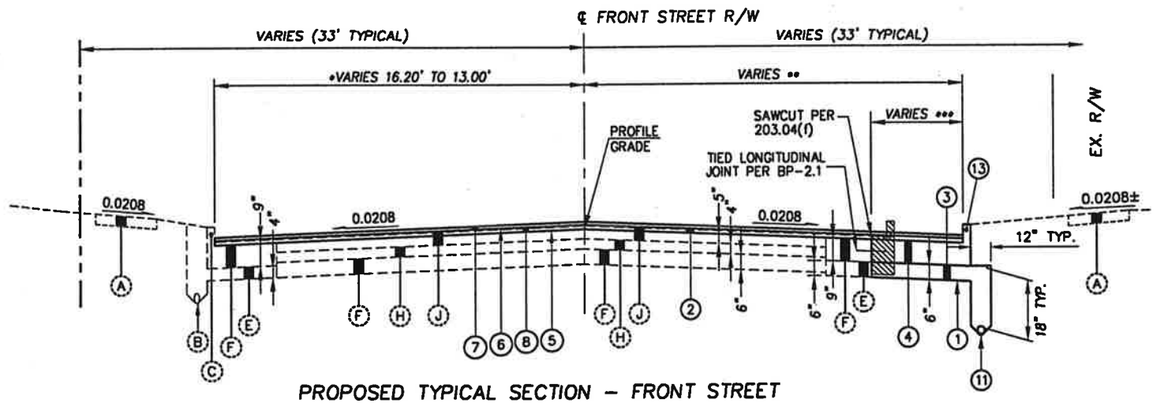
J:\Proj\7036100\ROADWAY\70361GYC.DWG User: jon81152 Oct 15, 2002 - 4:50pm

FOR MEDIAN REPLACEMENT TYPICAL
FROM STA. 29+77.46 TO STA. 31+06.57
SEE DETAIL A, SHEET GYC.



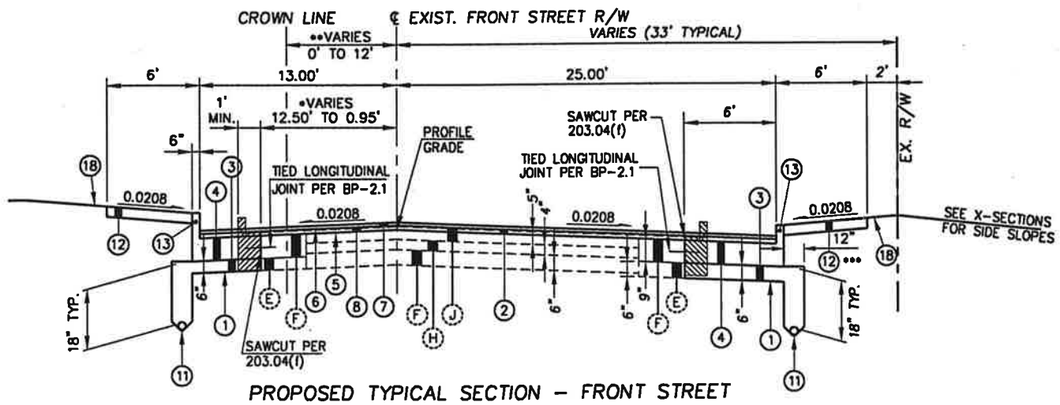
PROPOSED TYPICAL SECTION – FRONT STREET

STA. 28+81.62 TO STA. 29+77.46, •VARIES 26.10' TO 21.38', ••VARIES 12.00' TO 8.23',
•••VARIES 1.00' TO 4.77', L = 95.84'
STA. 29+77.46 TO STA. 31+06.57, •VARIES 21.38' TO 16.20', ••VARIES 8.23 TO 3.72'
•••SEE MEDIAN REPLACEMENT, DETAIL A, L = 129.11



PROPOSED TYPICAL SECTION – FRONT STREET

STA. 31+06.57 TO STA. 31+40.78, •VARIES 16.20 TO 14.90, ••VARIES 25.98 TO 25.00, •••VARIES 6.88' TO 6.00', L = 34.21'
STA. 31+40.78 TO STA. 31+84.38, •VARIES 14.90' TO 13.00', ••25.00', •••6.00', L = 43.62



PROPOSED TYPICAL SECTION – FRONT STREET

STA. 31+84.38 TO STA. 34+43.99, •VARIES 13' TO 1.45' (ALONG CURVE), ••VARIES 0' TO 12', ••• SEE PLAN SHEET FOR SIDEWALK LOCATIONS, L = 259.61

LEGEND

1. ITEM 203 – SUBGRADE COMPACTION
2. ITEM 254 – PAVEMENT PLANING, BITUMINOUS (Variable, 3" Average Depth)
3. ITEM 304 – AGGREGATE BASE (Depth As Shown)
4. ITEM 305 – 9" CONCRETE BASE, AS PER PLAN
5. ITEM 407 – TACK COAT (Applied @ 0.075 Gallons/S.Y.)
6. ITEM 407 – TACK COAT FOR INTERMEDIATE COURSE (Applied @ 0.040 Gallons/S.Y.)
7. ITEM 448 – 1 1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22
8. ITEM 448 – 1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22
9. ITEM 448 – ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22 (VARIABLE DEPTH LEVELING COURSE)
10. ITEM 451 – 9" REINFORCED CONCRETE PAVEMENT
11. ITEM 605 – 4" SHALLOW PIPE UNDERDRAINS WITH FABRIC WRAP, AS PER PLAN
12. ITEM 608 – 6" CONCRETE WALK
13. ITEM 830 – CURB, TYPE 2B, AS PER PLAN
14. ITEM 830 – CURB, TYPE 6
15. ITEM 830 – COMBINATION CURB & GUTTER, TYPE 2
16. ITEM 830 – CURB, TYPE 2A
17. NOT USED
18. ITEM 870 – SEEDING AND MULCHING
19. ITEM 301 – BITUMINOUS AGGREGATE BASE, PG64-22 (9")

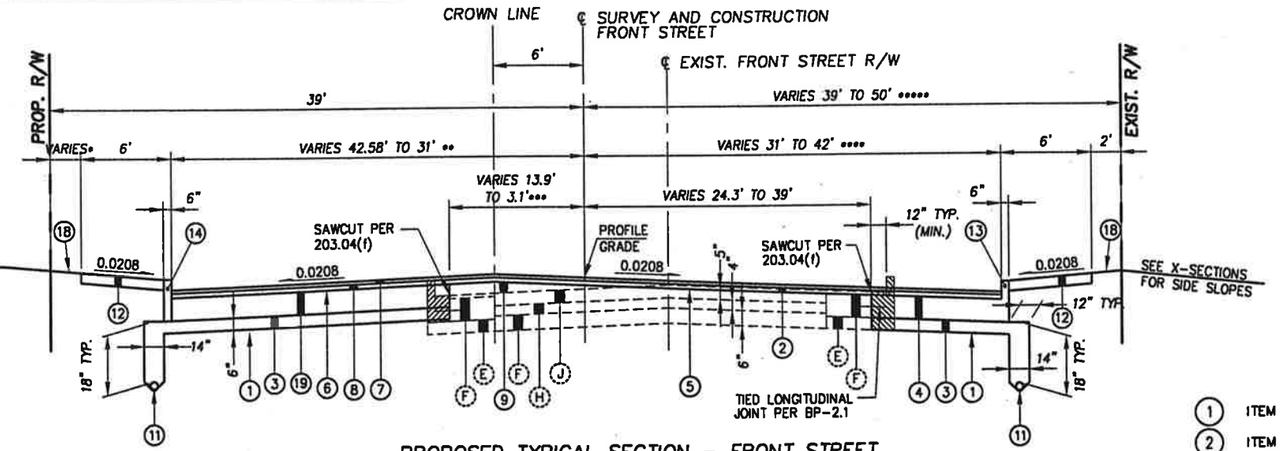
- (A) 4" CONCRETE SIDEWALK
- (B) 4" UNDERDRAIN
- (C) 6" INTEGRAL CONCRETE CURB
- (D) LONGITUDINAL JOINT
- (E) AGGREGATE SUBBASE (Depth As Shown)
- (F) REINFORCED CONCRETE PAVEMENT (Depth As Shown)
- (G) 1" SAND
- (H) BRICK (Thickness As Shown)
- (J) ASPHALT CONCRETE (Depth As Shown)
- (K) CONCRETE CURB & GUTTER
- (L) CONCRETE CURB, TYPE 6
- REMOVAL ITEMS

CALCULATED | CHECKED

TYPICAL SECTIONS

SUM - 59-4.93

6
171



PROPOSED TYPICAL SECTION – FRONT STREET

STA. 34+43.99 TO STA. 43+35.80, L = 891.81

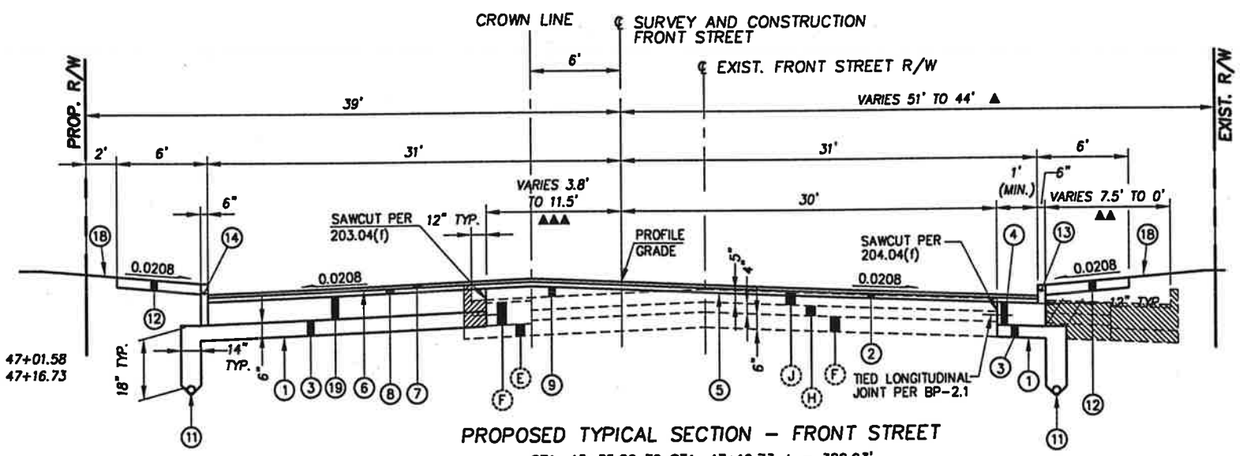
* 2' STA. 35+31.86 TO STA. 37+24.97
VARIES AT BAILEY; SEE RIGHT OF WAY PLANS
3' STA. STA. 39+34.81 TO STA. 40+56.25
1' STA. 40+56.25 TO STA. 40+86.90
3' STA. 41+91.21 TO STA. 42+51.33

** VARIES 42.58' TO 31' STA. 34+43.99 TO STA. 35+31.86
31' STA. 35+31.85 TO STA. 43+35.80

*** VARIES 13.9' TO 13.2' STA. 35+31.86 TO STA. 37+20.60
VARIES 13.2' TO 2.35' STA. 37+20.60 TO STA. 39+39.79
VARIES 2.35' TO 4' STA. 39+39.79 TO STA. 43+35.80

**** 31' STA. 34+43.99 TO STA. 38+50.00
VARIES 31' TO 42' STA. 38+50.00 TO STA. 39+00
42' STA. 39+00 TO STA. 43+35.80

***** 39' STA. 34+43.99 TO STA. 37+24.97
VARIES 39' TO 50' STA. 37+24.97 TO STA. 39+34.81
50' STA. 39+34.81 TO STA. 43+35.80



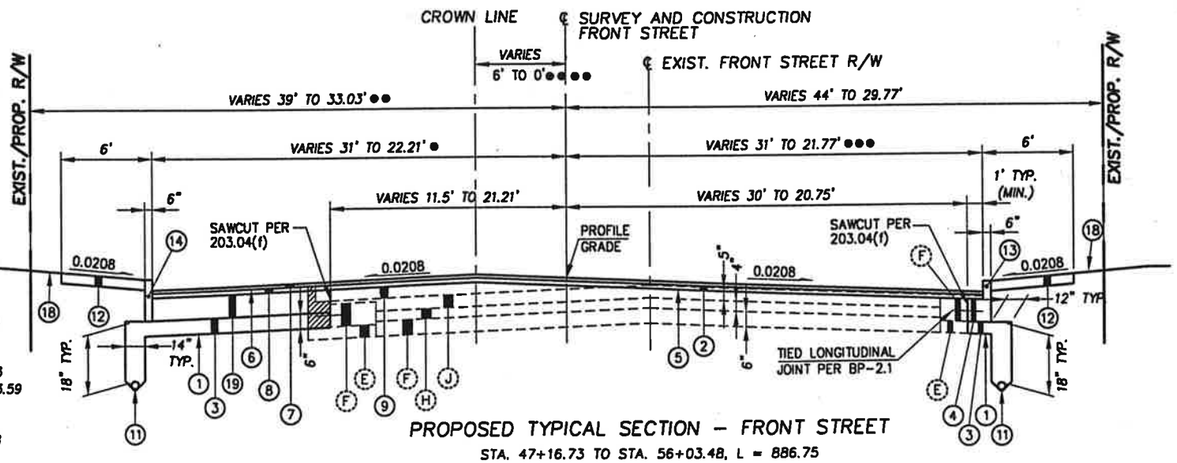
PROPOSED TYPICAL SECTION – FRONT STREET

STA. 43+35.80 TO STA. 47+16.73, L = 380.93'

▲ 51' STA. 43+35.80 TO STA. 45+55.44
VARIES 51' TO 42.90' STA. 45+55.44 TO STA. 47+01.58
VARIES 42.90' TO 44' STA. 47+01.58 TO STA. 47+16.73

▲▲ 7.5' STA. 43+35.80 TO STA. 45+55.44
7.5' TO 0' STA. 45+55.44 TO STA. 47+16.73

▲▲▲ 4' STA. 43+35.80 TO STA. 45+55.44
VARIES 3.8' TO 11.5' STA. 45+55.44 TO STA. 47+16.73



PROPOSED TYPICAL SECTION – FRONT STREET

STA. 47+16.73 TO STA. 56+03.48, L = 886.75

● 31' STA. 47+16.73 TO STA. 53+77.39
VARIES 31' TO 22.21' STA. 53+77.39 TO STA. 56+03.59

●● 39' STA. 47+16.73 TO STA. 53+77.39
VARIES 39' TO 33.03' STA. 53+77.39 TO STA. 55+67.73
VARIES 33.03' TO 42.80' STA. 55+67.73 TO STA. 56+03.59

●●● 31' STA. 47+16.73 TO STA. 53+77.26
VARIES 31' TO 21.77' STA. 53+77.26 TO STA. 56+03.48

●●●● 6' STA. 47+16.73 TO STA. 53+77.26
VARIES 6' TO 0' STA. 53+77.26 TO STA. 56+03.48

LEGEND

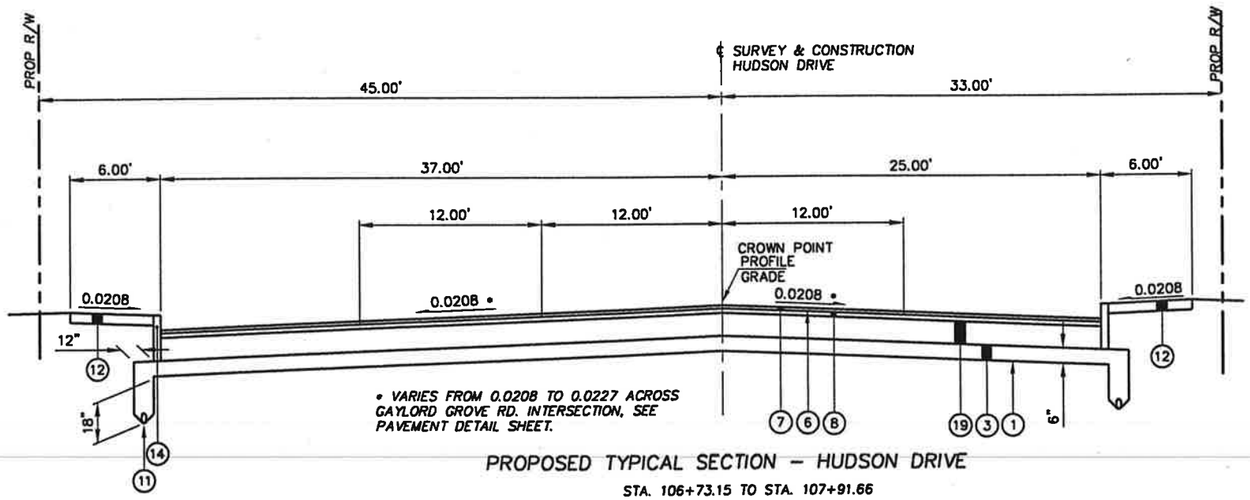
1. ITEM 203 – SUBGRADE COMPACTION
2. ITEM 254 – PAVEMENT PLANING, BITUMINOUS (Variable, 3" Average Depth)
3. ITEM 304 – AGGREGATE BASE (Depth As Shown)
4. ITEM 305 – 9" CONCRETE BASE, AS PER PLAN
5. ITEM 407 – TACK COAT (Applied @ 0.075 Gallons/S.Y.)
6. ITEM 407 – TACK COAT FOR INTERMEDIATE COURSE (Applied @ 0.040 Gallons/S.Y.)
7. ITEM 448 – 1 1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22
8. ITEM 448 – 1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22
9. ITEM 448 – ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22 (VARIABLE DEPTH LEVELING COURSE)
10. ITEM 451 – 9" REINFORCED CONCRETE PAVEMENT
11. ITEM 605 – 4" SHALLOW PIPE UNDERDRAINS WITH FABRIC WRAP, AS PER PLAN
12. ITEM 608 – 6" CONCRETE WALK
13. ITEM 830 – CURB, TYPE 2B, AS PER PLAN
14. ITEM 830 – CURB, TYPE 6
15. ITEM 830 – COMBINATION CURB & GUTTER, TYPE 2
16. ITEM 830 – CURB, TYPE 2A
17. NOT USED
18. ITEM 870 – SEEDING AND MULCHING
19. ITEM 301 – BITUMINOUS AGGREGATE BASE, PG64-22 (9")

- (A) 4" CONCRETE SIDEWALK
- (B) 4" UNDERDRAIN
- (C) 6" INTEGRAL CONCRETE CURB
- (D) LONGITUDINAL JOINT
- (E) AGGREGATE SUBBASE (Depth As Shown)
- (F) REINFORCED CONCRETE PAVEMENT (Depth As Shown)
- (G) 1" SAND
- (H) BRICK (Thickness As Shown)
- (J) ASPHALT CONCRETE (Depth As Shown)
- (K) CONCRETE CURB & GUTTER
- (L) CONCRETE CURB, TYPE 6
- ▨ REMOVAL ITEMS

CALCULATED | CHECKED

TYPICAL SECTIONS

SUM - 59-4.93



PROPOSED TYPICAL SECTION – HUDSON DRIVE

STA. 106+73.15 TO STA. 107+91.66

LEGEND

1. ITEM 203 – SUBGRADE COMPACTION
2. ITEM 254 – PAVEMENT PLANING, BITUMINOUS (Variable, 3" Average Depth)
3. ITEM 304 – AGGREGATE BASE (Depth As Shown)
4. ITEM 305 – 9" CONCRETE BASE, AS PER PLAN
5. ITEM 407 – TACK COAT (Applied @ 0.075 Gallons/S.Y.)
6. ITEM 407 – TACK COAT FOR INTERMEDIATE COURSE (Applied @ 0.040 Gallons/S.Y.)
7. ITEM 448 – 1 1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22
8. ITEM 448 – 1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22
9. ITEM 448 – ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22 (VARIABLE DEPTH LEVELING COURSE)
10. ITEM 451 – 9" REINFORCED CONCRETE PAVEMENT
11. ITEM 605 – 4" SHALLOW PIPE UNDERDRAINS WITH FABRIC WRAP, AS PER PLAN
12. ITEM 608 – 6" CONCRETE WALK
13. ITEM 830 – CURB, TYPE 2B, AS PER PLAN
14. ITEM 830 – CURB, TYPE 6
15. ITEM 830 – COMBINATION CURB & GUTTER, TYPE 2
16. ITEM 830 – CURB, TYPE 2A
17. NOT USED
18. ITEM 870 – SEEDING AND MULCHING
19. ITEM 301 – BITUMINOUS AGGREGATE BASE, PG64-22 (9")

- (A) 4" CONCRETE SIDEWALK
- (B) 4" UNDERDRAIN
- (C) 6" INTEGRAL CONCRETE CURB
- (D) LONGITUDINAL JOINT
- (E) AGGREGATE SUBBASE (Depth As Shown)
- (F) REINFORCED CONCRETE PAVEMENT (Depth As Shown)
- (G) 1" SAND
- (H) BRICK (Thickness As Shown)
- (J) ASPHALT CONCRETE (Depth As Shown)
- (K) CONCRETE CURB & GUTTER
- (L) CONCRETE CURB, TYPE 6

▨ REMOVAL ITEMS

CALCULATED | CHECKED

TYPICAL SECTIONS

SUM - 59-4.93

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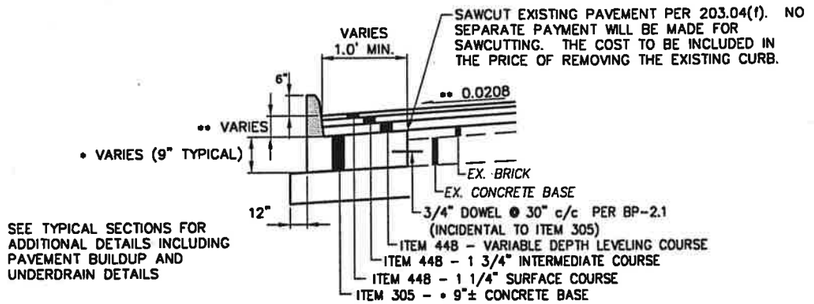
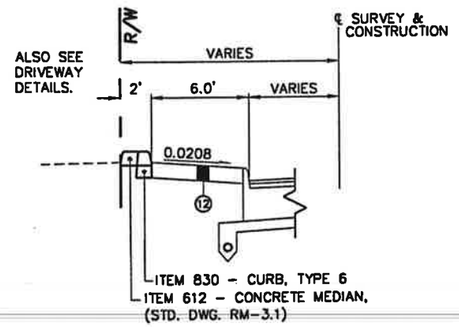


SEE TYPICAL SECTIONS FOR ADDITIONAL DETAILS INCLUDING PAVEMENT BUILDUP AND UNDERDRAIN DETAILS

• MATCH THE BRICK PLUS CONCRETE THICKNESS ADJACENT TO BRICK & CONCRETE SECTIONS. MATCH CONCRETE THICKNESS WHERE ABUTTING CONCRETE. PAYMENT TO BE MADE AT UNIT PRICE BID FOR 9" CONCRETE BASE.

•• MATCH THE SLOPE OF THE CONCRETE BASE TO THE SLOPE OF THE PROPOSED PAVEMENT. VARY THE HEIGHT OF THE CURB STEM AS NECESSARY TO MAINTAIN A 6" REVEAL.

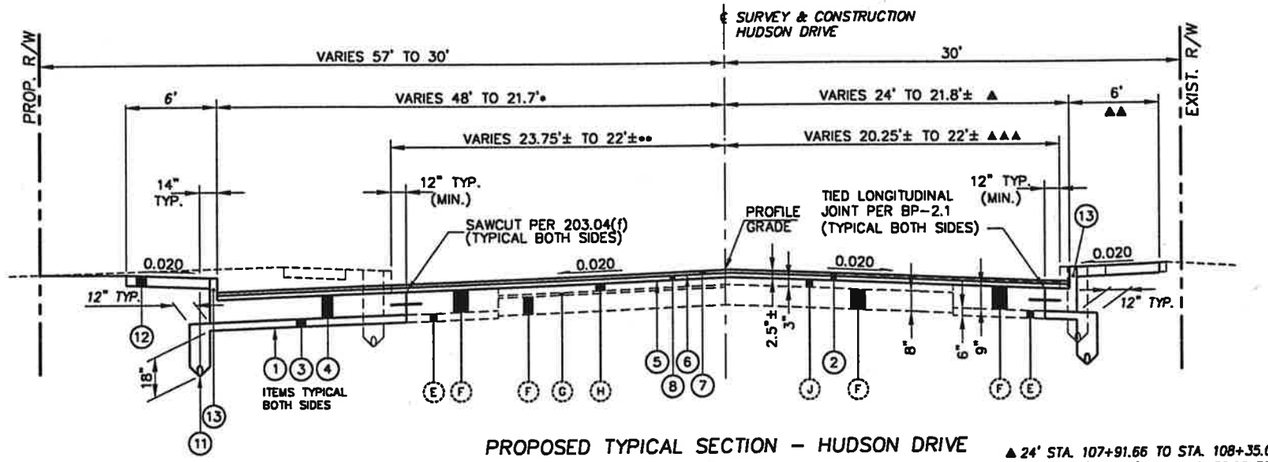
CURB, TYPE 2B, AS PER PLAN



ALSO SEE DRIVEWAY DETAILS.

SEE PLAN SHEETS FOR CURB AND MEDIAN LOCATIONS AND QUANTITIES

CONC. CURB/MEDIAN DETAIL



PROPOSED TYPICAL SECTION – HUDSON DRIVE

STA. 107+91.66 TO STA. 112+00.00

* 48' STA. 107+91.66 TO STA. 108+10.00
VARIES 48' TO 34' STA. 108+10.00 TO STA. 108+60.00
VARIES 34' TO 21.7' STA. 108+60.00 TO STA. 112+00.00

•• VARIES 23.75' TO 22.0' STA. 107+00.29 TO STA. 107+60.61 BK./107+60.47 AHD.

▲ 24' STA. 107+91.66 TO STA. 108+35.00
VARIES 24' TO 23' STA. 108+35.00 TO STA. 108+50.00
23' STA. 108+50.00 TO STA. 111+70.00
VARIES 23' TO 21.8±' STA. 111+70.00 TO STA. 112+00.00

▲▲ 6' STA. 107+91.66 TO STA. 111+70.00
4.00' WALK WITH 2.00' TREE LAWN
STA. 111+70.00 TO STA. 112+00.00

▲▲▲ VARIES 20.25±' TO 22.0±' STA. 107+91.66 TO STA. 107+60.61 BK./107+60.47 AHD.

LEGEND

1. ITEM 203 – SUBGRADE COMPACTION
2. ITEM 254 – PAVEMENT PLANING, BITUMINOUS (Variable, 3" Average Depth)
3. ITEM 304 – AGGREGATE BASE (Depth As Shown)
4. ITEM 305 – 9" CONCRETE BASE, AS PER PLAN
5. ITEM 407 – TACK COAT (Applied @ 0.075 Gallons/S.Y.)
6. ITEM 407 – TACK COAT FOR INTERMEDIATE COURSE (Applied @ 0.040 Gallons/S.Y.)
7. ITEM 448 – 1 1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22
8. ITEM 448 – 1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22
9. ITEM 448 – ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22 (VARIABLE DEPTH LEVELING COURSE)
10. ITEM 451 – 9" REINFORCED CONCRETE PAVEMENT
11. ITEM 605 – 4" SHALLOW PIPE UNDERDRAINS WITH FABRIC WRAP, AS PER PLAN
12. ITEM 608 – 6" CONCRETE WALK
13. ITEM 830 – CURB, TYPE 2B, AS PER PLAN
14. ITEM 830 – CURB, TYPE 6
15. ITEM 830 – COMBINATION CURB & GUTTER, TYPE 2
16. ITEM 830 – CURB, TYPE 2A
17. NOT USED
18. ITEM 870 – SEEDING AND MULCHING
19. ITEM 301 – BITUMINOUS AGGREGATE BASE, PG64-22 (9")

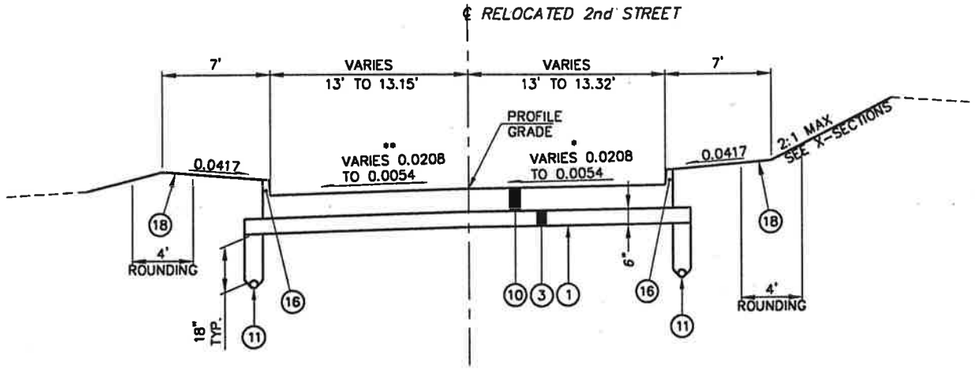
- (A) 4" CONCRETE SIDEWALK
- (B) 4" UNDERDRAIN
- (C) 6" INTEGRAL CONCRETE CURB
- (D) LONGITUDINAL JOINT
- (E) AGGREGATE SUBBASE (Depth As Shown)
- (F) REINFORCED CONCRETE PAVEMENT (Depth As Shown)
- (G) 1" SAND
- (H) BRICK (Thickness As Shown)
- (J) ASPHALT CONCRETE (Depth As Shown)
- (K) CONCRETE CURB & GUTTER
- (L) CONCRETE CURB, TYPE 6

▨ REMOVAL ITEMS

CALCULATED | CHECKED

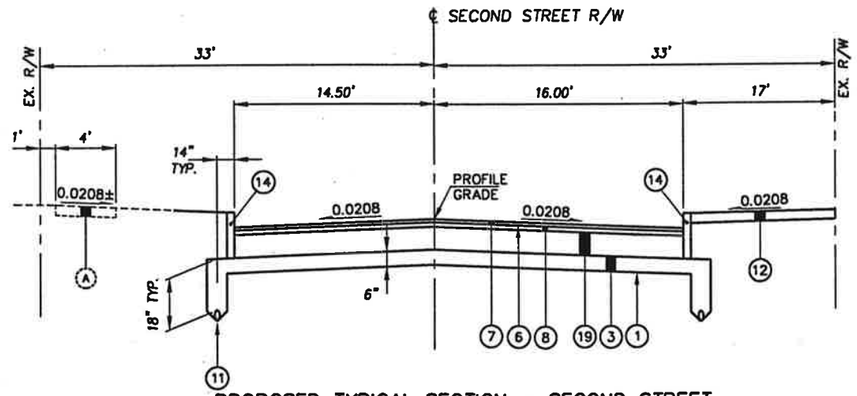
TYPICAL SECTIONS

SUM - 59-493



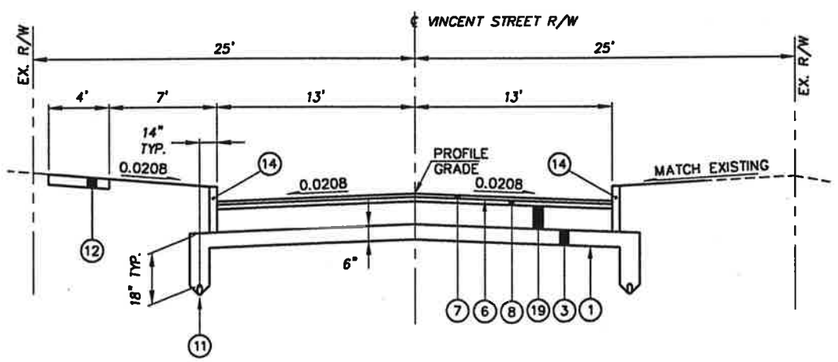
PROPOSED TYPICAL SECTION – RELOCATED SECOND STREET

STA. 51+53.24 TO STA. 51+90.00, •• –0.0156, • VARIES 0.0054 TO 0.0156
STA. 51+90.00 TO STA. 52+08.76, •• VARIES –0.0156 TO –0.0208, • VARIES 0.0156 TO 0.0208
STA. 52+08.76 TO STA. 53+16.50, •• –0.0208, • 0.0208



PROPOSED TYPICAL SECTION – SECOND STREET

STA. 49+00 TO STA. 49+70.71



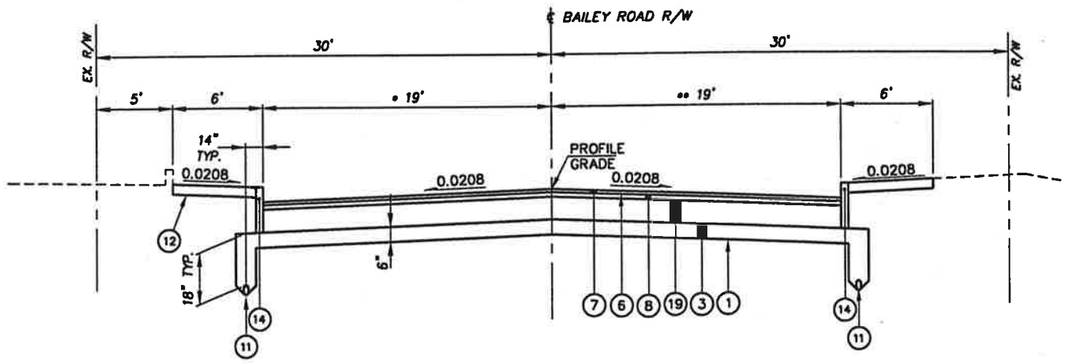
PROPOSED TYPICAL SECTION – VINCENT STREET

STA. 9+17.18 TO STA. 9+53.80

LEGEND

1. ITEM 203 – SUBGRADE COMPACTION
2. ITEM 254 – PAVEMENT PLANING, BITUMINOUS (Variable, 3" Average Depth)
3. ITEM 304 – AGGREGATE BASE (Depth As Shown)
4. ITEM 305 – 9" CONCRETE BASE, AS PER PLAN
5. ITEM 407 – TACK COAT (Applied @ 0.075 Gallons/S.Y.)
6. ITEM 407 – TACK COAT FOR INTERMEDIATE COURSE (Applied @ 0.040 Gallons/S.Y.)
7. ITEM 448 – 1 1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64–22
8. ITEM 448 – 1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64–22
9. ITEM 448 – ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64–22 (VARIABLE DEPTH LEVELING COURSE)
10. ITEM 451 – 9" REINFORCED CONCRETE PAVEMENT
11. ITEM 605 – 4" SHALLOW PIPE UNDERDRAINS WITH FABRIC WRAP, AS PER PLAN
12. ITEM 608 – 6" CONCRETE WALK
13. ITEM 830 – CURB, TYPE 2B, AS PER PLAN
14. ITEM 830 – CURB, TYPE 6
15. ITEM 830 – COMBINATION CURB & GUTTER, TYPE 2
16. ITEM 830 – CURB, TYPE 2A
17. NOT USED
18. ITEM 870 – SEEDING AND MULCHING
19. ITEM 301 – BITUMINOUS AGGREGATE BASE, PG64–22 (9")

- (A) 4" CONCRETE SIDEWALK
- (B) 4" UNDERDRAIN
- (C) 6" INTEGRAL CONCRETE CURB
- (D) LONGITUDINAL JOINT
- (E) AGGREGATE SUBBASE (Depth As Shown)
- (F) REINFORCED CONCRETE PAVEMENT (Depth As Shown)
- (G) 1" SAND
- (H) BRICK (Thickness As Shown)
- (J) ASPHALT CONCRETE (Depth As Shown)
- (K) CONCRETE CURB & GUTTER
- (L) CONCRETE CURB, TYPE 6



PROPOSED TYPICAL SECTION – BAILEY ROAD

STA. 8+00 TO STA. 8+50, • VARIES 17.50' TO 19.00', •• VARIES 15.50' TO 19.00'
STA. 8+50 TO STA. 9+57.05, • 19.00', •• 19.00'

CALCULATED | CHECKED

TYPICAL SECTIONS

SUM - 59-4.93

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SPECIFICATIONS — GENERAL

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION, DATED JANUARY 1, 1997, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PLANS AND PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

UTILITIES

LISTED BELOW ARE ALL UTILITIES LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS TOGETHER WITH THEIR RESPECTIVE OWNERS:

ELECTRIC:

OHIO EDISON COMPANY
1910 W. MARKET STREET
AKRON, OHIO 44313
ATTN: MR. DAVID MILLER
PHONE: 330-384-4720

CUYAHOGA FALLS ELECTRIC SYSTEM
2550 BAILEY ROAD
CUYAHOGA FALLS, OHIO 44221
ATTN: MR. ROBERT BYE
SUPERINTENDENT
PHONE: (330) 971-8046

GAS:

EAST OHIO GAS CO.
2100 EASTWOOD AVE.
AKRON, OHIO 44305
ATTN: MR. GEORGE TURNER
PHONE: 330-798-7104

CABLE:

TIME WARNER CABLE
1655 BRITTAIN ROAD
AKRON, OHIO 44310-3998
ATTN: MR. CHARLIE TONEY
DESIGN ENGINEER
PHONE: (330) 633-9203

TRAFFIC SIGNALS:

CITY OF CUYAHOGA FALLS
DIVISION OF ENGINEERING
2310 SECOND STREET
CUYAHOGA FALLS, OHIO 44221
ATTN: MR. PETER BELL
ASSISTANT CITY ENGINEER
PHONE: (330) 971-8180

WATER & SANITARY SEWER:

CITY OF CUYAHOGA FALLS
DIVISION OF ENGINEERING
2310 SECOND STREET
CUYAHOGA FALLS, OHIO 44221
ATTN: MR. PETER BELL
ASSISTANT CITY ENGINEER
PHONE: (330) 971-8180

TELEPHONE:

AMERITECH
50 W. BOWERY ST., 4TH FLOOR
AKRON, OHIO 44308
ATTN: MR. RICK DELAGRANGE
PHONE: 330-384-8057

RAIL ROAD

METRO REGIONAL TRANSIT AUTHORITY
416 KENMORE BLVD.
AKRON, OH 44301
PHONE: (330) 762-7267

FIBER OPTIC CABLES

QWEST
13952 DENVER W. PARKWAY, BLDG. 53
SUITE 200
GOLDEN, CO 80401
ATTN: MR. KEVIN FINCH
PHONE: (216) 272-3115

LDDS WORLD COM
120 RAVINE ST.
AKRON, OH 44303
ATTN: MR. AL GUEST
PHONE: (330) 253-8267

AT&T
3833 WEYMOUTH ROAD
MEDINA, OH 44256
ATTN: MR. ANDY ELLIS
PHONE: (216) 237-8410

THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS AS REQUIRED BY SECTION 153.64 OF O.R.C.

CONTINGENCY QUANTITIES

THE CONTRACTOR SHALL NOT ORDER MATERIALS OR PERFORM WORK FOR ITEMS DESIGNATED BY PLAN NOTE TO BE USED AS DIRECTED BY THE ENGINEER UNLESS AUTHORIZED BY THE ENGINEER. THE ACTUAL WORK LOCATIONS AND QUANTITIES USED FOR SUCH ITEMS SHALL BE INCORPORATED INTO THE FINAL CHANGE ORDER GOVERNING COMPLETION OF THIS PROJECT.

ELEVATION DATUM

ALL ELEVATIONS ARE BASED ON U.S.G.S. DATUM.

ROUNDING

THE ROUNDING AT SLOPE BREAKPOINTS SHOWN ON THE TYPICAL SECTIONS APPLY TO ALL CROSS-SECTIONS EVEN THOUGH OTHERWISE SHOWN.

CONVERSION OF STANDARD CONSTRUCTION DRAWINGS

THE METRIC STANDARD DRAWINGS REFERENCED IN THESE [LAN SHALL BE CONVERTED TO ENGLISH UNITS USING THE SI (METRIC) TO ENGLISH CONVERSION FACTORS PROVIDED IN SECTION 109.02 OF THE 2002 CONSTRUCTION AND MATERIALS SPECIFICATIONS. CONVERSIONS SHALL BE APPROPRIATELY PRECISE AND SHALL REFLECT STANDARD INDUSTRY ENGLISH VALUES WHERE SUITABLE.

ROADWAY

WORK LIMITS

THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. THE INSTALLATION AND OPERATION OF ALL TEMPORARY TRAFFIC CONTROL AND TEMPORARY TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS SHALL BE PROVIDED BY THE CONTRACTOR WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

REMOVAL OF TREES OR STUMPS

ALL TREES AND STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE CONSTRUCTION LIMITS SHALL BE REMOVED UNDER THE LUMP SUM BID FOR ITEMS 201, CLEARING AND GRUBBING. THE FOLLOWING IS AN APPROXIMATE ESTIMATE OF THE NUMBER OF TREES AND STUMPS TO BE REMOVED.

SIZES	No. TREES	No. STUMPS	TOTAL
18"	1	0	1

TREES THAT HAVE STEMS LARGER THE NINE (9) INCHES AT BREAST HEIGHT WITH LOOSE OR PEELING BARK OR WITH CAVITIES GREATER THAN 3 TO 4 INCHES IN SIZE ARE CONSIDERED TO BE SUITABLE HABITAT FOR THE ENDANGERED INDIANA BAT (Myotis Sodalis). ALL TREES MEETING THESE CHARACTERISTICS THAT NEED TO BE REMOVED WILL BE CUT BETWEEN SEPTEMBER 15 AND APRIL 15 WHILE THE BATS HAVE MIGRATED SOUTH.

PAVED OVER MANHOLES

WHEN MANHOLES THAT ARE ENCOUNTERED THAT HAVE BEEN PAVED OVER THEY WILL BE ADJUSTED OR RECONSTRUCTED TO GRADE. THE FOLLOWING ESTIMATED QUANTITY FOR THIS ITEM HAS BEEN PROVIDED IN THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER.

ITEM 604 - MANHOLE, RECONSTRUCTED TO GRADE 5 EACH
ITEM 604 - MANHOLE, ADJUSTED TO GRADE 5 EACH

ITEM 604 - MONUMENT ASSEMBLY, AS PER PLAN

MONUMENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH DETAILS AS SHOWN IN STANDARD DRAWING MC-1 AND AT THE LOCATIONS SHOWN ON THE PLAN SHEETS. CASTINGS SHALL BE EAST JORDAN 8365 OR EQUAL.

SOFT SUBGRADE

THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER IN AREAS WHERE SOFT SUBGRADE OF EMBANKMENT FOUNDATION IS ENCOUNTERED.

ITEM 203 - EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION 100 CU. YDS.

ITEM 203 - EMBANKMENT 100 CU. YDS.

ITEM 203 - PROOF ROLLING

THE FOLLOWING ESTIMATE QUANTITY FOR THIS ITEM HAS BEEN PROVIDED IN THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER.

AREA OF SUBGRADE COMPACTION (in s.y.) / (3000 s.y./hour)

ITEM 203 - PROOF ROLLING 8 HOUR

ITEM SPECIAL - WORK INVOLVING POTENTIAL PETROLEUM-CONTAMINATED SOILS

ENVIRONMENTAL STUDIES HAVE SHOWN THAT PETROLEUM-CONTAMINATED SOILS MAY BE ENCOUNTERED DURING CONSTRUCTION ACTIVITIES ADJACENT TO HOLLAND OIL. IN THE EVENT PETROLEUM-CONTAMINATED SOILS ARE ENCOUNTERED, THE CONTRACTOR SHALL MANAGE THIS MATERIAL ACCORDING TO THE FOLLOWING NOTES:

IF PETROLEUM-CONTAMINATED SOILS ENCOUNTERED CANNOT BE REUSED ON THE PROJECT SITE, THEN THIS MATERIAL SHALL BE PROPERLY TRANSPORTED AND DISPOSED OF IN A LICENSED (BY THE LOCAL HEALTH DEPARTMENT) AND PERMITTED (BY THE OHIO ENVIRONMENTAL PROTECTION AGENCY) SOLID WASTE FACILITY. IF REQUIRED BY THE SOLID WASTE FACILITY, THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONDUCTING SAMPLING AND ANALYSIS OF THIS MATERIAL.

THE CONTRACTOR SHALL FURNISH ALL THE LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO PROPERLY HANDLE, STORE (IF NECESSARY), TEST (FOR DISPOSAL, IF APPLICABLE), TRANSPORT, AND DISPOSE OF REGULATED MATERIALS, INCLUDING ANY REQUIRED PERMITS, APPROVALS, OR FEES WITHIN THE LIMITS IDENTIFIED ABOVE. PAYMENT FOR THIS WORK SHALL BE MADE AT THE CONTRACT PRICE BID PER TON. THE BASIS FOR CONVERSION FROM CUBIC YARD TO TON IS 1.5 TON/CUBIC YARD. THE FOLLOWING ESTIMATED CONTINGENCY QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE WORK NOTED ABOVE:

ITEM SPECIAL - WORK INVOLVING PETROLEUM CONTAMINATED SOIL 10 C.Y.

ITEM SPECIAL - RETAINING WALL MISC.: DECORATIVE CONCRETE BLOCK RETAINING WALL

THE CONTRACTOR SHALL CONSTRUCT A RETAINING WALL AT THE LOCATIONS SHOWN ON THE PLANS AND AS DIRECTED BY THE ENGINEER. THE RETAINING WALL SHALL BE A DECORATIVE CONCRETE BLOCK AS MANUFACTURER BY VERSA-LOK, P.O. BOX 9220, NORTH ST. PAUL, MN 55109, OR APPROVED EQUAL. THE MANUFACTURER, TYPE, AND COLOR SHALL BE APPROVED BY THE ENGINEER. THE WALLS SHALL BE INSTALLED PER THE MANUFACTURERS SPECIFICATIONS.

THE UNIT PRICE BID FOR ITEM SPECIAL - RETAINING WALL MISC.: DECORATIVE CONCRETE BLOCK RETAINING WALL WILL BE PAID BY THE NUMBER OF SQUARE FEET COMPLETED AS MEASURED BY THE ENGINEER.

THE UNIT PRICE BID FOR ITEM SPECIAL - RETAINING WALL MISC.: DECORATIVE CONCRETE BLOCK RETAINING WALL SHALL BE FULL COMPENSATION FOR ALL MATERIALS, LABOR, AND EQUIPMENT INCLUDING EXCAVATION AND BACKFILL REQUIRED TO MAKE THIS ITEM COMPLETE.

ITEM SPECIAL - ROADWAY MISC.: RUBBERIZED RAILROAD CROSSING

THIS ITEM SHALL INCLUDE THE INSTALLATION OF A RUBBERIZED RAILROAD CROSSING AT THE LOCATION SHOWN ON THE PLANS IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS

THE CROSSING SHALL BE AN "OMNI FULL-DEPTH HEAVY DUTY" RUBBERIZED CROSSING AS MANUFACTURED BY:

OMNI GRADE CROSSING SYSTEMS
975 SE SANDY BLVD.
PORTLAND, OR 97214
PHONE: 503-230-8034
FAX: 503-230-9002

OR APPROVED EQUAL.

THE CONTRACTOR SHALL INSTALL THE CROSSING ON THE EXISTING TIES AND RAILS. THE CONTRACTOR SHALL VERIFY THE EXISTING RAIL GAUGES AND PANEL WIDTHS PRIOR TO ORDERING MATERIALS IN ORDER TO VERIFY THE SIZE OF CROSSING SECTIONS.

ALL LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THIS ITEM SHALL BE INCLUDED IN THE LINEAR FOOT COST BID FOR ITEM SPECIAL - ROADWAY MISC.: RUBBERIZED RAILROAD CROSSING. THIS INCLUDES CLEANING AND PREPARATION OF THE TRACK BED, FILLING AND COMPACTING OF VOIDS IN THE BALLAST, LEVELING OF TIES, ADJUSTMENT OF RAILS, SUPPLYING AND INSTALLING ALL RUBBER SECTIONS, FASTENERS, AND END DEFLECTORS. THE CONTRACTOR SHALL ALSO INSTALL A 4" CONDUIT PER 713.07 TWO FEET DEEP ALONG THE SOUTH SIDE OF THE TRACKS FROM RIGHT OF WAY LINE TO RIGHT OF WAY LINE UNDER THIS ITEM FOR FUTURE USE.

ITEM 830 - CURB, TYPE 2B, AS PER PLAN

CURB TYPE 2B, AS PER PLAN SHALL BE IN ACCORDANCE WITH ITEM 830 AND AS DETAILED ON SHEET 9.

CALCULATED ML CHECKED JAN

GENERAL NOTES

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ROADWAY (CONTINUED)

ITEM SPECIAL – REMOVAL MISC.: COMMERCIAL SIGN, PARCEL XXXXXXX

COMMERCIAL SIGNS MARKED FOR REMOVAL IN THE PLANS SHALL INCLUDE THE REMOVAL OF THE SIGN, SUPPORT, FOUNDATION TO AT LEAST ONE FOOT BELOW FINISHED GRADE, DISCONNECTION OF ANY ELECTRIC SERVICE, AND ANY OTHER INCIDENTALS. ALL PROVISIONS OF 202 OF THE SPECIFICATIONS APPLY.

COMMERCIAL SIGN REMOVAL WILL BE PAID FOR ON A LUMP SUM BASIS PER EACH PARCEL. IN CASES WHERE THERE IS MORE THAN ONE SIGN MARKED FOR REMOVAL ON A PARCEL, ALL SIGNS MARKED FOR REMOVAL SHALL BE PAID FOR UNDER THE SINGLE LUMP SUM BID ITEM FOR THAT PARCEL.

ADDITIONAL SOIL INFORMATION

THE SOIL PROFILE CONTAIN ALL AVAILABLE SOIL AND BEDROCK INFORMATION WHICH CAN BE CONVENIENTLY SHOWN. ADDITIONAL SUBSURFACE INVESTIGATION INFORMATION IS AVAILABLE FROM THE CITY OF CUYAHOGA FALLS, DEPARTMENT OF ENGINEERING, 2310 FRONT STREET, CUYAHOGA FALLS, OHIO 44221.

BEDROCK HAS BEEN DETECTED THROUGHOUT THE PROJECT LENGTH AND IS ANTICIPATED TO BE ENCOUNTERED DURING EXCAVATION. EVERY ATTEMPT HAS BEEN MADE TO PLACE PROPOSED UTILITIES IN EXISTING TRENCHES ALREADY EXCAVATED THROUGH THE ROCK. EXTRA PAYMENT WILL NOT BE MADE FOR EXCAVATION OF ROCK FOR THE INSTALLATION OF UTILITY TRENCHES. THE CONTRACTOR SHALL FAMILIARIZE HIMSELF/HERSELF WITH THE SOILS INFORMATION IN THE PLANS AND THE REPORTS PREPARED IN CONJUNCTION WITH THE DESIGN OF THIS PROJECT.

PAVEMENT

ITEM 407 – TACK COAT & TACK COAT FOR INTERMEDIATE COURSE

THE RATE OF APPLICATION OF ITEM 407 – TACK COAT SHALL BE SUBJECT TO ADJUSTMENT AS DIRECTED BY THE ENGINEER. PLAN QUANTITIES INDICATE AN AVERAGE APPLICATION RATE OF 0.075 GALLONS PER SQUARE YARD.

CONTRACTION JOINTS IN CONCRETE BASE WIDENING

WHERE NEW CONCRETE IS PLACED ADJACENT TO EXISTING CONCRETE, CONTRACTION JOINTS SHALL BE PROVIDED IN THE NEW CONCRETE SO AS TO FORM CONTINUOUS JOINTS WITH THOSE IN THE EXISTING CONCRETE.

THE MAXIMUM DISTANCE BETWEEN THE JOINTS IN THE NEW CONCRETE SHALL BE IN ACCORDANCE WITH STANDARD CONSTRUCTION DRAWING BP–2.2. IF NECESSARY, ADDITIONAL JOINTS SHALL BE PROVIDED IN THE NEW CONCRETE AT APPROXIMATELY EQUAL INTERVALS BETWEEN EXISTING JOINTS THAT EXCEED THE MAXIMUM SPACING.

EROSION CONTROL

SEEDING AND MULCHING

THE FOLLOWING QUANTITIES ARE PROVIDED TO PROMOTE GROWTH AND CARE OF PERMANENT SEEDED AREAS:

870, SOIL ANALYSIS TEST 2 EACH

870, PLACING TOPSOIL 400 CU. YD.

870, COMMERCIAL FERTILIZER 1 TON

870, AGRICULTURAL LIME 2 TON

870, WATER 10 M. GAL.

870, MOWING 32 M. SQ. FT.

SEEDING AND MULCHING SHALL BE APPLIED TO ALL AREAS OF EXPOSED SOIL BETWEEN THE RIGHT–OF–WAY LINES, AND WITHIN THE CONSTRUCTION LIMITS FOR AREAS OUTSIDE THE RIGHT–OF–WAY LINES COVERED BY WORK AGREEMENT OR SLOPE EASEMENT. QUANTITY CALCULATIONS FOR SEEDING AND MULCHING ARE BASED ON THESE LIMITS.

SEEDING AND MULCHING OF LAWNS

IN ADDITION TO "SEED BED AREAS IN FRONT OF RESIDENCES" REFERRED TO IN 870.13, THE SPECIAL PREPARATION SHALL BE EXTENDED TO ENCOMPASS ALL LAWNS AND/OR LAWN–LIKE AREAS AS DETERMINED BY THE ENGINEER.

TEMPORARY SOIL EROSION AND SEDIMENT CONTROL

THE FOLLOWING ESTIMATED QUANTITIES ARE TO BE PLACED BY THE CONTRACTOR WITH THE ENGINEER'S CONCURRENCE FOR TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES:

877, TEMPORARY SEEDING AND MULCHING	700	SQ.YD.
877, TEMPORARY PERIMETER FILTER FABRIC FENCE	1150	L.F.
877, TEMPORARY INLET PROTECTION FILTER FABRIC FENCE	400	L.F.
601, ROCK CHANNEL PROTECTION, TYPE C (WITHOUT FILTER)	100	C.Y.
870, COMMERCIAL FERTILIZER	1	TON
870, REPAIR SEEDING AND MULCHING	175	SQ.YD.
870, WATER	2	M.GAL.
870, INTER–SEEDING	175	SQ.YD.

STORM WATER POLLUTION PREVENTION PLAN

THE CONDITIONS OF THE NPDES CONSTRUCTION STORM WATER GENERAL PERMIT (SEE PROPOSAL) SHALL BE MET DURING ALL STAGES OF CONSTRUCTION. THE LOCATION AND TIMING OF ALL EROSION AND SEDIMENT CONTROL ITEMS SHALL BE FIELD ADJUSTED TO PREVENT SIGNIFICANT IMPACTS ON RECEIVING WATERS. IMPLEMENTATION OF THIS STORM WATER POLLUTION PREVENTION PLAN SHALL CONTINUE THROUGHOUT THE DURATION OF THE PROJECT OR UNTIL SUCH TIME THAT THE UPSLOPE DISTURBED AREAS ARE STABILIZED.

INSTALLATION OF SEDIMENT BASINS/DAMS, PERIMETER FILTER FABRIC FENCE, AND DITCH CHECKS SHALL BE CONCURRENT WITH CLEARING AND GRUBBING AND/OR GRADING OPERATIONS.

ALL REASONABLE ATTEMPTS SHOULD BE MADE TO MINIMIZE THE TOTAL AREA OF DISTURBED LAND.

AREAS TO REMAIN DORMANT FOR MORE THAN 45 DAYS SHOULD BE IMMEDIATELY STABILIZED WITH TEMPORARY SEEDING AND MULCHING, EROSION CONTROL MATTING OR OTHER APPROPRIATE EROSION CONTROL MEASURES.

ADDITIONAL QUANTITIES OF TEMPORARY SOIL EROSION AND SEDIMENT CONTROL ITEMS ARE GIVEN IN THE GENERAL NOTES.

EROSION CONTROL

ITEM 601 IS PROVIDED IN THE PLANS FOR EROSION CONTROL. ROCK OF A STABLE NATURE SHALL NOT BE REMOVED IN ORDER TO PLACE ANY OF THESE ITEMS. THE ENGINEER SHALL CHECK AND NON–PERFORM QUANTITIES OR ADJUST LOCATIONS AND QUANTITIES OF THESE ITEMS WHERE INDICATED BY FIELD CONDITIONS DURING CONSTRUCTION. IN ADDITION, THESE ITEMS SHALL MEET THE REQUIREMENT OF 108.04.

DRAINAGE

CROSSINGS & CONNECTIONS TO EXISTING PIPES & UTILITIES

WHERE PLANS PROVIDE FOR PROPOSED CONDUIT TO BE CONNECTED TO, OR CROSS OVER OR UNDER AN EXISTING SEWER OR UNDERGROUND UTILITY, THE CONTRACTOR SHALL LOCATE THE EXISTING PIPES OR UTILITIES BOTH AS TO LINE AND GRADE BEFORE STARTING TO LAY THE PROPOSED CONDUIT.

IF IT IS DETERMINED THAT THE ELEVATION OF THE EXISTING CONDUIT, OR EXISTING APPURTENANCE TO BE CONNECTED, DIFFERS FROM THE PLAN ELEVATION OR RESULTS IN A CHANGE IN THE PLAN CONDUIT SLOPE, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WILL BE AFFECTED BY THE VARIANCE IN THE EXISTING ELEVATION.

IF IT IS DETERMINED THAT THE PROPOSED CONDUIT WILL INTERSECT AN EXISTING SEWER OR UNDERGROUND UTILITY IF CONSTRUCTED AS SHOWN ON THE PLAN, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WOULD BE AFFECTED BY THE INTERFERENCE WITH AN EXISTING FACILITY.

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 603 – CONDUIT ITEM.

UNTREATED SEPTIC CONNECTIONS

THIS PLAN MAKES NO PROVISION FOR CONNECTING, NOR SHALL THE ENGINEER OR CONTRACTOR CONNECT, ANY UNTREATED SEPTIC DRAINAGE INTO THE HIGHWAY DRAINAGE SYSTEM. ANY PIPE CARRYING UNTREATED SEPTIC FLOW SHALL BE PLUGGED WITH CLASS C CONCRETE AT THE RIGHT–OF–WAY LINE. PAYMENT FOR PLUGGING SHALL BE INCLUDED IN THE CONTRACT PRICE FOR ITEM 203 – EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION.

REVIEW OF DRAINAGE FACILITIES

BEFORE ANY WORK IS STARTED ON THE PROJECT, AND AGAIN BEFORE FINAL ACCEPTANCE BY THE CITY, REPRESENTATIVES OF THE CITY AND THE CONTRACTOR, SHALL MAKE AN INSPECTION OF ALL EXISTING SEWERS WHICH ARE TO REMAIN IN SERVICE AND WHICH MAY BE AFFECTED BY THE WORK. THE CONDITION OF THE EXISTING CONDUITS AND THEIR APPURTENANCES SHALL BE DETERMINED FROM FIELD OBSERVATIONS. RECORDS OF THE INSPECTIONS SHALL BE KEPT IN WRITING BY THE CITY.

ALL NEW CONDUITS, INLETS, CATCH BASINS, AND MANHOLES CONSTRUCTED AS A PART OF THE PROJECT SHALL BE FREE OF ALL FOREIGN MATTER AND IN A CLEAN CONDITION BEFORE THE PROJECT WILL BE ACCEPTED BY THE STATE.

ALL EXISTING SEWERS INSPECTED INITIALLY BY THE ABOVE MENTIONED PARTIES SHALL BE MAINTAINED AND LEFT IN A CONDITION REASONABLY COMPARABLE TO THAT DETERMINED BY THE ORIGINAL INSPECTION. ANY CHANGE IN THE CONDITION RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE CORRECTED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER.

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 603 – CONDUIT ITEMS.

MANHOLES, CATCH BASINS AND INLETS REMOVED OR ABANDONED

ALL CASTINGS SHALL BE CAREFULLY REMOVED AND STORED WITHIN THE RIGHT–OF–WAY FOR SALVAGE BY CITY FORCES.

PAYMENT FOR ALL OF THE ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 202 ITEM.

CALCULATED ML CHECKED JAN

GENERAL NOTES

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DRAINAGE

ITEM SPECIAL – MISCELLANEOUS METAL

IN ADDITION TO THE LIDS, THE EXISTING CASTINGS MAY PROVE TO BE UNSUITABLE FOR REUSE, AS DETERMINED BY THE ENGINEER. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE THE CASTINGS OF THE REQUIRED TYPE, SIZE AND STRENGTH (HEAVY OR LIGHT DUTY) FOR THE PARTICULAR STRUCTURE IN QUESTION. ALL MATERIALS SHALL MEET ITEM 604 OF THE SPECIFICATIONS AND SHALL HAVE THE PRIOR APPROVAL OF THE ENGINEER.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER:

ITEM SPECIAL	MISCELLANEOUS METAL	1000	LB.

THE CONTRACTOR IS CAUTIONED TO USE EXTREME CARE IN THE REMOVAL, STORAGE AND REPLACEMENT OF ALL EXISTING CASTINGS. CASTINGS DAMAGED BY THE NEGLIGENCE OF THE CONTRACTOR, AS DETERMINED BY THE ENGINEER SHALL BE REPLACED WITH THE PROPER NEW CASTINGS AT THE EXPENSE OF THE CONTRACTOR.

RESIDENTIAL & COMMERCIAL DRAINAGE CONNECTIONS

EXISTING ROOF DRAINS, FOOTER DRAINS, YARD DRAINS, OR PARKING LOT DRAINS DISTURBED BY THE WORK, SHALL BE PROVIDED WITH UNOBSTRUCTED OUTLETS BY CONNECTING A CONDUIT THROUGH THE CURB OR INTO A DRAINAGE STRUCTURE.

GRADING OPERATIONS MAY CREATE UNANTICIPATED LOCALIZED SUMPS WHICH MAY GATHER WATER. THE LOCATION, TYPE, SIZE, AND GRADE OF THE NEW CONDUIT REQUIRED TO REPLACE OR EXTEND THE EXISTING DRAIN, OR TO PROVIDE OUTLETS FOR LOCALIZED SUMPS, SHALL BE DETERIMINED BY THE ENGINEER.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER FOR THE WORK NOTED ABOVE:

ITEM 603	3" CONDUIT, TYPE E (THROUGH CURB)	100	FT.
ITEM 603	4" CONDUIT, TYPE E	100	FT.
ITEM 603	6" CONDUIT, TYPE E	100	FT.
ITEM 603	8" CONDUIT, TYPE E	100	FT.
ITEM 603	10" CONDUIT, TYPE E	100	FT.
ITEM 603	12" CONDUIT, TYPE E	100	FT.
ITEM 604	INSPECTION WELL (DM-3.1)	2	EACH

CALCULATED ML | CHECKED JAN

GENERAL NOTES

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GENERAL

ALL SIGNS, BARRICADES, AND DEVICES FOR MAINTENANCE OF TRAFFIC SHALL BE FURNISHED BY THE CONTRACTOR. ALL DEVICES SHALL BE ERECTED AND MAINTAINED IN COMPLIANCE WITH THE STATE OF OHIO "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES" CURRENT EDITION, LATEST REVISION. THE CONTRACTOR SHALL BE RESPONSIBLE AT ALL TIMES FOR PROVIDING AND MAINTAINING TRAFFIC LIGHTS, SIGNS AND BARRICADES FOR THE MAINTENANCE OF TRAFFIC AND SAFETY OF HIS WORK AT THE LOCATIONS SHOWN ON THESE PLANS OR AS DIRECTED BY THE ENGINEER. ANY REPAIRS OR ADJUSTMENT/RELOCATION TO THE TRAFFIC CONTROL DEVICES SHALL BE PERFORMED WITHIN FOUR (4) HOURS OF NOTIFICATION.

DURING THE CONSTRUCTION OF FRONT STREET AND HUDSON DRIVE SINGLE LANE TWO-WAY TRAFFIC IS TO BE MAINTAINED. ADDITIONALLY, AT THE INTERSECTIONS OF FRONT STREET AT BAILEY ROAD AND HUDSON DRIVE LEFT TURN LANES MUST BE PROVIDED.

NOTIFICATION

THE CONTRACTOR SHALL NOTIFY IN WRITING THE FOLLOWING AGENCIES AT LEAST 10 WORKING DAYS PRIOR TO THE START OF CONSTRUCTION, AND AT LEAST 72 HOURS BEFORE IMPLEMENTING ANY SUBSTANTIAL CHANGE IN TRAFFIC PATTERN.

THE CITY OF CUYAHOGA FALLS CITY ENGINEER
THE OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 4, PUBLIC INFORMATION OFFICE

SEQUENCE OF CONSTRUCTION

THE WIDENING OF FRONT STREET AND HUDSON DRIVE SHALL BE COMPLETED IN TWO PHASES. THE INTENT OF THESE MAINTENANCE OF TRAFFIC PLANS IS TO HAVE EACH PHASE COMPLETED AND OPEN TO TRAFFIC EXCEPT FOR FINAL PAVEMENT MARKINGS PRIOR TO IMPLEMENTING THE NEXT PHASE.

PHASE 1: NORTH SIDE OF FRONT STREET AND BOTH SIDES OF HUDSON DRIVE, BAILEY ROAD AND SECOND STREET.
PHASE 2: SOUTH SIDE OF FRONT STREET.

PROCEEDING THE START OF CONSTRUCTION OF PHASE 1 THE INITIATION OF THE FOLLOWING TASKS COULD BE CONSIDERED, HOWEVER TWO-WAY TWO-LANE TRAFFIC MUST BE MAINTAINED AT ALL TIMES:

- CONSTRUCTION OF PUBLIC UTILITIES (WATER & SANITARY SEWERS) WHERE IN CONFLICT WITH PHASE 1 TEMPORARY TRAFFIC LANES;
- RELOCATE SIGNALS, SIGNS AND OTHER TRAFFIC CONTROL INSTALLATIONS WHERE IN CONFLICT WITH TEMPORARY TRAFFIC AND PROPOSED WORK;
- CLEAR EXISTING AND PROPOSED R/W FROM ALL OBSTRUCTIONS.
- THE CONTRACTOR MAY CONSTRUCT THE STORM SEWER SYSTEM.

A MINIMUM OF ONE LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES BY USE OF THE EXISTING PAVEMENT, THE COMPLETED PAVEMENT, 615 TEMPORARY PAVEMENT AND TEMPORARY SURFACES USING 410, 614 AND 616.

ALL WORK IN A GIVEN PHASE, INCLUDING SUCH ITEMS AS SUBBASE AND BASE PLACEMENT, ASPHALT CONCRETE COURSES, ADJUSTMENT OF CASTINGS, LANDSCAPING, SIDEWALKS, DRIVEWAY REPAIRS, GUARDRAIL, AND TRAFFIC SIGNS AND SIGNALS SHALL BE COMPLETED PRIOR TO THE BEGINNING THE NEXT PHASE, WITH THE EXCEPTION OF THE ITEM 448 (SURFACE COURSE), FINAL PAVEMENT MARKINGS, AND ANY SIGNS OR SIGNALS WHICH CONFLICT WITH THE MAINTENANCE OF TRAFFIC PLANS.

AT THE END OF THE LAST PHASE OF CONSTRUCTION ITEM 407 (TACK COAT) FOR INTERMEDIATE COURSE AND ITEM 448 (SURFACE COURSE) SHALL BE INSTALLED ACROSS THE ENTIRE PAVEMENT WIDTH, AND FINAL PAVEMENT MARKINGS AND THE BALANCE OF THE SIGNS AND SIGNALS SHALL BE INSTALLED. DURING THIS PHASE, TRAFFIC SHALL BE MAINTAINED IN ACCORDANCE WITH STANDARD CONSTRUCTION DRAWING MT-95.31M, MT-95.32M, OR MT-95.60M, AS APPROPRIATE.

THE EXISTING TWO LANES OF TRAFFIC ALONG BAILEY ROAD AND SECOND STREET MAY BE REDUCED TO ONE TEN FOOT WIDE LANE (MINIMUM) DURING WORK OPERATIONS. THE LENGTH OF CONSTRUCTION ZONES SHALL BE LIMITED TO THE AMOUNT OF CONSTRUCTION THAT CAN BE COMPLETED EACH DAY. THE SINGLE LANE TWO-WAY ZONE IS TO BE USED DURING DAYTIME ONLY AND IS TO BE CONTROLLED BY FLAGGERS WITH COMMUNICATION DEVICES.

LENGTH AND DURATION OF LANE CLOSURES AND RESTRICTIONS SHALL BE AT THE APPROVAL OF THE ENGINEER. IT IS THE INTENT TO MINIMIZE THE IMPACT TO THE TRAVELING PUBLIC. LANE CLOSURES OR RESTRICTIONS OVER SEGMENTS OF THE PROJECT IN WHICH NO WORK IS ANTICIPATED WITHIN A REASONABLE TIME FRAME, AS DETERMIJNED BY THE ENGINEER, SHALL NOT BE PERMITTED. THE LEVEL OF UTILIZATION OF MAINTENANCE OF TRAFFIC DEVICES SHALL BE COMMENSURATE WITH THE WORK IN PROGRESS.

THE CONTRACTOR FOR THIS PROJECT SHALL COORDINATE HIS OPERATIONS WITH THAT OF THE WORK FORCES BY UTILITY COMPANIES RELOCATING THEIR FACILITIES SO AS TO COMPLETE ALL SCHEDULED CONSTRUCTION ACTIVITIES WITHOUT UNDUE DELAY OR INTERFERENCE IN ACCORDANCE WITH SECTION 105.07 OF THE SPECIFICATIONS. THE CONTRACTOR SHALL ARRANGE WITH OTHER WORK FORCES A MUTUALLY ACCEPTABLE WORK SCHEDULE SUBJECT TO THE APPROVAL OF THE ENGINEER, PRIOR TO COMMENCING ANY OPERATIONS. ANY CONFLICTS BETWEEN THE WORK FORCES SHALL BE RESOLVED BY THE ENGINEER. COMPENSATION FOR THE ABOVE COOPERATION SHALL BE INCIDENTAL TO THE VARIOUS PAY ITEMS WITHIN THIS PROJECT.

THE CONTRACTOR SHALL PROVIDE A SIDEWALK ON AT LEAST ONE SIDE OF FRONT STREET AND HUDSON DRIVE FOR PEDESTRIAN TRAFFIC AT ALL TIMES. THE SIDEWALK CAN BE TEMPORARY IN NATURE BUT MUST HAVE A COMPACTED SURFACE FREE OF LOOSE MATERIAL, RUTS, OR PONDED WATER, AND HAVE A MINIMUM WIDTH OF 5 FEET. ALL RESIDENTS AND BUSINESSES SHALL BE PROVIDED ACCESS TO A SIDEWALK AREA. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO GRADING AND PAVING OPERATIONS. DURING TRENCHING ACTIVITIES AND SIDEWALK CONSTRUCTION, PEDESTRIAN ACCESS MUST BE MAINTAINED USING EXISTING WALK, TEMPORARY WALK, OR PROPOSED WALK.
EXISTING SIDEWALK SHALL BE CLOSED IN ACCORDANCE WITH PART VI. OF THE FHA MUTCD.

THE ABOVE GENERAL PROVISIONS OF CONSTRUCTION SEQUENCE FOR PHASE 1 AND PHASE 2 ARE TO BE USED AS A GUIDE ONLY. THE CONTRACTOR HAS THE RESPONSIBILITY TO PROVIDE AN APPROVED CONSTRUCTION SCHEDULE. THE PURPOSE OF THE PLANS DETERMINE HOW TRAFFIC IS TO BE MAINTAINED.

SIDE STREET RECONSTRCUTION

ALTHOUGH PART WIDTH CONSTRUCTION IS TO BE USED FOR CONSTRUCTION. DAYTIME CLOSURES OF BAILEY ROAD, SECOND STREET, AND VINCENT STREET WILL BE PERMITTED TO ALLOW FOR FULL DEPTH PAVEMENT RECONSTRUCTION IN THE VICINITY OF THE SIDE STREET INTERSECTIONS WITH FRONT STREET AND HUDSON DRIVE. DETOURS SHALL BE POSTED AND BE IN ACCORDANCE WITH THE OMUTCD. THE ROADWAYS SHALL BE OPENED TO TRAFFIC AT THE END OF EACH WORK DAY. THE CITY SHALL BE NOTIFIED OF ANY CLOSURES 10 WORKING DAYS PRIOR TO ANY DAYTIME CLOSURES.

ACCESS TO ABUTTING COMMERCIAL PROPERTIES

PART WIDTH CONSTRUCTION SHALL BE USED FOR DRIVEWAYS WHERE THERE IS A SINGLE POINT OF INGRESS/EGRESS DIRECTLY FROM FRONT STREET TO AN ABUTTING PROPERTY. FULL WIDTH CONSTRUCTION MAY BE USED FOR DRIVEWAYS WHERE THERE ARE TWO OR MORE POINTS OF INGRESS/EGRESS TO AN ABUTTING PROPERTY HOWEVER, NOT MORE THAN ONE DRIVEWAY MAY BE CLOSED AT A TIME.

MANY BUSINESSES ALONG FRONT STREET ARE DEPENDENT UPON CUSTOMER ACCESS DURING EVENING HOURS.

THE CONTRACTOR SHALL SCHEDULE THE DRIVEWAY CONSTRUCTION SUCH THAT ACCESS IS MAINTAINED BY MEANS OF THE EXISTING DRIVE, A TEMPORARY ASPHALT DRIVE OR PROPOSED CONCRETE DRIVE.

UTILITY WORK

EXCAVATIONS MADE FOR CONDUIT OR UTILITIES RESULTING IN OPEN TRENCHES SHALL BE ADEQUATELY MAINTAINED AND PROTECTED AT ALL TIMES. THE USE OF METAL PLATES OVER OPEN TRENCHES IS ONLY PERMITTED IMMEDIATELY AFTER THE EXCAVATION IN ORDER TO MAINTAIN THE ROADWAY LANES TO TRAFFIC. UPON COMPLETING THE SUBSURFACE CONNECTIONS, THE OPENING SHALL BE RETURNED TO THE ROADWAY SURFACE LEVEL WITH APPROVED MATERIAL.

TRENCH FOR WIDENING

TRENCH EXCAVATION FOR BASE WIDENING SHALL BE ONLY ON ONE SIDE OF THE PAVEMENT AT A TIME. THE OPEN TRENCH SHALL BE ADEQUATELY MAINTAINED AND PROTECTED WITH DRUMS OR BARRICADES AT ALL TIMES. PLACEMENT OF PROPOSED SUBBASE AND BASE MATERIAL SHALL FOLLOW AS CLOSELY AS POSSIBLE BEHIND EXCAVATION OPERATIONS. THE LENGTH OF WIDENING TRENCH WHICH IS OPEN AT ANY ONE TIME SHALL BE HELD TO A MINIMUM AND SHALL AT ALL TIMES BY SUBJECT TO APPROVAL OF THE ENGINEER.

FOR DRIVEWAY ACCESS THE EXCAVATION AND PAVEMENT OPERATIONS SHALL BE COORDINATED AND PERFORMED BY THE CONTRACTOR SO THAT AT THE END OF EACH WORK DAY, THE PLACEMENT OF ITEM 404 OR SIMILAR APPROVED MATERIAL MUST BE PLACED SUCH THAT THE ACTUAL DROP-OFF WILL BE WITHIN THE LIMITS SHOWN ON THE DETAIL BELOW. ALL COSTS ASSOCIATED WITH THE PLACEMENT OF THE WEDGE AND ITS REMOVAL ARE TO BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614 MAINTAINING TRAFFIC.

ITEM 448 - SURFACE COURSE PAVING OPERATIONS

THE CONTRACTOR SHALL FINISH ALL PAVING WORK TO THE 448 INTERMEDIATE COURSE PRIOR TO PLACING THE 448 SURFACE COURSE. THE 448 SURFACE COURSE SHALL BE PLACED FOR THE ENTIRE PROJECT DURING ONE OPERATION.

THE CONTRACTOR SHALL BE REQUIRED TO PLACE CLASS 1 TEMPORARY PAVEMENT MARKINGS IMMEDIATELY AFTER PAVING AND WILL BE REQUIRED TO PLACE PERMANENT PAVEMENT MARKINGS WITHIN 48 HOURS OF COMPLETION OF THE PAVING OPERATIONS.

OVERNIGHT TRENCH CLOSING

THE BASE WIDENING SHALL BE COMPLETED TO A DEPTH OF NO MORE THAN SIX (6) INCHES BELOW THE EXISTING PAVEMENT BY THE END OF EACH WORK DAY. NO TRENCH SHALL BE LEFT OPEN OVERNIGHT EXCEPT FOR A SHORT LENGTH (25 FEET OR LESS) OF A WORK SECTION AT THE END OF THE TRENCH. IN CASE WORK MUST BE SUSPENDED BECAUSE OF INCLEMENT WEATHER OR OTHER REASONS, THE TRENCH FOR THE UNCOMPLETED BASE WIDENING SHALL BE BACKFILLED AT THE DIRECTION OF THE ENGINEER.

INSTALLATION AND RESETTING OF CONSTRUCTION PHASES

WHEN THE CONTRACTOR DESIRES TO CHANGE FROM ONE CONSTRUCTION PHASE TO ANOTHER, THE CONTRACTOR SHALL NOT BE PERMITTED TO DO SO BETWEEN THE HOURS OF 6:30 A.M. TO 8:30 A.M. AND 4:00 P.M. TO 6:00 P.M. MONDAY THROUGH FRIDAY.

TEMPORARY DRAINAGE

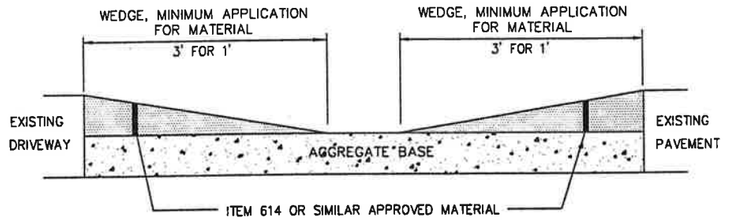
IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN ADEQUATE DRAINAGE OF THE TRAVELLED ROADWAYS DURING ALL PHASES OF CONSTRUCTION BY USING DITCHES, EXISTING DRAINAGE FACILITIES, TEMPORARY DRAINAGE FACILITIES, AND PERMANENT DRAINAGE FACILITIES.

TEMPORARY RAMPING OF VERTICAL SURFACES

IN ORDER TO PROVIDE FOR LOCAL ACCESS, LONGITUDINAL VERTICAL FACES ABUTTING DRIVES SHALL BE TEMPORARILY RAMPED AS DETAILED BELOW TRANSVERSE VERTICAL FACES SHALL BE TEMPORARILY RAMPED A MINIMUM OF TEN FEET IN LENGTH AND TRAFFIC SHALL BE WARNED WITH OW-62 "BUMP" SIGNS IN ADVANCE OF THE RAMPED AREAS.

ALL CASTINGS ENCOUNTERED SHALL BE SET TO GRADE AND PAID FOR UNDER VARIOUS ITEMS DESCRIBED ELSEWHERE IN THE ROADWAY GENERAL NOTES OR SPECIFICATIONS. THE CASTING ELEVATION DIFFERENTIAL SHALL NOT BE GREATER THEN ONE (1) INCH WHEN EXPOSED TO TRAFFIC.

ALL TEMPORARY RAMPING SHALL BE INSTALLED, AT THE DIRECTION OF THE ENGINEER, USING ITEM 614 - BITUMINOUS CONCRETE FOR MAINTAINING TRAFFIC.



WEDGE DETAIL FOR DRIVEWAY LOCATIONS

NIGHT WORK

NO WORK SHALL BE PERFORMED FROM ONE-HALF HOUR AFTER SUNSET TO ONE- HALF HOUR BEFORE SUNRISE UNLESS WRITTEN APPROVAL BY THE PROJECT ENGINEER HAS BEEN RECEIVED BY THE CONTRACTOR. THE CONTRACTOR'S REQUEST TO WORK DURING THESE HOURS SHALL INCLUDE THE TYPE OF WORK TO BE DONE, DURATION AND LOCATION OF THE WORK, AND THE CONTRACTOR'S TEMPORARY LIGHTING PLANS. TEMPORARY LIGHTING SHALL BE SUCH THAT THE LIGHTS DO NOT CAUSE GLARE TO DRIVERS ON THE HIGHWAY OR TO ANY RESIDENCE. TO INSURE THE ADEQUACY OF LIGHT PLACEMENT, THE CONTRACTOR'S SUPERINTENDENT AND THE PROJECT ENGINEER SHALL DRIVE THROUGH THE WORK SITE AFTER THE LIGHTING IS IN PLACE AND OPERATIVE PRIOR TO COMMENCEMENT OF WORK. IF GLARE IS DETECTED, THE LIGHT PLACEMENT AND SHIELDING SHALL BE ADJUSTED TO THE SATISFACTION OF THE ENGINEER BEFORE WORK PROCEEDS. THE COST OF ANY TEMPORARY LIGHTING REQUIRED FOR NIGHT WORK SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614 - MAINTAINING TRAFFIC.

ITEM 614 - LAW ENFORCEMENT OFFICER WITH PATROL CAR

IN ADDITION TO THE REQUIREMENTS OF 614 AND THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (OMUTCD), A UNIFORMED LAW ENFORCEMENT OFFICER AND OFFICIAL PATROL CAR WITH WORKING TOP MOUNTED EMERGENCY FLASHING LIGHTS SHALL BE PROVIDED FOR CONTROLLING TRAFFIC FOR THE FOLLOWING TASKS:

FOR LANE CLOSURES: DURING INITIAL SET-UP PERIODS, TEAR DOWN PERIODS, SUBSTANTIAL SHIFTS OF A CLOSURE POINT OR WHEN NEW LANE CLOSURE ARRANGEMENTS ARE INITIATED.
DURING A TRAFFIC SIGNAL INSTALLATION.

LAW ENFORCEMENT OFFICERS (L.E.O.'S) SHOULD NOT BE USED WHERE THE OMUTCD INTENDS THAT FLAGGERS BE USED. THE LEO'S ARE CONSIDERED TO BE EMPLOYED BY THE CONTRACTOR AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR THEIR ACTIONS. ALTHOUGH THEY ARE EMPLOYED BY THE CONTRACTOR, THE PROJECT ENGINEER SHALL HAVE CONTROL OVER THEIR PLACEMENT. THE OFFICIAL PATROL CAR SHALL BE A PUBLIC SAFETY VEHICLE AS REQUIRED BY THE OHIO REVISED CODE.

THE CONTRACTOR SHALL MAKE ARRANGEMENTS FOR THESE SERVICES WITH THE CHIEF, CUYAHOGA FALLS POLICE DEPARTMENT:

ADMINISTRATION BUILDING
2310 2nd STREET
PHONE 330-928-2181

LAW ENFORCEMENT OFFICERS WITH PATROL CAR REQUIRED BY THE TRAFFIC MAINTENANCE TASKS ABOVE SHALL BE PAID FOR ON UNIT PRICE (HOURLY) BASIS UNDER ITEM 614 - LAW ENFORCEMENT OFFICER WITH PATROL CAR. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIER TO THE GENERAL SUMMARY:

ITEM 614 - LAW ENFORCEMENT OFFICER WITH PATROL CAR 200 HOURS.

THE HOURS PAID SHALL INCLUDE MINIMUM SHOW-UP TIME REQUIRED BY THE LAW ENFORCEMENT AGENCY INVOLVED. IF CONTRACTORS WISH TO UTILIZE LEO'S FOR FLAGGING AND TRAFFIC CONTROL OTHER THAN FOR THAT REQUIRED IN THESE PLANS, THEY MAY DO SO AT THEIR OWN EXPENSE. PAYMENT FOR UTILIZING LEO'S IN THIS MANNER WILL BE INCLUDED UNDER ITEM 614 MAINTAINING TRAFFIC.

TEMPORARY PAVEMENT MARKINGS

ALL TEMPORARY PAVEMENT MARKINGS APPLIED TO INTERMEDIATE SURFACE COURSES SHALL BE CLASS I, ITEM 642 - PAINT. ANY TEMPORARY PAVEMENT MARKINGS TO BE APPLIED TO FINAL SURFACES SHALL BE 740.06, TYPE 1, ONLY. ALL CONFLICTING PAVEMENT MARKINGS SHALL BE REMOVED. TEMPORARY LINES SHALL BE 4 INCHES IN WIDTH.

CALCULATED JAN
CHECKED IM

MAINTENANCE OF TRAFFIC GENERAL NOTES

SUM - 59-4.93

EXISTING LIGHTING

THE CONTRACTOR SHALL MAINTAIN THE EXISTING ROADWAY LIGHTING AS DESCRIBED IN THE LIGHTING GENERAL NOTES. SEE SHEET 150.

COVERING OF SIGNS

WHERE THE PLANS CALL FOR ANY EXISTING OR PROPOSED PERMANENT SIGN TO BE COVERED, THE CONTRACTOR SHALL DO SO IN SUCH A MANNER AS TO AVOID DAMAGING THE PERMANENT SIGN WHEN THE COVER IS REMOVED. THE COVER SHALL BE TOTALLY OPAQUE. THE USE OF ADHESIVE TAPE APPLIED DIRECTLY TO ANY EXISTING OR NEW SIGN FACE IS STRICTLY PROHIBITED.

ESTIMATED QUANTITIES FOR MAINTAINING TRAFFIC

THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER FOR MAINTENANCE OF TRAFFIC:

ITEM 614 –	BITUMINOUS CONCRETE FOR MAINTAINING TRAFFIC	100 CY
ITEM 410 –	TRAFFIC COMPACTED SURFACE TYPE A OR B, AS PER PLAN	100 CY
ITEM 608 –	TEMPORARY BITUMINOUS WALK	40,000 SF
ITEM 616 –	WATER	10 M GAL
ITEM 616 –	CALCIUM CHLORIDE	10 TON

TEMPORARY MAINTENANCE OF EXISTING TRAFFIC SIGNALS

INCIDENTAL TO THE REQUIREMENTS FOR MAINTAINING TRAFFIC IN ACCORDANCE WITH 614.03, EXISTING TRAFFIC SIGNALS AT THE FOLLOWING INTERSECTION(S) SHALL BE TEMPORARILY MAINTAINED UNTIL THE NEW TRAFFIC SIGNAL INSTALLATION IS IN OPERATION, OR UNTIL THE PROJECT IS COMPLETE AND THE EXISTING OPERATION CAN BE RESTORED:

FRONT STREET AT BAILEY ROAD
FRONT STREET AT HUDSON DRIVE
HUDSON DRIVE AT SECOND STREET

ANY EXISTING SIGNAL SUPPORTS THAT INTERFERE WITH ANY OF THE PROPOSED WORK SHALL EITHER BE RELOCATED OR REMOVED AND THE SIGNALS SUPPORTED WITH TEMPORARY POLES.

THE EXISTING SIGNAL HEADS (OR ADDITIONAL TRAFFIC SIGNAL HEADS SUPPLIED BY THE CONTRACTOR) SHALL BE POSITIONED SO AS TO PROVIDE A MINIMUM OF TWO TRAFFIC SIGNAL HEADS OVER THE PORTION OF THE ROADWAY USED BY EACH DIRECTION OF TRAFFIC, AS SHOWN ON THE PLANS, AND THE OPERATION SHALL BE MODIFIED AS SHOWN IN THE PLANS. THE NUMBER, LOCATION, VISIBILITY, AND HEIGHT OF ALL TRAFFIC SIGNALS SHALL BE IN ACCORDANCE WITH THE PROVISIONS OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS (OMUTCD).

SIGNAL PHASING AND TIMINGS MAY BE ADJUSTED BY THE CITY OF CUYAHOGA FALLS FORCES DURING CONSTRUCTION. PRIOR TO ANY TRAFFIC PATTERN CHANGE THE CONTRACTOR SHALL GIVE THE CITY 72 HOURS ADVANCED NOTICE SO THE CITY CAN MAKE ADJUSTMENTS TO THE SYSTEM WHEN THE NEW PATTERNS ARE INTIATED.

THE COST OF PROVIDING TEMPORARY SIGNAL SUPPORTS AND ADJUSTING OF SIGNAL HEADS SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614–MAINTAINING TRAFFIC.

TRAFFIC CONTROL INSPECTOR

THE CONTRACTOR SHALL DESIGNATE AN INDIVIDUAL OTHER THAN THE SUPERINTENDENT AND SUBJECT TO THE APPROVAL OF THE ENGINEER, TO CONTINUOSLY INSPECT ALL TRAFFIC CONTROL DEVICES WHENEVER CONSTRUCTION WORK IS BEING PERFORMED WITHIN THE WORK LIMITS OF THE PROJECT. THE DESIGNED INDIVIDUAL SHALL ALSO INSPECT ALL TRAFFIC CONTROL DEVICES AT THE BEGINNING AND AT THE END OF EACH WORK DAY.
THE DESIGNATED INDIVIDUAL OR A QUALIFIED REPRESENTATIVE SHALL ALSO BE AVAILABLE ON AN AROUND THE CLOCK BASIS TO REPAIR AND/OR REPLACE DAMAGED OR MISSING TRAFFIC CONTROL DEVICES. THESE INDIVIDUALS SHALL BE EQUIPPED WITH CELLULAR PHONES AND THEIR NAMES AND PHONE NUMBERS SHALL BE GIVEN TO THE PROJECT ENGINEER AT THE PRE–CONSTRUCTION MEETING.
THE DESIGNATED INDIVIDUAL SHALL HAVE NO OTHER CONSTRUCTION RELATED DUTIES.
PAYMENT FOR THE SERVICES OF THE TRAFFIC CONTROL INSPECTOR SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614 MAINTAINING TRAFFIC.

DUST CONTROL

THE CONTRACTOR SHALL FURNISH AND APPLY WATER AND CALCIUM CHLORIDE FOR DUST CONTROL AS DIRECTED BY THE ENGINEER. THE FOLLOWING CONTINGENCY QUANTITIES HAVE BEEN INCLUDED FOR DUST CONTROL PURPOSES:

ITEM 616	CALCIUM CHLORIDE	5 TONS
ITEM 616	WATER	50 M.GALLON

USE OF TRAFFIC CONES

CONES SHALL NOT BE ACCEPTABLE TRAFFIC CONTROL DEVICES FOR LANE RESTRICTIONS OR LANE REDUCTIONS THAT EXTEND BETWEEN ONE HALF HOUR BEFORE SUNSET TO ONE HALF HOUR AFTER SUNRISE. ALL LANE RESTRICTIONS OR LANE REDUCTIONS SHALL REQUIRE DRUMS AT A MAXIMUM SPACING OF 25 FEET.

SUSPENSION OF WORK

IF THE CONTRACTOR FAILS TO COMPLY WITH THE PROVISIONS FOR MAINTENANCE OF TRAFFIC AS SET FORTH IN THESE PLANS OR WITH PROVISIONS OF THE MANUAL, THE ENGINEER MAY SUSPEND WORK UNTIL THE CONTRACTOR COMPLIES WITH THE NECESSARY REQUIREMENTS. NO COMPENSATION WILL BE PAID FOR SUSPENSION OF WORK.

ALTERNATE MAINTENANCE OF TRAFFIC PLANS

IF THE CONTRACTOR SO ELECTS, HE MAY SUBMIT ALTERNATE METHODS FOR THE MAINTENANCE OF TRAFFIC, PROVIDED THE INTENT OF THE ABOVE PROVISIONS IS FOLLOWED AND NO ADDITIONAL INCONVENIENCE TO THE TRAVELING PUBLIC RESULTS THEREFROM. NO ALTERNATIVE PLAN SHALL BE PLACED INTO EFFECT UNTIL APPROVAL HAS BEEN GRANTED IN WRITING BY THE ENGINEER.

METHOD OF PAYMENT

PAYMENT FOR THE MAINTENANCE OF TRAFFIC ITEMS, UNLESS SPECIFIED SEPARATELY, SHALL BE AT THE LUMP SUM BID FOR ITEM 614 MAINTAINING TRAFFIC, WHICH SHALL INCLUDE ALL LABOR EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK AS DETAILED IN THE PLANS.

CALCULATED JAN
CHECKED IM

MAINTENANCE OF TRAFFIC GENERAL NOTES

SUM - 59-4.93

MAINTENANCE OF TRAFFIC SUBSUMMARY

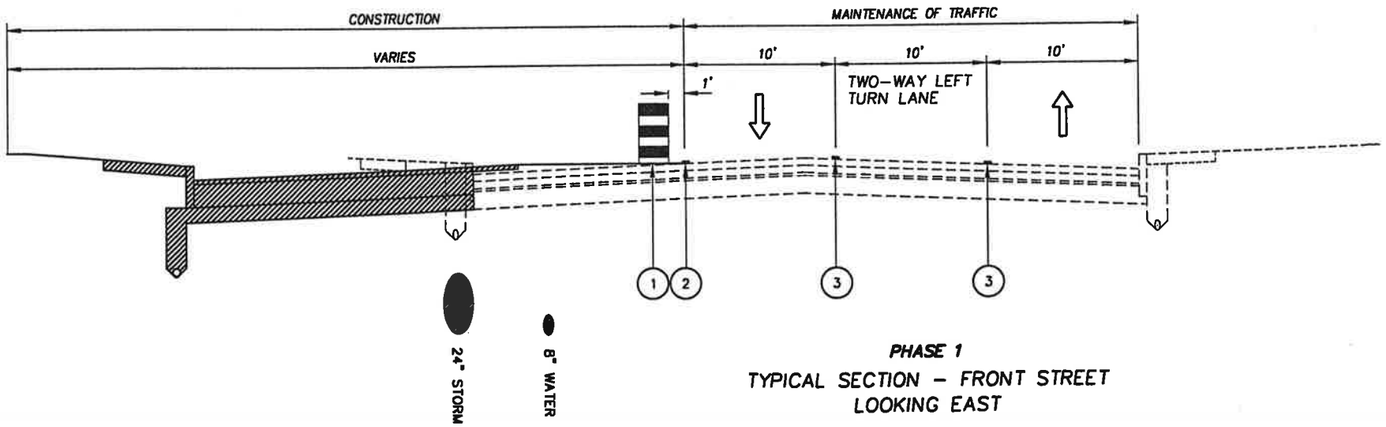
SHEET NO.	STATION	SIDE	614 TEMPORARY LANE LINE, CLASS 1, 642 PAINT	614 TEMPORARY CENTERLINE, CLASS 1, 642 PAINT	614 TEMPORARY EDGE LINE, CLASS 1, 642 PAINT (WHITE)	614 TEMPORARY EDGE LINE, CLASS 1, 642 PAINT (YELLOW)	614 TEMPORARY CHANNELIZING LINE, CLASS 1, 642 PAINT	614 TEMPORARY STOP LINE, CLASS 1, 642 PAINT	614 TEMPORARY LANE ARROW, CLASS 1, 642 PAINT	614 TEMPORARY WORD ON PAVEMENT, 72", CLASS 1, 642 PAINT	614 TEMPORARY RAILROAD SYMBOL, CLASS 1, 642 PAINT	614	615 TEMPORARY PAVEMENT, CLASS A	615 TEMPORARY ROAD	
			LF	LF	LF	LF	LF	LF	EA	EA	EA		SY	LUMP	
	PHASE 1														
	FRONT STREET														
17	27+00 TO 28+00	RT			100	100									
	RAMP M														
18	251+50 TO 253+54	LT				204									
	FRONT STREET														
18	28+00 TO 31+06.57	RT			307	307							56.2	LUMP	
18	31+06.57 TO 35+00	RT	150			393	243								
18	35+00 TO 37+95	RT	140				155	20	2	1					
18	35+00 TO 37+95	LT			295										
18	38+71 TO 39+00	RT		29				10							
	SECOND STREET														
18	51+50 TO 35+00(FRONT ST.)	LT			253										
	BAILEY ROAD														
18	7+00 TO 9+90	RT			290			10							
18	7+50 TO 9+90	LT			185										
	FRONT STREET														
20	39+00 TO 42+50	RT		500	400		200	28	6	1	2				
20	44+00 TO 50+00	RT		1050	600		145	20	8	1					
	HUDSON DRIVE														
20	106+60 TO 110+28	LT	368	128			160	20	2	1	1				
20	106+60 TO 110+28	RT	368	240			75	20	1	1	1				
20	111+00 TO 113+00	LT		200		200		20	1	1					
20	111+15 TO 113+00	RT	85	185		100									
	SECOND STREET														
20	48+00 TO 49+83	RT			183			10							
20	48+50 TO 49+83	LT			133										
	HUDSON DRIVE														
22	104+25 TO 106+05	RT					180		3	1					
	FRONT STREET														
24	50+00 TO 56+00	LT		600	565										
24	50+00 TO 56+00	RT		600				20	7	1					
24	57+43 TO 61+25	LT/RT		157	425		82	10	1	1					
	TOTAL PHASE 1	LF	1111	3689	3736	1304	1240	188	31	9	4		56.2	LUMP	
		MILE	0.21	0.70	5040 / 0.96										

SHEET NO.	STATION	SIDE	614 TEMPORARY LANE LINE, CLASS 1, 642 PAINT	614 TEMPORARY CENTERLINE, CLASS 1, 642 PAINT	614 TEMPORARY EDGE LINE, CLASS 1, 642 PAINT (WHITE)	614 TEMPORARY EDGE LINE, CLASS 1, 642 PAINT (YELLOW)	614 TEMPORARY CHANNELIZING LINE, CLASS 1, 642 PAINT	614 TEMPORARY STOP LINE, CLASS 1, 642 PAINT	614 TEMPORARY LANE ARROW, CLASS 1, 642 PAINT	614 TEMPORARY WORD ON PAVEMENT, 72", CLASS 1, 642 PAINT	614 TEMPORARY RAILROAD SYMBOL, CLASS 1, 642 PAINT	614 SIGN, TEMPORARY OVERLAY, TYPE H	614	615 TEMPORARY PAVEMENT, CLASS A	615 TEMPORARY ROAD
			LF	LF	LF	LF	LF	LF	EA	EA	EA	SF		SY	LUMP
	PHASE 2														
	FRONT STREET														
25	28+00	CL										5			
25	26+50 TO 28+00	LT/RT			150	150									
	RAMP M														
25	248+00 TO 250+50	LT			250	25									
26	250+50 TO 253+40	LT			290	250									
	FRONT STREET														
26	28+00 TO 31+40	LT/RT			295	340									
26	31+40 TO 35+50	LT			410	350									
26	35+50 TO 37+39	LT		189			139	20	2	1					
26	38+72 TO 39+00	LT		56	161			10							
	SECOND STREET														
26	51+50 TO 35+50(FRONT ST)	RT			239										
	BAILEY ROAD														
26	8+00 TO 9+22	CL		122				20							
	FRONT STREET														
28	39+00 TO 42+25	LT		475	437		175	20	2	1	1				
28	44+05 TO 50+00	LT		945	695		245	22	3	1					
30	50+00 TO 56+82	LT		775	682	234			4						
30	57+43 TO 62+00	LT				350	107		1	1					
	TOTAL PHASE 2	LF		2562	3609 / 5308	1699	666	92	12	4	1	5			
		MILE		0.49	1.01										
	TOTAL PHASE 1	LF	1111	3689	5040		1240	188	31	9	4			56.2	LUMP
		MILE	0.21	0.70	0.96										
	PROJECT TOTAL		0.21	1.19	1.97		1906	280	43	13	5	5		56.2	LUMP

CALCULATED E.W.K.
CHECKED K.P.W.

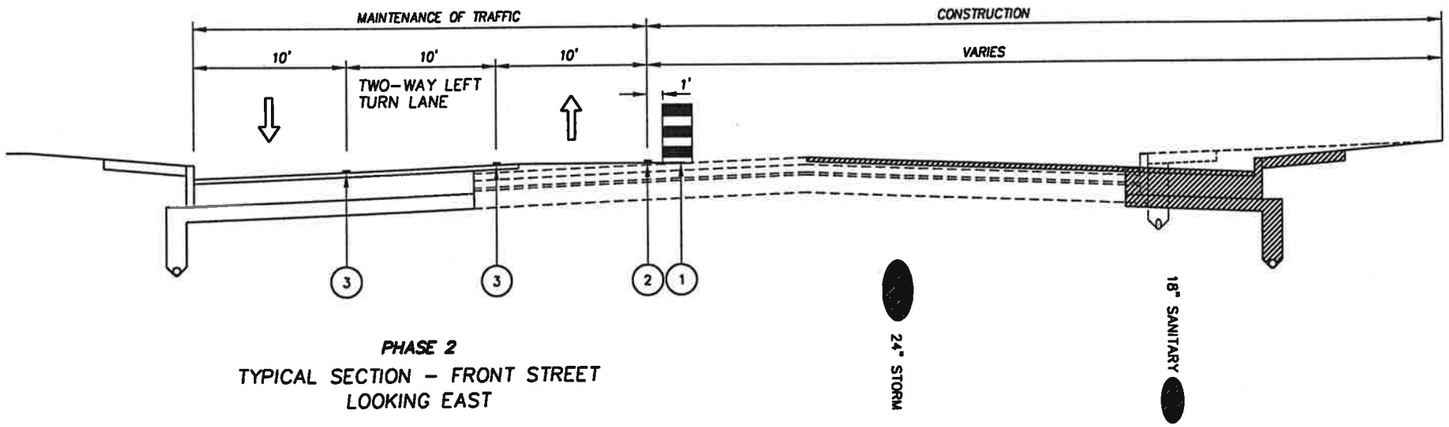
MAINTENANCE OF TRAFFIC SUBSUMMARY

SUM - 59-483

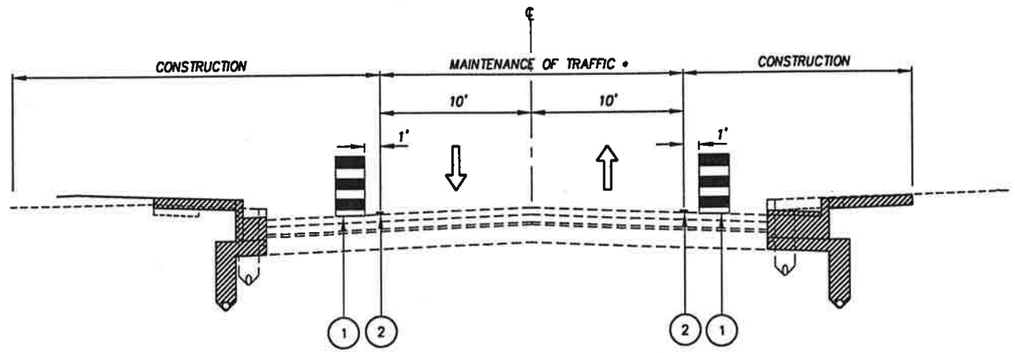


PHASE 1
TYPICAL SECTION – FRONT STREET
LOOKING EAST

1. PLASTIC SAFETY DRUM
2. TEMPORARY EDGE LINE, WHITE, CLASS 1
3. TEMPORARY CENTERLINE, CLASS 1



PHASE 2
TYPICAL SECTION – FRONT STREET
LOOKING EAST



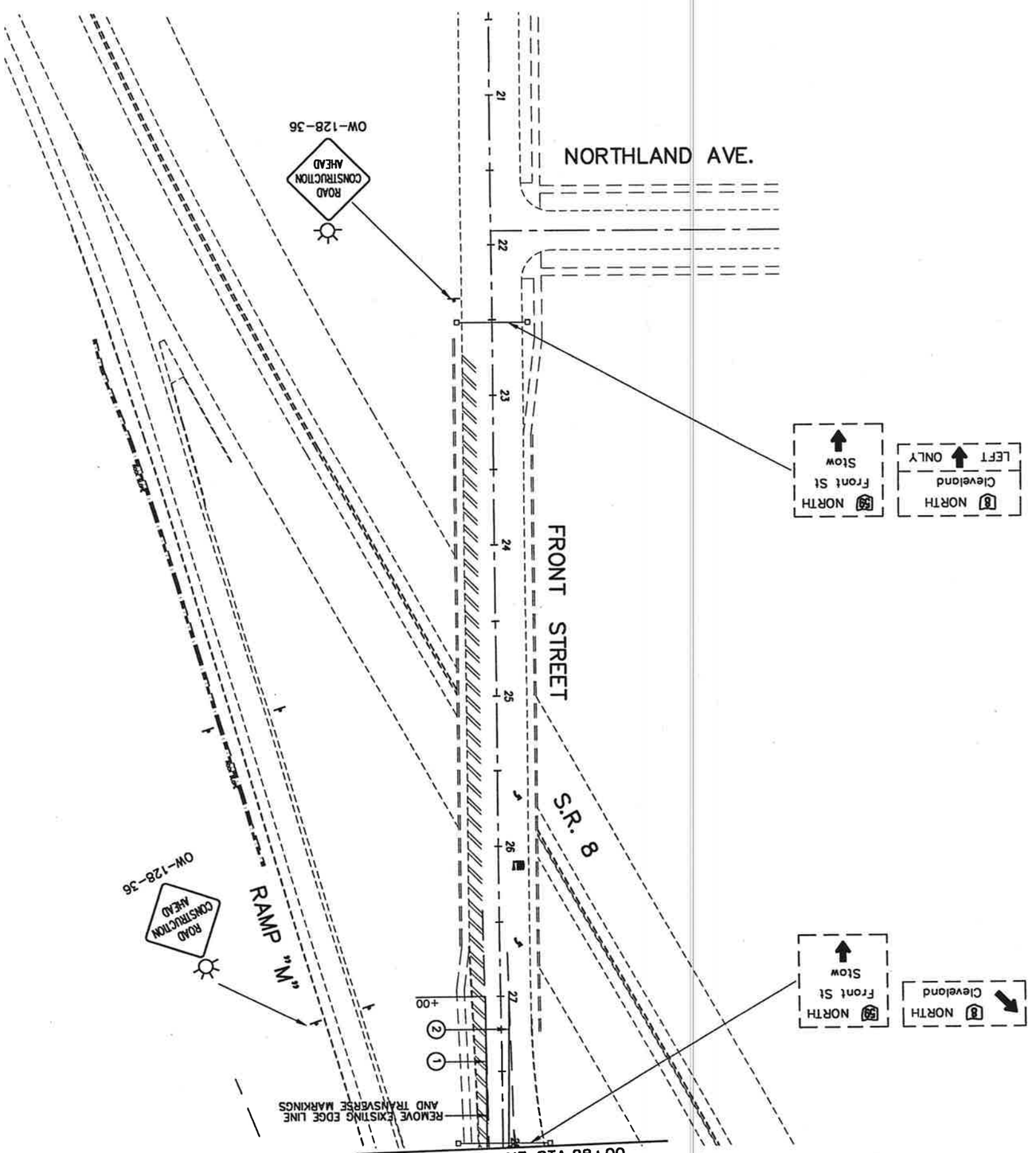
TYPICAL SECTION – SIDE ROAD
* 3–10' LANES ALONG HUDSON DRIVE

CALCULATED | CHECKED

MAINTENACE OF TRAFFIC TYPICAL SECTIONS

SUM - 59-4.93

17
171



LEGEND

① TEMPORARY WHITE EDGE LINE, CLASS 1

② TEMPORARY YELLOW EDGE LINE, CLASS 1

SUM - 59-4.93

MAINTENANCE OF TRAFFIC
PHASE 1

CALCULATED
CHECKED

(IN FEET)
1 inch = 40' ft.

LEGEND

① TEMPORARY WHITE EDGE LINE, CLASS 1
② TEMPORARY YELLOW EDGE LINE, CLASS 1
③ TEMPORARY CHANNELIZING LINE, CLASS 1
④ TEMPORARY LANE LINE, CLASS 1
⑤ TEMPORARY CENTERLINE, CLASS 1
⑥ TEMPORARY ARROW, CLASS 1
⑦ TEMPORARY WORD 'ONLY', CLASS 1
⑧ TEMPORARY STOP BAR, CLASS 1
⑨ DRUMS AT 25' SPACES
⑩ DRUMS AT 10' SPACES
→ TRAFFIC FLOW

* - PLACE EXISTING SIGNS ON TEMPORARY SUPPORTS

S.R.8

SECOND STREET

END CONSTRUCTION OC-8

OW-128-36 ROAD CONSTRUCTION AHEAD

W. BAILEY ROAD

TEMPORARY DAYTIME CLOSURES WILL BE PERMITTED TO FACILITATE FULL DEPTH PAVEMENT REPLACEMENT. DETOUR TRAFFIC IN ACCORDANCE WITH OMUTCD VIA 2ND STREET.

SEE SHEET 20

FRONT STREET

TWO WAY TRAFFIC AHEAD

OC-47R-30 33+00, LT.

THROUGH TRAFFIC KEEP RIGHT

OC-47R-30 33+00, RT.

MATCH LINE STA. 28+00 SEE SHEET 18

MATCH LINE STA.39+00 SEE SHEET NO. 21

RAMP "M"

EXISTING CENTERLINE

EAST 59

R-31Q-36 BLACK ON ORANGE MOUNT ON EXISTING POLE

STA. 28+50

STA. 31+06.57

REMOVE EXISTING CURB, SIDEWALK, SIGNS AND RAMP GORE NOSE.

INSTALL CLASS 'A' TEMPORARY PAVEMENT. PROVIDE A TEMPORARY SIDEWALK.

CALCULATED | CHECKED

(IN FEET) 1 inch = 40 ft.

MAINTENANCE OF TRAFFIC
PHASE 1

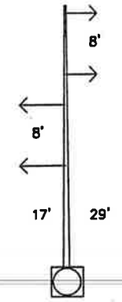
SUM - 59-4.93

19
171

THE EXISTING SIGNAL OPERATION SHALL REMAIN UNTIL THE PHASE 1 MAINTENANCE OF TRAFFIC SIGNALIZATION IS INSTALLED.

1. INSTALL PROPOSED SIGNAL FOUNDATIONS, CONDUIT, POLES, ARMS AND CONTROLLER IN ACCORDANCE WITH THE TRAFFIC CONTROL PLANS.

2. INSTALL 3-SECTION, 12" LENS POLYCARBONATE SIGNAL HEADS ON SIGNAL POLE 2, ARM 'A' FOR FRONT STREET AS FOLLOWS:



3. INSTALL PROPOSED SIGNAL HEADS ON SIGNAL POLE, ARM 'B' FOR FOR BAILEY ROAD APPROACH.

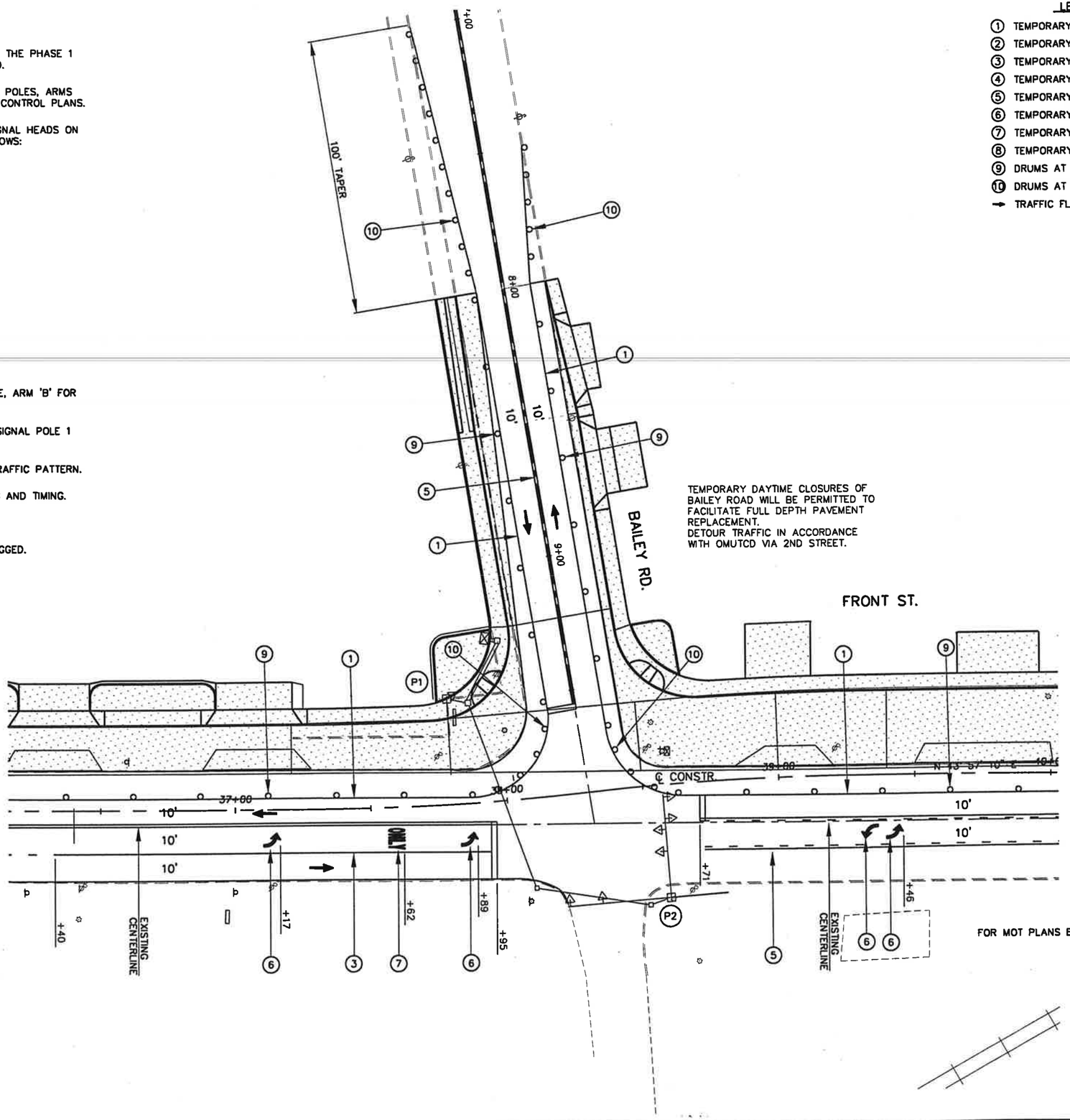
4. INSTALL A TYPE TC-3 MICROWAVE DETECTOR ON SIGNAL POLE 1 FOR BAILEY ROAD APPROACH.

5. PLACE TRAFFIC INTO PHASE 1 MAINTENANCE OF TRAFFIC PATTERN.

6. INTERSECTION TO OPERATE WITH EXISTING PHASING AND TIMING.

7. REMOVE EXISTING SIGNAL HEADS, POLES ETC.

8. ALL UNUSED TRAFFIC SIGNAL HEADS SHALL BE BAGGED.



LEGEND

1. TEMPORARY WHITE EDGE LINE, CLASS 1
2. TEMPORARY YELLOW EDGE LINE, CLASS 1
3. TEMPORARY CHANNELIZING LINE, CLASS 1
4. TEMPORARY LANE LINE, CLASS 1
5. TEMPORARY CENTERLINE, CLASS 1
6. TEMPORARY ARROW, CLASS 1
7. TEMPORARY WORD 'ONLY', CLASS 1
8. TEMPORARY STOP BAR, CLASS 1
9. DRUMS AT 25' SPACES
10. DRUMS AT 10' SPACES

→ TRAFFIC FLOW

TEMPORARY DAYTIME CLOSURES OF BAILEY ROAD WILL BE PERMITTED TO FACILITATE FULL DEPTH PAVEMENT REPLACEMENT.
DETOUR TRAFFIC IN ACCORDANCE WITH OMUTCD VIA 2ND STREET.

FOR MOT PLANS BEYOND INTERSECTION AREA SEE SHEET 19

MAINTENANCE OF TRAFFIC
PHASE 1

SUM - 59-4.93

SECOND STREET

TEMPORARY DAYTIME CLOSURES WILL BE PERMITTED TO FACILITATE FULL DEPTH PAVEMENT REPLACEMENT. DETOUR TRAFFIC IN ACCORDANCE WITH OMUTCD VIA FRONT STREET TO BAILEY ROAD.

SEE SHEET 24

SEE SHEET 24

* – PLACE EXISTING SIGNS ON TEMPORARY SUPPORTS

HUDSON DRIVE

EDISON STREET

FRONT STREET

FRONT STREET

SEE SHEET NO. 19
MATCH LINE STA. 39+00

SEE SHEET 22

MATCHLINE STA. 105+00
SEE SHEET NO. 23

MATCH LINE STA. 50+00
SEE SHEET NO. 25

LEGEND

1. TEMPORARY WHITE EDGE LINE, CLASS 1
2. TEMPORARY YELLOW EDGE LINE, CLASS 1
3. TEMPORARY CHANNELIZING LINE, CLASS 1
4. TEMPORARY LANE LINE, CLASS 1
5. TEMPORARY CENTERLINE, CLASS 1
6. TEMPORARY ARROW, CLASS 1
7. TEMPORARY WORD 'ONLY', CLASS 1
8. TEMPORARY STOP BAR, CLASS 1
9. DRUMS AT 25' SPACES
10. DRUMS AT 10' SPACES

→ TRAFFIC FLOW

FULL DEPTH PAVEMENT REPLACEMENT IS REQUIRED BY THE PLANS ALONG HUDSON DRIVE BETWEEN THE RR TRACKS AND THE FRONT STREET INTERSECTION. UPON COMPLETION OF THE WIDENING OF HUDSON DRIVE THE CONTRACTOR WILL BE REQUIRED TO REMOVE AND REPLACE THE REMAINING EXISTING PAVEMENT IN THE AREA SPECIFIED TO THE LINES AND GRADES SHOWN ON THE PLANS. THIS OPERATION WILL BE REQUIRED TO BE PERFORMED IN A SINGLE NIGHT TIME OPERATION BEGINNING AT 10:00PM AND RESTORING TRAFFIC TO NORMAL OPERATION BY 6:00AM. THE CONTRACTOR SHALL MAINTAIN TRAFFIC ON HUDSON DRIVE BY SHIFTING TRAFFIC ONTO THE WIDENED HUDSON DRIVE PAVEMENT USING BARRELS IN ACCORDANCE WITH THE STANDARDS SET FORTH IN THE OMUTCD. THE CONTRACTOR WILL BE REQUIRED TO HAVE AN LEO W/PATROL CAR PRESENT DURING THE ENTIRE NIGHT TIME OPERATION.

(IN FEET)
1 inch = 40 ft.

CALCULATED | CHECKED

MAINTENANCE OF TRAFFIC
PHASE 1

SUM - 59-4.93

21
171

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THE EXISTING SIGNAL OPERATION SHALL REMAIN UNTIL THE PHASE 1 MAINTENANCE OF TRAFFIC SIGNALIZATION IS INSTALLED.

1. INSTALL PROPOSED SIGNAL FOUNDATIONS, CONDUIT, POLES, ARMS AND CONTROLLER IN ACCORDANCE WITH THE TRAFFIC CONTROL PLANS.

2. INSTALL 3-SECTION, 12" LENS POLYCARBONITE SIGNAL HEADS ON SIGNAL POLE 1, FOR FRONT STREET AS SHOWN TO THE RIGHT.

3. INSTALL TWO 3-SECTION, 12" LENS POLYCARBONATE SIGNAL HEADS ON SIGNAL POLES 2 AND 4 FOR HUDSON ROAD APROACHES.

4. PLACE TRAFFIC INTO PHASE 1 MAINTENANCE OF TRAFFIC PATTERN.

5. INTERSECTION TO OPERATE WITH PHASING AND TIMING AS SHOWN BELOW.

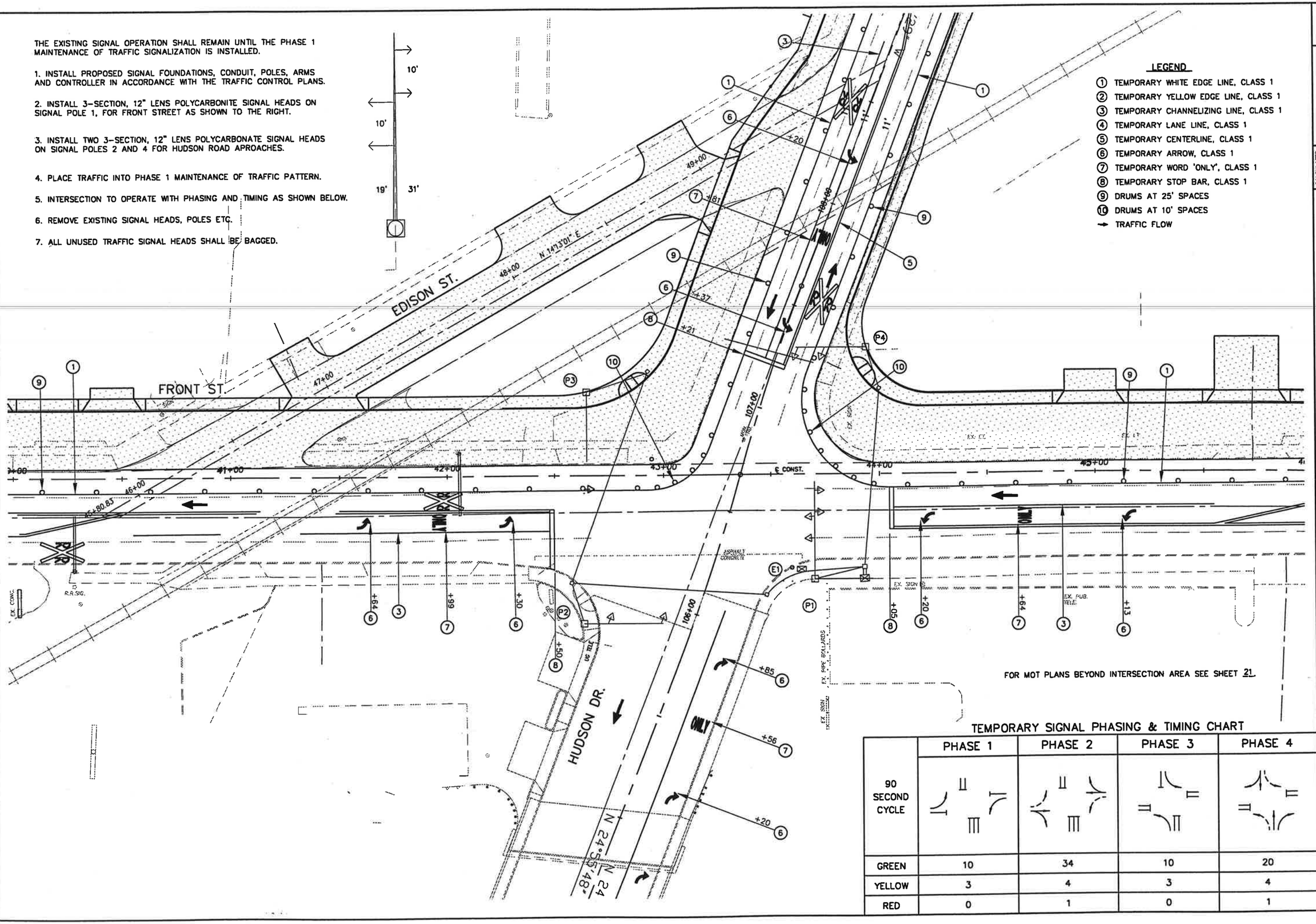
6. REMOVE EXISTING SIGNAL HEADS, POLES ETC.

7. ALL UNUSED TRAFFIC SIGNAL HEADS SHALL BE BAGGED.

LEGEND

1. TEMPORARY WHITE EDGE LINE, CLASS 1
2. TEMPORARY YELLOW EDGE LINE, CLASS 1
3. TEMPORARY CHANNELIZING LINE, CLASS 1
4. TEMPORARY LANE LINE, CLASS 1
5. TEMPORARY CENTERLINE, CLASS 1
6. TEMPORARY ARROW, CLASS 1
7. TEMPORARY WORD 'ONLY', CLASS 1
8. TEMPORARY STOP BAR, CLASS 1
9. DRUMS AT 25' SPACES
10. DRUMS AT 10' SPACES

→ TRAFFIC FLOW



FOR MOT PLANS BEYOND INTERSECTION AREA SEE SHEET 21.

TEMPORARY SIGNAL PHASING & TIMING CHART

	PHASE 1	PHASE 2	PHASE 3	PHASE 4
90 SECOND CYCLE				
GREEN	10	34	10	20
YELLOW	3	4	3	4
RED	0	1	0	1

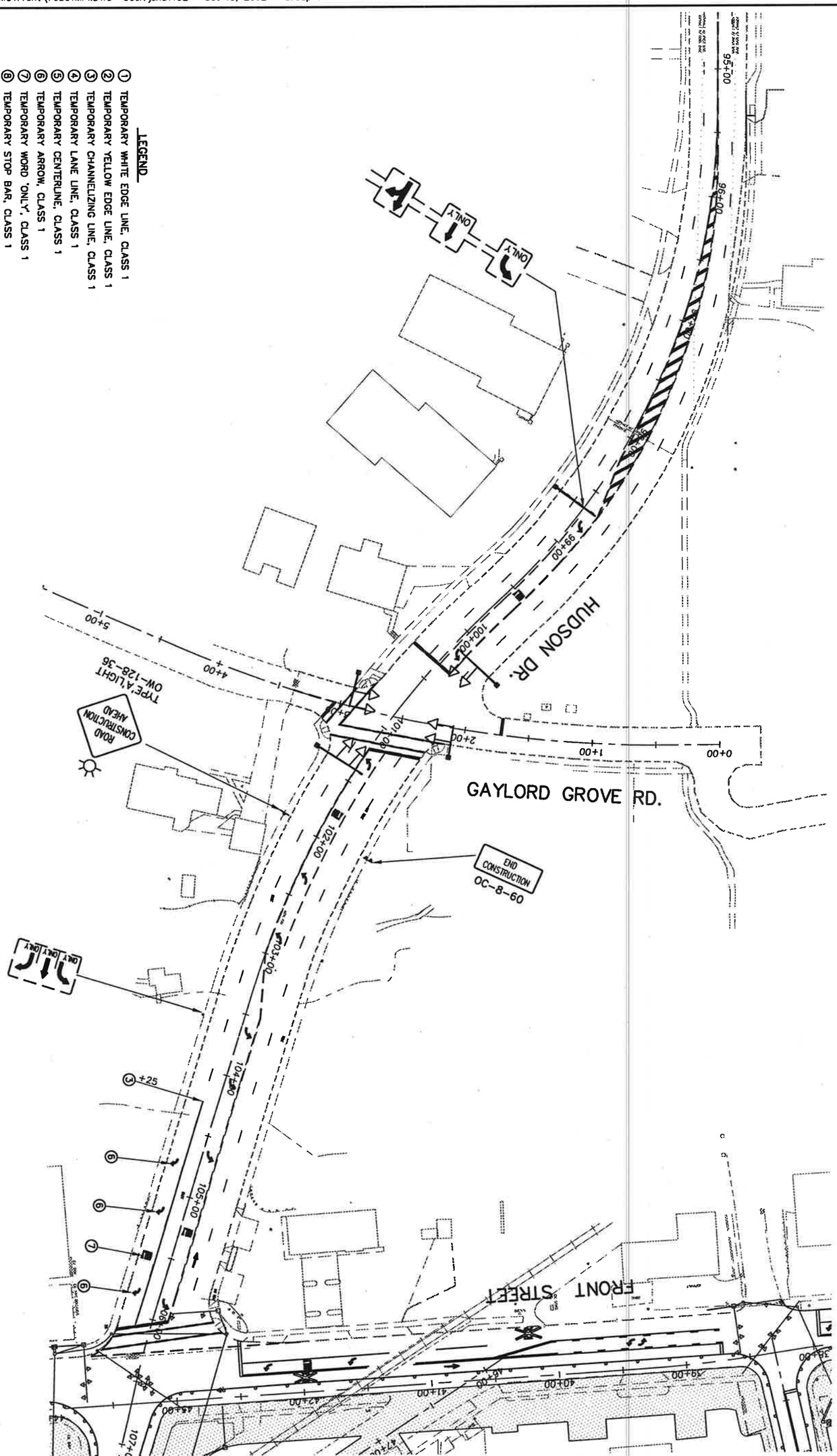
CALCULATED | CHECKED

(IN FEET) 1 inch = 20 ft.

MAINTENANCE OF TRAFFIC PHASE 1

SUM - 59-4.93

22
171



23 / 171	SUM - 59-4.93	MAINTENANCE OF TRAFFIC PHASE 1	CALCULATED / CHECKED	40 0 20 40 (IN FEET) 1 inch = 40' ft.

STEP 1. INSTALL PROPOSED SIGNAL POLES P1, P2, P3 AND P4 AND SIGNALS.

STEP 2. REMOVE EXISTING SIGNAL POLES E1 AND E2, SPAN WIRE AND SIGNALS.

ALL UNUSED TRAFFIC SIGNAL HEADS SHALL BE BAGGED.

TEMPORARY DAYTIME CLOSURES OF SECOND STREET WILL BE PERMITTED TO FACILITATE FULL DEPTH PAVEMENT REPLACEMENT. DETOUR TRAFFIC IN ACCORDANCE WITH OMUTCD VIA FRONT STREET TO BAILEY ROAD.

LEGEND

1. TEMPORARY WHITE EDGE LINE, CLASS 1
2. TEMPORARY YELLOW EDGE LINE, CLASS 1
3. TEMPORARY CHANNELIZING LINE, CLASS 1
4. TEMPORARY LANE LINE, CLASS 1
5. TEMPORARY CENTERLINE, CLASS 1
6. TEMPORARY ARROW, CLASS 1
7. TEMPORARY WORD 'ONLY', CLASS 1
8. TEMPORARY STOP BAR, CLASS 1
9. DRUMS AT 25' SPACES
10. DRUMS AT 10' SPACES

→ TRAFFIC FLOW

SECOND ST.

100'

1 STY. COMM. BLOCK
CHOI'S TAE KWON DO INSTITUTE

2 STY. BRICK RESTAURANT ROCKNE'S

100'

HUDSON DRIVE

TEMP. EASEMENT

R/W

10'

10'

10'

10'

℄ CONST.

111+00 MOV. END

112+00

113+00

ONLY

+15 +34 +74 +28

E1 E2 P1 P2 P3 P4

SEE SHEET 21.

EX. WALL (DO NOT DISTURB)

2 STY. BR. CUYAHOGA FALLS HISTORICAL SOCIETY

ROAD CONSTRUCTION AHEAD

TYPE 'A' LIGHT OW-128-36

RIGHT LANE ENDS

END CONSTRUCTION OC-8

8 NORTH

S.R. 8

(IN FEET)
1 inch = 20 ft.

CALCULATED

CHECKED

MAINTENANCE OF TRAFFIC
PHASE 1

SUM - 59-4.93

24
171

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LEGEND

1. TEMPORARY WHITE EDGE LINE, CLASS 1
2. TEMPORARY YELLOW EDGE LINE, CLASS 1
3. TEMPORARY CHANNELIZING LINE, CLASS 1
4. TEMPORARY LANE LINE, CLASS 1
5. TEMPORARY CENTERLINE, CLASS 1
6. TEMPORARY ARROW, CLASS 1
7. TEMPORARY WORD 'ONLY', CLASS 1
8. TEMPORARY STOP BAR, CLASS 1
9. DRUMS AT 25' SPACES
10. DRUMS AT 10' SPACES

→ TRAFFIC FLOW

* PLACE EXISTING SIGNS ON TEMPORARY SUPPORTS

CALCULATED | CHECKED

MAINTENANCE OF TRAFFIC PHASE 1

SLM - 59-4.93

LEGEND

① TEMPORARY WHITE EDGE LINE, CLASS 1
② TEMPORARY YELLOW EDGE LINE, CLASS 1
③ TEMPORARY CHANNELIZING LINE, CLASS 1
④ TEMPORARY LANE LINE, CLASS 1
⑤ TEMPORARY CENTERLINE, CLASS 1
⑥ TEMPORARY ARROW, CLASS 1
⑦ TEMPORARY WORD 'ONLY', CLASS 1
⑧ TEMPORARY STOP BAR, CLASS 1
⑨ DRUMS AT 25' SPACES
⑩ DRUMS AT 10' SPACES
→ TRAFFIC FLOW

MAINTENANCE OF TRAFFIC
PHASE 2

CALCULATED | CHECKED

SUM - 59-4.33

26
171

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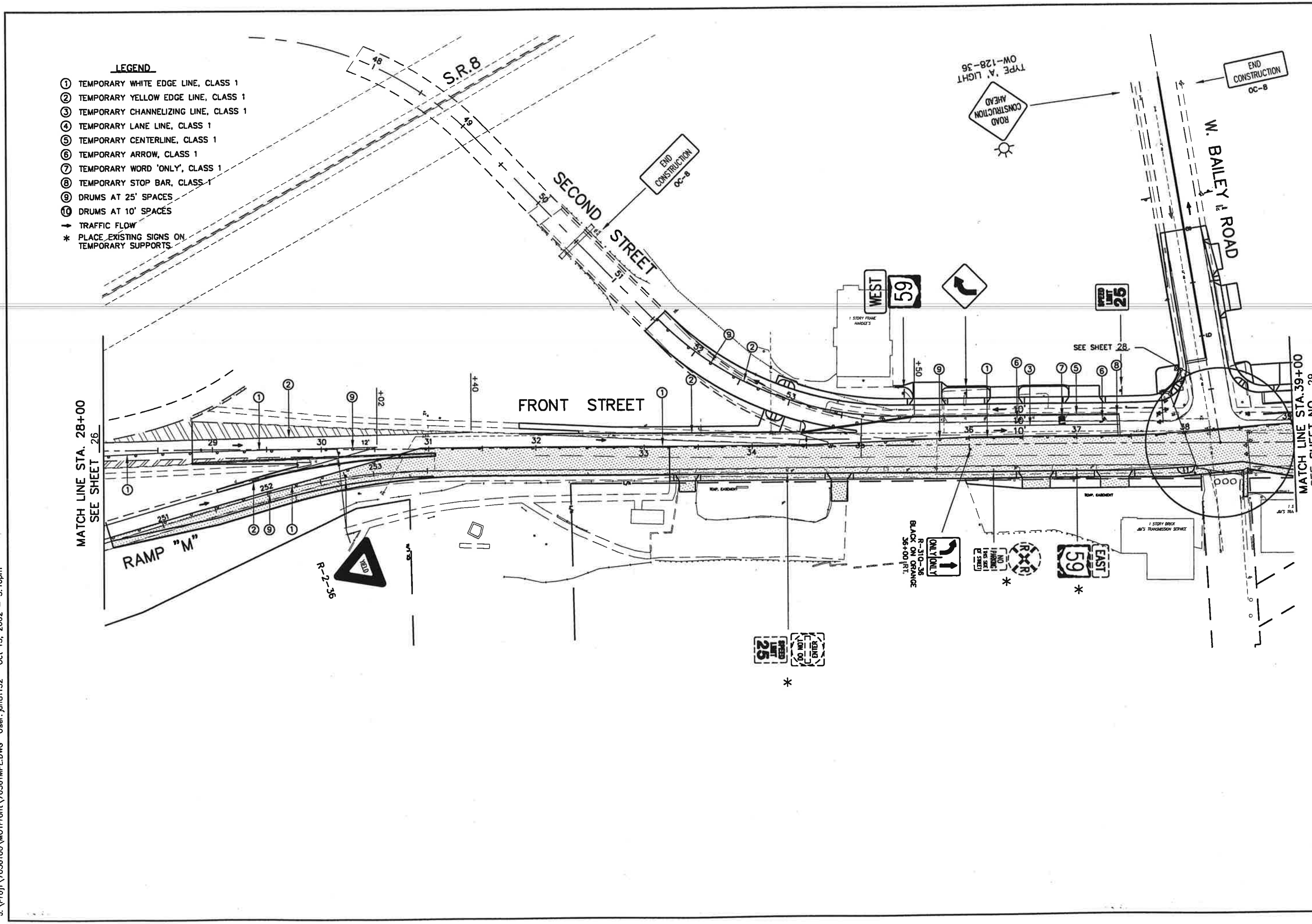
LEGEND

1. TEMPORARY WHITE EDGE LINE, CLASS 1
2. TEMPORARY YELLOW EDGE LINE, CLASS 1
3. TEMPORARY CHANNELIZING LINE, CLASS 1
4. TEMPORARY LANE LINE, CLASS 1
5. TEMPORARY CENTERLINE, CLASS 1
6. TEMPORARY ARROW, CLASS 1
7. TEMPORARY WORD 'ONLY', CLASS 1
8. TEMPORARY STOP BAR, CLASS 1
9. DRUMS AT 25' SPACES
10. DRUMS AT 10' SPACES

→ TRAFFIC FLOW

* PLACE EXISTING SIGNS ON TEMPORARY SUPPORTS



MAINTENANCE OF TRAFFIC PHASE 2

CALCULATED

CHECKED

(IN FEET) 1 inch = 40 ft.

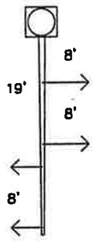
SUM - 59-4.93

27 / 171

J:\Proj1\7036100\MOTFront\70361MPL.DWG User: jon81152 Oct 15, 2002 - 5:10pm

PHASE 1 MAINTENANCE OF TRAFFIC PATTERN SHALL REMAIN UNTIL PHASE 2 MAINTENANCE OF TRAFFIC SIGNALIZATION IS INSTALLED.

1. INSTALL 3-SECTION, 12" LENS POLYCARBONITE SIGNAL HEADS ON SIGNAL POLE 1, FOR FRONT STREET AS FOLLOWS:

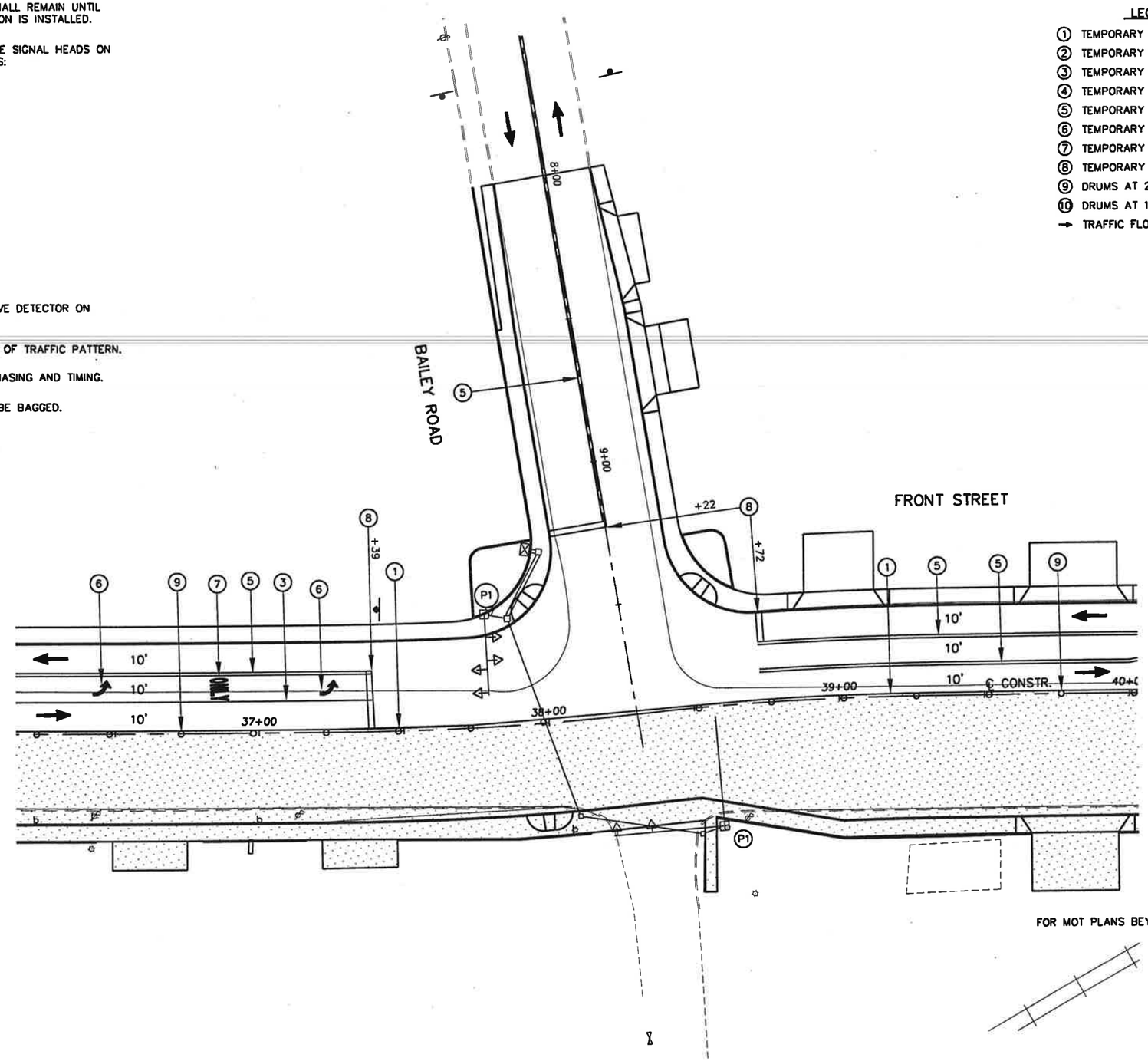


2. CONTINUE TO USE THE TYPE TC-3 MICROWAVE DETECTOR ON SIGNAL POLE 1 FOR BAILEY ROAD APPROACH.

3. PLACE TRAFFIC INTO PHASE 2 MAINTENANCE OF TRAFFIC PATTERN.

4. INTERSECTION TO OPERATE WITH EXISTING PHASING AND TIMING.

5. ALL UNUSED TRAFFIC SIGNAL HEADS SHALL BE BAGGED.



LEGEND

1. TEMPORARY WHITE EDGE LINE, CLASS 1
2. TEMPORARY YELLOW EDGE LINE, CLASS 1
3. TEMPORARY CHANNELIZING LINE, CLASS 1
4. TEMPORARY LANE LINE, CLASS 1
5. TEMPORARY CENTERLINE, CLASS 1
6. TEMPORARY ARROW, CLASS 1
7. TEMPORARY WORD 'ONLY', CLASS 1
8. TEMPORARY STOP BAR, CLASS 1
9. DRUMS AT 25' SPACES
10. DRUMS AT 10' SPACES

→ TRAFFIC FLOW

FOR MOT PLANS BEYOND INTERSECTION AREA SEE SHEET 27

MAINTENANCE OF TRAFFIC
PHASE 2

SUM - 59-4.93

28
171

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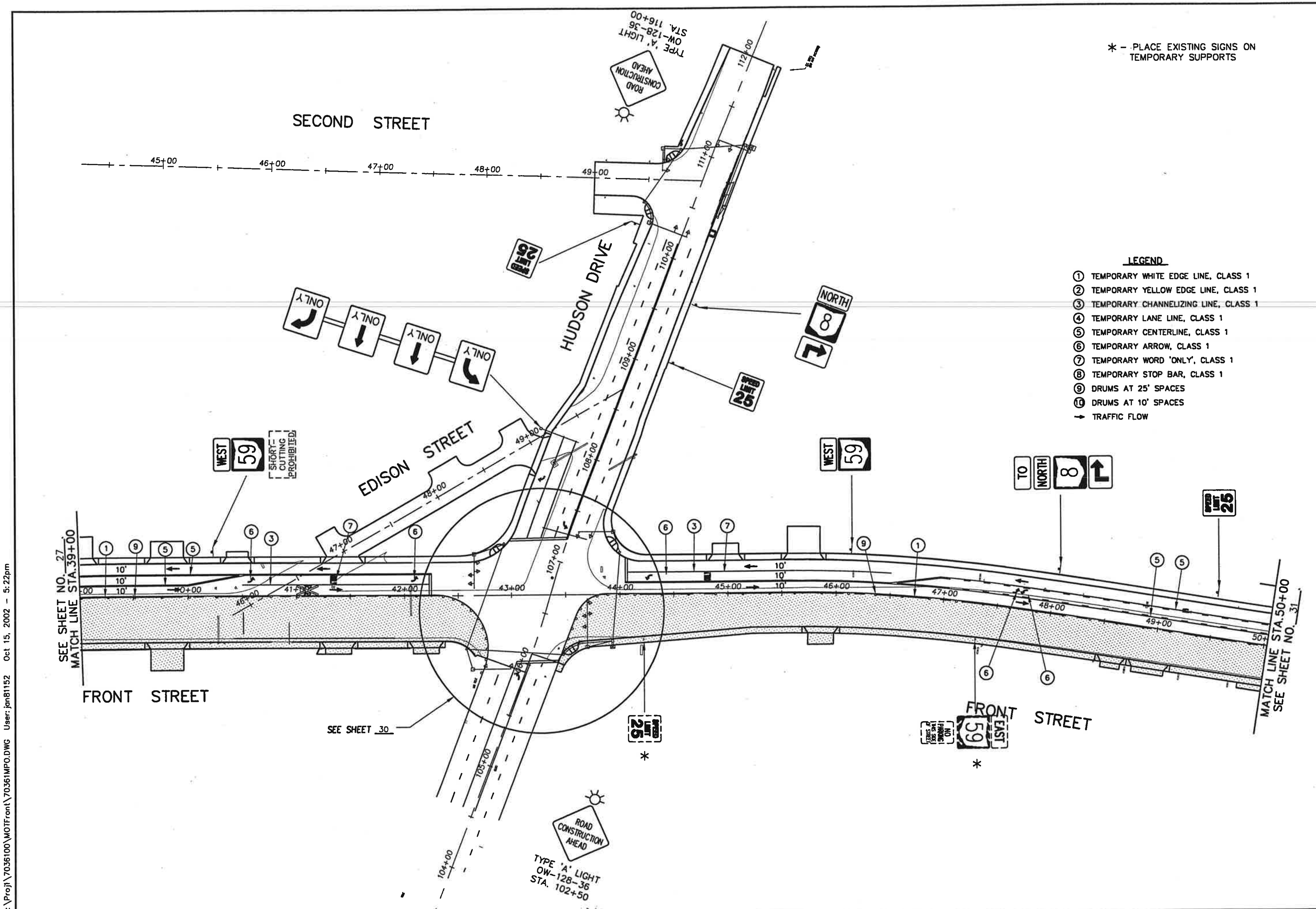


* - PLACE EXISTING SIGNS ON TEMPORARY SUPPORTS

LEGEND

1. TEMPORARY WHITE EDGE LINE, CLASS 1
2. TEMPORARY YELLOW EDGE LINE, CLASS 1
3. TEMPORARY CHANNELIZING LINE, CLASS 1
4. TEMPORARY LANE LINE, CLASS 1
5. TEMPORARY CENTERLINE, CLASS 1
6. TEMPORARY ARROW, CLASS 1
7. TEMPORARY WORD 'ONLY', CLASS 1
8. TEMPORARY STOP BAR, CLASS 1
9. DRUMS AT 25' SPACES
10. DRUMS AT 10' SPACES

→ TRAFFIC FLOW

(IN FEET) 1 inch = 40 ft.

CALCULATED
CHECKED

MAINTENANCE OF TRAFFIC
PHASE 2

SUM - 59 - 4.93

J:\Proj1\7036100\MOTFront\70361MPO.DWG User: jon81152 Oct 15, 2002 - 5:22pm

PHASE 1 MAINTENANCE OF TRAFFIC PATTERN SHALL REMAIN UNTIL PHASE 2 MAINTENANCE OF TRAFFIC SIGNALIZATION IS INSTALLED.

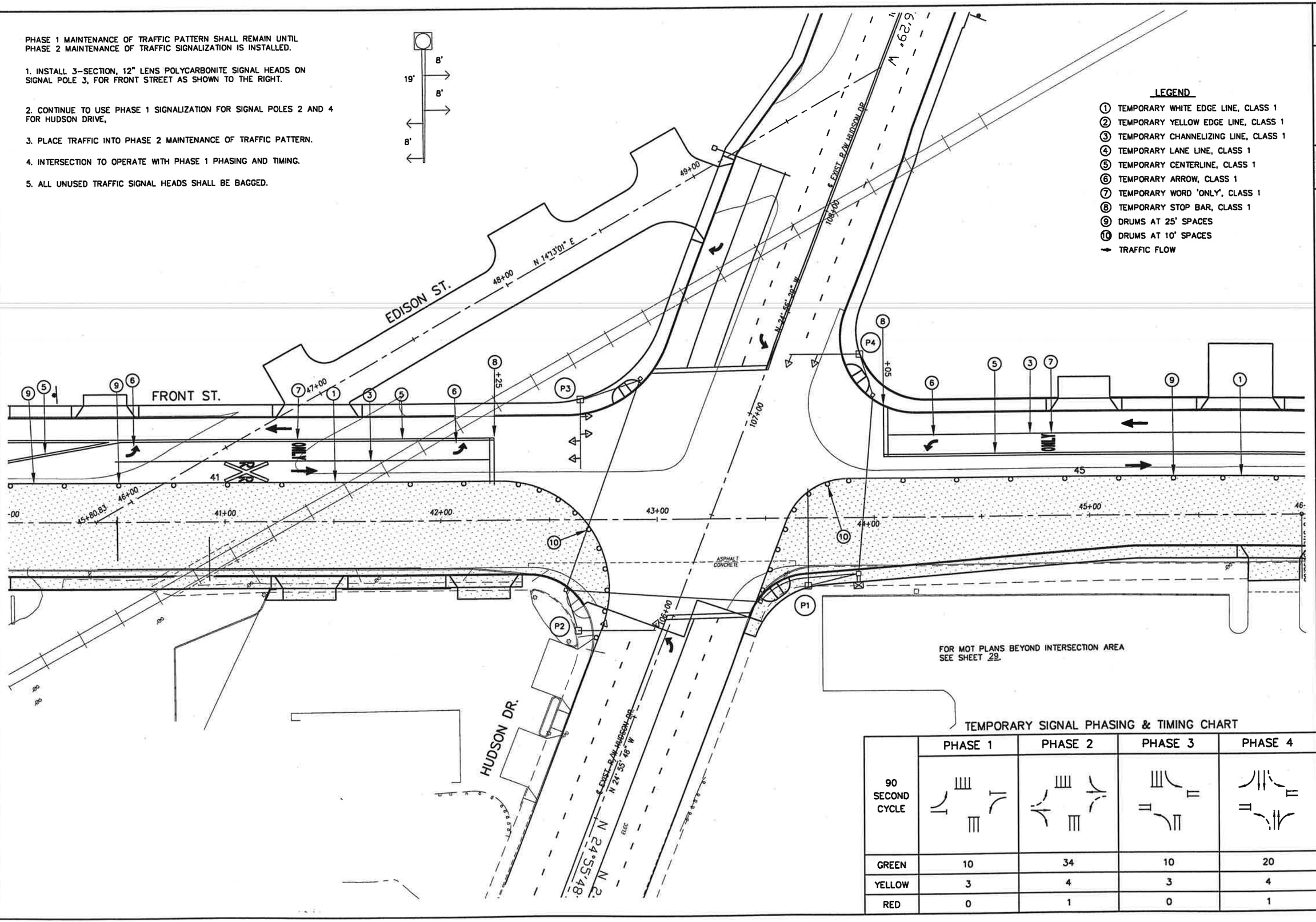
1. INSTALL 3-SECTION, 12" LENS POLYCARBONITE SIGNAL HEADS ON SIGNAL POLE 3, FOR FRONT STREET AS SHOWN TO THE RIGHT.

2. CONTINUE TO USE PHASE 1 SIGNALIZATION FOR SIGNAL POLES 2 AND 4 FOR HUDSON DRIVE,

3. PLACE TRAFFIC INTO PHASE 2 MAINTENANCE OF TRAFFIC PATTERN.

4. INTERSECTION TO OPERATE WITH PHASE 1 PHASING AND TIMING.

5. ALL UNUSED TRAFFIC SIGNAL HEADS SHALL BE BAGGED.



LEGEND

1. TEMPORARY WHITE EDGE LINE, CLASS 1
2. TEMPORARY YELLOW EDGE LINE, CLASS 1
3. TEMPORARY CHANNELIZING LINE, CLASS 1
4. TEMPORARY LANE LINE, CLASS 1
5. TEMPORARY CENTERLINE, CLASS 1
6. TEMPORARY ARROW, CLASS 1
7. TEMPORARY WORD 'ONLY', CLASS 1
8. TEMPORARY STOP BAR, CLASS 1
9. DRUMS AT 25' SPACES
10. DRUMS AT 10' SPACES

→ TRAFFIC FLOW

FOR MOT PLANS BEYOND INTERSECTION AREA SEE SHEET 29.

TEMPORARY SIGNAL PHASING & TIMING CHART

90 SECOND CYCLE	PHASE 1	PHASE 2	PHASE 3	PHASE 4
GREEN	10	34	10	20
YELLOW	3	4	3	4
RED	0	1	0	1

(IN FEET)
1 inch = 20 ft.

CALCULATED | CHECKED

MAINTENANCE OF TRAFFIC
PHASE 2

SUM - 59-4.93

30
171

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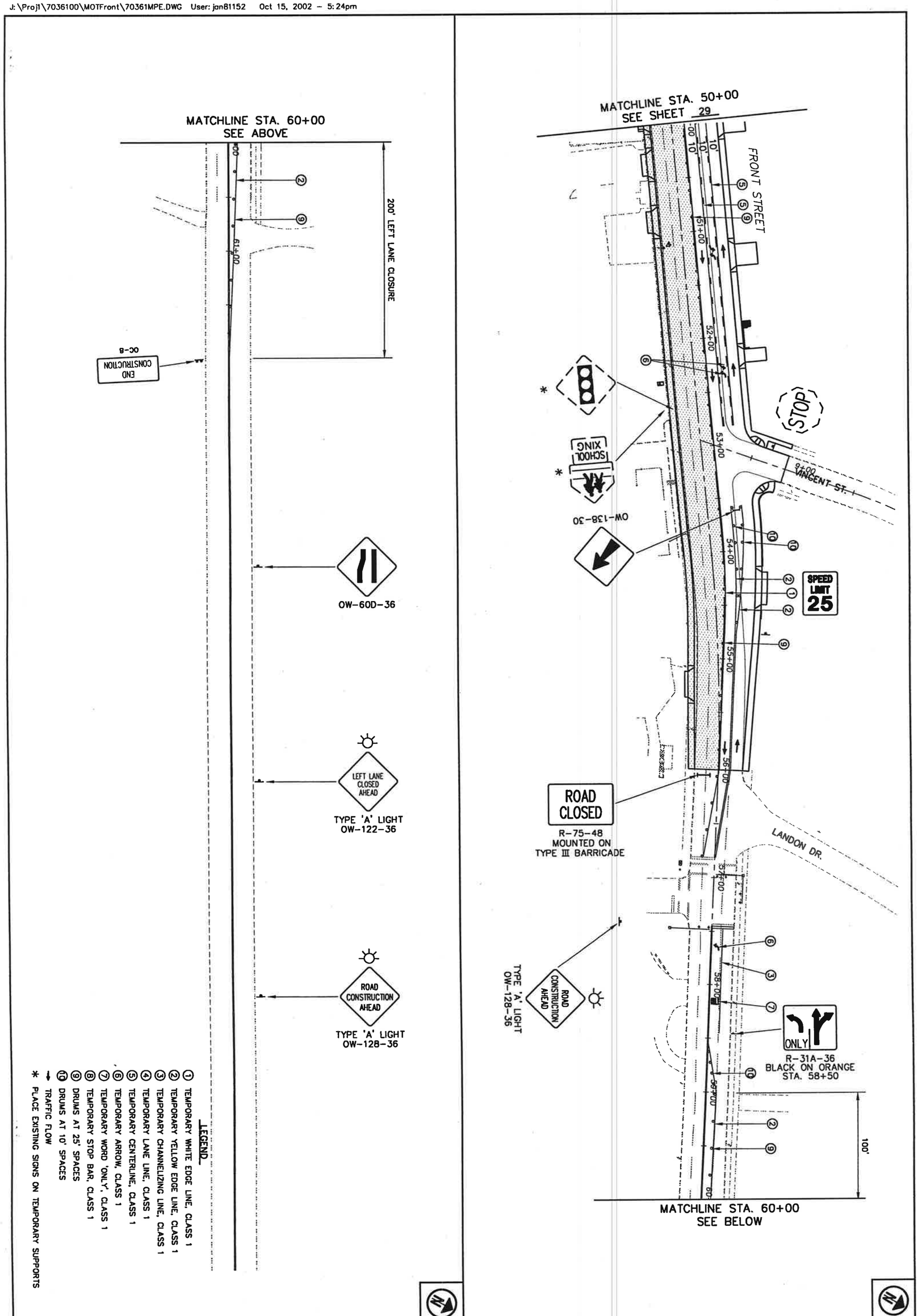

SUM - 59-4.93

MAINTENANCE OF TRAFFIC
PHASE 2

CALCULATED
CHECKED

0 10 20 40
(IN FEET)

SHEET NUMBER																					PARTICIPATION		ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	AS PER PLAN SHEET REF.
ITEM		11	12	13	14	15	16	35	36	39		45	46	47		48	100	101	102	103	100% CITY	PROJECT						
																											ROADWAY	
201		LUMP																				LUMP	201	11000	LUMP		CLEARING AND GRUBBING	
202										3006				824								3830	202	23000	3830	SQ. YD.	PAVEMENT REMOVED	
202										36175												36175	202	30000	36175	SQ. FT.	WALK REMOVED	
202										7213				310								7523	202	32000	7523	L.F.	CURB REMOVED	
202												344										344	202	35100	344	LIN. FT.	PIPE REMOVED, 24" AND UNDER	
202												462										462	202	35200	462	LIN. FT.	PIPE REMOVED, OVER 24"	
202										79												79	202	38000	79	L.F.	GUARDRAIL REMOVED	
202												19										19	202	58300	19	EACH	CATCH BASIN OR INLET REMOVED	
202												2										2	202	58600	2	EACH	CATCH BASIN OR INLET ABANDONED	
202												1										1	202	58000	1	EACH	MANHOLE REMOVED	
202										134												134	202	75000	134	L.F.	FENCE REMOVED	
202										LUMP												LUMP	202	98000	LUMP		REMOVAL MISC.: RETAINING WALL REMOVED	
202										9												9	202	98100	9	EACH	REMOVAL MISC.: LIGHTPOLE AND FOUNDATION	
203		100											8084									8184	203	12000	8184	CU.YD	EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION	
203		100											255									355	203	20000	355	CU.YD	EMBANKMENT	
203		8																				8	203	45000	8	HOUR	PROOF ROLLING	
604										1												1	604	38500	1	EACH	MONUMENT ASSEMBLY COMPLETE	
										3												3	604	39500	3	EACH	MONUMENT BOX ADJUSTED TO GRADE	
608										33185												33185	608	13000	33185	S.F.	6" CONCRETE WALK	
608										20												20	608	40000	20	L.F.	CONCRETE STEPS, TYPE A	
608										2												2	608	49000	2	EACH	CURB RAMP, DESIGN A	
608										7												7	608	49000	7	EACH	CURB RAMP, DESIGN D	
608										3												3	608	49000	3	EACH	CURB RAMP, DESIGN E	
609										326												326	830	14000	326	L.F.	CURB, TYPE 2A	
609										3904												3904	830	16000	3904	L.F.	CURB, TYPE 2B	
609										2722				571								3293	830	26000	3293	L.F.	CURB, TYPE 6	
SPECIAL		10																				10	SPECIAL	61050010	10	CU.YD.	WORK INVOLVING POTENTIALLY PETROLEUM CONTAMINATED SOIL	11
SPECIAL										150												150	SPECIAL	69065106	150	SQ.FT.	RETAINING WALL MISC., DECORATIVE CONCRETE BLOCK RETAINING WALL	11
SPECIAL										303												303	SPECIAL	20398300	303	L.F.	ROADWAY MISC: RUBBERIZED RAILROAD CROSSING	11
SPECIAL										LUMP												LUMP	SPECIAL	20298000	LUMP		REMOVAL MISC., COMMERCIAL SIGN, PARCEL 0219738	12
SPECIAL										LUMP												LUMP	SPECIAL	20298000	LUMP		REMOVAL MISC., COMMERCIAL SIGN, PARCEL 0211651	12
SPECIAL										LUMP												LUMP	SPECIAL	20298000	LUMP		REMOVAL MISC., COMMERCIAL SIGN, PARCEL 0218831	12
SPECIAL										LUMP												LUMP	SPECIAL	20298000	LUMP		REMOVAL MISC., COMMERCIAL SIGN, PARCEL 0205671	12
SPECIAL										LUMP												LUMP	SPECIAL	20298000	LUMP		REMOVAL MISC., COMMERCIAL SIGN, PARCEL 0217502	12
SPECIAL										LUMP												LUMP	SPECIAL	20298000	LUMP		REMOVAL MISC., COMMERCIAL SIGN, PARCEL 0209977	12
SPECIAL										LUMP												LUMP	SPECIAL	20298000	LUMP		REMOVAL MISC., COMMERCIAL SIGN, PARCEL 0200190	12
SPECIAL										LUMP												LUMP	SPECIAL	20298000	LUMP		REMOVAL MISC., COMMERCIAL SIGN, PARCEL 0211220	12
SPECIAL										LUMP												LUMP	SPECIAL	20298000	LUMP		REMOVAL MISC., COMMERCIAL SIGN, PARCEL 0208944	12
SPECIAL										LUMP												LUMP	SPECIAL	20298000	LUMP		REMOVAL MISC., COMMERCIAL SIGN, PARCEL 0219054	12
SPECIAL										LUMP												LUMP	SPECIAL	20298000	LUMP		REMOVAL MISC., COMMERCIAL SIGN, PARCEL 0208944	12
SPECIAL										LUMP												LUMP	SPECIAL	20298000	LUMP		REMOVAL MISC., COMMERCIAL SIGN, PARCEL 0211291	12
SPECIAL										LUMP												LUMP	SPECIAL	20298000	LUMP		REMOVAL MISC., COMMERCIAL SIGN, PARCEL 0200933	12
SPECIAL										LUMP												LUMP	SPECIAL	20298000	LUMP		REMOVAL MISC., COMMERCIAL SIGN, PARCEL 0215853	12
																											EROSION CONTROL	
601			100																			100	601	34200	100	CU.YD.	ROCK CHANNEL PROTECTION, TYPE C (WITHOUT FILTER)	
870			2																			2	870	00100	2	EACH	SOIL ANALYSIS TEST	
870			400																			400	870	00200	400	CU. YD.	PLACING TOPSOIL	
870													3531									3531	870	10000	3531	SQ.YD.	SEEDING AND MULCHING	
870			175																			175	870	14000	175	SQ. YD	REPAIR SEEDING AND MULCHING	
870			175																			175	870	15000	175	SQ. YD.	INTER-SEEDING	
870			2																			2	870	20000	2	TON	COMMERCIAL FERTILIZER	
870			2																			2	870	30000	2	TON	AGRICULTURAL LIME	
870			12																			12	870	35000	12	M.GAL	WATER	
870			32																			32	870	40000	32	MSQ.FT.	MOWING	
877			700																			700	877	10000	700	SQ. YD	TEMPORARY SEEDING AND MULCHING	
877			1150													2327						3477	877	30100	3477	LIN. FT.	TEMPORARY PERIMETER FILTER FABRIC FENCE	
877																40						40	877	30200	40	LIN. FT.	TEMPORARY DITCH CHECK FILTER FABRIC FENCE	
877			400													1080						1480	877	30300	1480	LIN. FT.	TEMPORARY INLET PROTECTION FILTER FABRIC FENCE	

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GENERAL SUMMARY

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SHEET NUMBER																						PARTICIPATION		ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	AS PER PLAN SHEET REF.
ITEM		10	11	12	13	14	15		35	36	39		45	46	47		48	100	101	102	103	100% CITY	PROJECT						
																												DRAINAGE	
603					100																		100	603	00012	100	LF	3" CONDUIT, TYPE E (THROUGH CURB)	
603													32										32	603	00200	32	LF	4" CONDUIT, TYPE C, 707.42	
603					100																		100	603	00400	100	LF	4" CONDUIT, TYPE E	
603													450										450	603	00406	450	LF	4" CONDUIT, TYPE F	
603													63										63	603	00900	63	LF	6" CONDUIT, TYPE B	
603					100																		100	603	01400	100	LF	6" CONDUIT, TYPE E	
603					100																		100	603	02500	100	LF	8" CONDUIT, TYPE E	
603					100																		100	603	03600	100	LF	10" CONDUIT, TYPE E	
603													1550										1550	603	04400	1550	LF	12" CONDUIT, TYPE B	
603													109										109	603	04600	109	LF	12" CONDUIT, TYPE C	
603					100																		100	603	05100	100	LF	12" CONDUIT, TYPE E	
603													56										56	603	05900	56	LF	15" CONDUIT, TYPE B	
603													793										793	603	07400	793	LF	18" CONDUIT, TYPE B	
603													8										8	603	07600	8	LF	18" CONDUIT, TYPE C	
603													425										425	603	10400	425	LF	24" CONDUIT, TYPE B	
603													251										251	603	13400	251	LF	30" CONDUIT, TYPE B	
603													129										129	603	16400	129	LF	36" CONDUIT, TYPE B	
603													77										77	603	97000	77	LF	12" SLOTTED DRAIN, TYPE 2	
603													24										24	603	97000	24	LF	18" SLOTTED DRAIN, TYPE 2	
604													9										9	604	00400	9	EA	CATCH BASIN NO. 3	
604													25										25	604	00800	25	EA	CATCH BASIN NO. 3A	
604													3										3	604	02000	3	EA	CATCH BASIN NO. 6	
604													8										8	604	04500	8	EA	CATCH BASIN NO. 2-2B	
604													18										18	604	31500	18	EA	MANHOLE NO. 3	
604			5										6										11	604	34500	11	EA	MANHOLE ADJUSTED TO GRADE	
604			5																				5	604	35500	5	EA	MANHOLE RECONSTRUCTED TO GRADE	
604					2																		2	604	37000	2	EA	INSPECTION WELL	
605													5788										5788	605	05100	5788	LF	4" SHALLOW PIPE UNDERDRAIN	
605													148										148	605	05200	148	LF	4" UNCLASSIFIED PIPE UNDERDRAIN	
SPECIAL					1000																		1000	SPECIAL	50000	1000	LBS.	MISCELLANEOUS METAL	
																												PAVEMENT	
203									8100	2565													10665	203	50000	10665	SQ.YD.	SUBGRADE COMPACTION	
254										14921													14921	254	01000	14921	SQ.YD.	PAVEMENT PLANING, BITUMINOUS	
301									1254	493													1747	301	46000	1747	CU.YD.	BITUMINOUS AGGREGATE BASE, PG64-22	
304									1350	428					517								2295	304	20000	2295	CU.YD.	AGGREGATE BASE	
305									2336														2336	305	13000	2336	SQ.YD.	9" CONCRETE BASE	
407									1557														1557	407	10000	1557	GAL.	TACK COAT	
407									830	78													908	407	14000	908	GAL.	TACK COAT FOR INTERMEDIATE COURSE	
408															931								931	408	10000	931	GAL.	BITUMINOUS PRIME COAT	
448															114								114	448	46024	114	CU.YD.	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22 (FOR DRIVEWAYS)	
448									1579	95													1674	448	46050	1674	CU.YD.	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22	
448									721	68													789	448	47020	789	CU.YD.	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22	
448															81								81	448	48020	81	CU.YD.	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22 (FOR DRIVEWAYS)	
451										490													490	451	14000	490	SQ.YD.	9" REINFORCED CONCRETE PAVEMENT	
452															1201								1201	452	12000	1201	SQ.YD.	8" PLAIN CONCRETE PAVEMENT	
																												WATER	
638																	10				10			638	00104	10	LF	4" WATERMAIN, DUCTILE IRON PIPE WITH PUSH-ON JOINTS, ASNI CL. 53	
638																	113				113			638	00604	113	LF	6" WATERMAIN, DUCTILE IRON PIPE WITH PUSH-ON JOINTS, ASNI CL. 53	
638																	136						136	638	00800	136	LF	6" WATERMAIN, DUCTILE IRON PIPE WITH PUSH-ON JOINTS & RESTRAINED MECHANICAL JOINT FITTINGS, ANSI CL. 52	
638																	2040				2040			638	01204	2040	LF	8" WATERMAIN, DUCTILE IRON PIPE WITH PUSH-ON JOINTS, ASNI CL. 53	
638																			200		200			638	01400	200	LF	8" WATERMAIN, DUCTILE IRON PIPE WITH PUSH-ON JOINTS & RESTRAINED MECHANICAL JOINT FITTINGS, ANSI CL. 52	
638																	118		150				268	638	04800	268	LF	3/4" COPPER SERVICE BRANCH	
638																	276		200				476	638	04900	476	LF	1" COPPER SERVICE BRANCH	
638																	48		50				98	638	05000	98	LF	1-1/2" COPPER SERVICE BRANCH	
638																	18		50				68	638	05100	68	LF	2" COPPER SERVICE BRANCH	
638																	140	65			205			638	07302	205	LF	18" STEEL PIPE ENCASEMENT, BORED OR JACKED	
638																		75			75			638	07314	75	LF	30" STEEL PIPE ENCASEMENT, BORED OR JACKED	
638																	8				8			638	07800	8	EACH	6" GATE VALVE AND VALVE BOX	
638																	4				4			638	07900	4	EACH	8" GATE VALVE AND VALVE BOX	
638																	1				1			638	08100	1	EACH	12" GATE VALVE AND VALVE BOX	

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GENERAL SUMMARY

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SHEET NUMBER																				PARTICIPATION		ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	AS PER PLAN SHEET REF.
ITEM		11	12	13	14	15	16		35	36	39	45	46	47	48	100	101	102	103	100% CITY	PROJECT						
																										WATER (CON'T)	
638																1				1		638	09894	1	EACH	16" X 8" TAPPING SLEEVE, VALVE AND VALVE BOX	
638																7					7	638	10200	7	EACH	6" FIRE HYDRANT	
638																7					7	638	10480	7	EACH	FIRE HYDRANT REMOVED	
638																4		3			7	638	10800	7	EACH	WATER VALVE ADJUSTED TO GRADE	
638																		7			7	638	10900	7	EACH	SERVICE BOX ADJUSTED TO GRADE	
638																		10			10	638	11100	10	EACH	METER AND CHAMBER REMOVED AND RESET	
SPECIAL																616				616		SPECIAL	20235100	616	LF	ABANDON EX. 4" WATERMAIN, AS PER PLAN	102
SPECIAL																1566				1566		SPECIAL	20235100	1566	LF	ABANDON EX. 6" WATERMAIN, AS PER PLAN	102
SPECIAL																8				8		SPECIAL	20235100	8	EACH	REMOVE EX. LINE VALVE, AS PER PLAN	102
																										SANITARY	
202																	10			10		202	58000	10	EACH	MANHOLE REMOVED, SANITARY	
603																			1650	1650		603	00900	1650	LF	6" CONDUIT, TYPE B, FOR SANITARY	
603																	2334		250	2584		603	01800	2584	LF	8" CONDUIT, TYPE B, FOR SANITARY	
603																	1193			1193		603	07400	1193	LF	18" CONDUIT, TYPE B, FOR SANITARY	
604																	17			17		604	31500	17	EACH	NO. 3 MANHOLE, FOR SANITARY	
604																	3			3		604	35500	3	EACH	MANHOLE RECONSTRUCTED TO GRADE, SANITARY	
SPECIAL																	40			40		SPECIAL	84281000	40	LF	CONCRETE ENCASEMENT, AS PER PLAN	114
SPECIAL																			1850	1850		SPECIAL	20235100	1850	LF	ABANDON EX. 8" SANITARY SEWER, AS PER PLAN	103
SPECIAL																			180	180		SPECIAL	20235100	180	LF	ABANDON EX. 12" SANITARY SEWER, AS PER PLAN	103
SPECIAL																			11	11		SPECIAL	20258700	11	EACH	ABANDON EX. SANITARY MANHOLE, AS PER PLAN	103
																										LIGHTING	
																										FOR LIGHTING GENERAL SUMMARY SEE SHEET 149	
																										TRAFFIC CONTROL	
																										FOR TRAFFIC CONTROL GENREAL SUMMARY SEE SHEET 115-116	
																										BUILDING DEMOLISHED	
											LUMP										LUMP	202	56000	LUMP		BUILDING DEMOLISHED (PARCEL 0212252, Gove Photo)	
																										MAINTENANCE OF TRAFFIC	
410						100																100	410	12001	100	CU.YD.	TRAFFIC COMPACTED SURFACE, TYPE A OR B, AS PER PLAN	
608						40000																40000	608	21200	40000	SQ.FT.	TEMPORARY BITUMINOUS WALK	
614					200																	200	614	11100	200	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR	
614							5															5	614	12454	5	SQ.FT.	SIGN, TEMPORARY OVERLAY, TYPE H	
614						100																	614	13000	100	CU.YD.	BITUMINOUS CONCRETE FOR MAINTAINING TRAFFIC	
614							0.21															0.21	614	20100	0.21	MI.	TEMPORARY LANE LINE, CLASS 1, 642 PAINT	
614							1.19															1.19	614	21100	1.19	MI.	TEMPORARY CENTERLINE, CLASS 1, 642 PAINT	
614							1.97															1.97	614	22100	1.97	MI.	TEMPORARY EDGE LINE, CLASS 1, 642 PAINT	
614							1906															1906	614	23200	1906	LF	TEMPORARY CHANNELIZING LINE, CLASS 1, 642 PAINT	
614							280															280	614	26200	280	LF	TEMPORARY STOP LINE, CLASS 1, 642 PAINT	
614							43															43	614	30200	43	EACH	TEMPORARY LANE ARROW, CLASS 1, 642 PAINT	
614							13															13	614	31200	13	EACH	TEMPORARY WORD ON PAVEMENT, CLASS 1, 642 PAINT	
614							5															5	614	32200	5	EACH	TEMPORARY RAILROAD SYMBOL, CLASS 1, 642 PAINT	
615							LUMP															LUMP	615	10000	LUMP		TEMPORARY ROAD	
615							56.2															56.2	615	20000	56.2	SQ.YD.	TEMPORARY PAVEMENT, CLASS A	
616						60																60	616	10000	60	M.GAL.	WATER	
616						15																15	616	20000	15	TON	CALCIUM CHLORIDE	
																										MISCELLANEOUS	
614																						LUMP	614	11000	LUMP		MAINTAINING TRAFFIC	
623																						LUMP	623	10000	LUMP		CONSTRUCTION LAYOUT STAKES	
624																						LUMP	624	10000	LUMP		MOBILIZATION	
806																						12	806	16020	12	MONTH	FIELD OFFICE, TYPE C	

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RESURFACING AND WIDENING SECTIONS

STATION		LENGTH, L	AVERAGE OVERLAY WIDTH, OW	AVERAGE WIDENING WIDTH LT., WWL	AVERAGE WIDENING WIDTH RT., WWR	SURFACE AREA OVERLAY (SO = L•OW)	SURFACE AREA WIDENING LT. (SWL = L•WWL)	SURFACE AREA WIDENING RT.(SWR = L•WWR)	ITEM NUMBER 203	301	304	305	407		448			451
									SUBGRADE COMPACTION	9" BITUMINUS AGGREGATE BASE, PG64-22	AGGREGATE BASE, 6"	9" CONCRETE BASE	TACK COAT (0.075 GAL./SQ. YD.)	TACK COAT FOR INTERMEDIATE COURSE (0.040 GAL./SQ. YD.)	VARIABLE DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22	1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22	1 1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22	9" REINFORCED CONCRETE PAVEMENT
									{(WWL+1)+(WWR+1)} •L/9	[(9/12)•(WWL)]/27	[0.5•(WWL+1)+ (WWR+1)]•L]/27	(WWR+0.5)•L/9	0.075•SO/9	0.040•SO/9	5.65•L/27	(1.75/12)•SO/27	(1.25/12)•SO/27	(L•WWR)/9
									•[(WWR+1)•L]/9		• [0.5•(WWR+1)•L]/27	• (WWL+WWR+1)•L/9						
FROM	TO	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	SQ. FT.	SQ. FT.	SQ. FT.	SQ. YD.	CU. YD.	CU. YD.	S.Y.	GAL.	GAL.	CU. YD.	CU. YD.	CU. YD.	SQ. YD.
FRONT STREET																		
28+81.62	29+77.46	95.84	33.86	0.00	2.89	3245.1	0.00	277.0	•41.4		•6.9	36.1	27.0	14.4	20.1	17.5	12.5	
29+77.46	31+06.57	129.11	24.77	0.00	5.71	3198.1	0.00	737.2	•96.3		•16.0	89.1	26.7	14.2	27.0	17.3	12.3	
31+06.57	31+40.78	34.21	41.04	0.00	6.44	1404.0	0.00	220.3	•28.3		•4.7	26.4	11.7	6.2	7.2	7.6	5.4	
31+40.78	31+84.38	43.60	38.95	0.00	6.00	1698.2	0.00	261.6	•33.9		•5.7	31.5	14.2	7.5	9.1	9.2	6.6	
31+84.38	34+43.99	259.61	38.00	7.45	6.40	9865.2	1934.1	1661.5	457.2		76.2	199.0	82.2	43.8	54.3	53.3	38.1	
34+43.99	35+31.86	87.87	67.79	12.34	6.95	5956.7	1084.3	610.7	207.9	30.1	34.6	72.7	49.6	26.5	18.4	32.2	23.0	
35+31.86	37+20.60	188.74	62.00	18.08	6.76	11701.9	3412.4	1275.9	562.9	94.8	93.8	152.3	97.5	52.0	39.5	63.2	45.1	
37+20.60	38+50.00	129.40	62.00	20.68	4.46	8022.8	2676.0	577.1	390.2	74.3	65.0	71.3	66.9	35.7	27.1	43.3	31.0	
38+50.00	39+00.00	50.00	67.50	27.79	1.50	3375.0	1389.5	75.0	173.8	38.6	29.0	11.1	28.1	15.0	10.5	18.2	13.0	
39+00.00	39+39.79	39.79	73.00	29.49	4.66	2904.7	1173.4	185.4	159.8	32.6	26.6	22.8	24.2	12.9	8.3	15.7	11.2	
39+39.79	43+35.80	396.01	73.00	27.89	4.80	28908.7	11044.7	1900.8	1526.4	306.8	254.4	233.2	240.9	128.5	82.9	156.1	111.5	
43+35.80	45+55.44	219.64	62.00	27.62	1.63	13617.7	6066.5	358.0	762.6	168.5	127.1	52.0	113.5	60.5	46.0	73.6	52.5	
45+55.44	47+16.73	161.29	62.00	25.06	1.50	10000.0	4041.9	241.9	511.8	112.3	85.3	35.8	83.3	44.4	33.8	54.0	38.6	
47+16.73	53+77.39	660.66	62.00	18.35	1.76	40960.9	12123.1	1162.8	1623.0	336.8	270.5	165.9	341.3	182.0	138.2	221.2	158.0	
53+77.39	56+03.48	226.09	53.00	9.45	2.20	11982.8	2136.6	497.4	342.9	59.3	57.2	67.8	99.9	53.3	47.3	64.7	46.2	
HUDSON DRIVE																		
107+91.66	108+10.00	18.34	72.00	28.18	3.62	1320.5	516.8	66.4	68.9		11.5	•66.8	11.0	5.9		7.1	5.1	
108+10.00	108+35.00	25.00	68.5	24.27	3.27	1712.5	606.8	81.8	82.1		13.7	•79.3	14.3	7.6		9.2	6.6	
108+35.00	108+50.00	15.00	62.40	18.32	2.75	936.0	274.8	41.3	38.5		6.4	•36.8	7.8	4.2		5.1	3.6	
108+50.00	108+60.00	10.00	58.40	14.55	2.29	584.0	145.5	22.9	20.9		3.5	•19.8	4.9	2.6		3.2	2.3	
108+60.00	109+25.00	65.00	57.00	13.93	2.42	3705.0	905.5	157.3	132.5		22.1	•125.3	30.9	16.5		20.0	14.3	
109+25.00	111+12.00	187.00	52.83	9.63	2.50	9879.2	1800.8	467.5	293.6		48.9	•272.8	82.3	43.9		53.4	38.1	
111+12.00	111+70.00	58.00	47.33	4.40	2.55	2745.1	255.2	147.9	57.7		9.6	•51.2	22.9	12.2		14.8	10.6	
111+70.00	112+00.00	30.00	44.78	2.25	2.15	1343.4	67.5	64.5	21.3		3.6	•18.0	11.2	6.0		7.3	5.2	
RAMP M																		
250+50.00	251+50.00	100.00	26.00	0.00	10.52	2600.0	0.00	1052.0	•128.0		•21.3	122.4	21.7	11.6		14.0	10.0	
251+50.00	251+56.50	6.50	29.5	0.00	14.8	191.8	0.00	96.2	•11.4		•1.9	11.1	1.6	0.9		1.0	0.7	
251+56.50	251+89.91	33.41	28.33	3.17	14.50	946.5	105.9	484.4	73.0		12.2	55.7	7.9	4.2		5.1	3.7	
251+89.91	251+99.38	9.47	28.73	2.87	14.29	272.1	27.2	135.3	20.2		3.4	15.6	2.3	1.2		1.5	1.0	
251+99.38	252+16.07	16.69	28.22	3.32	14.04	471.0	55.4	234.3	35.9		6.0	27.0	3.9	2.1		2.5	1.8	
252+16.07	252+31.88	15.81	27.29	4.04	13.39	431.5	63.9	211.7	34.1		5.7	24.4	3.6	1.9		2.3	1.7	
252+31.88	253+55.80	123.92	22.75	0.00	9.86	2819.2	0.0	1221.9	163.3		27.2	142.6	23.5	12.5		15.2	10.9	
SUBTOTALS															570	1009		
TOTALS (CARRIED TO THE GENERAL SUMMARY)									8100	1254	1350	2336	1557	830	1579		721	0

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PAVEMENT CALCULATIONS

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FULL DEPTH PAVEMENT REPLACEMENT SECTIONS

STATION		LENGTH, (L)	WIDTH (W)	SURFACE AREA (SA)	ITEM NUMBER 203	301	304	407	448		451
					SUBGRADE COMPACTION	9" BITUMINUS AGGREGATE BASE, PG64-22	AGGREGATE BASE, 6"	TACK COAT FOR INTERMEDIATE COURSE (0.040 GAL./SQ. YD.)	1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22	1 1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22	9" RINFORCED CONCRETE PAVEMENT
		FT.	FT.	SQ. FT.	(W+2.67)*L/9	[(9/12)*W*L]/27	[(6/12)*[W+2.67]*L]/27	0.040*A/9	(1.75/12)*A/27	(1.25/12)*A/27	[L*(W+1)]/9
FROM	TO	LIN. FT.	LIN. FT.	SQ. FT.	SQ. YD.	CU. YD.	CU. YD.	GAL.	CU. YD.	CU. YD.	SQ. YD.
RELOCATED SECOND STREET											
51+53.24	53+16.50	163.26	26.00	4244.76	520.1		86.7				489.8
SECOND STREET											
49+00.00	49+39.94	39.94	30.50	1218.17	147.2	34.9	24.5	5.4	6.6	4.7	
49+39.94	49+70.71	30.77	43.93	1351.80	159.3	38.4	26.6	6.0	7.3	5.2	
VINCENT STREET											
9+17.18	9+53.80	36.62	33.47	1225.78	147.0	35.1	24.5	5.4	6.6	4.7	
BAILEY ROAD											
8+00.00	8+50.00	50.00	35.50	1775.00	212.1	50.7	35.3	7.9	9.6	6.8	
8+50.00	9+22.91	72.91	38.00	2770.58	329.5	79.0	54.9	12.3	15.0	10.7	
9+22.91	9+56.55	33.64	50.26	1690.80	197.8	47.9	33.0	7.5	9.1	6.5	
HUDSON DRIVE											
107+00.00	107+59.80	59.80	91.06	5445.39	622.8	151.3	103.8	24.2	29.4	21.0	
107+59.80	107+91.66	31.86	62.00	1975.32	228.9	54.9	38.2	8.8	10.7	7.6	
EDISON DR.											
TOTALS					2565	493	428	78	95	68	490

PAVEMENT PLANING, BITUMINOUS

STATION		LENGTH	AVERAGE WIDTH	AREA	ITEM NUMBER 254 PAVEMENT PLANING	
		FT.	FT.	S.F.	A/9	
TO	FROM	L	W	A	S.Y.	
FRONT STREET						
28+81.62	29+77.46	95.84	35.20	3373.57	374.8	
29+77.46	31+06.57	129.11	26.21	3383.97	376.0	
31+06.57	31+40.78	34.21	35.62	1218.56	135.4	
31+40.78	31+84.38	43.60	33.98	1481.53	164.6	
31+84.38	34+43.99	259.61	27.12	7040.62	782.3	
34+43.99	43+35.80	891.81	42.61	38000.02	4222.2	
43+35.80	47+16.73	380.93	44.23	16848.53	1872.1	
47+16.73	56+03.48	886.75	43.98	38999.27	4333.3	
HUDSON DRIVE						
107+91.66	112+00.00	408.34	43.26	17664.79	1962.8	
RAMP M						
250+50.00	251+50.00	100	24.16	2416.00	268.4	
251+50.00	251+56.58	6.58	23.20	152.66	17.0	
251+56.58	251+89.91	33.33	22.44	747.93	83.1	
251+89.91	251+99.38	9.47	21.66	205.12	22.8	
251+99.38	252+16.07	16.69	21.11	352.33	39.1	
252+16.07	252+31.88	15.81	20.11	317.94	35.3	
252+31.88	253+55.80	123.92	16.86	2089.29	232.1	
TOTALS					14921	

CALCULATED - DET
CHECKED JAN

PAVEMENT CALCULATIONS

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SHEET NO.	REFERENCE NO.	STATION FROM	STATION TO	OFFSET	SIDE	ITEM NUMBER 202 PAVEMENT REMOVED	202 CURB REMOVED	202 WALK REMOVED	202 FENCE REMOVED	202 REMOVAL MISC.: LIGHT POLE AND FOUNDATION	202 REMOVAL MISC., RETAINING WALL REMOVED	202 GUARDRAIL REMOVED	202 BUILDING DEMOLISHED	604 MONUMENT BOX ADJUSTED TO GRADE	604 MONUMENT ASSEMBLY COMPLETE	SPECIAL RETAINING WALL MISC.: DECORATIVE CONCRETE BLOCK RETAINING WALL	SPECIAL ROADWAY MISC.: RUBBERIZED RR CROSSING	608 CURB RAMP, DESIGN A	608 CURB RAMP, DESIGN D	608 CURB RAMP, DESIGN E	608 6" CONCRETE WALK	830 CURB, TYPE 2B	830 CURB, TYPE 2A	830 CURB, TYPE 6	830 CONCRETE STEPS, TYPE A	SPECIAL REMOVAL MISC., COMMERCIAL SIGN PARCEL 0219738	SPECIAL REMOVAL MISC., COMMERCIAL SIGN PARCEL 0211651	SPECIAL REMOVAL MISC., COMMERCIAL SIGN PARCEL 0218831	SPECIAL REMOVAL MISC., COMMERCIAL SIGN PARCEL 0205671	SPECIAL REMOVAL MISC., COMMERCIAL SIGN PARCEL 0217502	SPECIAL REMOVAL MISC., COMMERCIAL SIGN PARCEL 0209977	SPECIAL REMOVAL MISC., COMMERCIAL SIGN PARCEL 0200190	SPECIAL REMOVAL MISC., COMMERCIAL SIGN PARCEL 0211220	SPECIAL REMOVAL MISC., COMMERCIAL SIGN PARCEL 0208944	SPECIAL REMOVAL MISC., COMMERCIAL SIGN PARCEL 0219054	SPECIAL REMOVAL MISC., COMMERCIAL SIGN PARCEL 0208944	SPECIAL REMOVAL MISC., COMMERCIAL SIGN PARCEL 0211291	SPECIAL REMOVAL MISC., COMMERCIAL SIGN PARCEL 0200933	SPECIAL REMOVAL MISC., COMMERCIAL SIGN PARCEL 0215853
				FT.		SQ. YD.	L.F.	SQ. FT.	L.F.	EACH	LUMP	L.F.	LUMP	EACH	EACH	SQ. FT.	L.F.	EACH	EACH	EACH	SQ. FT.	L.F.	L.F.	L.F.	L.F.	LUMP	LUMP	LUMP	LUMP	LUMP	LUMP	LUMP	LUMP	LUMP	LUMP	LUMP	LUMP	LUMP	LUMP
		FRONT STREET																																					
50	X-1	28+81.62	30+15.00		RT.		134																																
50	X-2	28+81.62	29+78.00		RT.			465																															
50	C-1	28+81.62	29+77.46	13.00	RT.																	96																	
50	M-1	28+89.78			CL									1																									
50	X-3	31+04.58	38+22.50		RT.		717																																
50	X-4	31+04.58	33+23.51		RT.			860																															
50	C-2	31+04.58	37+24.97		RT.																	621																	
51	X-5	31+84.00	34+43.99		LT.			1300																															
51	X-6	31+84.00	34+70.50		LT.		290																																
51	C-3	31+84.38	34+43.99	13.00	LT.																	260																	
51	SW-1	31+84.38	34+25.10		LT.																1575																		
51	X-7	33+23.51	38+15.00		RT.			2030																															
51	SW-2	33+23.51	38+53.22		RT.																3090																		
51	X-8	34+20.00	35+48.00		LT.				134																														
51	CR-1	34+20.75		30.20	LT.															1																		
51	C-4	34+43.99	34+96.00	13.00	LT.																			51															
51	C-5	34+53.28	35+31.86		LT.																			80															
51	SW-3	34+53.41	09+22.91 BAILEY RD.		LT.																2080																		
51	SW-4	09+31.00 BAILEY RD.	107+19.65 HUDSON DR.		LT.																2820																		
51	X-9	35+31.86	37+87.50		LT.		256																																
51	C-6	35+31.86	37+74.12		LT.																			241															
51	X-10	35+31.88	38+03.00		LT.			1130																															
52	X-11	35+78.00		40.80	LT.																					1													
		35+97.00		40.60	LT.																					1													
52	X-12	36+97.00		33.30	RT.																						1											
52	C-7	37+24.97	39+00.00		RT.																	177																	
52	X-13	37+81.00		36.60	LT.																							1											
52	CR-2	37+94.44		49.28	LT.														1																				
52	CR-3	37+99.63		22.30	RT.															1																			
52	X-14	38+18.00	38+47.00		RT.									29																									
52	M-2	38+30.92		11.69	RT.										1																								
52	X-15	38+45.00	40+45.00		LT.			815																															
52	X-16	38+48.00			RT.									18																									
52	CR-4	38+50.46		52.50	LT.														1																				
52	X-17	38+53.00	39+22.00		RT.			380																															
52	SW-5	38+53.22	42+37.48		RT.																2110																		
52	X-18	38+55.00	40+35.00		LT.		180																																
52	X-19	38+56.00		50.00	LT.																															1			
52	X-20	38+61.00	42+15.00		RT.		354																																
52	C-8	38+73.27	42+58.26	31.00	LT.																			387															
52	C-9	39+00.00	105+90.92 HUDSON DR.		RT.																	370																	
52	C-10	106+10.66 HUDSON DR.	45+20.63		RT.																	188																	
52	X-21	40+25.00	40+79.00		RT.			240																															
52	X-70	36+40.00			RT.					1																													
52	X-71	38+07.00			RT.					1																													
52	X-72	38+51.00			LT.					1																													
52	X-73	38+60.00			RT.					1																													
52	X-74	39+99.00			LT.					1																													
53	RR-1	40+76.22	42+26.21		RT.-LT.												171																						
53	X-22	40+79.00	42+62.00		RT.			750																															
53	X-23	41+35.00	43+10.00		LT.			825																															
53	X-24	41+39.00	42+96.00		LT.		157																																
53	CR-5	42+87.20		57.30	LT.														1																				
53	X-25	43+41.00	56+03.48		RT.			10535																															
53	SW-6	43+42.70	56+03.48		RT.																6975																		
53	SW-7	107+64.17 HUDSON DR.	09+17.76 VINCENT ST.		LT.																5540																		
53	CR-6	43+51.20		31.00	RT.														1																				
53	X-26	43+74.50	56+03.48		RT.		1225																																
53	X-27	43+84.00		40.60	LT.																														1				
53	CR-7	43+90.80		63.20	LT.														1																				
53	X-28	43+99.00	52+92.00		LT.			5010																															
53	X-29	44+04.00	52+73.00		LT.		873																																
53	X-30	44+19.00		34.40	RT.																															1			
53	C-11	44+19.65	52+80.36	31.00	LT.																			868															
53	C-12	45+20.63	56+00.00		RT.																	1074																	
53	X-69	NW CORNER FRONT & HUDSON											LUMP																										
53	X-75	44+42.00			LT.					1																													
53	X-76	44+63.00			LT.					1																													
53	X-77	45+16.00			LT.					1																													
53	X-78	40+67.00			LT.																																	1	
		TOTAL THIS SHEET				0	4186	24340	134	8	0	47	LUMP	2	0	0	171	0	5	2	24190	2786	0	1627	0	LUMP	LUMP	LUMP	LUMP	LUMP	LUMP	0	0	0	0	0	LUMP	0	0

CALCULATED DET
CHECKED JAN

ROADWAY SUBSUMMARY

SUM - 59-4.93

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J:\Proj\7036100\ROADWAY\7036IGBA.DWG User:jonB1152 Feb 13, 2003 - 9:17am

SHEET NO.	REFERENCE NO.	STATION FROM	STATION TO	OFFSET	SIDE	ITEM NUMBER 202 PAVEMENT REMOVED	202 CURB REMOVED	202 WALK REMOVED	202 FENCE REMOVED	202 REMOVAL MISC.: LIGHT POLE AND FOUNDATION	202 REMOVAL MISC., RETAINING WALL REMOVED	202 GUARDRAIL REMOVED	202 BUILDING DEMOLISHED	604 MONUMENT BOX ADJUSTED TO GRADE	604 MONUMENT ASSEMBLY COMPLETE	SPECIAL RETAINING WALL MISC.: DECORATIVE CONCRETE BLOCK RETAINING WALL	SPECIAL ROADWAY MISC.: RUBBERIZED RR CROSSING	608 CURB RAMP, DESIGN A	608 CURB RAMP, DESIGN D	608 CURB RAMP, DESIGN E	608 6" CONCRETE WALK	830 CURB, TYPE 2B	830 CURB, TYPE 2A	830 CURB, TYPE 6	830 CONCRETE STEPS, TYPE A	SPECIAL REMOVAL MISC., COMMERCIAL SIGN PARCEL 0219738	SPECIAL REMOVAL MISC., COMMERCIAL SIGN PARCEL 0211651	SPECIAL REMOVAL MISC., COMMERCIAL SIGN PARCEL 0218831	SPECIAL REMOVAL MISC., COMMERCIAL SIGN PARCEL 0205671	SPECIAL REMOVAL MISC., COMMERCIAL SIGN PARCEL 0217502	SPECIAL REMOVAL MISC., COMMERCIAL SIGN PARCEL 0209977	SPECIAL REMOVAL MISC., COMMERCIAL SIGN PARCEL 0200190	SPECIAL REMOVAL MISC., COMMERCIAL SIGN PARCEL 0211220	SPECIAL REMOVAL MISC., COMMERCIAL SIGN PARCEL 0208944	SPECIAL REMOVAL MISC., COMMERCIAL SIGN PARCEL 0219054	SPECIAL REMOVAL MISC., COMMERCIAL SIGN PARCEL 0208944	SPECIAL REMOVAL MISC., COMMERCIAL SIGN PARCEL 0211291	SPECIAL REMOVAL MISC., COMMERCIAL SIGN PARCEL 0200933	SPECIAL REMOVAL MISC., COMMERCIAL SIGN PARCEL 0215853
						SQ. YD.	L.F.	SQ. FT.	L.F.	EACH	LUMP	L.F.	LUMP	EACH	EACH	SQ. FT.	L.F.	EACH	EACH	EACH	SQ. FT.	L.F.	L.F.	L.F.	L.F.	LUMP	LUMP	LUMP	LUMP	LUMP	LUMP	LUMP	LUMP	LUMP	LUMP	LUMP	LUMP	LUMP
54	X-31	46+15.00		34.60	LT.																										1							
		47+30.00		37.00	LT.																										1							
		47+32.00		37.00	LT.					1																												
54	X-32	47+34.00		31.00	RT.																																	
		48+72.00		30.60	RT.																										1							
54	X-33	48+84.50		33.70	LT.																										1							
54	X-34	49+23.00		29.20	RT.																											1						
		49+69.40		29.00	RT.																												1						
		50+07.00		29.00	RT.																												1						
55	X-35	51+64.00		33.50	RT.																												1						
55	X-36	53+28.00	56+03.50		LT.			2180																														
55	X-37	53+38.60		40.30	LT.																																	
55	X-38	53+38.70	56+00.00		LT.		265																															1
55	C-13	53+56.01	56+00.00		LT.																																	
55	X-39	54+61.00	54+74.00		LT.							32												249														
55	X-40	09+04.00 VINCENT ST.	54+09.00		LT.						1																											
55	SW-8	09+22.28 VINCENT ST.	56+03.50		LT.																1565																	
55	C-28	51+80.00	52+14.00		LT.											150									20													
55	X-79	52+60.00			LT.																																	
		BAILEY ROAD																																				
82	SW-9	08+00.00	09+22.90		RT.																610																	
82	SW-10	08+00.00	09+31.00		LT.																695																	
82	C-14	08+00.00	37+74.12 FRONT ST.		RT.																			174														
82	C-15	08+00.00	38+73.27 FRONT ST.		LT.																			175														
82	X-41	08+00.00	38+87.50 FRONT ST.		RT.		187																															
82	X-42	08+00.00	38+55.00 FRONT ST.		LT.		181																															
82	X-43	08+00.00	09+70.00		LT.			765																														
82	X-44	08+00.00	09+55.00		RT.			630																														
82	X-44A	08+00.00	09+79.50		LT.-RT.	680																																
		HUDSON DR.																																				
77	C-16	42+58.26 FRONT ST.	107+91.66		LT.																			136														
77	X-46	42+96.00 FRONT ST.	107+95.00		LT.		152																															
77	X-45	43+10.00 FRONT ST.	107+96.00		LT.			1110																														
77	X-51	43+99.00 FRONT ST.	112+00.00		RT.			2430																														
77	X-52	44+04.00 FRONT ST.	112+00.00		RT.		538																															
77	C-17	44+19.65 FRONT ST.	107+91.66		RT.																			100														
77	SW-12	49+63.80 SECOND ST.	112+00.00		LT.																775																	
77	X-46A	106+73.15	107+92.30		LT.-RT.	635																																
77	M-3	106+83.71		2.88	LT.										1																							
77	SW-11	107+19.60	110+20.80		LT.																1770																	
77	RR-2	107+34.83	108+35.20		LT.-RT.												132																					
77	SW-13	107+64.20	112+00.00		RT.																2420																	
77	C-18	107+91.66	108+10.00		LT.																	19																
77	C-19	107+91.66	112+00.00		RT.																	408																
77	C-20	108+10.00	110+20.80		LT.																	213																
77	X-47	108+33.40	110+13.70		LT.		137																															
77	X-48	108+50.00	110+13.73		LT.			1250																														
78	CR-8	110+34.42			LT.														1																			
78	CR-9	110+86.43			LT.														1																			
78	C-21	111+03.00	112+00.00		LT.																	97																
78	X-49	111+06.80	112+00.00		LT.		94																															
78	X-50	111+07.00	112+00.00		LT.			585																														
78	M-4	111+11.69			CL									1																								
		TOTALS THIS SHEET				1315	1554	8950	0	1	LUMP	32	0	1	1	150	132	2	0	0	7835	737	0	834	20	0	0	0	0	0	0	LUMP	LUMP	LUMP	LUMP	LUMP	0	LUMP	LUMP

CALCULATED DET
CHECKED JAN

ROADWAY SUBSUMMARY

SUM - 59-493

SHEET NO.	REFERENCE NO.	STATION FROM	STATION TO	OFFSET	SIDE	ITEM NUMBER 202 PAVEMENT REMOVED	202 CURB REMOVED	202 WALK REMOVED	202 FENCE REMOVED	202 REMOVAL MISC.: LIGHT POLE AND FOUNDATION	202 REMOVAL MISC., RETAINING WALL REMOVED	202 GUARDRAIL REMOVED	202 BUILDING DEMOLISHED	604 MONUMENT BOX ADJUSTED TO GRADE	604 MONUMENT ASSEMBLY COMPLETE	SPECIAL RETAINING WALL MISC.: DECORATIVE CONCRETE BLOCK RETAINING WALL	SPECIAL ROADWAY MISC.: RUBBERIZED RR CROSSING	608 CURB RAMP, DESIGN A	608 CURB RAMP, DESIGN D	608 CURB RAMP, DESIGN E	608 6" CONCRETE WALK	830 CURB, TYPE 2B	830 CURB, TYPE 2A	830 CURB, TYPE 6	830 CONCRETE STEPS, TYPE A	SPECIAL REMOVAL MISC., COMMERCIAL SIGN PARCEL 0219738	SPECIAL REMOVAL MISC., COMMERCIAL SIGN PARCEL 0211651	SPECIAL REMOVAL MISC., COMMERCIAL SIGN PARCEL 0218831	SPECIAL REMOVAL MISC., COMMERCIAL SIGN PARCEL 0205671	SPECIAL REMOVAL MISC., COMMERCIAL SIGN PARCEL 0217502	SPECIAL REMOVAL MISC., COMMERCIAL SIGN PARCEL 0209977	SPECIAL REMOVAL MISC., COMMERCIAL SIGN PARCEL 0200190	SPECIAL REMOVAL MISC., COMMERCIAL SIGN PARCEL 0211220	SPECIAL REMOVAL MISC., COMMERCIAL SIGN PARCEL 0208944	SPECIAL REMOVAL MISC., COMMERCIAL SIGN PARCEL 0219054	SPECIAL REMOVAL MISC., COMMERCIAL SIGN PARCEL 0208944	SPECIAL REMOVAL MISC., COMMERCIAL SIGN PARCEL 0211291	SPECIAL REMOVAL MISC., COMMERCIAL SIGN PARCEL 0200933	SPECIAL REMOVAL MISC., COMMERCIAL SIGN PARCEL 0215853
				FT.		SQ. YD.	L.F.	SQ. FT.	L.F.	EACH	LUMP	L.F.	LUMP	EACH	EACH	SQ. FT.	L.F.	EACH	EACH	EACH	SQ. FT.	L.F.	L.F.	L.F.	L.F.	LUMP	LUMP	LUMP	LUMP	LUMP	LUMP	LUMP	LUMP	LUMP	LUMP	LUMP	LUMP	LUMP
		SECOND ST.																																					
83	C-22	49+00.00	110+20.80 HUDSON DR.		RT.																																		
83	C-23	49+00.00	111+06.80 HUDSON DR.		LT.																			74															
																								92															
83	SW-14	49+00.00	110+20.80 HUDSON DR.		RT.																930.0																	
83	X-53	49+00.00	110+13.70 HUDSON DR.		RT.		81.0																																
83	X-54	49+00.00	111+06.80 HUDSON DR.		LT.		99.0																																
83	X-55	49+00.00	110+13.73 HUDSON DR.		RT.			1000																															
		RELOCATED SECOND ST.																																					
85	X-56	51+53.24	53+42.80		RT.		411.0																																
85	X-57	51+53.24	53+99.52		LT.		243.0																																
85	X-57A	51+53.24	53+16.50		LT.-RT.	410.0																																	
85	X-58	53+33.87	53+99.52		LT.			320																															
85	C-22	51+53.24	53+16.50		RT.																		169															
85	C-23	51+53.24	53+16.50		LT.																		157															
85	SW-15	52+82.00	53+16.50		LT.																230.0																	
85	CR-10	52+92.50			LT.															1.0																		
		RAMP M																																					
50	C-24	250+50.00	253+55.80		RT.																	304.0																
50	X-59	250+50.00	253+55.80		RT.		305.0																																
50	X-60	251+56.50	253+55.80		LT.		204.0																																
50	C-25	251+56.60	252+31.53		LT.																	77.0																
50	X-61	252+63.00	253+55.80		RT.			460																															
50	X-61A	252+68.00	31+06.00		LT.	21.0																																
		VINCENT STREET																																					
84	X-62	52+73.00 FRONT ST.	09+16.80		RT.		74.0																																
84	X-63	09+16.80	53+38.70 FRONT ST.		LT.		56.0																																
84	X-64	09+16.80	09+75.00		RT.			215																															
84	X-64A	09+16.80	09+73.10		LT.-RT.	130.0																																
84	X-65	09+20.50	09+54.00		LT.			140																															
84	C-26	52+80.36 FRONT ST.	09+17.00		RT.																																		
84	C-27	09+16.80	53+56.01 FRONT ST.		LT.																			55															
																								40															
84	CR-12	09+33.50		22.15	LT.																																		
84	CR-11	09+50.00		13.89	RT.														1																			
																			1																			
		EDISON STREET																																					
97	X-66	46+23.50	49+65.76		LT.-RT.	1130.0																																	
97	X-67	46+83.00	49+03.00		LT.-RT.			750																															
		TOTALS THIS SHEET				1691	1473	2885	0	0	0	0	0	0	0	0	0	0	2	1	1160	381	326	261	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		TOTALS SHEET		37		0	4186	24340	134	8	0	47	LUMP	2	0	0	171	0	5	2	24190	2786	0	1627	0	LUMP	LUMP	LUMP	LUMP	LUMP	LUMP	0	0	0	0	0	LUMP	0	0
		TOTALS SHEET		38		1315	1554	8950	0	1	LUMP	32	0	1	1	150	132	2	0	0	7835	737	0	834	20	0	0	0	0	0	0	LUMP	LUMP	LUMP	LUMP	LUMP	0	LUMP	LUMP
		TOTALS CARRIED TO GENERAL SUMMARY				3006	7213	36175	134	9	LUMP	79	LUMP	3	1	150	303	2	7	3	33185	3904	326	2722	20	LUMP	LUMP	LUMP	LUMP	LUMP	LUMP	LUMP	LUMP	LUMP	LUMP	LUMP	LUMP	LUMP	LUMP

CALCULATED DET
CHECKED JAN

ROADWAY SUBSUMMARY

SUM - 59-4.93

SHEET NUMBER	REFERENCE	STATION	OFFSET	SIDE	STATION	OFFSET	SIDE	ITEM NUMBER																															
								202					603													604								605			BENDS AND BRANCHES FOR INFORMATIONAL PURPOSES ONLY		
								PIPE REMOVED, 24" AND UNDER	CATCH BASIN OR INLET REMOVED	CATCH BASIN OR INLET ABANDONED	MANHOLE REMOVED	PIPE REMOVED, OVER 24"	4" CONDUIT, TYPE C, 707.42	4" CONDUIT, TYPE F	6" CONDUIT, TYPE B	12" CONDUIT, TYPE B	12" CONDUIT, TYPE C	12" SLOTTED DRAIN, TYPE 2	15" CONDUIT, TYPE B	18" CONDUIT, TYPE B	18" CONDUIT, TYPE C	18" SLOTTED DRAIN, TYPE 2	24" CONDUIT, TYPE B	30" CONDUIT, TYPE B	36" CONDUIT, TYPE B	CATCH BASIN, NO. 2-2B	CATCH BASIN, NO. 3	CATCH BASIN, NO. 3A	CATCH BASIN, NO. 6	MANHOLE, NO. 3	MANHOLE ADJUSTED TO GRADE			4" SHALLOW PIPE UNDERDRAIN	4" UNCLASSIFIED PIPE UNDERDRAIN	UNDERDRAIN OUTLET DETAIL	4" BEND	4" TEE	SEWER PROFILE SHEET NO.
								LF	EA	EA	EA	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	EA	EA	EA	EA	EA	EA			LF	LF		EA	EA	
50	D-1	31+41.02	13.22	RT.						1													4								1								60
50	U-1	28+81.00 (FRONT ST.)		RT.	34+44.00 (FRONT ST.)		RT.																											94					
50	U-2	34+44.00 (FRONT ST.)		RT.	252+32.00 (RAMP M)		RT.								34																						1		
50	U-3	250+50.00 (RAMP M)		RT.	252+32.00 (RAMP M)		RT.																											181				1	
50	U-4	252+32.00 (RAMP M)		RT.	31+54.17 (FRONT ST.)		RT.							10																				162			1		
51	D-2	31+41.02	13.22	RT.	31+54.17	25.00	RT.									18											1												60
51	D-3	31+41.02	13.22	RT.	32+80.83	6.00	RT.																140							1									51
51	D-4	32+80.83	6.00	RT.	32+90.89	25.00	RT.									22												1											60
51	D-5	32+80.83	6.00	RT.	34+20.83	6.00	RT.																140							1									51
51	D-6	34+20.83	6.00	RT.	34+40.83	25.00	RT.									28												1											61
51	D-7	51+84.20 (SECOND ST.)	13.00	LT.												8												1											88
51	D-8	53+23.14 (SECOND ST.)	7.03	LT.	53+68.79 (SECOND ST.)	13.00	LT.													51							1			1									
51	R-1	31+50.00	20.00	LT.				18	1																														
51	R-2	53+28.00 (SECOND ST.)	3.00	LT.				6	1																														
51	U-5	31+54.17		RT.	32+87.14		RT.							10																				124			1		
51	U-6	32+90.89		RT.	34+37.08		RT.							10																				137			1		
51	U-7	34+40.83		RT.	35+87.14		RT.							10																				137			1		
51	U-8	51+53.24 (SECOND ST.)		LT.	51+80.42 (SECOND ST.)		LT.							10																				20			1		
51	U-9	51+87.95 (SECOND ST.)		LT.	53+68.79 (SECOND ST.)		LT.							10																				163			1		
51	U-10	53+68.79 (SECOND ST.)		LT.	35+87.14 (FRONT ST.)		LT.							10																				75			1		
51	U-11	51+53.24 (SECOND ST.)		RT.	53+15.54 (SECOND ST.)		LT.								29																			170			1	1	
TOTAL THIS SHEET								24	2	1				70	63	76				51			284				2	3		3	1			1263			9	2	

CALCULATED EJK
CHECKED DET

DRAINAGE SUBSUMMARY

SUM - 59-4.93

J: \PROJ1\7036100\ROADWAY\70361DSA.DWG User: jon81152 Oct 16, 2002 - 2:23pm

CALCULATED EJK
CHECKED DET

SHEET NUMBER	REFERENCE	STATION	OFFSET	SIDE	STATION	OFFSET	SIDE	PIPE REMOVED, 24" AND UNDER	CATCH BASIN OR INLET REMOVED	CATCH BASIN OR INLET ABANDONED	MANHOLE REMOVED	PIPE REMOVED, OVER 24"	4" CONDUIT, TYPE C, 707.42	4" CONDUIT, TYPE F	6" CONDUIT, TYPE B	12" CONDUIT, TYPE B	12" CONDUIT, TYPE C	12" SLOTTED DRAIN, TYPE 2	15" CONDUIT, TYPE B	18" CONDUIT, TYPE B	18" CONDUIT, TYPE C	18" SLOTTED DRAIN, TYPE 2	24" CONDUIT, TYPE B	30" CONDUIT, TYPE B	36" CONDUIT, TYPE B	CATCH BASIN, NO. 2-2B	CATCH BASIN, NO. 3	CATCH BASIN, NO. 3A	CATCH BASIN, NO. 6	MANHOLE, NO. 3	MANHOLE ADJUSTED TO GRADE			4" SHALLOW PIPE UNDERDRAIN	4" UNCLASSIFIED PIPE UNDERDRAIN	UNDERDRAIN OUTLET DETAIL	4" BEND (BENDS AND BRANCHES FOR INFORMATIONAL PURPOSES ONLY)	4" TEE (BENDS AND BRANCHES FOR INFORMATIONAL PURPOSES ONLY)	SEWER PROFILE SHEET NO.
							ITEM NUMBER	202					603													604								605					
								LF	EA	EA	EA	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	EA	EA	EA	EA	EA	EA			LF	LF		EA	EA	
52	D-9	34+20.83	6.00	RT.	35+80.89	12.00	RT.													160										1									51
52	D-10	35+80.89	12.00	RT.	35+90.89	31.00	RT.									22												1											62
52	D-11	35+80.89	12.00	RT.	35+90.89	31.00	LT.													52						1		1											62
52	D-11A	35+62.00	38.00	LT.													17	25																					
52	D-11B	36+33.00	38.00	LT.													30	25																					
52	D-12	35+80.89	12.00	RT.	36+93.17	12.00	RT.									112														1									52
52	D-13	36+93.17	12.00	RT.	37+03.17	31.00	RT.									22												1											63
52	D-17	09+33.22 (BAILEY RD.)	20.83	RT.	09+54.64 (BAILEY RD.)	6.57	LT.									34												1											87
52	D-18	09+31.08 (BAILEY RD.)	19.00	LT.	09+54.64 (BAILEY RD.)	6.57	LT.									26												1											87
52	D-19	09+54.64 (BAILEY RD.)	6.57	LT.	38+73.27 (FRONT ST.)	31.00	LT.		1							40												1											87
52	D-20	09+54.64 (BAILEY RD.)	6.57	LT.	38+37.99 (FRONT ST.)	18.80	RT.																	77						1									
52	D-21	38+37.05	43.28	RT.	38+98.86	41.77	RT.									59												1											
52	D-22	38+37.99	18.80	RT.	38+37.05	43.28	RT.																	8						1	1								64
52	D-23	40+11.50	42.00	RT.	40+11.50	31.00	LT.									72												1											64
52	D-25	40+11.50	31.00	RT.	38+73.27	31.00	LT.									140												1											
52	R-3	36+80.12	31.10	LT.					1																														
52	R-4	38+03.74	21.99	LT.					1																														
52	R-5	38+53.68	9.88	LT.	38+65.85	20.05	LT.		2																														
52	R-6	38+65.85	20.05	LT.	39+58.51	18.66	LT.	94	1																														
52	R-7	38+60.00	35.83	RT.					1																														
52	R-7A	38+34.72		RT.	42+97.15		RT.					462																											
52	U-12	35+90.89		RT.	36+99.92		RT.							10																				100			1		
52	U-13	37+03.17		RT.	38+75.00		RT.							10																				137	28		1		
52	U-14	38+48.51		RT.	40+07.75		RT.							10																				149				1	
52	U-15	40+11.50		RT.	40+72.25		RT.							10																				51			1		
52	U-16	35+90.89		LT.	37+73.69		LT.							10																				172			1		
52	U-19	09+31.01 (BAILEY RD.)		LT.	40+07.75		LT.							10																				169			1		
52	U-20	40+11.50		LT.	41+43.38		LT.							10																				182			1		
82	D-14	08+01.30 (BAILEY RD.)	17.55	RT.	08+05.10 (BAILEY RD.)	5.35	LT.									23												1											86
82	D-15	08+01.30 (BAILEY RD.)	15.59	LT.	08+05.10 (BAILEY RD.)	5.35	LT.									10												1											86
82	D-16	08+05.10 (BAILEY RD.)	5.35	LT.	09+54.64 (BAILEY RD.)	6.57	LT.																	150						1									86
82	R-1	09+14.74	6.62	LT.							1																												
82	U-17	08+05.02 (BAILEY RD.)		RT.	09+33.22 (BAILEY RD.)		RT.							10																				119			1		
82	U-18	08+05.03 (BAILEY RD.)		LT.	09+31.08 (BAILEY RD.)		RT.							10																				117			1		
TOTAL THIS SHEET								94	7		1	462		90		560	47	50		212				235		1		11		5	1			1196	28		8	1	

DRAINAGE SUBSUMMARY

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SHEET NUMBER	REFERENCE	STATION	OFFSET	SIDE	STATION	OFFSET	SIDE	ITEM NUMBER 202					ITEM NUMBER 603																		ITEM NUMBER 604							ITEM NUMBER 605					SEWER PROFILE SHEET NO.
								PIPE REMOVED, 24" AND UNDER	CATCH BASIN OR INLET REMOVED	CATCH BASIN OR INLET ABANDONED	MANHOLE REMOVED	PIPE REMOVED, OVER 24"	4" CONDUIT, TYPE C, 707.42	4" CONDUIT, TYPE F	6" CONDUIT, TYPE B	12" CONDUIT, TYPE B	12" CONDUIT, TYPE C	12" SLOTTED DRAIN, TYPE 2	15" CONDUIT, TYPE B	18" CONDUIT, TYPE B	18" CONDUIT, TYPE C	18" SLOTTED DRAIN, TYPE 2	24" CONDUIT, TYPE B	30" CONDUIT, TYPE B	36" CONDUIT, TYPE B	CATCH BASIN, NO. 2-2B	CATCH BASIN, NO. 3	CATCH BASIN, NO. 3A	CATCH BASIN, NO. 6	MANHOLE, NO. 3	MANHOLE ADJUSTED TO GRADE			4" SHALLOW PIPE UNDERDRAIN	4" UNCLASSIFIED PIPE UNDERDRAIN	UNDERDRAIN OUTLET DETAIL	BENDS AND BRANCHES FOR INFORMATIONAL PURPOSES ONLY		
								LF	EA	EA	EA	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	EA	EA	EA	EA	EA	EA			LF	LF		EA	EA	
53	D-25	42+68.38	32.00	LT.	42+98.88	1.55	LT.	10	1							43											1					2									99
53	D-25A	47+25.00 (EDISON ST.)	CL		47+98.50 (EDISON ST.)	34.81	RT.									82										1														
53	D-25B	47+98.50 (FRONT ST.)	34.81	RT.	42+68.38 (FRONT ST.)	32.00	LT.									36										1														
53	D-26	44+69.77	31.00	LT.	46+20.00	31.00	LT.									152												1													53
53	D-27	44+84.33	39.17	LT.	45+11.67	39.17	LT.											27								1														98
53	D-28	45+11.67	39.17	LT.	45+48.09	37.50	LT.									36										1														98
53	R-1	41+32.16	11.08	LT.			LT.		1																																
53	R-2	42+98.88			43+75.24	16.55	LT.	86	1																															
53	U-21	42+34.58		LT.	42+68.38		LT.							10																							24			1		
53	U-22	107+28.96 (HUDSON DR.)		LT.	42+68.38 (FRONT ST.)		LT.							10																							51			1		
53	U-23	41+03.26		RT.	42+70.55		RT.							10																							167			1		
53	U-24	108+16.63 (HUDSON DR.)		RT.	44+21.27 (FRONT ST.)		LT.							10																							114			1		
53	U-25	44+21.27		LT.	46+20.00		LT.							10																							186			1		
53	U-26	105+79.75 (HUDSON DR.)		RT.	46+20.00 (FRONT ST.)		RT.							10																							306			1		
TOTAL THIS SHEET								96	3					60		349		27								4	1	1			2					848			6		

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CALCULATED EJK
CHECKED DET

DRAINAGE SUBSUMMARY

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DRAINAGE SUBSUMMARY

CALCULATED EJK | CHECKED DET

SHEET NUMBER	REFERENCE	STATION	OFFSET	SIDE	STATION	OFFSET	SIDE	ITEM NUMBER 202				ITEM NUMBER 603																				ITEM NUMBER 604							ITEM NUMBER 605					SEWER PROFILE SHEET NO.
								PIPE REMOVED, 24" AND UNDER	CATCH BASIN OR INLET REMOVED	CATCH BASIN OR INLET ABANDONED	MANHOLE REMOVED	PIPE REMOVED, OVER 24"	4" CONDUIT, TYPE C, 707.42	4" CONDUIT, TYPE F	6" CONDUIT, TYPE B	12" CONDUIT, TYPE B	12" CONDUIT, TYPE C	12" SLOTTED DRAIN, TYPE 2	15" CONDUIT, TYPE B	18" CONDUIT, TYPE B	18" CONDUIT, TYPE C	18" SLOTTED DRAIN, TYPE 2	24" CONDUIT, TYPE B	30" CONDUIT, TYPE B	36" CONDUIT, TYPE B	CATCH BASIN, NO. 2-28	CATCH BASIN, NO. 3	CATCH BASIN, NO. 3A	CATCH BASIN, NO. 6	MANHOLE, NO. 3	MANHOLE ADJUSTED TO GRADE			4" SHALLOW PIPE UNDERDRAIN	4" UNCLASSIFIED PIPE UNDERDRAIN	UNDERDRAIN OUTLET DETAIL	BENDS AND BRANCHES FOR INFORMATIONAL PURPOSES ONLY		
																																								4" BEND	4" TEE	
								LF	EA	EA	EA	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	EA	EA	EA	EA	EA	EA			LF	LF		EA	EA	
54	D-29	45+48.09	37.50	LT.	46+20.00	37.50	LT.									74													1												98
54	D-30	46+20.00	37.50	LT.	46+20.00	31.00	LT.										8												1												70
54	D-31	46+20.00	31.00	RT.	46+30.00	25.00	RT.												56									1												70
54	D-32	46+20.00	31.00	RT.	46+30.00	25.00	RT.									11				119								1												54
54	D-33	46+30.00	25.00	RT.	47+51.86	25.00	RT.										7			32								1												70
54	D-34	47+46.85	31.00	RT.	47+51.86	25.00	RT.																					1												54
54	D-35	47+51.86	25.00	RT.	47+83.69	25.36	RT.										8												1												70
54	D-36	47+44.68	31.00	LT.	47+44.68	37.50	LT.									56																								98
54	D-37	47+44.68	37.50	LT.	48+00.00	39.17	LT.									33												1												98
54	D-38	48+00.00	39.17	LT.	48+28.08	39.67	LT.													3		24					1												98
54	D-39	48+60.53	39.67	LT.	48+28.08	39.67	LT.									44									50			1												71
54	D-40	48+28.08	39.67	LT.	48+08.93	11.61	LT.									70												1												72
54	D-41	49+60.00	31.00	RT.	49+50.00	12.00	LT.																141																	54
54	D-42	49+79.00	31.00	LT.	49+50.00	12.00	LT.																		45															54/71
54	D-43	49+50.00	12.00	LT.	48+08.93	11.61	LT.																		34															71
54	D-44	48+08.93	11.61	LT.	47+83.69	25.36	RT.																																	
54	D-45	47+83.69	25.36	RT.	47+94.96	57.00	RT.																																	
54	R-1	47+82.02	11.52	LT.	48+08.93	11.61	LT.	27																																
54	R-2	47+81.37	15.66	LT.	47+83.84	30.02	RT.	46	3																															
54	U-27	46+23.67		LT.	47+44.66		LT.							10																							115		1		
54	U-28	47+44.66		LT.	49+75.00		LT.							10																							220		1		
54	U-29	49+75.00		LT.	51+41.25		LT.							10																							156		1		
54	U-30	46+23.84		RT.	47+46.85		RT.							10																							111		1		
54	U-31	47+46.85		RT.	49+55.62		RT.							10																							199		1		
54	U-32	49+60.00		RT.	51+51.25		RT.							10																							182		1		
TOTAL THIS SHEET								73	3					60		288	23		56	154		24	141		129	2	4	2	3	6					983			6		

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SHEET NUMBER	REFERENCE	STATION	OFFSET	SIDE	STATION	OFFSET	SIDE	ITEM NUMBER 202				ITEM NUMBER 603																		ITEM NUMBER 604							ITEM NUMBER 605					SEWER PROFILE SHEET NO.
								PIPE REMOVED, 24" AND UNDER	CATCH BASIN OR INLET REMOVED	CATCH BASIN OR INLET ABANDONED	MANHOLE REMOVED	PIPE REMOVED, OVER 24"	4" CONDUIT, TYPE C, 707.42	4" CONDUIT, TYPE F	6" CONDUIT, TYPE B	12" CONDUIT, TYPE B	12" CONDUIT, TYPE C	12" SLOTTED DRAIN, TYPE 2	15" CONDUIT, TYPE B	18" CONDUIT, TYPE B	18" CONDUIT, TYPE C	18" SLOTTED DRAIN, TYPE 2	24" CONDUIT, TYPE B	30" CONDUIT, TYPE B	36" CONDUIT, TYPE B	CATCH BASIN, NO. 2-28	CATCH BASIN, NO. 3	CATCH BASIN, NO. 3A	CATCH BASIN, NO. 6	MANHOLE, NO. 3	MANHOLE ADJUSTED TO GRADE			4" SHALLOW PIPE UNDERDRAIN	4" UNCLASSIFIED PIPE UNDERDRAIN	UNDERDRAIN OUTLET DETAIL	BENDS AND BRANCHES FOR INFORMATIONAL PURPOSES ONLY 4" BEND	BENDS AND BRANCHES FOR INFORMATIONAL PURPOSES ONLY 4" TEE	
								LF	EA	EA	EA	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	EA	EA	EA	EA	EA	EA			LF	LF		EA	EA	
55	D-46	51+55.00	31.00	RT.	51+45.00	12.00	LT.									44												1												74
55	D-47	51+45.00	31.00	LT.	51+45.00	12.00	LT.									19												1												74
55	D-48	49+50.00	12.00	LT.	51+45.00	12.00	LT.													195									1											54/55
55	D-49	09+26.31 (VINCENT ST.)	15.35	LT.	09+40.00 (VINCENT ST.)	13.00	RT.									29												1												89
55	D-50	09+40.00 (VINCENT ST.)	13.00	RT.	52+75.43 (FRONT ST.)	12.00	LT.													51								1												75
55	D-51	51+45.00	12.00	LT.	52+75.43	12.00	LT.													130									1												55
55	R-1	49+50.00	12.11	LT.	52+75.00	14.63	LT.																																	
55	R-2	52+60.16	27.73	RT.																																				
55	R-3	52+75.31	14.78	LT.	52+97.02	31.09	LT.																																	
55	R-4	52+75.31	14.78	LT.	53+41.54	13.67	LT.																																	
55	U-33	51+45.00		LT.	52+82.00		LT.							10																							128			1		
55	U-34	52+84.00 (FRONT ST.)		LT.	09+17.57 (VINCENT ST.)		RT.							20																							33			2		
55	U-35	09+16.80 (VINCENT ST.)		LT.	53+99.69 (FRONT ST.)		LT.							20																							61			2		
55	U-36	54+01.61		LT.	56+02.24		LT.							10																							195			1		
55	U-37	51+55.00		RT.	54+23.96		RT.							10																							258			1		
55	U-38	54+26.04		RT.	56+02.23		RT.							10																							165			1		
56	D-52	56+02.23	21.77	RT.	56+02.24	22.25	LT.									43																								
56	D-53	56+02.24	22.25	LT.												4																								
56	R-1	55+81.85	22.15	LT.				20	1																															
TOTAL THIS SHEET								20	1					80		139				376								4		2						840			8		

CALCULATED EJK
CHECKED DET

DRAINAGE SUBSUMMARY

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DRAINAGE SUBSUMMARY

CALCULATED EJK
CHECKED DET

SHEET NUMBER	REFERENCE	STATION	OFFSET	SIDE	STATION	OFFSET	SIDE	ITEM NUMBER 202					ITEM NUMBER 603																ITEM NUMBER 604							ITEM NUMBER 605					SEWER PROFILE SHEET NO.
								PIPE REMOVED, 24" AND UNDER	CATCH BASIN OR INLET REMOVED	CATCH BASIN OR INLET ABANDONED	MANHOLE REMOVED	PIPE REMOVED, OVER 24"	4" CONDUIT, TYPE C, 707.42	4" CONDUIT, TYPE F	6" CONDUIT, TYPE B	12" CONDUIT, TYPE B	12" CONDUIT, TYPE C	12" SLOTTED DRAIN, TYPE 2	15" CONDUIT, TYPE B	18" CONDUIT, TYPE B	18" CONDUIT, TYPE C	18" SLOTTED DRAIN, TYPE 2	24" CONDUIT, TYPE B	30" CONDUIT, TYPE B	36" CONDUIT, TYPE B	CATCH BASIN, NO. 2-28	CATCH BASIN, NO. 3	CATCH BASIN, NO. 3A	CATCH BASIN, NO. 6	MANHOLE, NO. 3	MANHOLE ADJUSTED TO GRADE			4" SHALLOW PIPE UNDERDRAIN	4" UNCLASSIFIED PIPE UNDERDRAIN	UNDERDRAIN OUTLET DETAIL	BENDS AND BRANCHES FOR INFORMATIONAL PURPOSES ONLY 4" BEND	BENDS AND BRANCHES FOR INFORMATIONAL PURPOSES ONLY 4" TEE	
								LF	EA	EA	EA	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	EA	EA	EA	EA	EA	EA			LF	LF		EA	EA	
77	D-54	108+19.37	16.15	LT.						1													8																77
77	D-55	108+60.00	30.50	RT.	108+64.04	12.10	LT.									35	8								1		1												79
77	D-56	108+60.00	23.00	LT.	108+64.04	12.10	LT.									21							8			1													79
77	U-39	108+37.64		RT.	108+60.08		RT.							10																					13	B	1		
77	U-40	108+60.08		RT.	110+06.75		RT.							10																					177		B	1		
77	U-41	107+49.30		RT.	108+64.04		LT.							10																						107	B	1		
77	U-42	108+64.04		LT.	110+15.54		LT.							10																					142		B	1		
78	D-57	110+50.00	23.00	RT.	110+52.06	5.43	RT.									17											1				1									80
78	D-58	110+84.63	30.34	LT.	111+03.01	26.05	LT.									27											1			1									98
78	D-59	49+37.07 (SECOND ST.)	18.45	RT.	49+56.21 (SECOND ST.)	14.53	LT.									38											1												89
78	D-60	110+20.00 (HUDSON DR.)	29.76	LT.	49+56.21 (SECOND ST.)	14.53	LT.										31				8						1			1									
78	D-61	110+94.25	9.45	RT.																											1									
78	D-62	111+03.01	26.05	LT.	111+18.92	32.31	LT.						21																										
78	D-63	111+18.92	32.31	LT.	111+29.52	31.84	LT.						11																										
78	R-1	109+58.70	18.27	RT.					1																														
78	R-2	111+17.61	22.65	LT.				33	1																														
78	R-3	111+56.32	21.94	RT.				4	1																														
78	U-43	110+50.00 (HUDSON DR.)		RT.	112+00.03 (HUDSON DR.)									10																					133		B	1		
78	U-44	49+00.00 (SECOND ST.)		RT.	110+20.00 (HUDSON DR.)	29.69	LT.							10																					55		B	2		
78	U-45	49+00.00 (SECOND ST.)		LT.	110+97.67 (HUDSON DR.)		LT.							20																					64		B	2		
78	U-46	111+03.01		LT.	112+00.00		LT.							10																					87		B	1		
TOTAL THIS SHEET								37	3	1			32	90		138	39				8			16		1	2	4		2	2			658	120		10		
TOTAL SHEET # 40								24	2	1				70	63	76				51			284				2	3		3	1			1263			9	2	
TOTAL SHEET # 41								94	7		1	462		90		560	47	50		212				235		1		11		5	1			1196	28		8	1	
TOTAL SHEET # 42								96	3					60		349		27								4	1	1			2			848			6		
TOTAL SHEET # 43								73	3					60		288	23		56	154		24	141	0	129	2	4	2	3	6				983			6		
TOTAL SHEET # 44								20	1					80		139				376								4		2				840			8		
TOTAL CARRIED TO GENERAL SUMMARY								344	19	2	1	462	32	450	63	1550	109	77	56	793	8	24	425	251	129	8	9	25	3	18	6			5788	148		47	3	

S.M. - 59-4.93

			203			870
SHEET No.	STATION		EXCAVATION, NOT INCLUDING EMBANKMENT CONSTRUCTION	EMBANKMENT		SEEDING AND MULCHING
	FROM	TO	C.Y.	C.Y.		S.Y.
		RAMP M				
57	250+00	251+56.50 BK.	69	2		51
58	251+56.50 AH.	252+00.00	53	0		77
		FRONT STREET				
58	28+81.62	29+50	12	0		40
59	29+77.46	31+00	181	0		135
60	31+50	33+40	245	0		270
61	34+00	35+00	304	3		259
62	35+50	36+33	327	0		64
63	36+50	37+34	266	0		59
64	37+50	38+50	333	17		37
65	39+00	40+00	435	13		13
66	40+45.50	41+43	244	23		147
67	42+00	43+00	270	51		214
68	43+35.80	44+50	402	1		60
69	44+98	45+86.34	358	19		103
70	46+00	47+50	445	23		234
71	47+67	48+60.97	168	5		92
72	48+95.97	50+00	306	0		0
73	50+50	51+25	300	0		55
74	51+50	52+50	317	0		14
75	52+99.08	54+34.82	319	10		135
76	54+50	56+03.48	106	10		254
		HUDSON DRIVE				
79	107+00	108+50.00	470	21		194
80	108+86	110+50.00	447	0		136
81	110+96	112+00.00	191	4		77
		BAILEY ROAD				
86	8+00	8+69.17	428	1		62
87	9+00	9+50.00	675	0		133
		RELOCATED SECOND ST.				
88	51+53.24	53+14.25	185	49		509
		VINCENT STREET				
89	9+17.18	9+50.00	71	3		40
		SECOND STREET				
89	49+00	49+50.00	157	0		67
	TOTALS		8084	255		3531

CALCULATED DET
CHECKED JAN

EARTHWORK/SEEDING SUBSUMMARY

SUM - 59-4.93

DRIVEWAY CALCULATIONS

CALCULATED DET
CHECKED AML

PLAN SHEET NO.	REF. NO.	STATION	SIDE	DRIVE TYPE	DRIVE WIDTH	EXISTING DRIVE COMPOSITION	AVERAGE APRON WIDTH (AAW)	APRON LENGTH (L1)	AVERAGE DRIVE WIDTH (ADW)	DRIVE LENGTH (L2)	APRON AREA (A1=AAW•L1)	DRIVE AREA (A2=ADW•L2)	EXTRA DRIVE OR PARKING AREA	EXISTING APRON AREA	ITEM NUMBER 202		304	408	448		452	830
															PAVEMENT REMOVED	CURB REMOVED	8" AGGREGATE BASE	BITUMINOUS PRIME COAT	1-1/4" ASPHALT CONCRETE SURFACE COURSE, PG64-22, FOR DRIVEWAYS	1-3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, PG64-22, FOR DRIVEWAYS	8" PLAIN CONCRETE PAVEMENT	CURB, TYPE 6
					W		[W+(W+8)]/2	L1	ADW	L2	• (CADD AREA) A1	• (CADD AREA) A2	A3	E1	E1/9		[(8/12)•(A2+A3)]/27	(0.4)•(A2+A3)/9	[(1.25/12)• (A2+A3)]/27	[(1.75/12)• (A2+A3)]/27	• A2/9 A1/9	
					FT.		SQ. FT.	FT.	FT.	FT.	SQ. FT.	SQ. FT.	SQ. FT.	SQ. FT.	S.Y.	L.F.	C.Y.	GAL.	C.Y.	C.Y.	S.Y.	L.F.
		FRONT STREET																				
51	DR-1	33+40.00	RT.	COMM.	15.0	ASPHALT	19.0	5.5	15.0	10.0	104.5	150.0		320	36		3.7	6.7	0.6	0.8	11.6	
51	DR-2	34+80.00	RT.	COMM.	15.00	ASPHALT	19.0	5.5	15.0	20.0	104.5	300.0		500	56		7.4	13.3	1.2	1.6	11.6	
52	DR-3	35+62.00	LT.	COMM.	26.00	ASPHALT	30.0	5.5	26.0	15.0	165.0	390.0	118	235	26	32	12.5	22.6	2.0	2.7	18.3	85
52	DR-4	36+33.00	LT.	COMM.	26.00	ASPHALT	30.0	5.5	26.0	10.0	165.0	260.0	53	245	27	80	7.7	13.9	1.2	1.7	18.3	62
52	DR-5	36+62.00	RT.	COMM.	26.00	ASPHALT	30.0	5.5	26.0	10.0	165.0	260.0	815	250	28		26.5	47.8	4.1	5.8	18.3	
52	DR-6	37+07.00	LT.	COMM.	28.00	ASPHALT	32.0	5.5	28.0	10.0	176.0	280.0	286	250	28	141	14.0	25.2	2.2	3.1	19.6	237
52	DR-7	37+34.00	RT.	COMM.	26.00	ASPHALT	30.0	5.5	26.0	10.0	165.0	260.0	633	255	28		22.0	39.7	3.4	4.8	18.3	
52	DR-8	39+00.00	LT.	COMM.	24.00	ASPHALT	28.0	5.5	24.0	20.0	154.0	480.0	1435	215	24	57	47.3	85.1	7.4	10.3	17.1	57
52	DR-9	39+81.00	LT.	COMM.	30.00	ASPHALT	34.0	5.5	30.0	15.0	187.0	450.0	395	355	39		20.9	37.6	3.3	4.6	20.8	
52	DR-10	39+81.00	RT.	COMM.	30.00	ASPHALT	34.0	5.5	30.0	20.0	187.0	600.0	1810	155	17		59.5	107.1	9.3	13.0	20.8	130
52	DR-11	40+45.50	LT.	COMM.	20.00	ASPHALT	24.0	5.5	20.0	5.0	132.0	100.0		200	22		2.5	4.4	0.4	0.5	14.7	
53	DR-12	41+39.00	RT.	COMM.	24.00	ASPHALT	28.0	5.5	24.0	5.5	154.0	132.0	325	320	36		11.3	20.3	1.8	2.5	17.1	
53	DR-13	41+43.00	LT.	COMM.	20.00	ASPHALT	24.0	6.0	20.0	0.0	144.0	0.0	115	170	19		2.8	5.1	0.4	0.6	16.0	
53	DR-14	42+20.00	RT.	COMM.	24.00	ASPHALT	28.0	5.5	24.0	5.5	154.0	132.0	15	205	23		3.6	6.5	0.6	0.8	17.1	
53	DR-15	44+98.00	LT.	COMM.	24.00	ASPHALT	28.0	5.5	24.0	10.0	154.0	240.0	1798									
54	DR-16	45+70.00	LT.	COMM.	30.00	ASPHALT	34.0	5.5	30.0	25.0	187.0	750.0	3127	215	24		95.7	172.3	15.0	20.9	20.8	
54	DR-17	45+86.34	RT.	COMM.	24.00	ASPHALT	28.0	5.5	24.0	10.0	154.0	240.0		320	36		5.9	10.7	0.9	1.3	17.1	
54	DR-18	47+67.00	LT.	COMM.	30.00	ASPHALT	34.0	5.5	30.0	10.0	187.0	300.0	479	480	53		19.2	34.6	3.0	4.2	20.8	
54	DR-19	48+47.00	LT.	COMM.	24.00	ASPHALT	28.0	5.5	24.0	10.0	154.0	240.0		185	21		5.9	10.7	0.9	1.3	17.1	
54	DR-20	48+60.97	RT.	COMM.	18.00	ASPHALT	22.0	5.5	18.0	5.0	121.0	90.0		150	17		2.2	4.0	0.3	0.5	13.4	
54	DR-21	48+95.97	RT.	COMM.	30.00	ASPHALT	34.0	5.5	30.0	5.0	187.0	150.0	348	250	28		12.3	22.1	1.9	2.7	20.8	
54	DR-22	49+91.00	RT.	COMM.	21.00	ASPHALT	25.0	5.5	21.0	5.0	137.5	105.0	55	235	26		4.0	7.1	0.6	0.9	15.3	
54	DR-23	49+55.00	LT.	COMM.	27.00	ASPHALT	31.0	5.5	27.0	20.0	170.5	540.0		175	19		13.3	24.0	2.1	2.9	18.9	
54	DR-23A	50+35.00	RT.	COMM.	20.00	ASPHALT	24.0	5.5	20.0	5.0	132.0	100.0		175	19		2.5	4.4	0.4	0.5	14.7	
55	DR-24	50+88.00	RT.	COMM.	20.00	ASPHALT	24.0	5.5	20.0	5.0	132.0	100.0	18	180	20		2.9	5.2	0.5	0.6	14.7	
55	DR-25	51+67.00	LT.	COMM.	27.00	ASPHALT	31.0	5.5	27.0	20.0	170.5	540.0	558	175	19		27.1	48.8	4.2	5.9	18.9	
55	DR-26	52+19.36	LT.	COMM.	12.00	ASPHALT	16.0	5.5	12.0	20.0	88.0	240.0		65	7		5.9	10.7	0.9	1.3	9.8	
55	DR-27	54+34.82	LT.	COMM.	30.00	ASPHALT	34.0	5.5	30.0	5.0	187.0	150.0	500	550	61		16.0	28.9	2.5	3.5	20.8	
55	DR-27A	52+25.00	RT.	COMM.	24.00	ASPHALT	28.0	5.5	24.0	5.0	154.0	120.0		150	17		3.0	5.3	0.5	0.6	17.1	
		BAILEY ROAD																				
82	DR-28	8+30.10	LT.	COMM.	24.00	ASPHALT	28.0	5.1	24.0	6.1	143.4	146.6	250	X			9.8	17.6	1.5	2.1	15.9	
82	DR-29	8+69.17	LT.	COMM.	24.00	ASPHALT	28.0	5.5	24.0	20.5	154.0	492.0	610	X			27.2	49.0	4.3	6.0	17.1	
		EDISON STREET																				
97	–	46+89.70 TO 47+13.64	–	COMM.	20.00	ASPHALT	–	–	–	–	–	• 445	–								• 49	
97	–	47+13.64 TO 48+70.08	–	COMM.	20.00	ASPHALT	–	–	–	–	–	• 3129	–								• 348	
97	–	48+70.08 TO 49+10.56	–	COMM.	20.00	ASPHALT	–	–	–	–	–	• 875	–								• 97	
97	DR-29A	46+93.64	LT.	COMM.	20.00	ASPHALT	–	–	–	–	• 295	–	–								• 33	
97	DR-30	48+18.70	LT.	COMM.	30.00	ASPHALT	–	–	–	–	• 470	–	–								• 52	
97	DR-31	48+91.80	LT.	COMM.	23.50	ASPHALT	–	–	–	–	• 350	–	–								• 39	
		HUDSON DR.																				
77	DR-32	107+87.00	LT.	COMM.	30.00	ASPHALT	34.0	5.5	30.0	0.0	187.0	0.0		X			0.0	0.0	0.0	0.0	20.8	
77	DR-33	108+86.00	LT.	COMM.	18.00	ASPHALT	22.0	5.5	18.0	10.0	121.0	180.0		125	14		4.4	8.0	0.7	1.0	13.4	
78	DR-34	110+96.00	RT.	COMM.	26.00	ASPHALT	30.0	5.5	26.0	10.0	165.0	260.0	115	150	17		9.3	16.7	1.4	2.0	18.3	
78	DR-35	111+76.00	LT.	COMM.	23.00	ASPHALT	27.0	5.5	23.0	5.5	148.5	126.5	205	160	18		8.2	14.7	1.3	1.8	16.5	
TOTAL CARRIED TO GENERAL SUMMARY															824	310	517	931	81	114	1201	571

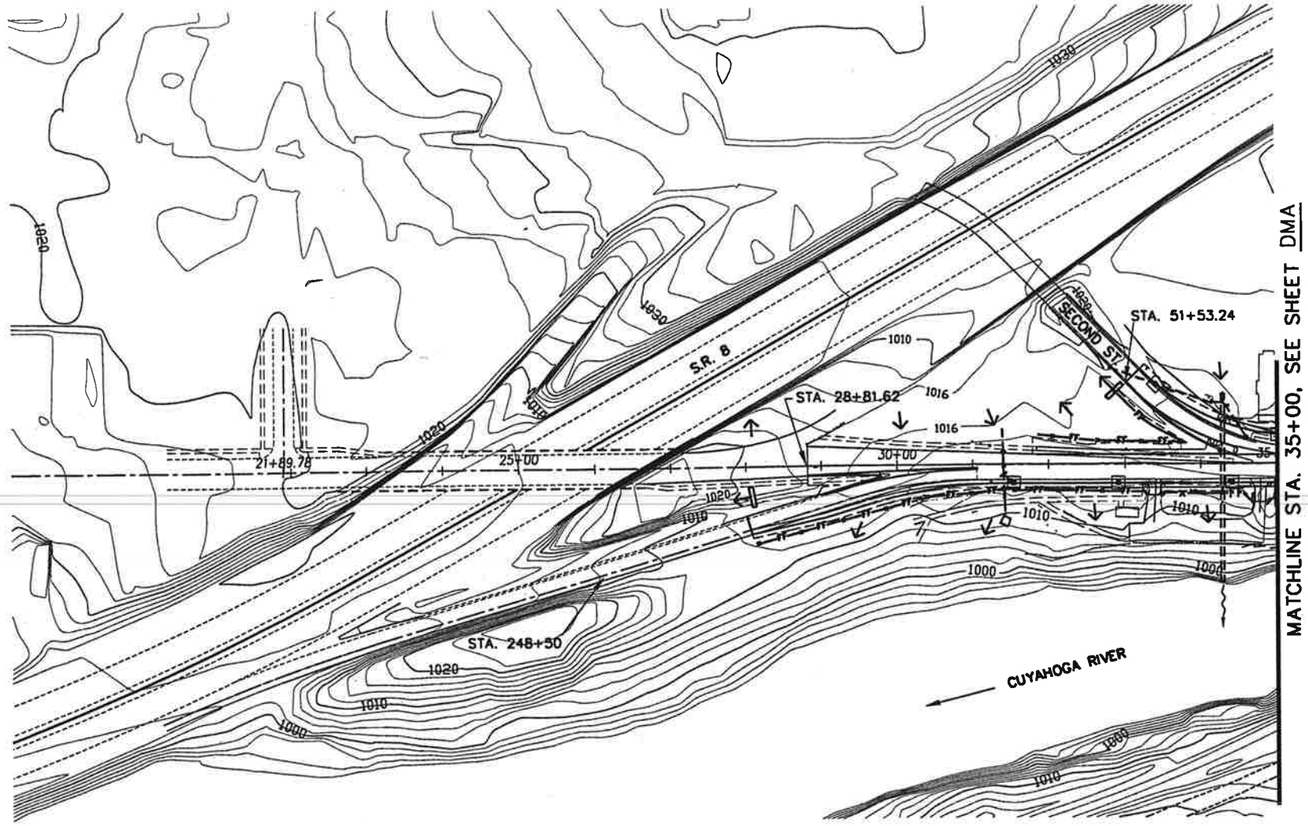
SUM - 59-493

PROJECT DATA	
PROJECT LENGTH	0.84 MILES
AREA TO UNDERGO EXCAVATION FILLING OR GRADING	7.74 ACRES
RUNOFF COEFFICIENT FOR PRE-CONSTRUCTION SITE	0.70
RUNOFF COEFFICIENT FOR POST-CONSTRUCTION SITE	0.75
SOIL DATA	SEE SOIL PROFILE
IMMEDIATE RECEIVING WATERS	CUYAHOGA RIVER
SUBSEQUENT RECEIVING WATERS	LAKE ERIE

USGS QUADRANT NO. HUDSON, OHIO
LONGITUDE: 81°26'15"
LATITUDE: 41°09'30"

LATITUDE AND LONGITUDE ARE TO THE APPROXIMATE CENTER OF THE PROFECT.

PROJECT DESCRIPTION:
WIDENING AND RECONSTRUCTION OF 0.52 MILES OF FRONT STREET AND 0.32 MILES OF HUDSON DRIVE INCLUDING NEW CURB AND SIDEWALK, RESURFACING, DRAINAGE, LIGHTING, NEW TRAFFIC SIGNALS, SIGNING AND PAVEMENT MARKINGS, AND RELOCATION OF THE OVERHEAD UTILITIES UNDERGROUND.



ESTIMATED QUANTITIES

STATION			SIDE	877 TEMP. PERIMETER FABRIC FILTER FENCE	877 TEMP. DITCH CHECK FABRIC FILTER FENCE	877 TEMP. INLET PROTECTION FABRIC FILTER FENCE	877 TEMP. DIKES, AS PER PLAN	877 TEMP. SEDIMENT BASINS AND DAMS
				LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	CU. YD.
250+50	TO	254+00	S.R.8 RAMP, RT.	350	1			
51+53	TO	52+58	SECOND ST. RT.	105				
			SECOND ST. RT. LT.	0	1	2		
31+87	TO	33+80	FRONT ST. LT.	193				
31+50	TO	33+28	FRONT ST. RT.	178				
33+45	TO	34+72	FRONT ST. RT.	127				
34+86	TO	35+50	FRONT ST. RT.	64				
			FRONT ST. RT. LT.	0		3		
35+50	TO	40+40	FRONT ST. RT.	490				
			FRONT ST. RT. LT.	0		9		
40+60	TO	41+15	FRONT ST. RT.	55				
43+48	TO	43+78	FRONT ST. RT.	30				
			FRONT ST. RT. LT.	0		4		
47+09	TO	50+50	FRONT ST. RT.	341				
			FRONT ST. RT. LT.	0		6		
50+50	TO	50+75	FRONT ST. RT.	25				
51+00	TO	52+70	FRONT ST. RT.	170				
54+08	TO	55+50	FRONT ST. RT.	142				
			FRONT ST. RT. LT.	0		4		
55+50	TO	56+07	FRONT ST. RT.	57				
			FRONT ST. RT. LT.	0		2		
			HUDSON DR. RT. LT.	0		4		
			HUDSON DR. RT. LT.	0		2		
					2	36		
36 TEMP. INLET PROTECTIONS @ 30' EACH						1080		
2 DITCH CHECKS @ 20' EACH					40			
TOTAL				2327	40	1080	0	0

I CERTIFY UNDER PENALTY OF THE LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHERED AND EVALUATED THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.

SIGNATURE: DATE:

LEGEND

- DRAINAGE DIVIDE
- DIRECTION OF OVERLAND FLOW
- TEMPORARY PERIMETER FILTER FABRIC FENCE (FF)
- TEMPORARY DITCH CHECK FILTER FABRIC FENCE
- TEMPORARY INLET PROTECTION FILTER FABRIC FENCE
- DIRECTION OF DITCH FLOW
- DITCH CHECK FILTER FABRIC FENCE
- SLOPE DRAIN (S)
- PERIMETER FILTER FABRIC FENCE (P)
- INLET PROTECTION FILTER FABRIC FENCE
- SEDIMENT BASIN

CALCULATED | CHECKED

STORMWATER POLLUTION PREVENTION PLAN

SUM - 59-493

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171

J:\PROJ1\7036100\ROADWAY\7036IGS01.DWG User: jon81152 Oct 16, 2002 - 2:27pm

MATCHLINE STA. 35+00, SEE SHEET DMA

S.R. 8

SECOND ST.

HUDSON DR.

STA. 112+00

W. BAILEY RD.

EDISON ST.

FRONT ST.

VINCENT ST.

LANDON DR.

STA. 56+03.48

CUYAHOGA RIVER

GAYLORD GROVE

E. BAILEY RD.

STA. 95+28.43

LEGEND

- DRAINAGE DIVIDE.....
- DIRECTION OF OVERLAND FLOW.....
- TEMPORARY PERIMETER FILTER FABRIC FENCE.....
- TEMPORARY DITCH CHECK FILTER FABRIC FENCE.....
- TEMPORARY INLET PROTECTION FILTER FABRIC FENCE.....
- DIRECTION OF DITCH FLOW.....
- DITCH CHECK FILTER FABRIC FENCE
- SLOPE DRAIN
- PERIMETER FILTER FABRIC FENCE
- INLET PROTECTION FILTER FABRIC FENCE
- SEDIMENT BASIN

(IN FEET)

CALCULATED | CHECKED

STORMWATER POLLUTION PREVENTION PLAN

SUM - 59-4.93

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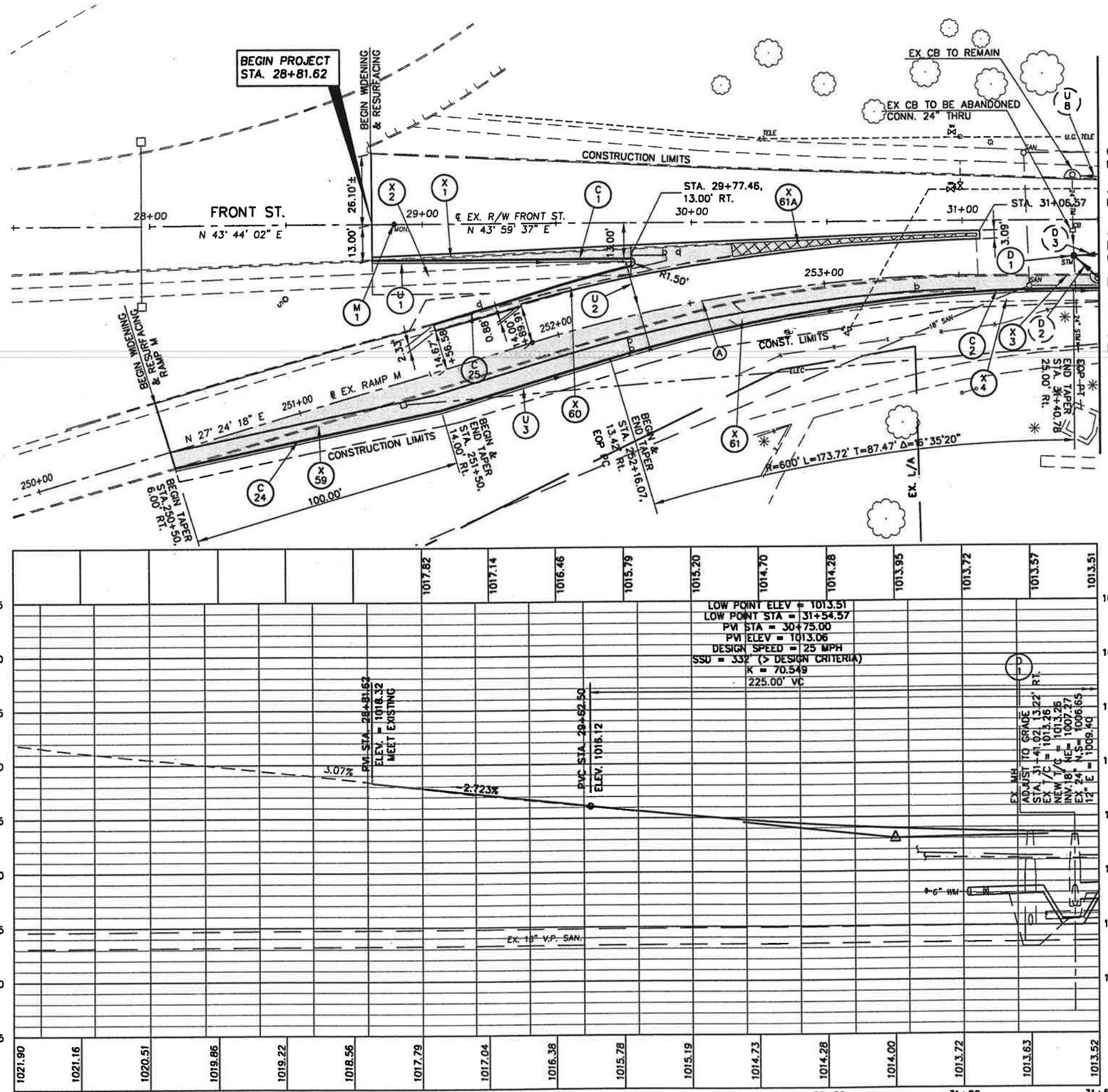
J:\PROJ1\7036100\ROADWAY\703616S02.DWG User: jon81152 Oct 16, 2002 - 2:30pm



PAVEMENT WIDENING AREAS

REMOVE EXISTING PAVEMENT, CURB, AND MEDIAN.

(A)
EXIST ℄ RAMP M
P.I. STA. 252+73.44
Δ = 16° 35' 20"
R = 572.96'
T = 83.53'
L = 165.89'
E = 6.06'
e_{max} = 0.041

BENCHMARK No. 5
TOP OF N. ANCHOR BOLT OF THE SIGNAL POLE AT S.E. CORNER OF FRONT STREET AND BAILEY ROAD ELEV. = 1016.11

SYMBOLS KEY

- (C/X) CURB ITEM
- (CR/X) CURB RAMP
- (D/X) DRAINAGE ITEM
- (DR/X) DRIVEWAY ITEM
- (M/X) MONUMENT ITEM
- (R/X) DRAINAGE REMOVAL ITEM
- (SW/X) SIDEWALK ITEM
- (U/X) UNDERDRAIN ITEM
- (X/X) REMOVAL ITEM

FOR RAMP M PAVEMENT DETAILS SEE SHEET 91.

FOR WATER AND SANITARY SEWER PLANS SEE SHEETS 100 – 114.

FOR ROADWAY QUANTITIES SEE SHEETS 37 – 39.

FOR DRAINAGE QUANTITIES SEE SHEETS 40 – 45.

PIPE PROFILES	
REF.	PAGE
D-2	60

1" (N FEET) = 1 inch = 20' ft.

CALCULATED SCW CHECKED JAN

FRONT STREET PLAN AND PROFILE STA. 27+50 TO STA. 31+50

SUM - 59-493

50
171

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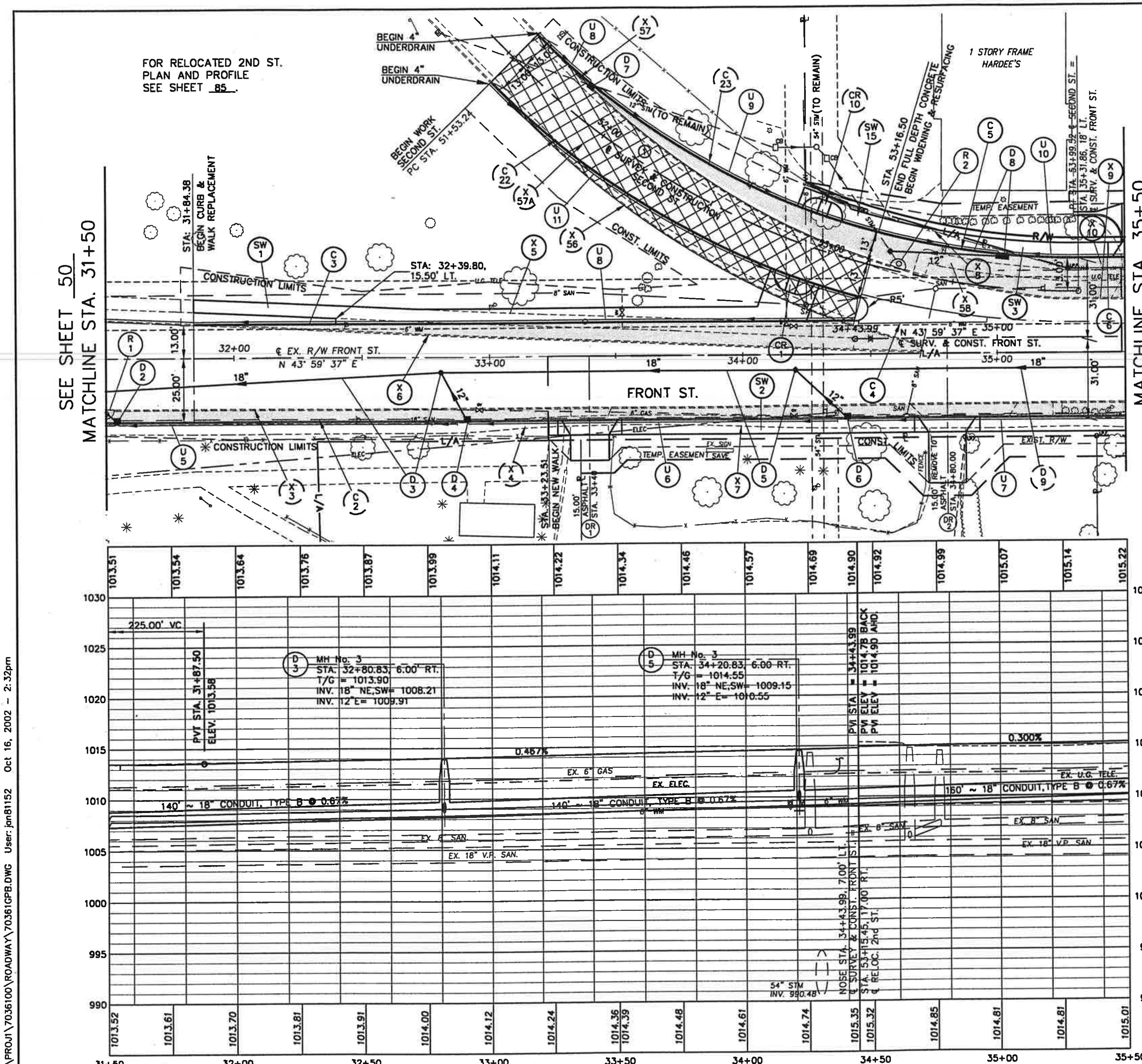
FOR RELOCATED 2ND ST.
PLAN AND PROFILE
SEE SHEET 85.
SEE SHEET 50
MATCHLINE STA. 31+50
MATCHLINE STA. 35+50
SEE SHEET 52
FRONT ST.
BEGIN 4" UNDERDRAIN
CONSTRUCTION LIMITS
CONST. LIMITS
TEMP. EASEMENT
1 STORY FRAME
HARDEE'S
STA: 32+39.80, 15.50' LT.
STA: 31+84.38 BEGIN CURB & WALK REPLACEMENT
BEGIN WORK SECOND ST. PC STA. 51+53.24
STA. 53+16.50 END FULL DEPTH CONCRETE BEGIN WIDENING & RESURFACING
54" STM (TO REMAIN)
12" STM (TO REMAIN)
N 43° 59' 37" E
225.00' VC
PVI STA. 31+87.50
ELEV. 1013.58
MH No. 3
STA. 32+80.83, 6.00' RT.
T/G = 1013.90
INV. 18" NE,SW= 1008.21
INV. 12" E= 1009.91
MH No. 3
STA. 34+20.83, 6.00' RT.
T/G = 1014.55
INV. 18" NE,SW= 1009.15
INV. 12" E= 1010.55
PVI STA = 34+43.99
PVI ELEV = 1014.78 BACK
PVI ELEV = 1014.90 AHD.
0.467%
0.300%
140' ~ 18" CONDUIT, TYPE B @ 0.67%
160' ~ 18" CONDUIT, TYPE B @ 0.67%
EX. 6" GAS
EX. ELEC.
EX. U.G. TELE.
EX. 8" SAN.
EX. 18" V.P. SAN.
54" STM INV. 990.48
31+50
32+00
32+50
33+00
33+50
34+00
34+50
35+00
35+50

[crosshatch]	REMOVE EXISTING PAVEMENT, CURB, AND MEDIAN.
[shaded]	PAVEMENT WIDENING AREAS

①
℄ SURVEY &
CONSTRUCTION SECOND ST.
P.I. STA. 52+83.31
Δ = 45° 33' 41"
R = 309.71'
T = 130.07'
L = 246.28'
E = 26.20'
e_{max} = NC

BENCHMARK No. 3
C&GS DISK STAMPED "FALLS 1934" AT N. END OF W. BALLAST DECK SOUTH OF R.R. BRIDGE OVER OLD BAILEY ROAD.
ELEV. = 1014.34

FOR BALLOON REFERENCE SYMBOLS SEE SHEET 50.

FOR WATER AND SANITARY SEWER PLANS SEE SHEETS 100–114.

FOR ROADWAY QUANTITIES SEE SHEETS 37 – 39.

FOR DRAINAGE QUANTITIES SEE SHEETS 40 – 45.

FOR RELOCATED SECOND ST INTERSECTION DETAIL, SEE SHEET 92.

PIPE PROFILES	
REF.	PAGE
D-6	61
D-7	88
D-8	85

(IN FEET) 1 inch = 20 ft.

CALCULATED SCW
CHECKED JAN

FRONT STREET PLAN AND PROFILE
STA. 31+50 TO STA. 35+50

SUM - 59 - 4.93

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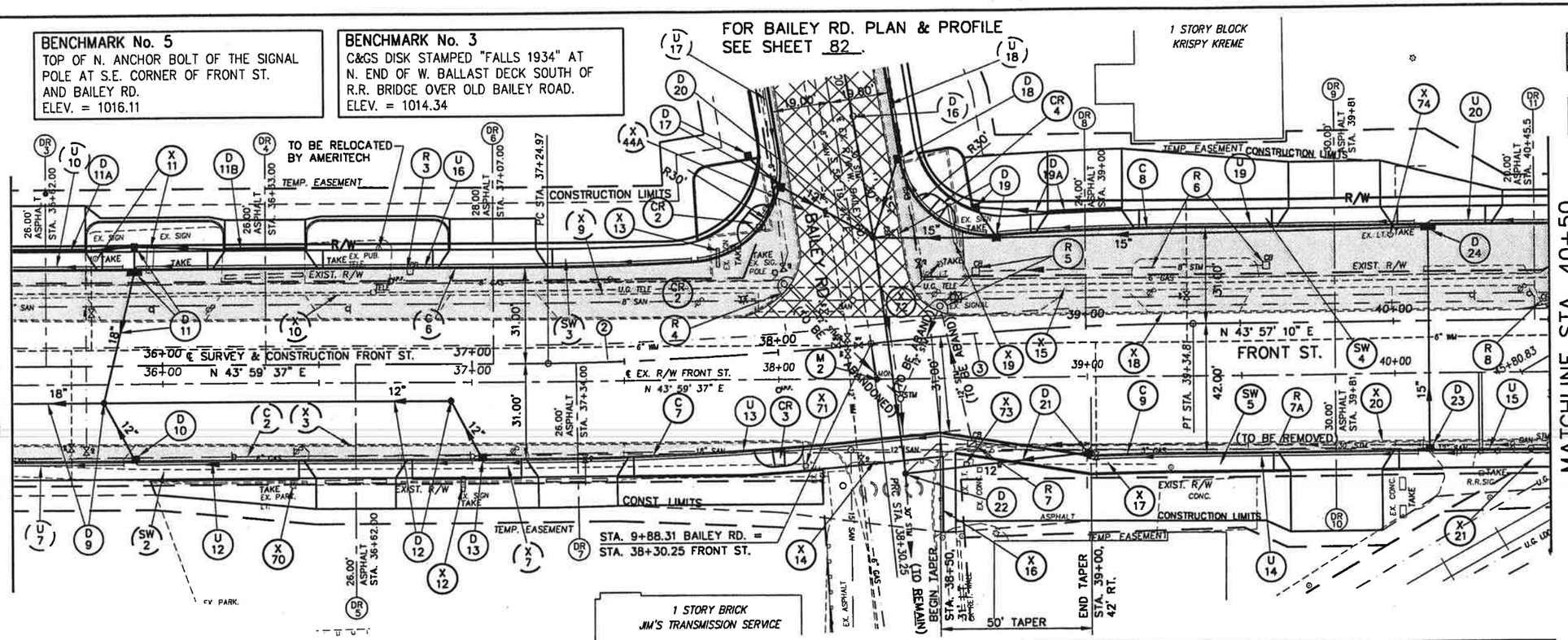
BENCHMARK No. 5
TOP OF N. ANCHOR BOLT OF THE SIGNAL POLE AT S.E. CORNER OF FRONT ST. AND BAILEY RD.
ELEV. = 1016.11

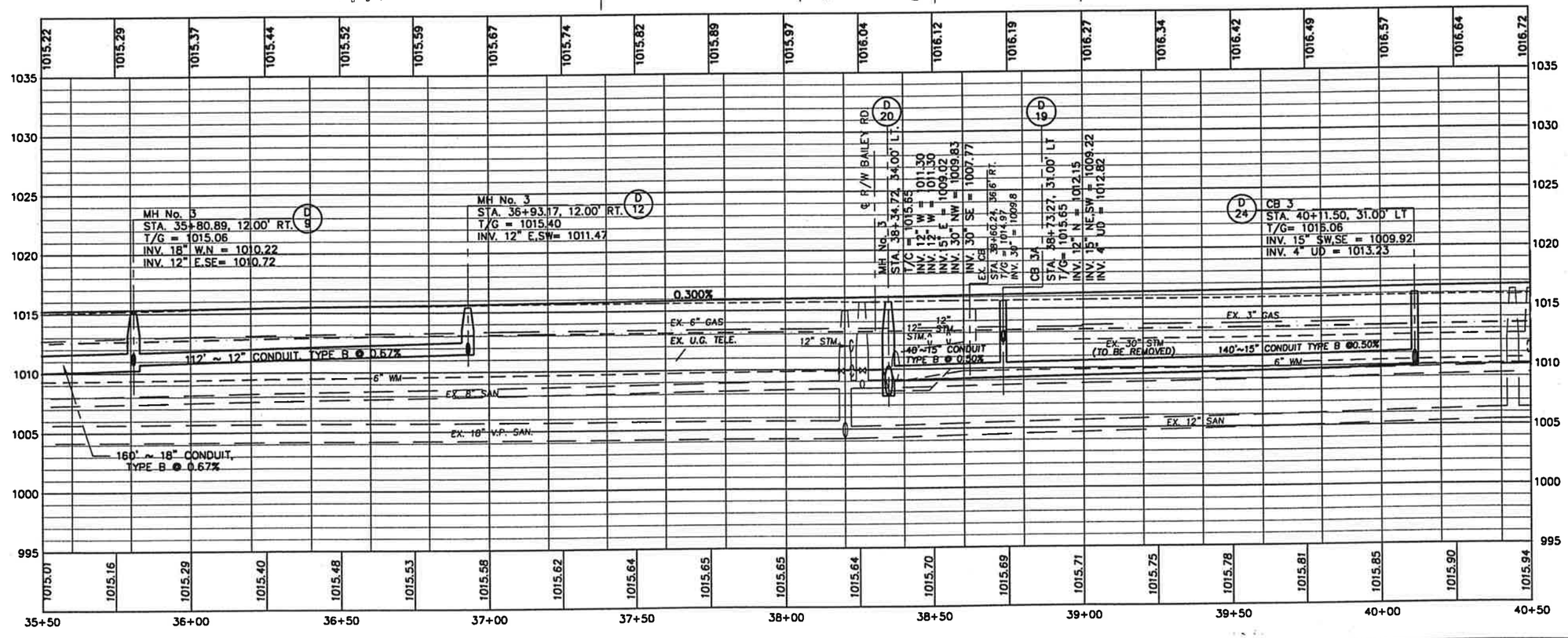
BENCHMARK No. 3
C&GS DISK STAMPED "FALLS 1934" AT N. END OF W. BALLAST DECK SOUTH OF R.R. BRIDGE OVER OLD BAILEY ROAD.
ELEV. = 1014.34

FOR BAILEY RD. PLAN & PROFILE SEE SHEET 82

SEE SHEET 51 MATCHLINE STA. 35+50

MATCHLINE STA. 40+50 SEE SHEET 53





FOR BALLOON REFERENCE SYMBOLS, SEE SHEET 50

FOR SANITARY SEWER AND WATERLINE PLANS SEE SHEETS 100 – 112

FOR ROADWAY QUANTITIES SEE SHEETS 37 – 39

FOR DRAINAGE QUANTITIES SEE SHEETS 40 – 45

FOR BAILEY ROAD INTERSECTION DETAIL SE SHEET 93

PIPE PROFILES	
REF.	PAGE
D-(9-11)	62
D-13	63
D-20	64
D-(11A,11B)	98
D-(19,19A)	98
D-(21-22)	98
D-(23-24)	65

(IN FEET) 1 inch = 20 ft.

CALCULATED SCW CHECKED JAN

FRONT STREET PLAN AND PROFILE STA. 35+50 TO STA. 40+50

SUM - 59-493

FOR HUDSON DRIVE PLAN & PROFILE SEE SHEET 77.

SEE SHEET 52
MATCHLINE STA. 40+50

MATCHLINE STA. 45+50
SEE SHEET 54

BENCHMARK No. 2
TOP OF N.E. ANCHOR BOLT OF "UNION 76" SIGN N. POLE, S.W. CORNER OF FRONT STREET AND HUDSON DRIVE.
ELEV. = 1016.84

1 STORY BRICK SILVER SWAN TAVERN

EDISON ST.

METRO REGIONAL TRANSIT AUTHORITY R/W

1 STY. COMM. BLDG. (TO BE REMOVED)

(TO BE ABANDONED)

1 STORY FRAME CROCKER'S RESTAURANT

HUDSON DR.

FRONT ST.

PT STA AHEAD: 107+59.40
STA BACK: 107+58.54

℄ CONSTRUCTION LIMITS

℄ SURVEY & CONSTRUCTION FRONT ST. 45+00
N 43° 57' 10" E

℄ EX. R/W FRONT ST.
N 43° 57' 10" E

STA. 106+67.91 HUDSON DRIVE =
STA. 43+35.80 FRONT ST.

℄ SURVEY & CONSTRUCTION HUDSON DR.
P.I. STA. 106+22.03
Δ = 05° 15' 42"
R = 1000'
T = 45.95'
L = 91.83'
E = 1.06'
e_{max} = NC

℄ SURVEY & CONSTRUCTION HUDSON DR.
P.I. STA. 107+13.76
Δ = 05° 15' 00"
R = 1000'
T = 45.85'
L = 91.63'
E = 1.05'
e_{max} = NC

CONSTRUCTION LIMITS

EXIST. TEMP. EASEMENT

TEMP. EASEMENT

BEGIN TAPER STA. 43+68.26 42' RT.

13:1 TAPER

STA. 45+21, 31' RT. END TAPER

EX. PUB. TELE. SAVE

REMOVE EXISTING PAVEMENT CURB AND MEDIAN.

RUBBERIZED RR CROSSING

PAVEMENT WIDENING AREAS

FOR BALLOON REFERENCE SYMBOLS, SEE SHEET 50

FOR SANITARY SEWER AND WATERLINE PLANS SEE SHEETS 100 – 114

FOR ROADWAY QUANTITIES SEE SHEETS 37 – 39

FOR DRAINAGE QUANTITIES SEE SHEETS 40 – 45

FOR INTERSECTION DETAIL SEE SHEET 94

PIPE PROFILES	
REF.	PAGE
D-25	99
D-(25A,25B)	98
D-(27-29)	98

HIGH POINT ELEV = 1016.89
HIGH POINT STA = 41+15.45
PVI STA = 41+60
PVI ELEV = 1017.05
DESIGN SPEED = 25 MPH
SSD = 413' (> DESIGN CRITERIA)
K = 68.1
130.00' VC

LOW POINT ELEV = 1015.44
LOW POINT STA = 42+95.78
PVI STA = 42+75
PVI ELEV = 1015.20
DESIGN SPEED = 25 MPH
SSD = 600' (> DESIGN CRITERIA)
K = 44.0
100.00' VC

HIGH POINT ELEV = 1015.92
HIGH POINT STA = 44+16.94
PVI STA = 44+00
PVI ELEV = 1016.03
DESIGN SPEED = 25 MPH
SSD = 720' (> DESIGN CRITERIA)
K = 100.8
100.00' VC

℄ R/W EDISON ST.

℄ RR RAILS

℄ R/W HUDSON DR.

℄ SURV. & CONST. HUDSON DR.

EX. STORM MH STA. 40+50.8 40.9' RT
T/C = 1016.27
INV. 30" = 1010.10
INV. (2)12"NW = 1010.89
INV. 12"N = 1011.16±

PVC STA. 40+95
ELEV. 1016.85

PCC STA. 42+25
ELEV. 1016.00

EX. STM. MH ADJUST TO GRADE STA. 42+97.15, 58.4 RT.
EX. T/C = 1015.00
NEW T/C = 1014.64
INV. EX 30"NW, SE = 1010.54

PVI STA. 43+25
ELEV. 1015.53

PVC STA. 43+50
ELEV. 1015.70

PVT STA. 44+50
ELEV. 1015.87

CB 3A
STA. 44+69.77, 31.00' LT.
T/G = 1015.26
INV. 12" NE = 1011.76
INV. 4" UD = 1012.43

-1.609%
0.664%
-0.328%

152'-12" TYPE B @ 0.89%

EX. U.G. TELE.
EX. WM
6" WM
30" STORM (TO BE REMOVED)
EX. 12" SAN
EX. GAS
EX. ELEC. DUCT
8" WM
EX. 8" SAN
EX. 8" GAS

1040 1035 1030 1025 1020 1015 1010 1005 1000

1016.72 1016.79 1016.87 1016.88 1016.80 1016.63 1016.36 1016.00 1015.67 1015.48 1015.44 1015.53 1015.70 1015.83 1015.91 1015.92 1015.87 1015.78 1015.70 1015.62 1015.54

1015.94 1016.19 1016.49 1016.48 1016.51 1016.34 1016.03 1015.39 1015.19 1015.06 1015.08 1015.38 1015.56 1015.38 1015.39 1015.34 1015.26 1015.16 1015.05 1014.96 1014.88

40+50 41+00 41+50 42+00 42+50 43+00 43+50 44+00 44+50 45+00 45+50

CALCULATED SCW CHECKED JAN

FRONT STREET PLAN AND PROFILE
STA. 35+50 TO STA. 40+50

SJM - 59-493

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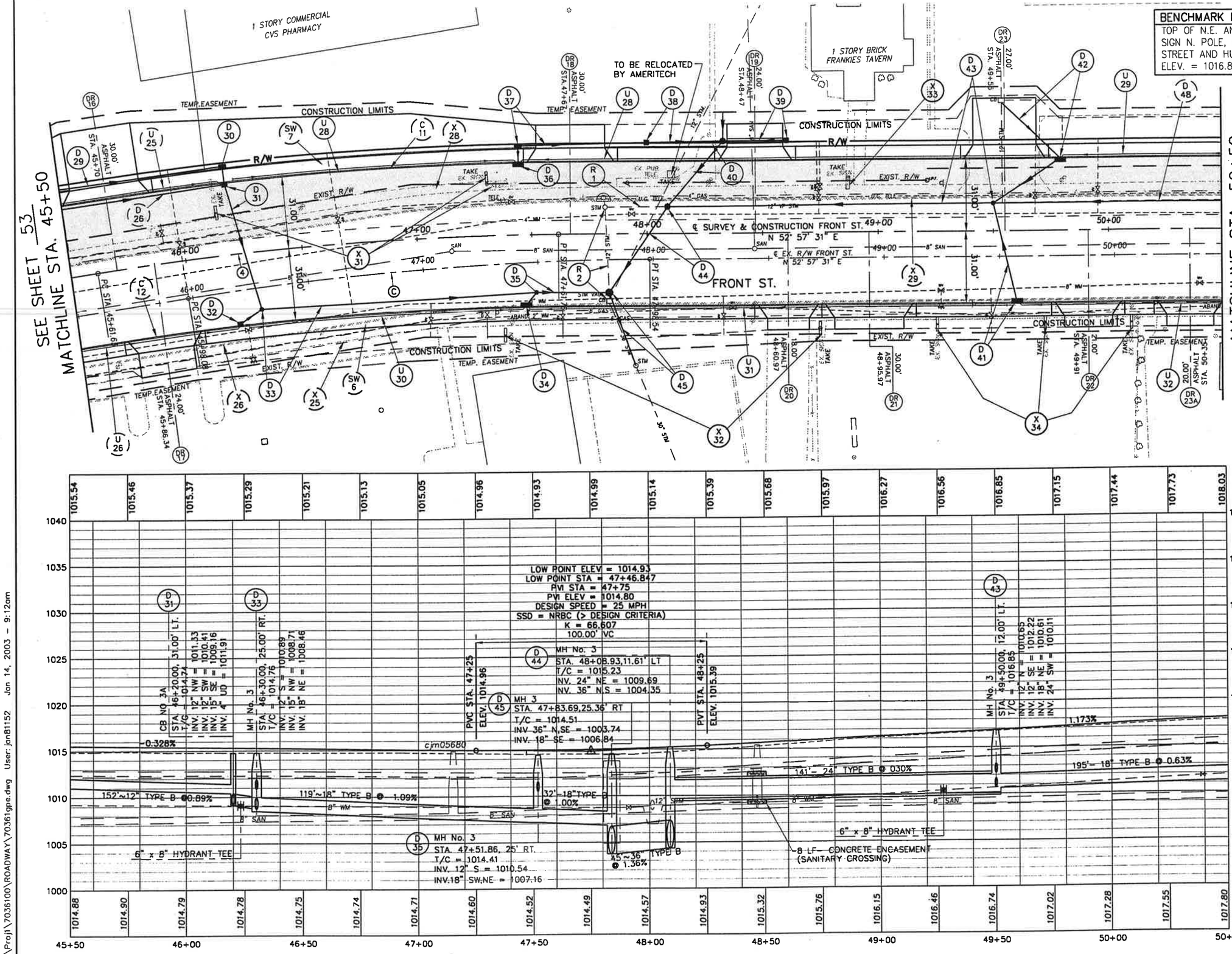

FOR BALLOON REFERENCE SYMBOLS, SEE SHEET 50

FOR SANITARY SEWER AND WATERLINE PLANS SEE SHEETS 100 – 114

FOR ROADWAY QUANTITIES SEE SHEETS 37 – 39

FOR DRAINAGE QUANTITIES SEE SHEETS 40 – 45

PIPE PROFILES	
REF.	PAGE
D-(30-32)	70
D-36	70
D-(37-39)	98
D-40	71
D-(41-42)	72
D-(44-45)	71

PAVEMENT WIDENING AREAS

(N FEET) 1 inch = 20' ft.

CALCULATED SCW CHECKED JAN

FRONT STREET PLAN AND PROFILE STA. 45+50 TO STA. 50+50

SUM - 59-493

54 / 171

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SEE SHEET 54
MATCHLINE STA. 50+50

MATCHLINE STA. 55+50
SEE SHEET 56

FOR VINCENT STREET PLAN & PROFILE
SEE SHEET 84

BENCHMARK No. 6
TOP LETTER "G" IN "DARLING" ON HYD. N
WESTERLY SIDE OF KENT ROAD OPPOSITE OF
OAK PARK ROAD
ELEV. = 1019.80

RESIDENCE
2 STORY BRICK SCHOOL BUILDING
1 STORY BRICK COMMERCIAL
1 STORY FRAME RESIDENTIAL
2 STORY FRAME COMMERCIAL PROPERTY
FRONT ST.
VINCENT ST.
BEGIN WORK STA. 9+16.80
TEMP. EASEMENT
CONSTRUCTION LIMITS
EXIST. R/W
℄ SURVEY & CONSTRUCTION FRONT ST.
N 52° 57' 31" W
℄ EX. R/W FRONT ST.
N 52° 57' 31" W
STA. 9+87.90 VINCENT ST. =
STA. 52+99.08 FRONT ST.
TO BE ABANDONED
WALL TAKE
226.22' TAPER @ 25.74:1
226.22' TAPER @ 24.51:1
BEGIN TAPER STA. 53+77.26 31.00' LT. & RT.
PC STA. 54+07.27
PT STA. 54+77.26
GAS REG.
EX. GAS TANK
FOR BALLOON REFERENCE SYMBOLS, SEE SHEET ____

Ⓓ EX. ℄ R/W FRONT ST.
P.I. STA. 55+07.27
Δ = 07° 40' 00"
R = 1492.44'
T = 100.00'
L = 199.70'
E = 3.35'
e_{max} = NC

⑤ ℄ SURVEY & CONSTRUCTION FRONT ST.
P.I. STA. 54+27.33
Δ = 07° 37' 59"
R = 750.63'
T = 50.07'
L = 100.00'
E = 1.67'
e_{max} = NC

HIGH POINT ELEV = 1020.48
HIGH POINT STA = 54+15.120
PVI STA = 54+50
PVI ELEV = 1021.05
DESIGN SPEED = 25 MPH
SSD = 564' (> DESIGN CRITERIA)
K = 186.681
300.00' VC

MH No. 3 STA. 51+45.00, 12.00' LT.
T/C = 1019.14
INV. 12" N = 1012.83
INV. 12" SE = 1014.31
INV. 18" NE,SW = 1011.83

PVI STA = 51+50
PVI ELEV = 1019.20

MH No. 3 STA. 52+75.43, 12.00' LT.
T/C = 1020.05
INV. 18" N,SW = 1012.88

PVC STA. 53+00
ELEV. 1020.13

℄ R/W VINCENT ST.

EX. CB STA. 53+41.20, 14.7' LT.
T/G = 1019.17
12" INV. = 1017.96
4" INV. = 1018.09

1.173% | 0.617% | -0.990%
195'- 18" TYPE B @ 0.63%
130'- 18" TYPE B @ 0.81%
EX. 8" GAS
EX. 8" GAS | EX. 12" GAS | EX. 20" GAS
EX. U.G. TELE.
8" WM
8" SAN

FOR BALLOON REFERENCE SYMBOLS, SEE SHEET 50

FOR SANITARY SEWER AND WATERLINE PLANS SEE SHEETS 100 – 114

FOR ROADWAY QUANTITIES SEE SHEETS 37 – 39

FOR DRAINAGE QUANTITIES SEE SHEETS 40 – 45

FOR VINCENT STREET INTERSECTION DETAILS SEE SHEET 96

PIPE PROFILES	
REF.	PAGE
D-46	74
D-47	74
D-49	89
D-50	75

PAVEMENT WIDENING AREAS

REMOVE EXIST. PAVEMENT CURB AND MEDIAN.

CALCULATED SCW CHECKED JAN

FRONT STREET PLAN AND PROFILE
STA. 50+50 TO STA. 55+50

SUM - 59-493

55
171

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SEE SHEET 55
MATCHLINE STA. 55+50

PAVEMENT WIDENING AREAS

REMOVE EXIST. PAVEMENT CURB AND MEDIAN.

226.22' TAPER
@ 25.74:1

END PROJECT
STA. 56+03.48

END TAPER
STA. 56+03.48,
21.77' RT.

LANDON DR.

TEMP. EASEMENT
CONSTRUCTION LIMITS

6" WM(SILVER LAKE)

22.21'

21.77'

℄ EX. R/W FRONT ST.
N 60° 37' 31" E

FRONT ST.

55+00

56+00

57+00

58+00

59+00

60+00

16" WM

30" STEEL CASING

OAK PARK RD.

CONSTRUCTION LIMITS
TEMP. EASEMENT

END TAPER
STA. 56+03.48,
21.77' RT.

226.22' TAPER
@ 25.74:1

END ℄ CONST. FRONT ST. (BK) =
STA. 56+06.98 ℄ EX. R/W (AHD)

1 STORY BRICK
SERVICE STATION

BENCHMARK No. 6
TOP LETTER "G" IN "DARLING" ON HYD. N
WESTERLY SIDE OF FRONT STREET OPPOSITE
OF OAK PARK ROAD
ELEV. = 1019.80

1019.99 1019.80 1019.56 1019.53

END PROJECT
STA. 56+03.48
MATCH EXIST.

300.00' VC

EX. CB
STA. 56+08.79, 22.2' LT.
T/G = 1018.79
12" INV. = 1014.79
(TO BE REMOVED)

PVT. STA. 56+00
ELEV. 1019.56

-0.990%

0.86%

EX. U.G. TELE

EX 12" STM. (TO REMAIN)

8~12" TYPE B
@ EX. SLOPE

8" SAN.

CONC MASONRY COLLAR-
AS PER DM1.1(TYP)

D 53 CB 3A
STA.56+02.21,21.63 LT
T/G = 1018.54
INV.12"NE,SW = 1014.59
INV.4" UD = 1015.71

STA BACK: 56+10.44
STA AHD: 56+06.98

1040 1035 1030 1025 1020 1015 1010 1005 1000

1019.91 1019.77 1019.56 1019.53 1019.32 1018.96 1018.59 1018.17 1017.75 1017.23 1016.69 1016.09 1015.48 1014.83 1014.18 1013.48 1012.80 1012.12 1011.45 1010.78 1010.21 1009.64 1009.64

55+50 56+00 56+50 57+00 57+50 58+00 58+50 59+00 59+50 60+00 60+50

FOR BALLOON REFERENCE SYMBOLS, SEE SHEET 50

FOR SANITARY SEWER AND WATERLINE PLANS SEE SHEETS 100 – 114

FOR ROADWAY QUANTITIES SEE SHEETS 37 – 39

FOR DRAINAGE QUANTITIES SEE SHEETS 40 – 45

PIPE PROFILES	
REF.	PAGE
D-52	76
D-53	76

(IN FEET)
1 inch = 20 ft.

CALCULATED SCW
CHECKED JAN

FRONT STREET PLAN AND PROFILE
STA. 55+50 TO STA. 60+50

SUM - 59-493

56
171

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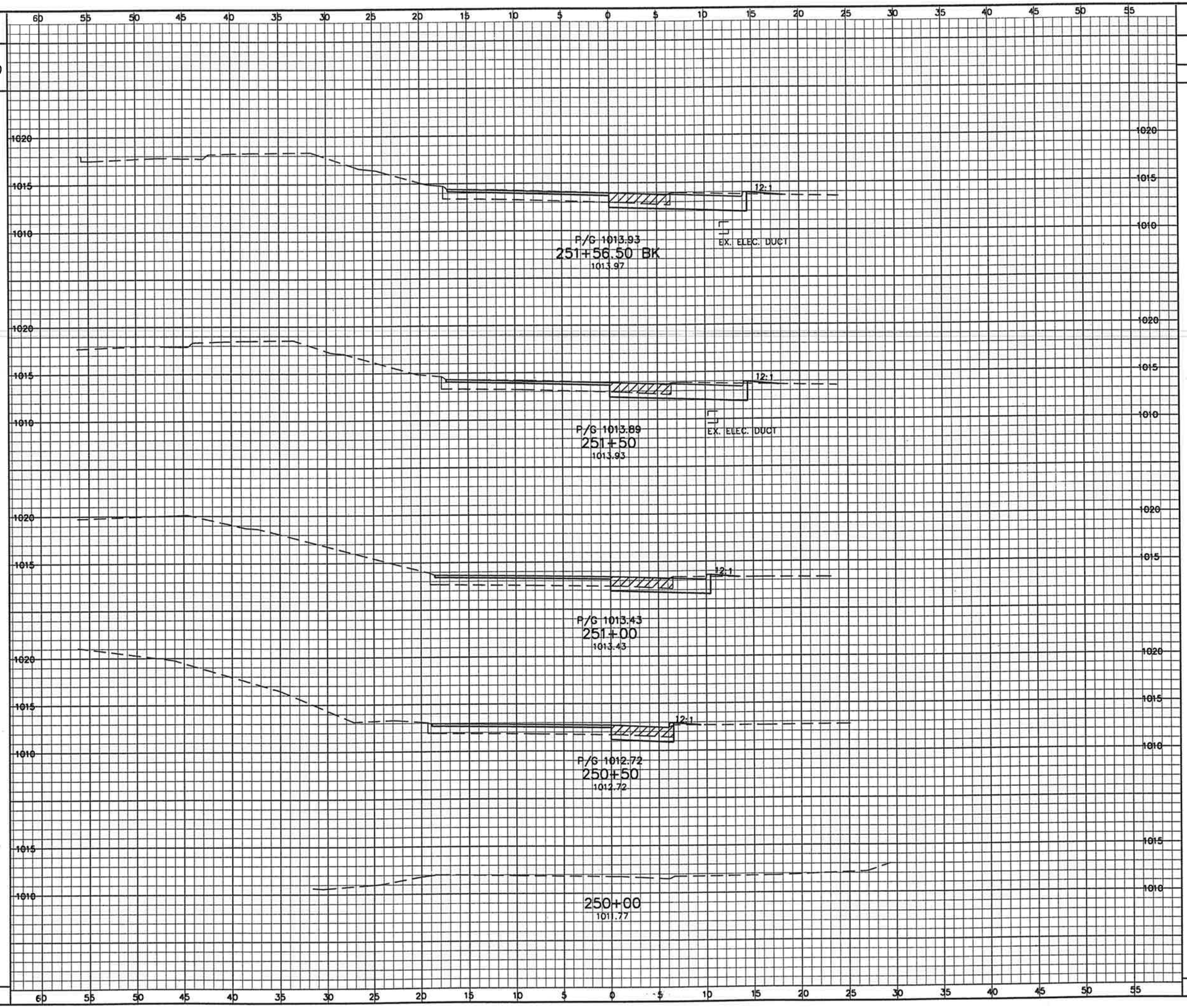
SEEDING	
END WIDTH (FEET)	AREA (SQUARE) (FEET)
6	4
5	28
5	19
2	
TOTAL	51



EARTHWORK			
END AREA (SQUARE FEET)		VOLUME (CUBIC YARDS)	
CUT	FILL	CUT	FILL
30	0		
		6	0
24	0		
		38	1
17	0		
		25	1
10	1		
TOTALS		69	2

CALCULATED DET
CHECKED IM

RAMP M CROSS SECTIONS
STA. 250+50 TO STA. 251+56.50

SUM - 59-493

57
171

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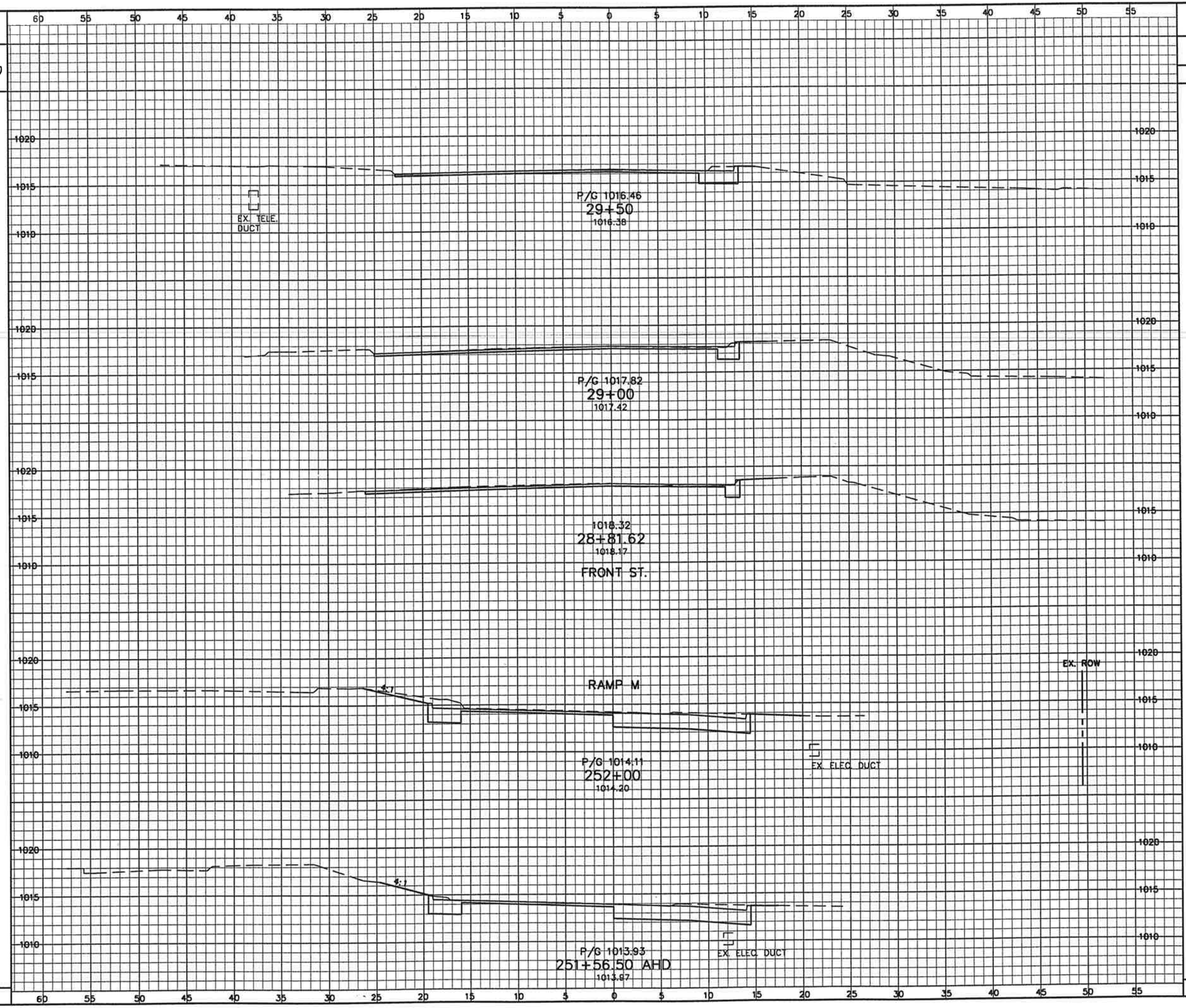
SEEDING	
END WIDTH (FEET)	AREA (SQUARE) (FEET)
6	28
6	12
6	18
18	77
14	
TOTAL	117



EARTHWORK			
END AREA (SQUARE FEET)		VOLUME (CUBIC YARDS)	
CUT	FILL	CUT	FILL
7	0		
		10	0
3	0		
		2	0
2	0		
35	0		
		53	0
31	0		
TOTALS		65	0

CALCULATED DET
CHECKED IM

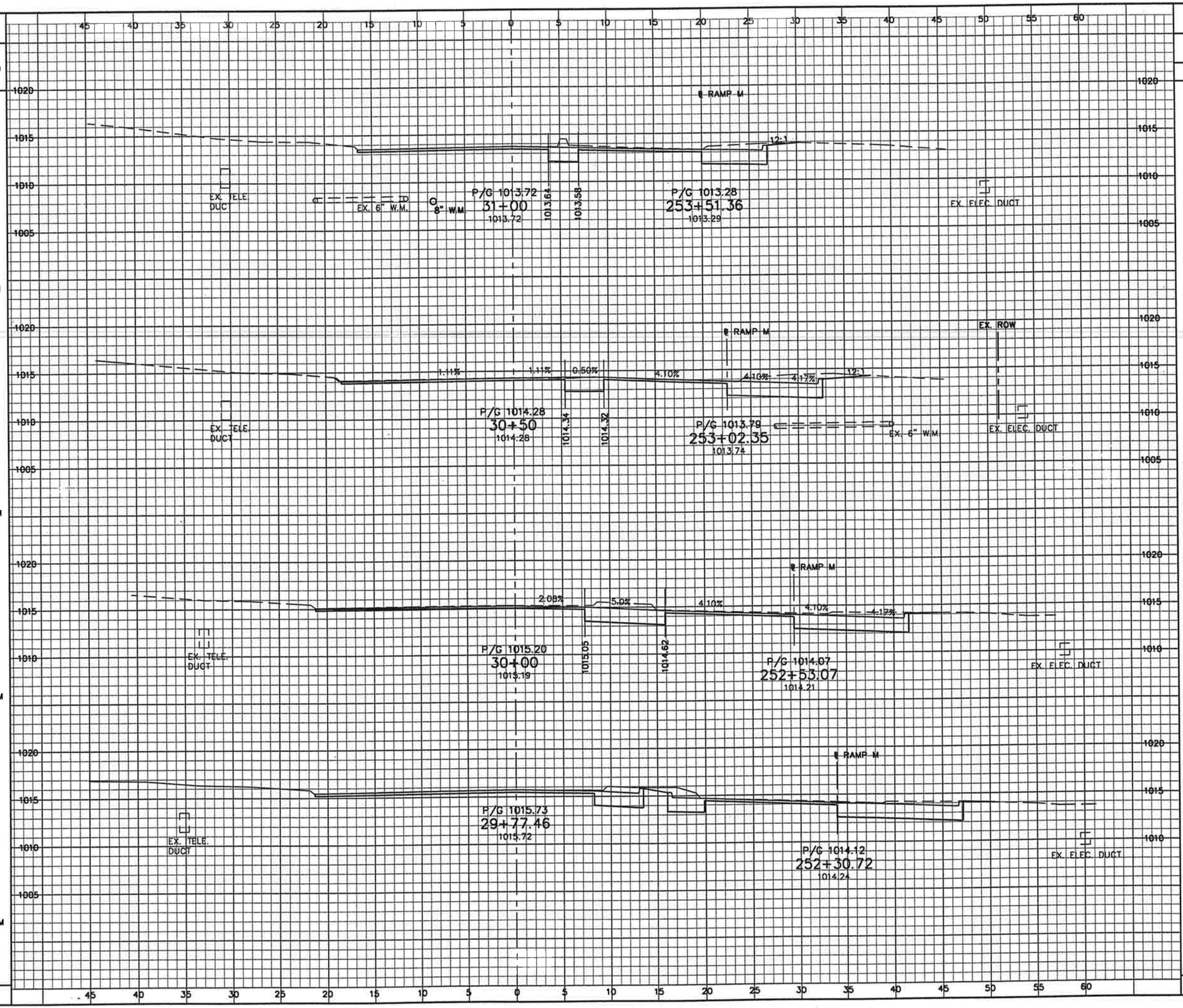
FRONT STREET CROSS SECTIONS
STA. 28+81.62 TO STA. 29+50

SUM - 59-493

58
171

SEEDING

END WIDTH (FEET)	AREA (SQUARE) (FEET)
+00 AH	
5	
+51.36	
5	
	RAMP M
	35
+02.35	
8	
	RAMP M
	38
+53.07	
6	
	RAMP M
	15
+77.46	
0	
+30.72	
6	
	FRONT
	6
	RAMP M
	41
TOTAL	135



EARTHWORK

END AREA (SQUARE FEET) CUT	END AREA (SQUARE FEET) FILL	VOLUME (CUBIC YARDS) CUT	VOLUME (CUBIC YARDS) FILL
20	0		
		45	0
29	0		
		64	0
40	0		
		25	0
+77.46 (AH.) 20	0		
+77.46 (BK.) 20	0		
+30.72 (BK.) 24	0		
		+77.46 (BK.) 14	0
		+30.72 (BK.) 33	0
TOTALS		181	0

CALCULATED DET
CHECKED IM

FRONT STREET CROSS SECTIONS
STA. 29+77.46 TO STA. 253+51.36

SUM - 59-493

59
171

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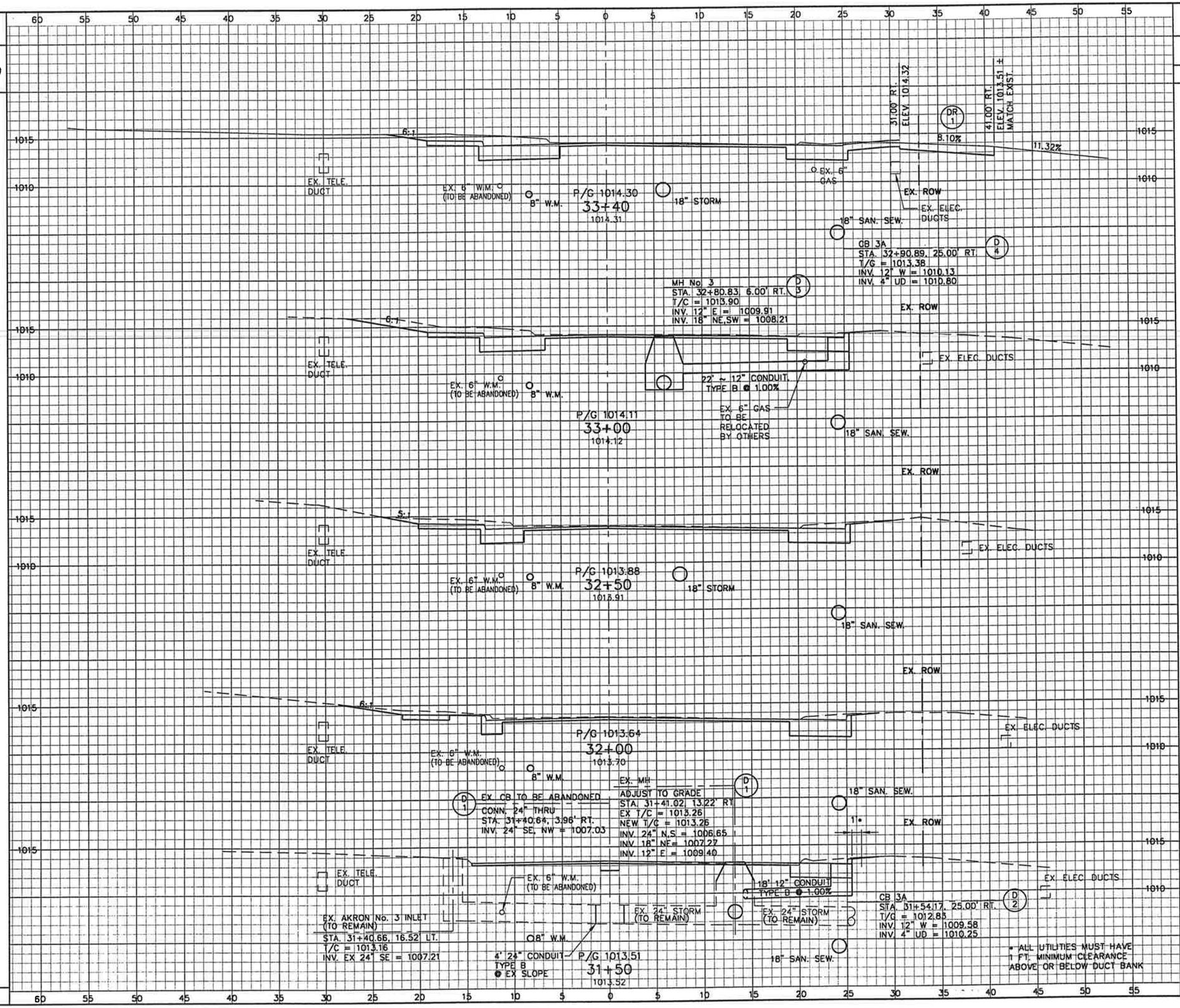
SEEDING

END WIDTH (FEET)	AREA (SQUARE) (FEET)
18	
	76 (-28)
16	
	81
13	
	92
20	
	69
5	
	28
TOTAL	270



EARTHWORK

END AREA (SQUARE FEET) CUT	END AREA (SQUARE FEET) FILL	VOLUME (CUBIC YARDS) CUT	VOLUME (CUBIC YARDS) FILL
50	0		
		66	0
39	0		
		64	0
30	0		
		51	0
25	0		
		34	0
12	0		
		30	0
TOTALS		245	0

CALCULATED DET
CHECKED IM

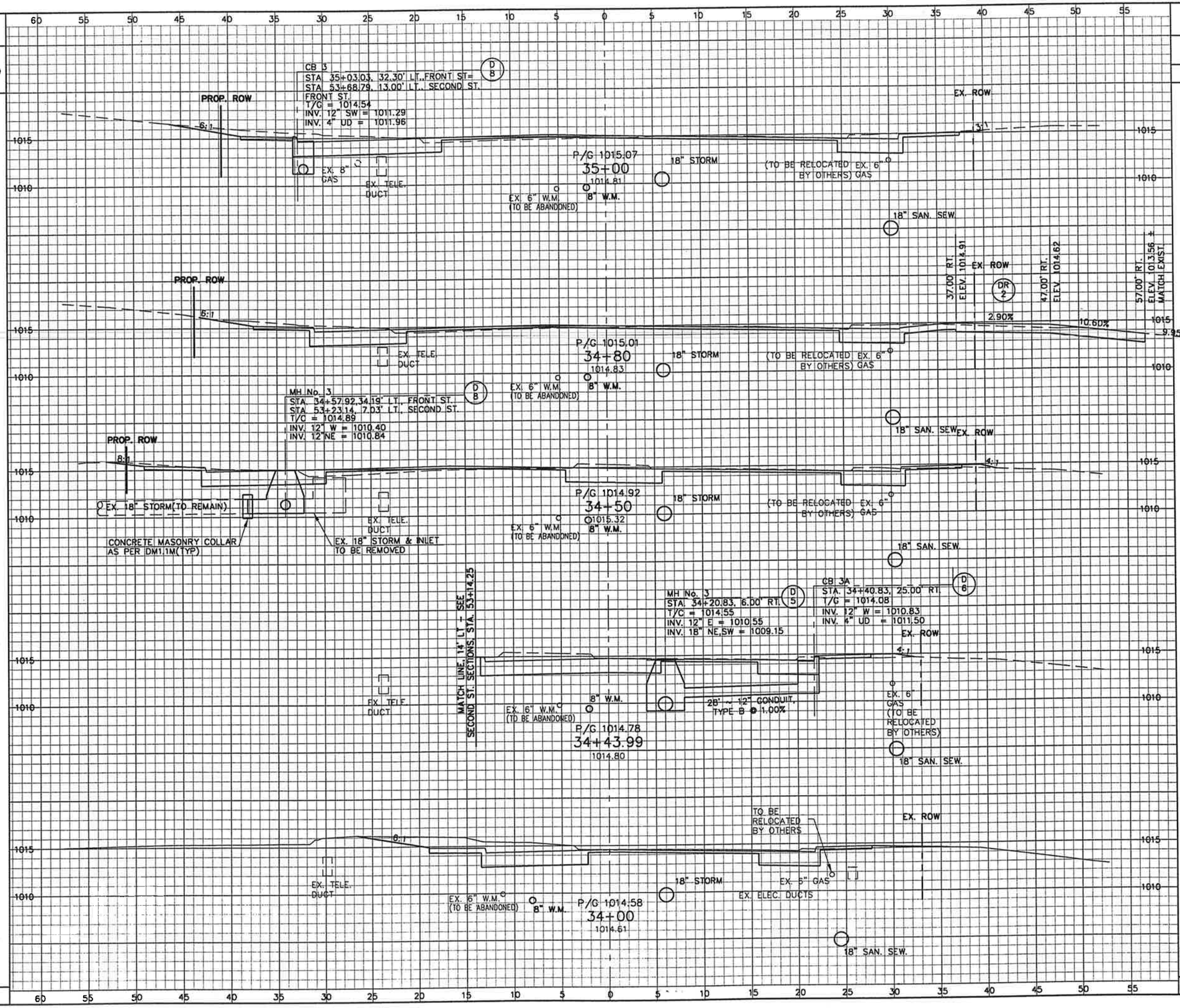
FRONT STREET CROSS SECTIONS STA. 31+50 TO STA. 33+40

SUM - 59-493

60
171

J:\Proj\7036100\ROADWAY\70361gxd.dwg User:bsh05728 Jan 14, 2003 - 9:12am

SEEDING	
END WIDTH (FEET)	AREA (SQUARE) (FEET)
14	43
12	62 (-45)
12	6
7	66
20	127
TOTAL	259



EARTHWORK			
END AREA (SQUARE FEET)		VOLUME (CUBIC YARDS)	
CUT	FILL	CUT	FILL
52	0		
		40	0
55	0		
		61	0
54	1		
		11	0
48	2		
		80	2
50	1		
		112	1
TOTALS		304	3

CALCULATED DET
CHECKED TM

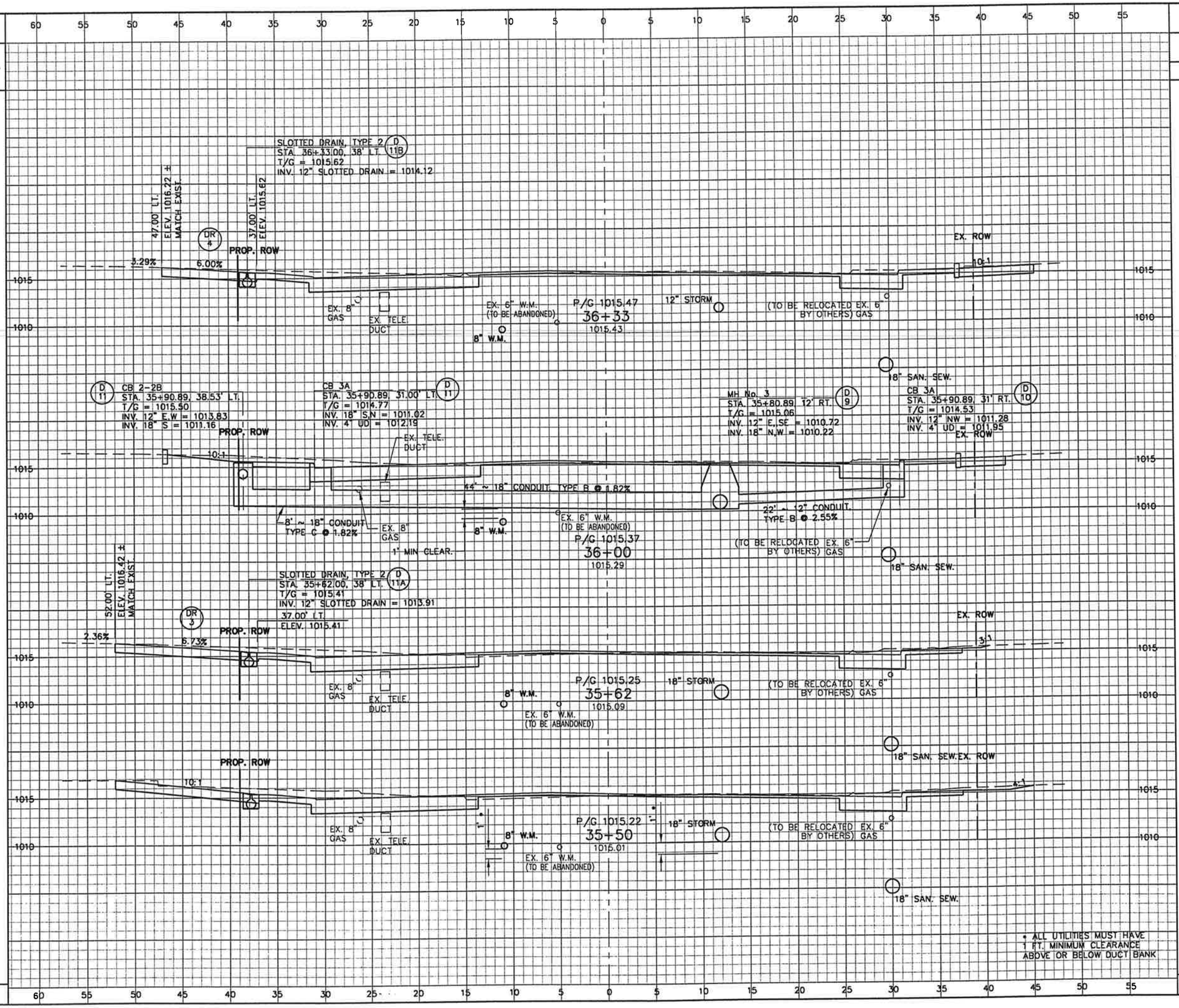
FRONT STREET CROSS SECTIONS
STA. 34+00 TO STA. 35+00

SUM - 59-493

61
171

J:\Proj\703610O\ROADWAY\703613xe.dwg User:bsh05728 Jan 14, 2003 - 9:17am

SEEDING	
END WIDTH (FEET)	AREA (SQUARE) (FEET)
	(-53)
13	
	46
12	
	74 (-75)
23	
	19
5	
	53
TOTAL	64



EARTHWORK			
END AREA (SQUARE FEET)		VOLUME (CUBIC YARDS)	
CUT	FILL	CUT	FILL
71	0		
62	0	81	0
73	0	95	0
75	0	33	0
		118	0
TOTALS		327	0

CALCULATED DET
CHECKED IM

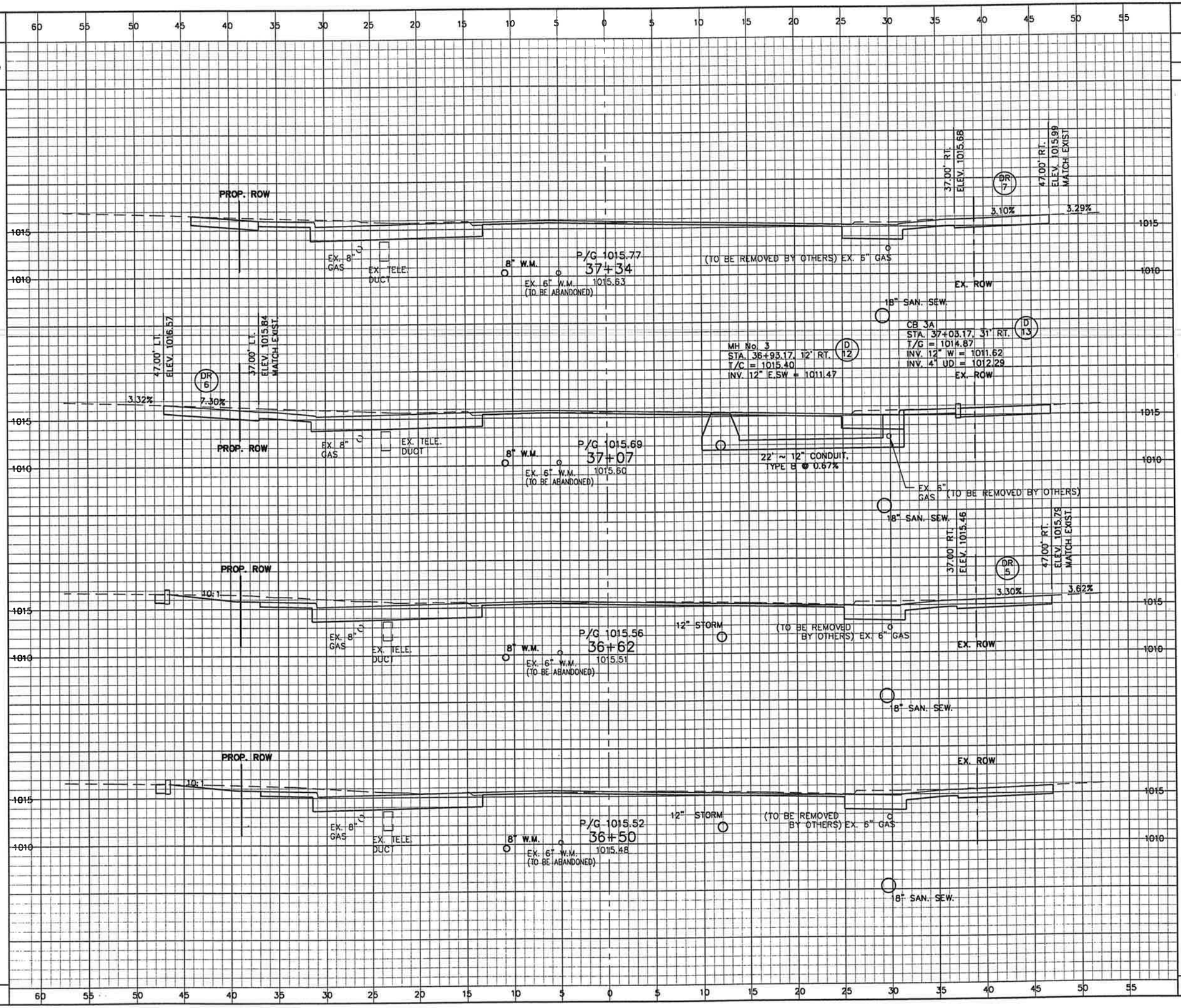
FRONT STREET CROSS SECTIONS
STA. 35+50 TO STA. 36+33

SUM - 59-4.93

62
171

J:\Proj\7036100\ROADWAY\70361gxf.dwg User:bsh05728 Jan 14, 2003 - 9:19am

SEEDING	
END WIDTH (FEET)	AREA (SQUARE) (FEET)
10	
	36
14	
	(-82) 65
12	
	16
12	
	24
TOTAL	59



EARTHWORK			
END AREA (SQUARE FEET)		VOLUME (CUBIC YARDS)	
CUT	FILL	CUT	FILL
69	0		
		71	0
74	0		
		120	0
70	0		
		31	0
68	0		
		44	0
TOTALS		266	0

CALCULATED DET
CHECKED IM

FRONT STREET CROSS SECTIONS 36+50 TO STA. 37+34

SUM - 59-493

63
171

J:\Proj1\7036100\ROADWAY\70361gxg.dwg User: bsh05728 Jan 14, 2003 - 9:20am

SEEDING	
END WIDTH (FEET)	AREA (SQUARE) (FEET)
0	
	11
10	
	17
0	
	0
0	
	9
TOTAL	37

EARTHWORK			
END AREA (SQUARE FEET)		VOLUME (CUBIC YARDS)	
CUT	FILL	CUT	FILL
70	11		
		54	9
76	14		
		94	8
92	0		
		145	0
65	0		
		40	0
TOTALS		333	17

CALCULATED DET
CHECKED IM

FRONT STREET CROSS SECTIONS STA. 37+50 TO STA. 38+50

SUM - 59-493

64
171

P/G 1016.12
38+50
1015.70
8" W.M.
EX. 6" W.M. TO BE ABANDONED
EX. 12" STORM
EX. TELE. DUCT
EX. 6" GAS
PROP 15" STM
ROW
6:1
EX. 3" GAS (TO BE RELOCATED BY OTHERS)
18" SAN. SEW.
EXISTING MH TO BE REMOVED STA. 38+37.05, 43.28' RT.
MH 3
STA. 9+54.64, 6.57' LT. BAILEY RD. = D 20
STA. 38+34.72, 34.00' LT. FRONT ST.
T/C = 1015.65
INV. 12" N = 1011.38
INV. 12" W = 1011.30
INV. 15" E = 1009.02
INV. 30" NW = 1009.83
INV. 30" SE = 1007.77
D 22 MH3
STA. 38+37.05, 43.28' RT.
T/C = 1015.25
INV.12" NE = 1111.39
INV.EX 30" N,SE = 1007.34
INV. 30" NW = 1007.34
EX. TELE. DUCT
EX. 12" STORM TO BE ABANDONED
EX. 30" STORM
EX. 12" W.M.
EX. 3" GAS
EX. 6" W.M.
77'± 30" CONDUIT TYPE B @ 0.56%
8" W.M.
P/G 1016.06
38+30.25
1015.65
18" SAN. SEW.
CONCRETE MASONRY COLLAR AS PER DM1.1M(TYP)
FOR CONTINUATION SEE BAILEY RD PLAN & PROFILE
EX. ROW
P/G 1015.97
38+00
1015.65
8" W.M.
EX. 6" W.M. (TO BE ABANDONED)
EX. 6" GAS
EX. 12" STORM
EX. 8" GAS
EX. TELE. DUCT
EX. 6" GAS (TO BE RELOCATED BY OTHERS)
18" SAN. SEW.
PROP. ROW
P/G 1015.82
37+50
1015.64
8" W.M.
EX. 6" W.M. (TO BE ABANDONED)
EX. 8" GAS
EX. TELE. DUCT
EX. 6" GAS (TO BE RELOCATED BY OTHERS)
18" SAN. SEW.
• ALL UTILITIES MUST HAVE 1 FT. MINIMUM CLEARANCE ABOVE OR BELOW DUCT BANK

J:\PROJ1\7036100\ROADWAY\7036IGXH.DWG User: jan81152 Oct 16, 2002 - 2:40pm

SEEDING	
END WIDTH (FEET)	AREA (SQUARE) (FEET)
12	
	13
0	
	0
0	
	0
0	
	0
TOTAL	13

EARTHWORK			
END AREA (SQUARE FEET)		VOLUME (CUBIC YARDS)	
CUT	FILL	CUT	FILL
58	3		
		47	1
75	0		
		89	0
80	0		
		154	1
86	1		
		145	11
TOTALS		435	13

CALCULATED DET
CHECKED IM

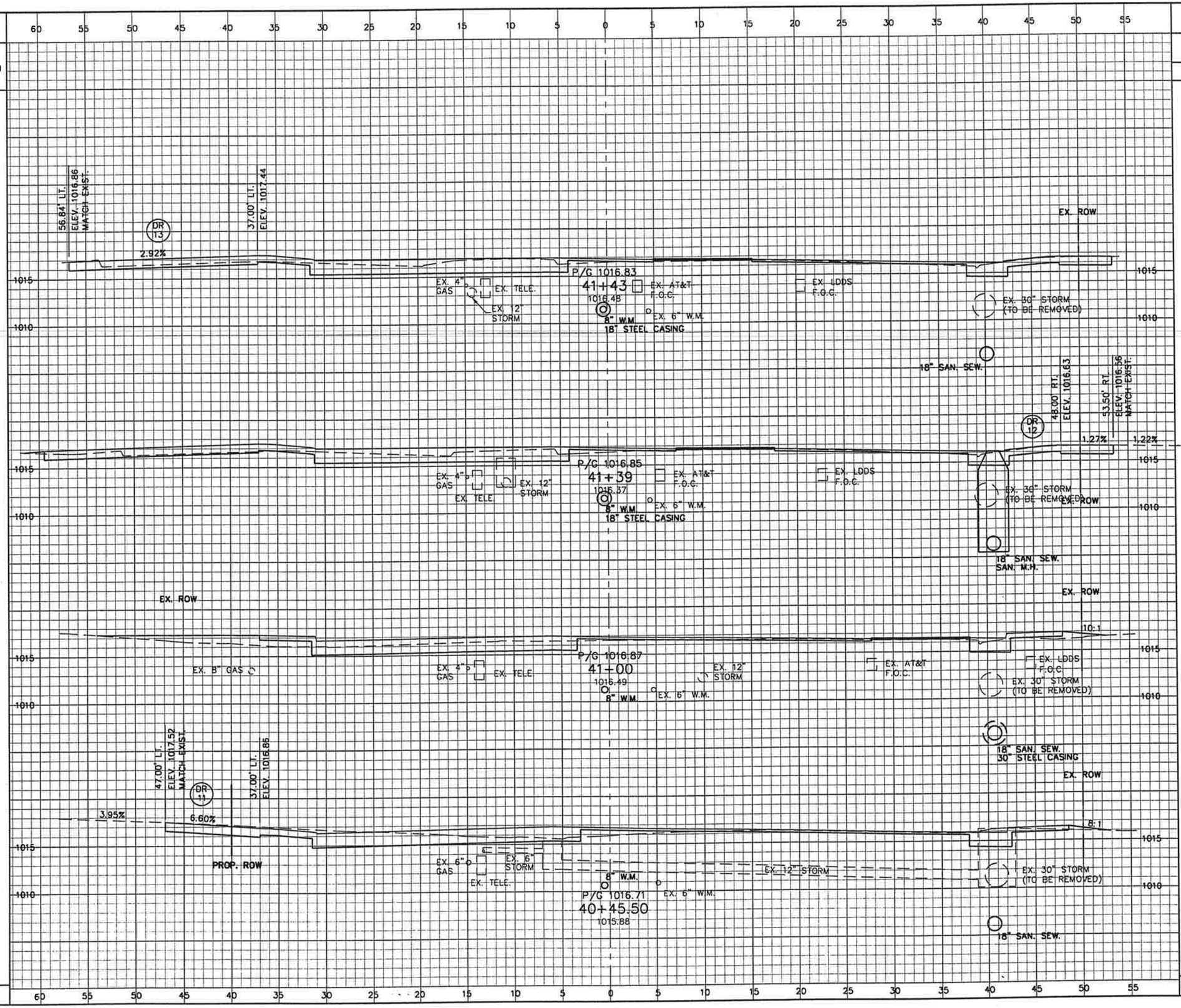
FRONT STREET CROSS SECTIONS
STA. 39+00 TO STA. 40+00

SUM - 59-493

65
171

J:\Proj\703610O\ROADWAY\70361gxi.dwg User:bsh0572B Jan 14, 2003 - 9:23am

SEEDING	
END WIDTH (FEET)	AREA (SQUARE) (FEET)
0	
	0
0	
	35
16	
	65
6	
	47
TOTAL	147



EARTHWORK			
END AREA (SQUARE FEET)		VOLUME (CUBIC YARDS)	
CUT	FILL	CUT	FILL
54	0		
		8	0
49	0		
		58	8
32	11		
		85	12
53	1		
		93	3
TOTALS		244	23

CALCULATED DET
CHECKED IM

FRONT STREET CROSS SECTIONS
STA. 40+45.50 TO STA. 41+43

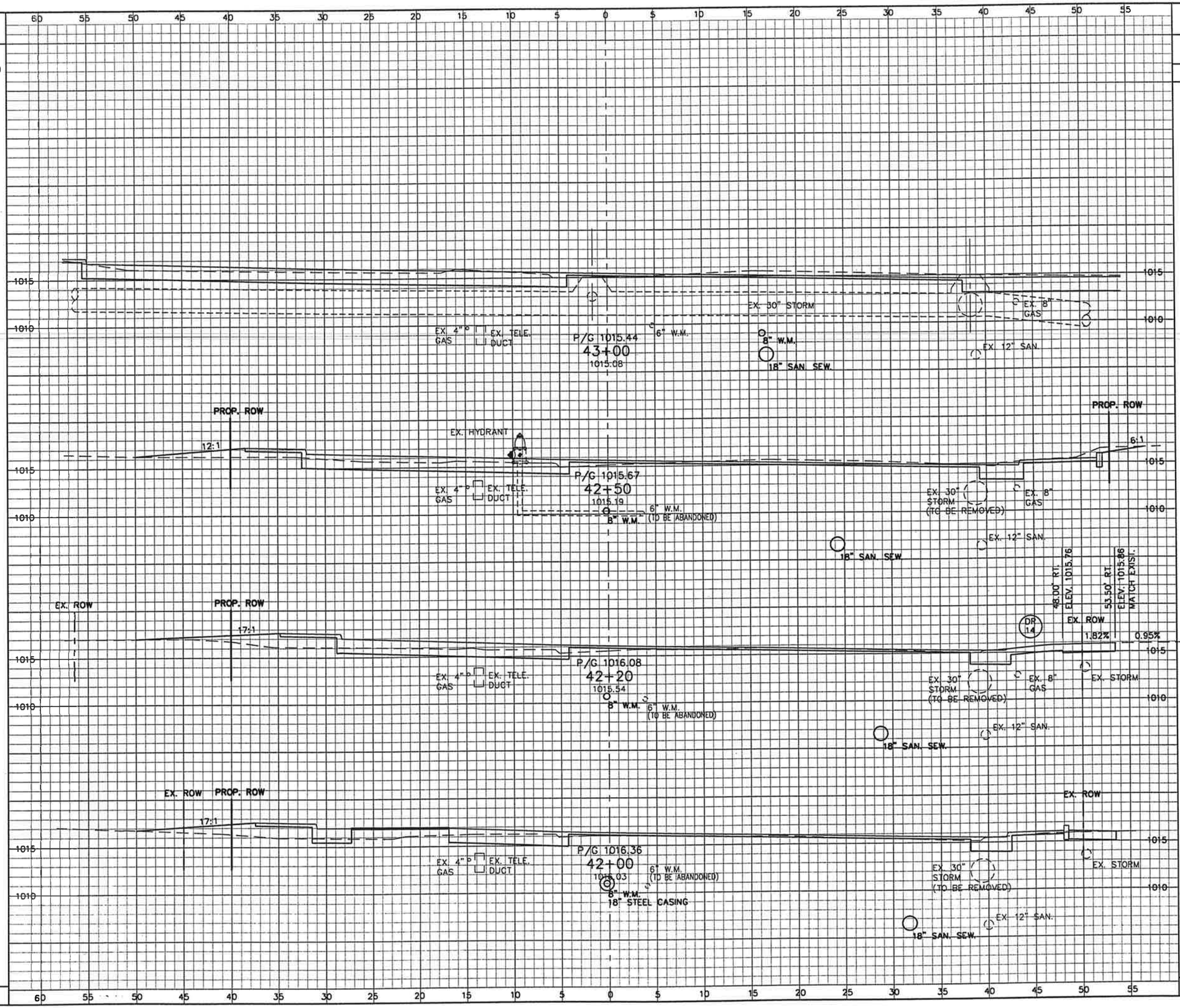
SUM - 59-493

66
171

J:\Proj\7036100\ROADWAY\70361gxj.dwg User:bsh05728 Jan 14, 2003 - 9:24am

SEEDING

END WIDTH (FEET)	AREA (SQUARE) (FEET)
0	
	61
22	
	65
17	
	37
16	
	51
TOTAL	214



EARTHWORK

END AREA (SQUARE FEET) CUT	END AREA (SQUARE FEET) FILL	VOLUME (CUBIC YARDS) CUT	VOLUME (CUBIC YARDS) FILL
91	0		
41	9	122	8
34	15	42	14
25	16	22	12
		84	17
TOTALS		270	51

CALCULATED DET
CHECKED IM

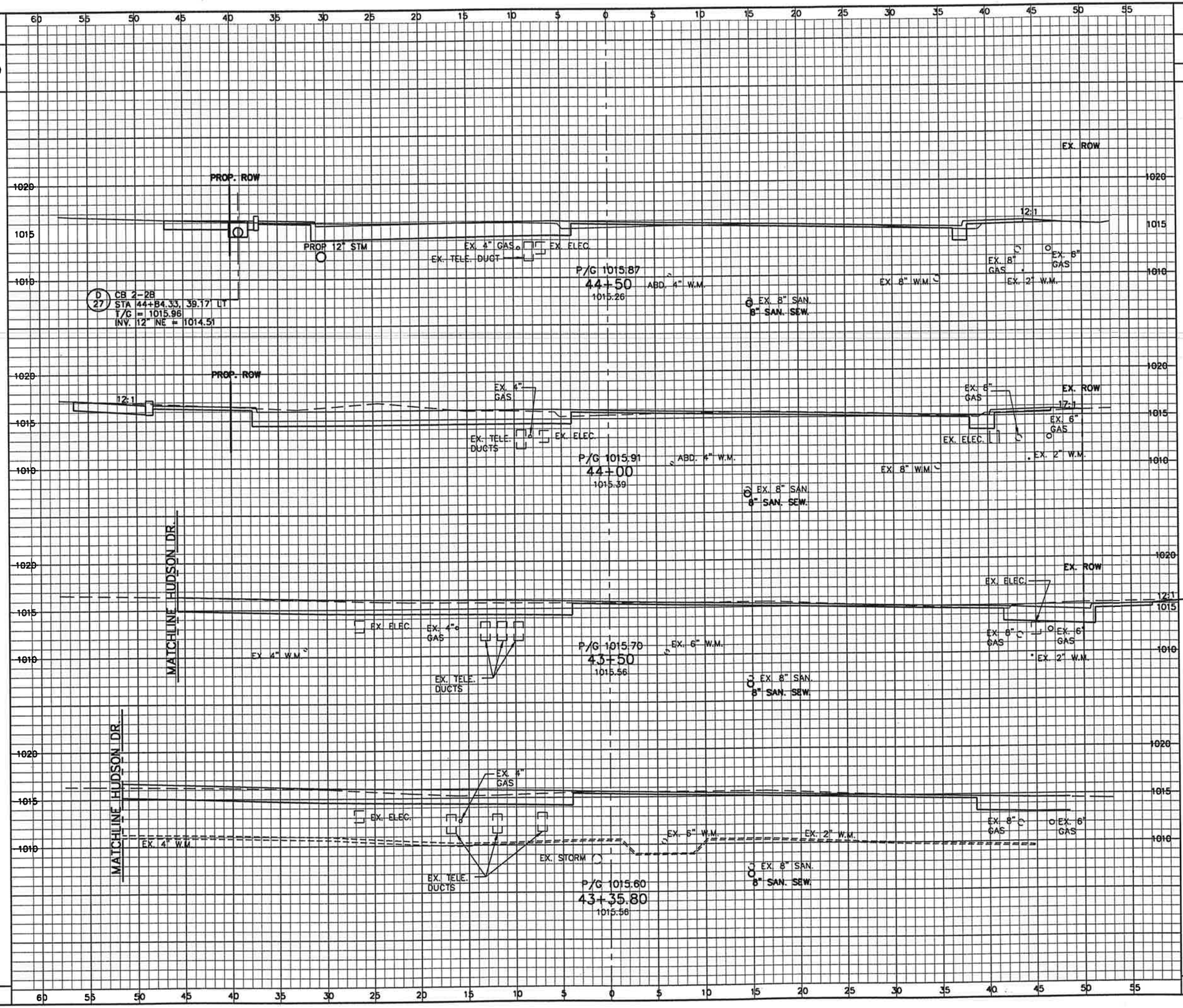
FRONT STREET CROSS SECTIONS
STA. 42+00 TO STA. 43+00

SUM - 59-4.93

67
171

J:\Proj\7036100\ROADWAY\70361gxk.dwg User: bsh05728 Jan 14, 2003 - 9:28am

SEEDING	
END WIDTH (FEET)	AREA (SQUARE) (FEET)
5	28
5	28
5	4
0	0
TOTAL	60



EARTHWORK			
END AREA (SQUARE FEET)		VOLUME (CUBIC YARDS)	
CUT	FILL	CUT	FILL
50	2		
		115	1
74	0		
		141	0
78	0		
		39	0
70	0		
		107	0
TOTALS		402	1

CALCULATED DET
CHECKED TM

FRONT STREET CROSS SECTIONS
STA. 43+35.80 TO STA. 44+50

SUM - 59-493

68
171

J:\PROJ\7036100\ROADWAY\70361GXL.DWG User: jon81152 Oct 16, 2002 - 2:40pm

SEEDING	
END WIDTH (FEET)	AREA (SQUARE) (FEET)
11	
	15
6	
	13
6	
	40
8	
	35
TOTAL	103

EARTHWORK			
END AREA (SQUARE FEET)		VOLUME (CUBIC YARDS)	
CUT	FILL	CUT	FILL
100	0		
93	5	58	1
85	5	66	3
59	5	138	9
		96	6
TOTALS		358	19

CALCULATED DET
CHECKED IM

PROP. ROW
PROP 12" STM
EX. 4" GAS
EX. TELE. DUCT
P/G 1015.42
45+86.34
1014.84
ABD. 4" W.M.
EX. 8" SAN.
8" SAN. SEW.
EX. 8" W.M.
37.00' RT.
ELEV. 1015.33
DR 17
47.00' RT.
ELEV. 1015.05
EX. ROW
2.80%
0.87%
EX. 8" GAS
EX. 6" GAS
EX. 2" W.M.
10:1
62.00' RT.
ELEV. 1017.61
MATCH EXIST.
DR 16
37.00' RT.
ELEV. 1015.63
5.20%
7.92%
P/G 1015.47
45+70
1014.91
CB 2-2B
STA 45+11.67, 39.17' LT
T/G = 1015.75
INV. 12" SW = 1014.38
INV. 12" NE = 1012.38
CB 6
STA 45+48.09, 38.25' LT
T/G = 1015.75
INV. 12" SW,NE = 1011.92
D 28
D 29
P/G 1015.54
45+50
1014.88
47.00' RT.
ELEV. 1016.21
MATCH EXIST.
37.00' RT.
ELEV. 1015.86
DR 15
2.51%
3.50%
12:1
D 27
SLOTTED DRAIN
STA 44+98, 39.17' LT
T/SLOT = 1015.80
INV. 12" NE = 1014.45
EX. ELEC.
P/G 1015.71
44+98
1015.06
8" SAN. SEW.
EX. 8" SAN.

FRONT STREET CROSS SECTIONS
STA. 44+98 TO STA. 45+86.34

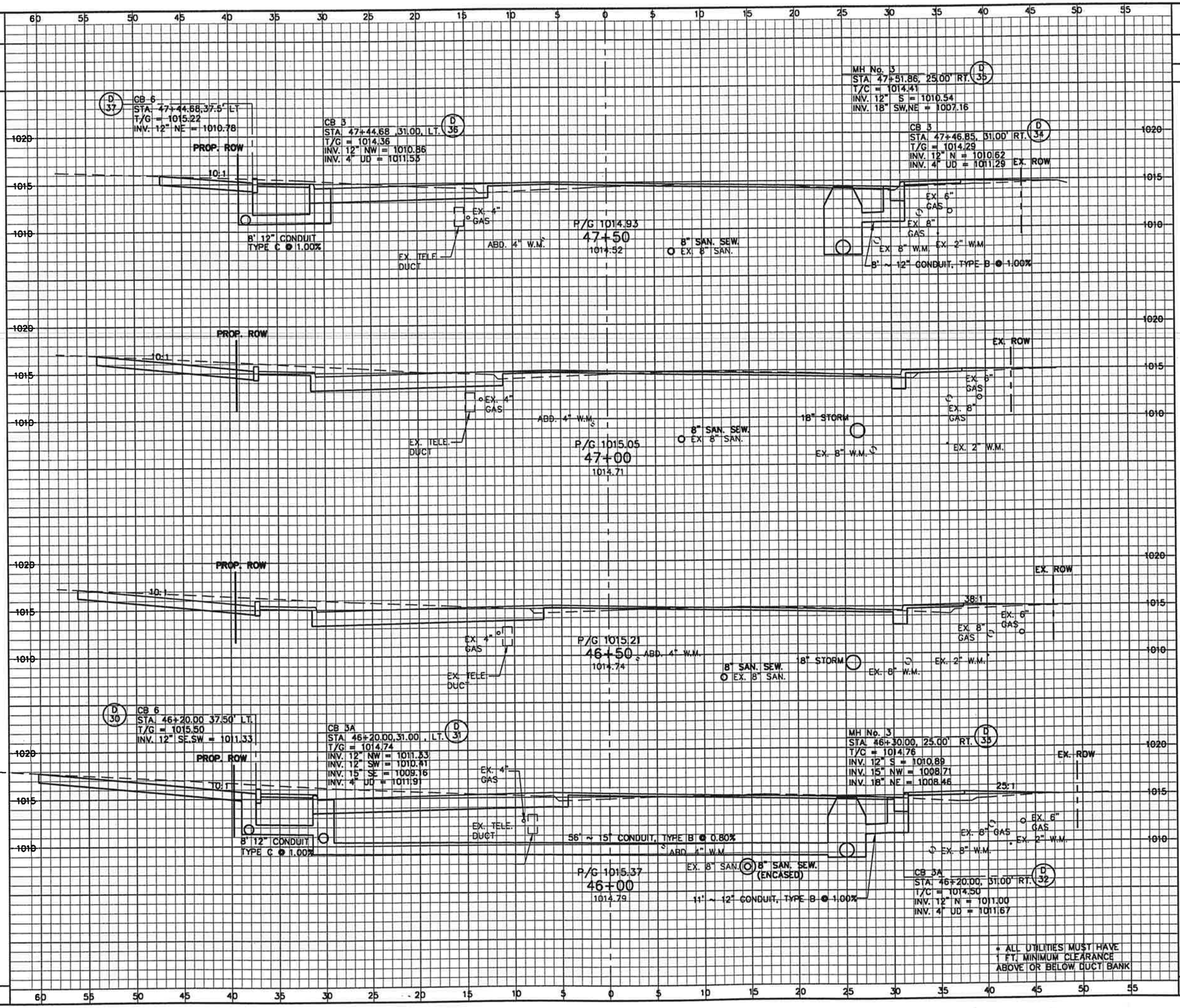
SUM - 59-493

69
171

J:\Proj\7036100\ROADWAY\70361gxm.dwg User: bsh05728 Jan 14, 2003 - 9:30am

SEEDING

END WIDTH (FEET)	AREA (SQUARE) (FEET)
13	72
13	72
13	72
13	72
13	18
TOTAL	234



EARTHWORK

END AREA (SQUARE FEET) CUT	END AREA (SQUARE FEET) FILL	VOLUME (CUBIC YARDS) CUT	VOLUME (CUBIC YARDS) FILL
46	3	105	4
67	2	135	6
79	5	157	11
90	7	48	2
TOTALS		445	23

CALCULATED DET
CHECKED IM

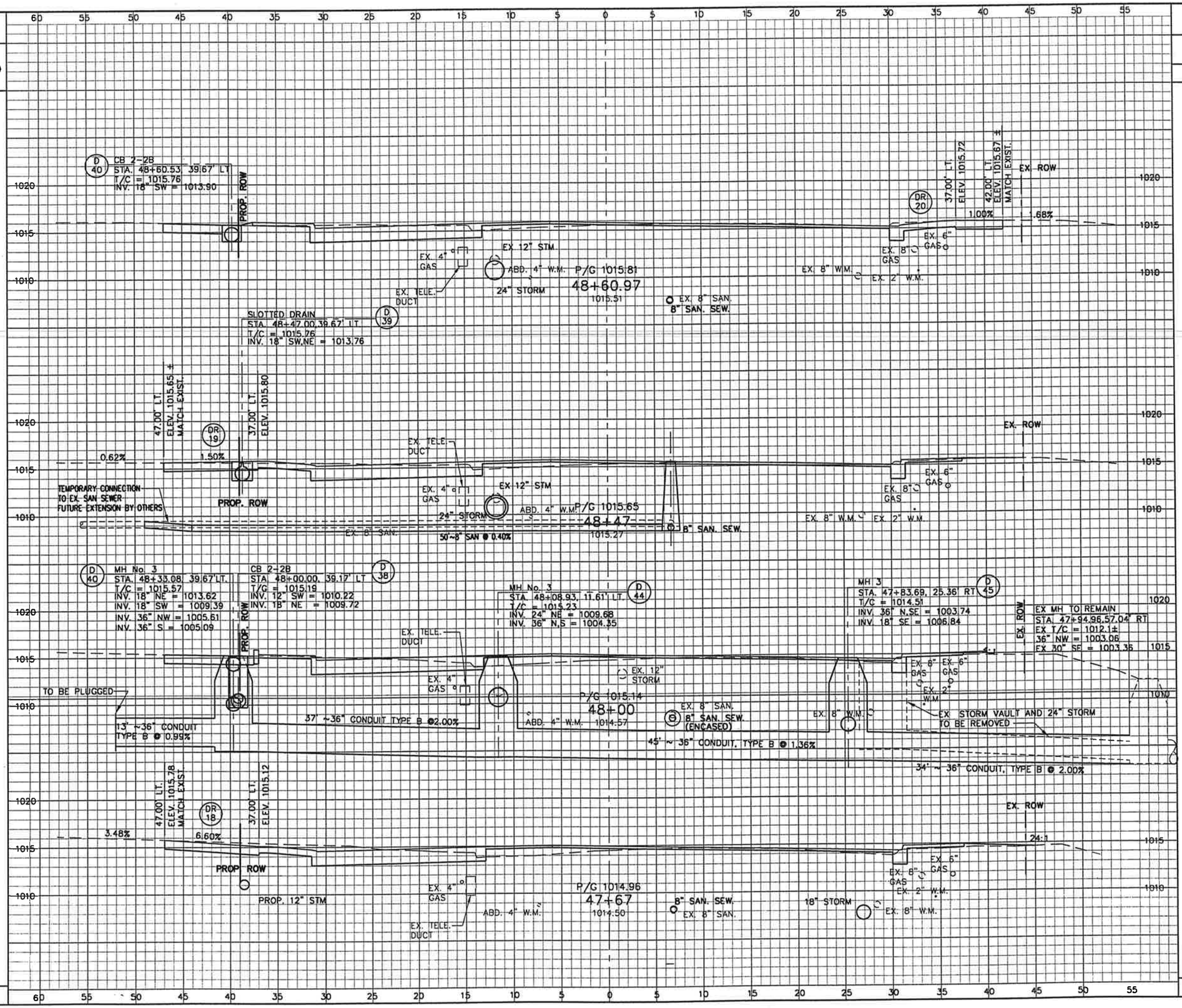
FRONT STREET CROSS SECTIONS
STA. 46+00 TO STA. 47+50

SUM - 59-493

70
171

J:\PROJ\7036100\ROADWAY\70361GXN.DWG User: jan81152 Oct 16, 2002 - 2:40pm

SEEDING	
END WIDTH (FEET)	AREA (SQUARE) (FEET)
0	
	6
8	
	34
5	
	29
11	
	23
TOTAL	92



EARTHWORK			
END AREA (SQUARE FEET)		VOLUME (CUBIC YARDS)	
CUT	FILL	CUT	FILL
46	0		
		22	0
41	0		
		67	1
36	1		
		50	2
46	2		
		29	2
TOTALS		168	5

CALCULATED DET
CHECKED IM

FRONT STREET CROSS SECTIONS
STA. 47+67 TO STA. 48+60.97

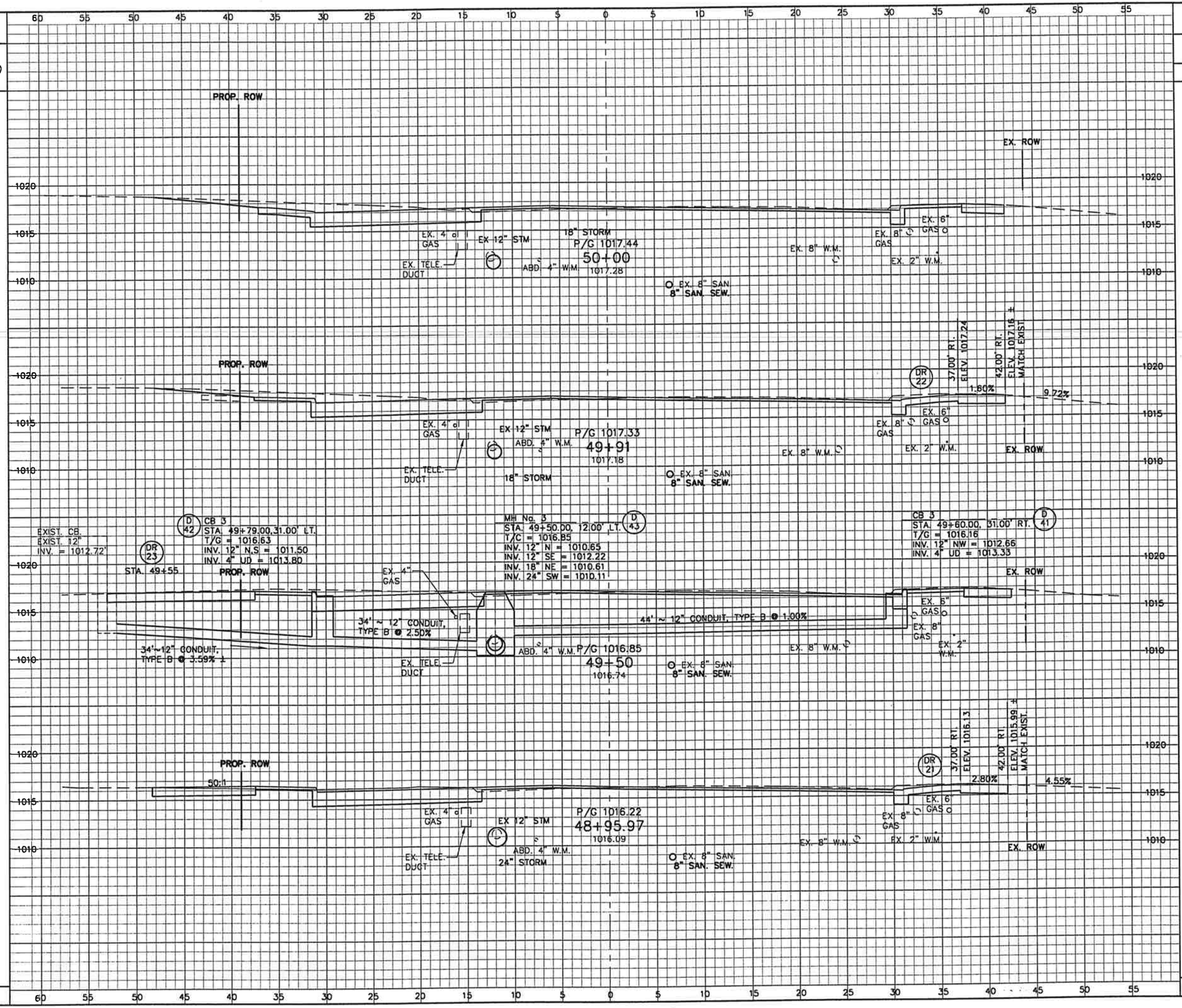
SUM - 59-493

71
171

J:\Proj\703610O\ROADWAY\703610xo.dwg User:bsh05728 Jan 14, 2003 - 9:33am

SEEDING

END WIDTH (FEET)	AREA (SQUARE) (FEET)
0	0
0	0
0	0
0	0
0	0
TOTAL	0



EARTHWORK

END AREA (SQUARE FEET) CUT	END AREA (SQUARE FEET) FILL	VOLUME (CUBIC YARDS) CUT	VOLUME (CUBIC YARDS) FILL
76	0		
		26	0
80	0		
		106	0
59	0		
		111	0
52	0		
		63	0
TOTALS		306	0

CALCULATED DET
CHECKED IM

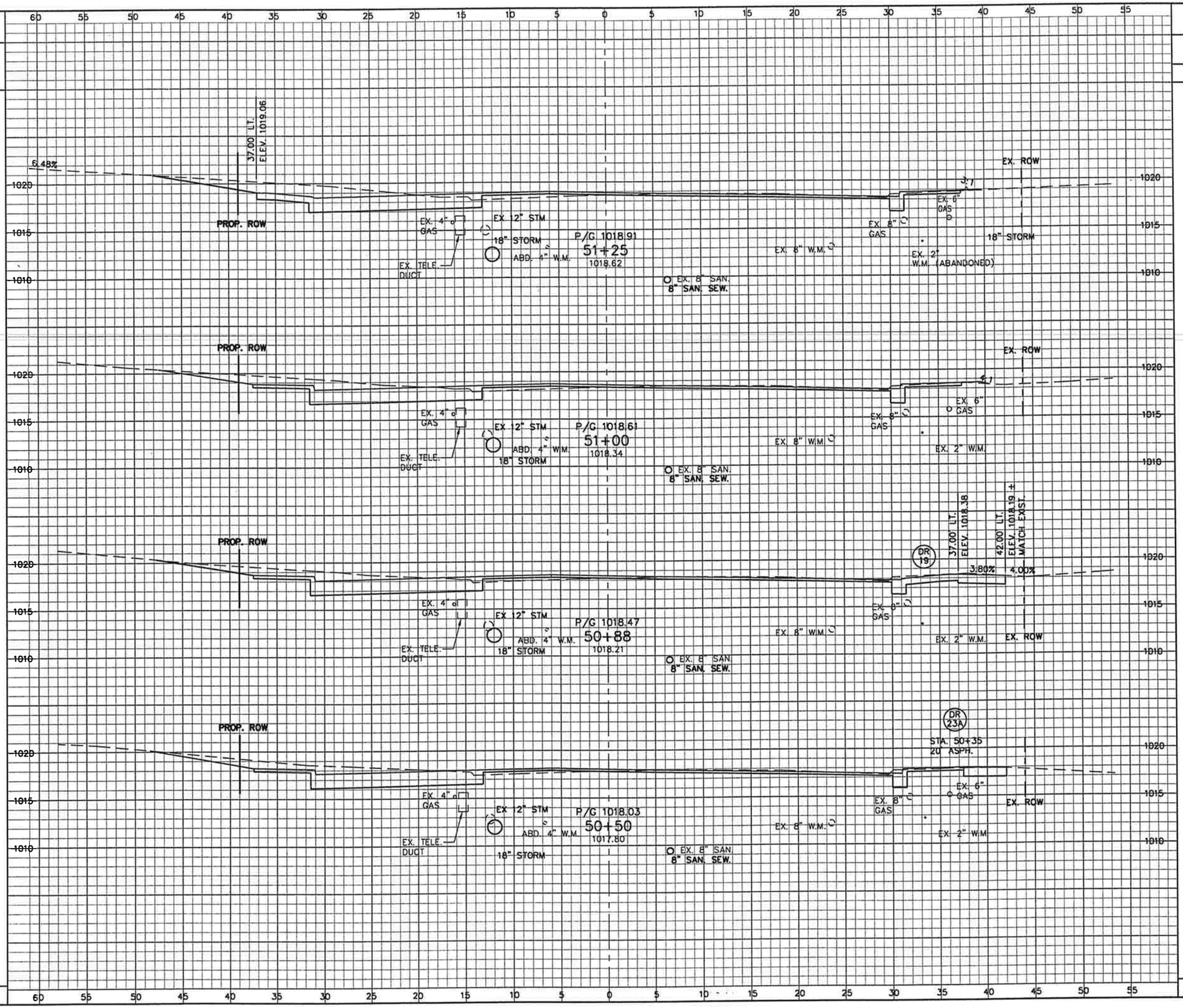
FRONT STREET CROSS SECTIONS STA. 48+95.97 TO STA. 50+00

SUM - 59-493

72
171

J:\Proj\7036100\ROADWAY\70361gxp.dwg User:bsh05728 Jan 14, 2003 - 1:44pm

SEEDING	
END WIDTH (FEET)	AREA (SQUARE) (FEET)
5	8
5	8
7	25
5	14
TOTAL	55



EARTHWORK			
END AREA (SQUARE FEET)		VOLUME (CUBIC YARDS)	
CUT	FILL	CUT	FILL
78	0		
		63	0
58	0		
		27	0
64	0		
		86	0
58	0		
		124	0
TOTALS		300	0

CALCULATED | CHECKED

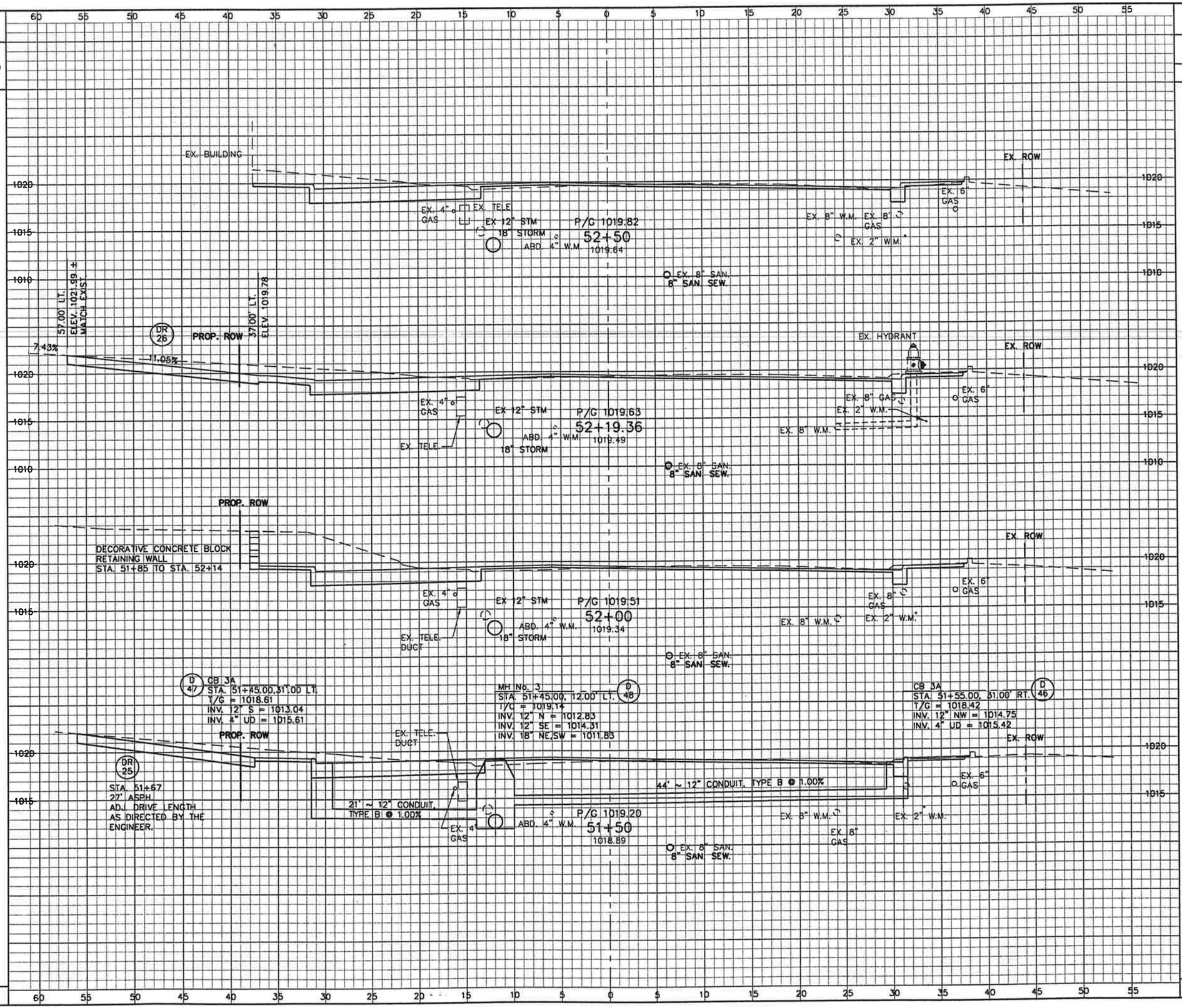
FRONT STREET CROSS SECTIONS
STA. 50+50 TO STA. 51+25

SUM - 59-493

73
171

J:\Proj\7036100\ROADWAY\70361gxq.dwg User: bsh05728 Jan 14, 2003 - 1:51pm

SEEDING	
END WIDTH (FEET)	AREA (SQUARE) (FEET)
0	
	0
0	
	0
0	
	14
TOTAL	14



EARTHWORK			
END AREA (SQUARE FEET)		VOLUME (CUBIC YARDS)	
CUT	FILL	CUT	FILL
50	0		
		73	0
80	0		
		56	0
77	0		
		125	0
58	0		
		63	0
TOTALS		317	0

CALCULATED DET
CHECKED IM

FRONT STREET CROSS SECTIONS STA. 51+50 TO STA. 52+50

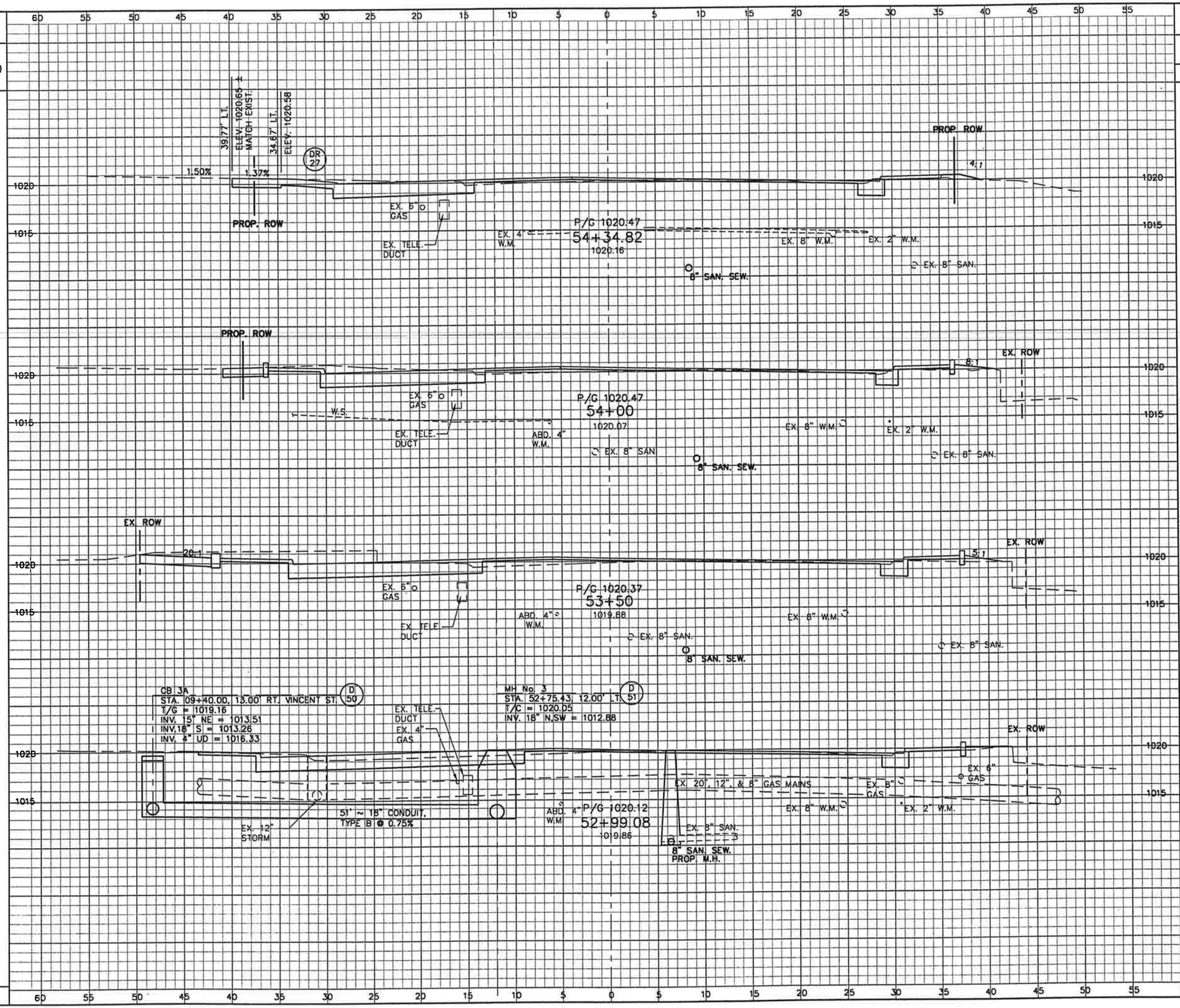
SUM - 59-493

74
171

J:\Proj1\7036100\ROADWAY\70361gxr.dwg User: jan81152 Jan 15, 2003 - 8:22am

SEEDING

END WIDTH (FEET)	AREA (SQUARE) (FEET)
7	27
7	36
6	45
10	27
TOTAL	135



EARTHWORK

END AREA (SQUARE FEET) CUT	END AREA (SQUARE FEET) FILL	VOLUME (CUBIC YARDS) CUT	VOLUME (CUBIC YARDS) FILL
36	1	49	2
40	2	96	4
63	2	95	3
37	1	79	1
TOTALS		319	10

CALCULATED DET
CHECKED IM

FRONT STREET CROSS SECTIONS
STA. 52+99.08 TO STA. 54+34.82

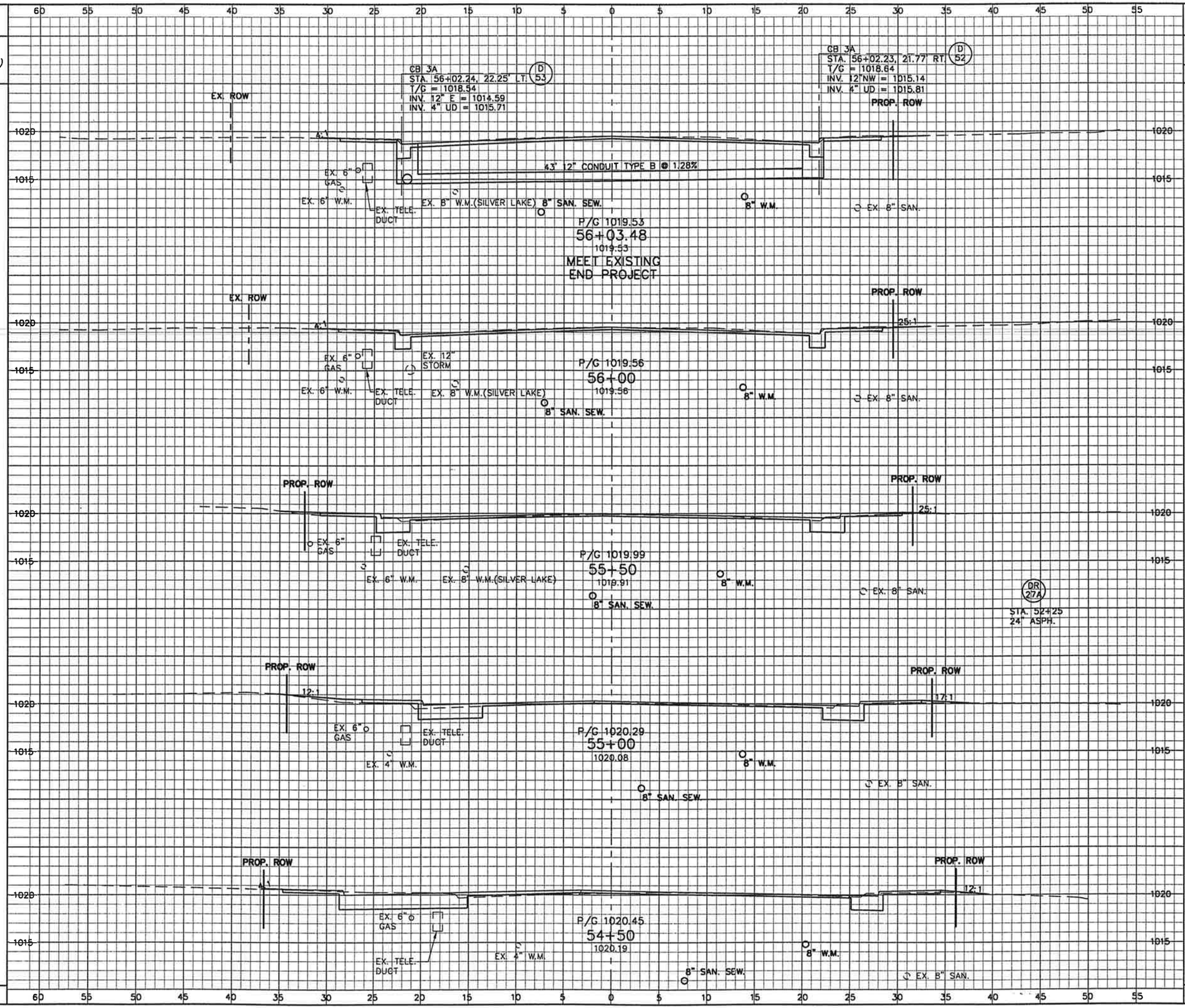
SUM - 59-493

75
171

J:\Proj1\7036100\ROADWAY\70361gxs.dwg User: bsh05728 Jan 14, 2003 - 12:45pm

SEEDING

END WIDTH (FEET)	AREA (SQUARE) (FEET)
10	4
10	67
14	86
17	81
12	16
TOTAL	254



EARTHWORK

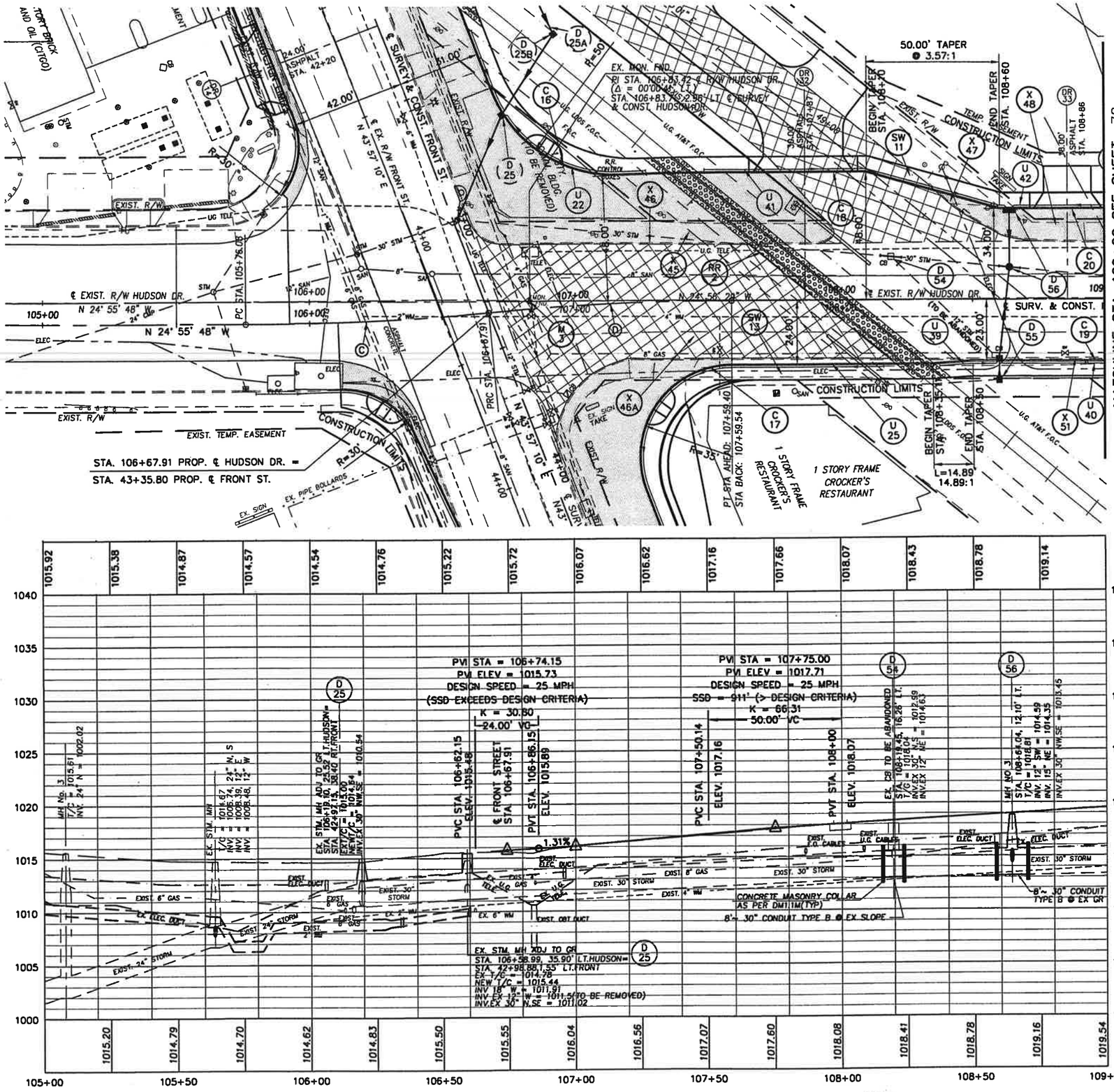
END AREA (SQUARE FEET) CUT	END AREA (SQUARE FEET) FILL	VOLUME (CUBIC YARDS) CUT	VOLUME (CUBIC YARDS) FILL
7	0		
		1	0
10	0		
		19	1
11	1		
		25	4
16	3		
		42	4
30	1		
		19	1
TOTALS		106	10

CALCULATED DET
CHECKED IM

FRONT STREET CROSS SECTIONS
STA. 54+50 TO STA. 56+03.48

SUM - 59-493

76
171



⑧
℄ SURVEY & CONSTRUCTION HUDSON DR.
P.I. STA. 106+22.03
Δ = 05° 15' 42"
R = 1000.00'
D_c = 05° 43' 46"
T = 45.95'
L = 91.83'
Ch. = 91.80
e_f = N.C.

⑨
℄ SURVEY & CONSTRUCTION HUDSON DR.
P.I. STA. 107+13.76
Δ = 05° 15' 00"
R = 1000.00'
D_c = 05° 43' 46"
T = 45.85'
L = 91.63'
Ch. = 91.60'
e_f = N.C.

FOR FRONT STREET PLAN & PROFILE SEE SHEETS 50 THROUGH 56.

FOR BALLOON REFERENCE SYMBOLS, SEE SHEET 50

FOR SANITARY SEWER AND WATERLINE PLANS SEE SHEETS 100 – 114

FOR ROADWAY QUANTITIES SEE SHEETS 37 – 39

FOR DRAINAGE QUANTITIES SEE SHEETS 40 – 45

FOR INTERSECTION DETAIL SEE SHEETS 94

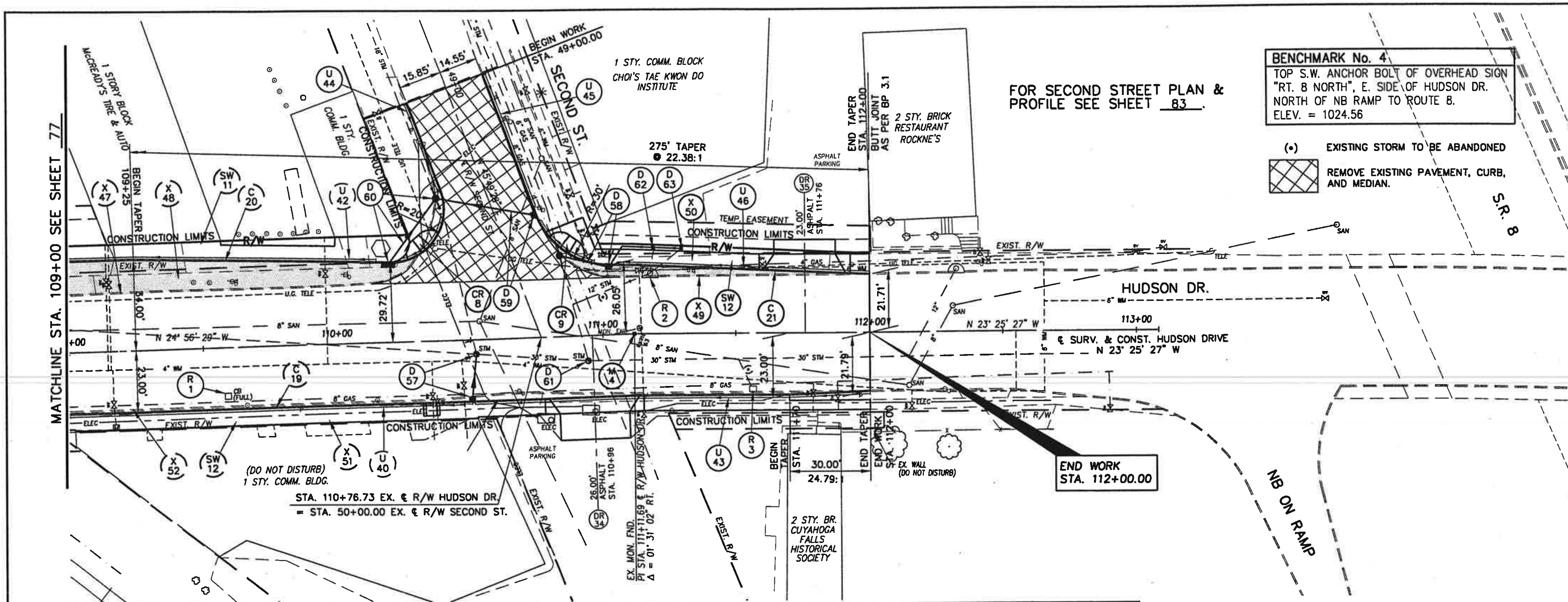
PIPE PROFILES	
REF.	PAGE
D-55	79
D-56	79

SCALE (IN FEET) 1 inch = 20 ft.
CALCULATED SCW
CHECKED

HUDSON DRIVE PLAN AND PROFILE STA. 110+00 TO STA. 115+00

SUM - 59-493

HUDSON DRIVE PLAN AND PROFILE
STA. 110+00 TO STA. 113+00



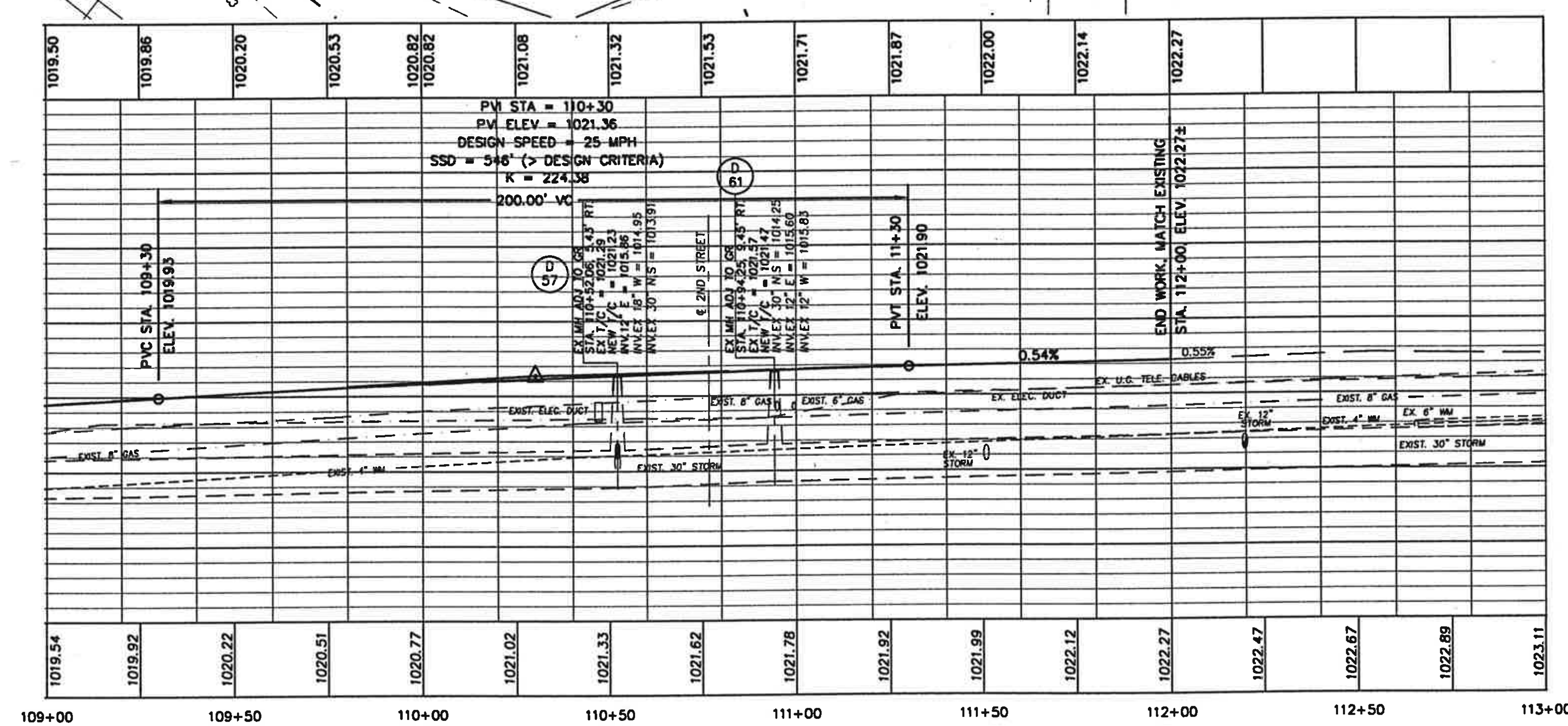
MATCHLINE STA. 109+00 SEE SHEET 77
BEGIN WORK STA. 49+00.00
1 STY. COMM. BLOCK CHOI'S TAE KWON DO INSTITUTE
1 STORY BLOCK McCREADY'S TIRE & AUTO
1 STY. COMM. BLDG
SECOND ST.
275' TAPER @ 22.38:1
2 STY. BRICK RESTAURANT ROCKNE'S
END TAPER STA. 112+00
BUTT JOINT AS PER BP 3.1
ASPHALT PARKING
TEMP. EASEMENT
CONSTRUCTION LIMITS
EXIST. R/W
HUDSON DR.
N 24° 56' 29" W
N 23° 25' 27" W
℄ SURV. & CONST. HUDSON DRIVE N 23° 25' 27" W
BEGIN TAPER 109+25
110+00
111+00
112+00
113+00
END WORK STA. 112+00.00
(DO NOT DISTURB) 1 STY. COMM. BLDG.
STA. 110+76.73 EX. ℄ R/W HUDSON DR.
= STA. 50+00.00 EX. ℄ R/W SECOND ST.
EX. MON. FND. PI STA. 111+11.69 ℄ R/W HUDSON DR. Δ = 01° 31' 02" RT.
BEGIN TAPER STA. 111+70
30.00'
24.79:1
2 STY. BR. CUYAHOGA FALLS HISTORICAL SOCIETY
EX. WALL (DO NOT DISTURB)
NB ON RAMP
S.R. 8

FOR SECOND STREET PLAN & PROFILE SEE SHEET 83.

BENCHMARK No. 4
TOP S.W. ANCHOR BOLT OF OVERHEAD SIGN "RT. 8 NORTH", E. SIDE OF HUDSON DR. NORTH OF NB RAMP TO ROUTE 8. ELEV. = 1024.56

(•) EXISTING STORM TO BE ABANDONED

REMOVE EXISTING PAVEMENT, CURB, AND MEDIAN.



PVI STA = 110+30
PVI ELEV = 1021.36
DESIGN SPEED = 25 MPH
SSD = 546' (> DESIGN CRITERIA)
K = 224.38
200.00' VC
PVC STA. 109+30 ELEV. 1019.93
PVT STA. 111+30 ELEV. 1021.90
END WORK, MATCH EXISTING STA. 112+00 ELEV. 1022.27±
0.54%
0.55%
1019.50 1019.86 1020.20 1020.53 1020.82 1021.08 1021.32 1021.53 1021.71 1021.87 1022.00 1022.14 1022.27
1019.54 1019.92 1020.22 1020.51 1020.77 1021.02 1021.33 1021.62 1021.78 1021.92 1021.99 1022.12 1022.27 1022.47 1022.67 1022.89 1023.11
109+00 109+50 110+00 110+50 111+00 111+50 112+00 112+50 113+00

(•) EXISTING STORM TO BE ABANDONED

REMOVE EXISTING PAVEMENT, CURB, AND MEDIAN.

PAVEMENT WIDENING AREAS

FOR BALLOON REFERENCE SYMBOLS, SEE SHEET 50

FOR SANITARY SEWER AND WATERLINE PLANS SEE SHEETS 100-114

FOR ROADWAY QUANTITIES SEE SHEETS 37-39

FOR DRAINAGE QUANTITIES SEE SHEETS 40-45

PIPE PROFILES	
REF.	PAGE
D-57	80
D-58	98
D-59	89
D-60	98

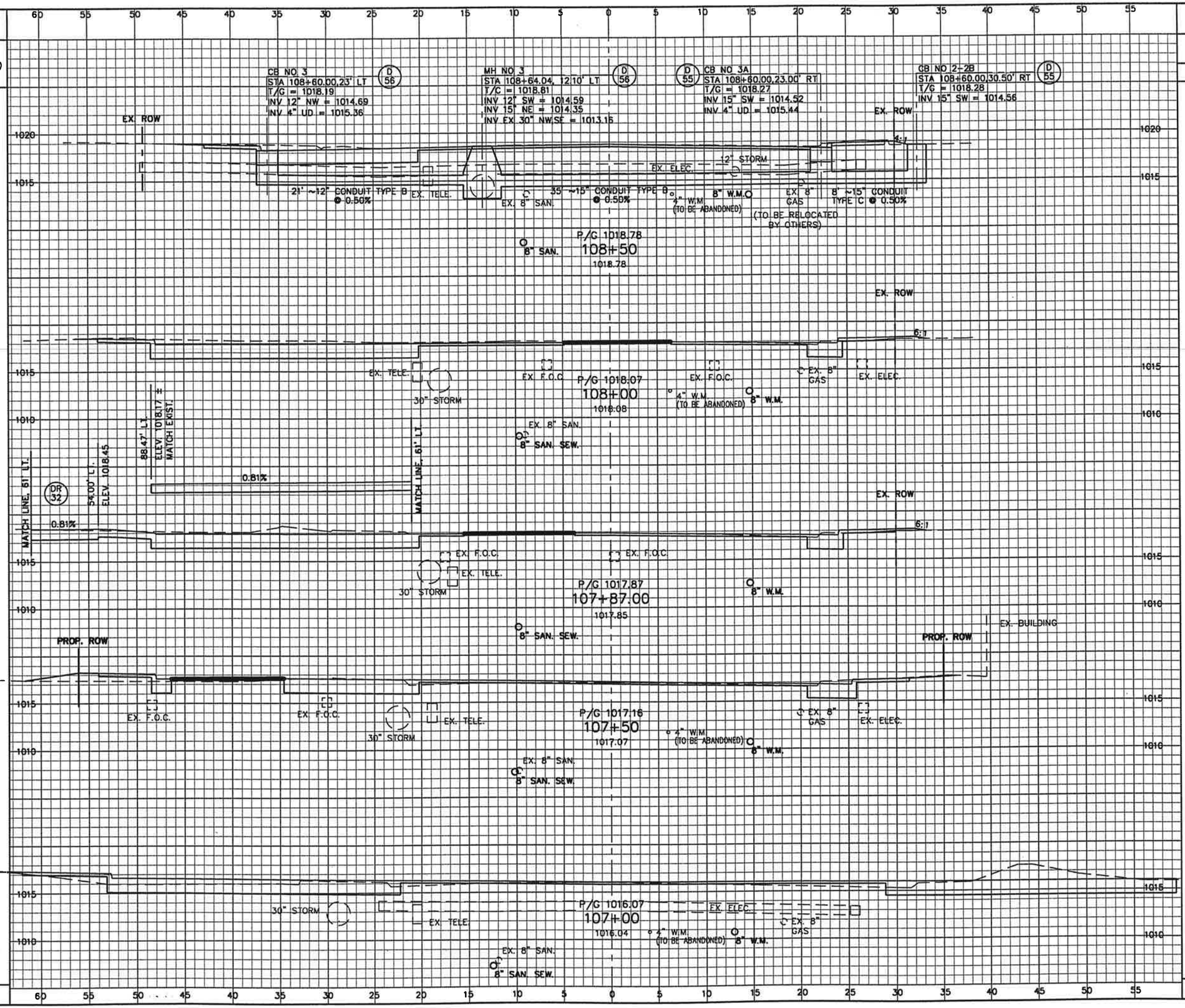
CALCULATED | CHECKED

SUM-59-4.93

J:\PROJ1\7035100\ROADWAY\70361GP1.DWG User: jon81152 Oct 16, 2002 - 2:41pm

SEEDING

END WIDTH (FEET)	AREA (SQUARE) (YARDS)
11	58
10	11
5	47
18	78
10	
TOTAL	194



EARTHWORK

END AREA (SQUARE FEET) CUT	END AREA (SQUARE FEET) FILL	VOLUME (CUBIC YARDS) CUT	VOLUME (CUBIC YARDS) FILL
37	0		
		124	1
60	1		
		51	0
93	1		
		151	5
34	7		
		144	15
87	3		
TOTALS		470	21

CALCULATED | CHECKED

HUDSON DRIVE CROSS SECTIONS
STA. 107+00 TO STA. 108+50

SUM - 59-493

79
171

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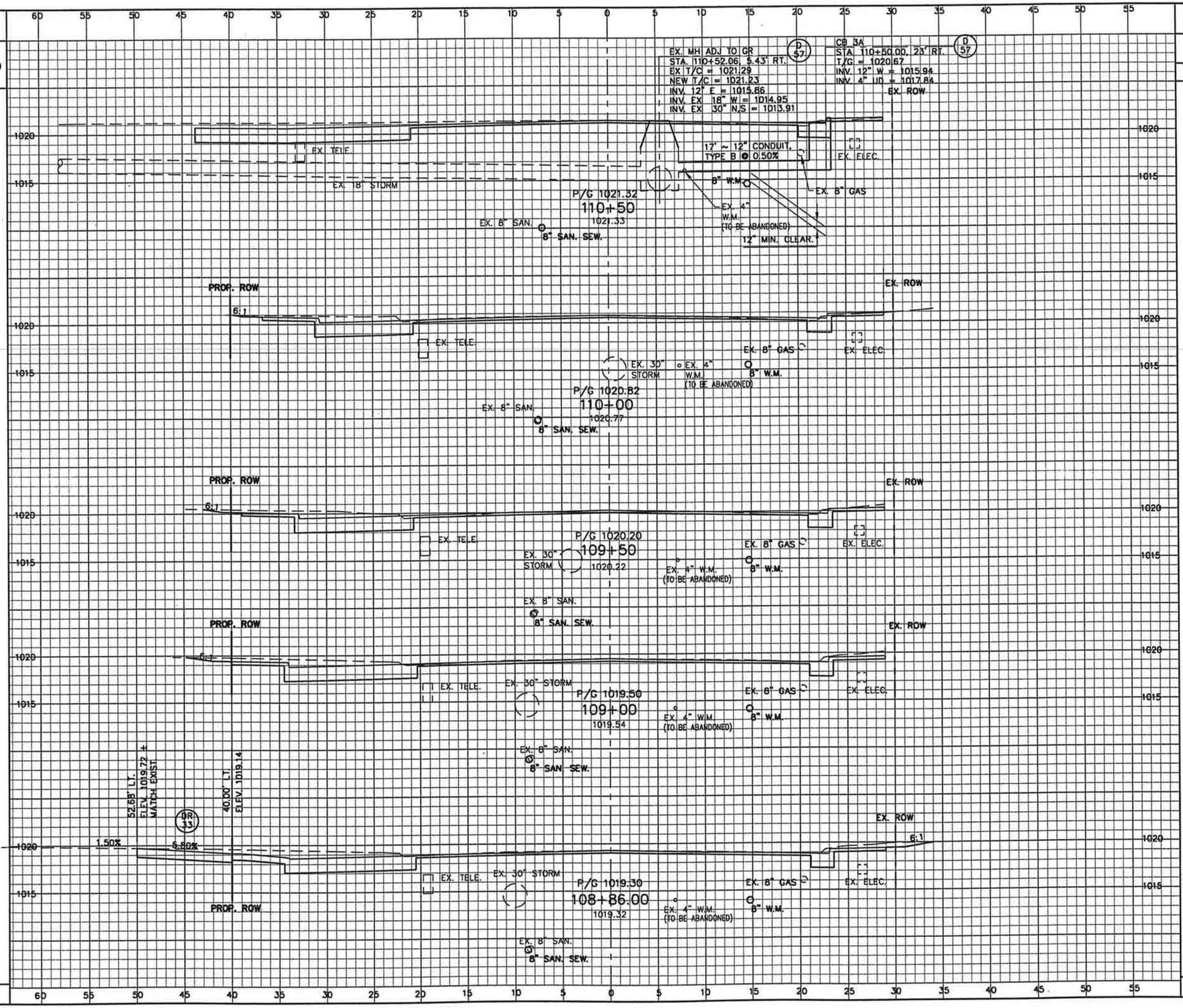
SEEDING

END WIDTH (FEET)	AREA (SQUARE) (YARDS)
0	17
6	33
6	36
7	12
8	38
TOTAL	136



EARTHWORK

END AREA (SQUARE FEET) CUT	END AREA (SQUARE FEET) FILL	VOLUME (CUBIC YARDS) CUT	VOLUME (CUBIC YARDS) FILL
51	0		
		122	0
29	0		
		86	0
36	0		
		104	0
41	0		
		36	0
56	0		
		99	0
TOTALS		447	0

CALCULATED DET
CHECKED IM

HUDSON DRIVE CROSS SECTIONS
STA. 108+86 TO STA. 110+50

SUM - 59-493

80
171

J:\PROJ1\7036100\ROADWAY\70361GXY.DWG User: jsn81152 Oct 16, 2002 - 2:41pm

SEEDING	
END WIDTH (FEET)	AREA (SQUARE) (YARDS)
9	17
4	14
6	33
5	13
TOTAL	77

EARTHWORK			
END AREA (SQUARE FEET)		VOLUME (CUBIC YARDS)	
CUT	FILL	CUT	FILL
5	1		
		11	1
16	0		
		23	1
16	1		
		62	2
30	0		
		95	0
TOTALS		191	4

CALCULATED DET
CHECKED JM

HUDSON DRIVE CROSS SECTIONS
STA. 110+96 TO STA. 112+00

SUM - 59-493

81
171

EX. ROW
6:1
EX. 4" GAS
EX. TELE.
EX. 6" W.M.
P/G 1022.27
112+00
1022.27
EX. 30" STORM
EX. 8" GAS
EX. ELEC.
EX. 6" W.M. (TO BE ABANDONED)
8" W.M.
EX. 8" SAN.
8" SAN. SEW.
1020
1015
2.21%
35.00' LT. ELEV. 1022.20 ± MATCH EXIST.
29.54' LT. ELEV. 1022.65
0.55%
DR 35
PROP. ROW
P/G 1022.14
111+76.00
1022.13
P/G 1022.00
111+50
1021.99
EXISTING CATCH BASIN TO BE REMOVED
TO BE PLUGGED
EXIST 12" STORM TO BE ABANDONED
EX. MH
ADJUST TO GRADE
STA. 110+94.25, 9.45 RT.
T/G = 1021.47
D 51
29.00' RT. ELEV. 1021.75
DR 34
39.00' RT. ELEV. 1021.65 ± MATCH EXIST.
1.10%
1.46%
EX. 6" GAS
P/G 1021.69
110+96.00
1021.75
(TO BE ABANDONED)
EX. 4" W.M.

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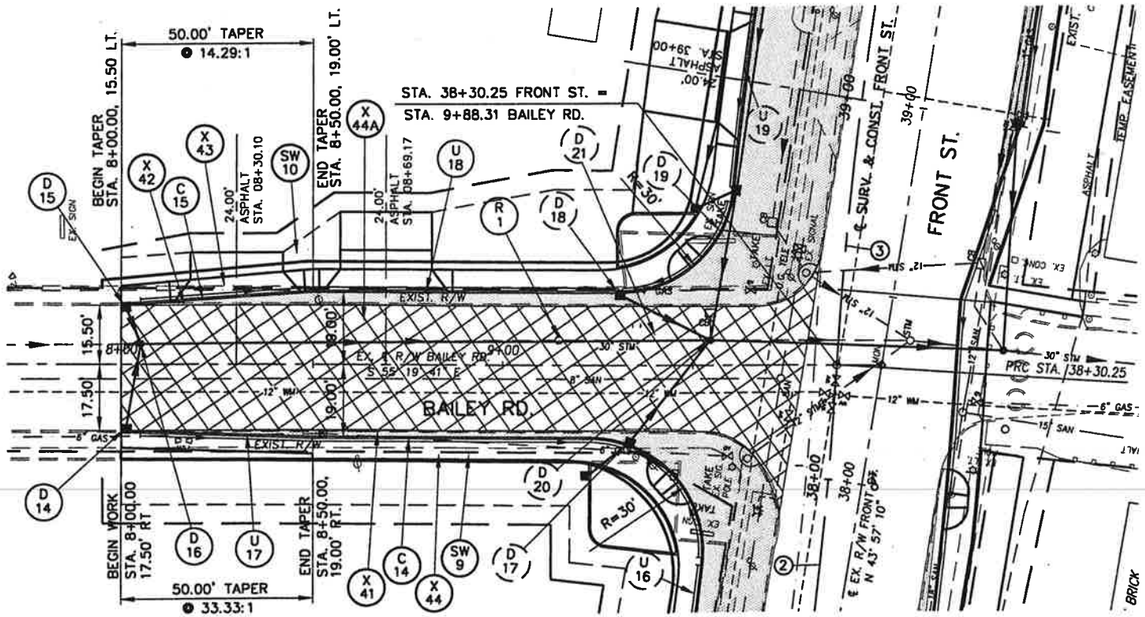
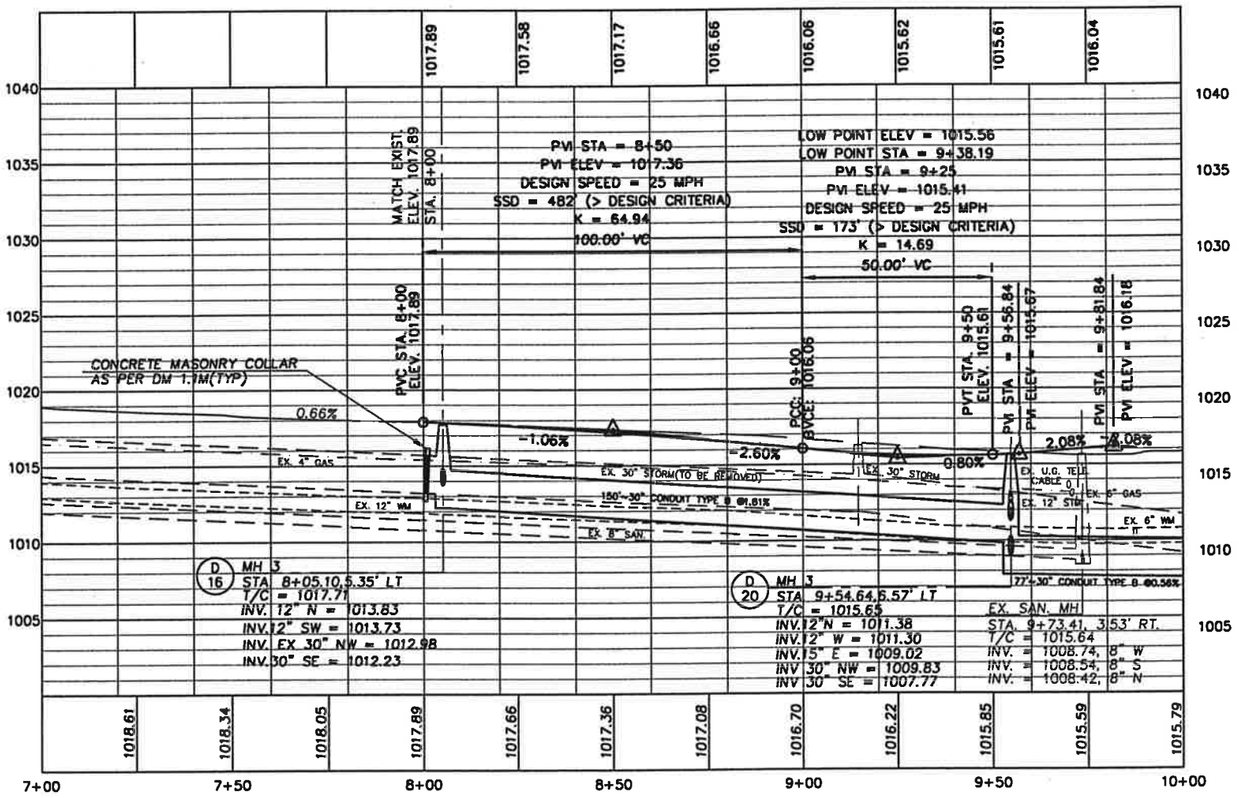




BENCHMARK No. 5
TOP OF N. ANCHOR BOLT OF THE SIGNAL POLE AT S.E. CORNER OF FRONT STREET AND BAILEY ROAD. ELEV. = 1016.11

BENCHMARK No. 3
C&GS DISK STAMPED "FALLS 1934" AT N. END OF W. BALLAST DECK SOUTH OF R.R. BRIDGE OVER OLD BAILEY ROAD. ELEV. = 1014.34

② ℄ SURVEY & CONSTRUCTION FRONT STREET

P.I. STA. 37+77.65
Δ = 6° 01' 55"
R = 1000.00'
T = 52.69'
L = 105.28'
E = 1.39'
e_{max} = NC

③ ℄ SURVEY & CONSTRUCTION FRONT STREET

P.I. STA. 38+82.58
Δ = 5° 59' 28"
R = 1000.00'
T = 52.33'
L = 104.56'
E = 1.37'
e_{max} = NC

REMOVE EXISTING PAVEMENT, CURB, AND MEDIAN.

PAVEMENT WIDENING AREAS

PIPE PROFILES	
REF.	PAGE
D–14, 15	86
D–17, 18	87

FOR BALLOON REFERENCE SYMBOLS, SEE SHEET 50

FOR SANITARY SEWER AND WATERLINE PLANS SEE SHEETS 100 – 114

FOR ROADWAY QUANTITIES SEE SHEETS 37 – 39

FOR DRAINAGE QUANTITIES SEE SHEETS 40 – 45

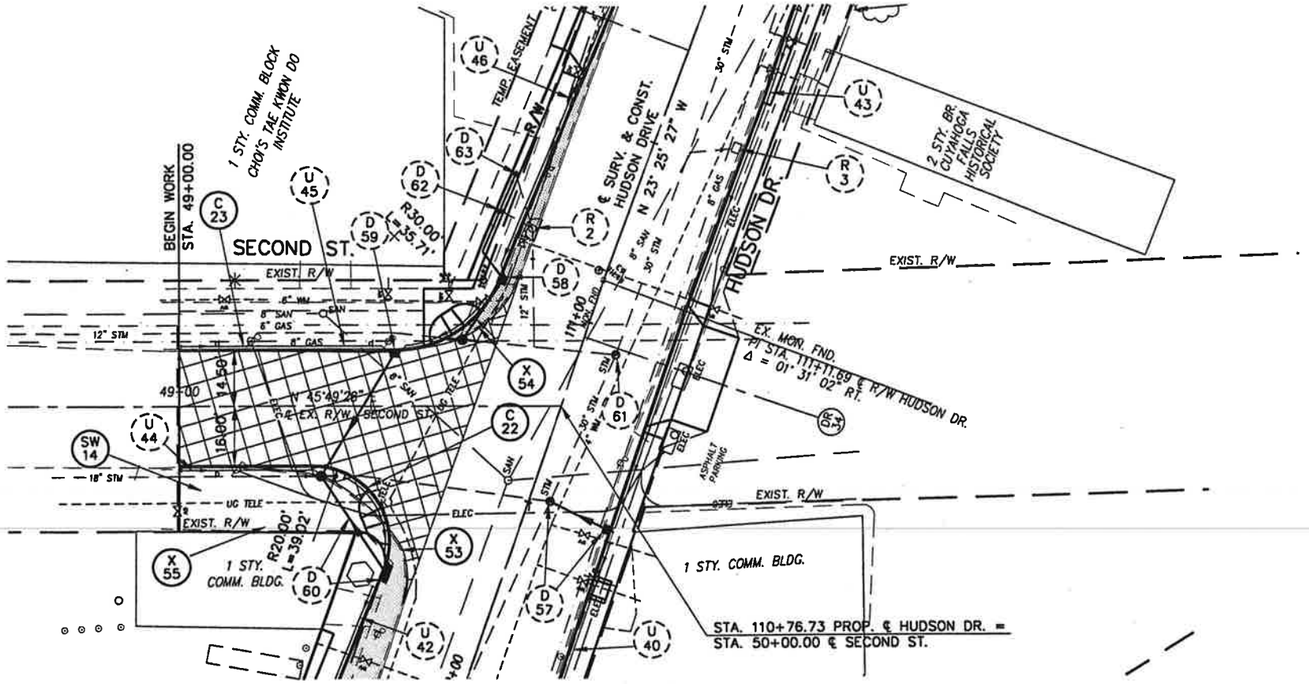
FOR BAILEY ROAD INTERSECTION DETAIL SEE SHEET 93

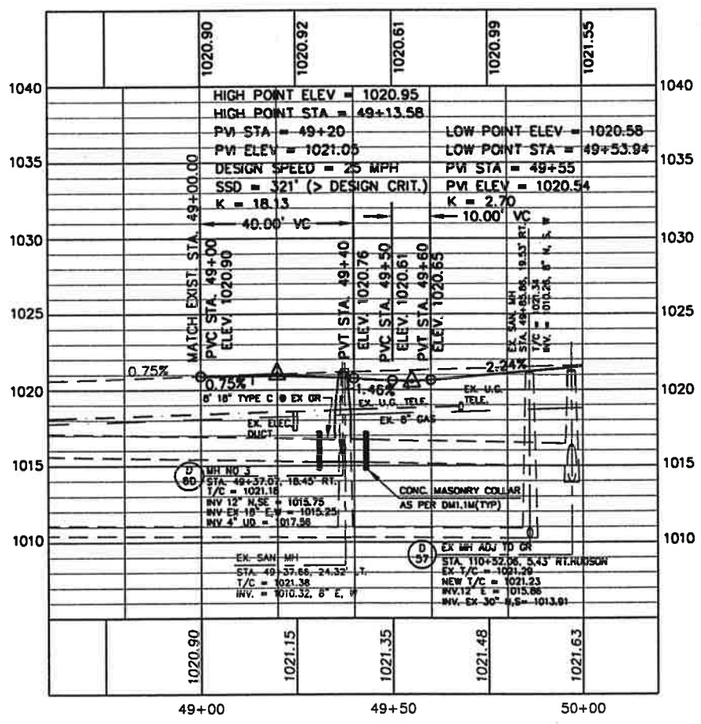
(IN FEET) 1 inch = 20' ft.

CALCULATED SCW | CHECKED

BAILEY ROAD PLAN AND PROFILE
STA. 7+00 TO STA. 10+00

SUM - 59-4.93





BENCHMARK No. 4
TOP S.W. ANCHOR BOLT OF OVERHEAD SIGN "RT. 8 NORTH", E. SIDE OF HUDSON DR. NORTH OF NB RAMP TO ROUTE 8. ELEV. = 1024.56

REMOVE EXISTING PAVEMENT, CURB, AND MEDIAN.

PAVEMENT WIDENING AREAS

PIPE PROFILES	
REF.	PAGE
D-59	89
D-60	98

FOR BALLOON REFERENCE SYMBOLS, SEE SHEET 50

FOR SANITARY SEWER AND WATERLINE PLANS SEE SHEETS 100 – 114

FOR ROADWAY QUANTITIES SEE SHEETS 37 – 39

FOR DRAINAGE QUANTITIES SEE SHEETS 40 – 45

FOR SECOND ST. INTERSECTION DETAIL SEE SHEET 95

CALCULATED

CHECKED

(IN FEET)
1 inch = 20 ft.

SECOND STREET PLAN AND PROFILE
STA. 49+00 TO STA. 50+00

SUM - 59-4.93

83
171

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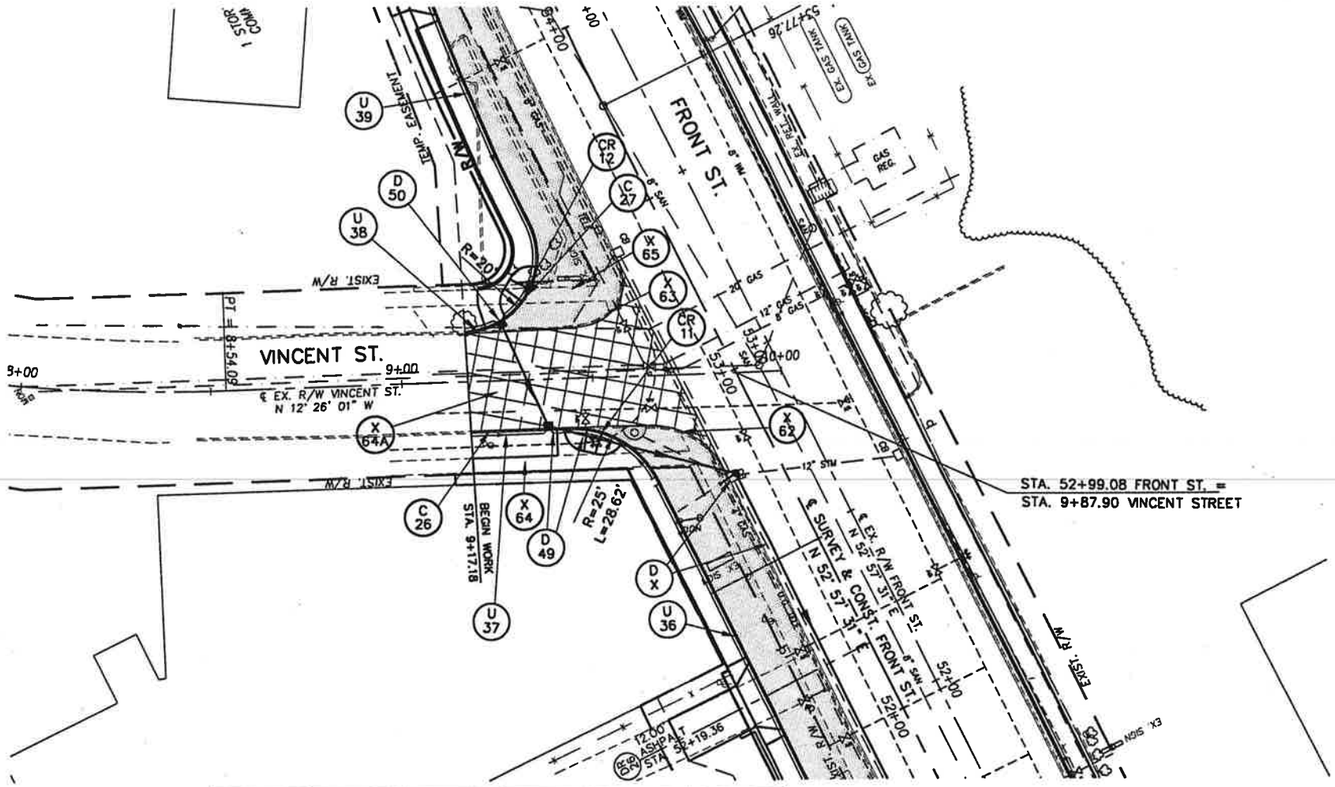
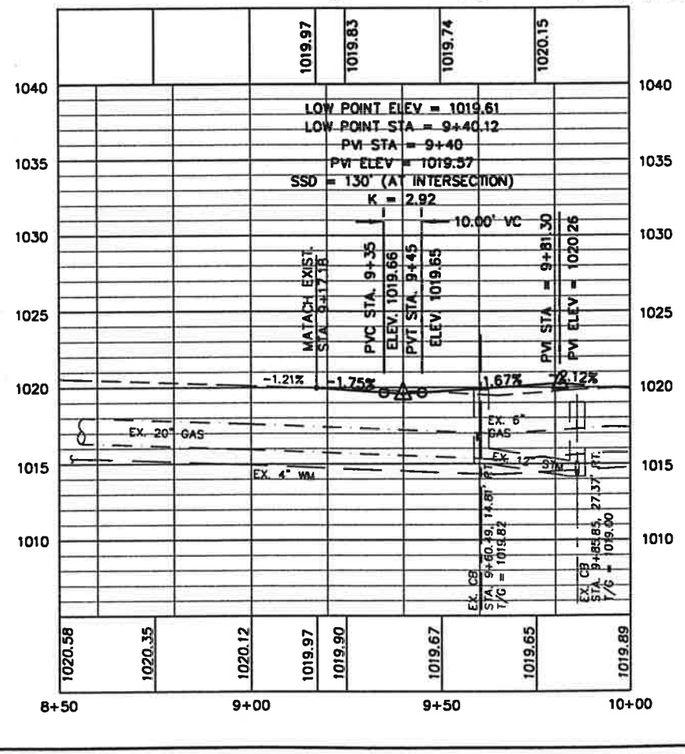




BENCHMARK No. 6
TOP LETTER "G" IN "DARLING" ON HYD. N WESTERLY SIDE OF KENT ROAD OPPOSITE OF OAK PARK ROAD ELEV. = 1019.80

REMOVE EXISTING PAVEMENT, CURB, AND MEDIAN.

PAVEMENT WIDENING AREAS

FOR BALLOON REFERENCE SYMBOLS, SEE SHEET 50

FOR SANITARY SEWER AND WATERLINE PLANS SEE SHEETS 100 – 114

FOR ROADWAY QUANTITIES SEE SHEETS 37 – 39

FOR DRAINAGE QUANTITIES SEE SHEETS 40 – 45

FOR VINCENT ST. PAVEMENT DETAILS SEE SHEET 96

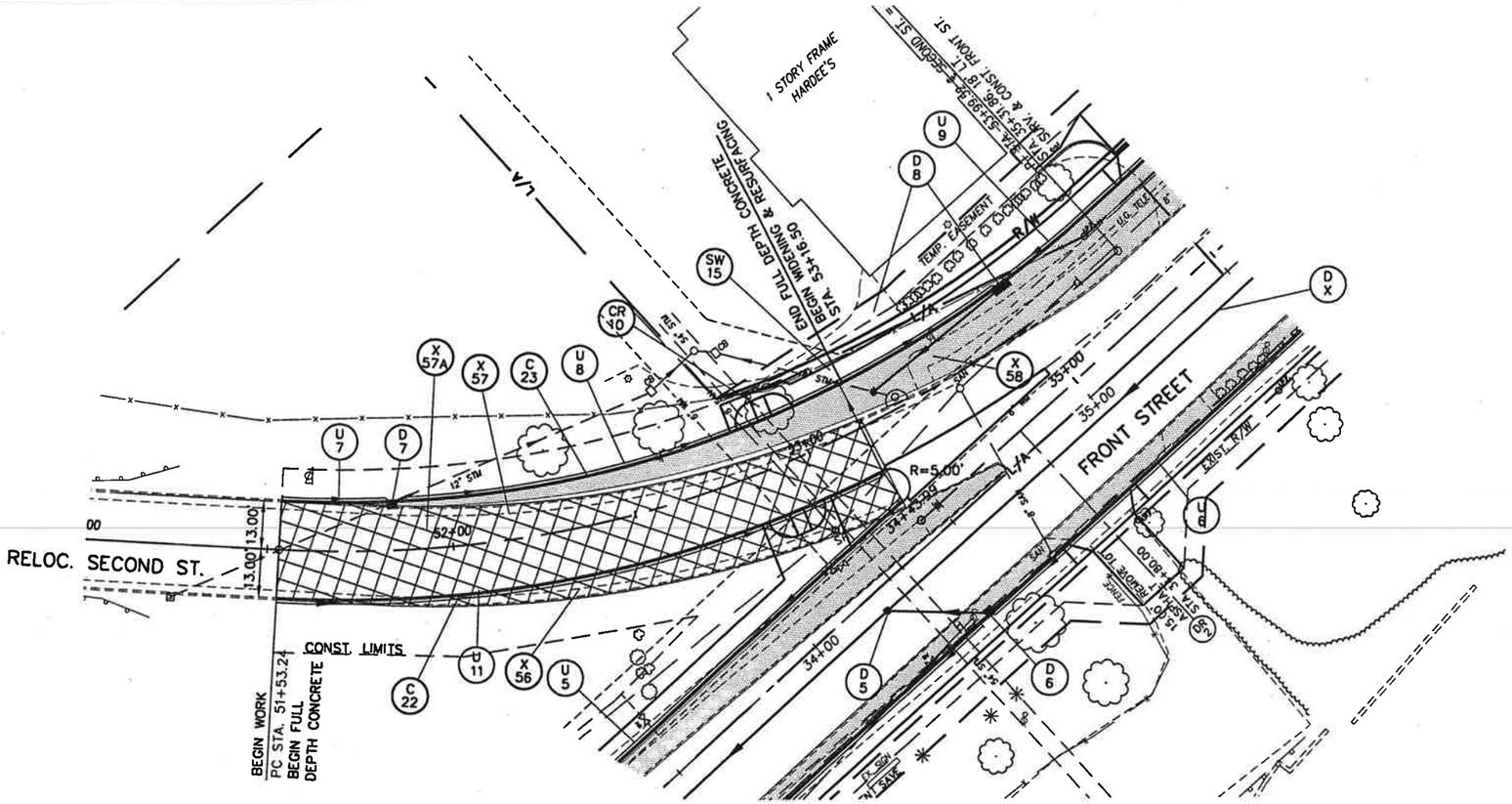
PIPE PROFILES	
REF.	PAGE
D-49	89
D-50	75

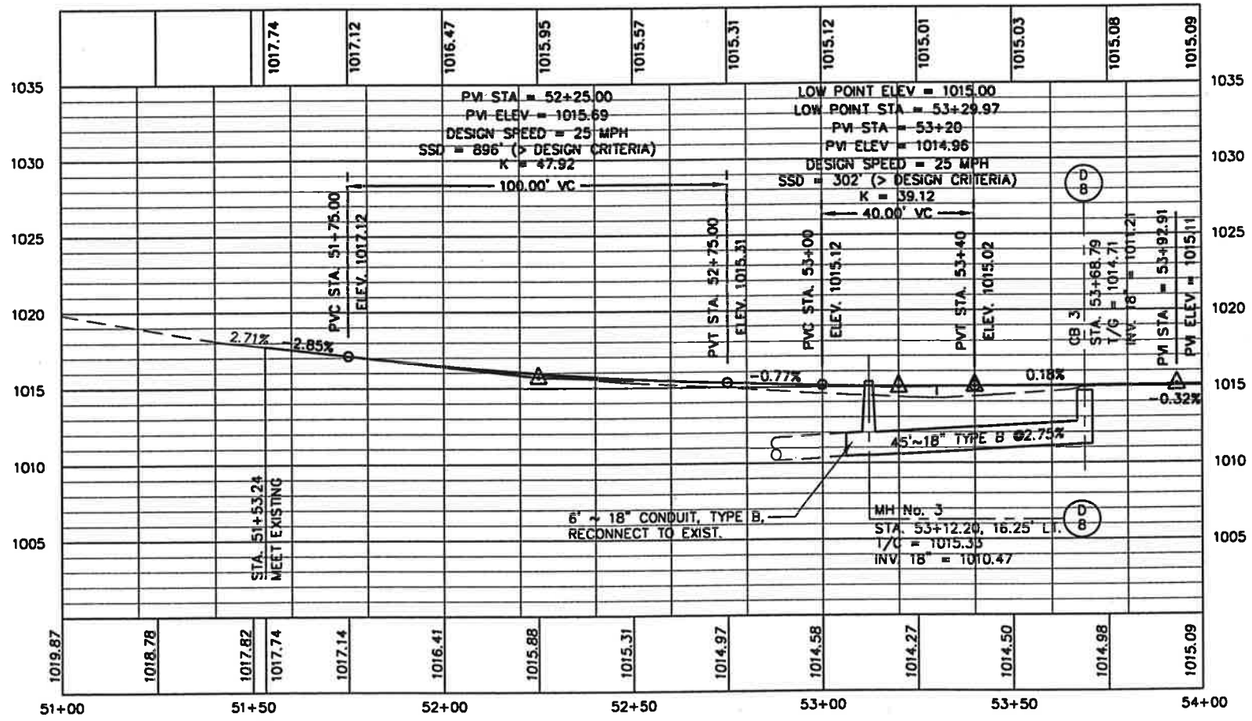
(IN FEET) 1 inch = 20 ft.

CALCULATED | CHECKED

PLAN AND PROFILE, VINCENT ST. STA. 9+17.18 TO STA. 10+00.00

SUM - 59-493





FOR BALLOON REFERENCE SYMBOLS, SEE SHEET 50

FOR SANITARY SEWER AND WATERLINE PLANS SEE SHEETS 100 – 114

FOR ROADWAY QUANTITIES SEE SHEETS 37 – 39

FOR DRAINAGE QUANTITIES SEE SHEETS 40 – 45

FORRELOCATED 2ND ST. PAVEMENT DETAIL, SEE SHEET 92

① EXIST. ℄ R/W HUDSON DR.
P.I. STA. 95+28.43
Δ = 49° 23' 22"
R = 520.87'
D_c = 11° 00' 00"
T = 239.52'
L = 448.99'
Ch. = 435.22'

REMOVE EXISTING PAVEMENT, CURB, AND MEDIAN.

PAVEMENT WIDENING AREAS

BENCHMARK No. 5
TOP OF N. ANCHOR BOLT OF THE SIGNAL POLE AT S.E. CORNER OF FRONT ST. AND BAILEY RD.
ELEV. = 1016.11

BENCHMARK No. 3
C&GS DISK STAMPED "FALLS 1934" AT N. END OF W. BALLAST DECK SOUTH OF R.R. BRIDGE OVER OLD BAILEY ROAD.
ELEV. = 309.171

(IN FEET)
1 inch = 20 ft.

CALCULATED | CHECKED

PLAN AND PROFILE RELOCATED SECOND ST.

SUM - 59-4.93

85
171

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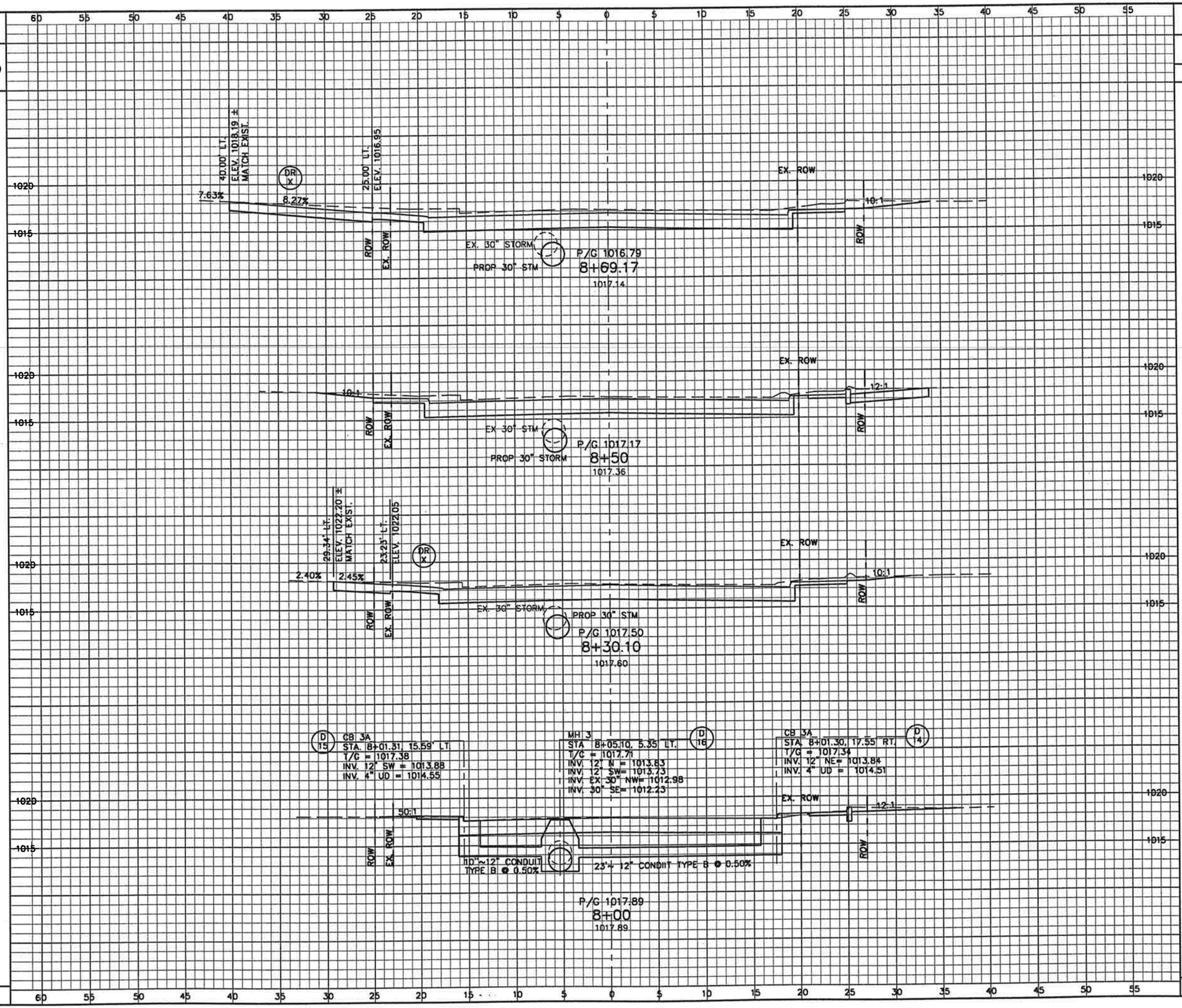
SEEDING	
END WIDTH (FEET)	AREA (SQUARE) (FEET)
11	
	19
7	
	18
9	
	25
6	
TOTAL	62



EARTHWORK			
END AREA (SQUARE FEET)		VOLUME (CUBIC YARDS)	
CUT	FILL	CUT	FILL
111	0		
		144	0
92	0		
		128	0
82	0		
		156	1
58	1		
TOTALS		428	1

CALCULATED DET
CHECKED IM

BAILEY RD. CROSS SECTIONS
STA. 8+00 TO STA. 8+69.17

SUM - 59-493

86
171

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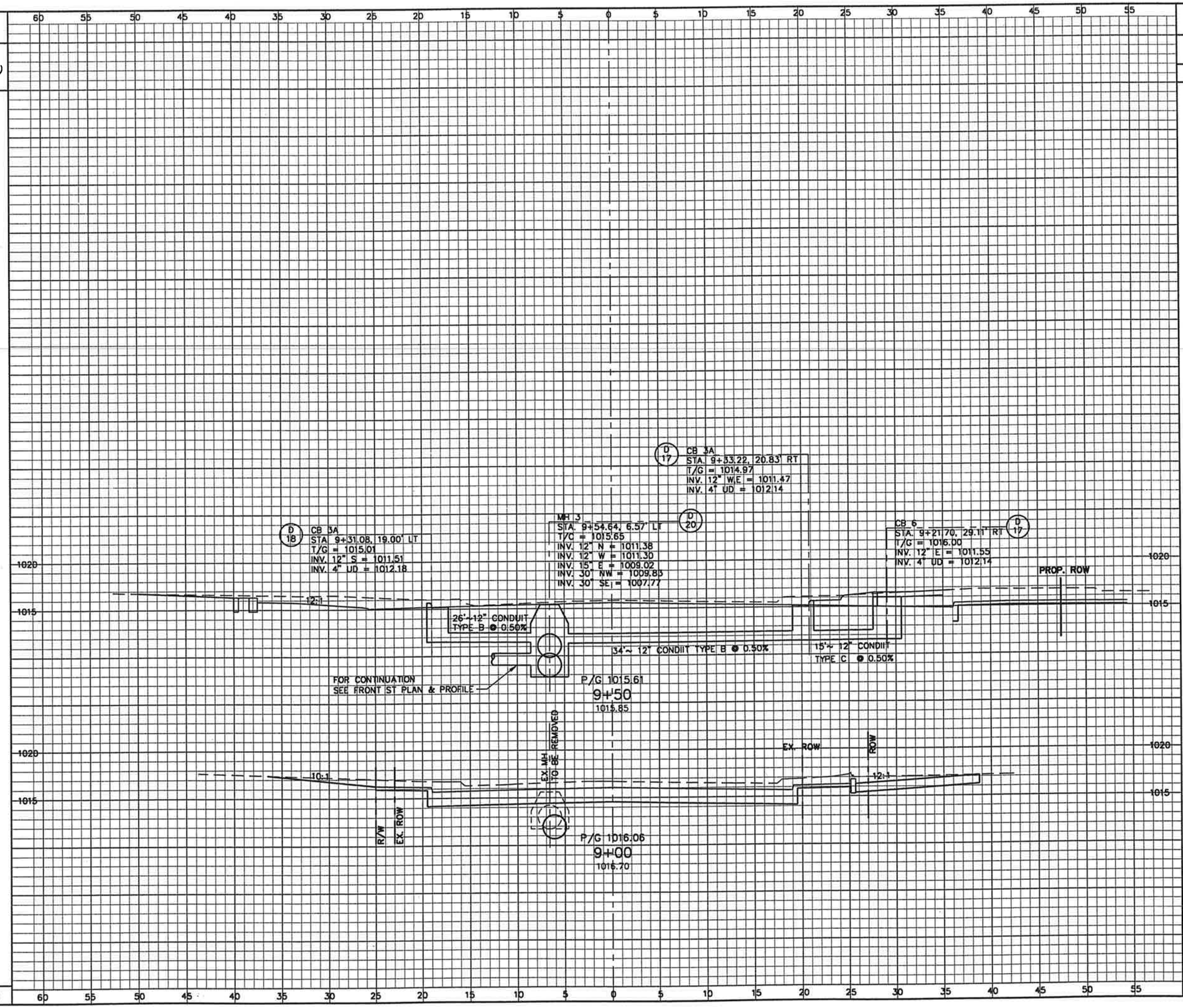
SEEDING

END WIDTH (FEET)	AREA (SQUARE) (FEET)
20	92
13	41
TOTAL	133

EARTHWORK

END AREA (SQUARE FEET)		VOLUME (CUBIC YARDS)	
CUT	FILL	CUT	FILL
		103	0
		412	0
		120	0
		263	0
		TOTALS 675	0

CALCULATED DET
CHECKED RJ



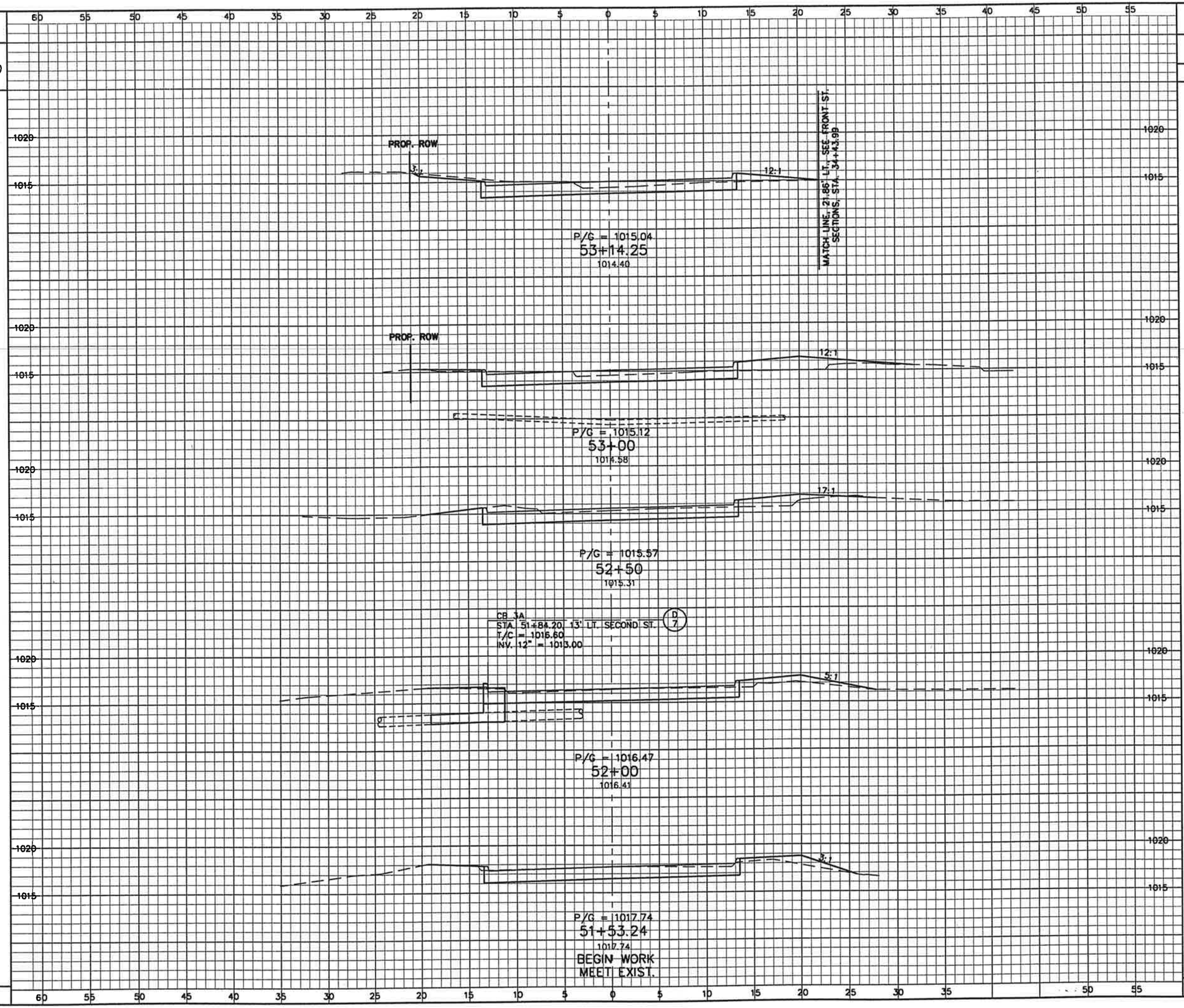
BAILEY RD. CROSS SECTIONS
STA. 9+00 TO STA. 9+50

SUM - 59-493

87
171

SEEDING

END WIDTH (FEET)	AREA (SQUARE) (FEET)
21	43
33	172
29	156
27	138
26	509
TOTAL	



EARTHWORK

END AREA (SQUARE FEET) CUT	END AREA (SQUARE FEET) FILL	VOLUME (CUBIC YARDS) CUT	VOLUME (CUBIC YARDS) FILL
30	4	15	5
27	15	55	20
32	7	59	13
32	7	56	11
32	6		
TOTALS		185	49

CALCULATED DET
CHECKED TM

RELOCATED SECOND STREET CROSS SECTIONS
STA. 51+53.24 TO STA. 53+14.25

SUM - 59-493

88
171

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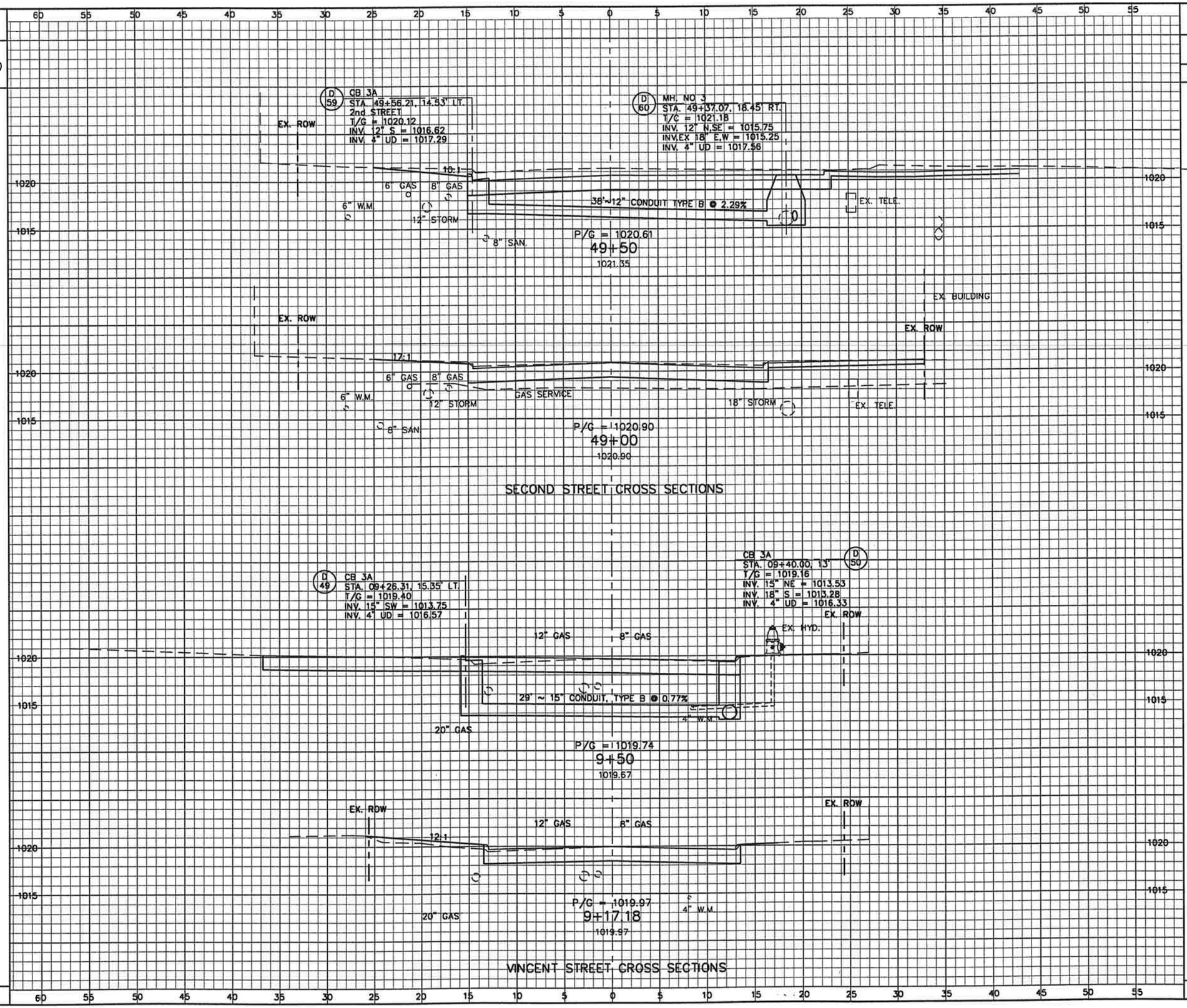
SEEDING	
END WIDTH (FEET)	AREA (SQUARE) (FEET)
12	
	67
12	
	40
0	
	22
TOTAL	107



EARTHWORK			
END AREA (SQUARE FEET)		VOLUME (CUBIC YARDS)	
CUT	FILL	CUT	FILL
107	0	107	0
62	0		
78	0	71	3
39	5		
TOTALS		71	3

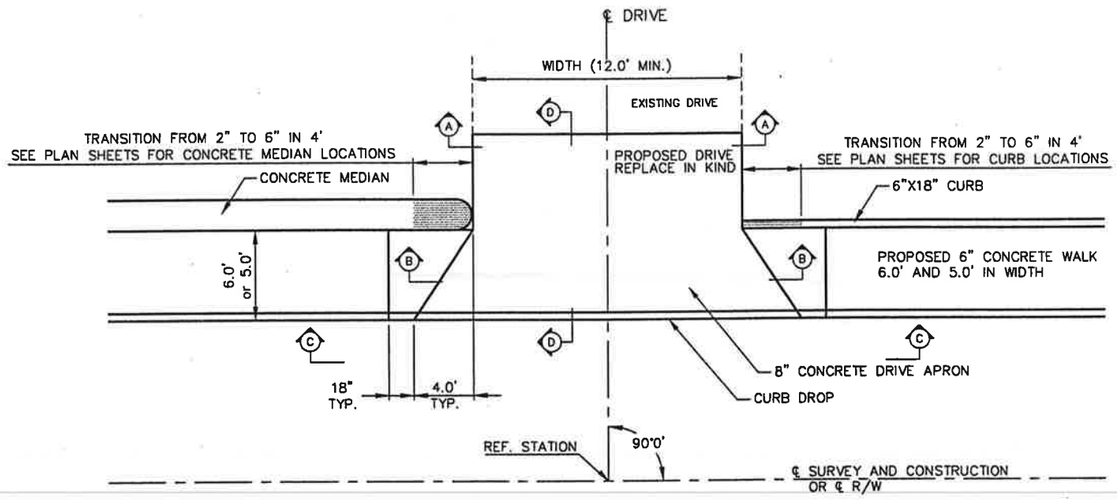
CALCULATED DET
CHECKED IM

VINCENT ST. CROSS SECTIONS + SECOND ST. CROSS SECTIONS
STA. 9+17.18 TO STA. 9+50

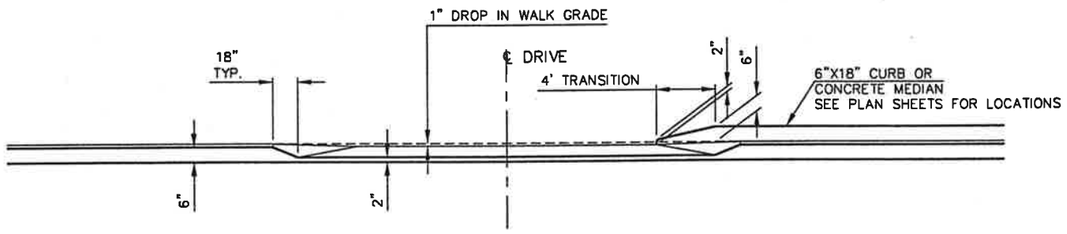
SLM - 59-4.93

89
171

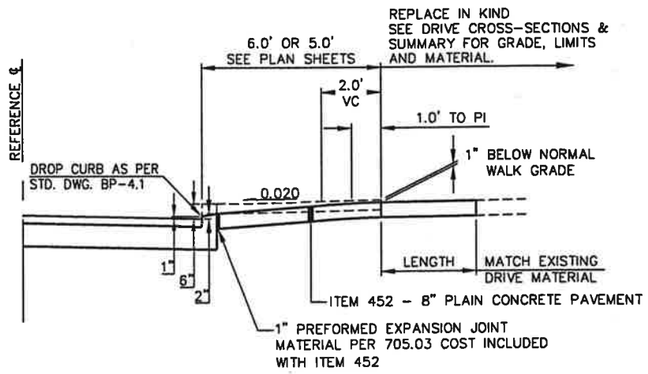
J:\PROJ1\7036100\ROADWAY\703616XW.DWG User: jon81152 Oct 16, 2002 - 2:44pm



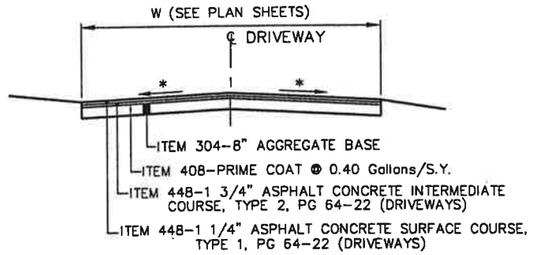
DRIVE APRON DETAIL



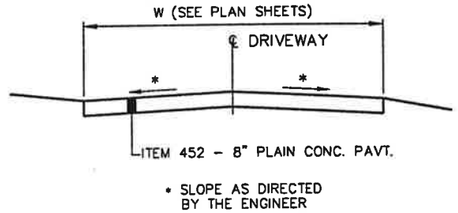
DROP CURB PROFILE
SECTION C–C



DRIVE APRON SECTION
SECTION D–D



COMMERCIAL ASPHALT DRIVE
SECTION A–A
TYPE 2



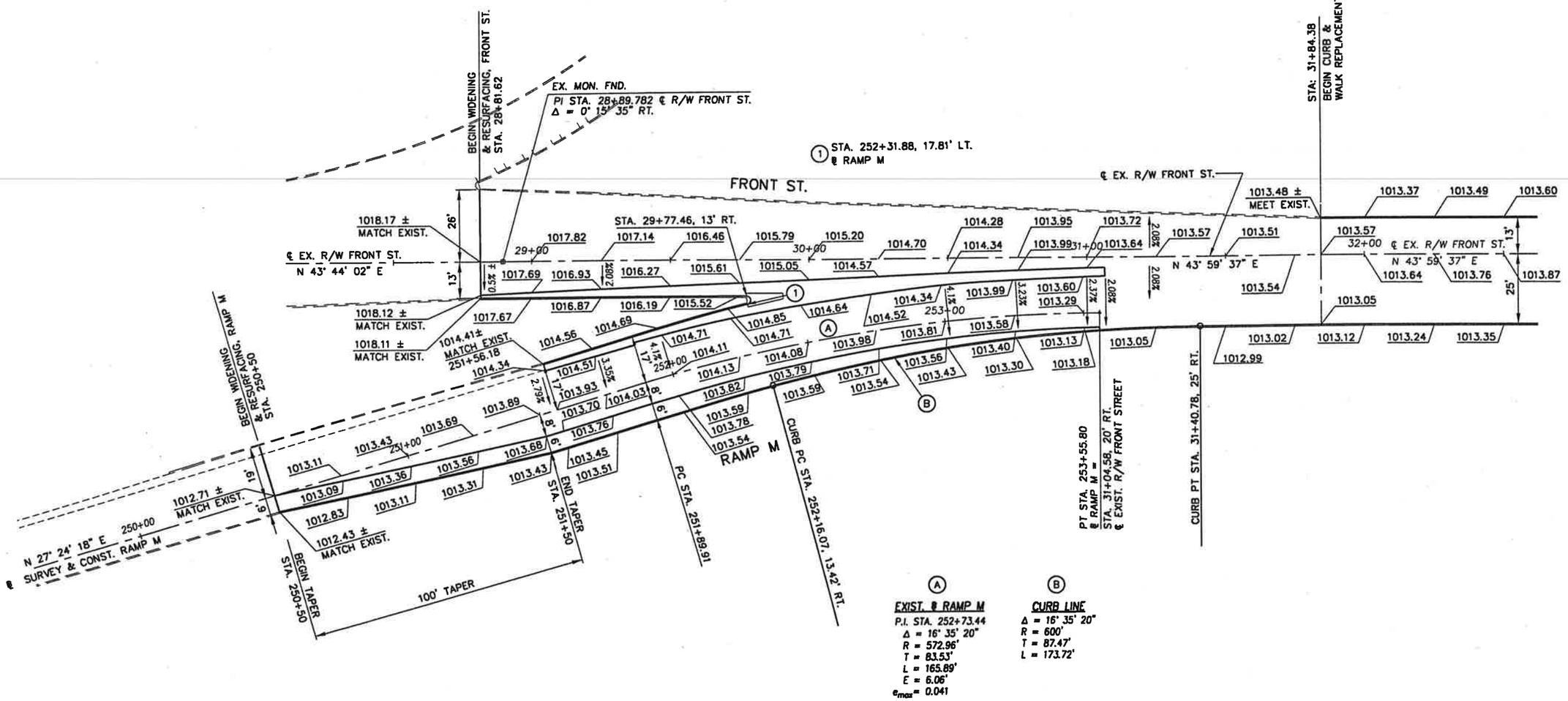
COMMERCIAL CONCRETE DRIVE
SECTION A–A & SECTION B–B
TYPE 1

FOR JOINT DETAILS, SEE STD. DWG. BP–4.1.

CALCULATED | CHECKED

DRIVEWAY DETAILS

SUM - 59-493



(IN FEET)
1 inch = 20 ft.

CALCULATED SCW
CHECKED JAN

PAVEMENT DETAILS
RAMP M AND FRONT STREET

SUM - 59-4.93

91
171

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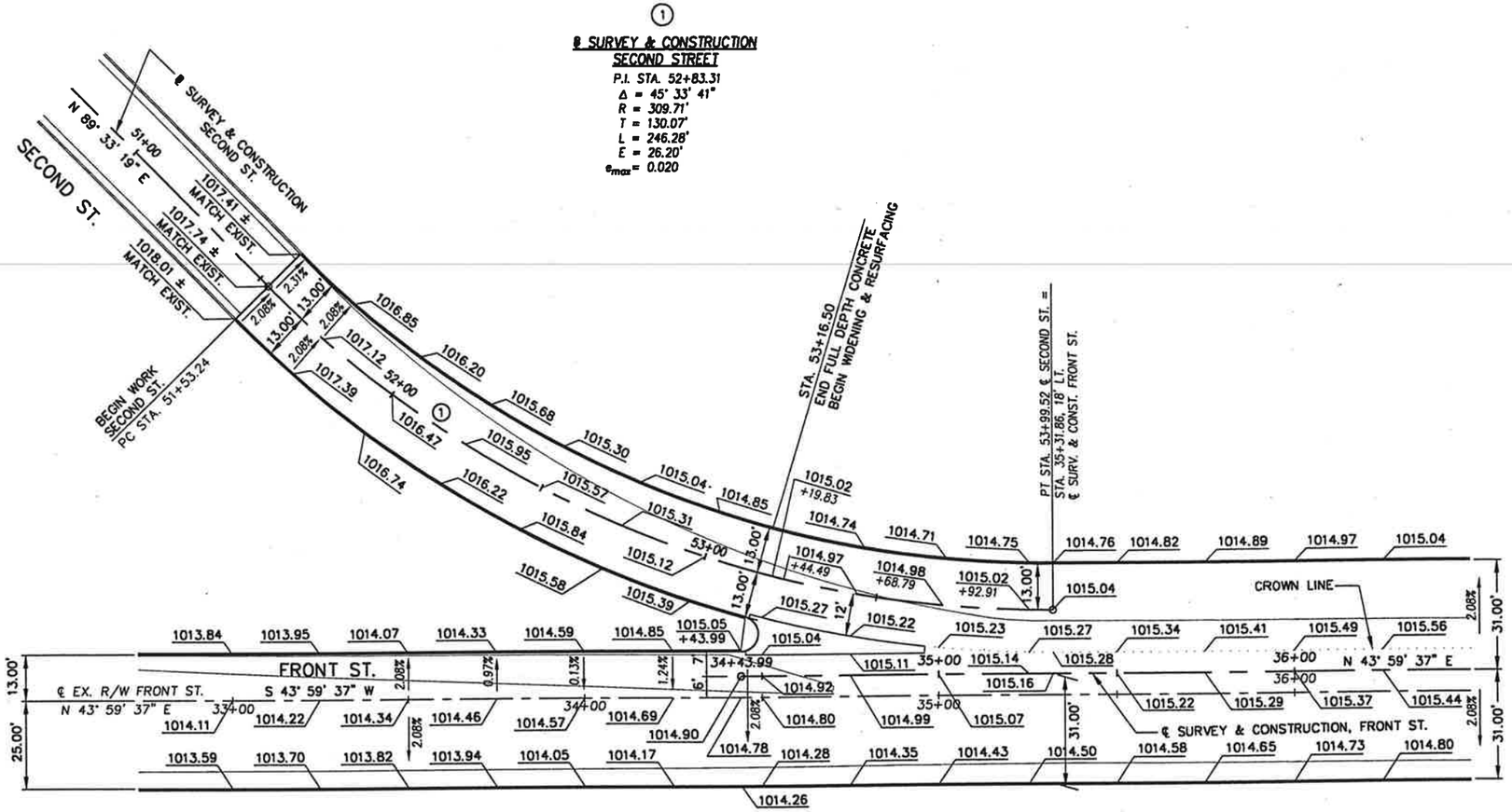


CALCULATED SCW
CHECKED JAN

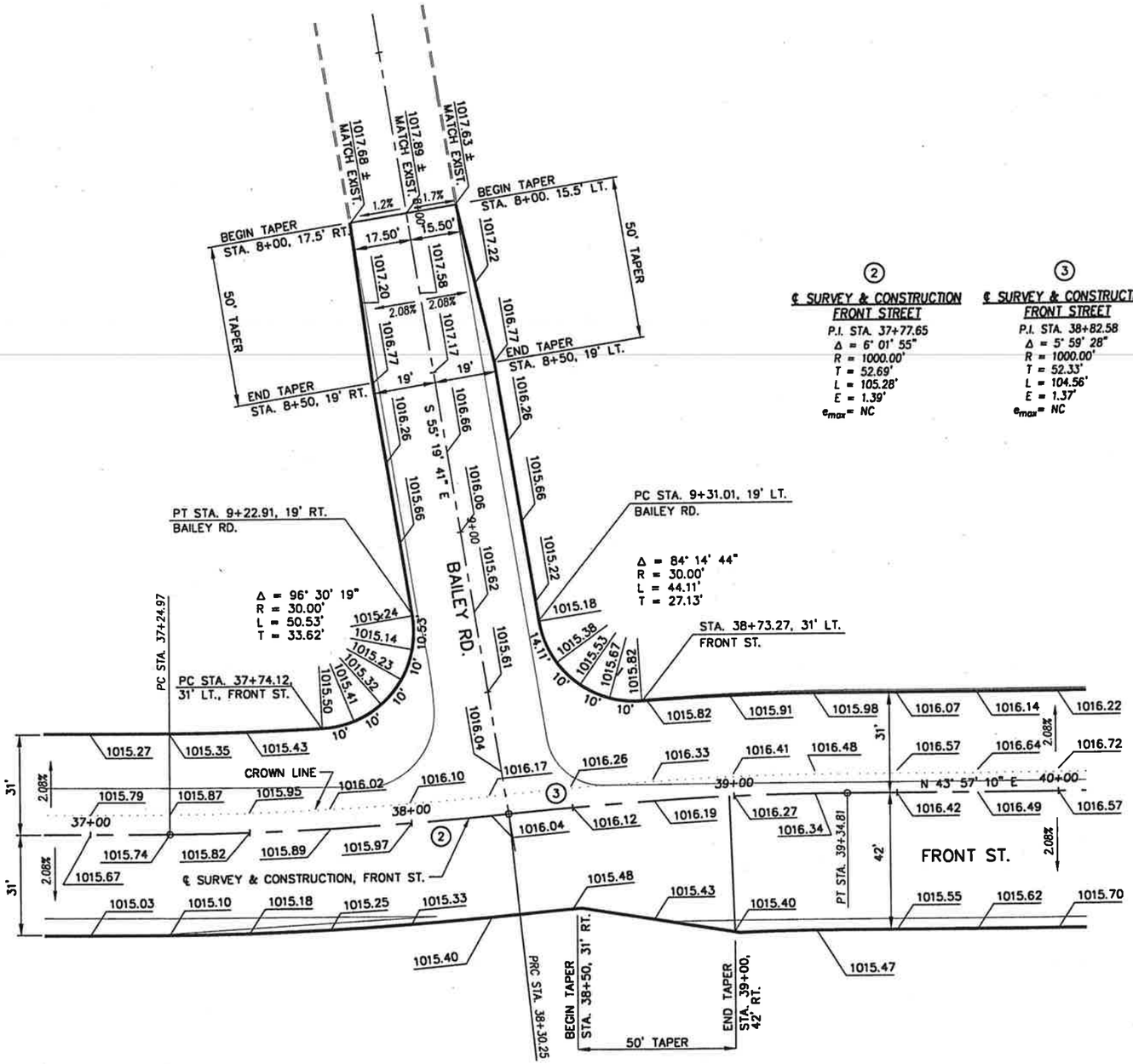
(IN FEET)
1 inch = 20 ft.

PAVEMENT DETAILS
SECOND STREET AND FRONT STREET

SUM - 59-433

92
171

J:\PROJ1\7036100\ROADWAY\70361GMC.DWG User: jan81152 Oct 16, 2002 - 2:44pm



② ℄ SURVEY & CONSTRUCTION FRONT STREET
P.I. STA. 37+77.65
Δ = 6° 01' 55"
R = 1000.00'
T = 52.69'
L = 105.28'
E = 1.39'
e_{max} = NC

③ ℄ SURVEY & CONSTRUCTION FRONT STREET
P.I. STA. 38+82.58
Δ = 5° 59' 28"
R = 1000.00'
T = 52.33'
L = 104.56'
E = 1.37'
e_{max} = NC

0 10 20 30 (IN FEET) 20

CALCULATED SCW CHECKED JAN

PAVEMENT DETAILS
BAILEY ROAD AND FRONT STREET

SUM - 59-4.93

93
171

J:\PROJ1\7036100\ROADWAY\70361GMD.DWG User: jan81152 Oct 16, 2002 - 2:44pm

RUBBERIZED RAILROAD CROSSING

⑧
℄ SURVEY & CONSTRUCTION HUDSON DRIVE
P.I. STA. 106+22.03
Δ = 5°15'42"
R = 1000.00'
T = 45.95'
L = 91.83'
E = 1.06'
e_{max} = NC

⑨
℄ SURVEY & CONSTRUCTION HUDSON DRIVE
P.I. STA. 107+13.76
Δ = 5°15'00"
R = 1000.00'
T = 45.85'
L = 91.63'
E = 1.05'
e_{max} = NC

METRO REGIONAL TRANSIT AUTHORITY

PT STA. 107+59.54 BACK ℄ CONST. HUDSON DR. =
PT STA. 107+59.40 AHEAD EX. R/W HUDSON DR.

EDISON ST.

PT STA. 107+19.65, 48' LT.
HUDSON DRIVE
Δ = 71° 10' 47"
R = 50.00'
T = 35.78'
L = 62.12'

PC STA. 42+58.46, 31' LT.
FRONT STREET

PC STA. 107+59.80, 24' RT.
HUDSON DRIVE
Δ = 111° 06' 18"
R = 35.00'
T = 51.03'
L = 67.87'

PT STA. 44+20.02, 31' LT.
FRONT STREET

FRONT ST.

N 24° 56' 29" W

N 43° 57' 10" E

℄ SURV. & CONST. FRONT STREET

41+00 42+00 43+00 44+00 45+00 106+00 107+00

PC STA. 45+61.63

PC STA. 42+40.69, 42' RT.
FRONT STREET
Δ = 111° 07' 02"
R = 30.00'
T = 43.75'
L = 58.18'

PRC STA. 106+67.91 HUDSON DRIVE =
STA. 43+35.80 FRONT ST.
Δ = 66° 28' 54"
R = 30.00'
T = 19.66'
L = 34.81'

PT STA. 43+68.26, 42.17' RT.
FRONT STREET

PT STA. 105+66.35, 37' LT.
HUDSON DRIVE

PC STA. 106+10.66, 25' RT.
HUDSON DRIVE

PC STA. 105+76.08
HUDSON DRIVE

HUDSON DR.
℄ SURV. & CONST. HUDSON DRIVE
N 24° 55' 48" W

N 24° 55' 48" W

PAVEMENT INTERSECTION DETAIL
FRONT STREET AND HUDSON DRIVE INTERSECTION

CALCULATED SCW CHECKED JAN

(IN FEET)
1 inch = 20 ft.

SUM - 59-4.93

94
171

J:\PROJ\7036100\ROADWAY\70361gmo.dwg User: jonB1152 Oct 16, 2002 - 2:44pm

CALCULATED SCW
CHECKED JAN

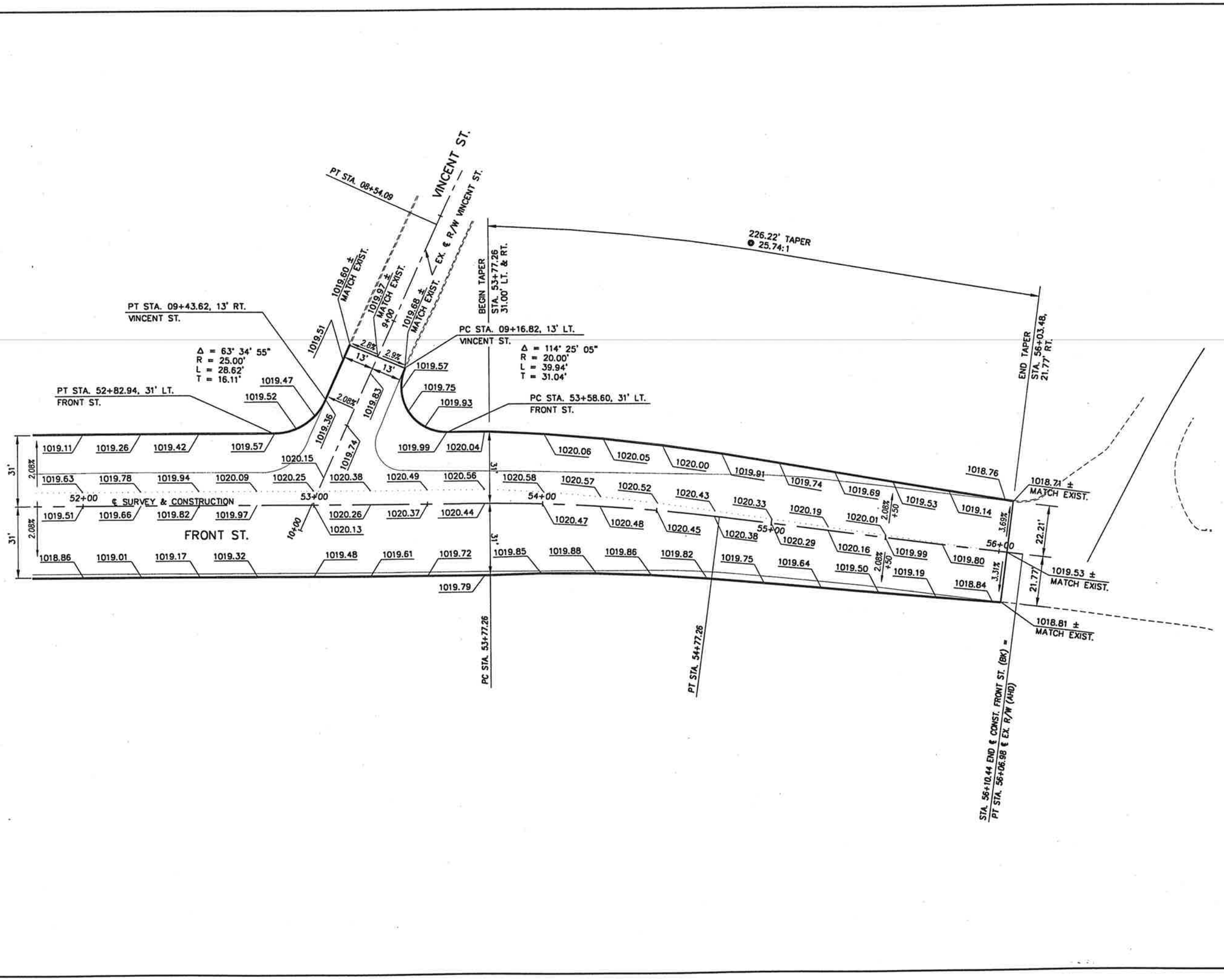
(IN FEET)
1 inch = 20 ft.

PAVEMENT DETAILS
SECOND STREET AND FRONT STREET

SUM - 59-4.93

95
171

J: \PROJ1\7036100\ROADWAY\70361GMF.DWG User: jan81152 Oct 16, 2002 - 2:44pm



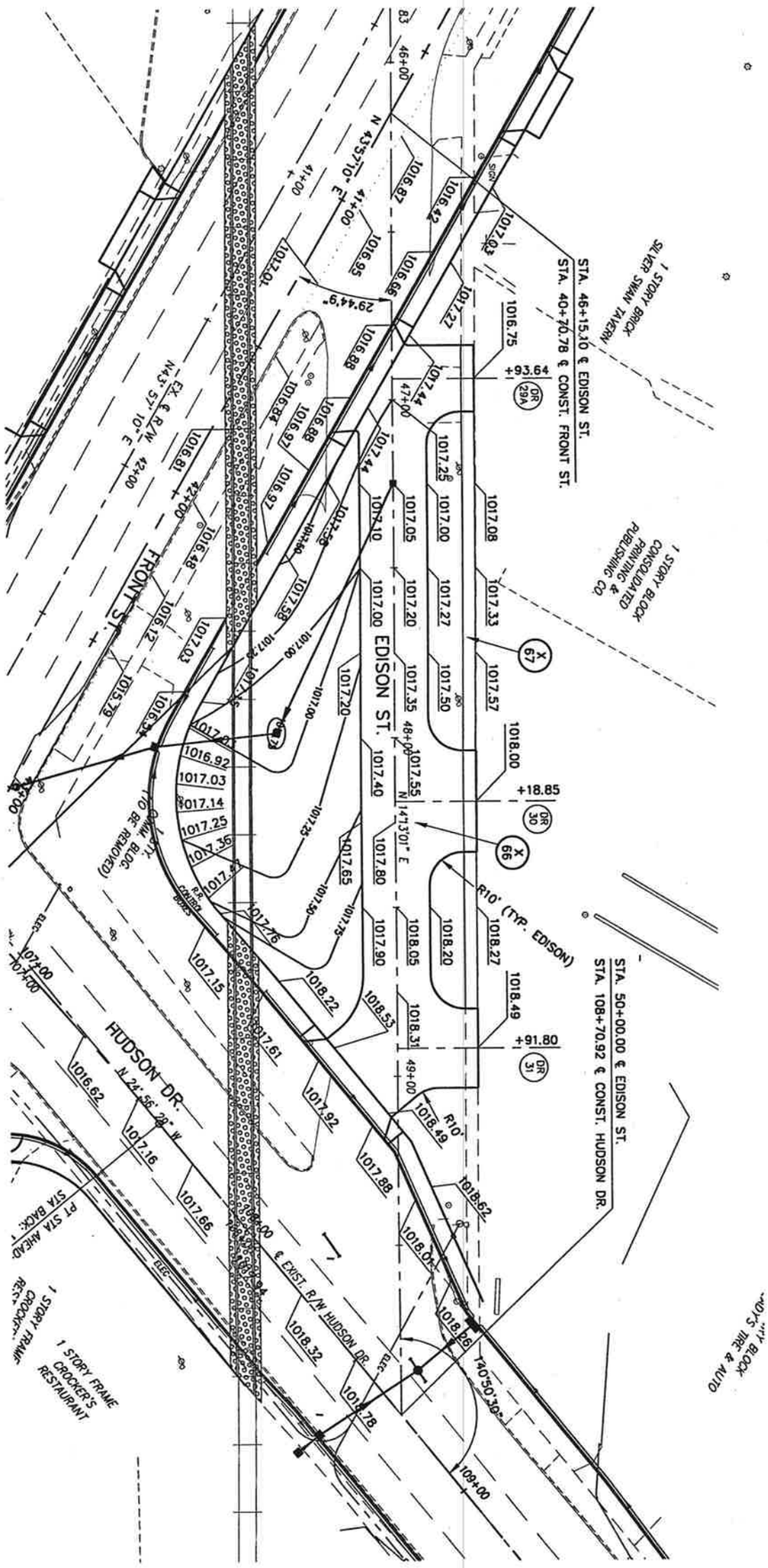
J:\PROJ1\7036100\ROADWAY\70361GMG.DWG User: jsnB1152 Oct 16, 2002 - 2:44pm

(IN FEET)
1 inch = 20 ft.

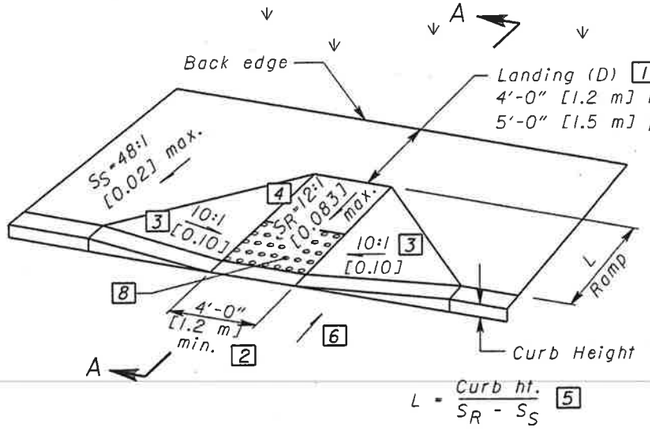
CALCULATED SCW
CHECKED JAN

PAVEMENT DETAILS
VINCENT STREET AND FRONT STREET

SUM - 59-4.93

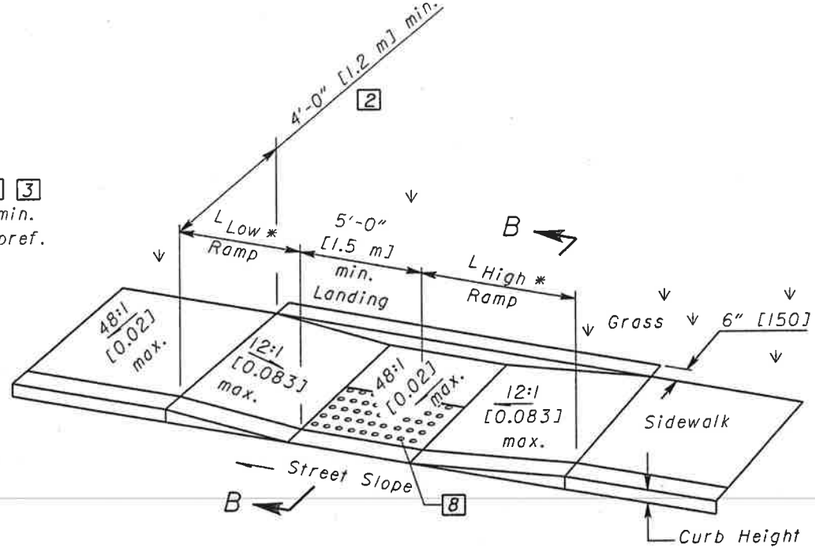


17 / 67	SUM - 59-4.93	PAVEMENT DETAILS EDISON STREET	CALCULATED DET CHECKED JAN	20 0 10 20 (IN FEET) 1 inch = 20 ft.



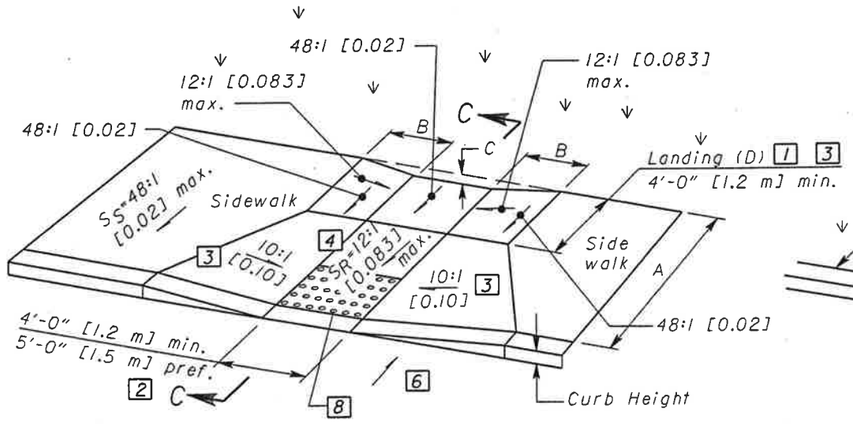
See Sht. 3/3 for SECTION A-A

PERPENDICULAR CURB RAMP DETAIL



See Sht. 3/3 for SECTION B-B

PARALLEL CURB RAMP DETAIL (DOUBLE)

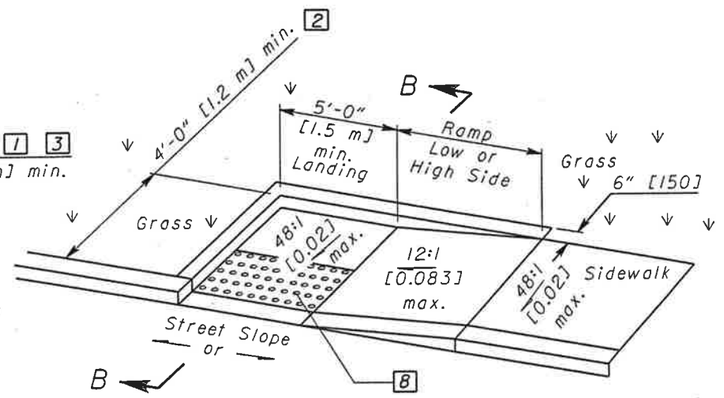


See Sht. 3/3 for SECTION C-C

COMBINED CURB RAMP DETAIL

$B = C / 0.083$

$C = [\text{Curb ht.} + A(S_S)] - [(A-D)S_R + D(0.02)]$



See Sht. 3/3 for SECTION B-B

PARALLEL CURB RAMP DETAIL (SINGLE)

Street Slope	Ramp Length @ 1"/ft [0.083]	
	$L_{LOW\ SIDE}$ *	$L_{HIGH\ SIDE}$ *
0.01	5'-5" [1.6 m]	6'-10" [2.1 m]
0.02	4'-10" [1.5 m]	7'-11" [2.4 m]
0.03	4'-5" [1.3 m]	9'-5" [2.9 m]
0.04	4'-1" [1.2 m]	11'-8" [3.6 m]
0.05	3'-9" [1.1 m]	15'-2" [4.6 m]
* Measured along the back of a 6" [150] high curb.		

$$L_{HIGH} = \frac{\text{Curb ht.}}{0.083 - \text{Street Slope}}$$ 7

$$L_{LOW} = \frac{\text{Curb ht.}}{0.083 + \text{Street Slope}}$$ 7

LEGEND

1. May be reduced to 3'-0" [915] in existing sidewalks if the landing is unconstrained along the back edge.
2. May be reduced to 3'-4" [1.02 m] in existing sidewalks to better fit the walk configuration or where site conditions are restricted by narrow walks, pole foundations, drainage inlets, etc. The width may be tapered.
3. Where landing width (D) has been reduced to 3'-0" [915] the flared sides shall have a maximum slope of 12:1 [0.083].

   Flared sides are not required where the edges of a curb ramp are protected by landscaping or other barriers to travel by wheel chair users or pedestrians across the edge of the curb ramp. However, if the flared sides are used in these areas, they may be of any slope.
4. The slope of the ramp toward the curb is preferred to be 12:1 [0.083] or flatter related to the horizontal, but the maximum slope shall be 12:1 [0.083] relative to the existing or proposed walk slope.

   In existing sidewalks, where the maximum ramp slope (S_R) is not feasible, it may be reduced as follows:

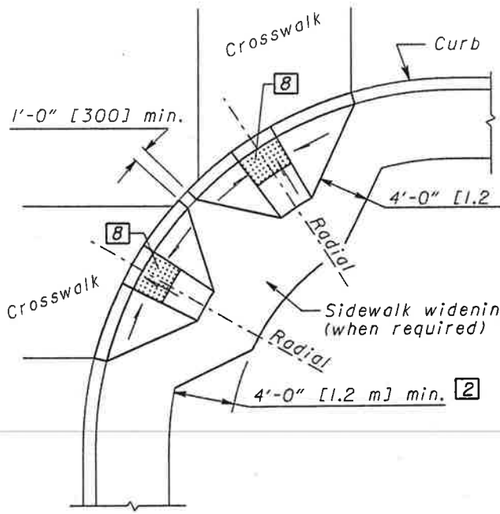
   A) 10:1 [0.10] for a max. rise of 6" [150],
   B) 8:1 [0.125] for a max. rise of 3" [75],
   C) 6:1 [0.167] over a max. run of 2'-0" [610] for historic areas where a flatter slope is not feasible.
5. The minimum length of a perpendicular ramp is 6' [2.0 m] from the back of a 6" [150] curb and may be increased where feasible to obtain a flatter ramp slope or to better blend with the walk configuration.
6. Gutter counter slopes at the foot of perpendicular curb ramps should not exceed 20:1 [0.05] over a distance of 2'-0" [610] from the curb.
7. Dimensions derived by equation are nominal. Construct ramps to meet required slopes and existing conditions.
8. Detectable Warnings (truncated domes) are to be installed in the location shown. Dimensions of the domes are 24" [610] from the back of the curb by the width of the ramp. See NOTES on sheet 3.

7-12-02

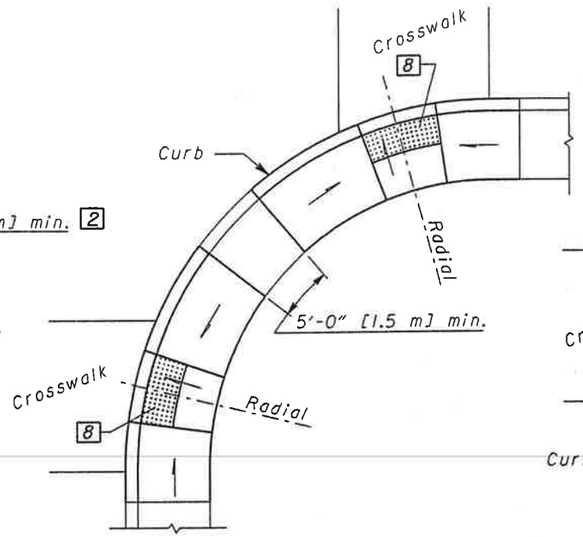
CURB RAMPS WITH TRUNCATED DOMES

SUM-59-4.93

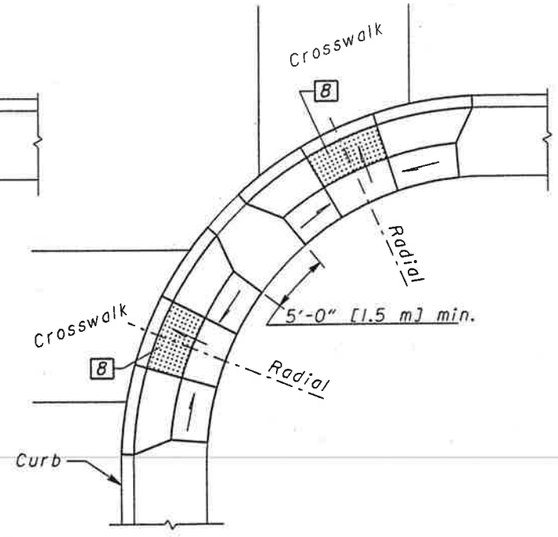
97A
171



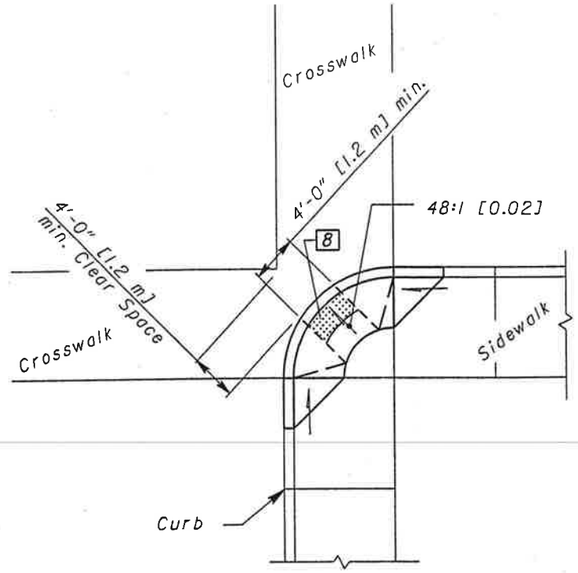
DESIGN A
PERPENDICULAR RAMP



DESIGN B
PARALLEL RAMP



DESIGN C
COMBINATION RAMP



DESIGN D
DIAGONAL RAMP

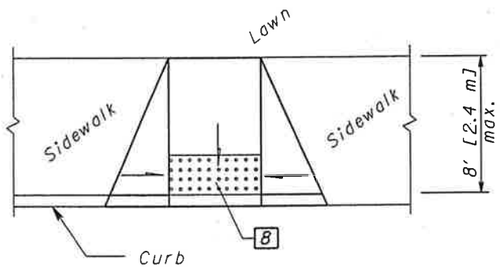
Use in existing walks only and when site constraints prohibit other designs. The diagonal ramp may be perpendcular, parallel or combination.

Avoid using where curb radii are less than 20'-0" [6.0 m].

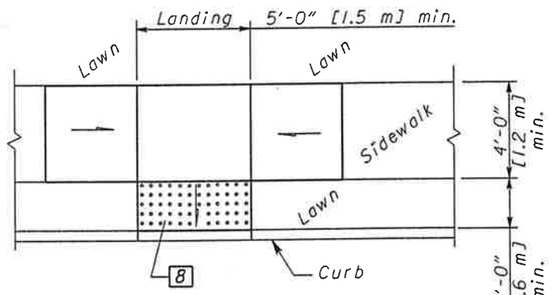
CORNER CURB RAMP DESIGNS

(See Curb Ramp Details on Sht. 1/3 for additional requirements.)

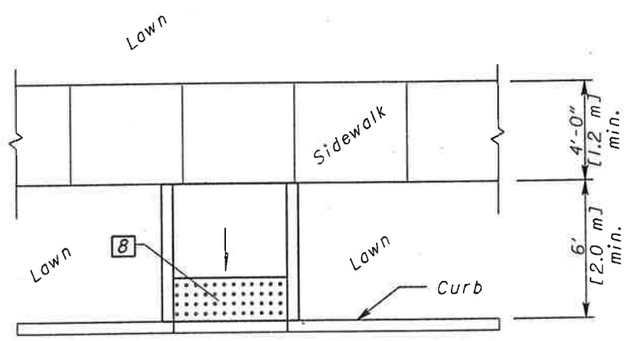
For LEGEND, See sheet 1.



DESIGN E
PERPENDICULAR RAMP



DESIGN F
PARALLEL RAMP



DESIGN G
PERPENDICULAR RAMPS
w/o FLARES

MID BLOCK CURB RAMP DESIGNS

(See Curb Ramp Details on Sht. 1/3 for additional requirements.)

7-12-02

CURB RAMPS WITH TRUNCATED DOMES

SUM-59-4.93

97B
171

NOTES

SURFACE TEXTURE: Texture of concrete surfaces shall be obtained by coarse brooming transverse to the ramp slopes and shall be rougher than adjacent walk.

TRUNCATED DOMES: Install detectable warnings (truncated domes) for a distance of 24" [610] from the back of the curb for the entire width of the ramp opening as shown on details on Sheet 1.

Pavers will meet ASTM C 902 Class SX, Type I, or C 936, or C 1272 Type R.

Acceptable manufacturers and products are:

1) Whitacre-Greer Fireproofing Company,
   1400 S. Mahoning Ave, Alliance, OH, 44601, (800) WG PAVER
   ADA Paver, 4"x8"x2-1/4", Clear Red (Rustic) #30.

2) Hanover Architectural Products,
   240 Bender Rd., Hanover, PA. 17331, (717) 637-0500
   Detectable Warning Paver, 12"x12"x2", or 24"x24"x2",
   Red or Quarry Red.

3) Endicott Clay Products,
   PO Box 17, Fairbury, NE, 68352, (402) 729-5804
   Handicap Detectable Warning Paver,
   4"x8"x2-1/4", Red Blend.

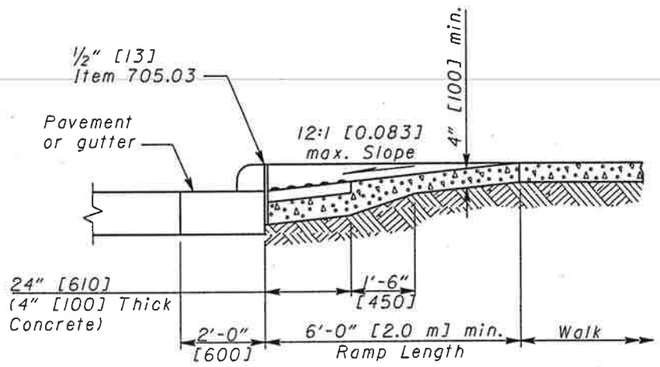
Pavers will laid on top of a 4" [100] unreinforced concrete base. Setting bed and joints to be mortared in accordance with manufacturer's instruction, or with a maximum 1/2" [13] thick bed of latex modified cement mortar. Mortar joints to a width not greater than 5/32" [4] and not less than 1/16" [1.5]. Pavers shall not be directly touching each other unless they have spacing bars.

Mortared joints are to be flush with top surface and struck so as to give a smooth surface. Pavers shall be laid such that joints are level with adjoining joints so as to provide a smooth transition from brick to brick and brick to concrete surface.

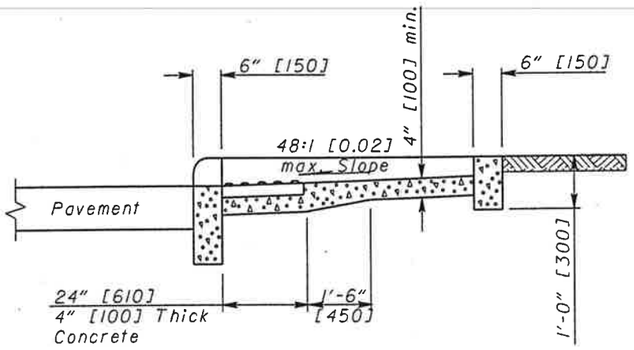
The surface of any two adjacent units should not differ by more than 1/8" [3] in height. Bricks shall be placed in a running bond pattern. Face of all brick shall be clean of cement and protected so as to avoid chipping during constructionn.

EXPANSION JOINTS: shall be provided in the curb ramp as extensions of walk joints and consistent with Item 608.03 requirements for a new concrete walk. A 1/2" [13] Item 705.03 expansion joint filler shall be provided around the edge of ramps built in existing concrete walk. Lines shown on this drawing indicate the ramp edge and slope changes and are not necessarily joint lines.

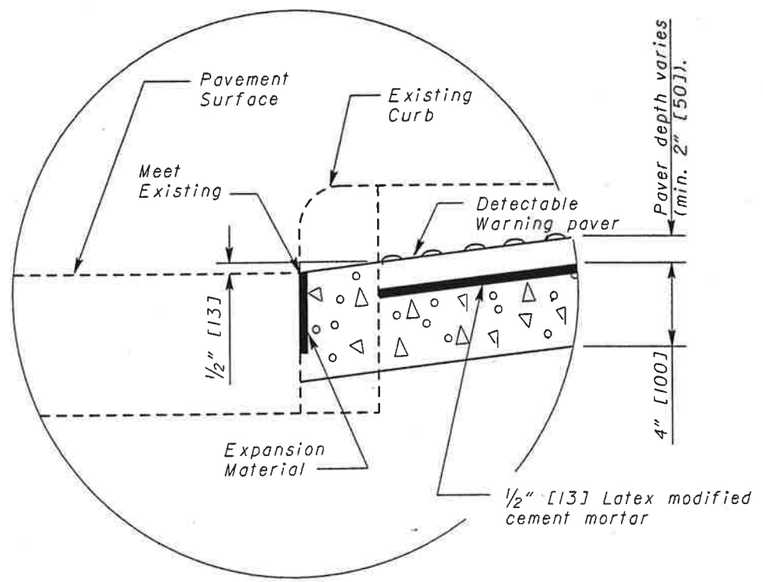
PAYMENT: Walk and curb, Items 608 and 609, shall be measured through the curb ramp area paid for under their respective Items. **Item 608 - Curb Ramp, As Per Plan, Each** constructed in new curb and walk shall include the cost of any additional materials and installation (including truncated domes), grading, forming and finishing. **Item 608 - Curb Ramp. As Per Plan, Square Foot [Meter],** constructed in existing curb and walk shall include the cost of furnishing and installing all materials (including truncated domes), grading, forming, and finishing of the curb and walk of the curb ramp. Removal of existing curb and walk shall be paid for under Item 202.



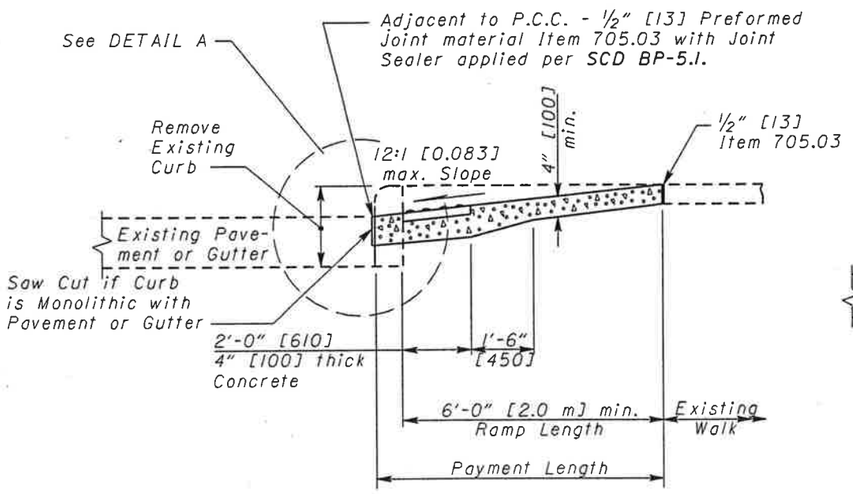
SECTION A-A
NORMAL DETAIL
See Sheet 1 of 3.
(Gutter shown)



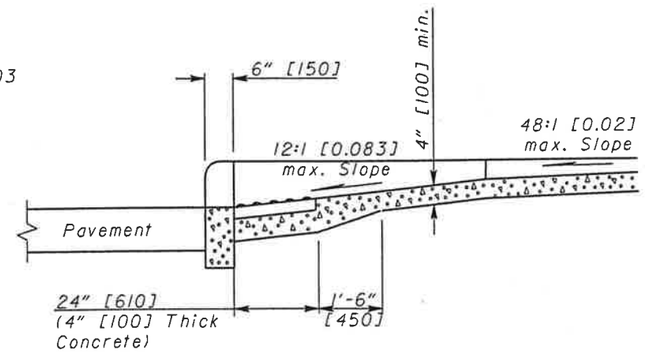
SECTION B-B
See Sheet 1 of 3.



DETAIL A



SECTION A-A
EXISTING WALK DETAIL
See Sheet 1 of 3.



SECTION C-C
See Sheet 1 of 3.

7-12-02

CURB RAMPS WITH TRUNCATED DOMES

SUM-59-4.93

97C
171

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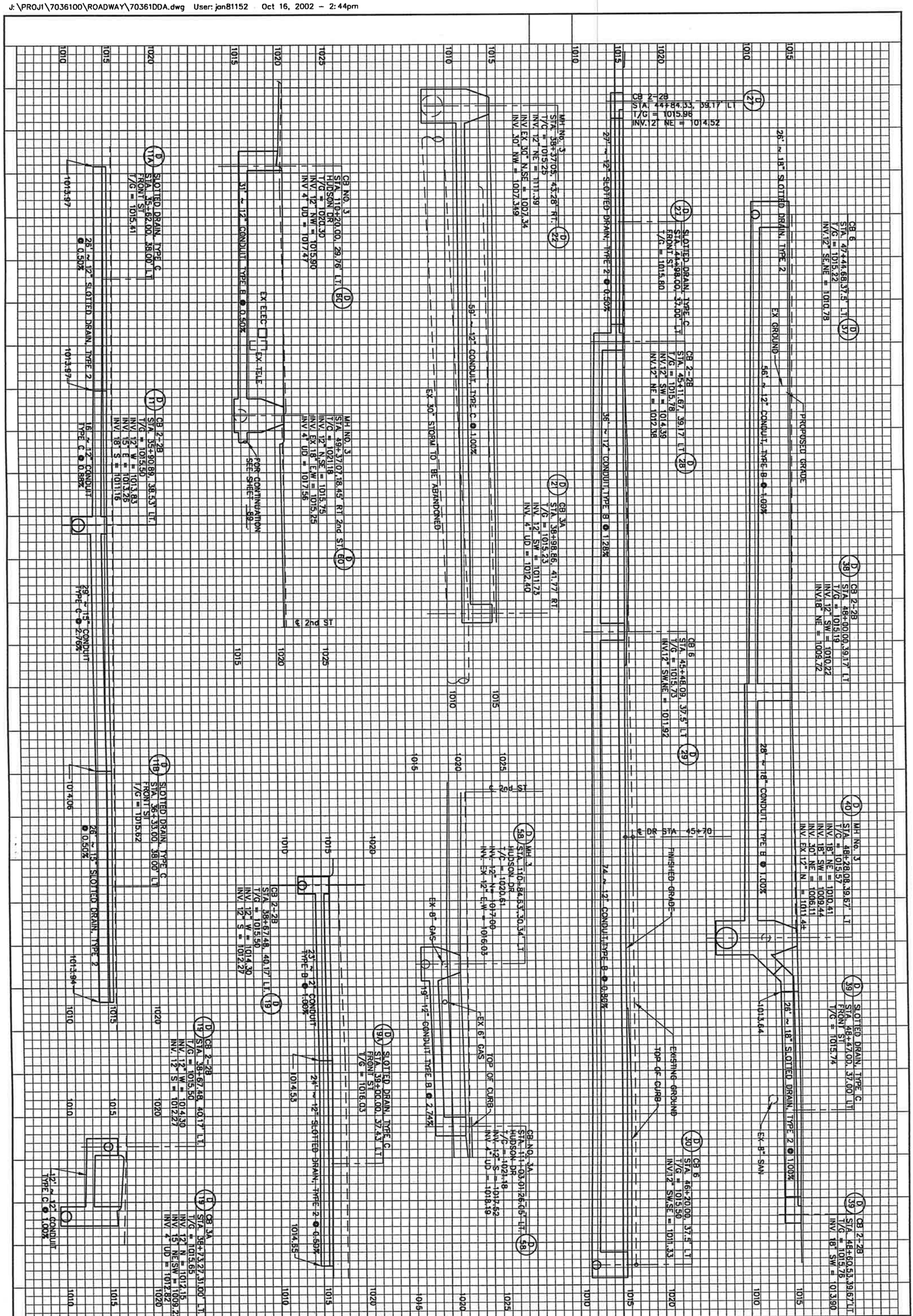
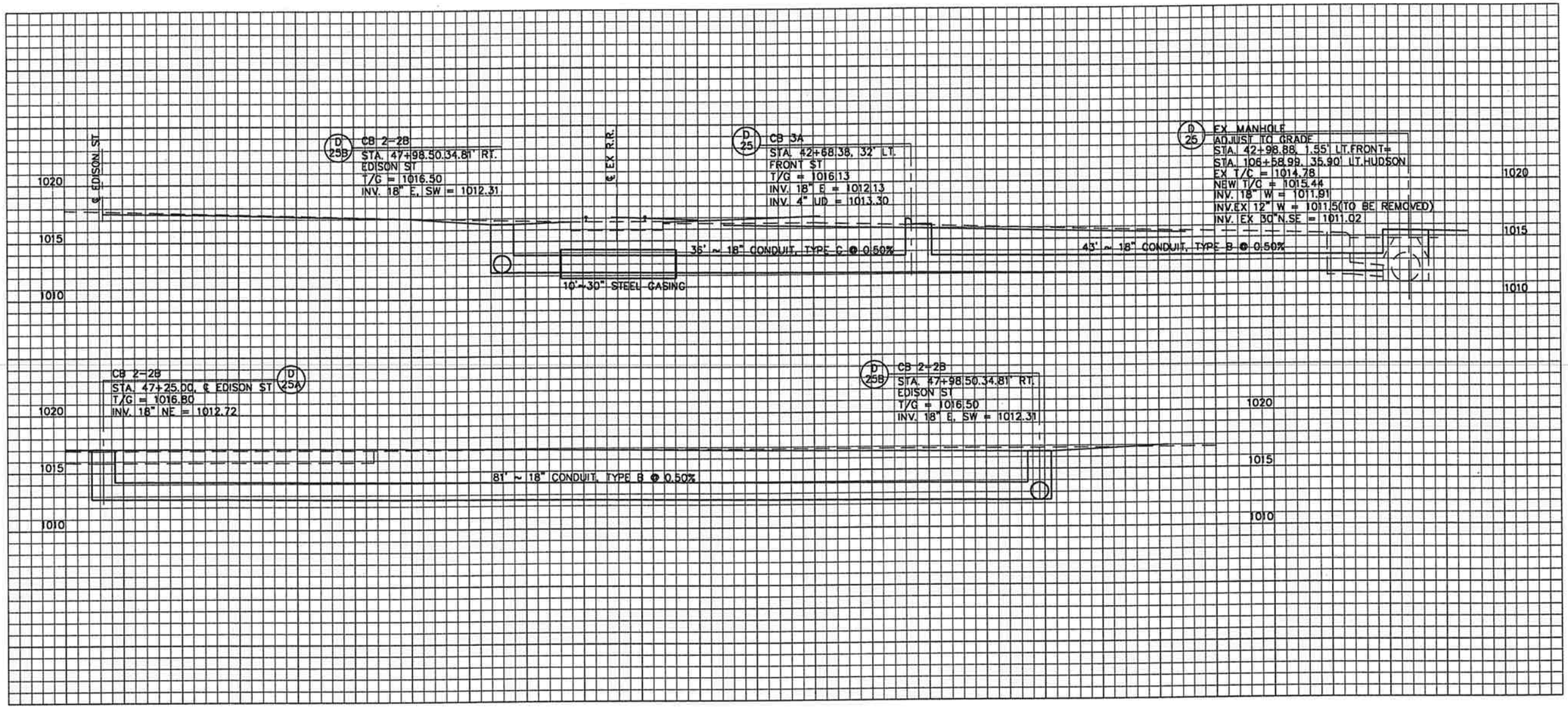
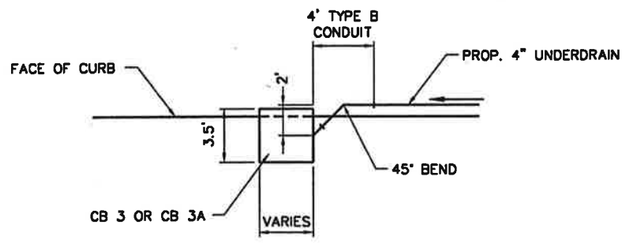
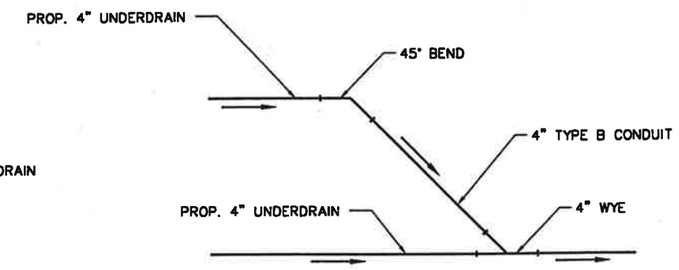


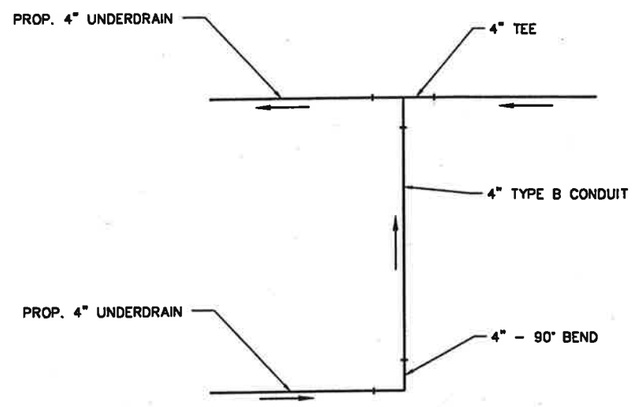




UNDERDRAIN OUTLET DETAIL "B"
N.T.S.



UNDERDRAIN OUTLET DETAIL "A"
N.T.S.



UNDERDRAIN OUTLET DETAIL "C"
N.T.S.

CALCULATED | CHECKED

DRAINAGE PROFILES AND UNDERDRAIN DETAILS

SUM - 59-4.93

99
171

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SHEET NO.	REF. NO.	STATION TO STATION	SIDE	638																SPECIAL		
				4" WATERMAIN, DUCTILE IRON PIPE WITH PUSH-ON JOINTS, ANSI CLASS 53	6" WATERMAIN, DUCTILE IRON PIPE WITH PUSH-ON JOINTS, ANSI CLASS 53	6" WATERMAIN, DUCTILE IRON PIPE WITH PUSH-ON JOINTS & RESTRAINED MECHANICAL JOINT FITTINGS, ANSI CLASS 52	8" WATERMAIN, DUCTILE IRON PIPE WITH PUSH-ON JOINTS, ANSI CLASS 53	18" STEEL PIPE ENCASEMENT, BORED OR JACKED	6" GATE VALVE AND VALVE BOX	8" GATE VALVE AND VALVE BOX	12" GATE VALVE AND VALVE BOX	16"x 8" TAPPING SLEEVE, VALVE AND VALVE BOX	6" FIRE HYDRANT	FIRE HYDRANT REMOVED	WATER VALVE ADJUSTED TO GRADE	3/4" COPPER SERVICE BRANCH	1" COPPER SERVICE BRANCH	1 1/2" COPPER SERVICE BRANCH	2" COPPER SERVICE BRANCH	ABANDON EX. 4" WATERMAIN, AS PER PLAN	ABANDON EX. 6" WATERMAIN, AS PER PLAN	REMOVE EX. LINE VALVE, AS PER PLAN
				FEET	FEET	FEET	FEET	FEET	EACH	EACH	EACH	EACH	EACH	EACH	EACH	FEET	FEET	FEET	FEET	FEET	FEET	EACH
		FRONT STREET																				
104	W1	31+02.00 TO 31+50.00	LT				48			1											48	
104	W2	31+02.00 TO 31+50.00	LT																			
105	W3	31+50.00 TO 35+50.00	LT				400			1											400	1
105	W4	31+50.00 TO 35+50.00	LT													14.2						
105	W5	34+49.70	LT																			1
105	W6	34+17.44 TO 34+17.36	LT		65				1													
106	W7	35+50.00 TO 40+50.00	LT				500			2											500	2
106	W8	35+50.00 TO 40+50.00	LT														46.7					
106	W9	35+73.07	RT														23.2					
106	W10	35+73.98	LT						1				1	1								
106	W11	37+63.53	LT			30					1											
106	W12	38+22.53	LT												1							
106	W13	38+22.38	RT															47.6				
106	W14	39+04.57	RT														36.3					
106	W15	39+30.08	LT																			
107	W16	40+50.00 TO 43+10.34	LT&RT				265	75													265	2
107	W17	40+50.00 TO 43+10.34	LT																			
107	W18	40+98.80	LT	10									1	1								
107	W19	42+68.36	LT			35			1						2							
107	W20	43+10.34 TO 45+50.00	RT										1	1								
107	W21	44+24.84	RT			15			1													
108	W22	46+23.53	RT			20			1				1	1								
108	W23	49+27.16	RT			10			1				1	1								
108	W24	50+39.17	RT												1							
109	W25	52+28.43	RT			15			1				1	1								
109	W26	53+04.91	LT			11			1				1	1								
109	W27	55+16.39 TO 55+50.00	RT				34														36	1
109	W28	55+16.39 TO 55+11.22	LT&RT																		39	
109	W29	55+11.22 TO 55+50.00	LT																			
110	W30	55+50.00 TO 57+12.37	RT				165														110	
110	W31	55+50.00 TO 56+58.39	LT												1							
110	W32	57+12.37	RT																			
		HUDSON DRIVE																				
111	W33	106+59.49 TO 110+00.00	RT				341	65											350			1
111	W34	106+59.49 TO 110+00.00	RT															18.1				
111	W35	107+57.82	RT													51.8						
111	W36	109+11.70	LT														51.8					
111	W37	109+18.60	LT														12.1					
111	W38	109+19.55	RT													51.9						
111	W39	109+93.66	LT																			
112	W40	110+00.00 TO 112+77.59	LT&RT		8		277												266			
112	W41	110+00.00 TO 112+65.53																			168	
112	W42	110+98.00 TO 112+65.63															19.3					
112	W43	110+38.06	RT														19.3					
112	W44	110+50.41	RT																			
112	W45	111+03.00 TO 110+98.00	LT&RT		40																	
112	W46	111+14.63	RT				10										14.1					
112	W47	111+81.55	RT														15.0					
112	W48	112+18.47	RT														38.4					
112	W49	112+47.90	LT																			
SUBTOTAL (THIS SHEET)				10	113	136	2040	140	8	4	1	1	7	7	4	118	276	48	18	616	1566	8
TOTAL (CARRIED TO GEN. SUMMARY)				10	113	136	2040	140	8	4	1	1	7	7	4	118	276	48	18	616	1566	8

CALCULATED CJM
CHECKED MJB

FRONT STREET AND HUDSON DRIVE WATERWORKS
SUBSUMMARY

SUM - 59-493

SHEET NO.	REF. NO.	STATION TO STATION	SIDE	202	603		604		638		SPECIAL
				MANHOLE REMOVED, SANITARY	8" CONDUIT, TYPE B, FOR SANITARY	18" CONDUIT, TYPE B, FOR SANITARY	SANITARY MANHOLE	MANHOLE RECONSTRUCTED TO GRADE	18" STEEL PIPE ENCASEMENT, BORED OR JACKED	30" STEEL PIPE ENCASEMENT, BORED OR JACKED	CONCRETE ENCASEMENT, AS PER PLAN
				EACH	FEET	FEET	EACH	EACH	FEET	FEET	FEET
		FRONT STREET									
104	SA1	31+24.59 TO 31+50.00	RT			26					
104	SA2	31+24.59	RT	1			1				
105	SA3	31+50.00 TO 34+25.34	RT			275					
105	SA4	34+25.34	RT				1				
105	SA5	34+25.34 TO 34+25.16	LT&RT		45						
105	SA6	34+25.16	LT					1			
105	SA7	34+25.34 TO 35+50.00	RT	1		125					
106	SA8	35+50.00 TO 37+83.39	RT			235					
106	SA9	37+83.39	RT				1				
106	SA10	37+83.39 TO 38+24.62	LT&RT		76						
106	SA11	38+24.62	LT				1				
106	SA12	37+83.39 TO 38+20.20	RT			38					
106	SA13	38+20.20	RT.	1			1				
106	SA14	38+20.20 TO 40+50.00	RT	1		229					
107	SA15	40+50.00 TO 41+38.61	RT	1		87				75	
107	SA16	41+38.61	RT				1				
107	SA17	41+38.61 TO 43+14.22	RT			178					
107	SA18	43+14.22	RT	1			1				
107	SA19	43+14.22 TO 45+50.00	RT		235						
108	SA20	45+50.00 TO 47+15.03	RT		166						20
108	SA21	47+15.03	RT	1			1				
108	SA22	47+15.03 TO 48+46.58	RT		131						20
108	SA23	48+46.58	RT	1			1				
108	SA24	48+46.58 TO 48+45.57	LT&RT		46						
108	SA25	48+46.58 TO 50+50.00	RT		204						
109	SA26	50+50.00 TO 50+72.33	RT		22						
109	SA27	50+72.33	RT				1				
109	SA28	50+72.33 TO 52+98.08	RT		226						
109	SA29	52+98.08	RT	1			1				
109	SA30	52+98.08 TO 55+50.00	LT&RT		253						
110	SA31	55+50.00 TO 56+28.60	LT		81						
110	SA32	56+28.60	LT				1				
		HUDSON DRIVE									
111	SA33	106+47.49 TO 107+42.05	LT		96						
111	SA34	107+42.05	LT				1				
111	SA35	107+42.05 TO 108+46.43	LT		105				65		
111	SA36	108+46.43	LT				1				
111	SA37	108+46.43 TO 110+00.00	LT		154						
112	SA38	110+00.00 TO 110+53.64	LT		54						
112	SA39	110+53.64	LT	1			1				
112	SA40	110+53.64 TO 110+79.16	LT		65						
112	SA41	110+79.16	LT					1			
112	SA42	110+53.64 TO 110+73.67	LT&RT		50						
112	SA43	110+73.67	RT				1				
112	SA44	110+53.64 TO 113+12.80	LT		261						
112	SA45	113+12.80	LT				1				
112	SA46	113+12.80 TO 113+75.37	LT		64						
112	SA47	113+75.37	LT					1			
SUBTOTAL (THIS SHEET)				10	2334	1193	17	3	65	75	40
TOTAL (CARRIED TO GEN. SUMMARY)				10	2334	1193	17	3	65	75	40

NOTE: SANITARY LATERALS NOT INCLUDED IN SUBSUMMARY. SEE WATERLINE AND SANITARY SEWER NOTES: SHEETS 102 – 103.

CALCULATED CJM
CHECKED MJB

FRONT STREET AND HUDSON DRIVE SANITARY SEWER SUBSUMMARY

SUM - 59-4.93

101
171

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CALCULATED CJM | CHECKED MJB

WATERLINE NOTES

1. ALL WATERLINES AND APPURTENANCES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF CUYAHOGA FALLS CONSTRUCTION SPECIFICATIONS, 1976 EDITION. WATER MAIN PIPE SHALL BE CLASS 53, CEMENT LINED (AWWA C-104) POLYETHYLENE ENCASED (AWWA C-105), DUCTILE IRON PIPE (AWWA C-151) WITH PUSH-ON RUBBER GASKET TYPE JOINTS (AWWA C-110), EXCEPT AS NOTED. MECHANICAL JOINTS (AWWA C-110) WITH STAINLESS STEEL TYPE 316 BOLTS AND NUTS SHALL BE USED FOR ALL FITTINGS, VALVES, AND HYDRANTS. TIE RODS OR POURED CONCRETE THRUST BLOCKS MUST BE CONSTRUCTED WHERE NECESSARY. ALL VALVES SHALL BE GATE VALVES WITH RESILIENT SEATING (AWWA C-509), SHALL OPEN LEFT AND SHALL HAVE BOXES.

2. THE CONTRACTOR SHALL NOTIFY THE OHIO UTILITIES PROTECTION SERVICE (1-800-362-2764), THE CITY OF CUYAHOGA FALLS ENGINEERING DEPARTMENT AT (330) 971-8180 AND THE CITY OF CUYAHOGA FALLS ELECTRIC SERVICES DEPARTMENT AT (330) 971-8045 AT LEAST 48 HOURS PRIOR TO BEGINNING CONSTRUCTION.

3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE CAUSED DURING CONSTRUCTION TO EXISTING AND NEWLY CONSTRUCTED UTILITIES, STREETS, WALKS, AND ALL OTHER APPURTENANCES REPAIR OF DAMAGED AREAS SHALL BE AT THE CONTRACTORS EXPENSE.

4. NO TAPS FOR WATER SERVICES SHALL BE MADE UNTIL AFTER THE MAIN LINE HAS BEEN TESTED AND STERILIZED PER SECTION 801.104 TO SECTION 801.1108 OF THE CITY OF CUYAHOGA FALLS CONSTRUCTION SPECIFICATIONS, 1976 EDITION.

5. THE CONTRACTOR SHALL EXCAVATE ALL NEW TAPS AND NEW CURB BOX CONNECTIONS AND SHALL TRENCH OR PUSH THE NEW COPPER SERVICES BETWEEN THE NEW TAP AND THE NEW CURB BOX. ALL EXCAVATION SHALL BE BACKFILLED BY THE CONTRACTOR. PRICE PER LINEAR FOOT FOR WATER SERVICES SHALL INCLUDE; EXCAVATION AND GRANULAR BACKFILL.

6. THE CONTRACTOR SHALL FURNISH ALL MATERIALS FOR THE NEW WATER SERVICES INCLUDING TAPPING SADDLES, CORPORATION STOPS, SERVICE STOPS AND SERVICE BOXES. THE CUYAHOGA FALLS WATER DEPARTMENT SHALL PERFORM ALL TAPS ON THE MAIN LINE AND MAKE ALL CONNECTIONS TO EXISTING CURB VALVES OR HOUSE SERVICES.

7. ANY SIDEWALK THAT MUST BE REMOVED IN ORDER TO INSTALL A WATER SERVICE TAP SHALL REPLACED BY THE CONTRACTOR.

8. ANY EXISTING HYDRANT VALVES, VALVE BOXES, METER PITS, SERVICE LINES, CURB BOXES OR WATER MAINS THAT ARE DAMAGED OR MUST BE ADJUSTED AND/OR MOVED MUST BE REPAIRED, ADJUSTED, MOVED AND/OR REPLACED AT THE CONTRACTOR'S EXPENSE.

9. THE BID PRICE FOR FIRE HYDRANT ASSEMBLIES SHALL BE BROKEN DOWN INTO THREE (3) UNIT BID PRICES WHICH INCLUDE:
(1) FIRE HYDRANT:
(2) SIX (6) INCH GATE VALVE WITH BOX AND LID:
(3) SIX (6) INCH PIPE RUN TREATED ON EACH END WITH MEGALUG JOINTS OR EQUIVALENT. PIPING COST SHALL ALSO INCLUDE GRANULAR BACKFILL AS PER THE CITY OF CUYAHOGA FALLS SPECIFICATIONS.

10. FIRE HYDRANTS SHALL BE AMERICAN DARLING B-84-B OR MUELLER A-423 OR KENNEDY K-81-A. ALL HYDRANTS INSTALLED AS PART OF THIS PROJECT SHALL BE FROM THE SAME MANUFACTURER. VALVE OPENINGS SHALL BE 6 INCHES. ALL HOSE CONNECTIONS SHALL HAVE NATIONAL STANDARD THREADS. HYDRANTS SHALL BE PLACED A MINIMUM OF THREE FEET FROM FACE OF CURB AND BEHIND THE WALK WHERE RIGHT-OF-WAY ALLOWS. THE CONTRACTOR SHALL RECEIVE APPROVAL ON THE LOCATIONS FROM THE ENGINEER PRIOR TO INSTALLATION. THE LOCATIONS SHALL BE FREE FROM OBSTRUCTIONS THAT WOULD PREVENT EFFECTIVE USE OF THE HYDRANT.

11. ALL VALVES ARE TO BE LEFT OPEN.

12. FOR THE PROPOSED TRENCHES LOCATED UNDER EXISTING OR PROPOSED PAVEMENT AND ALL PROPOSED TRENCH AREAS BELOW A 1:1 SLOPE LINE STARTING AT THE TOP OF THE PROPOSED OR EXISTING CURB LINE SHALL BE FILED WITH COMPACTED 304. SUITABLE ON SITE MATERIAL MAY BE USED ABOVE THE 1:1 SLOPE LINE. THE MATERIAL SHALL BE COMPACTABLE AND FREE FROM STONES LARGER THAN TWO (2) INCHES, RUBBISH, BIODEGRADABLE OR FROZEN MATERIAL. THE METHOD OF BACKFILLING SHALL BE DIRECTED BY THE CITY OF CUYAHOGA FALLS AND SHALL CONFORM TO SECTION 603.08- BACKFILLING FOR CONDUIT, AS SPECIFIED IN THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATION, LATEST EDITION.

13. THE CONTRACTOR SHALL MAINTAIN A SAFE WATER SUPPLY TO ALL CUSTOMERS AFFECTED BY THIS PROJECT. ADEQUATE FIRE PROTECTION TO ALL SURROUNDING BUSINESSES MUST BE MAINTAINED AT ALL TIMES.

14. A 4.0' MINIMUM HORIZONTAL CLEARANCE MUST BE MAINTAINED FROM THE EDGE OF ALL WATER MAIN PIPE TO THE EDGE OF THE STORM SEWER PIPE.

WATERLINE NOTES (CONT.)

15. A 10.0' MINIMUM HORIZONTAL CLEARANCE MUST BE MAINTAINED FROM THE EDGE OF THE WATER MAIN PIPE TO THE EDGE OF THE SANITARY SEWER.

16. A 12" VERTICAL CLEARANCE MUST BE MAINTAINED FROM THE EDGE OF ALL WATERLINES TO THE EDGE OF ALL PROPOSED STORM SEWERS AND/ OR INLET LEAD PIPE WHERE THEY CROSS. AN 18" MINIMUM VERTICAL CLEARANCE MUST BE MAINTAINED FROM THE EDGE OF ALL WATER MAIN PIPE TO THE EDGE OF ALL SANITARY SEWER PIPE WHERE THEY CROSS.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR ANY UNANTICIPATED ADJUSTMENT OF THE WATER MAIN AND FOR USE AS DIRECTED BY THE ENGINEER.

ITEM 638 - 8" WATER MAIN, DUCTILE IRON PIPE, CLASS 53 MECHANICAL JOINTS AND FITTINGS	200 FEET
ITEM 638 - WATER VALVE ADJUSTED TO GRADE	3 EACH

17. PRICES BID PER FOOT FOR ALL PIPES ARE TO INCLUDE EXCAVATION AND BACKFILL COMPLETED IN PLACE REGARDLESS OF SOIL, ROCK, OR WEATHER CONDITIONS.

18. ALL CURB STOPS AND CURB BOXES LOCATED WITHIN THE PROPOSED PAVEMENT LIMITS SHALL BE RELOCATED BEHIND THE CURB. ALL CURB BOXES LOCATED OUTSIDE THE PROPOSED PAVEMENT LIMITS SHALL BE ADJUSTED TO GRADE. THE LOCATIONS OF ALL SERVICES MAY NOT BE SHOWN ON THE PLANS. THE CONTRACTOR SHALL DETERMINE THE LOCATION OF ALL SERVICES IN THE FIELD. UNANTICIPATED SERVICE ADJUSTMENTS SHALL BE PERFORMED UNDER THE FOLLOWING CONTINGENCY QUANTITIES:

ITEM 638 - METER AND CHAMBER REMOVED AND RESET	10 EACH
ITEM 638 - SERVICE BOX ADJUSTED TO GRADE	7 EACH
ITEM 638 - 3/4" COPPER SERVICE BRANCH	150 FEET
ITEM 638 - 1" COPPER SERVICE BRANCH	200 FEET
ITEM 638 - 1-1/2" COPPER SERVICE BRANCH	50 FEET
ITEM 638 - 2" COPPER SERVICE BRANCH	50 FEET

19. ALL SALVAGEABLE VALVES AND HYDRANTS THAT ARE REMOVED THROUGHOUT THIS PROJECT ARE THE PROPERTY OF THE CITY OF CUYAHOGA FALLS AND SHALL BE RETURNED TO THE CITY ENGINEERS.

20. ABANDONMENT OF ALL WATER MAINS SPECIFIED IN THE PLANS SHALL BE DONE AS PER DETAIL SHEET 113.

OEPA NOTES

1 - REPLACEMENT OF STORM DRAINS SHALL BE IN ACCORDANCE WITH O.D.O.T. MATERIAL AND CONSTRUCTION SPECIFICATIONS, SECTION 603. NO PLASTIC PIPE ALLOWED.

2 - ALL CONSTRUCTION SHALL CONFORM TO THE DEPT. OF LABOR, BUREAU OF LABOR STANDARDS SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION AND THE CONTRACT WORK HOURS AND SAFETY ACT. (CHAPTER XVII TITLE C&R, PART 1926 AND ALL ADDITION AND REVISIONS)

3 - ALL WATER LINE INSTALLATION AND PRESSURE TESTING SHALL FOLLOW AWWA C-600 SPECIFICATIONS.

4 - ALL WATER LINE DISINFECTION SHALL FOLLOW AWWA C-651 SPECIFICATIONS.

SANITARY SEWER NOTES

1. ALL SANITARY SEWERS CONTAINED HEREIN ARE TO BE PUBLICLY OWNED AND MAINTAINED.

2. ALL SANITARY SEWERS AND APPURTENANCES SHALL BE CONSTRUCTED IN STRICT ACCORDANCE WITH CURRENT STANDARDS AND SPECIFICATIONS OF THE CUYAHOGA FALLS ENGINEERING DEPARTMENT (CFE) AND THE OHIO ENVIRONMENTAL PROTECTION AGENCY (OEPA).

3. CUYAHOGA FALLS REGULATIONS PROHIBIT ROOF DRAINS, FOUNDATION DRAINS, AND OTHER CLEAN WATER CONNECTIONS TO THE SANITARY SEWER SYSTEM.

4. APPROVAL BY THE CFE OFFICE CONSTITUTES NEITHER EXPRESSED NOR IMPLIED WARRANTIES AS TO THE FITNESS, ACCURACY, OR SUFFICIENCY OF PLANS, DESIGNS OR SPECIFICATIONS.

5. THE DESIGN ENGINEER CERTIFIES THAT ALL UTILITIES IN EXISTING ROADS ARE SHOWN IF THEY APPEAR ON EXISTING RECORDS OR CAN BE OBSERVED ABOVE GROUND. ANY UNDERGROUND UTILITIES THAT ARE UNKNOWN TO THE DESIGN ENGINEER DUE TO THEIR CONCEALED NATURE CANNOT BE CERTIFIED.

6. ALL SANITARY SEWERS SHALL BE FLUSHED AND PASS THE AIR ACCEPTANCE TEST AS DESCRIBED IN ASTM D3212 PRIOR TO ACCEPTANCE BY CFE.

SANITARY SEWER NOTES (CONT.)

7. ALL SANITARY SEWERS SHALL BE COLOR FILMED BY THE OWNER AND FOUND TO BE FREE OF DEFECTS AND FOREIGN MATTER AND IN PROPER ALIGNMENT PRIOR TO FORMAL ACCEPTANCE BY THE CFE.

8. ALL SANITARY SEWER LATERALS SHALL BE EXTENDED TO NOT LESS THAN TEN (10) FEET INTO PROPERTY.

9. ALL SANITARY LATERALS SHALL BE LAID AT NO LESS THAN 1% GRADE.

10. ALL SANITARY SEWER MATERIALS SHALL CONSIST OF PVC PIPE A.S.T.M. D-3034 AND ALL SANITARY SEWER MATERIALS SHALL CONFORM TO CFE AND OEPA STANDARDS.

11. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ALL DAMAGE TO THE EXISTING SEWERAGE SYSTEM RESULTING FROM NONCONFORMANCE WITH THE CITY OF CUYAHOGA FALLS STANDARDS OR GENERAL NEGLIGENCE.

12. ALL MANHOLES SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C478 WITH JOINTS HAVING RESILIENT GASKETS CONFORMING TO ASTM C443. ALL MANHOLES SHALL BE SUPPLIED WITH SOLID LIDS EXCEPT IN EASEMENTS WHERE MANHOLE COVERS SHALL BE THE SOLID-LOCKING TYPE. WHERE STATED IN THE PLANS, MANHOLES SHALL BE SUPPLIED WITH WATERTIGHT LIDS MEETING THE APPROVAL OF THE CITY.

13. 12" GRADE ADJUSTMENT OF MANHOLES IS PERMITTED WITH GRADE RINGS. A MAXIMUM OF 2 COURSES OF BRICK IS PERMITTED IF NECESSARY. MAXIMUM ADJUSTMENT SHALL NOT EXCEED 12". A MINIMUM OF ONE GRADE RING IS REQUIRED.

14. WHERE INLET AND OUTLET PIPES CONNECT TO MANHOLES A FLEXIBLE WATERTIGHT JOINT, CONFORMING TO ASTM C923 AND APPROVED BY THE CUYAHOGA FALLS ENGINEERING DEPARTMENT, IS REQUIRED.

15. NO SEWER CONSTRUCTION WILL BE PERMITTED UNTIL SUCH TIME THAT THE PLANS ARE APPROVED BY THE CITY OF CUYAHOGA FALLS AND THE OEPA INCLUDING PAYMENT OF REVIEW AND "PERMIT TO INSTALL" FEES REQUIRED BY THE OEPA.

16. ANY NEW SEWER CONNECTED INTO EXISTING SANITARY MANHOLE SHALL BE BLOCKED WITH A PLUMBERS PLUG. THE PLUG SHALL BE CHAINED AND LOCKED TO THE MANHOLE STEPS. THIS PLUG SHALL REMAIN IN PLACE UNTIL FINAL ACCEPTANCE OF THE SANITARY SEWER IS MADE.

17. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST OF ALL TESTING AND PERMITS AS DIRECTED BY THE ENGINEER. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE IF ANY PERMITS MAY BE REQUIRED AND ACQUIRE SAME.

18. ALL SHOP DRAWINGS FOR SANITARY ITEMS SHALL BE SUBMITTED TO THE CITY OF CUYAHOGA FALLS ENGINEERING DEPARTMENT FOR REVIEW AND APPROVAL PRIOR TO PURCHASE AND INSTALLATION BY THE CONTRACTOR.

19. ALL INSPECTIONS AND TESTING SHALL BE DONE BY AN EXPERIENCED AND QUALIFIED FIRM ENGAGED IN THESE TYPES OF WORK AS APPROVED BY THE CITY OF CUYAHOGA FALLS ENGINEERING DEPARTMENT.

20. ALL PVC SEWERS SHALL PASS A DEFLECTION TEST. THE DEFLECTION TEST SHALL BE RUN AFTER THE FINAL BACKFILL HAS BEEN IN PLACE FOR MORE THAN THIRTY (30) DAYS. THE TEST SHALL BE PERFORMED WITHOUT A MECHANICAL PILLING DEVICE AND SHALL BE DONE IN THE PRESENCE OF A REPRESENTATIVE OF THE CITY OF CUYAHOGA FALLS ENGINEERING DEPARTMENT. TOTAL PIPE DEFLECTION SHALL NOT EXCEED 5%.

21. IF THE INSTALLATION FAILS TO MEET THE REQUIREMENTS OF ANY OF THESE TESTS AND/OR INSPECTIONS, THE CONTRACTOR SHALL REPAIR ALL DEFECTS AND RETEST THE INSTALLATION.

22. ALL SEWERS AND SERVICE LATERALS INSTALLED UNDERNEATH OR WITHIN 5 FEET OF EXISTING OR PROPOSED PAVEMENT SHALL BE BACKFILLED WITH APPROVED GRANULAR MATERIAL AND COMPACTED WITH A VIBRATORY PLATE COMPACTOR OR OTHER MACHINE-MOUNTED COMPACTION EQUIPMENT APPROVED BY THE CFE. THE MINIMUM COMPACTION REQUIREMENT SHALL CONFORM TO ODOT ITEM 203. COMPACTION TESTS WILL BE REQUIRED BY THE CFE AND SHALL BE PAID FOR BY THE CONTRACTOR.

23. BACKFILL MATERIAL IN ALL OTHER TRENCHES SHALL BE COMPACTED WITH MACHINE MOUNTED COMPACTION EQUIPMENT TO THE SATISFACTION OF THE CFE.

24. NO SLAG PRODUCTS SHALL BE PERMITTED FOR PIPE BEDDING, BACKFILL OR DRIVEWAY REPLACEMENT.

25. MATERIAL SPECIFICATIONS CALLED HEREIN AND ON THE PLANS REPRESENT THE MINIMUM REQUIRED FOR EACH APPLICATION. THE OWNER MAY REQUEST OR THE CONTRACTOR MAY DESIRE TO SUBSTITUTE ALTERNATE MATERIALS. ANY SUCH SUBSTITUTION MUST BE EQUIVALENT IN QUALITY TO THE MATERIAL CALLED FOR ON THE PLANS AND MUST BE APPROVED IN WRITING BY THE CITY OF CUYAHOGA FALLS ENGINEERING DEPARTMENT.

26. PREFORMED WYES ARE TO BE INSTALLED TO SERVICE EACH LOT

WATERLINE AND SANITARY SEWER NOTES

SUM - 59-493

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SANITARY SEWER NOTES (CONT.)

27. AFTER INSTALLING THE WYE BRANCH AND CONNECTION, THE END OF THE CONNECTION SHALL BE SEALED WITH AND AIR TIGHT PLUG AND THE PLUG SHALL BE PAINTED GREEN. THE END OF THE SANITARY CONNECTION SHALL BE MARKED WITH A 2"x 2" HARDWOOD STAKE EXTENDING VERTICALLY FROM THE END OF THE CONNECTION TO A POINT APPROXIMATELY 3 FEET ABOVE THE GROUND SURFACE WITH THE TOP PAINTED GREEN.

28. THE MATERIAL FOR ALL WYE BRANCHES, RISERS, AND CONNECTIONS SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:

PVC ASTM D-3034 (SDR-35) FOR DEPTHS LESS THAN FIFTEEN FEET (15'). PIPE SHALL HAVE O-RING GASKETS CONFORMING TO SECTION 3 OF ASTM C-443 AND JOINTS PER ASTM 3212 OR SOLVENT CEMENT JOINTS PER ASTM D-2564.

29. SANITARY LATERALS HAVE BEEN SHOWN ON THE PLANS BASED ON RECORD DRAWINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RECONNECTING ANY EXISTING, RECORDED OR UNRECORDED, ACTIVE LATERAL TO THE SANITARY SEWER SYSTEM TO THE SATISFACTION OF THE ENGINEER.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER FOR THE WORK ABOVE:

ITEM 603 - 6" CONDUIT, TYPE B, FOR SANITARY	1650 FEET
ITEM 603 - 8" CONDUIT, TYPE B, FOR SANITARY	250 FEET

30. ABANDONMENT OF 8" SANITARY SEWERS SHALL BE ACCOMPLISHED BY CUTTING AND BULK HEADING THE ENDS OF THE SEWER.

31. ABANDONMENT OF 12" SANITARY SEWERS SHALL BE ACCOMPLISHED BY COMPLETELY GROUTING THE ENTIRE LENGTH OF SEWER.

32. THE CONTRACTOR SHALL SALVAGE THE CASTING ON ANY SANITARY MANHOLE ON ALL LINES PROPOSED TO BE ABANDONED LINE, CRUSH THE TOP TO APPROXIMATELY TWO (2) FEET BELOW THE SUBGRADE AND FILL IT IN WITH THE APPROPRIATE BACKFILL MATERIAL. THE CONTRACTOR SHALL NOTIFY THE ENGINEER AS TO THE TYPE OF FILL MATERIAL TO BE USED BEFORE BACKFILLING.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER FOR THE ABANDONMENT WORK ABOVE (#30-#32):

ITEM SPECIAL - ABANDON EX. 8" SANITARY SEWER, AS PER PLAN	1850 FEET
ITEM SPECIAL - ABANDON EX. 12" SANITARY SEWER, AS PER PLAN	180 FEET
ITEM SPECIAL - ABANDON EX. SANITARY MANHOLE, AS PER PLAN	11 EACH

33. REMOVAL OF THE EXISTING SANITARY SEWER IN AREAS WHERE THE PROPOSED SEWER IS TO BE IN THE SAME TRENCH SHALL BE INCLUDED IN THE UNIT BID PRICE FOR THE TYPE B CONDUIT FOR SANITARY SEWERS.

34. THE CONTRACTOR SHALL MAINTAIN ADEQUATE FLOW THROUGH THE SANITARY SEWER SYSTEM AT ALL TIMES DURING CONSTRUCTION. WHENEVER NECESSARY, THE CONTRACTOR SHALL PROVIDE A SAFE AND EFFECTIVE BYPASS IF SERVICE MUST BE INTERRUPTED FOR ANY REASON. THE CONTRACTOR SHALL HAVE THE MEANS OF BYPASSING THE EXISTING SEWER APPROVED BY THE CITY OF CUYAHOGA FALLS DEPARTMENT OF ENGINEERING PRIOR TO CONSTRUCTION. PAYMENT FOR BYPASSING THE EXISTING SANITARY SEWER SHALL BE INCLUDED IN THE UNIT BID PRICE FOR TYPE B CONDUIT FOR SANITARY SEWERS.

35. WHEREVER PROPOSED SANITARY MANHOLES FALL IN OR NEAR THE PROPOSED CURBLINE, THE CONTRACTOR SHALL PROVIDE WATERTIGHT LIDS AND ORIENT THE MANHOLES SUCH THAT THE LID IS AS FAR AS POSSIBLE FROM THE PROPOSED CURB.

36. ALL MANHOLES SHALL BE TESTED BY MEANS OF A LOW PRESSURE AIR TEST IN ACCORDANCE WITH ASTM C1244. THE CONTRACTOR MUST RECEIVE APPROVAL OF THE PROPOSED TEST METHOD FROM THE SANITARY ENGINEER PRIOR TO CONSTRUCTION.

CALCULATED CJM
CHECKED MJB

WATERLINE AND SANITARY SEWER NOTES

SUM - 59-4.93

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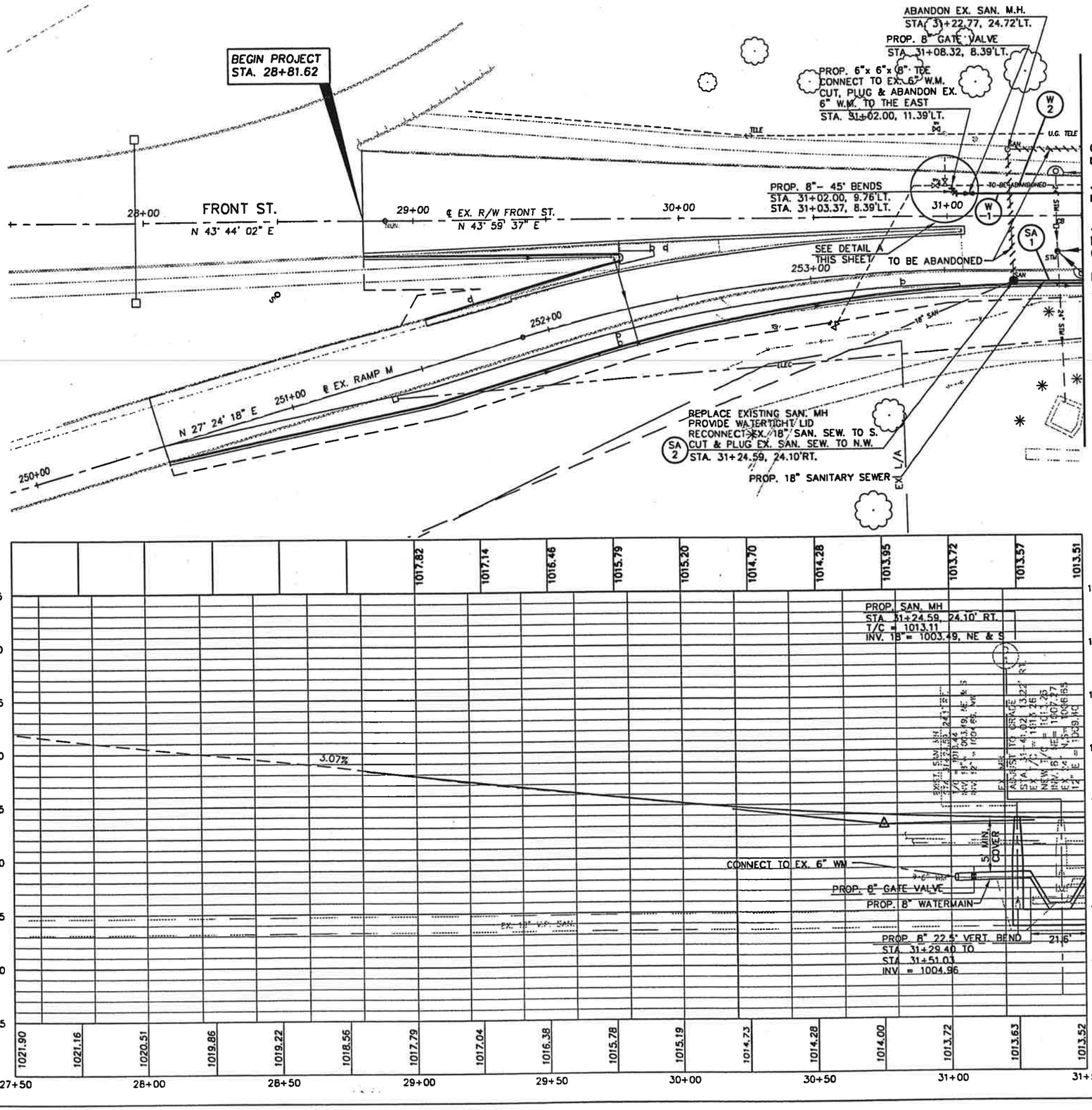
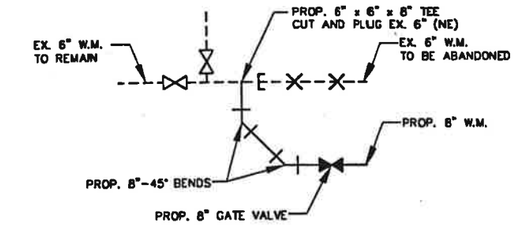


Ⓐ
EXIST ℄ RAMP M
P.I. STA. 252+73.44
Δ = 16° 35' 20"
R = 572.96'
T = 83.53'
L = 165.89'
E = 6.06'
e_{max} = 0.041

BENCHMARK No. 5
TOP OF N. ANCHOR BOLT OF THE SIGNAL POLE AT S.E. CORNER OF FRONT STREET AND BAILEY ROAD
ELEV. = 1016.11

NOTE: ALL LATERALS (SANITARY & WATER) ARE TO BE TIED INTO NEW MAINLINES.

ABANDON EXISTING SANITARY SEWER IN PLACE



DETAIL A
NOT TO SCALE

CALCULATED C.M
CHECKED M.B

FRONT STREET WATER AND SEWER PLAN AND PROFILE STA. 27+50 TO STA. 31+50

SUM - 59-4.93

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171

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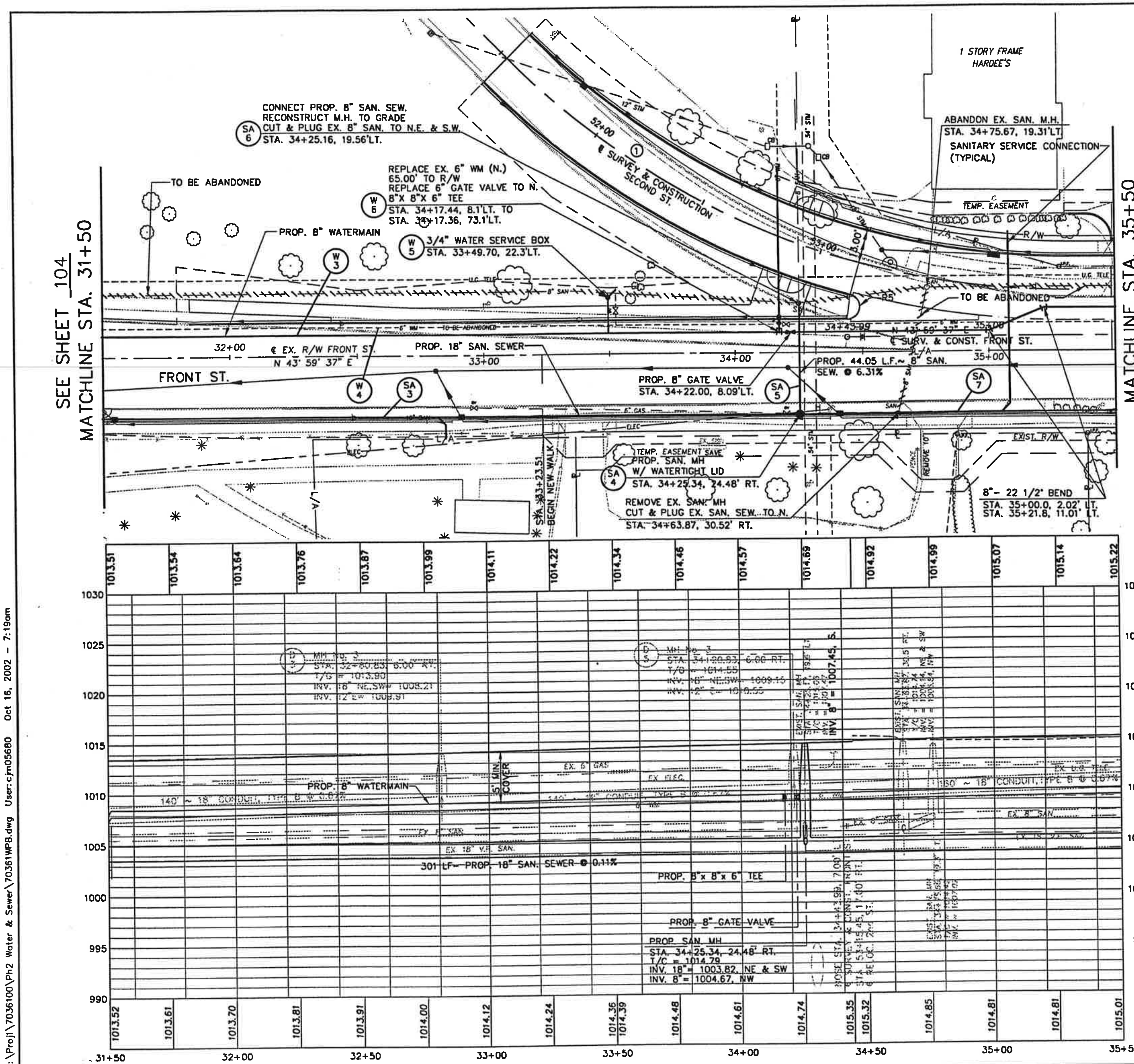


1 STORY FRAME HARDEE'S
CONNECT PROP. 8" SAN. SEW.
RECONSTRUCT M.H. TO GRADE
CUT & PLUG EX. 8" SAN. TO N.E. & S.W.
STA. 34+25.16, 19.56'LT.
SA 6
ABANDON EX. SAN. M.H.
STA. 34+75.67, 19.31'LT.
SANITARY SERVICE CONNECTION (TYPICAL)
TO BE ABANDONED
REPLACE EX. 6" WM (N.)
65.00' TO R/W
REPLACE 6" GATE VALVE TO N.
8"x 8"x 6" TEE
STA. 34+17.44, 8.1'LT. TO
STA. 34+17.36, 73.1'LT.
W 6
PROP. 8" WATERMAIN
W 3
3/4" WATER SERVICE BOX
STA. 33+49.70, 22.3'LT.
W 5
℄ SURVEY & CONSTRUCTION SECOND ST.
52+00
TEMP. EASEMENT
R/W
TO BE ABANDONED
SEE SHEET 104
MATCHLINE STA. 31+50
32+00
℄ EX. R/W FRONT ST.
N 43° 59' 37" E
PROP. 18" SAN. SEWER
33+00
34+00
34+43.99
N 43° 59' 37" E
℄ SURV. & CONST. FRONT ST.
35+00
FRONT ST.
W 4
SA 3
PROP. 8" GATE VALVE
STA. 34+22.00, 8.09'LT.
PROP. 44.05 L.F.~ 8" SAN. SEW. @ 6.31%
SA 5
SA 7
MATCHLINE STA. 35+50
SEE SHEET 106
TEMP. EASEMENT SAVE
PROP. SAN. MH
W/ WATERTIGHT LID
STA. 34+25.34, 24.48' RT.
SA 4
REMOVE EX. SAN. MH
CUT & PLUG EX. SAN. SEW. TO N.
STA. 34+63.87, 30.52' RT.
STA. 33+23.51 BEGIN NEW WALK
8"- 22 1/2° BEND
STA. 35+00.0, 2.02' LT.
STA. 35+21.8, 11.01' LT.
EXIST. R/W
1013.51
1013.54
1013.64
1013.76
1013.87
1013.99
1014.11
1014.22
1014.34
1014.46
1014.57
1014.69
1014.92
1014.99
1015.07
1015.14
1015.22
1030
1025
1020
1015
1010
1005
1000
995
990
MH No. 3
STA. 32+80.83, 6.00' RT.
T/G = 1013.90
INV. 18" NE,SW= 1008.21
INV. 12" E= 1009.91
MH No. 3
STA. 34+20.93, 6.00' RT.
T/G = 1014.55
INV. 18" NE,SW= 1009.15
INV. 12" E= 1010.55
INV. 8" = 1007.45, S.
5' MIN. COVER
EX. 6" GAS
EX. ELEC.
PROP. 8" WATERMAIN
140' ~ 18" CONDUIT, TYPE B @ 0.62%
150' ~ 18" CONDUIT, TYPE B @ 0.67%
EX. 8" SAN.
EX. 18" V.P. SAN.
301 LF~ PROP. 18" SAN. SEWER @ 0.11%
PROP. 8"x 8"x 6" TEE
PROP. 8" GATE VALVE
PROP. SAN. MH
STA. 34+25.34, 24.48' RT.
T/C = 1014.79
INV. 18" = 1003.82, NE & SW
INV. 8" = 1004.67, NW
1013.52
1013.61
1013.70
1013.81
1013.91
1014.00
1014.12
1014.24
1014.35
1014.39
1014.48
1014.61
1014.74
1015.35
1015.32
1014.85
1014.81
1014.81
1015.01
31+50
32+00
32+50
33+00
33+50
34+00
34+50
35+00
35+50

① ℄ SURVEY & CONSTRUCTION SECOND ST.

P.I. STA. 52+83.31
Δ = 45° 33' 41"
R = 309.71'
T = 130.07'
L = 246.28'
E = 26.20'
e_{max} = NC

NOTE: ALL LATERALS (SANITARY & WATER) ARE TO BE TIED INTO NEW MAINLINES.

ABANDON EXISTING SANITARY SEWER IN PLACE

BENCHMARK No. 3
C&GS DISK STAMPED "FALLS 1934" AT N. END OF W. BALLAST DECK SOUTH OF R.R. BRIDGE OVER OLD BAILEY ROAD.
ELEV. = 1014.34

(IN FEET) 1 inch = 20 ft.

CALCULATED CJM
CHECKED MJB

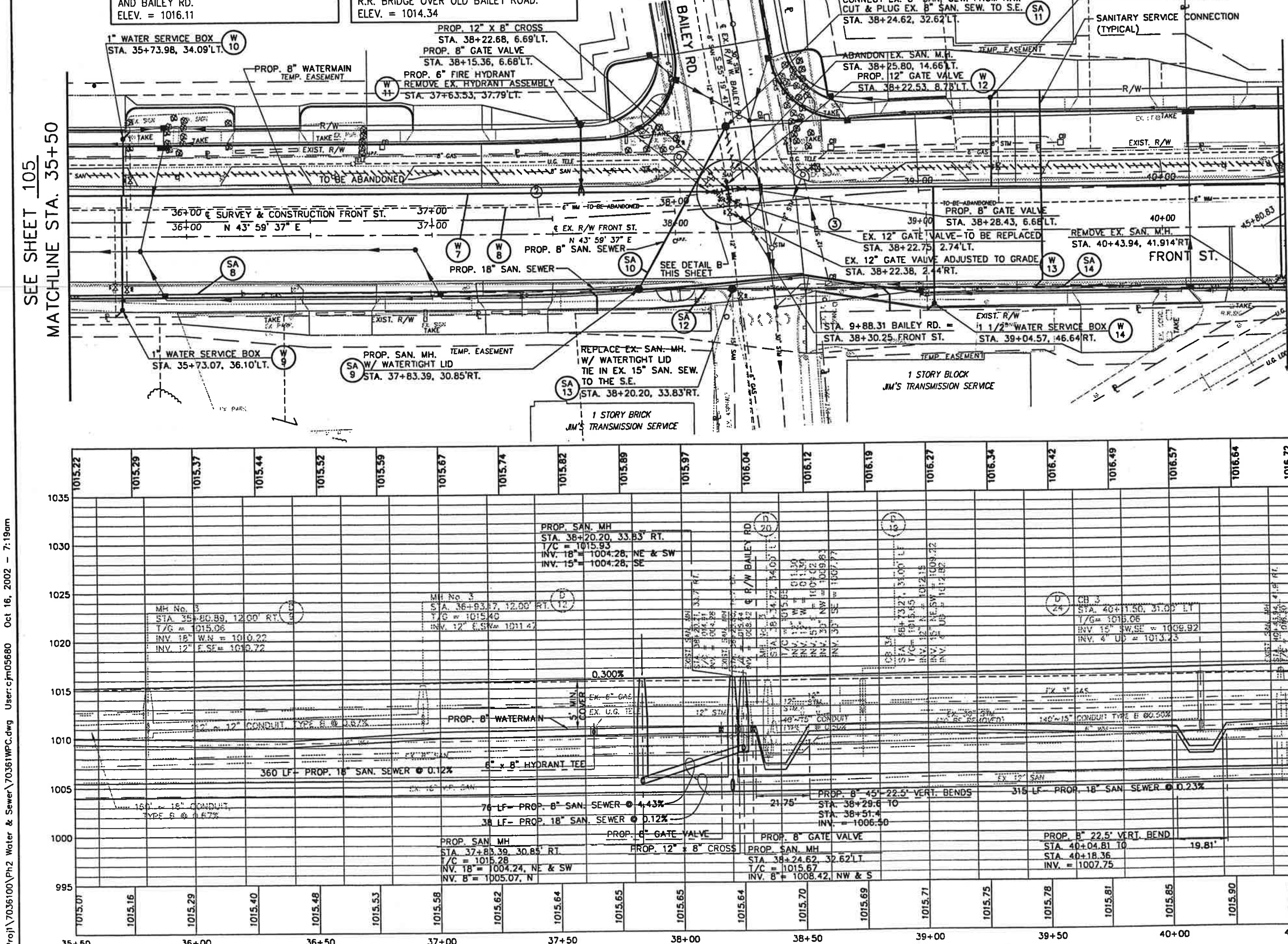
FRONT STREET WATER AND SEWER PLAN AND PROFILE
STA. 31+50 TO STA. 35+50

SUM - 59 - 4.93

BENCHMARK No. 5
TOP OF N. ANCHOR BOLT OF THE SIGNAL POLE AT S.E. CORNER OF FRONT ST. AND BAILEY RD.
ELEV. = 1016.11

BENCHMARK No. 3
C&GS DISK STAMPED "FALLS 1934" AT N. END OF W. BALLAST DECK SOUTH OF R.R. BRIDGE OVER OLD BAILEY ROAD.
ELEV. = 1014.34

FOR BAILEY RD. PLAN & PROFILE SEE SHEET 82.

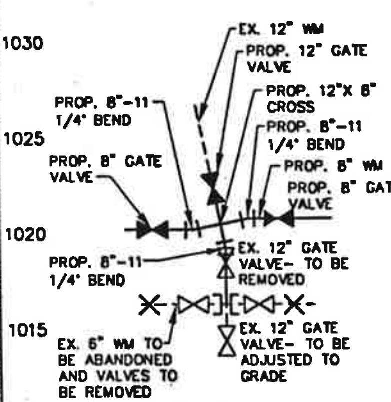


② ℄ SURVEY & CONSTRUCTION FRONT ST.
P.I. STA. 37+77.65
Δ = 06° 01' 55"
R = 1000'
T = 52.69'
L = 105.28'
E = 1.39'
e_{max} = N.C.

③ ℄ SURVEY & CONSTRUCTION FRONT ST.
P.I. STA. 38+82.58
Δ = 05° 59' 28"
R = 1000'
T = 52.33'
L = 104.56'
E = 1.37'
e_{max} = N.C.

NOTE: ALL LATERALS (SANITARY & WATER) ARE TO BE TIED INTO NEW MAINLINES.

ABANDON EXISTING SANITARY SEWER IN PLACE



DETAIL B
NOT TO SCALE

(IN FEET) 1 inch = 20 ft.

CALCULATED CJM
CHECKED MJB

FRONT STREET WATER AND SEWER PLAN AND PROFILE
STA. 35+50 TO STA. 40+50

SUM - 59-4.93

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SEE SHEET 106
MATCHLINE STA. 40+50

PROP. 8"x 4" TEE
RECONNECT EX. 4" W.M. TO N.W.
STA. 40+98.80, 0.47'LT.

ABANDON EX. SAN. M.H.
STA. 40+69.39, 8.75'LT

EDISON ST.

PROP. 6" FIRE HYDRANT
REMOVE EX. HYDRANT ASSEMBLY
STA. 42+68.36, 41.48'LT.

SUMMIT COUNTY PORT

PROP. 8" WATERMAIN

TO BE ABANDONED

PROP. 8"- 45° BEND
STA. 42+83.24, 0.12'LT.

PROP. 8"- 22 1/2° BEND
STA. 43+07.80, 24.10'RT

PROP. 18" SAN. SEWER

CONNECT TO PHASE 1 W.M.
STA. 43+10.34, 25.08'RT.

PROP. SAN. MH
W/ WATERTIGHT LID
ABANDON EX. 12" SAN.
SEW. TO N.E.
STA. 41+38.61, 40.84'RT.

EXIST. TEMP. EASEMENT

CROCKER'S RESTAURANT

PROP. 8" SAN. SEWER

PROP. 8" WM

SANITARY SERVICE CONNECTION (TYPICAL)

FRONT ST.

EXIST. R/W

TAKE

℄ SURVEY & CONSTRUCTION FRONT ST. 45+00
N 43° 57' 10" E

PROP. 8" SAN. SEWER

℄ EX. R/W FRONT ST. N 43° 57' 10" E

PROP. 6" FIRE HYDRANT
REMOVE EX. HYDRANT ASSEMBLY
STA. 44+24.84, 48.48'RT.

TEMP. EASEMENT

STA. 106+67.91 HUDSON DRIVE =
STA. 43+35.80 FRONT ST.

REPLACE EX. SAN. MH
CUT & PLUG EX. 8" SAN. SEW. TO S.
STA. 43+14.22, 14.74'RT.

EX. 8" WATERMAIN

ABANDON EX. SAN. M.H.
STA. 43+02.75, 38.96'RT.

℄ SURVEY & CONSTRUCTION HUDSON DR.

HUDSON DR.

EXIST. TEMP. EASEMENT

FOR HUDSON DRIVE PLAN & PROFILE
SEE SHEETS 111 THROUGH 112.

MATCHLINE STA. 45+50
SEE SHEET 108

BENCHMARK No. 2
TOP OF N.E. ANCHOR BOLT OF "UNION 76" SIGN N. POLE, S.W. CORNER OF FRONT STREET AND HUDSON DRIVE.
ELEV. = 1016.84

⑧
℄ SURVEY &
CONSTRUCTION HUDSON DR.
P.I. STA. 106+22.03
Δ = 05° 15' 42"
R = 1000'
T = 45.95'
L = 91.83'
E = 1.06'
e_{max} = NC

⑨
℄ SURVEY &
CONSTRUCTION HUDSON DR.
P.I. STA. 107+13.76
Δ = 05° 15' 00"
R = 1000'
T = 45.85'
L = 91.63'
E = 1.05'
e_{max} = NC

REMOVE EXISTING PAVEMENT, CURB, AND MEDIAN.

RUBBERIZED RAILROAD CROSSING

NOTE: ALL LATERALS (SANITARY & WATER) ARE TO BE TIED INTO NEW MAINLINES.

ABANDON EXISTING SANITARY SEWER IN PLACE

1016.72 1016.79 1016.87 1016.88 1016.80 1016.63 1016.36 1016.00 1015.67 1015.48 1015.44 1015.53 1015.70 1015.83 1015.91 1015.92 1015.87 1015.78 1015.70 1015.62 1015.54

℄ R/W HUDSON DR.
℄ SURV. & CONST. HUDSON DR.

℄ R/W EDISON ST.

℄ RR RAILS

6" MIN. COVER

EX. GAS

EX. W.M.

PROP. 8" WATERMAIN

PROP. 8"x 4" TEE

75'- 18" STEEL CASING

75'- 30" STEEL CASING

178 LF- PROP. 18" SAN. SEWER @ 0.15%

400 LF- 8" SAN. SEWER @ 0.40%

PROP. SAN. MH
STA. 41+38.61, 40.84' RT.
T/C = 1016.11
INV. 18"= 1005.00, NE & SW

6" x 8" HYDRANT TEE

PROP. SAN. MH
STA. 43+14.22, 14.74' RT.
T/C = 1015.26
INV. 8"= 1006.10, NE
INV. 18"= 1005.27, SW
INV. 8"= 1006.78, N

5" x 8" HYDRANT TEE

1015.94 1016.19 1016.49 1016.48 1016.51 1016.34 1016.03 1015.39 1015.19 1015.06 1015.08 1015.38 1015.56 1015.38 1015.39 1015.34 1015.26 1015.16 1015.05 1014.96 1014.88

1040 1035 1030 1025 1020 1015 1010 1005 1000

40+50 41+00 41+50 42+00 42+50 43+00 43+50 44+00 44+50 45+00 45+50

(IN FEET) 1 inch = 20 ft.

CALCULATED CJM
CHECKED MJB

FRONT STREET WATER AND SEWER PLAN AND PROFILE
STA. 40+50 TO STA. 45+50

SUM - 59-4.93

107
171

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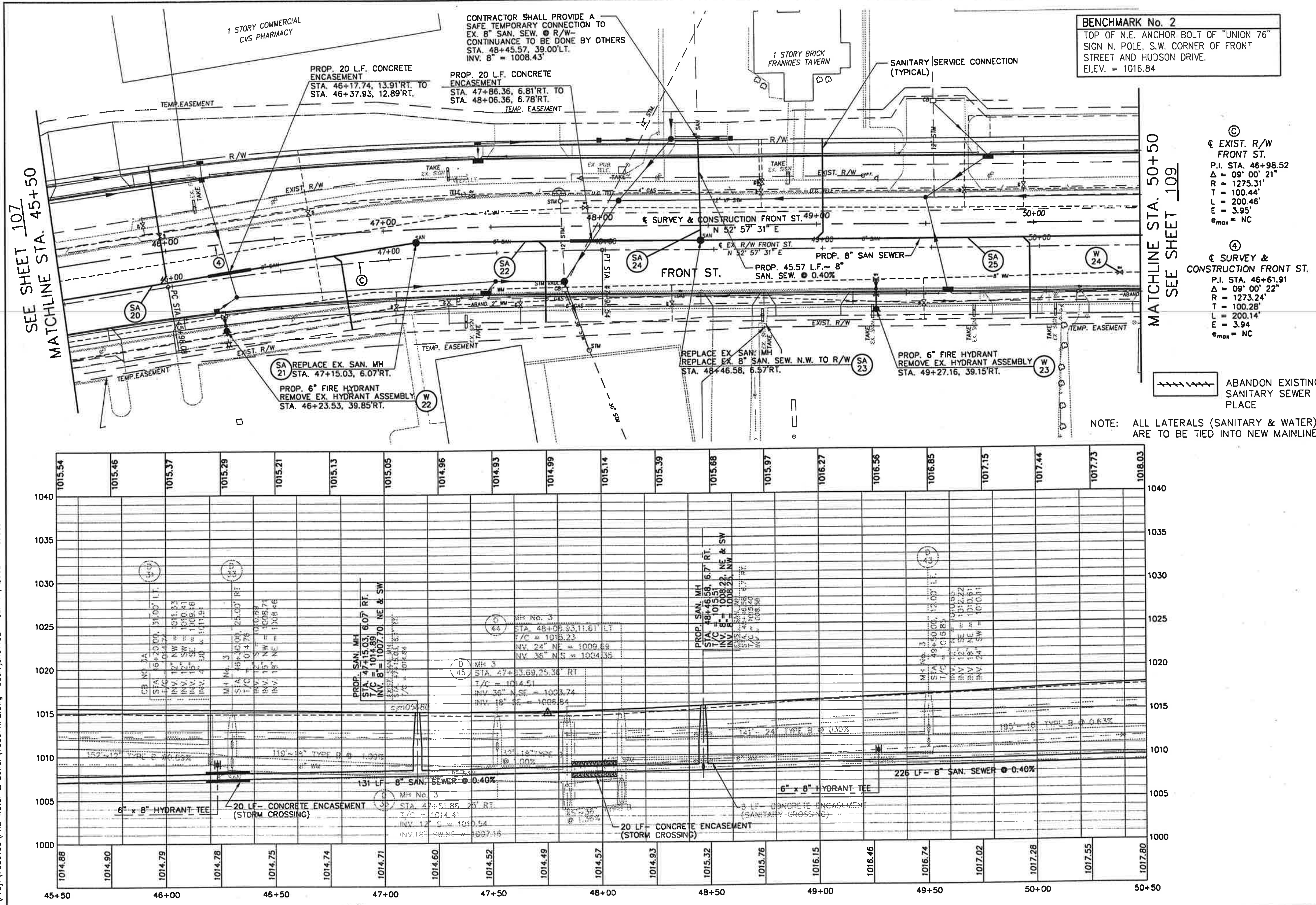

1 STORY COMMERCIAL CVS PHARMACY
1 STORY BRICK FRANKIES TAVERN
CONTRACTOR SHALL PROVIDE A SAFE TEMPORARY CONNECTION TO EX. 8" SAN. SEW. @ R/W– CONTINUANCE TO BE DONE BY OTHERS STA. 48+45.57, 39.00'LT. INV. 8" = 1008.43'
PROP. 20 L.F. CONCRETE ENCASEMENT STA. 46+17.74, 13.91'RT. TO STA. 46+37.93, 12.89'RT.
PROP. 20 L.F. CONCRETE ENCASEMENT STA. 47+86.36, 6.81'RT. TO STA. 48+06.36, 6.78'RT.
SANITARY SERVICE CONNECTION (TYPICAL)
BENCHMARK No. 2
TOP OF N.E. ANCHOR BOLT OF "UNION 76" SIGN N. POLE, S.W. CORNER OF FRONT STREET AND HUDSON DRIVE.
ELEV. = 1016.84
SEE SHEET 107
MATCHLINE STA. 45+50
MATCHLINE STA. 50+50
SEE SHEET 109
TEMP. EASEMENT
R/W
EXIST. R/W
℄ SURVEY & CONSTRUCTION FRONT ST.
N 52° 57' 31" E
℄ EX. R/W FRONT ST.
FRONT ST.
PROP. 45.57 L.F.~ 8" SAN. SEW. @ 0.40%
PROP. 8" SAN SEWER
REPLACE EX. SAN. MH STA. 47+15.03, 6.07'RT.
PROP. 6" FIRE HYDRANT REMOVE EX. HYDRANT ASSEMBLY STA. 46+23.53, 39.85'RT.
REPLACE EX. SAN. MH REPLACE EX. 8" SAN. SEW. N.W. TO R/W STA. 48+46.58, 6.57'RT.
PROP. 6" FIRE HYDRANT REMOVE EX. HYDRANT ASSEMBLY STA. 49+27.16, 39.15'RT.
SA 20
SA 21
SA 22
SA 23
SA 24
SA 25
W 22
W 23
W 24
ⓒ ℄ EXIST. R/W FRONT ST.
P.I. STA. 46+98.52
Δ = 09° 00' 21"
R = 1275.31'
T = 100.44'
L = 200.46'
E = 3.95'
e_{max} = NC
④ ℄ SURVEY & CONSTRUCTION FRONT ST.
P.I. STA. 46+61.91
Δ = 09° 00' 22"
R = 1273.24'
T = 100.28'
L = 200.14'
E = 3.94
e_{max} = NC
ABANDON EXISTING SANITARY SEWER IN PLACE
NOTE: ALL LATERALS (SANITARY & WATER) ARE TO BE TIED INTO NEW MAINLINES.
PROP. SAN. MH STA. 47+15.03, 6.07' RT. T/C = 1014.89 INV. 8" = 1007.70 NE & SW
PROP. SAN. MH STA. 48+46.58, 6.7' RT. T/C = 1015.51 INV. 8" = 1008.22 NE INV. 8" = 1008.25 SW
MH No. 3 STA. 48+05.93, 11.61' LT T/C = 1015.23 INV. 24" NE = 1009.69 INV. 36" N/S = 1004.35
MH 3 STA. 47+13.69, 25.38' RT T/C = 1014.51 INV. 36" N SE = 1003.74 INV. 18" SE = 1006.84
131 LF– 8" SAN. SEWER @ 0.40%
226 LF– 8" SAN. SEWER @ 0.40%
6" x 8" HYDRANT TEE
20 LF– CONCRETE ENCASEMENT (STORM CROSSING)
20 LF– CONCRETE ENCASEMENT (STORM CROSSING)
8 LF– CONCRETE ENCASEMENT (SANITARY CROSSING)
1040
1035
1030
1025
1020
1015
1010
1005
1000
1015.54 1015.46 1015.37 1015.29 1015.21 1015.13 1015.05 1014.96 1014.93 1014.99 1015.14 1015.39 1015.68 1015.97 1016.27 1016.56 1016.85 1017.15 1017.44 1017.73 1018.03
1014.88 1014.90 1014.79 1014.78 1014.75 1014.74 1014.71 1014.60 1014.52 1014.49 1014.57 1014.93 1015.32 1015.76 1016.15 1016.46 1016.74 1017.02 1017.28 1017.55 1017.80
45+50 46+00 46+50 47+00 47+50 48+00 48+50 49+00 49+50 50+00 50+50

FRONT STREET WATER AND SEWER PLAN AND PROFILE
STA. 45+50 TO STA. 50+50

CALCULATED CJM | CHECKED MJB

SUM - 59 - 4.93

108 / 171

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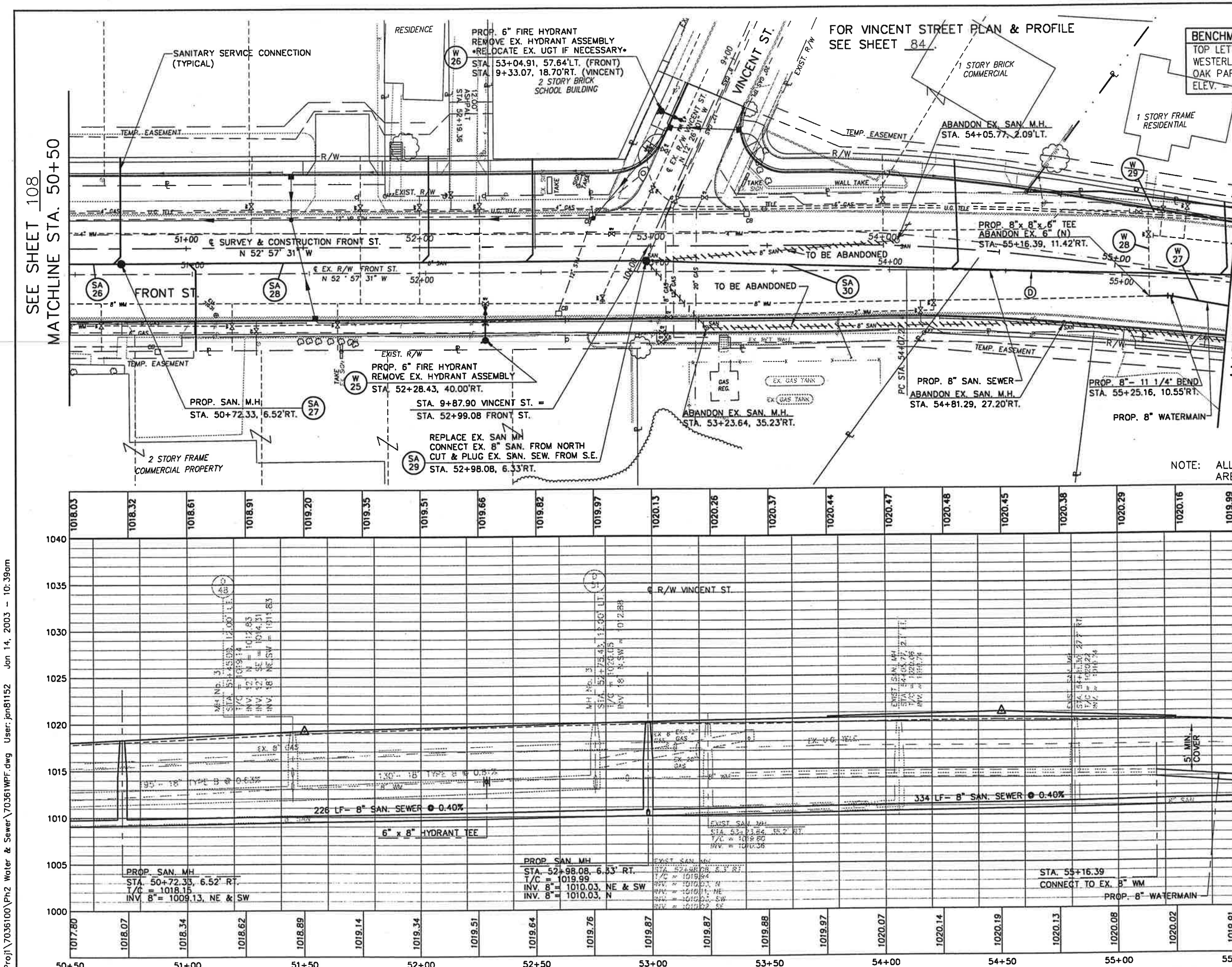
FRONT STREET WATER AND SEWER PLAN AND PROFILE STA. 50+50 TO STA. 55+50

SUM - 59 - 4.93

CALCULATED CJM
CHECKED MJB

(IN FEET)
1 inch = 20 ft.

BENCHMARK No. 6
TOP LETTER "G" IN "DARLING" ON HYD. N WESTERLY SIDE OF KENT ROAD OPPOSITE OF OAK PARK ROAD
ELEV. = 1019.80



SEE SHEET 108
MATCHLINE STA. 50+50
MATCHLINE STA. 55+50
SEE SHEET 110
FOR VINCENT STREET PLAN & PROFILE SEE SHEET 84
SANITARY SERVICE CONNECTION (TYPICAL)
PROP. 6" FIRE HYDRANT
REMOVE EX. HYDRANT ASSEMBLY
RELOCATE EX. UGT IF NECESSARY
STA. 53+04.91, 57.64'LT. (FRONT)
STA. 9+33.07, 18.70'RT. (VINCENT)
2 STORY BRICK SCHOOL BUILDING
RESIDENCE
1 STORY BRICK COMMERCIAL
1 STORY FRAME RESIDENTIAL
TEMP. EASEMENT
VINCENT ST.
ABANDON EX. SAN. M.H.
STA. 54+05.77, 2.09'LT.
PROP. 8"x 8"x 6" TEE
ABANDON EX. 6" (N)
STA. 55+16.39, 11.42'RT.
TO BE ABANDONED
℄ SURVEY & CONSTRUCTION FRONT ST.
N 52° 57' 31" W
℄ EX. R/W FRONT ST.
N 52° 57' 31" W
FRONT ST.
PROP. 6" FIRE HYDRANT
REMOVE EX. HYDRANT ASSEMBLY
STA. 52+28.43, 40.00'RT.
STA. 9+87.90 VINCENT ST. =
STA. 52+99.08 FRONT ST.
PROP. SAN. M.H.
STA. 50+72.33, 6.52'RT.
REPLACE EX. SAN MH
CONNECT EX. 8" SAN. FROM NORTH
CUT & PLUG EX. SAN. SEW. FROM S.E.
STA. 52+98.08, 6.33'RT.
2 STORY FRAME COMMERCIAL PROPERTY
ABANDON EX. SAN. M.H.
STA. 53+23.64, 35.23'RT.
PROP. 8" SAN. SEWER
ABANDON EX. SAN. M.H.
STA. 54+81.29, 27.20'RT.
PROP. 8" - 11 1/4° BEND
STA. 55+25.16, 10.55'RT.
PROP. 8" WATERMAIN
226 LF- 8" SAN. SEWER @ 0.40%
334 LF- 8" SAN. SEWER @ 0.40%
6" x 8" HYDRANT TEE
℄ R/W VINCENT ST.
5' MIN. COVER
PROP. SAN. MH
STA. 50+72.33, 6.52' RT.
T/C = 1018.15
INV. 8"= 1009.13, NE & SW
PROP. SAN. MH
STA. 52+98.08, 6.33' RT.
T/C = 1019.99
INV. 8"= 1010.03, NE & SW
INV. 8"= 1010.03, N
STA. 55+16.39
CONNECT TO EX. 8" WM
PROP. 8" WATERMAIN
50+50
51+00
51+50
52+00
52+50
53+00
53+50
54+00
54+50
55+00
55+50

Ⓓ
EX. ℄ R/W FRONT ST.
P.I. STA. 55+07.27
Δ = 07° 40' 00"
R = 1492.44'
T = 100.00'
L = 199.70'
E = 3.35'
e_{max} = NC

⑤
℄ SURVEY & CONSTRUCTION FRONT ST.
P.I. STA. 54+27.33
Δ = 07° 37' 59"
R = 750.63'
T = 50.07'
L = 100.00'
E = 1.67'
e_{max} = NC

ABANDON EXISTING SANITARY SEWER IN PLACE

NOTE: ALL LATERALS (SANITARY & WATER) ARE TO BE TIED INTO NEW MAINLINES.

SEE SHEET 109
MATCHLINE STA. 55+50

CUT, PLUG AND ABANDON EX. 6" W.M.
TO THE WEST OF EX. 6" GATE VALVE
STA. 56+58.39, 31.08'LT.

LANDON DR.

PROP. SAN. MH
CONNECT EX. 8" SAN. SEW. FROM N.
CUT & PLUG EX. 8" SAN. SEW. TO S. (SA 32)
STA. 56+28.60, 10.32'LT.

TEMP. EASEMENT

(W 31)

8" WM(SILVER LAKE)

PROP. 8" SAN SEWER

TO BE ABANDONED
℄ EX. R/W FRONT ST.
N 60° 37' 31" E

FRONT ST.

56+00 57+00 58+00 59+00 60+00

(SA 31) (W 30)

ABANDON EX. SAN. M.H.
STA. 56+09.73, 25.66'RT.

TO BE ABANDONED

TEMP. EASEMENT

PUMP ISLAND

PROP. 8" WATERMAIN

PROP. 8"- 22 1/2° BEND
STA. 56+81.85, 17.79'RT.

PROP. 8"- 22 1/2° BEND
STA. 57+07.47, 29.85'RT.

(W 32) PROP. 16"X 8" TAPPING
SLEEVE AND VALVE
STA. 57+12.37, 29.91'RT.

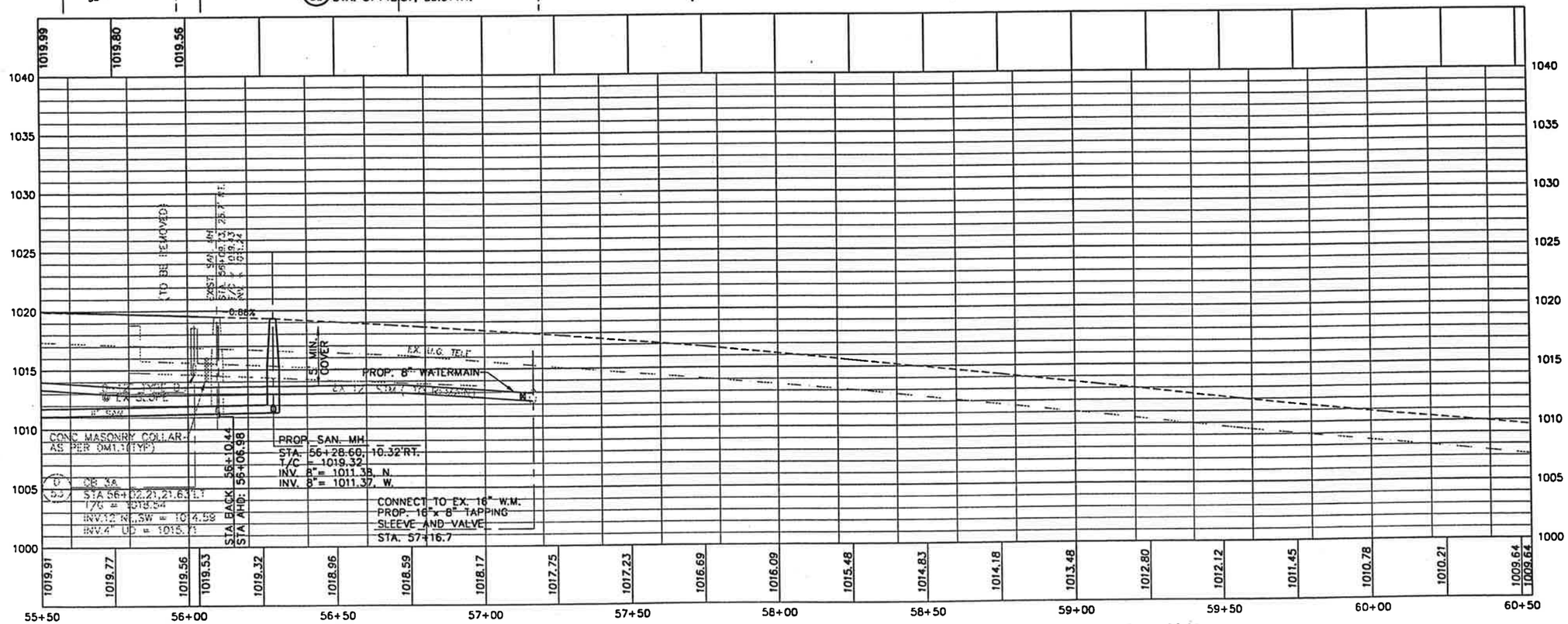
1 STORY BRICK
SERVICE STATION

OAK PARK RD.

BENCHMARK No. 6
TOP LETTER "G" IN "DARLING" ON HYD. N
WESTERLY SIDE OF FRONT STREET OPPOSITE
OF OAK PARK ROAD
ELEV. = 1019.80

NOTE: ALL LATERALS (SANITARY & WATER) ARE TO BE TIED INTO NEW MAINLINES.

ABANDON EXISTING SANITARY SEWER IN PLACE



CALCULATED CJM
CHECKED MJB

FRONT STREET WATER AND SEWER PLAN AND PROFILE
STA. 55+50 TO STA. 60+50

SUM - 59-4.93

110
171

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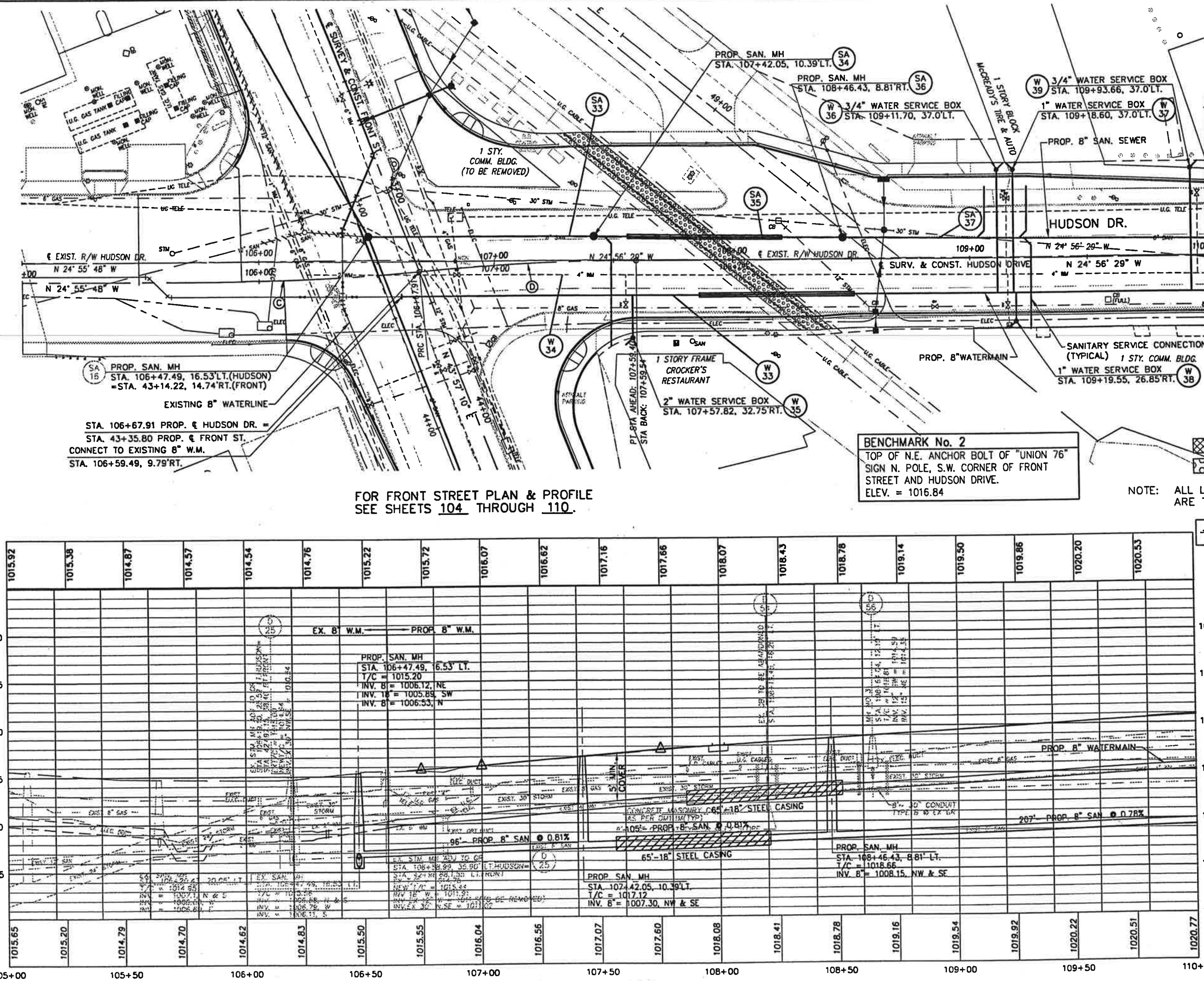

℄ SURVEY & CONSTRUCTION HUDSON DR.
P.I. STA. 106+22.03
Δ = 05° 15' 42"
R = 1000.00'
D_c = 05° 43' 46"
T = 45.95'
L = 91.83'
Ch. = 91.80
e = N.C.

℄ SURVEY & CONSTRUCTION HUDSON DR.
P.I. STA. 107+13.76
Δ = 05° 15' 00"
R = 1000.00'
D_c = 05° 43' 46"
T = 45.85'
L = 91.63'
Ch. = 91.60'
e = N.C.

REMOVE EXISTING PAVEMENT, CURB, AND MEDIAN.
RUBBERIZED RAILROAD CROSSING

NOTE: ALL LATERALS (SANITARY & WATER) ARE TO BE TIED INTO NEW MAINLINES.

ABANDON EXISTING SANITARY SEWER IN PLACE

HUDSON DRIVE WATER AND SEWER PLAN AND PROFILE
STA. 105+00 TO STA. 110+00

SUM - 59 - 4.93

CALCULATED CJM CHECKED MJB

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MATCHLINE STA. 110+00 SEE SHEET 111

BENCHMARK No. 4
TOP S.W. ANCHOR BOLT OF OVERHEAD SIGN "RT. 8 NORTH", E. SIDE OF HUDSON DR. NORTH OF NB RAMP TO ROUTE 8.
ELEV. = 1024.56

1 STY. COMM. BLOCK
CHOI'S TAE KWON DO INSTITUTE

2 STY. BRICK RESTAURANT ROCKNE'S

SECOND ST.

RECONSTRUCT M.H. TO GRADE
STA. 110+79.16, 66.87'LT. (SA 41)

REPLACE EX. SAN. M.H.
STA. 110+53.64, 6.92'LT. (SA 39)
T/C = 1031.38

CONNECT TO EX. 6" W.M. TO S.W.
CUT & PLUG EX. 6" W.M. TO N.W.
STA. 110+98, 24'RT. (SA 44)
TEMP. EASEMENT

1" WATER SERVICE BOX
STA. 112+47.90, 27.15'LT. (W 49)

CONNECT TO EX. 6" W.M. (SA 46)
ABANDON EX. 6" W.M. TO S.E.
STA. 112+77.59 11.02'LT.

RECONSTRUCT M.H. TO GRADE
RECONNECT EX. 8" SAN. SEW. TO NW (SA 47)
STA. 113+75.37, 9.67'LT.

HUDSON DR.

PROP. 22 1/2° BEND
STA. 111+02.97, 8.53'LT.

PROP. 8" SAN. SEWER

PROP. 6" WATERMAIN

℄ SURV. & CONST. HUDSON DRIVE
N 23° 25' 27" W

PROP. MH
STA. 113+12.8, 21.07'LT. (SA 45)

S.R. 8

PROP. 6"-45° BEND
STA. 112+73.15, 11.03'LT.

PROP. 8"X6" REDUCER
STA. 112+72.17, 10.0'LT.

PROP. 8"-45° BEND
STA. 112+52.16, 11.09'LT.

PROP. 8"x 8" TEE
RECONNECT EX. 8" W.M. (W 46)
STA. 111+14.63, 14.71'RT.

PROP. 8"x 6" TEE
STA. 111+03, 15'RT.

STA. 110+76.73 EX. ℄ R/W HUDSON DR.
= STA. 50+00.00 EX. ℄ R/W SECOND ST.

ABANDON EX. SAN. M.H.
STA. 112+31.38, 9.67'LT.

EL. WALL (DO NOT DISTURB)

1" WATER SERVICE BOX
STA. 112+18.47, 26.90'RT. (W 48)

ABANDON EX. SAN. M.H.
STA. 112+14.69, 20.04'RT.

NB ON RAMP

PROP. 8" WATERMAIN

1" WATER SERVICE BOX
STA. 110+38.06, 34.07'RT. (W 43)

1" WATER SERVICE BOX
STA. 110+50.41, 34.07'RT. (W 44)

PROP. SAN. M.H.
TIE IN EX. 8" SAN. SEW. TO E.
STA. 110+73.67, 38.89'RT. (SA 43)
T/C = 1021.60

2 STY. BR. CUYAHOGA FALLS HISTORICAL SOCIETY

1" WATER SERVICE BOX
STA. 111+81.55, 26.90'RT. (W 47)

1020.82 | 1021.08 | 1021.32 | 1021.53 | 1021.71 | 1021.87 | 1022.00 | 1022.14 | 1022.27

1035 / 1030 / 1025 / 1020 / 1015 / 1010 / 1005

℄ 2ND STREET

0.54% | 0.55%

5' MIN. COVER

CONNECT TO EX. 6" WM

PROP. SAN. MH
STA. 112+00.43, 9.23' LT.
T/C = 1022.35
INV. 8"= 1011.02, NW & SE

8"X 6" TEE

261'- PROP. 8" SAN. @ 0.48%

63'- PROP. 8" SAN. @ 0.48%

50'- PROP. 8" SAN @ EX. GRADE

65'- PROP. 8" SAN. @ EX. GRADE

PROP. 8" WATERMAIN

RECONSTRUCT M.H. TO GRADE
STA. 113+75.37, 9.67' LT.
T/C = 1022.40
INV. 8"= 1011.32, NW & SE

PROP. SAN. MH
STA. 110+53.64, 6.92' LT.
T/C = 1021.21
INV. 8" = 1009.76, NW & SE
INV. 8" = 1009.94, W
INV. 8" = 1011.94, NE

1020.77 | 1021.02 | 1021.33 | 1021.62 | 1021.78 | 1021.92 | 1021.99 | 1022.12 | 1022.27 | 1022.47 | 1022.67 | 1022.89 | 1023.11

110+50 | 111+00 | 111+50 | 112+00 | 112+50 | 113+00 | 113+50 | 114+00

NOTE: ALL LATERALS (SANITARY & WATER) ARE TO BE TIED INTO NEW MAINLINES.

ABANDON EXISTING SANITARY SEWER IN PLACE

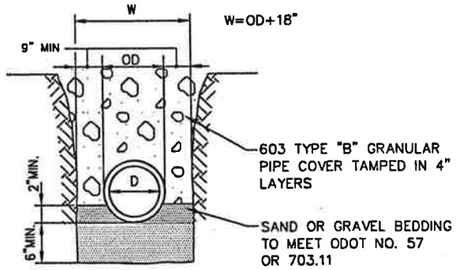
CALCULATED CJM
CHECKED MJB

HUDSON DRIVE WATER AND SEWER PLAN AND PROFILE
STA. 110+00 TO STA. 113+00

SUM - 59-4.93

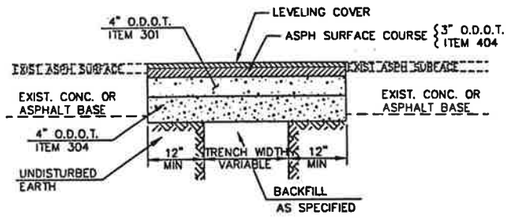
112
171

J:\Proj\7036100\Ph2 Water & Sewer\70361wpk.dwg User:cjm05680 Oct 16, 2002 - 7:25am



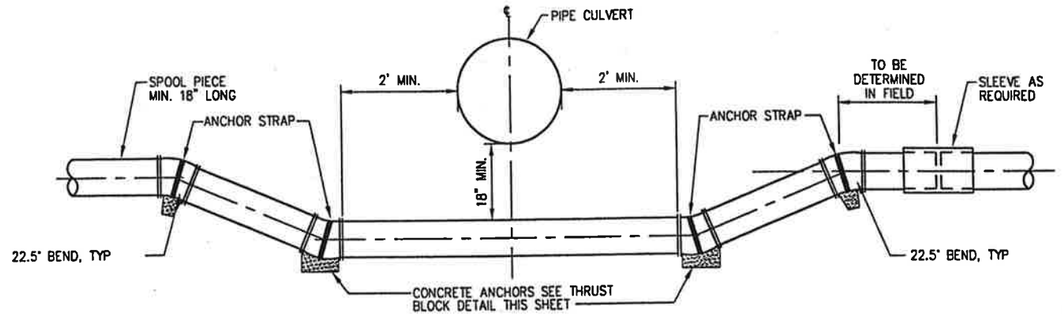
TYPICAL WATER MAIN TRENCH DETAIL

(N.T.S.)



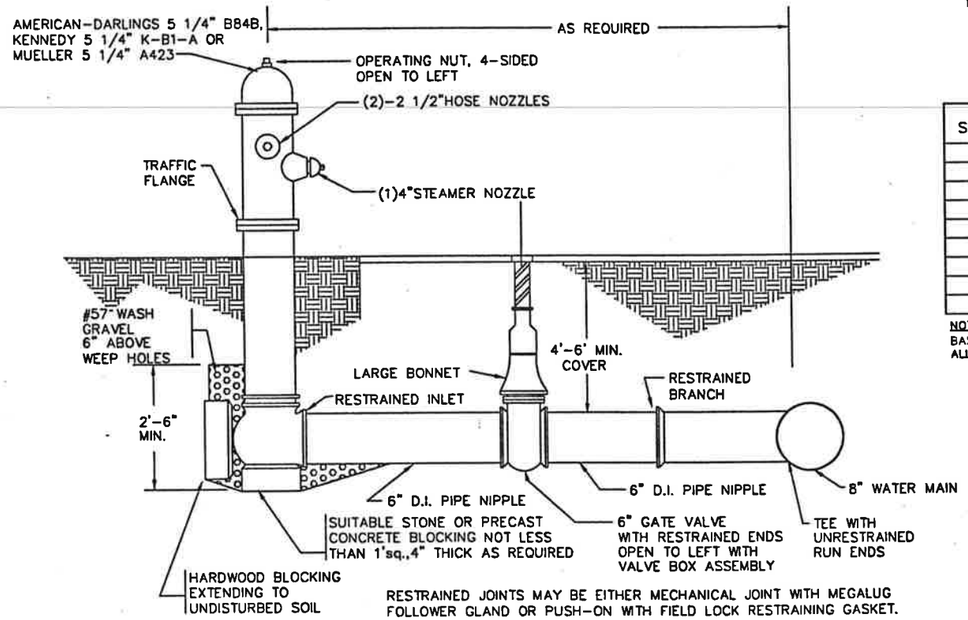
PAVEMENT REPLACEMENT– ASPHALT ROADWAY

(N.T.S.)



UTILITY CROSSING DETAIL

(N.T.S.)



HYDRANT RUN & INSTALLATION

(N.T.S.)

NOTE: CONTRACTOR SHALL RESTRAIN ALL VERTICAL AND HORIZONTAL BENDS TEES AND PLUGS USING THE METHODS DEMONSTRATED IN THIS DETAIL. PAYMENT FOR THRUST BLOCKING SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 638: 8" WATERMAIN.

VERTICAL BENDS

SIZE	TYPE A			TYPE B				STRAPS	ANCH. BOLT SIZE (DIA.)	L_1
	A	B	C	A	B	C	D			
6"*	38"	32"	27"	27"	27"	27"	16"	(1) 1/4"x 1 1/8"	5/8"	1'–0"
8"	44"	38"	27"	30"	30"	30"	18"	" "	"	"
10"	50"	44"	34"	37"	37"	33"	18"	(2) 1/4"x 1 1/4"	5/8"	1'–0"
12"	57"	51"	40"	41"	41"	40"	21"	" "	"	"
14"	57"	51"	67"	47"	47"	47"	24"	(2) 3/8"x 1 1/2"	3/4"	1'–0"
16"	64"	57"	67"	54"	54"	49"	24"	" "	"	"
18"	71"	61"	74"	59"	59"	57"	27"	(2) 1/2"x 1 3/4"	7/8"	2'–0"
20"	78"	63"	80"	64"	64"	64"	30"	(2) 1/2"x 1 3/4"	7/8"	2'–0"
24"	93"	75"	83"	78"	78"	78"	36"	(2) 1/2"x 2 1/2"	1"	2'–0"

*6" OR LESS

NOTE
BASED ON 150 P.S.I. STATIC PRESSURE PLUS A.W.W.A. WATER HAMMER.
ALL BEARING SURFACES TO BE CARRIED TO UNDISTURBED GROUND.

THRUST BLOCK DETAILS

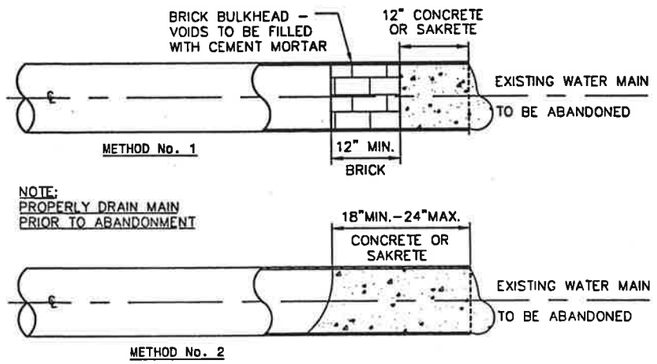
(N.T.S.)

BENDS & TEES

SIZE	90° BENDS		45° BENDS		22–1/2° & 11–1/4° BENDS		TEES		PLUGS	
	A	B	A	B	A	B	A	B	C	D
6" *	18"	11"	10"	11"	6"	9"	11"	13"	10"	24"
8"	25"	14"	14"	14"	9"	11"	15"	17"	12"	32"
10"	27"	20"	16"	19"	10"	15"	18"	22"	14"	40"
12"	33"	23"	18"	23"	12"	18"	21"	26"	16"	47"
14"	39"	26"	22"	26"	13"	22"	24"	30"	18"	54"
16"	43"	30"	24"	30"	14"	26"	28"	33"	20"	61"
18"	47"	35"	26"	35"	16"	29"	31"	38"	22"	67"
20"	50"	39"	27"	39"	17"	32"	33"	42"	24"	74"
24"	60"	45"	33"	45"	20"	38"	40"	49"	28"	88"

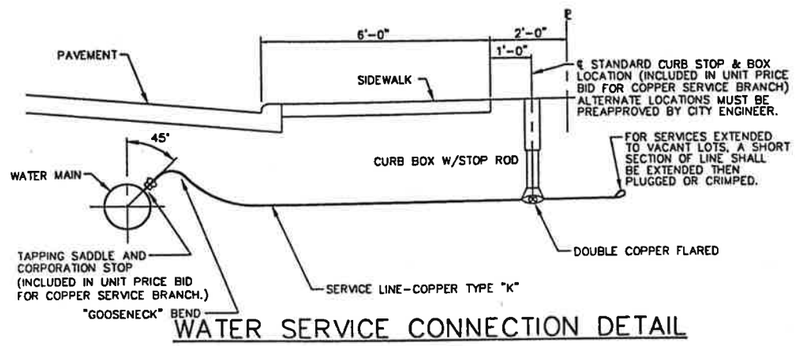
*6" OR LESS

NOTE
BASED ON 150 P.S.I. STATIC PRESSURE PLUS A.W.W.A. WATER HAMMER.
ALL BEARING SURFACES TO BE CARRIED TO UNDISTURBED GROUND.



PLUGGING ABANDONED WATER MAIN ENDS

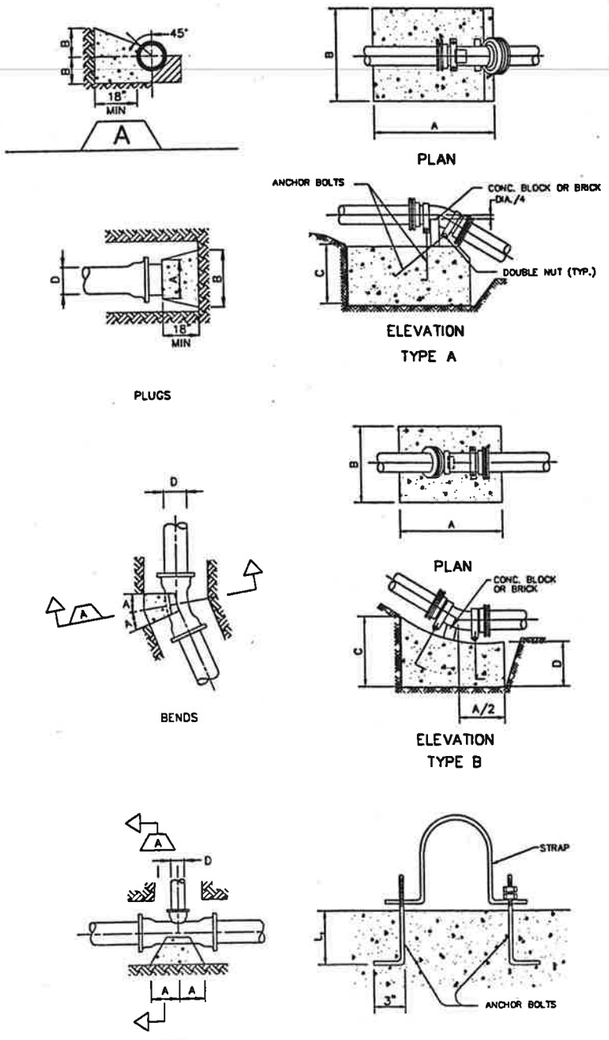
(N.T.S.)



WATER SERVICE CONNECTION DETAIL

ITEM 638– "(BY SIZE)" COPPER SERVICE BRANCH

(N.T.S.)



CALCULATED CJM
CHECKED MJB

WATERLINE DETAILS

SUM - 59-493

113
171

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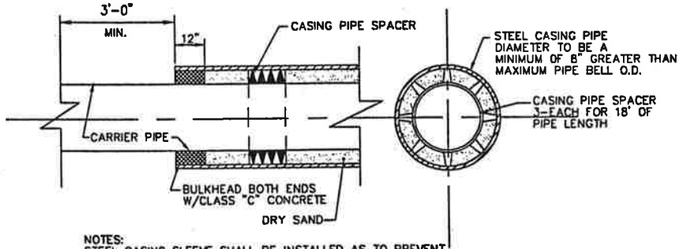
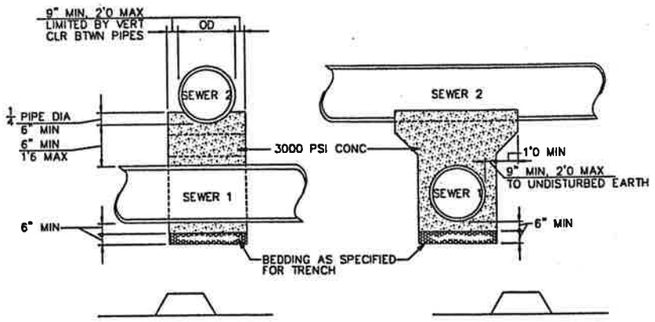


NOTES:
STEEL CASING SLEEVE SHALL BE INSTALLED AS TO PREVENT THE FORMATION OF A WATERWAY UNDER THE CHANNEL BED AND WITH AN EVEN BEARING THROUGHOUT ITS LENGTH AND SLOPE TO ONE END. THE CASING PIPE JOINTS ARE TO BE WELDED WATER TIGHT

STEEL CASING PIPE SHALL EXTEND A MINIMUM OF 4 FT BEYOND EDGE OF PAVEMENT

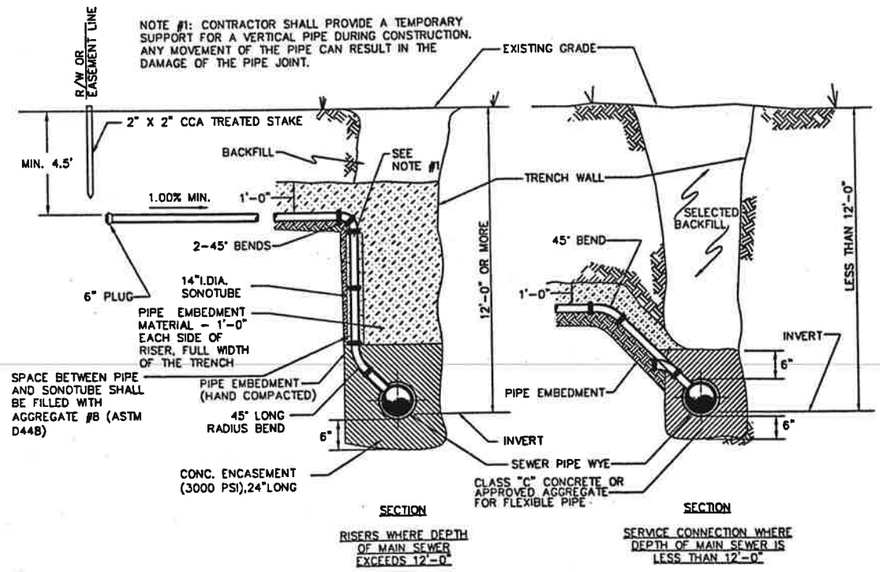
BORE OR JACK STEEL CASING DETAIL

(N.T.S.)



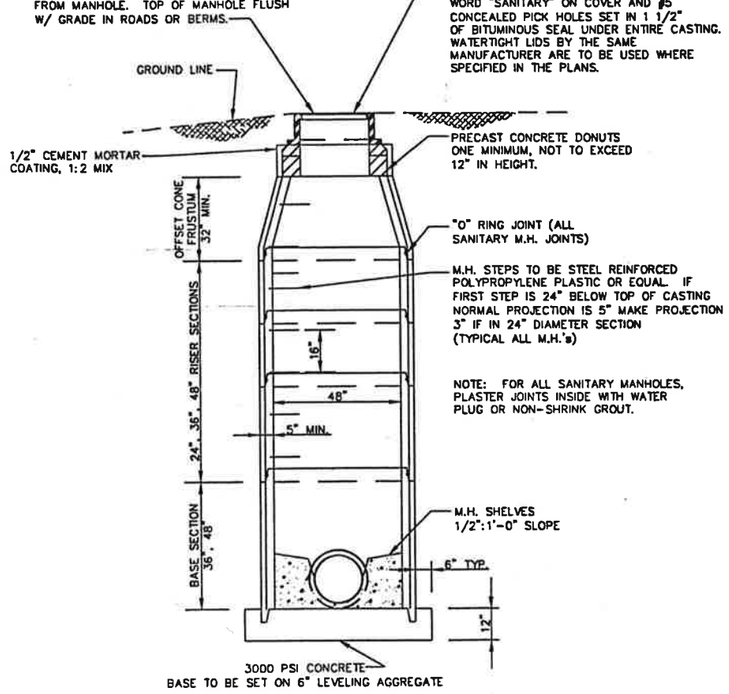
CONCRETE ENCASEMENT

(N.T.S.)



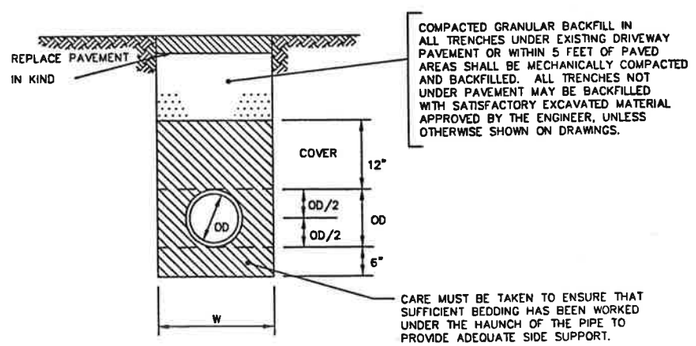
6" DIAM. SANITARY SERVICE CONNECTIONS

(N.T.S.)



PRECAST CONCRETE MANHOLE FOR 6" THRU 24" SEWERS

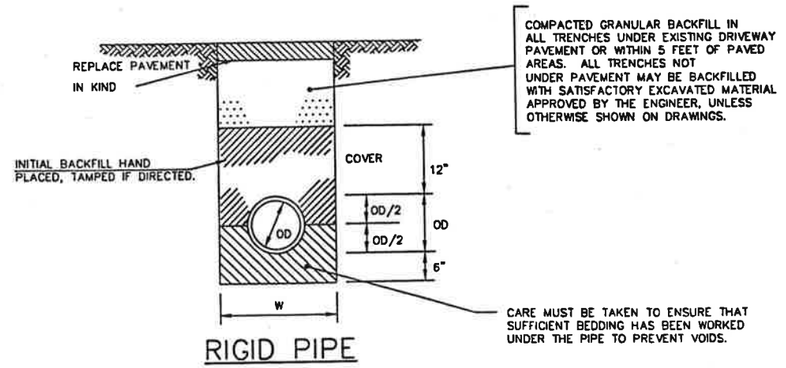
(N.T.S.)



FLEXIBLE PIPE TRENCH DETAIL

(N.T.S.)

NOTE: TRENCH WIDTH W= PIPE O.D. PLUS 2'-0"



RIGID PIPE TRENCH DETAIL

(N.T.S.)

CALCULATED CJM
CHECKED MJB

SANITARY SEWER DETAILS

SUM - 59-493

GENERAL SUMMARY

SHEET NUMBER											PARTICIPATION		ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	AS PER PLAN SHEET REF.
117	125	126	127	128	129	130	131	135	141	146								
		LUMP SUM											202	00201	LUMP SUM	–	RAILROAD CROSSING REMOVED, AS PER PLAN	119
1280													603	00400	1280	LIN. FT.	4" CONDUIT, TYPE E	
								739	1051	56			625	25400	1846	LIN. FT.	CONDUIT, 2", 713.04	
								140	172	572			625	25500	884	LIN. FT.	CONDUIT, 3", 713.04	
								133	197				625	25600	330	LIN. FT.	CONDUIT, 4", 713.04	
									230				625	25700	230	LIN. FT.	CONDUIT, 6", 713.04	
									72				625	25900	72	LIN. FT.	CONDUIT JACKED OR DRILLED	
								1102	1685	630			625	29000	3417	LIN. FT.	TRENCH	
								10	11	4			625	31101	26	EACH	PULL BOX, 713.081, 10" x 14", AS PER PLAN	117
								2	2	4			625	31201	8	EACH	PULL BOX, 713.081, 13" x 18", AS PER PLAN	117
	1	2	1	1				4	4	5			625	32000	18	EACH	GROUND ROD	
								1	1	1			625	32001	3	EACH	GROUND ROD, AS PER PLAN	118
								1102	1717	630			625	36000	3449	LIN. FT.	SPECIAL – PLASTIC CAUTION TAPE	
	97.5	70	100	67	338.5								630	02100	674	LIN. FT.	GROUND MOUNTED SUPPORT, NO.2 POST	
	63		31	60.75									630	03100	155	LIN. FT.	GROUND MOUNTED SUPPORT, NO.3 POST	
		1	2	2									630	08500	5	EACH	STREET NAME SIGN SUPPORT	
	1												630	15401	1	EACH	COMBINATION OVERHEAD SIGN SUPPORT, TYPE TC–16.20, DESIGN 4, AS PER PLAN	119
			1										630	16001	1	EACH	COMBINATION OVERHEAD SIGN SUPPORT, TYPE TC–16.20, DESIGN 10, AS PER PLAN	119
		1											630	16101	1	EACH	COMBINATION OVERHEAD SIGN SUPPORT, TYPE TC–16.20, DESIGN 11, AS PER PLAN	119
		7		4									630	79101	11	EACH	SIGN HANGER ASSEMBLY, MAST ARM, AS PER PLAN	119
	1	3		1									630	79500	5	EACH	SIGN SUPPORT ASSEMBLY, POLE MOUNTED	
	125.25	140.75	75.37	99.69	43.75								630	80102	486	SQ. FT.	SIGN, FLAT SHEET, TYPE G	
		42		24									630	80103	66	SQ. FT.	SIGN, FLAT SHEET, TYPE G, AS PER PLAN	120
		2	3	3									630	80500	8	EACH	SIGN, DOUBLE FACED, STREET NAME	
	1	1	1										630	84510	3	EACH	RIGID OVERHEAD SIGN SUPPORT FOUNDATION	
	22	16	25	19	3								630	85000	85	EACH	REMOVAL OF GROUND MOUNTED SIGN AND STORAGE	
		1	2		1								630	85100	4	EACH	REMOVAL OF GROUND MOUNTED SIGN AND REERECTION	
	13	7	14	8	4								630	86002	46	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	
								4	2	8			632	00303	14	EACH	VEHICULAR SIGNAL HEAD, 3 SECTION, 12" LENS, 1–WAY, POLYCARBONATE, AS PER PLAN	118
								2	6				632	00503	8	EACH	VEHICULAR SIGNAL HEAD, 5 SECTION, 12" LENS, 1–WAY, POLYCARBONATE, AS PER PLAN	118
								4	8	4			632	20601	16	EACH	PEDESTRIAN SIGNAL HEAD, TYPE D2, AS PER PLAN	117
								6	8	8			632	25001	22	EACH	COVERING OF VEHICULAR SIGNAL HEAD	
								4	8	4			632	25010	16	EACH	COVERING OF PEDESTRIAN SIGNAL HEAD	
								4	8	4			632	26000	16	EACH	PEDESTRIAN PUSHBUTTON	
								11	22	5			632	26500	38	EACH	DETECTOR LOOP	
								8	13	4			632	27004	25	EACH	LOOP DETECTOR UNIT	
								3	9	2			632	27009	14	EACH	LOOP DETECTOR UNIT, DELAY AND EXTENSION TYPE, AS PER PLAN	117
								421	1774	586			632	40500	2781	LIN. FT.	SIGNAL CABLE, 5 CONDUCTOR NO.14 AWG	
								606	1495	623			632	40700	2724	LIN. FT.	SIGNAL CABLE, 7 CONDUCTOR NO.14 AWG	
		1		1				2	4	4			632	64010	12	EACH	SIGNAL SUPPORT FOUNDATION	

CALCULATED T.K.I. CHECKED K.P.W.

TRAFFIC CONTROL GENERAL SUMMARY

SUM - 59-493

GENERAL SUMMARY

SHEET NUMBER											PARTICIPATION		ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	AS PER PLAN SHEET REF.
120B	145A	126	127	128	129	130	131	135	141	146								
								2		1			632	64020	3	EACH	PEDESTAL FOUNDATION	
								2653	8193	1259			632	65200	12105	LIN. FT.	LOOP DETECTOR LEAD-IN CABLE	
								187	83	140			632	68300	329	LIN. FT.	POWER CABLE, 3 CONDUCTOR NO.6 AWG	
								1	1	1			632	70001	3	EACH	POWER SERVICE, AS PER PLAN	120
								1	2	1			632	70401	4	EACH	CONDUIT RISER, 2" DIAMETER, AS PER PLAN	117
								1					632	77081	1	EACH	COMBINATION SIGNAL SUPPORT, TYPE TC-81.20, DESIGN 12 POLE WITH MAST ARMS	119
																	TC-81.20 DESIGN 4 AND DESIGN 3, AS PER PLAN	
										2			632	80101	2	EACH	SIGNAL SUPPORT, TYPE TC-81.20, DESIGN 1, AS PER PLAN	119
		1		1									632	80601	2	EACH	COMBINATION SIGNAL SUPPORT, TYPE TC-81.20, DESIGN 12, AS PER PLAN	117
								1	1	2			632	81201	4	EACH	COMBINATION SIGNAL SUPPORT, TYPE TC-81.20, DESIGN 2, AS PER PLAN	119
									2				632	81301	2	EACH	COMBINATION SIGNAL SUPPORT, TYPE TC-81.20, DESIGN 3, AS PER PLAN	119
									1				632	81501	1	EACH	COMBINATION SIGNAL SUPPORT, TYPE TC-81.20, DESIGN 11, AS PER PLAN	119
								2		1			632	89600	3	EACH	PEDESTAL, 8'	
								1	1	1			632	90101	3	EACH	REMOVAL OF TRAFFIC SIGNAL INSTALLATION, AS PER PLAN	117
								389	1909	860			632	90500	3158	LIN. FT.	SIGNALIZATION, MISC.: INTERCONNECT CABLE, 12 FIBER	120
200	1847								639	484			632	90500	3170	LIN. FT.	SIGNALIZATION, MISC.: INTERCONNECT CABLE, 96 FIBER	120A
								1	1	1			633	38001	3	EACH	CONTROLLER, ACTUATED, 8 PHASE, SOLID STATE DIGITAL MICROPROCESSOR, AS PER PLAN	118
									1				633	39001	1	EACH	CONTROLLER, MASTER, TRAFFIC RESPONSIVE, AS PER PLAN	118
								1	1	1			633	64001	3	EACH	PREEMPTION, AS PER PLAN	120
								1.85	1.85	1.85			633	70000	5.6	CU. YD.	CONCRETE FOR CABINET FOUNDATION	
										11.16			633	70500	12	SQ. FT.	CONTROLLER WORK PAD	
										1			633	99000	1	EACH	CONTROLLER ITEM, MISC.: MICROWAVE DETECTOR UNIT	117
								1	1	1			633	99000	3	EACH	CONTROLLER ITEM, MISC.: PAN-TILT-ZOOM CAMERA	119
						0.168							642	00102	0.168	MILE	EDGE LINE, TYPE 2	
						1.044	0.229						642	00202	1.273	MILE	LANE LINE, TYPE 2	
						0.603	0.202						642	00302	0.805	MILE	CENTER LINE, TYPE 2	
						1492							642	00402	1492	LIN. FT.	CHANNELIZING LINE, TYPE 2	
						349	15						644	00500	364	LIN. FT.	STOP LINE	
						1198	84						644	00600	1282	LIN. FT.	CROSSWALK LINE	
						560	207						644	00700	767	LIN. FT.	TRANSVERSE LINE	
						25	57						644	00900	82	SQ. FT.	ISLAND MARKING	
						11							644	01000	11	EACH	RAILROAD SYMBOL MARKING	
						20							644	01300	20	EACH	LANE ARROW	
						7							644	01400	7	EACH	WORD ON PAVEMENT, 72"	

CALCULATED T.K.I. | CHECKED K.P.W.

TRAFFIC CONTROL GENERAL SUMMARY

SUM - 59-4.93

SCOPE

THE WORK TO BE PERFORMED BY THE CONTRACTOR IN CONNECTION WITH THE TRAFFIC CONTROL DEVICES OF THIS PROJECT CONSIST OF FURNISHING LABOR, SUPPLIES, EQUIPMENT, MATERIALS AND PERFORMING ALL OPERATIONS NECESSARY FOR THE ACCEPTABLE INSTALLATION OF THE TRAFFIC CONTROL DEVICES, IN STRICT ACCORDANCE WITH THESE PLANS, NOTES AND SPECIFICATIONS. THESE NOTES, SCHEDULES AND DRAWINGS ARE INTENDED TO PROVIDE FOR ALL MATERIAL AND LABOR REQUIRED TO FURNISH AND INSTALL A COMPLETE TRAFFIC CONTROL SYSTEM.

MAINTENANCE OF TRAFFIC SIGNAL INSTALLATIONS

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING TRAFFIC SIGNAL INSTALLATIONS WITHIN THE PROJECT UNDER THE FOLLOWING CONDITIONS:

A) EXISTING SIGNAL INSTALLATIONS WHICH THE PLANS REQUIRE THE CONTRACTOR TO ACTUALLY ADJUST, MODIFY OR OTHERWISE DISTURB: THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ENTIRE INSTALLATION (AT AN INTERSECTION) FROM THE TIME HIS OPERATION FIRST DISTURBS THE INSTALLATION UNTIL THE INSTALLATION HAS BEEN SUBSEQUENTLY REMOVED OR MODIFIED AND THE WORK IS ACCEPTED.

B) NEW OR REUSED SIGNAL INSTALLATIONS OR DEVICES, INSTALLED BY THE CONTRACTOR: THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF THESE FROM THE TIME OF INSTALLATION UNTIL THE WORK IS ACCEPTED.

THE CONTRACTOR SHALL CORRECT AS QUICKLY AS POSSIBLE ALL OUTAGES OR MALFUNCTIONS. HE SHALL PROVIDE THE CITY AND THE ENGINEER SUCH ADDRESSES AND PHONE NUMBERS WHERE HIS MAINTENANCE FORCES CAN BE CONTACTED. THE CONTRACTOR SHALL PROVIDE ONE OR MORE PERSONS TO RECEIVE ALL CALLS AND DISPATCH THE NECESSARY MAINTENANCE FORCES TO CORRECT OUTAGES. SUCH A PERSON OR PERSONS MAY BE USED TO PERFORM OTHER DUTIES AS LONG AS PROMPT ATTENTION IS GIVEN TO THESE CALLS AND A PERSON IS READILY AVAILABLE CONTINUOUSLY 24 HOURS A DAY, 7 DAYS A WEEK. ALL LAMP OUTAGES, CABLE OUTAGES, ELECTRICAL FAILURES, EQUIPMENT MALFUNCTIONS AND MISALIGNED SIGNAL HEADS SHALL BE CORRECTED TO THE SATISFACTION OF THE ENGINEER WITH THE SIGNAL BACK TO SERVICE WITHIN FOUR HOURS AFTER THE CONTRACTOR HAS BEEN NOTIFIED OF THE OUTAGE.

IN THE EVENT NEW SIGNALS ARE DAMAGED PRIOR TO ACCEPTANCE, ALL DAMAGED EQUIPMENT EXCEPT POLES AND CONTROL EQUIPMENT SHALL BE REPLACED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER WITH THE SIGNAL BACK IN SERVICE WITHIN 8 HOURS AFTER THE CONTRACTOR'S NOTIFICATION OF THE OUTAGE.

IF POLES AND/OR CONTROL EQUIPMENT ARE DAMAGED AND MUST BE REPLACED, THE CONTRACTOR SHALL MAKE TEMPORARY REPAIRS AS NECESSARY TO BRING THE SIGNAL BACK INTO FULL OPERATION WITHIN THE ALLOWED 8-HOUR PERIOD, AND SHALL MAKE PERMANENT REPAIRS OR REPLACEMENT AS SOON THEREAFTER AS POSSIBLE.

NONE OF THE ABOVE SHALL BE CONSTRUED AS COLLECTIVE OR CONSECUTIVE OUTAGE TIME PERIODS AT ANY ONE LOCATION. THAT IS, WHERE MORE THAN ONE OUTAGE OCCURS AT ANY ONE LOCATION, THEN THE ALLOTTED TIME LIMIT SHALL BE FOR THE WORST SINGLE OUTAGE.

WHERE OUTAGES ARE THE DIRECT RESULT OF A VEHICLE ACCIDENT, THE RESPONSE OF THE CONTRACTOR SHALL BE AS OUTLINED ABOVE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COLLECTION OF ANY COMPENSATION FOR THIS WORK FROM THOSE PARTIES RESPONSIBLE FOR THE DAMAGE, AS PER 107.16.

WHERE THE CONTRACTOR HAS FAILED TO OR CANNOT RESPOND TO AN OUTAGE OR SIGNAL EQUIPMENT MALFUNCTION, AT THESE LOCATIONS WITHIN HIS RESPONSIBILITY, WITHIN PERIODS SPECIFIED ABOVE, THE ENGINEER MAY INVOKE THE PROVISIONS OF SECTION 105.15 AND ANY SUBSEQUENT BILLINGS TO THE STATE OR THE CITY OF CUYAHOGA FALLS FOR POLICE SERVICES AND MAINTENANCE SERVICE BY CITY FORCES SHALL BE DEDUCTED FROM MONIES DUE OR TO BECOME DUE THE CONTRACTOR IN ACCORDANCE WITH PROVISIONS OF SECTION 105.15.

THE CONTRACTOR SHALL PROVIDE THE MAINTENANCE SERVICE ENTIRELY WITH HIS FORCES OR HE MAY CHOOSE TO ENTER INTO A COOPERATIVE UNDERSTANDING WITH THE LOCAL MAINTAINING AGENCY TO PROVIDE THE MAINTENANCE.

THE CONTRACTOR SHALL INFORM THE ENGINEER, IN WRITING, OF THE MAINTENANCE METHOD SELECTED.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ANY TRAFFIC SIGNAL COMPONENTS REQUIRED TO BE HANDLED DURING THE RELOCATION OF POLES AND REVISIONS TO THE SIGNAL SYSTEM.

WHEN A TRAFFIC SIGNAL MUST BE TAKEN OUT OF SERVICE BY THE CONTRACTOR, DUE TO CONSTRUCTION PROCEDURES, THIS OUTAGE SHALL NOT EXCEED 6 HOURS AND SHALL NOT INCLUDE THE HOURS OF 6:30 A.M. TO 8:30 A.M. AND 4:00 P.M. TO 6:00 P.M., MONDAY THROUGH FRIDAY. ANY SIGNALIZED INTERSECTION, WHERE THE SIGNAL IS OUT OF SERVICE DUE TO CONSTRUCTION PROCEDURES, OR DUE TO AN OUTAGE OR MALFUNCTION OF EQUIPMENT AS DESCRIBED ABOVE, SHALL BE PROTECTED BY THE CONTRACTOR, BY THE INSTALLATION OF TEMPORARY "STOP" SIGNS.

ANY VEHICULAR TRAFFIC SIGNAL HEAD, EITHER NEW OR EXISTING WHICH WILL BE OUT OF OPERATION SHALL BE COVERED IN THE MANNER DESCRIBED IN 632.24.

ALL COSTS RESULTING IN THE ABOVE REQUIREMENTS SHALL BE CONSIDERED TO BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614, MAINTAINING TRAFFIC.

TEMPORARY SIGNAL TIMING FOR NEW SIGNALS

AS THE NEW SIGNAL INSTALLATIONS ARE ENERGIZED, THE CONTRACTOR SHALL ESTABLISH AND MAINTAIN "TIME BASED COORDINATION" BETWEEN ALL NEW CONTROLLERS
UNTIL THE INTERCONNECT CABLE IS IN PLACE AND THE CONTROLLERS ARE BROUGHT "ON-LINE" WITH THE SYSTEM MASTER CONTROLLER.

THE INTERIM TIMING PATTERN SHALL BE THE COORDINATION TIMING SHOWN IN THE PLAN INCLUDING THE TIME OF DAY SCHEDULE.

THE COST OF THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE COST OF THE CONTROLLER PAY ITEM. NO ADDITIONAL COMPENSATION SHALL BE MADE TO THE CONTRACTOR TO PERFORM THIS WORK.

632 REMOVAL OF TRAFFIC SIGNAL INSTALLATION, AS PER PLAN

TRAFFIC SIGNAL INSTALLATIONS, INCLUDING SIGNAL HEADS, CABLE, MESSENGER WIRE, STRAIN POLES, CABINET, CONTROLLER, ETC., SHALL BE REMOVED IN ACCORDANCE WITH 632.25 AND AS INDICATED ON THE PLANS. REMOVED ITEMS SHALL BE DELIVERED AND UNLOADED AT THE CITY SIGNAL DEPT. LOCATED AT 2511 E. BAILEY ROAD IN ACCORDANCE WITH THE LISTING GIVEN ON SHEET 2. THE CONTRACTOR SHALL CALL THE CITY SIGNAL DEPARTMENT (330-971-8020), 3 WORKING DAYS PRIOR TO THE DELIVERY.

REMOVAL ITEM CHART

DESCRIPTION OF THE ITEMS TO BE REMOVED BY THE CONTRACTOR	ITEMS TO BE STORED FOR THE CITY OF CUYAHOGA FALLS	ITEMS TO BE DISPOSED OF BY THE CONTRACTOR
ALL CONTROLLERS W/CABINETS AND ACCESSORIES	X	
ALL SIGNAL HEADS	X	
MESSENGER WIRE AND SIGNAL CABLE		X
EXISTING SIGNAL POLES		X

POWER SUPPLY FOR TRAFFIC SIGNALS

ELECTRIC POWER SHALL BE OBTAINED FROM THE CITY OF CUYAHOGA FALLS ELECTRIC DEPARTMENT AT THE LOCATION INDICATED ON THE PLANS. POWER SUPPLIED SHALL BE 120 VOLTS.

GUARANTEE

THE CONTRACTOR SHALL GUARANTEE THAT THE TRAFFIC CONTROL SYSTEM INSTALLED AS PART OF THIS CONTRACT SHALL OPERATE SATISFACTORILY FOR A PERIOD OF 180 DAYS FOLLOWING COMPLETION OF THE 10-DAY PERFORMANCE TEST. IN THE EVENT OF UNSATISFACTORY OPERATION, THE CONTRACTOR SHALL CORRECT FAULTY INSTALLATIONS, MAKE REPAIRS AND REPLACE DEFECTIVE PARTS WITH NEW PARTS OF EQUAL OR BETTER QUALITY. EQUIPMENT, MATERIAL AND LABOR COSTS INCURRED IN CORRECTING AN UNSATISFACTORY OPERATION SHALL BE BORNE BY THE CONTRACTOR.

THE GUARANTEE SHALL COVER THE FOLLOWING ITEMS OF THE TRAFFIC CONTROL SYSTEM: CONTROLLERS AND ASSOCIATED EQUIPMENT, DETECTOR UNITS, INTERCONNECTION ITEMS AND MASTER CONTROL EQUIPMENT.

CUSTOMARY MANUFACTURER'S GUARANTEES FOR THE FOREGOING ITEMS SHALL BE TURNED OVER TO THE CITY OF CUYAHOGA FALLS.

THE COST OF GUARANTEEING THE TRAFFIC CONTROL SYSTEM WILL BE INCIDENTAL TO AND INCLUDED IN THE CONTRACT UNIT PRICE OF THE VARIOUS ITEMS MARKING THE SYSTEM.

ITEM 632 - CONDUIT RISER, 2" DIAMETER, AS PER PLAN

THIS ITEM OF WORK SHALL CONSIST OF SUPPLYING AND ERECTING A CONDUIT RISER AS DETAILED ON SHEET NO. 148 .

ALL LABOR, MATERIALS, TOOLS, AND INCIDENTALS NECESSARY TO PERFORM THE REQUIRED WORK SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE BID PER EACH ITEM 632-CONDUIT RISER, 2" DIAMETER, AS PER PLAN.

632 LOOP DETECTOR UNITS, BY TYPE, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF 632 AND 732.07 OR 732.08, LOOP DETECTOR UNITS SHALL HAVE THE FOLLOWING REQUIREMENTS OR FEATURES:

THE OUTPUT DEVICE SHALL BE A RELAY, AND ALL CONTACTS SHALL BE INCLUDED IN THE WIRING HARNESS.

THE LOOP DETECTOR UNITS FOR NON-SYSTEM LOOPS SHALL HAVE TWO (2) OUTPUTS. ONE OUTPUT TO BE PRESENCE AND THE OTHER TO BE PULSE TO ENABLE ACCURATE COUNTING OF VEHICLES ENTERING THE LOOP EVEN WHEN PRECEDING VEHICLES REMAIN PRESENT OVER THE LOOP. THE COUNT OUTPUT SHALL BE WIRED TO THE SYSTEM INPUT OF THE TRANSCEIVER MODULE. THE PRESENCE OUTPUT SHALL BE WIRED TO THE CONTROLLER'S DETECTOR INPUT AND THE TRANSCEIVER MODULES'S GRAPHICS DETECTOR INPUT.

THE UNIT SHALL BE SELF TUNING.

THE UNIT SHALL BE OF THE TS2 TYPE.

ONE ADDITIONAL UNIT OF EACH TYPE SHALL BE SUPPLIED TO BE USED AS A SPARE.

EACH AMPLIFIER SHALL BE NUMBERED TO CORRESPOND WITH ITS LOOP NUMBER. THE LOOP NUMBERS ARE SHOWN ON EACH PLAN SHEET.

UNDERDRAINS FOR PULLBOXES

REFERENCE IS MADE TO STANDARD DRAWING HL-30.11 FOR DETAILS OF DRAINING PULLBOXES. UNDERDRAINS FOR PULLBOXES SHALL BE USED AS DIRECTED BY THE ENGINEER AND SHALL BE PROVIDED WHERE THE LENGTH REQUIRED FOR A SATISFACTORY OUTLET DOES NOT EXCEED APPROXIMATELY 40 FEET. AN ESTIMATED QUANTITY OF 1280 FEET. OF ITEM 603, 4" CONDUIT, TYPE E IS INCLUDED IN THE GENERAL SUMMARY FOR THIS PURPOSE.

ITEM 625 - PULL BOX, 713.081, BY SIZE, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF 625.11 AND 713.08, PULL BOXES SHALL BE CONSTRUCTED OF POLYMER CONCRETE. COVERS SHALL BE NON-CONDUCTIVE AND NON-SLIP.

ALL LABOR, MATERIALS, TOOLS, EQUIPMENT, AND INCIDENTALS NECESSARY TO PERFORM THE REQUIRED WORK SHALL BE INCLUDED IN THE CONTRACT BID PRICE PER EACH ITEM 625-PULL BOX, 713.081, BY SIZE, AS PER PLAN

ITEM 632 - PEDESTRIAN SIGNAL HEAD, TYPE D2, AS PER PLAN

ALL PEDESTRIAN SIGNAL HEADS SHALL BE INSTALLED USING QUICK DISCONNECT MOUNTING HARDWARE. FIELD INSTALLATION OF WIRING HOLES, FASTENERS, AND MOUNTING HEIGHTS ON EXISTING POLES SHALL BE AS NOTED ON STANDARD CONSTRUCTION DRAWING TC-85.10M, NOTE 4 AND 7.

PEDESTRIAN SIGNAL HEADS AND VISORS SHALL BE BLACK AND CONSTRUCTED OF INJECTION MOLDED, UV STABILIZED, POLYCARBONATE PLASTIC AND MEET I.T.E. SPECIFICATIONS. PROPER EXTERIOR COLORS SHALL BE OBTAINED BY USE OF COLORED PLASTIC MATERIAL RATHER THAN PAINTING. PLASTIC LENSES SHALL BE USED.

ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO PERFORM THE REQUIRED WORK SHALL BE INCLUDED IN THE CONTRACT BID PRICE PER EACH ITEM
632-PEDESTRIAN SIGNAL HEAD, TYPE D2, AS PER PLAN.

ITEM 633 - CONTROLLER ITEM, MISC.: MICROWAVE DETECTOR UNIT

THE CONTRACTOR SHALL FURNISH AND INSTALL A RADAR MICROWAVE VEHICLE DETECTOR, AS SHOWN IN THE PLANS, AND ALL OTHER ACCESSORIES THAT ARE NECESSARY TO MAKE THE DETECTOR FUNCTIONAL AND OPERATIONAL.

THE DETECTORS SHALL BE A TC-26B AS MANUFACTURED BY MICROWAVE SENSORS, 7885 JACKSON ROAD, ANN ARBOR, MICHIGAN, 48103, 800-521-0418.

ALL LABOR, MATERIALS, MOUNTING BRACKETS, TOOLS, EQUIPMENT, TESTING, WIRING, CERTIFICATIONS, AND OTHER INCIDENTALS NECESSARY TO PERFORM THE REQUIRED WORK, INCLUDING ALL CONNECTIONS MADE AND WIRING COMPLETE, SHALL BE INCLUDED IN THE CONTRACT BID PRICE PER EACH ITEM 633-CONTROLLER ITEM, MISC.: MICROWAVE DETECTOR UNIT.

CALCULATED T.K.I. CHECKED K.P.W.

TRAFFIC CONTROL GENERAL NOTES

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ITEM 632 – VEHICULAR SIGNAL HEAD, BY SECTION, 12" LENS, 1–WAY, POLYCARBONATE, AS PER PLAN

SIGNAL HEADS AND VISORS SHALL BE BLACK AND CONSTRUCTED OF INJECTION MOLDED, UV STABILIZED, POLYCARBONATE PLASTIC AND MEET I.T.E. SPECIFICATIONS. PROPER EXTERIOR COLORS SHALL BE OBTAINED BY USE OF COLORED PLASTIC MATERIAL RATHER THAN PAINTING. PLASTIC LENSES SHALL BE USED. PIPE, SPACER, AND FITTINGS SHALL BE CONSTRUCTED OF GALVANIZED STEEL OR ALUMINUM MATERIAL. SIGNALS ATTACHED TO MAST ARMS SHALL USE RIGID MOUNTING FIXTURES AS SHOWN ON TC–85.20.

ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO PERFORM THE REQUIRED WORK SHALL BE INCLUDED IN THE CONTRACT BID PRICE PER EACH ITEM 632–VEHICULAR SIGNAL HEAD, BY SECTION, 12" LENS, 1–WAY, POLYCARBONATE, AS PER PLAN.

ITEM 633 – CONTROLLER, ACTUATED, 8–PHASE, SOLID STATE DIGITAL MICROPROCESSOR, AS PER PLAN

THIS ITEM OF WORK SHALL CONSIST OF FURNISHING AND INSTALLING AN ACTUATED, 8–PHASE, SOLID STATE DIGITAL MICROPROCESSOR TYPE CONTROLLERS WITH SECONDARY COORDINATOR, MENU DRIVEN PROMPTS, INTERNAL TBC, TELEMETRY UNIT, AND ALL OTHER ACCESSORIES THAT ARE NECESSARY TO MAKE THE CONTROLLER COMPLETELY FUNCTIONAL AND OPERATIONAL AS SHOWN IN THE PLANS.

THE TIMER SHALL MEET NEMA TS–2 TYPE II SPECIFICATIONS WITH A TS–1 ADAPTER. THE CABINET SHALL HAVE A TS–2 TYPE 1 BACKPANEL WITH TS–2 RACK MOUNTED DETECTORS. THE CONTROLLER AND CABINET SHALL CONFORM TO O.D.O.T. SPECIFICATION 633 AND SHALL HAVE THE FOLLOWING FEATURES:

1. THE LOAD SWITCHES SHALL PROVIDE INPUT AND OUTPUT INDICATIONS.

2. THE MALFUNCTION MONITOR UNIT SHALL BE CAPABLE OF 12 CHANNEL OPERATION, EXTENDED MONITORING, LCD DISPLAY AND FAULT/EVENT STORAGE.

3. THE FOLLOWING SHALL BE ACCESSIBLE VIA THE POLICE PANEL DOOR:
   A. SIGNAL SHUTDOWN SWITCH
   B. FLASH CONTROL SWITCH
   C. MANUAL PUSHBUTTON AND 10 FOOT EXTENSION CORD
   D. AUTOMATIC/MANUAL TRANSFER

4. THE FOLLOWING SWITCHES SHALL BE MOUNTED ON THE SWITCH PANEL IN THE CABINET:
   A. RUN/STOP TIMING
   B. CONTROLLER TIMER POWER
   C. DETECTOR TEST

5. A SERVICE LAMP WITH DOOR ACTIVATED ON/OFF SWITCH

6. THE CABINET EXTERIOR SHALL BE MATTE BLACK.

7. UTILITY POWER DISCONNECT AND METER SHALL BE LOCATED ON THE SIGNAL SUPPORT NEAREST THE CONTROLLER AND NOT ON THE CABINET.

8. THE CONTRACTOR SHALL FURNISH FOR APPROVAL, A CABINET PLAN SHOWING COMPONENT PLACEMENT.

9. AN IFS FIBER MODEM (64K BAUD OR GREATER) SHALL BE INSTALLED IN EACH CONTROLLER.

AN ADDITIONAL TIMER, MALFUNCTION MONITOR, AND CONFLICT MONITOR SHALL BE FURNISHED TO BE USED AS SPARES.

IN ADDITION, NO CABINET DOORS WILL OPEN OUTSIDE OF THE RIGHT–OF–WAY. PRIOR TO ACCEPTANCE, THE CONTRACTOR SHALL CERTIFY, IN WRITING, THAT THE CONTROLLER HAS BEEN TESTED BY AN AUTOMATIC CONFLICT MONITOR TESTER AND THAT NO CONFLICTS EXIST IN THE PROPER OPERATION OF THE CONTROLLER.

PAYMENT FOR ITEM 633 – CONTROLLER, ACTUATED, 8–PHASE, SOLID STATE DIGITAL MICROPROCESSOR, AS PER PLAN WILL BE MADE AT THE CONTRACT UNIT PRICE FOR EACH CONTROLLER IN PLACE AND FULLY OPERATIONAL AS SHOWN IN THE PLANS.

ALTERNATE BID–ITEM 633 – CONTROLLER, ACTUATED, 8–PHASE, SOLID STATE DIGITAL MICROPROCESSOR

THE CONTROLLER SHALL BE A MODEL PEEK 3000 AS MANUFACTURED BY PEEK TRAFFIC. THE CONTROLLER SHALL MEET ALL SPECIFICATIONS AS OUTLINED IN ITEM 633–CONTROLLER, ACTUATED, 8–PHASE, SOLID STATE DIGITAL MICROPROCESSOR, AS PER PLAN.

THE CONFLICT MONITOR SHALL BE MANUFACTURED BY EDI MALFUNCTION MANAGEMENT UNITS (MMU).

ITEM 625 – GROUND ROD, AS PER PLAN

IN ADDITION TO ITEM 625.10, THIS ITEM SHALL CONSIST OF FURNISHING AND RUNNING OF A SEVEN (7) STRAND # 4 COPPER WIRE FROM THE TOP OF THE GROUND ROD AND ATTACHING IT TO THE NEUTRAL BAR IN THE CABINET.

PAYMENT SHALL BE MADE AT THE CONTRACT UNIT PRICE PER EACH.

ITEM 625 SPECIAL–PLASTIC CAUTION TAPE

IN ADDITION TO THE REQUIREMENTS OF 625.12 AND THE STANDARD CONSTRUCTION DRAWINGS, WITHIN EACH TRENCH, THE LOCATION OF UNDERGROUND CABLE OR CONDUIT SHALL BE MARKED BY THE USE OF A CONTINUOUS IDENTIFYING TAPE BURIED IN THE TRENCH ABOVE THE LINE. THE IDENTIFYING TAPE SHALL BE AN INERT MATERIAL, APPROXIMATELY 6" WIDE, COMPOSED OF POLYETHYLENE PLASTIC, HIGHLY RESISTANT TO ALKALIS ACIDS OR OTHER CHEMICALS COMPONENTS LIKELY TO BE ENCOUNTERED IN SOILS. THE TAPE SHALL BE BRIGHT RED WITH IDENTIFYING PRINTING "ELECTRIC" IN BLACK LETTERS, ONE SIDE ONLY. TAPES SHALL BE SUPPLIED IN CONTINUOUS ROLLS WITH IDENTIFYING LETTERING REPEATED CONTINUOUSLY THE FULL LENGTH OF THE TAPE. IDENTIFYING TAPES SHALL BE BURIED IN THE ELECTRIC LINE TRENCH WITH ONE STRIP PLACED APPROXIMATELY 8" TO 12" BELOW THE FINAL SURFACE. THE TAPE SHALL BE PLACED PARALLEL WITH THE FINISHED SURFACE. THE CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS TO INSURE THAT THE TAPE IS NOT PULLED, DISTORTED OR OTHERWISE MISPLACED IN COMPLETING THE TRENCH BACKFILL. TAPE SHALL BE ALLEN SYSTEM'S, TERRA TAPE OR EQUAL AS APPROVED BY THE ENGINEER. THIS ITEM SHALL BE PAID FOR PER LINEAR FEET OF ITEM 625 SPECIAL–PLASTIC CAUTION TAPE COMPLETE AND IN PLACE.

ITEM 633 – CONTROLLER, MASTER, TRAFFIC RESPONSIVE, AS PER PLAN

THIS ITEM OF WORK SHALL CONSIST OF FURNISHING AND INSTALLING A SOLID STATE DIGITAL MICROPROCESSOR TYPE TRAFFIC RESPONSIVE MASTER CONTROLLER WITH MENU DRIVEN PROMPTS, INTERNAL TBC, TELEMETRY UNIT, IN THE LOCAL CONTROLLER CABINET, AND ALL OTHER ACCESSORIES THAT ARE NECESSARY TO MAKE THE MASTER COMPLETELY FUNCTIONAL AND OPERATIONAL AS SHOWN IN THE PLANS. THE MASTER CONTROLLER SHALL BE CAPABLE OF OPERATING THE SYSTEM WITH FIBER COMMUNICATION CABLE. THIS ITEM SHALL ALSO INCLUDE THE EXTRA CABINET SPACE NECESSARY TO BE LOCATED IN THE LOCAL CONTROLLER CABINETS WHERE INDICATED IN THE PLANS. THE MASTER SHALL BE OF THE SAME BRAND AS THE LOCAL CONTROLLER. THE CONTROLLER SHALL CONFORM TO ODOT SPECIFICATION 633 AND 733.

ONE ADDITIONAL MASTER CONTROLLER SHALL BE FURNISHED TO BE USED AS A SPARE.

THE CONTROLLER SHALL BE INSTALLED IN THE NEW GROUND MOUNTED CONTROLLER CABINET AT THE LOCATIONS INDICATED ON THE PLANS.

SYSTEM TIMING AND ANALYSIS

A. GENERAL DESCRIPTION

THE PURPOSE OF THIS WORK IS TO FURNISH ALL MATERIALS, LABOR, TOOLS AND EQUIPMENT NECESSARY TO PLACE INTO FULL OPERATION A TRAFFIC RESPONSIVE, CLOSED LOOP TRAFFIC SIGNAL COORDINATION SYSTEM.

THIS WORK SHALL CONSIST OF PREPARING SIGNAL TIMING AND TRAFFIC PROGRESSION PROGRAMS, LOADING THE PROGRAMS INTO THE SIGNAL SYSTEM, EVALUATING THE PERFORMANCE OF THE SYSTEM AND REFINING THE PROGRAM AS NECESSARY TO MAXIMIZE TRAFFIC FLOW AND OPERATION. THE WORK SHALL INCLUDE TRAFFIC SIGNAL DATA COLLECTION AND EVALUATION TRAFFIC SIGNAL PROGRESSION AND TIMING ANALYSES. DEVELOPMENT OF TRAFFIC ADJUSTED PATTERN SELECTION PARAMETERS, PERFORMING THE SYSTEM EVALUATION AND REFINEMENT OF THE SYSTEM OPERATION AND PREPARING AND SUBMITTING A SUMMARY REPORT FOR REVIEW AND APPROVAL BY THE ENGINEER.

WHERE A PROJECT CONTAINS INDIVIDUAL "SUB–SYSTEMS" THAT ARE CONNECTED TO THE CENTRAL OFFICE MONITOR (VIA FIBER COMMUNICATION CABLE), ALL WORK AS OUTLINED IN THIS NOTE SHALL BE PERFORMED FOR EACH SUB–SYSTEM AND THE COST SHALL BE CONSIDERED INCIDENTAL TO EACH MASTER CONTROLLER FOR THAT SUB–SYSTEM. IF REQUIRED, SIGNAL "SUB–SYSTEM" SHALL BE ANALYZED TOGETHER AND TRAFFIC PROGRESSION PROGRAMS SHALL BE COORDINATED TO OPTIMIZE THE OVERALL TRAFFIC FLOW BETWEEN THE VARIOUS SUB–SYSTEMS.

IT IS THE INTENT OF THIS ITEM OF WORK TO OPTIMIZE ONLY CYCLE LENGTHS, PHASE SPLITS, PERMISSIVE AND OFFSETS AND NOT TO CHANGE THE ACTUAL PHASING (AS DEPICTED IN THE PHASE DIAGRAM) THAT IS PROVIDED IN THE PLAN.

B. SYSTEMS ENGINEER

THE WORK SHALL BE PERFORMED BY A PERSON EXPERIENCED IN TRAFFIC ENGINEERING OR TRAFFIC ENGINEERING TECHNOLOGY. THE SYSTEMS ENGINEER SHALL HAVE MINIMUM OF FIVE (5) YEARS EXPERIENCE IN TRAFFIC ENGINEERING OR TRAFFIC ENGINEERING TECHNOLOGY AND SHALL BE KNOWLEDGEABLE WITH THE DESIGN AND OPERATION OF "CLOSED LOOP" TRAFFIC CONTROL AND SURVEILLANCE SYSTEMS. THE SYSTEMS ENGINEER SHALL BE FAMILIAR WITH THE TYPE OF "CLOSED LOOP" SYSTEM INSTALLED AS PART OF THIS PROJECT AND SHALL HAVE PREVIOUSLY SET–UP AND FINED–TUNED A SYSTEM OF THIS TYPE.

THREE (3) COPIES OF A RESUME DOCUMENTING THE FOLLOWING SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL:

THE SYSTEM ENGINEER'S EDUCATION INCLUDING TRAINING IN TRAFFIC ENGINEERING TECHNOLOGY AND SIGNAL SYSTEM DESIGN.

THE SYSTEM ENGINEER'S FAMILIARITY WITH THE "CLOSED LOOP" TYPE SYSTEM TO BE USED ON THIS PROJECT AND EXPERIENCE IN SETTING UP AND FINE TUNING A SYSTEM THAT THE SYSTEM ENGINEER OR TECHNICIAN HAS PROGRAMMED INTO THE TRAFFIC RESPONSIVE MODE SHALL BE PROVIDED TO THE ENGINEER FOR DOCUMENTATION PURPOSES.

A BRIEF DESCRIPTION OF PROPOSED METHODOLOGY OF DATA COLLECTION AND ANALYSIS, OF SYSTEM PARAMETER USAGE IN SYSTEM EVALUATION, OF FREQUENCY AND MEASUREMENT OF TRAVEL TIME AND DELAY, AND COMPARING ACTUAL VERSES SYSTEM MEASUREMENTS AND DELAY – LEVEL OF SERVICE.

THE SYSTEMS ENGINEER, UNDER AUTHORITY OF THE GENERAL CONTRACTOR, SHALL BE RESPONSIBLE FOR THE OPERATION OF THE SYSTEM, FROM THE START OF THE (10) DAY PERFORMANCE GUARANTEE (AS NOTED IN THE "GUARANTEE" PLAN NOTE SHOWN ON SHEET 117) UNTIL COMPLETION AND ACCEPTANCE OF THE FINAL SUMMARY REPORT BY THE ENGINEER. THE SYSTEMS ENGINEER SHALL PROVIDE A TWENTY FOUR (24) HOUR EMERGENCY PHONE NUMBER AND SHALL RESPOND TO SYSTEM RELATED PROBLEMS AS DEEMED NECESSARY BY THE ENGINEER TWENTY FOUR (24) HOURS A DAY, SEVEN DAYS A WEEK. THE ENGINEER RESERVES THE RIGHT TO REQUEST A SYSTEMS ANALYSIS THROUGHOUT THE ENTIRE DURATION OF THE (10) DAY GUARANTEE PERIOD, SHOULD NEW OR CONTINUING PROBLEMS OCCUR WITH THE OPERATION OF THE TRAFFIC RESPONSIVE SYSTEM.
THE ENGINEER RESERVES THE RIGHT TO REQUEST THAT THE CONTRACTOR PROVIDE A NEW SYSTEMS ENGINEER SHOULD THE CURRENT SYSTEM ENGINEER FAIL TO PERFORM THE REQUIRED DUTIES IN A TIMELY AND PROFESSIONAL MANNER OR FAIL TO HAVE A FIRM UNDERSTANDING OF THE OPERATION AND PROGRAMMING OF THE CLOSED LOOP SYSTEM CONSTRUCTED UNDER THIS PROJECT.

C. TRAFFIC PROGRAMS:

SIGNAL PROGRESSION AND TIMING PROGRAMS SHALL BE DEVELOPED BY THE SYSTEMS ENGINEER FROM COUNT AND OCCUPANCY DATA OBTAINED FROM THE LOCAL INTERSECTION AND SYSTEM LOOP DETECTORS, SUPPLEMENTED BY FIELD COUNTS AND MEASUREMENTS AS REQUIRED. THE SIGNAL PROGRESSION PROGRAMS TO BE DEVELOPED SHALL BE AS FOLLOWS:

THREE (3) INBOUND PREFERENTIAL (A.M. PEAK)

THREE (3) OUTBOUND PREFERENTIAL (P.M. PEAK)

THREE (3) AVERAGE (OFF PEAK)

NOTE: THE THREE AVERAGE PROGRAMS SHOULD UTILIZE VARYING CYCLE LENGTHS BASED ON TRAFFIC VOLUME. DENSITY AND OCCUPANCY TO MINIMIZE OVERALL INTERSECTION APPROACH DELAY TIME.

TWO (2) SPECIAL PROGRAMS FOR EITHER HIGH CONGESTION OR QUEUE BACKUP.

A MINIMUM OF THREE (3) TIMING PLANS FOR A BACK UP TIME BASE COORDINATED SYSTEM SHALL BE DEVELOPED AND PROGRAMMED INTO THE SYSTEM, TO REPLACE OR SUPPLEMENT THE TIMING PLANS SHOWN IN THE PLANS.

DEFINE SYSTEM PARAMETERS WHICH WILL ENABLE THE SYSTEM TO AUTOMATICALLY TRANSFER INTO A "FREE OPERATION" MODE DURING LIGHT TRAFFIC VOLUME PERIODS AND TO AUTOMATICALLY TRANSFER TO A COMPUTER SELECTED COORDINATED MODE DURING HEAVY TRAFFIC VOLUMES PERIODS.

THE FOLLOWING SYSTEM PARAMETERS SHALL BE ESTABLISHED:

VOLUME, OCCUPANCY AND DIRECTIONALLY THRESHOLDS

TRANSITION SMOOTHING FACTORS

SYSTEM DETECTOR ASSIGNMENT

SYSTEM DETECTOR WEIGHING

THE SYSTEMS ENGINEER MAY USE THE SOFTWARE PROVIDED WITH THE CENTRAL OFFICE MONITOR TO HELP ASSIST IN HIS/HER ANALYSIS OF THE OPERATION OF THE CLOSED LOOP SYSTEM.

CALCULATED T.K.I. CHECKED K.P.W.

TRAFFIC CONTROL GENERAL NOTES

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D. SYSTEM TRAVEL TIME STUDIES

THE SYSTEMS ENGINEER SHALL CONDUCT A SERIES OF TRAVEL TIME STUDIES FOR EACH SYSTEM OR SUB-SYSTEM ARTERY CONSTRUCTED AS PART OF THE PROJECT, TO MEASURE THE TIME IT TAKES TO TRAVEL FROM 1/4 MILE FROM THE BEGINNING OF EACH SYSTEM OR SUB-SYSTEM TO 1/4 MILE AFTER THE END OF THAT SYSTEM OR SUB-SYSTEM, IN EACH DIRECTION. THE TRAVEL TIME STUDY PARAMETERS SHOULD BE BASED ON THE POSTED SPEED LIMIT; HOWEVER, DURING PEAK PERIODS IT MAY NOT BE POSSIBLE TO OBTAIN THE POSTED SPEED DUE TO LARGER TRAFFIC VOLUMES.

THE SYSTEMS ENGINEER SHALL CONDUCT FOUR (4) SEPARATE SETS OR TRAVEL TIME STUDIES IN EACH DIRECTION FOR EACH OF THE FOLLOWING FIELD CONDITIONS:

I. PRIOR TO THE BEGINNING OF CONSTRUCTION, WITH THE EXISTING SIGNAL SYSTEM IN OPERATION (NO LANE CLOSURES SHALL BE IN EFFECT DURING THIS ANALYSIS).

II. PRIOR TO IMPLEMENTING THE TRAFFIC RESPONSIVE MODE, WHILE THE NEW TRAFFIC SIGNAL SYSTEM IS OPERATING UNDER THE "TIME OF DAY" MODE (AS IS SHOWN IN THE PLANS).

III. AFTER THE SYSTEM(S) IS PLACED IN THE TRAFFIC RESPONSIVE MODE.

IV. AFTER THE SYSTEM OPERATION MEETING AND FINAL SYSTEM ADJUSTMENTS ARE MADE.

EACH SET OF TRAVEL TIME STUDIES SHALL INCLUDE A MINIMUM OF FIVE (5) RUNS THROUGH THE SYSTEM PER DIRECTION. TRAVEL TIME STUDIES SHALL BE CONDUCTED DURING "IDEAL" WEATHER CONDITIONS (I.E. NO SNOW, RAIN OR FOG, ETC...).

THE FOUR (4) SEPARATE SETS OF TRAVEL TIME STUDIES SHALL INCLUDE THE FOLLOWING:

1. THE FIRST SET OF TRAVEL TIME STUDIES SHALL BE CONDUCTED BETWEEN THE HOURS OF 7:00 A.M. AND 9:00 A.M. ON WEEKDAYS AND SATURDAY.

2. THE SECOND SET OF TRAVEL TIME STUDIES SHALL BE CONDUCTED BETWEEN THE HOURS OF 11:30 A.M. AND 1:00 P.M. WEEKDAYS AND SATURDAY.

3. THE THIRD SET OF TRAVEL TIME STUDIES SHALL BE CONDUCTED BETWEEN THE HOURS OF 4:00 P.M. AND 6:00 P.M. WEEKDAYS AND SATURDAY.

4. THE FOURTH SET OF TRAVEL TIME STUDIES SHALL BE CONDUCTED DURING ANY OF THE FOLLOWING NON-PEAK HOUR PERIODS:

a. 9:00 A.M. TO 11:00 A.M. MONDAY THROUGH SATURDAY

b. 7:00 P.M. TO 10:00 P.M. MONDAY THROUGH SATURDAY

c. 7:00 A.M. TO 10:00 P.M. SUNDAY

DOCUMENTING, AT A MINIMUM, THE DATE OF TRAVEL TIME STUDY, DAY OF WEEK, TIME OF DAY, TOTAL TIME OF TRAVEL AND TOTAL TIME THE VEHICLE WAS STOPPED FOR EACH TRIP.

THE REPORTS PROVIDED FROM EACH OF THE FOUR FIELD CONDITIONS FOR WHICH SYSTEM TRAVEL TIME STUDIES ARE PREPARED SHALL BE USED AS ONE MEANS OF MEASURING THE EFFICIENCY OF THE NEW SYSTEM.

E. DRAFT SYSTEM SUMMARY REPORT:

A DRAFT SYSTEM SUMMARY REPORT SHALL BE PREPARED AFTER TRAVEL TIME STUDIES FOR THE FIRST THREE FIELD CONDITIONS ARE PERFORMED (ITEMS I, II AND III OUTLINED IN PART D) AND TWO (2) COPIES EACH SHALL BE SUBMITTED TO THE ENGINEER AND THE MAINTAINING AGENCY OF THE SIGNAL SYSTEM FOR THE EVALUATION AND REVIEW OF THE SYSTEM PROGRAMMING, OPERATION AND EFFICIENCY.

THE REPORT SHALL SUMMARIZE THE SIGNAL PROGRESSION AND TIMING PROGRAMS THAT WERE ENTERED INTO THE SYSTEM. THE REPORT SHALL ALSO INCLUDE A COPY OF THE SYSTEMS LOG AFTER OPERATING IN THE TRAFFIC RESPONSIVE MODE TO VERIFY THE NUMBER OF PROGRAMS USED THROUGHOUT THE DAY AS WELL AS THE FREQUENCY OF PROGRAM CHANGES. A MINIMUM OF AT LEAST FOUR DAYS OF SYSTEMS LOGS SHALL BE PROVIDED AND THREE OF THE FOUR LOGS SHALL BE LIMITED TO THE WEEKDAYS OF MONDAY THROUGH FRIDAY; THE FOURTH LOG SHALL BE ON A SUNDAY. COPIES OF ALL DATA AND ANALYSIS CALCULATIONS FOR THE SYSTEM TIMING SHALL BE INCLUDED IN THE REPORT. THE DRAFT SYSTEM SUMMARY REPORT SHALL INCLUDE AN EVALUATION OF THE SYSTEM OPERATION, EFFICIENCY AND PERFORMANCE AND COPIES OF ALL TRAVEL TIME STUDY DATA.

F. SYSTEM OPERATION MEETING AND FINAL SYSTEM SUMMARY REPORT:

AFTER THE DRAFT SYSTEM SUMMARY REPORT HAS BEEN SUBMITTED TO THE RESPECTIVE CITY, THE ENGINEER WILL SCHEDULE A MEETING WHICH WILL INCLUDE THE SYSTEMS ENGINEER OR TECHNICIAN, THE CONTRACTOR, THE ENGINEER AND REPRESENTATIVE(S) FROM THE MAINTAINING AGENCY TO DISCUSS THE OPERATION OF THE TRAFFIC RESPONSIVE "CLOSED LOOP" SIGNAL SYSTEM. THIS MEETING WILL OCCUR WITHIN FOUR (4) WEEKS AFTER THE DRAFT SYSTEM SUMMARY REPORT HAS BEEN SUBMITTED TO THE ENGINEER AND MAINTAINING AGENCY.

THE PURPOSE OF THIS MEETING IS TO DISCUSS THE OPERATION OF THE TRAFFIC RESPONSIVE CLOSED LOOP SIGNAL SYSTEM CONSTRUCTED AND PROGRAMMED UNDER THIS PROJECT AND TO RECEIVE COMMENTS AND RECOMMENDATIONS FORM THE ENGINEER AND/OR THE MAINTAINING AGENCY REGARDING POTENTIAL MODIFICATIONS TO THE OPERATION OF THE SYSTEM. THE SYSTEMS ENGINEER OR TECHNICIAN WILL ANSWER QUESTIONS REGARDING THE SYSTEMS SUMMARY REPORT AS WELL AS THE OPERATION OF THE CLOSED LOOP SYSTEM.

FINAL ADJUSTMENTS TO THE SYSTEM SHALL BE MADE AS DIRECTED BY THE ENGINEER TO ADDRESS ANY CONCERNS WHICH ARE DISCUSSED AT THIS MEETING. THE FINAL TRAVEL TIME STUDY SHALL BE PERFORMED PRIOR TO SUBMITTING THE FINAL REPORT. ONE (1) COPY OF AN FINAL SYSTEM SUMMARY REPORT SHALL BE SUBMITTED TO THE ENGINEER AND ONE (1) ADDITIONAL COPY SHALL BE SUBMITTED FOR EACH MAINTAINING AGENCY FOR REVIEW AND APPROVAL. THE FINAL REPORT SHALL INCLUDE ANY REVISIONS TO THE DRAFT REPORT THAT ARE REQUIRED AS A RESULT OF THE SYSTEM OPERATION MEETING.

G. PAYMENT:

THE COST OF THIS WORK, INCLUDING ALL LABOR, MATERIALS, EQUIPMENT, TOOLS AND OTHER INCIDENTALS NECESSARY TO PERFORM THE WORK AS OUTLINED ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID EACH FOR ITEM 633 - CONTROLLER, MASTER, TRAFFIC RESPONSIVE, AS PER PLAN.

ITEM 630 COMBINATION OVERHEAD SIGN SUPPORT, TYPE TC-16.20, BY DESIGN, AS PER PLAN
ITEM 632 SIGNAL SUPPORT, TYPE-81.20, BY DESIGN, AS PER PLAN;
ITEM 632 COMBINATION SIGNAL SUPPORT, TYPE-81.20, BY DESIGN, AS PER PLAN

THIS ITEM SHALL BE AS PER 632.14, 630.06 AND 732.11 EXCEPT THE POLE, ARMS, LUMINAIRE BRACKET, AND BASE SHALL BE STEEL AND SHALL HAVE A MATTE BLACK FINISH.

ALL FINISH PAINTED POLES WILL BE SHIPPED IN A MANNER TO MINIMIZE DAMAGE IN TRANSIT. POLE SURFACES WILL BE PROTECTED BY FOAM PADDING, BY CARDBOARD WRAPPING, BY SPIRAL WRAPPING WITH WAXED PAPER, BY CRATING, OR BY A COMBINATION OF THESE. THE METHOD USED SHALL BE SELECTED BY THE SUPPORT MANUFACTURER CONFIGURATIONS, AND METHOD OF TRANSPORTATION.

IN ADDITION TO THE REQUIREMENTS OF 632.14 AND 732.11, COMBINATION SIGNAL SUPPORTS, TYPE TC-81.20, DESIGN 12, USED TO SUPPORT LANE USE CONTROL SIGNS, SHALL INCLUDE SIGN BRACKETS, FURNISHED AND INSTALLED, AS DETAILED ON STANDARD CONSTRUCTION DRAWING TC-16.20.

PAYMENT FOR ITEM 632 SIGNAL SUPPORT, TYPE-81.20, BY DESIGN, AS PER PLAN; ITEM 632 COMBINATION SIGNAL SUPPORT, TYPE-81.20, BY DESIGN, AS PER PLAN; ITEM 630 COMBINATION OVERHEAD SIGN SUPPORT, TYPE 16.20, BY DESIGN, AS PER PLAN WILL BE MADE AT THE CONTRACT UNIT BID PRICE AND SHALL INCLUDE ALL REQUIRED LABOR, MATERIAL, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THIS ITEM OF WORK.

ITEM 633-CONTROLLER ITEM, MISC.: PAN-TILT-ZOOM CAMERA

THIS ITEM OF WORK SHALL CONSIST OF FURNISHING AND INSTALLING VIDEO EQUIPMENT AND ALL ACCESSORIES THAT ARE NECESSARY TO MAKE THE EQUIPMENT PROVIDE VEHICLE SURVEILLANCE.

EACH SIGNALIZED INTERSECTION SHOWN IN THE PLANS SHALL BE SUPPLIED WITH THE FOLLOWING COMPONENTS:

1. A PAN-TILT-ZOOM CAMERA AS MANUFACTURED BY PHILLIPS COMMUNICATIONS AND SECURITY SYSTEMS.
2. ALL COMMUNICATION CABLES, POWER CABLES, DROP CABLES, AND ALL OTHER CABLES NECESSARY TO OPERATE THE VIDEO CAMERAS AND VIDEOTRAK 900 AS DETAILED IN THE PLANS.
3. ANY ADDITIONAL HARDWARE REQUIRED TO MOUNT THE CAMERAS OR TO MAKE THE VIDEO SURVEILLANCE EQUIPMENT OPERATE AS SHOWN IN THE PLANS.
4. COMMUNICATION TO EACH PAN-TILT-ZOOM CAMERA SHALL BE VIA A PAIR OF BURLE FIBER OPTIC TCVR MODEL: TC-4628BR.

THE FOLLOWING IS A LIST OF THE QUANTITY OF ITEMS 1-3, AS LISTED ABOVE, THAT ARE REQUIRED AT EACH OF THE FOLLOWING INTERSECTIONS:

1.) FRONT STREET AT W. BAILEY ROAD
1 - PAN-TILT-ZOOM CAMERA

2.) FRONT STREET AT HUDSON DRIVE
1 - PAN-TILT-ZOOM CAMERA

3.) HUDSON DRIVE AT SECOND STREET
1 - PAN-TILT-ZOOM CAMERA

ALL LABOR, MATERIALS, MOUNTING BRACKETS, TOOLS, EQUIPMENT, TESTING, WIRING, CERTIFICATIONS, AND OTHER INCIDENTALS NECESSARY TO PERFORM THE REQUIRED WORK, INCLUDING ALL CONNECTIONS MADE AND WIRING COMPLETE, SHALL BE INCLUDED IN THE CONTRACT BID PRICE PER EACH ITEM 633-CONTROLLER ITEM, MISC.: PAN-TILT-ZOOM CAMERA.

632 INTERCONNECT CABLE, MISC. : INTEGRAL MESSENGER WIRE TYPE, 96 FIBER, REA (PE- 90)

THIS ITEM OF WORK SHALL CONSIST OF FURNISHING AND INSTALLING INTERCONNECT CABLE AS FOLLOWS:

1. THE OPTICAL FIBER TYPE SHALL BE 62.5/125 MICROMETER MULTIMODE AND 8.3/125 MICROMETER SINGLE MODE FIBER EIA CLASS IA. THE CABLE SHALL BE DESIGNED FOR REVERSE OSCILLATING STRANDING. THE CABLE SHALL HAVE A CORRUGATED POLYETHYLENE INNERDUCT.
2. WHERE INTERCONNECT CABLE IS TO BE PLACED IN CONTROLLERS, POLES, CONDUITS, CONDUIT RISERS AS SHOWN ON THE PLAN, THE CONTRACTOR SHALL CAREFULLY REMOVE THE MESSENGER WIRE AND JACKET WEB FROM THE CABLE WITHOUT DAMAGING THE INSULATION OR JACKET OF THE CABLE, USING A TOOL SPECIFICALLY DESIGNED AND SIZED FOR THIS PURPOSE. DEVIATIONS FROM THE CABLE ROUTING SHOWN IN THE PLAN, FOR THE SOLE PURPOSE OF REDUCING THE AMOUNT OF MESSENGER TO BE REMOVED, WILL NOT BE PERMITTED WITHOUT APPROVAL OF THE ENGINEER.
3. THE CABLE SHALL BE INSTALLED WITH APPROXIMATELY ONE TWIST FOR EACH 25 FEET OF SPAN LENGTH.
4. PRUNING OF TREES TO PREVENT CONTACT WITH INTERCONNECT CABLE SHALL BE PERFORMED BY THE CITY. TWO WORKING DAYS ADVANCE NOTICE BY CALLING (330)-971-8060 SHALL BE GIVEN TO THE TECHNICAL SERVICE DEPARTMENT FOR TREE PRUNING.
5. 632.27 OF THE SPECIFICATIONS IS MODIFIED FOR THIS PROJECT AS FOLLOWS:
   A. THE ARMOR FOR EACH INSTALLED SECTION OF CABLE SHALL BE TESTED FOR CONTINUITY ACCORDING TO 632.27(3).
   B. ATTENTION AND BANDWIDTH FOR EACH OPTICAL FIBER IN THE CABLE FOR EACH INSTALLED SECTION SHALL BE MEASURED. ATTENTION SHALL NOT DEVIATE BY MORE THAN 0.3 db/km FROM THE MANUFACTURERS CERTIFIED TEST REPORTS. ALSO BANDWIDTH OF EACH FIBER SHALL NOT CHANGE BY MORE THAN 15 PERCENT.
   C. COPIES OF THE TEST RESULTS SHALL BE PROVIDED TO THE CITY.
6. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL EXISTING INTERCONNECT WIRE. COST FOR REMOVAL AND DISPOSAL SHALL BE INCIDENTAL TO THE COST OF ITEM 632 INTERCONNECT CABLE, BY TYPE, BY SIZE, REA (PE-90), AS PER PLAN.

MEASUREMENT SHALL BE BASED UPON THE NUMBER OF LINEAR FEET "INTERCONNECT CABLE, BY TYPE, BY SIZE, REA (PE-90), AS PER PLAN IN PLACE IN ACCORDANCE WITH THE METHOD DESCRIBED IN 632.28.

PAYMENT FOR ALL LABOR, MATERIAL, TOOLS, EQUIPMENT AND OTHER INCIDENTALS SHALL BE INCLUDED IN THE UNIT PRICE BID PER LINEAR FOOT INSTALLED FOR ITEM 632 INTERCONNECT CABLE, BY TYPE, BY SIZE, REA (PE-90), AS PER PLAN.

ITEM 202 - RAILROAD CROSSING REMOVED, AS PER PLAN

RAILROAD CROSSING EQUIPMENT, INCLUDING FOUNDATIONS, POLES, ARMS, CONTROLLERS, CABINETS, BATTERIES AND ALL OTHER EQUIPMENT ASSOCIATED WITH THE CROSSING SHALL BE REMOVED AND DISPOSED OF AS PER 202.02, ONLY THE TIES AND TRACKS ARE TO REMAIN. THE CONTRACTOR SHALL COORDINATE DELIVERY OF REMOVAL ITEMS WITH THE METRO REGIONAL TRANSIT AUTHORITY.

ALL COSTS RESULTING IN THE ABOVE REQUIREMENTS SHALL BE CONSIDERED TO BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 202 - RAILROAD CROSSING REMOVED, AS PER PLAN.

ITEM 630 - SIGN HANGER ASSEMBLY, MAST ARM, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF 630.06, SIGNS SHALL BE MOUNTED ON MAST ARMS AS DETAILED ON O.D.O.T. STANDARD CONSTRUCTION DRAWING TC-16.20.

ALL LABOR, MATERIALS, TOOLS, EQUIPMENT, AND INCIDENTALS TO PERFORM THE REQUIRED WORK SHALL BE INCLUDED IN THE CONTRACT PRICE BID PER EACH ITEM 630-SIGN HANGER ASSEMBLY, MAST ARM, AS PER PLAN.

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ITEM 633 - PREEMPTION, AS PER PLAN

THIS ITEM OF WORK SHALL CONSIST OF FURNISHING AND INSTALLING PREEMPTION EQUIPMENT IN THE LOCATIONS AND LOCAL CONTROLLERS AS SHOWN ON THE PLANS.

THE PREEMPTION SHALL CONFORM TO O.D.O.T. SPECIFICATION 633 AND SHALL UTILIZE COMMUNICATIONS TO IDENTIFY THE PRESENCE OF AN EMERGENCY PRIORITY VEHICLE. IT SHALL CAUSE THE TRAFFIC SIGNAL CONTROLLER TO SELECT A PRE-PROGRAMMED, PREEMPTION PLAN THAT WILL DISPLAY AND HOLD THE DESIRED SIGNAL PHASE FOR THE DIRECTION OF THE EMERGENCY VEHICLE.

THE COMMUNICATIONS MEDIUM SHALL EMPLOY SOUND DETECTION TECHNIQUES TO DETERMINE AND LOG THE PRESENCE OF THE EMERGENCY VEHICLE. THE SYSTEM SHALL DETECT THE PRESENCE OF THE VEHICLE THROUGH AN EMITTING DEVICE LOCATED ON THE EMERGENCY VEHICLE.

THE SYSTEM SHALL ACTIVATE THE PREEMPTION SEQUENCE BY APPLYING A SIGNAL TO ONE OF THE CONTROLLER'S PREEMPT DISCRETE INPUTS. THE SYSTEM SHALL BE COMPLETELY COMPATIBLE WITH THE NEMA CONTROLLER.

THE EQUIPMENT SHALL BE RACK-MOUNTED AND EASILY REMOVABLE AND REPLACEABLE WITHIN THE CABINET. THE EQUIPMENT SHALL BE SUPPLIED COMPLETELY WIRED IN THE CONTROLLER CABINET AND TESTED.

THE SYSTEM SHALL BE CAPABLE OF PREEMPTING AND RECEIVING PRIORITY FOR EACH APPROACH TO THE INTERSECTION. IT SHALL BE POSSIBLE TO DETECT THE EMERGENCY VEHICLE UP TO 1200 FEET FROM THE INTERSECTION.

EACH INTERSECTION SHOWN IN THE PLANS SHALL BE SUPPLIED WITH THE FOLLOWING COMPONENTS:

1. PREEMPT DETECTORS
2. PREEMPTION DETECTOR CABLE
3. PREEMPT PHASE SELECTOR ASSEMBLY AND INTERFACE WIRING PANEL
4. CONFIRMATION LIGHT AND CABLE

THE PREEMPTION DETECTORS SHALL CONSIST OF FURNISHING AND INSTALLING A LIGHTWEIGHT, WEATHERPROOF AND DIRECTIONAL PREEMPTION DETECTOR ASSEMBLY AS SHOWN IN THE PLANS. THE DETECTOR SHALL BE CAPABLE OF SENDING THE PROPER ELECTRICAL SIGNAL TO THE TRAFFIC SIGNAL CONTROLLER VIA THE PREEMPTION DETECTOR HOME RUN CABLE. DETECTORS SHALL BE SUPPLIED WITH MAST ARM MOUNTING HARDWARE.

THE PREEMPTION DETECTOR CABLE SHALL CONSIST OF FURNISHING AND INSTALLING A HOME RUN CABLE FROM EACH DETECTOR TO THE PHASE SELECTORS IN THE CONTROLLER CABINETS.

THE PREEMPTION DETECTOR CABLE SHALL CONFORM TO O.D.O.T. SPECIFICATION 632. THE CABLE SHALL BE APPROVED FOR BOTH OVERHEAD AND UNDERGROUND USE. THE JACKET SHALL WITHSTAND EXPOSURE TO SUNLIGHT AND ATMOSPHERIC TEMPERATURES AND STRESSES REASONABLY EXPECTED IN NORMAL INSTALLATIONS.

PREEMPT PHASE SELECTORS SHALL BE INSTALLED AND FURNISHED IN THE CONTROLLER CABINETS INCLUDING WIRING INTERFACE PANELS AND ALL OTHER ACCESSORIES THAT ARE NECESSARY TO MAKE THE PREEMPT PHASE SELECTORS COMPLETELY FUNCTIONAL AND OPERATIONAL AS SHOWN IN THE PLANS. THIS ITEM SHALL INCLUDE THE EXTRA CABINET SPACE NECESSARY TO BE LOCATED IN THE LOCAL CONTROLLER CABINETS WHERE INDICATED IN THE PLANS.

THE PHASE SELECTORS SHALL CONSIST OF A MODULE OR MODULES THAT WILL PROVIDE THE NECESSARY INPUTS TO THE CONTROLLER. PHASE SELECTORS SHALL BE SUPPLIED WITH SUFFICIENT QUANTITIES OF CHANNELS TO PROVIDE PREEMPTION FOR ALL APPROACHES TO THE INTERSECTION SEPARATELY. POWER SHALL BE OBTAINED FROM THE PHASE SELECTOR OR PHASE SELECTOR POWER SUPPLY AND NOT FROM THE LOCAL CONTROLLER TIMER. THE PHASE SELECTORS SHALL HAVE FRONT PANEL INDICATORS FOR ACTIVE PREEMPT CHANNEL STATUS. IT SHALL HAVE TEST SWITCHES TO ACTIVATE ALL PREEMPT CHANNELS.

PREEMPT CONFIRMATION LIGHTS SHALL BE FURNISHED AND INSTALLED INCLUDING MOUNTING HARDWARE, WIRE AND ALL OTHER ACCESSORIES THAT ARE NECESSARY TO MAKE THE PREEMPT CONFIRMATION LIGHT COMPLETELY FUNCTIONAL AND OPERATIONAL AS SHOWN IN THE PLANS.

A CONFIRMATION LIGHT SHALL BE SUPPLIED FOR EACH APPROACH TO INDICATE THAT THE EMERGENCY VEHICLE HAS ACHIEVED CONTROL OF THE TRAFFIC SIGNAL. THE CONFIRMATION LIGHT SHALL BE A VAPOR TIGHT ALUMINUM LIGHTING FIXTURE. IT SHALL BE SUPPLIED WITH A BLUE COLORED GLOBE, 150 WATT INCANDESCENT LAMP AND MOUNTING HARDWARE TO ATTACH TO THE TRAFFIC SIGNAL MAST ARM. THE CONFIRMATION LIGHT SHALL BE POWERED BY A LOAD SWITCH IN THE TRAFFIC SIGNAL CONTROLLER.

THE CONTRACTOR SHALL THOROUGHLY CHECK OUT THE INSTALLED SYSTEM. AS A MINIMUM, THE CONTRACTOR SHALL VERIFY THAT ALL CONNECTIONS ARE PROPERLY MADE TO THE CONTROLLER CABINETS. THE CONTRACTOR SHALL CHECK THAT THE RANGE SETTING IS PROPER FOR EACH INTERSECTION. THE CONTRACTOR SHALL DETERMINE THAT ALL PHASE SELECTORS ARE SELECTING THE PROPER PHASE AND TIMING ACCURATELY. THE CONTRACTOR SHALL VERIFY THAT ALL VEHICLE EMITTERS ARE BEING PROPERLY DETECTED.

PAYMENT SHALL BE MADE AT THE CONTRACT UNIT PRICE FOR EACH ITEM 633-PREEMPTION, AS PER PLAN, IN PLACE AND FULLY OPERATIONAL AS SHOWN IN THE PLANS.

ITEM 632 - POWER SERVICE, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF 632.23, 732.20, AND 732.21 THE FOLLOWING SHALL BE INCLUDED IN THIS BID ITEM:

ALL NEW ELECTRIC SERVICE ENCLOSURES ARE TO BE INSPECTED BY THE CITY ELECTRICAL INSPECTOR PRIOR TO CONNECTION TO A UTILITY DISTRIBUTION LINE. THE CONTRACTOR SHALL APPLY FOR ALL INSPECTION(S), PAY THE APPROPRIATE FEE(S), AND ADVISE THE PROJECT ENGINEER OF THE TIME AND DATE OF THE INSPECTION(S). THIS INSPECTION IS NOT A SUBSTITUTE FOR THE CITY'S FINAL INSPECTION, NOR DOES IT SUPERSEDE REQUIREMENTS OF THE PLANS AND SPECIFICATIONS.

ALL DISCONNECT AND TRANSFER SWITCHES SHALL BE STAINLESS STEEL.

A STANDARD, LOCKABLE DISCONNECT SWITCH AND ENCLOSURE FOR THE TRAFFIC SIGNAL SHALL BE LOCATED ON THE SIGNAL SUPPORT NEAREST THE CONTROLLER.

A LOCKABLE, DOUBLE POLE, DOUBLE THROW TRANSFER SWITCH FOR THE GENERATOR HOOK-UP SHALL BE LOCATED ON THE SIGNAL SUPPORT NEAREST THE CONTROLLER.

THE SIGNAL SUPPORT NEAREST THE CONTROLLER SHALL HAVE A GENERATOR HOOK-UP MOUNTED ON THE POLE. THE GENERATOR HOOK-UP SHALL BE A HUBBELL WP2 MALE CONNECTOR RATED AT 30 AMPS AND 125 VOLTS. THE HOUSING SHALL BE A CAST ALUMINUM 2" x 4" SINGLE GANG DEVICE BOX, AND THE COVER SHALL BE WEATHER PROOF AND MADE OF GRAY LEXAM.

THE GENERATOR HOOK-UP SHALL BE WIRED SO THAT IN THE EVENT THAT THERE IS A POWER FAILURE AND/OR THE DISCONNECT SWITCH IS THROWN, A PORTABLE GENERATOR CAN BE USED TO POWER THE SIGNAL, NO BACK FEED WILL RESULT, AND THE METER WILL NOT BE AFFECTED.

A TYPICAL DETAIL DEPICTING THE GENERATOR HOOK-UP, TRANSFER SWITCH, DISCONNECT SWITCH LOCATION, AND WIRING IS SHOWN ON SHEET NO. 148.

POWER CABLE FROM THE DISCONNECT SWITCH TO THE TRANSFER SWITCH, AND THE CABLE FROM THE GENERATOR HOOK-UP TO THE TRANSFER SWITCH SHALL BE 3 CONDUCTOR NO.6 AWG.

ALL LABOR, MATERIALS, POWER CABLE, EQUIPMENT, TOOLS, AND INCIDENTALS NECESSARY TO PERFORM THE REQUIRED WORK SHALL BE INCLUDED IN THE CONTRACT BID PRICE PER EACH ITEM 632-POWER SERVICE, AS PER PLAN.

ITEM 630 - SIGN, FLAT SHEET, TYPE G, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF 630.04 STREET NAME SIGNS SHALL BE FURNISHED AND INSTALLED AS DETAILED ON SHEET NO. 147.

ALL LABOR, MATERIALS, TOOLS, EQUIPMENT, AND INCIDENTALS NECESSARY TO PERFORM THE REQUIRED WORK SHALL BE INCLUDED IN THE CONTRACT BID PRICE PER EACH ITEM 630-SIGN, FLAT SHEET, TYPE G, AS PER PLAN.

ITEM 632-SIGNALIZATION, MISC.: INTERCONNECT CABLE, 12 FIBER

Indoor/Outdoor 12 Fiber, UL Riser Breakout Cable:
General Description
1. Quantity: 3,000 feet
2. Cable Description: Cable shall be of tight bound, tight buffer construction containing 12 single fiber cables with one tight buffered fiber to 900 (m in each. Each sub unit shall contain an aramid yarn strength member with a pressure extruded polymer jacket that shall be colored following the standard color code system. The cable shall have a black PVC, "Core-Locked" TM outer jacket, UV and fungus resistant, which is to be pressure extruded to the cable core. No water blocking powders, tapes, or yarns shall be accepted.
3. Fiber Type: Multimode 62.5/125(m with nominal attenuation to 3.25 dB/km.
4. UL Listing: This cable shall be indoor/outdoor with a UL Riser rating.
5. Terminations: Each fiber shall be direct-terminated. No breakout (fanout/splitter kits) are to be used.
6. Outer jacket Color: UV Resistant Black

Mechanical Specifications:
The cable shall meet the following mechanical specifications:

1.	Diameter:	12.5 mm or .49 inch
2.	Cable Weight:	101 pounds per 1000 feet
3.	Tensile Load Rating (Installation):	6,000N or 1,350 Lbs. per foot
	Tensile Load Rating (In-Service):	2,500 N or 560 Lbs. per foot
4.	Crush Resistance:	2,200 N/cm/1,256 Lbs./in
5.	Impact Resistance:	1500 impacts
6.	Flex Resistance:	2000 flex cycles
7.	Bend Radii:	
	Installation:	15 X O.D.
	Long Term:	10 X O.D.
8.	Temperature Ranges:	
	Operating:	-40(C to +85(C
	Storage:	-55(C to +85(C

Cable Markings: The cable shall have the following markings on the outer jacket no less than every two meters in WHITE:
Name of Manufacturer, Date of Manufacture, Manufacturer's catalog part number, UL Listing (rating), "Indoor/Outdoor", Manufacturers telephone number, and sequential footage marking.

Cable Testing:
Each reel of fiber optic cable shall be tested on the reel prior to installation. This data shall be recorded and retained. Then, with the use of an OTDR, each terminated fiber shall be bi-directionally tested. Each location shall be clearly identified and this test data shall be duly recorded. Complete test documentation shall be presented, in a three ring binder, to the owner or his agent upon completion of this project.

1.0 Scope: This product specification provides the data necessary to procure multi-channel tight buffered fiber optic cable for inside building and outside plant applications including aerial, burial and duct.

The cable is UL listed type OFNR and is suitable for installation in building risers in accordance with National Electrical Code Article 770.

The manufacturer shall provide multichannel tight buffered fiber optic cable in accordance with the requirements of this product specification, detail drawing(s), and as specified in the contract order.

2.0 Applicable Documents: The following documents of the latest issue form a part of this specification to the extent specified herein:

EIA-STD-RS-455	Standard Test Procedures For Fiber Optic Fibers, Cables, Transducers, connecting and Terminating Devices.
EIA-STD-RS-359	Standard Colors for Color Identification and Coding
MIL-STD-202	Test Methods for Electronic and Electrical Components Parts
MIL-STD-454	Standard General Requirements for Electronic Equipment
MIL-STD-810	Environmental Test Methods and Engineering Guidelines
UL Subject 1666	Standard Flame Test for Flame Propagation Height of Electrical and Optical Cable Installed Vertically in Shafts.

3.0 Requirements:
3.1 Assembly: The fiber optic cable shall consist of, but not be limited to, the following components:
a. single fiber subcables
b. rod fillers
c. synthetic yarn strength member,
d. subcable jacket
e. protective outer jacket
The cable shall be assembled by helically stranding multiple single fiber sub-cables and, if necessary, rod fillers around a central rod filler; helically stranding a synthetic yarn strength member directly over the stranded core, and pressure extruding a protective outer jacket directly over the strength member layer.

3.1.1 Optical Fiber. Each optical fiber shall meet the following dimensional requirements:

	Diameter
Multimode Core	62.5 um
Multimode Cladding	125 um

3.1.2 Tight Buffer: A tight buffered optical fiber shall consist of a central glass optical fiber surrounded by a primary polymer coating and an tight fitting secondary buffer of a polyvinylchloride (PVC) material with the dimensions as listed below.

Diameter	
Primary Coating	250 um
Secondary Buffer	900 um

3.1.3 Rod Fillers: Each rod filler shall consist of a central dielectric strength member surrounded by an extruded elastomeric polymer coating.

3.1.4 Synthetic Yarn Strength Member: The synthetic yarn strength member shall be helically laid directly over the stranded cable core. The strength member shall be composed of individually and precisely tensioned elements such that tensile loads are equally shared by each element.

3.1.5 Outer Jacket: The outer jacket shall consist of a pressure extrusion of flame retardant Polyvinylchloride (PVC) having a minimum wall thickness of 1.0 millimeter at any point. The outer jacket shall be pressure extruded directly over the strength member layer. Tape or other materials between the jacket and the core are specifically not allowed. The outer jacket shall be smooth and be free from holes, splits, blisters, and other surface flaws.

3.1.6 Ripcord: The cable shall contain a non-wicking polyester yarn beneath the cable jacket to serve as a ripcord for jacket removal.

3.1.7 Cable Marking: The outer jacket shall be surface printed with the manufacturer's identification and required UL markings. Optional markings including date of manufacture, manufacturer's part number, and sequential numerical meter marks shall be as required by the purchase order.

3.1.8 Colors:
3. 1.8A Sub-cable outer jacket: The subcable outer jacket shall be color coded in accordance with the Standard Color Code System listed in Appendix B.
3.1.8B Outer Jacket: The color of the outer jacket shall be solid black.
3.1.8C Rod Fillers: The color of the rod fillers shall be white.
3.1.8D Markings: The color of the markings on the cable shall be white.

3.1.9 Cable diameter: The diameter shall be .49 inches

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3.2 Optical Performance: The optical performance shall meet the following requirements:
3.2.1 Multimode fibers:

Wavelength	850nm	1300 nm
Attenuation	3.0 dB.km	1.0 dB/km
Bandwidth	200 MHz-km	500 MHz-km
Numerical Aperture		.275

3.3 Mechanical Performance:

3.3.1 Fiber Proof Test: All fibers shall be subjected to a minimum proof stress of 0.7 GPa equivalent to 100 KPSI (100,000 pounds per square inch).

3.3.2 Fiber Strippability: Both the primary coating and secondary buffer layers, and cable jacket shall be easily removed with commercially available mechanical stripping tools.

3.3.3 Minimum bend radius: The minimum bend radius of the cable under full rated tensile load shall be no larger than 15 times the outside diameter of the cable and no more than 10 times the outside diameter of the cable with no load on the cable.

3.3.4 Minimum Tensile Strength: The short term tensile strength shall be 1,350 pounds.

3.3.5 Impact Resistance: The cable shall withstand an impact force of 1500 times per the requirements of EIA-RS-455-25A.

3.3.6 Crush Resistance: The cable shall withstand a compression load of 2200 N/cm per the requirements of EIA-RS-45S-41.

3.3.7 Cyclic Flex Resistance: The cable shall withstand cyclic flexing of 2000 times per the requirements of EIA-RS-45S-104.

3.4 Environmental Performance: The fiber optic cable shall comply with the requirements specified herein when subjected to the following environmental conditions:

3.4.1 Humidity: The cable shall comply with the optical and mechanical requirements specified herein up to 95% relative humidity (non-condensing) when subjected to moisture resistance conditioning according to Method 106B of MIL STD-202 except that the specimen shall not be vibrated.

3.4.2 Temperature: The cable shall comply with the optical and mechanical performance requirements specified herein over the operating temperature as stated below. The cable shall not be damaged in any way when exposed to the storage temperature range as specified below.

Operating Temperature Range	Storage Temperature Range
-40°C to +85°C	-55°C to +85°C

3.4.3 Moisture Resistance: Optical and mechanical performance shall not be degraded and the cable shall not be damaged in any way by immersion in ground water.

3.4.4 Fungus Resistance: The outer jacket material used in construction of this cable shall be fungus inert as described in Requirement 4 of MIL-STD-454.

3.4.5 Sunlight/UV Resistance: The outer jacket material shall be suitable for long-term exposure to sunlight and weather, with a life expectancy in excess of 20 years. Suitability shall be determined in accordance with MIL-STD-810, Method 505.

4.0 Quality Assurance Provision: The fiber optic cable shall meet or exceed the requirements of this specification when measured in accordance with the methods of the individual requirements or the following methods as defined in EIA-STD-RS-455:

a. Fiber dimensions
b. attenuation
c. bandwidth
d. numerical aperture
e. fiber proof test
f. cable bending
g. tensile load
h. impact resistance
i. crush resistance
j. attenuation vs. temperature

4.1 Quality Standard: Manufacturer shall provide ISO 9001 certification.

5.0 Preparation for Delivery:

5.1 Reels: The fiber optic cable shall be shipped on non-returnable wooden reels in lengths as specified in the purchase order with a -0% +5% overrun tolerance. The diameter of the drum shall be at least 20 times the diameter of the cable.

5.2 Marking: Labels shall be attached to the reel showing length, cable identification number, and date of manufacture.

APPENDIX A
STANDARD COLOR CODE SYSTEM
FIBER COLOR CODE

COLOR		FIBER POSITION			
		WITH 1 BLACK DASH	WITH 2 BLACK DASHES	WITH 3 BLACK DASHES	WITH 4 BLACK DASHES
BLUE	1	13	25	37	49
ORANGE	2	14	26	38	50
GREEN	3	15	27	39	51
BROWN	4	16	28	40	52
GRAY	5	17	29	41	53
WHITE	6	18	30	42	54
RED	7	19	31	43	55
BLACK *	8	20	32	44	56
YELLOW	9	21	33	45	57
PURPLE	10	22	34	46	58
ROSE	11	23	35	47	59
AQUA	12	24	36	48	60

Where the interconnect cable is to be mounted overhead, messenger wire shall be furnished and installed. The messenger wire shall include all necessary accessories such as insulators, grips, thimbles, clamps, and lashing rods to suspend the interconnect cable between two utility poles as shown in the plans.

The length of messenger wire shall be adjusted under the load of the interconnect cable so the sag at the lowest point shall not be greater than five percent or less than three percent of the span. Interconnect cable shall be attached to messenger wire by lengths of preformed lashing rod or spinning wire which shall be of a proper internal diameter to tightly secure the cable to the messenger wire.

All items listed in this note shall be included in the contract bid price per linear foot of Item 632-Signalization, misc.: Interconnect Cable, 12 fiber.

ITEM 632-SIGNALIZATION, MISC.: INTERCONNECT CABLE, 96 FIBER

Indoor/Outdoor 96 Fiber, UL Riser Grouped, Distribution Cable:

General Description

1. Quantity: 3,000 feet
2. Cable Description: Cable shall be of tight bound, tight buffer construction containing 96 fibers with 60 of them multimode and 36 of them single-mode. This cable consists of eight (8) sub-cable units with each containing 12 tight buffered fibers. Five (5) of the sub units shall contain multimode fibers and three (3) of the sub units shall contain single-mode fibers. I want to stress that these are not simply buffer tubes, but fully water tolerant cables consisting of the fibers, a precisely tensioned aramid yarn strength member, and a rip cord. And for easy identification, the pressure extruded, polymer sub-unit jacket is colored following the standard color code system. Since this is a hybrid cable the sub-unit jackets are also appropriately labeled "single-mode" or "multimode". The outer jacket shall be of a PVC, "Core- Locked" TM, which is pressure extruded to the cable core. No water blocking powders, tapes, or yarns shall be accepted.
3. Fiber Types: Multimode: 62.5/125(m with nominal attenuation to 3.25 dB/km.
   Single-mode: 8.3/125(m with nominal attenuation to .5 dB/km
4. UL Listing: This cable shall be indoor/outdoor with a UL Riser rating.
5. Terminations: Each fiber shall be direct-terminated. No breakout (fanout/splitter kits) are to be used.
6. Outer jacket Color: UV Resistant Black

Mechanical Specifications:
The cable shall meet the following mechanical specifications:

1. Diameter:	24.5 mm or .96 inch
2. Cable Weight:	264 pounds per 1000 feet
3. Tensile Load Rating (Installation):	14,900N or 3,350 Lbs. per foot
Tensile Load Rating (In-Service):	4,950 N or 1,110 Lbs. per foot
4. Crush Resistance:	2,100 N/cm/1,200 Lbs./in
5. Impact Resistance:	1500 impacts
6. Flex Resistance:	2000 flex cycles
7. Bend Radii:	
Installation:	15 X O.D.
Long Term:	10 X O.D.
8. Temperature Ranges:	
Operating:	-40(C to +85(C
Storage:	-55(C to +85(C

Cable Markings: The cable shall have the following markings on the outer jacket no less than every two meters in WHITE:
Name of Manufacturer, Date of Manufacture, Manufacturer's catalog part number, UL Listing (rating), "Indoor/Outdoor", Manufacturers telephone number, and sequential footage marking.

Cable Testing:
Each reel of fiber optic cable shall be tested on the reel prior to installation. This data shall be recorded and retained. Then, with the use of an OTDR, each terminated fiber shall be bi-directionally tested. Each location shall be clearly identified and this test data shall be duly recorded. Complete test documentation shall be presented, in a three ring binder, to the owner or his agent upon completion of this project.

1.0 Scope: This purchase description provides the data necessary to procure multi-channel tight buffered distribution breakout fiber optic cable for use inside building risers outside plant applications including aerial, burial, and duct installations.

The cable is UL listed type OFNR and is suitable for installation in building risers in accordance with National Electrical Code Article 770

The manufacturer shall provide multichannel tight buffered distribution breakout fiber optic cable in accordance with the requirements of this purchase description, the detail drawing(s), and as specified in the contract order.

2.0 Applicable Documents: The following documents of the latest issue form a part of this specification to the extent specified herein:

EIA-STD-RS-455	Standard Test Procedures For Fiber Optic Fibers, Cables, Transducers, connecting and Terminating Devices.
EIA-STD-RS-359	Standard Colors for Color Identification and Coding
MIL-STD-202	Test Methods for Electronic and Electrical Components Parts
MIL-STD-454	Standard General Requirements for Electronic Equipment
MIL-STD-810	Environmental Test Methods and Engineering Guidelines
UL Subject 1666	Standard Flame Test for flame propagation Height of Electrical and Optical Cable Installed Vertically in Shafts.
NEPA 70-1993	National Electrical Code Article 770, Optical Fiber Cable

3.0 Requirements:

3.1 Assembly: The fiber optic cable shall consist of, but not be limited to, the following components:

a. tight buffered optical fibers,
b. extruded plastic rod fillers,
c. synthetic yarn strength member,
d. multifiber subcables
e. protective outer jacket

The cable shall be assembled by helically stranding multifiber subcables and, if necessary, extruded plastic rod fillers and extruding a protective outer jacket directly over the stranded cable core.

3.1.1 Optical Fiber. Each optical fiber shall meet the following dimensional requirements:

	Diameter
Multimode Core	62.5 um
Multimode Cladding	125 um
Single-mode Core	8.3 um
Single-mode Cladding	125 um

3.1.2 Tight Buffer: A tight buffered optical fiber shall consist of a central glass optical fiber surrounded by a primary polymer coating and an tight fitting secondary buffer of a polyvinylchloride (PVC) material with the dimensions as listed below (for both multimode and singlemode)

	Diameter
Primary Coating	250 um
Secondary Buffer	900 um

3.1.3 Colored Secondary Buffer: The optical fiber shall have a secondary buffer that is colored in accordance with the Standard Color Code System for easy identification.

3.1.4 Subcable: The multifiber subcables shall consist of tight-buffered optical fiber surrounded by a water-blocking, synthetic yarn strength member and a color-coded, flame retardant elastomeric polymer jacket. The strength member shall be composed of individually and precisely tensioned elements such that the tensile loads are equally shared by each element.

3.1.5 Plastic Rod Fillers: Each plastic rod filler shall consist of a central dielectric strength member surrounded by an extruded elastomeric polymer coating.

3.1.6 Outer Jacket: The outer jacket shall consist of an extrusion of flame retardant PVC having a minimum wall thickness of 1.0 millimeters at any point. The outer jacket shall be extruded directly over the outer layer of the stranded cable core. No tape separators or other materials between the jacket and core are specifically not allowed. The outer jacket shall be smooth and free from holes, splits, blisters, and other surface flaws.

3.1.7 Ripcord: The cable shall contain a non-wicking polyester yarn beneath the cable jacket to serve as a ripcord for jacket removal.

3.1.8 Cable Marking:

3.1.8A Outer Jacket: The outer jacket shall be surface printed with the manufacturer's identification and required UL markings. Optional markings including date of manufacture, manufacturer's part number, and sequential meter marks shall be required by the purchase order.

3.1.8B Subcables: In hybrid applications the subcables shall be marked "Multimode" or "Single-mode" whichever is appropriate. Otherwise, cable markings shall be as required in the purchase order.

3.1.9 Colors:
3.1.9A Subcable: The subcable outer jackets shall be color coded in accordance with the Standard Color Code System. The color of the outer jacket shall be specified in the purchase order. The color of the rod fillers shall be white. The color of the markings on the sub cables shall be black. Primary colors shall be in accordance with EIA-STD-RS-359.
3.1.9B Buffered Coatings: The buffered coatings shall be color coded in accordance with the Standard Color Code System listed in Appendix B.
3.1.9C Outer Jacket: The color of the outer jacket shall be black. Color of the markings shall be white.

3.2 Optical Performance: The optical performance shall meet the following requirements:
3.2.1 Multimode fibers:

Wavelength	850nm	1300 nm
Attenuation	3.0 dB.km	1.0 dB/km
Bandwidth	200 MHz-km	500 MHz-km
Numerical Aperture	.275	

3.2.2 Single-mode Fibers:

Wavelength	1300 nm	1550 nm
Attenuation	0.5 dB.km	0.5 dB/km
Bandwidth	Matched Clad	Match Clad

CALCULATED T.K.I. CHECKED K.F.W.

TRAFFIC CONTROL GENERAL NOTES

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3.3 Mechanical Performance:

3.3.1 Fiber Proof Test: All fibers shall be subjected to a minimum proof stress of 0.7 GPa equivalent to 100 KPSI (100,000 pounds per square inch).

3.3.2 Fiber Strippability: Both the primary coating and secondary buffer layers, and cable jacket shall be easily removed with commercially available mechanical stripping tools. The outer jacket and steel armor shall be removed by a ripcord placed between the inner jacket and steel armor.

3.3.3 Minimum bend radius: The minimum bend radius of the cable under full rated tensile load shall be no larger than 15 times the outside diameter of the cable and no more than 10 times the outside diameter of the cable with no load on the cable.

3.3.6 Impact Resistance: The cable shall withstand an impact force of 1500 impacts per the requirements of EIA-RS-455-25A.

3.3.7 Crush Resistance: The cable shall withstand a compression load of 2100 N/cm per the requirements of EIA-RS-455-41.

3.3.8 Cyclic Flex Resistance: The cable shall withstand cyclic flexing of 2000 times per the requirements of EIA-RS-455-104.

3.4 Environmental Performance: The fiber optic cable shall comply with the requirements specified herein when subjected to the following environmental conditions:

3.4.1 Humidity: The cable shall comply with the optical and mechanical requirements specified herein up to 95% relative humidity (non-condensing) when subjected to moisture resistance conditioning according to Method 106B of MIL STD-202 except that the specimen shall not be vibrated.

3.4.2 Temperature: The cable shall comply with the optical and mechanical performance requirements specified herein over the operating temperature as stated below. The cable shall not be damaged in any way when exposed to the storage temperature range with the following specifications:
Operating Temperature Range: -40°C to +85°C; Storage Temperature Range: -55°C to +85°C

3.4.3 Moisture Resistance: Optical and mechanical performance shall not be degraded and the cable shall not be damaged in any way by immersion in ground water.

3.4.4 Fungus Resistance: The outer jacket material used in construction of this cable shall be fungus inert as described in Requirement 4 of MIL-STD-454.

3.4.5 Flame Retardancy: The cable shall be UL Listed Type OFNR, meeting the requirements of UL Standard 1666.
4.0 Quality Assurance Provision: The fiber optic cable shall meet or exceed the requirements of this specification when measured in accordance with the methods of the individual requirements or the following methods as defined in EIA-STD-RS-455:

a. Fiber dimensions
b. attenuation
c. bandwidth
d. numerical aperture
e. fiber proof test
f. cable bending
g. tensile load
h. impact resistance
i. crush resistance
j. attenuation vs. temperature

4.1 Quality Standard: Manufacturer shall provide ISO 9001 certification.

5.0 Preparation for Delivery:

5.1 Reels: The fiber optic cable shall be shipped on non-returnable wooden reels in lengths as specified in the purchase order with a -0% +5% overrun tolerance. The diameter of the drum shall be at least 20 times the diameter of the cable.

5.2 Marking: Labels shall be attached to the reel showing length, cable identification number, and date of manufacture.

APPENDIX A
G-SERIES DISTRIBUTION BREAKOUT SPECIFICATIONS

TENSILE LOAD RATING

GROUPINGS	# FIBERS	DIA. (Inch)	WEIGHT (Lbs/000 Ft)	SHORT TERM (Lbs.)	FIBER (Lbs.)
6 Fiber Subgroupings	12	.57	125	850	270
12 Fiber Subgroupings		Not available			
6 Fiber Subgroupings	18	.57	125	850	270
12 Fiber Subgroupings		Not available			
6 Fiber Subgroupings	24	.57	125	850	270
12 Fiber Subgroupings		.67	218	1,030	340
6 Fiber Subgroupings	30	.59	130	1,690	540
12 Fiber Subgroupings		Not available			
6 Fiber Subgroupings	36	.67	158	2,000	640
12 Fiber Subgroupings		.67	218	1,330	440
6 Fiber Subgroupings	42	.73	167	2,320	740
12 Fiber Subgroupings		Not available			
6 Fiber Subgroupings	48	.79	205	2,630	840
12 Fiber Subgroupings		.67	218	1,620	540
6 Fiber Subgroupings	54	.89	293	2,950	940
12 Fiber Subgroupings		Not available			
6 Fiber Subgroupings	60	.89	293	3,260	1,050
12 Fiber Subgroupings		.73	212	2,140	710
6 Fiber Subgroupings	72	.89	293	3,890	1,250
12 Fiber Subgroupings		.79	205	2,540	840
NOTE: 84 FIBER COUNT AND ABOVE ONLY AVAILABLE IN 12-FIBER BUNDLES					
12 Fiber Subgroupings	84	.87	230	2,950	980
12 Fiber Subgroupings	96	.93	264	3,350	1,110
12 Fiber Subgroupings	108	.98	286	4,090	1,350
12 Fiber Subgroupings	120	.98	286	4,380	1,450
12 Fiber Subgroupings	132	.98	286	4,680	1,550
12 Fiber Subgroupings	144	.98	286	4,970	1,650

APPENDIX B
STANDARD COLOR CODE SYSTEM
FIBER COLOR CODE

COLOR	FIBER OR SUB-CABLE POSITION
BLUE	1
ORANGE	2
GREEN	3
BROWN	4
GRAY	5
WHITE	6
RED	7
BLACK	8
YELLOW	9
PURPLE	10
ROSE	11
AQUA	

Where the interconnect cable is to be mounted overhead, messenger wire shall be furnished and installed. The messenger wire shall include all necessary accessories such as insulators, grips, thimbles, clamps, and lashing rods to suspend the interconnect cable between two utility poles as shown in the plans.

The length of messenger wire shall be adjusted under the load of the interconnect cable so the sag at the lowest point shall not be greater than five percent or less than three percent of the span. Interconnect cable shall be attached to messenger wire by lengths of preformed lashing rod or spinning wire which shall be of a proper internal diameter to tightly secure the cable to the messenger wire.

The interconnect cable shall be spliced to the existing interconnect cable at the existing pull box at Sta.101+23, 48' Rt., see sheet no. 145A, by means of a fiber optic splice. The splice shall be considered incidental to the contract bid price for the interconnect cable.

An additional quantity of 200 Lin. Ft. of interconnect cable has been included in the General Summary for the installation of the interconnect cable into the Technical Services Building shown on sheet no. 145A. The contractor shall install the interconnect cable into the building as directed by the City of Cuyahoga Falls.

All items listed in this note shall be included in the contract bid price per linear foot of Item 632-Signalization, misc.: Interconnect cable, 96 fiber.

CALCULATED T.K.I. CHECKED K.P.W.

TRAFFIC CONTROL GENERAL NOTES

SUM - 59-4.93

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SIGN LEGEND

NEW	EXISTING SIGN, SINGLE POST
EXISTING, TO REMAIN	EXISTING SIGN, DOUBLE POST
EXISTING, TO BE REERECTED	PROPOSED SIGN, SINGLE POST
EXISTING, TO BE REMOVED	PROPOSED SIGN, DOUBLE POST

S.R.8

SECOND STREET

FRONT STREET

W. BAILEY ROAD

RAMP "M"

R-123-24 ONE WAY R-43R-36 STA.34+40, LT. (12)

R-38R-24 STA.34+50, LT. (13)

R-123-24 R-38R-24 RP-38R-24 STA.32+44, LT. (5)

R-55-12 POLE MOUNTED STA.33+01, LT. (8)

R-43R-36 STA.33+40, LT. (8A)

R-55-12 POLE MOUNTED STA.52+60, LT. (69)

W-76AP-30 STA.52+80, LT. (70)

D-14 STA.53+05, LT. (71)

D-14 POLE MOUNTED STA.53+44, LT. (72)

M-2-24-2 STA.35+18, LT. (14)

M-40-24 WEST 59 (15)

M-2-24-2 STA.35+35, LT. (15)

W-1-30 (16)

R-55-12 STA.35+96, LT. (16)

W-1-30 (18)

R-55-12 STA.36+00, LT. (18)

R-10-24 STA.36+60, LT. (20)

W-76P-30 STA.36+75, LT. (21)

R-10-24 (23)

R-55-12 STA.37+40, LT. (S)

W. BAILEY RD SPECIAL SIGN MAST ARM MOUNTED STA.37+80, LT. (24)

D-14 POLE MOUNTED STA.38+58, LT. (27)

R-10-24 R-41A-36 STA.29+65, RT. (1)

R-10-24 STA.29+90, RT. (2)

R-41A-36 STA.29+95, RT. (3)

R-36R-36 28+82/RT. (1A)

R-15D-30 STA.251+75, LT. (67)

R-2-48 R-41A-36 STA.252+25, RT. (68)

R-2-48 STA.30+85, RT. (4)

STA.32+48, RT. (6)

W-71-30 R-41A-36 STA.32+50, LT. & RT. (7)

R-30A-36 R-26A-36 OVERHEAD SIGN SUPPORT STA.34+40, 31.5' RT. (11)

M-2-24-2 59 EAST M-39-24 STA.36+00, RT. (17)

R-55-12 W-94-36 STA.36+23, RT. (19)

M-2-24-2 M-39-24 STA.37+00, RT. (22)

D-14 POLE MOUNTED STA.38+06, RT. (25)

FRONT ST SPECIAL SIGN MAST ARM MOUNTED STA.38+57, RT. (26)

W BAILEY RD SPECIAL SIGN MAST ARM MOUNTED STA.38+57, RT. (26A)

W-71-24 W-71-30 R-10-24 R-41B-30 STA.34+32, RT. (9)

W-71-30 R-10-24 R-41B-30 POLE MOUNTED STA.34+40, RT. (10)

R-36R-36 THROUGH TRAFFIC KEEP RIGHT

MATCH LINE STA.39+00
SEE SHEET NO. 122.

CROSSWALK & STOP LINE TYPICAL

6' CROSSWALK LINE

4' STOP LINE

PAVEMENT MARKING LEGEND

- (EW) EDGE LINE, WHITE, TYPE 2
- (EY) EDGE LINE, YELLOW, TYPE 2
- (L) LANE LINE, TYPE 2
- (C) CENTER LINE, TYPE 2, DOUBLE, SOLID
- (CB) CENTER LINE, TYPE 2, DOUBLE, BROKEN AND SOLID
- (CH) CHANNELIZING LINE, TYPE 2
- (S) STOP LINE
- (CW) CROSSWALK LINE
- (TY) TRANSVERSE LINE, (YELLOW), 12' C/C
- (IM) ISLAND MARKING, YELLOW
- (RR) RAILROAD SYMBOL MARKING
- (A) LANE ARROW
- (W) WORD ON PAVEMENT, 72"

(98) NO PARKING R-55-12
SECOND STREET
STA.52+50, LT.
FRONT STREET
STA.31+50, LT. & RT.
STA.33+65, LT. & RT.
STA.35+50, RT.
STA.37+60, RT.

FOR OVERHEAD SIGN ELEVATION VIEWS, SEE SHEET NO. 124.

FOR PAVEMENT MARKING QUANTITIES SEE SHEET NO. 130 - 131.

FOR SIGNING QUANTITIES SEE SHEET NO. 125 - 129.

FOR SIGNAL PLANS SEE SHEET NO. 132.

CALCULATED T.K.L.
CHECKED E.W.K.

(IN FEET) 1 inch = 40 ft.

TRAFFIC CONTROL
SIGNING AND PAVEMENT MARKING PLAN

SUM - 59-4.93

121
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TRAFFIC CONTROL
SIGNING AND PAVEMENT MARKING PLAN

CALCULATED T.K.L.
CHECKED E.W.K.

1 inch = 40 ft. (IN FEET)

SECOND STREET
FRONT STREET
HUDSON DRIVE
EDISON STREET

EXISTING RAILROAD CROSS BUCK, FLASHERS, AND GATE TO BE REMOVED
STA.40+28, RT. FRONT ST.
STA.42+06, LT. FRONT ST.
STA.107+84, LT HUDSON DRIVE
STA.108+18, RT. HUDSON DRIVE

RR SEE RAILROAD CROSSING REMOVED, AS PER PLAN NOTE ON SHEET NO. 119.

SEE SHEET NO. 121. MATCH LINE STA.39+00

MATCH LINE STA.50+00 SEE SHEET NO. 123.

FOR LEGEND SEE SHEET NO. 121.

FOR OVERHEAD SIGN ELEVATION VIEWS, SEE SHEET NO. 124.

FOR PAVEMENT MARKING QUANTITIES SEE SHEET NO. 130 - 131.

FOR SIGNING QUANTITIES SEE SHEET NO. 125 - 129.

FOR SIGNAL PLANS SEE SHEET NO. 136 AND 142.

SLM - 59-4.93

122
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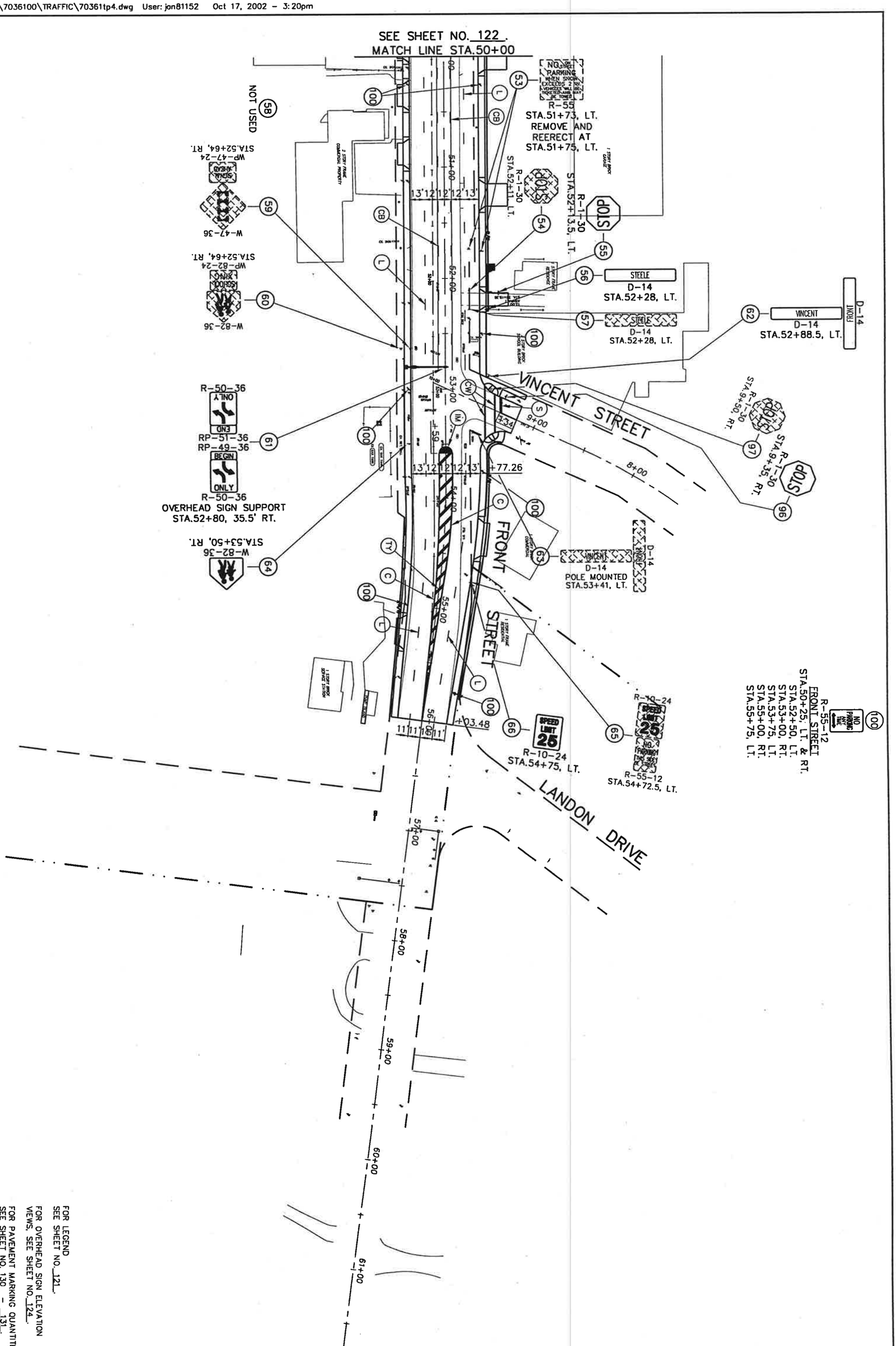


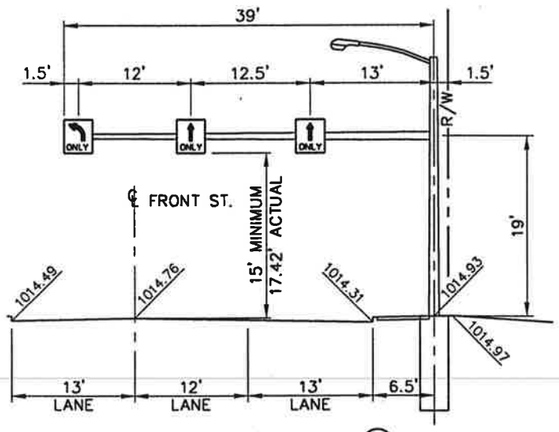
FOR LEGEND
SEE SHEET NO. 121.

FOR OVERHEAD SIGN ELEVATION
VIEWS, SEE SHEET NO. 124.

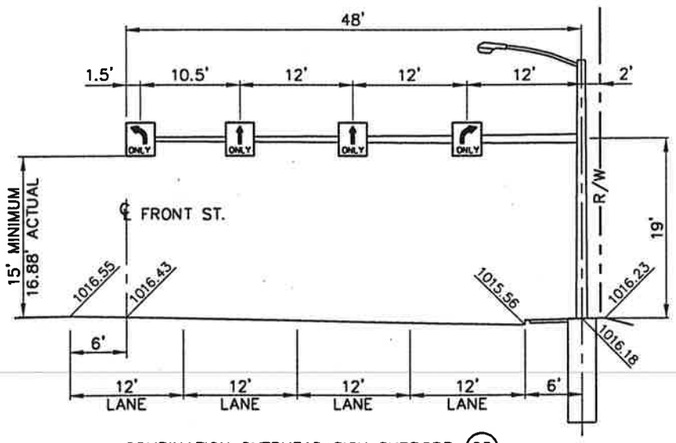
FOR PAVEMENT MARKING QUANTITIES
SEE SHEET NO. 130 - 131.

FOR SIGNING QUANTITIES
SEE SHEET NO. 125 - 128.

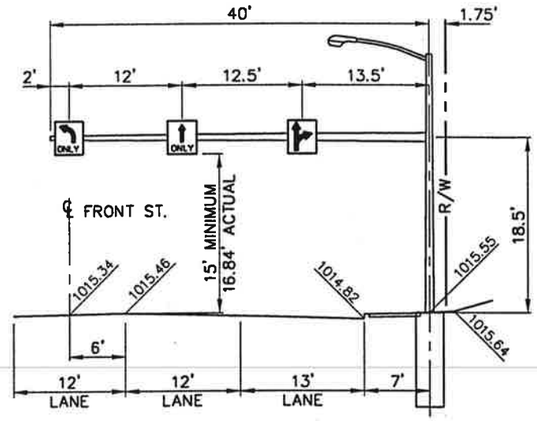
123 / 171	SUM - 59-4.93	TRAFFIC CONTROL SIGNING AND PAVEMENT MARKING PLAN	CALCULATED T.K.I. CHECKED E.W.K.	(IN FEET) 1 inch = 40 ft.



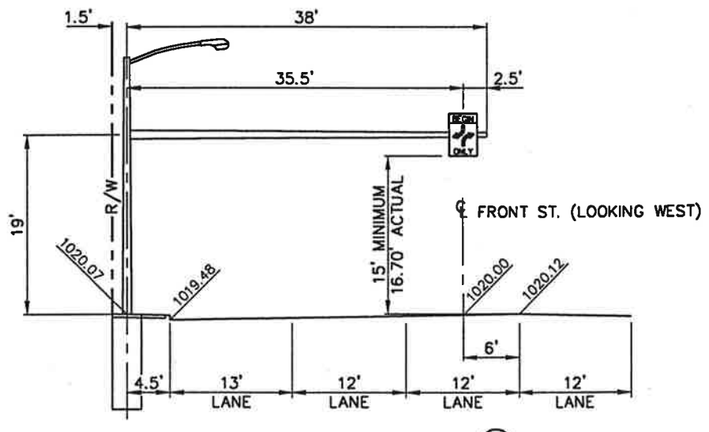
COMBINATION OVERHEAD SIGN SUPPORT (11)
STA.34+40, 31.5' RT.
TC-16.20, DESIGN 4
POLE = 27'-2"
ARM = 39'



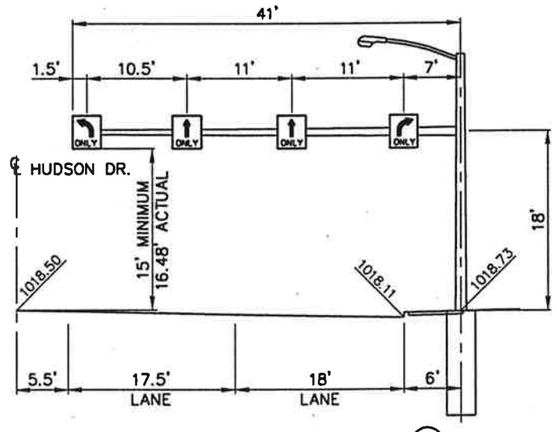
COMBINATION OVERHEAD SIGN SUPPORT (28)
STA.39+55, 48' RT.
TC-81.20, DESIGN 12
POLE = 27'-2"
ARM = 48'



COMBINATION OVERHEAD SIGN SUPPORT (44)
STA.45+96, 38' LT.
TC-16.20, DESIGN 11
POLE = 27'-2"
ARM = 40'



COMBINATION OVERHEAD SIGN SUPPORT (61)
STA.52+80, 35.5' RT.
TC-16.20, DESIGN 10
POLE = 27'-2"
ARM = 38'



COMBINATION OVERHEAD SIGN SUPPORT (77)
STA.108+35, 47' LT.
TC-81.20, DESIGN 12
POLE = 27'-2"
ARM = 41'

TRAFFIC CONTROL
OVERHEAD SIGN ELEVATION VIEWS

CALCULATED T.K.I.
CHECKED E.W.K.

(IN FEET) 1/8 inch = 1 ft.

SUM - 59-4.93

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SIGNING SUB-SUMMARY

SHEET NO.	REFERENCE NO.	STATION	SIDE	CODE	SIZE (INCHES)	ITEM NUMBERS 625 GROUND ROD EACH	630 GROUND MOUNTED SUPPORT, NO.2 POST L.F.	630 GROUND MOUNTED SUPPORT, NO.3 POST L.F.	630 COMBINATION OVERHEAD SIGN SUPPORT, TYPE TC-16.20, DESIGN 4, AS PER PLAN EACH	630 SIGN SUPPORT ASSEMBLY, POLE MOUNTED EACH	630 SIGN, FLAT SHEET, TYPE G S.F.	630 RIGID OVERHEAD SIGN SUPPORT FOUNDATION EACH	630	630 REMOVAL OF GROUND MOUNTED SIGN AND STORAGE EACH	630 REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL EACH
FRONT STREET															
121	1	29+65	RT.	R-10-24	24 x 30		13.5				5				
	1	29+65	RT.	R-41A-36	36 x 24						6				
	1A	28+82	RT.	R-36R-36	36 x 48			30			12				
	2	29+90	RT.	R-10-24	24 x 30									1	1
	3	29+95	RT.	R-41A-36	36 x 24									1	1
	4	30+83	RT.	R-2-48	48 x 48 x 48									1	2
	5	32+44	LT.	SPECIAL	-									1	1
	6	32+48	RT.	SPECIAL	-									1	1
	7	32+50	LT/RT	W-71-30	30 x 30			33			6.25				
	7	32+50	LT/RT	R-41A-36	36 x 24						6				
	8	33+01	LT.	R-55-12	12 x 18									1	
	8A	33+40	LT.	R-43R-36	36 x 12		12				3				
	9	34+32	RT.	WP-71-24	24 x 18									1	1
	9	34+32	RT.	W-71-30	30 x 30									1	
	9	34+32	RT.	R-10-24	24 x 30									1	
	9	34+32	RT.	R-41B-30	30 x 30									1	
	10	34+40	RT.	W-71-30	30 x 30					1	6.25				
	10	34+40	RT.	R-10-24	24 x 30						5				
	10	34+40	RT.	R-41B-30	30 x 30						6.25				
	11	34+40	RT.	R-26A-36	36 x 42	1			1		10.5	1			
	11	34+40	RT.	R-30A-36	36 x 42						10.5				
	11	34+40	RT.	R-30A-36	36 x 42						10.5				
	12	34+40	LT.	R-123-24	24 x 24		13.5				4				
	12	34+40	LT.	R-38R-24	24 x 30						5				
	12	34+40	LT.	R-43R-36	36 x 12						3				
	13	34+50	LT.	RP-123-24	24 x 12									1	1
	13	34+50	LT.	R-123-24	24 x 24									1	
	13	34+50	LT.	R-38R-24	24 x 30									1	
	13	34+50	LT.	RP-38R-24	24 x 12									1	
	14	35+18	LT.	M-2-24-2	24 x 24									1	1
	15	35+35	LT.	M-40-24	24 x 12		14				2				
	15	35+35	LT.	M-2-24-2	24 x 24						4				
	16	35+96	LT.	W-1-30	30 x 30									1	1
	16	35+96	LT.	R-55-12	12 x 18									1	
	17	36+00	RT.	M-39-24	24 x 12		14				2				
	17	36+00	RT.	M-2-24-2	24 x 24						4				
	18	36+00	LT.	W-1-30	30 x 30		16				6.25				
	18	36+00	LT.	R-55-12	12 x 18						1.5				
	19	36+23	RT.	W-94-36	36 DIA.									1	1
	19	36+23	RT.	R-55-12	12 x 18									1	
	20	36+60	LT.	R-10-24	24 x 30									1	1
	21	36+75	LT.	W-76P-30	30 x 30		14.5				6.25				
	22	37+00	RT.	M-2-24-2	24 x 24									1	1
121	22	37+00	RT.	M-39-24	24 x 12									1	
TOTAL						1	97.5	63	1	1	125.25	1		22	13

CALCULATED T.K.I. | CHECKED K.P.W.

SIGNING SUBSUMMARY

SUM - 50-4.93

SIGNING SUB-SUMMARY

SHEET NO.	REFERENCE NO.	STATION	SIDE	CODE	SIZE (INCHES)	ITEM NUMBERS 202 RAILROAD CROSSING REMOVED, AS PER PLAN –	625 GROUND ROD EACH	630 GROUND MOUNTED SUPPORT, NO.2 POST L.F.	630 STREET NAME SIGN SUPPORT EACH	630 COMBINATION OVERHEAD SIGN SUPPORT, TYPE TC-16.20, DESIGN 11, AS PER PLAN EACH	630 SIGN SUPPORT ASSEMBLY, POLE MOUNTED EACH	630 SIGN HANGER ASSEMBLY, MAST ARM, AS PER PLAN EACH	630 SIGN, FLAT SHEET, TYPE G S.F.	630 SIGN, FLAT SHEET, TYPE G, AS PER PLAN S.F.	630 SIGN, DOUBLE FACED, STREET NAME EACH	630 RIGID OVERHEAD SIGN SUPPORT FOUNDATION EACH	630 REMOVAL OF GROUND MOUNTED SIGN AND STORAGE EACH	630 REMOVAL OF GROUND MOUNTED SIGN AND REERECTION EACH	630 REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL EACH	632 SIGNAL SUPPORT FOUNDATION EACH	632 COMBINATION SIGNAL SUPPORT, TYPE TC-81.20, DESIGN 12, AS PER PLAN EACH
FRONT STREET																						
121	23	37+40	LT.	R-10-24	24 x 30			15					5									
	23	37+40	LT.	R-55-12	12 x 18								1.5									
	24	37+80	LT.	SPECIAL	72 x 12							1		6								
	25	38+06	RT.	D-14	–												1					
	26	38+57	RT.	SPECIAL	72 x 12							1		6								
	26A	38+57	RT.	SPECIAL	72 x 12							1		6								
121	27	38+58	LT.	D-14	–												2					
122	28	39+55	RT.	R-26A-36	36 x 42		1						10.5							1	1	
	28	39+55	RT.	R-30A-36	36 x 42								10.5									
	28	39+55	RT.	R-30A-36	36 x 42								10.5									
	28	39+55	RT.	R-27A-36	36 x 42								10.5									
	29	39+55	RT.	W-94-36	36 DIA.						1		9									
	30	40+21	RT.	R-95A-30	30 x 42												1		1			
	30	40+21	RT.	D-14	–												1					
	30A	40+28	RT.	RAILROAD SIGN	–	LUMP																
	31	40+25	LT.	M-40-24	24 x 12			14					2				1		1			
	31	40+25	LT.	M-2-24-2	24 x 24								4				1					
	31	40+25	LT.	SPECIAL	–													1				
	32	40+44	LT.	R-1-30	30 x 30												1		1			
	33	41+25	LT.	R-1-30	30 x 30			13.5					6.25									
	34	41+35	LT.	D-14	–												2		1			
	35	41+65	LT.	D-14	–				1						2							
	35A	42+06	LT.	RAILROAD SIGN	–	LUMP																
	36	42+60	LT.	W-94-36	36 DIA.						1		9									
	37	42+65	LT.	SPECIAL	72 x 12							1		6								
	37A	42+63.5	RT.	SPECIAL	72 x 12							1		6								
	37B	43+70	RT.	SPECIAL	72 x 12							1		6								
	37C	43+94	LT.	SPECIAL	72 x 12							1		6								
	38	43+86	LT.	D-14	–												2		1			
	39	44+22	RT.	R-10-24	24 x 30												1		1			
	40	44+50	RT.	R-10-24	24 x 30			13.5					5									
	41	45+50	LT.	W-94-36	36 DIA.												1		1			
	41	45+50	LT.	M-2-24-2	24 x 24												1					
	41	45+50	LT.	R-55-12	12 x 18												1					
	42	45+50	RT.	M-39-24	24 x 12			14					2									
	42	45+50	RT.	M-2-24-2	24 x 24								4									
	43	46+10	LT.	M-39-24	24 x 12						1		2									
	43	46+10	LT.	M-2-24-2	24 x 24								4									
	44	45+96	LT.	R-26A-36	36 x 42		1			1			10.5			1						
	44	45+96	LT.	RP-49-36	36 x 12								3									
	44	45+96	LT.	R-50-36	36 x 42								10.5									
	44	45+96	LT.	R-30A-36	36 x 42								10.5									
122	44	45+96	LT.	R-29A-36	36 x 42								10.5									
TOTAL						LUMP	2	70	1	1	3	7	140.75	42	2	1	16	1	7	1	1	

CALCULATED T.K.J. CHECKED K.P.W.

SIGNING SUBSUMMARY

SUM - 59-493

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SIGNING SUB-SUMMARY

SHEET NO.	REFERENCE NO.	STATION	SIDE	CODE	SIZE (INCHES)	ITEM NUMBERS 625 GROUND ROD (EACH)	630 GROUND MOUNTED SUPPORT, NO.2 POST (L.F.)	630 GROUND MOUNTED SUPPORT, NO.3 POST (L.F.)	630 STREET NAME SIGN SUPPORT (EACH)	630 COMBINATION OVERHEAD SIGN SUPPORT, TYPE 1C-16.20, DESIGN 10, AS PER PLAN (EACH)	630 SIGN, FLAT SHEET, TYPE G (S.F.)	630 SIGN, DOUBLE FACED, STREET NAME (EACH)	630 RIGID OVERHEAD SIGN SUPPORT FOUNDATION (EACH)	630 REMOVAL OF GROUND MOUNTED SIGN AND STORAGE (EACH)	630 REMOVAL OF GROUND MOUNTED SIGN AND REERECTION (EACH)	630 REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL (EACH)
FRONT STREET																
122	45	47+34	LT.	R-95A-30	30 x 42									1		
	45	47+34	LT.	D-14	–									1		
	46	47+34	RT.	M-39-24	24 x 12									1		1
	46	47+34	RT.	M-2-24-2	24 x 24									1		
	46	47+34	RT.	R-55-12	12 x 18									1		
	47	47+88	LT.	SPECIAL	30 x 24		13								1	1
	48	48+00	LT.	M-8-24	24 x 12			17			2					
	48	48+00	LT.	M-37-24	24 x 12						2					
	48	48+00	LT.	M-2-24-2	24 x 24						4					
	48	48+00	LT.	M-19-21	21 x 15						2.19					
	49	48+27	LT.	M-8-24	24 x 12									1		
	49	48+27	LT.	M-37-24	24 x 12									1		
	49	48+27	LT.	M-2-24-2	24 x 24									1		
	49	48+27	LT.	M-19-21	21 x 15									1		
	50	49+28	LT.	R-10-24	24 x 30									1		1
	50	49+28	LT.	R-55-12	12 x 18									1		
	51	49+41.5	RT.	R-55-12	12 x 18									1		1
122	52	49+50	LT.	R-10-24	24 x 30		13.5				5					
123	53	51+75	LT.	R-55-SPEC	24 x 30		13.5								1	1
	54	52+11	LT.	R-1-30	30 x 30									1		1
	55	52+13.5	LT.	R-1-30	30 x 30		13.5				6.25					
	56	52+28	LT.	D-14	–				1			1				
	57	52+28	LT.	D-14	–									1		1
	58	NOT USED														
	59	52+64	RT.	W-47-36	36 x 36									1		1
	59	52+64	RT.	WP-47-24	24 x 12									1		
	60	52+64	RT.	W-82-36	36 x 36									1		1
	60	52+64	RT.	WP-82-36	24 x 12									1		
	61	52+80	RT.	RP-49-36	36 x 12	1				1	3		1			
	61	52+80	RT.	R-50-36	36 x 42						10.5					
	61	52+80	RT.	RP-51-36	36 x 12						3					
	61	52+80	RT.	R-50-36	36 x 42						10.5					
	62	52+88.5	LT.	D-14	–				1			2				
	63	53+41	LT.	D-14	–									2		1
	64	53+50	RT.	W-82-36	36 x 36			14			9					
	65	54+72.5	LT.	R-10-24	24 x 30									1		1
	65	54+72.5	LT.	R-55-12	12 x 18									1		
123	66	54+75	LT.	R-10-24	24 x 30		13.5				5					
RAMP 'M'																
121	67	251+75	LT.	R-15D-30	30 x 30									1		1
121	68	252+25	RT.	R-2-48	48 x 48 x 48		33				6.93			1		2
121	68	252+25	RT.	R-41A-36	36 x 24						6			1		
TOTAL						1	100	31	2	1	75.37	3	1	25	2	14

CALCULATED T.K.I.
CHECKED K.P.W.

SIGNING SUBSUMMARY

SUM - 59-4.93

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SIGNING SUB-SUMMARY

CALCULATED T.K.I. | CHECKED K.P.W.

SHEET NO.	REFERENCE NO.	STATION	SIDE	CODE	SIZE (INCHES)	ITEM NUMBERS 202	625	630										632	
						RAILROAD CROSSING REMOVED, AS PER PLAN	GROUND ROD	GROUND MOUNTED SUPPORT, NO.2 POST	GROUND MOUNTED SUPPORT, NO.3 POST	STREET NAME SIGN SUPPORT	SIGN SUPPORT ASSEMBLY, POLE MOUNTED	SIGN HANGER ASSEMBLY, MAST ARM, AS PER PLAN	SIGN, FLAT SHEET, TYPE G	SIGN, FLAT SHEET, TYPE G, AS PER PLAN	SIGN, DOUBLE FACED, STREET NAME	REMOVAL OF GROUND MOUNTED SIGN AND STORAGE		REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	SIGNAL SUPPORT FOUNDATION	COMBINATION SIGNAL SUPPORT, TYPE TC-81.20, DESIGN 12, AS PER PLAN
						–	EACH	L.F.	L.F.	EACH	EACH	EACH	S.F.	S.F.	EACH	EACH		EACH	EACH	EACH
		SECOND STREET																		
121	69	52+60	LT.	R-55-12	12 x 18											1				
	70	52+80	LT.	W-76AP-30	30 x 30				14.5				6.25							
	71	53+05	LT.	D-14	–					1					1					
121	72	53+44	LT.	D-14	–											1				
		HUDSON DRIVE																		
122	73	105+95	RT.	W-94-36	36 DIA.											1		1		
	74	107+66	LT.	D-14	–					1					2					
	75	107+67	RT.	W-94-36	36 DIA.				15.5				9							
	75	107+67	RT.	R-55-12	12 x 18								1.5							
	76	107+68	LT.	R-1-30	30 x 30			13.5					6.25							
	76A	107+84	LT.	RAILROAD SIGN	–	LUMP														
	77	108+35	LT.	R-26A-36	36 x 42		1						10.5						1	1
	77	108+35	LT.	R-30A-36	36 x 42								10.5							
	77	108+35	LT.	R-30A-36	36 x 42								10.5							
	77	108+35	LT.	R-27A-36	36 x 42								10.5							
	78	108+35	LT.	R-55-12	12 x 18						1		1.5							
	78A	108+18	RT.	RAILROAD SIGN	–	LUMP														
	79	108+70	LT.	D-14	–											2		1		
	80	108+93	RT.	M-37-24	24 x 12											1		1		
	80	108+93	RT.	M-2-24-2	24 x 24											1				
	80	108+93	RT.	M-19-21	21 x 15											1				
	81	109+00	RT.	R-10-24	24 x 30			13.5					5							
	82	109+06	LT.	W-94-36	36 DIA.				14				9							
	83	109+75	RT.	M-37-24	24 x 12				16.75				2							
	83	109+75	RT.	M-2-24-2	24 x 24								4							
	83	109+75	RT.	M-19-21	21 x 15								2.19							
	83	109+75	RT.	R-55-12	12 x 18								1.5							
	84	109+63	LT.	W-94-36	36 DIA.											1		1		
	84	109+63	LT.	R-10-24	24 x 30											1				
	84	109+63	LT.	R-55-12	12 x 18											1				
	85	109+86	RT.	R-10-24	24 x 30											1		1		
	85	109+86	RT.	R-55-12	12 x 18											1				
	86	110+00	LT.	R-10-24	24 x 30			15					5							
	86	110+00	LT.	R-55-12	12 x 18								1.5							
	87	110+04	LT.	R-31A-36	36 x 30											1				
	88	111+00	LT.	D-14	–											2		1		
	88A	110+23	LT.	SPECIAL	72 x 12							1		6						
	88B	110+61	RT.	SPECIAL	72 x 12							1		6						
	88C	110+91.5	LT.	SPECIAL	72 x 12							1		6						
	88D	111+17	RT.	SPECIAL	72 x 12							1		6						
	89	111+34	LT.	R-95A-30	30 x 42											1		1		
	89	111+34	LT.	D-14	–											1				
	90	111+50	LT.	R-55-12	12 x 18			12.5					1.5							
	91	111+65	RT.	R-55-12	12 x 18			12.5					1.5							
122	92	111+96.5	RT.	R-55-12	12 x 18											1		1		
		TOTAL				LUMP	1	67	60.75	2	1	4	99.69	24	3	19		8	1	1

SIGNING SUBSUMMARY

SUM - 59-4.03

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SIGNING SUB-SUMMARY

SHEET NO.	REFERENCE NO.	STATION	SIDE	CODE	SIZE (INCHES)	ITEM NUMBERS 630 GROUND MOUNTED SUPPORT, NO.2 POST L.F.	630 SIGN, FLAT SHEET, TYPE G S.F.	630	630 REMOVAL OF GROUND MOUNTED SIGN AND STORAGE EACH	630 REMOVAL OF GROUND MOUNTED SIGN AND REERECTION EACH	630 REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL EACH
SECOND STREET											
122	93	49+10	RT.	R-57-12	12 x 18	12.5				1	1
122	94	49+10	LT.	R-55-12	12 x 18				1		1
122	95	49+50	LT.	R-55-12	12 x 18	12.5	1.5		1		1
VINCENT STREET											
123	96	9+35	RT.	R-1-30	30 x 30	13.5	6.25				
123	97	9+50	RT.	R-1-30	30 x 30				1		1
SECOND STREET											
121	98	52+50	LT.	R-55-12	12 x 18	12.5	1.5				
FRONT STREET											
121	98	SEE PLAN SHEET	-	R-55-12	12 x 18	75	9				
122	99	SEE PLAN SHEET	-	R-55-12	12 x 18	125	15				
123	100	SEE PLAN SHEET	-	R-55-12	12 x 18	87.5	10.5				
TOTAL						338.5	43.75		3	1	4

CALCULATED T.K.I. CHECKED K.P.W.

SIGNING SUBSUMMARY

SUM - 59-493

PAVEMENT MARKING SUBSUMMARY

SHEET NO.	REFERENCE NO.	LOCATION	STATION FROM	STATION TO	SIDE	ITEM NUMBERS 642: EDGE LINE, TYPE 2, WHITE (MILE)	642: EDGE LINE, TYPE 2, YELLOW (MILE)	642: LANE LINE, TYPE 2 (MILE)	642: CENTER LINE, TYPE 2, DOUBLE, SOLID (MILE)	642: CENTER LINE, TYPE 2, DOUBLE, BROKEN AND SOLID (MILE)	642: CHANNELIZING LINE, TYPE 2 (L.F.)	644: STOP LINE (L.F.)	644: CROSSWALK LINE (L.F.)	644: TRANSVERSE LINE (L.F.)	644: LANE ARROW (EACH)	644: WORD ON PAVEMENT, 72" (EACH)
121	EW	RAMP 'M'	250+50	253+59	RT.	0.059										
	EY	RAMP 'M'	250+50	252+31	LT.		0.034									
	L	RAMP 'M'	251+50	253+59	LT.			0.040								
	CH	RAMP 'M'	252+31	252+51	LT.						20					
	EW	FRONT STREET	28+82	29+77.5	RT.	0.018										
	EY	FRONT STREET	28+82	31+84	LT.		0.057									
	L	FRONT STREET	28+82	30+09	CL			0.024								
	L	FRONT STREET	30+09	34+44 (x2)	CL/RT			0.165								
	L	FRONT STREET	34+44	39+00	RT.			0.086								
	L	FRONT STREET	35+32	37+88.5	LT.			0.049								
	C	FRONT STREET	34+44	39+00	LT.				0.086							
	CH	FRONT STREET	34+44	37+88.5	RT.						344.5					
	S	FRONT STREET	37+88.5	–	LT/RT							37				
	S	FRONT STREET	38+73	–	LT.							25				
	CW	FRONT STREET	37+92.5	–	LT/RT								61			
	CW	FRONT STREET	38+01.5	–	LT/RT								67			
	TY	FRONT STREET	28+82	31+84	LT.									264		
	TY	FRONT STREET	34+44	35+32	LT.									35		
	A	FRONT STREET	35+05	–	CL										1	
	A	FRONT STREET	35+73	–	CL										1	
	A	FRONT STREET	36+41	–	CL										1	
	A	FRONT STREET	37+75	–	CL										1	
	W	FRONT STREET	37+07	–	CL											1
	L	SECOND STREET	51+53	54+00	CL		0.047									
	C	SECOND STREET	53+16.5	54+00	RT.				0.016							
	CW	SECOND STREET	52+87	–	LT/RT								26			
	CW	SECOND STREET	52+96	–	LT/RT								26			
	C	W. BAILEY ROAD	8+00	9+39	LT.				0.026							
	CH	W. BAILEY ROAD	8+50	9+39	RT.						89					
	S	W. BAILEY ROAD	9+39	–	LT/RT							29				
	CW	W. BAILEY ROAD	9+43	–	LT/RT								48			
	CW	W. BAILEY ROAD	9+52	–	LT/RT								59			
	A	W. BAILEY ROAD	8+61	–	CL										1	
	A	W. BAILEY ROAD	9+29	–	CL										1	
121	W	W. BAILEY ROAD	8+99	–	CL											1
122	L	FRONT STREET	39+00	50+00 (x2)	LT/RT		0.417									
	C	FRONT STREET	39+00	42+69	LT.				0.070							
	C	FRONT STREET	43+83	46+10	RT.				0.043							
	C	FRONT STREET	45+60	46+10	LT/RT				0.009							
	CB	FRONT STREET	46+10	50+00 (x2)	LT/RT					0.148						
	CH	FRONT STREET	39+10	42+69 (x2)	RT.						718					
	CH	FRONT STREET	43+83	45+50	LT.						167					
	S	FRONT STREET	42+69	–	LT/RT							55				
	S	FRONT STREET	43+83	–	LT/RT							47				
122	CW	FRONT STREET	42+73	–	LT/RT								89			
SUB-TOTAL						0.077	0.091		0.250	0.148						
SUB-TOTAL LEFT						0.168		0.828	0.398		1338.5	193	376	299	6	2

SHEET NO.	REFERENCE NO.	LOCATION	STATION FROM	STATION TO	SIDE	ITEM NUMBERS 642: EDGE LINE, TYPE 2, WHITE (MILE)	642: EDGE LINE, TYPE 2, YELLOW (MILE)	642: LANE LINE, TYPE 2 (MILE)	642: CENTER LINE, TYPE 2, DOUBLE, SOLID (MILE)	642: CENTER LINE, TYPE 2, DOUBLE, BROKEN AND SOLID (MILE)	642: CHANNELIZING LINE, TYPE 2 (L.F.)	644: STOP LINE (L.F.)	644: CROSSWALK LINE (L.F.)	644: TRANSVERSE LINE (L.F.)	644: RAILROAD SYMBOL MARKING (EACH)	644: LANE ARROW (EA)	644: WORD ON PAVEMENT, 72" (EA)	644: ISLAND MARKING (S.F.)
122	CW	FRONT STREET	42+82	–	LT/RT								87					
	CW	FRONT STREET	43+87	–	LT/RT								91					
	CW	FRONT STREET	43+96	–	LT.								92					
	TY	FRONT STREET	45+60	46+10	LT/RT									38				
	RR	FRONT STREET	39+84	–	LT/RT										4			
	RR	FRONT STREET	42+60	–	LT.										2			
	A	FRONT STREET	39+50	–	CL/RT											2		
	A	FRONT STREET	40+70	–	CL/RT											2		
	A	FRONT STREET	41+30	–	CL/RT											2		
	A	FRONT STREET	42+50	–	CL/RT											2		
	A	FRONT STREET	43+95	–	CL											1		
	A	FRONT STREET	45+21	–	CL											1		
	A	FRONT STREET	49+46	–	CL											1		
	A	FRONT STREET	49+54	–	CL											1		
	W	FRONT STREET	41+90	–	CL/RT												2	
	W	FRONT STREET	44+55	–	CL												1	
	C	EDISON STREET	47+02	48+97	CL				0.037									
	S	EDISON STREET	47+02	–	LT.							16						
	S	EDISON STREET	48+97	–	RT.							16						
	C	SECOND STREET	49+00	49+55	CL				0.010									
	S	SECOND STREET	49+55	–	RT.							21						
	CW	SECOND STREET	49+59	–	LT/RT								44					
	CW	SECOND STREET	49+68	–	LT/RT								55					
	L	HUDSON DRIVE	107+23.5	109+15	LT.			0.036										
	L	HUDSON DRIVE	107+23.5	112+00 (x2)	LT/RT			0.180										
	C	HUDSON DRIVE	107+23.5	112+00	CL				0.090									
	C	HUDSON DRIVE	108+10	111+70	LT.				0.068									
	TY	HUDSON DRIVE	108+10	110+25	LT.									215				
	TY	HUDSON DRIVE	111+03	111+70	LT.									8				
	IM	HUDSON DRIVE	110+25	–	LT.													20
	IM	HUDSON DRIVE	111+03	–	LT.													5
	CH	HUDSON DRIVE	107+23.5	108+00 (x2)	LT.									153				
	S	HUDSON DRIVE	107+23.5	–	LT.								54					
	S	HUDSON DRIVE	110+25	–	RT.								23					
	S	HUDSON DRIVE	111+03	–	LT.								26					
	CW	HUDSON DRIVE	106+09	–	LT/RT								80					
	CW	HUDSON DRIVE	106+18	–	LT/RT								79					
	CW	HUDSON DRIVE	107+10.5	–	LT/RT								92					
	CW	HUDSON DRIVE	107+19.5	–	LT/RT								95					
	CW	HUDSON DRIVE	110+29	–	LT/RT								55					
	CW	HUDSON DRIVE	110+38	–	LT/RT								52					
	RR	HUDSON DRIVE	107+50	–	RT.										2			
	RR	HUDSON DRIVE	108+82	–	LT.										3			
	A	HUDSON DRIVE	107+30	–	LT.											2		
122	W	HUDSON DRIVE	107+70	–	LT.												2	
SUB-TOTAL RIGHT						–	–	0.216	0.205	–	153	156	822	261	11	14	5	25
SUB-TOTAL LEFT						0.168		0.828	0.398		1338.5	193	376	299	–	6	2	–
TOTAL THIS SHEET						0.168		1.044	0.603		1492	349	1198	560	11	20	7	25

CALCULATED T.K.I.
CHECKED K.P.W.

PAVEMENT MARKING SUBSUMMARY

SIM - 59-493

130
171

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PAVEMENT MARKING SUBSUMMARY

SHEET NO.	REFERENCE NO.	LOCATION	STATION FROM	STATION TO	SIDE	ITEM NUMBERS 642 LANE LINE, TYPE 2	642 CENTER LINE, TYPE 2, DOUBLE, SOLID	642 CENTER LINE, TYPE 2, DOUBLE, BROKEN AND SOLID	644 STOP LINE	644 CROSSWALK LINE	644 TRANSVERSE LINE	644 ISLAND MARKING
						MILE	MILE	MILE	L.F.	L.F.	L.F.	S.F.
123	L	FRONT STREET	50+00	56+03.48(x2)	LT/RT	0.229						
	C	FRONT STREET	53+59	56+03.48(x2)	LT/RT		0.093					
	CB	FRONT STREET	50+00	52+80 (x2)	LT/RT			0.106				
	TY	FRONT STREET	53+59	56+03.48	LT/RT						207	
	IM	FRONT STREET	53+59	–	LT/RT							57
	C	VINCENT STREET	9+17	9+34	CL		0.003					
	S	VINCENT STREET	9+34	–	RT.				15			
	CW	VINCENT STREET	9+38	–	LT/RT					34		
123	CW	VINCENT STREET	9+47	–	LT/RT					50		
		SUB–TOTAL				–	0.096	0.106	–	–	–	–
		TOTAL				0.229	0.202		15	84	207	57

CALCULATED T.K.I. CHECKED K.P.W.

PAVEMENT MARKING SUBSUMMARY

SUM - 59-4.93

131
171

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SP-1
15' 6' 6' 1'
3' 5.5' 6.5'
SIGN NO.24
PREEMPT DETECTOR (TYPICAL)

SP-2 ARM "A"
19' 12' 6' 1'
3' 5.5' 10.5'
SIGN NO.26A

SP-2 ARM "B"
25' 6' 6' 1'
3' 4' 18'
SIGN NO.26

W. BAILEY ROAD
FRONT STREET
EXIST. R/W
R/W
8+00
9+09
12.5' RT.
13' 12' 13'
PEDESTAL, 8' STA.38+65, 39.5' LT. (PP 1)
2" 713.04 CONDUIT
1 STORY BLOCK KRISPY KREME
PULL BOX, 713.081, 10"x14" STA.38+65, 36' LT. (PB 8)
PULL BOX, 713.081, 10"x14" STA.40+73, 34.5' LT. (PB 9)
1 STORY BRICK SILVER SWAN TAVERN
17+00
40+81 14.9' RT.
41+00
45+80.83
40+63 27' RT.
39+32 27' RT.
39+00
37+30 27.5' LT.
37+59 3' LT.
37+80
36+00
35+84 20.9' RT.
L1 L2 L3 L4 L5 L6 L7 L8 L9 L10 L11
U.G. TELE
8" SAN
4" GAS
U.G. LOOPS F.O.C.
R.R.SIG.
CHICO CREEK
ASPHALT
EXIST. R/W CONC.
12" SAN
15" SAN
1 STORY BLOCK JIM'S TRANSMISSION SERVICE
1 STORY BRICK JIM'S TRANSMISSION SERVICE

PB 1 PULL BOX, 713.081, 13"x18" STA.38+01, 59' LT.
C 1 CONTROLLER STA.37+85, 50' LT.
PB 9B PULL BOX, 713.081, 10"x14" STA.37+87, 40.5' LT.
2-4" 713.04 CONDUIT
PB 2 PULL BOX, 713.081, 13"x18" STA.37+88, 37' LT.
SP 1 COMBINATION SIGNAL POLE STA.37+80, 39' LT.
PB 3 PULL BOX, 713.081, 10"x14" STA.37+38, 33' LT.
2" 713.04 CONDUIT
3" 713.04 CONDUIT
4" 713.04 CONDUIT
PB 4 PULL BOX, 713.081, 10"x14" STA.38+08, 33' RT.
PP 2 PEDESTAL, 8' STA.38+08, 38' RT.
PB 9A PULL BOX, 713.081, 10"x14" STA.38+14, 37.5' RT.
EXISTING ELECTRIC PEDESTAL STA.38+14±, 41.5'± RT.
PB 5 PULL BOX, 713.081, 10"x14" STA.35+92, 34.5' RT.
PB 6 PULL BOX, 713.081, 10"x14" STA.38+49, 43.5' RT.
PB 7 PULL BOX, 713.081, 10"x14" STA.39+40, 44' RT.
PB 10 PULL BOX, 713.081, 10"x14" STA.40+65, 44' RT.
PB 11 PULL BOX, 713.081, 10"x14" STA.41+05, 44' RT.
SP 2 COMBINATION SIGNAL POLE STA.38+57, 41.5' RT. — PAN-TILT-ZOOM CAMERA

FOR CONTINUATION SEE SHEET NO. 136

SIGNALS

1,2, 4,6 — 3 — 5

ALL PEDESTRIAN SIGNAL TYPE D-2

TO CROSS FRONT PUSH BUTTON WAIT FOR WALK SIGNAL — R-73A-9

TO CROSS BAILEY PUSH BUTTON WAIT FOR WALK SIGNAL — R-73A-9

LEGEND

- SIGNAL POLE
- GROUND MOUNTED CONTROLLER
- PULL BOX
- VEHICULAR SIGNAL 3-SECTION
- VEHICULAR SIGNAL 5-SECTION
- PEDESTRIAN SIGNAL
- LOOP DETECTOR
- QUADRAPOLE LOOP DETECTOR
- CONDUIT
- PEDESTAL, 8'
- PREEMPT DETECTOR
- CONFIRMATION LIGHT

FOR SIGNING AND PAVEMENT MARKING PLANS, SEE SHEET NO. 121 - 122.

FOR PHASING, TIMING, DETECTORS, AND POLE CHART, SEE SHEET NO. 133.

FOR WIRING DIAGRAM SEE SHEET NO. 134.

FOR SIGNAL QUANTITIES SEE SHEET NO. 135.

(IN FEET) 1 inch = 20 ft.

CALCULATED T.K.I. CHECKED E.W.K.

FRONT STREET SIGNAL PLAN
INTERSECTION AT W. BAILEY ROAD

SUM - 59-493

TRAFFIC SIGNAL DETECTORS

DETECTOR	SIZE	NO. OF TURNS	PULSE OR PRESENCE	DELAY OR EXTENSION (SEC.)	DET. UNIT NO.	PHASE	REMARKS
L1	6' x 35'	3	PRESENCE	–	1	5	–
L2	6' x 35'	3	PRESENCE	2 DELAY	2	4	–
L3	6' x 35'	3	PRESENCE	8 DELAY	3	4	–
L4	6' x 6'	4	PRESENCE	–	4	2	–
L5	6' x 6'	4	PRESENCE	–	5	2	–
L6	6' x 6'	4	PRESENCE	–	6	6	–
L7	6' x 6'	4	PRESENCE	–	7	6	–
L8	6' x 6'	4	PRESENCE	–	8	–	SYSTEM
L9	6' x 6'	4	PRESENCE	–	9	–	SYSTEM
L10	6' x 6'	4	PRESENCE	–	10	–	SYSTEM
L11	6' x 6'	4	PRESENCE	–	11	–	SYSTEM

DISPLAY CHART

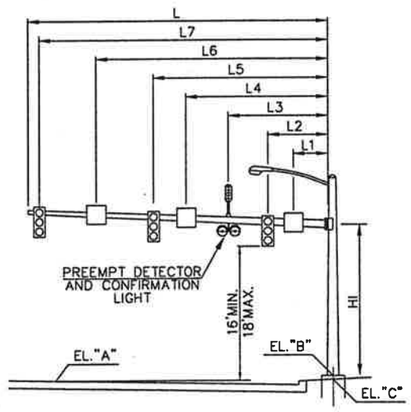
PHASE	ø 6				ø 2+5				ø 2+6				ø 4+7				
DISPLAY																	FLASH
SIGNAL																	
1, 2	G	Y	R		R	R	R		G	Y	R		R	R	R		Y
3	R	R	R		←G / G	←Y / G	G		G	Y	R		R	R	R		Y
4	R	R	R		G	G	G		G	Y	R		R	R	R		Y
5	R	R	R		R / G→	R / Y→	R		R	R	R		G	Y	R		R
6	R	R	R		R	R	R		R	R	R		G	Y	R		R
A–A	DW	DW	DW		DW	DW	DW		DW	DW	DW		W	FDW	DW		OFF
B–B	DW	DW	DW		DW	DW	DW		W	FDW	DW		DW	DW	DW		OFF

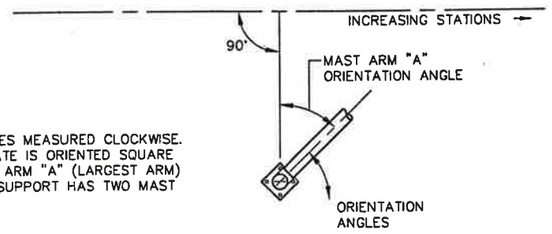
COORDINATION TIMING

	DIAL 1	DIAL 2	DIAL 3
CYCLE LENGTH	80 SEC.	90 SEC.	100 SEC.
PHASE 2 SPLIT	65%	69%	72%
PHASE 4 SPLIT	35%	31%	28%
PHASE 5 SPLIT	15%	14%	15%
PHASE 6 SPLIT	50%	55%	57%
PHASE 7 SPLIT	35%	31%	28%
PERMISSIVE	5%	5%	5%
OFFSET	16%	14%	13%
TIME OF DAY SCHEDULE	6:30AM TO 9:00AM MON–SAT	9:00AM TO 3:00PM MON–SAT	3:00PM TO 6:00PM MON–SAT

120 sec
77%
23%
13%
64%
23%
5%
11%

NOTES:
1. PHASE SPLITS SHALL INCLUDE ALL GREEN PLUS YELLOW & ALL RED.
2. PERMISSIVES SHALL START AT THE ZERO POINT OF THE CYCLE.
3. OFFSETS SHALL BE REFERENCED TO THE BEGINNING OF PHASE 2+6 YELLOW.



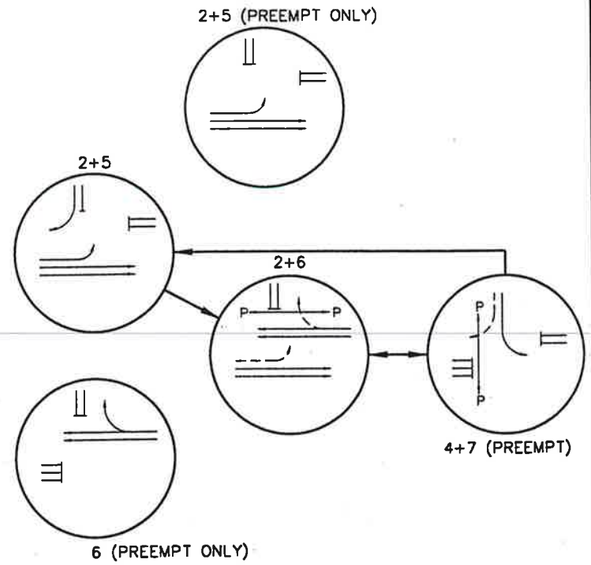


NOTES:
1) ALL ANGLES MEASURED CLOCKWISE.
2) BASE PLATE IS ORIENTED SQUARE TO MAST ARM "A" (LARGEST ARM) EVEN IF SUPPORT HAS TWO MAST ARMS.

SIGNAL SUPPORT TYPE TC–81.20

ARM	POLE NO.	POLE DESIGN NO.	ARM DESIGN NO.	POLE HEIGHT (FT.)	HI	L	L1	L2	L3	L4	L5	L6	L7	ELEVATIONS "A"	ELEVATIONS "B"	ELEVATIONS "C"	MAST ARM "A" ORIENTATION ANGLE	ANGLES (DEG.) FROM MAST ARM "A" ARM "B"	HANDHOLE	PEDESTRIAN SIGNAL BRACKET	PEDESTRIAN PUSHBUTTON	PEDESTRIAN SIGNAL BRACKET	PEDESTRIAN PUSHBUTTON	LUMINAIRE BRACKET
	SP1	2	2	27.2'	19.5'	28'	6'	15'	21'	–	–	–	27'	1015.91	1016.11	1016.11	0°		180	180	270	270	0	0
ARM "A"	SP2	12	4	27.2'	19.5'	38'	6'	19'	31'	–	–	–	37'	1016.14	1016.15	1016.15	0°	270	180	–	–	–	–	0
ARM "B"	SP2		3		19.5'	38'	5'	25'	31'	–	–	–	37'	1016.10										

PEDESTRIAN SIGNALS SHALL BE ATTACHED TO SIGNAL POLES AS PER TC–85.10, NOTE 4c.



TIMING CHART

INTERVAL OR FEATURE			NEMA PHASE NO. 1	2	3	4	5	6	7	8
INTERSECTION MOVEMENT				EB TH		SB TH	EB LT	WB TH	SB LT	
MINIMUM GREEN (INITIAL)		(SEC.)		25		10	7	25	10	
PASSAGE		(SEC.)		–		4	2.5	–	4	
MAXIMUM GREEN I		(SEC.)		–		25	18	–	25	
YELLOW CHANGE		(SEC.)		3.6		3.5	3.6	3.6	3.5	
ALL RED CLEARANCE		(SEC.)		1.5		1.5	1.5	1.5	1.5	
WALK		(SEC.)		7		7	–	7	–	
PEDESTRIAN CLEARANCE		(SEC.)		11		16	–	11	–	
RECALL	MAXIMUM	(ON/OFF)		OFF		OFF	OFF	OFF	OFF	
	MINIMUM	(ON/OFF)		ON		OFF	OFF	ON	OFF	
	PEDESTRIAN	(ON/OFF)		OFF		OFF	OFF	OFF	OFF	
MEMORY		(ON/OFF)		ON		OFF	OFF	ON	OFF	

PREEMPT CHANNELS

CHANNEL 1 = ø6 (WESTBOUND ONLY)
CHANNEL 2 = ø2 & ø5 (EASTBOUND ONLY) ø4 & ø7 (SOUTHBOUND ONLY)

PREEMPT NOTES

1. ACTIVE WALK INDICATIONS SHALL IMMEDIATELY GO TO "DON'T WALK" UPON RECEIVING PREEMPTION SIGNAL.
2. IF PHASE ACTIVE CONFLICTS WITH PREEMPT PHASE CALLED, IT SHALL IMMEDIATELY TIME IT'S YELLOW AND ALL RED CLEARANCES.
3. IF ACTIVE PHASE = THE PREEMPT PHASE, THEN THE PHASE SHALL HOLD FOR THE DURATION OF THE PREEMPT SIGNAL.
4. AFTER RELEASE FROM PREEMPT, YELLOW AND ALL RED CLEARANCE SHALL BE DISPLAYED AND RETURN PHASE SHALL BE ø2 AND ø6.
5. IF PREEMPT PHASES = RETURN PHASES THEN YELLOW AND ALL RED CLEARANCE AFTER PREEMPT SHALL NOT BE DISPLAYED.

CALCULATED T.K.I.
CHECKED K.P.W.

PHASING, TIMING, DETECTORS, AND POLE CHART
FRONT STREET AT W. BAILEY ROAD

SUM - 59-493

CONTROLLER C-1

POWER CABLE

LEI
LEI
LEI
5/C
LEI
LEI
3/C
PREEMPT
7/C
7/C
PREEMPT
3/C
CAMERA CABLE
LEI
LEI
INTERCONNECT
5/C
LEI
LEI
LEI
LEI
LEI
5/C
7/C
PREEMPT
3/C
LEI
5/C
LEI
LEI

PULL BOX PB-1

PULL BOX PB-2

PULL BOX PB-3

PULL BOX PB-9B

PULL BOX PB-9A

EXIST. ELEC. PEDESTAL

PULL BOX PB-5

PEDESTAL PP-2

SIGNAL POLE SP-1

PULL BOX PB-4

PULL BOX PB-6

PEDESTAL PP-1

PULL BOX PB-8

PULL BOX PB-9

SIGNAL POLE SP-2

PULL BOX PB-7

L1 L2 L3 L4 L5 L6 L7 L8 L9 L10 L11

1 2 3 4 5 6

A B C D

TO PB-12 AT FRONT ST. AND HUDSON DR.

NOTE: ALL PEDESTRIAN PUSHBUTTONS SHALL BE WIRED WITH TWO CONDUCTOR LOOP DETECTOR LEAD-IN CABLE.

LEGEND

- 2 — VEHICULAR SIGNAL HEAD, 3-SECTION
- 1 — VEHICULAR SIGNAL HEAD, 5-SECTION
- PEDESTRIAN SIGNAL
- PEDESTRIAN PUSHBUTTON
- L1 — LOOP DETECTOR
- PAN-ZOOM-TILT CAMERA
- PREEMPT DETECTOR
- CONFIRMATION LIGHT
- POWER CABLE, 3-CONDUCTOR NO.6 AWG
- SIGNAL CABLE, 3-CONDUCTOR NO.14 AWG
- SIGNAL CABLE, 5-CONDUCTOR NO.14 AWG
- SIGNAL CABLE, 7-CONDUCTOR NO.14 AWG
- LOOP DETECTOR LEAD-IN CABLE
- INTERCONNECT CABLE, 12 FIBER
- INTERCONNECT CABLE, 96 FIBER
- PREEMPT DETECTOR CABLE
- CAMERA CABLE

CALCULATED T.K.I.
CHECKED K.P.W.

WIRING DIAGRAM
FRONT STREET AT WEST BAILEY ROAD

SUM - 59-483

134
171

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TRAFFIC SIGNAL QUANTITY SUBSUMMARY

ITEM NUMBERS — 625

SHEET No.	REFERENCE No.	STATION TO STATION	SIDE	GROUND ROD (EACH)	GROUND ROD, AS PER PLAN (EACH)	PULL BOX, 713.081, 10" x 14", AS PER PLAN (EACH)	PULL BOX, 713.081, 13" x 18", AS PER PLAN (EACH)	TRENCH (L.F.)	CONDUIT, 2", 713.04 (L.F.)	CONDUIT, 3", 713.04 (L.F.)	CONDUIT, 4", 713.04 (L.F.)	PLASTIC CAUTION TAPE (L.F.)
132	C1	37+85	LT.		1							
	PB-1	37+85 TO 38+01	LT.				1	5			10	5
	PB-2	38+01 TO 37+88	LT.				1	25			50	25
	SP-1	37+88 TO 37+80	LT.	1				8		8		8
	PB-3	37+88 TO 37+38	LT.			1		48	48			48
	PB-4	37+88 TO 38+08	RT.			1		73			73	73
	PB-5	38+08 TO 35+92	RT.			1		220	220			220
	PP-2	38+08 TO 38+08	RT.	1				5		5		5
	PB-6	38+08 TO 38+49	RT.			1		42		42		42
	SP-2	38+49 TO 38+57	RT.	1				8		8		8
	PB-7	38+08 TO 39+40	RT.			1		130	130			130
	PB-10	39+40 TO 40+65	RT.			1		126	126			126
	PB-8	37+88 TO 38+65	LT.			1		77		77		77
	PP-1	38+65 TO 38+65	LT.	1				4	4			4
	PB-9	38+65 TO 40+73	LT.			1		211	211			211
	PB-9A	EX. POWER PEDESTAL TO 38+14	RT.			1		4				4
	PB-9B	38+14 TO 37+87	LT.			1		85				85
	–	37+87 TO 37+80	LT.					5				5
132	–	37+80 TO C1	LT.					26				26
		POWER SERVICE										
		C1 TO VEHICULAR SIGNAL 1 AND 2										
		C1 TO VEHICULAR SIGNAL 3 AND 4										
		C1 TO VEHICULAR SIGNAL 5 AND 6										
		C1 TO PEDESTRIAN SIGNAL A (SP-1)										
		C1 TO PEDESTRIAN SIGNAL B (SP-1)										
		C1 TO PEDESTRIAN SIGNAL A (PP-2)										
		C1 TO PEDESTRIAN SIGNAL B (PP-1)										
		C1 TO LOOP DETECTOR L1										
		C1 TO LOOP DETECTOR L2										
		C1 TO LOOP DETECTOR L3										
		C1 TO LOOP DETECTOR L4										
		C1 TO LOOP DETECTOR L5										
		C1 TO LOOP DETECTOR L6										
		C1 TO LOOP DETECTOR L7										
		C1 TO LOOP DETECTOR L8										
		C1 TO LOOP DETECTOR L9										
		C1 TO LOOP DETECTOR L10										
		C1 TO LOOP DETECTOR L11										
		TOTAL		4	1	10	2	1102	739	140	133	1102

ITEM NUMBERS — 632

REFERENCE No.	STATION TO STATION	VEHICULAR SIGNAL HEAD, 3-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, AS PER PLAN (EACH)	VEHICULAR SIGNAL HEAD, 5-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, AS PER PLAN (EACH)	PEDESTRAIN SIGNAL HEAD, TYPE D2, AS PER PLAN (EACH)	PEDESTRIAN PUSHBUTTON (EACH)	LOOP DETECTOR UNIT (EACH)	LOOP DETECTOR UNIT, DELAY AND EXTENSION TYPE, AS PER PLAN (EACH)	DETECTOR LOOP (EACH)	SIGNAL SUPPORT FOUNDATION (EACH)	PEDESTAL FOUNDATION (EACH)	COMBINATION SIGNAL SUPPORT, TYPE TC-81.20, DESIGN 2, AS PER PLAN (EACH)	COMBINATION SIGNAL SUPPORT, TYPE TC-81.20, DESIGN 12 POLE, WITH MAST ARMS TC-81.20 DESIGN 4 AND TC-81.20 DESIGN 3, AS PER PLAN (EACH)	PEDESTAL, 8' (EACH)	CONDUIT RISER, 2" DIA., AS PER PLAN (EACH)
C1	37+85													
PB-1	37+85 TO 38+01													
PB-2	38+01 TO 37+88													
SP-1	37+88 TO 37+80								1		1			
PB-3	37+88 TO 37+38													
PB-4	37+88 TO 38+08													
PB-5	38+08 TO 35+92													
PP-2	38+08 TO 38+08									1			1	
PB-6	38+08 TO 38+49													
SP-2	38+49 TO 38+57								1			1		
PB-7	38+08 TO 39+40													
PB-10	39+40 TO 40+65													
PB-8	37+88 TO 38+65													
PP-1	38+65 TO 38+65									1			1	
PB-9	38+65 TO 40+73													
PB-9A	EX. POWER PEDESTAL TO 38+14													1
PB-9B	38+14 TO 37+87													
–	37+87 TO 37+80													
–	37+80 TO C1													
	POWER SERVICE													
	C1 TO VEHICULAR SIGNAL 1 AND 2	2												
	C1 TO VEHICULAR SIGNAL 3 AND 4	1	1											
	C1 TO VEHICULAR SIGNAL 5 AND 6	1	1											
	C1 TO PEDESTRIAN SIGNAL A (SP-1)			1	1									
	C1 TO PEDESTRIAN SIGNAL B (SP-1)			1	1									
	C1 TO PEDESTRIAN SIGNAL A (PP-2)			1	1									
	C1 TO PEDESTRIAN SIGNAL B (PP-1)			1	1									
	C1 TO LOOP DETECTOR L1						1	1						
	C1 TO LOOP DETECTOR L2						1	1						
	C1 TO LOOP DETECTOR L3						1	1						
	C1 TO LOOP DETECTOR L4					1		1						
	C1 TO LOOP DETECTOR L5					1		1						
	C1 TO LOOP DETECTOR L6					1		1						
	C1 TO LOOP DETECTOR L7					1		1						
	C1 TO LOOP DETECTOR L8					1		1						
	C1 TO LOOP DETECTOR L9					1		1						
	C1 TO LOOP DETECTOR L10					1		1						
	C1 TO LOOP DETECTOR L11					1		1						
	TOTAL	4	2	4	4	8	3	11	2	2	1	1	2	1

ITEM NUMBERS — 632 / 633

REFERENCE No.	STATION TO STATION	SIGNAL CABLE, 5 CONDUCTOR NO.14 AWG (L.F.)	SIGNAL CABLE, 7 CONDUCTOR NO.14 AWG (L.F.)	INTERCONNECT CABLE, MISC.: 6 FIBER, REA (PE-90), AS PER PLAN (L.F.)	LOOP DETECTOR LEAD-IN CABLE (L.F.)	POWER CABLE, 3 CONDUCTOR NO.6 AWG (L.F.)	POWER SERVICE, AS PER PLAN (EACH)	COVERING OF VEHICULAR SIGNAL HEAD (EACH)	COVERING OF PEDESTRAIN SIGNAL HEAD (EACH)	REMOVAL OF TRAFFIC SIGNAL INSTALLATION, AS PER PLAN (EACH)	633: CONTROLLER, ACTUATED, 8-PHASE, SOLID STATE DIGITAL MICROPROCESSOR, AS PER PLAN (EACH)	PREEMPTION, AS PER PLAN (EACH)	CONCRETE FOR CABINET FOUNDATION (C.Y.)	CONTROLLER ITEM, MISC.: PAN-TILT-ZOOM CAMERA (EACH)
C1	37+85									1	1	1	1.85	1
PB-1	37+85 TO 38+01			15										
PB-2	38+01 TO 37+88			30										
SP-1	37+88 TO 37+80													
PB-3	37+88 TO 37+38													
PB-4	37+88 TO 38+08			78										
PB-5	38+08 TO 35+92													
PP-2	38+08 TO 38+08													
PB-6	38+08 TO 38+49													
SP-2	38+49 TO 38+57													
PB-7	38+08 TO 39+40			135										
PB-10	39+40 TO 40+65			131										
PB-8	37+88 TO 38+65													
PP-1	38+65 TO 38+65													
PB-9	38+65 TO 40+73													
PB-9A	EX. POWER PEDESTAL TO 38+14													
PB-9B	38+14 TO 37+87													
–	37+87 TO 37+80													
–	37+80 TO C1													
	POWER SERVICE					187	1							
	C1 TO VEHICULAR SIGNAL 1 AND 2		112					2						
	C1 TO VEHICULAR SIGNAL 3 AND 4		247					2						
	C1 TO VEHICULAR SIGNAL 5 AND 6		247					2						
	C1 TO PEDESTRIAN SIGNAL A (SP-1)	67			63				1					
	C1 TO PEDESTRIAN SIGNAL B (SP-1)	67			63				1					
	C1 TO PEDESTRIAN SIGNAL A (PP-2)	142			139				1					
	C1 TO PEDESTRIAN SIGNAL B (PP-1)	145			141				1					
	C1 TO LOOP DETECTOR L1				123									
	C1 TO LOOP DETECTOR L2				15									
	C1 TO LOOP DETECTOR L3				15									
	C1 TO LOOP DETECTOR L4				348									
	C1 TO LOOP DETECTOR L5				348									
	C1 TO LOOP DETECTOR L6				343									
	C1 TO LOOP DETECTOR L7				343									
	C1 TO LOOP DETECTOR L8				98									
	C1 TO LOOP DETECTOR L9				98									
	C1 TO LOOP DETECTOR L10				258									
	C1 TO LOOP DETECTOR L11				258									
	TOTAL	421	606	389	2653	187	1	6	4	1	1	1	1.85	1

CALCULATED T.K.L. CHECKED K.P.W.

TRAFFIC SIGNAL SUBSUMMARY
FRONT STREET AT W. BAILEY ROAD

SUM - 59-4.93

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FOR CONTINUATION SEE SHEET NO. 142.

FOR CONTINUATION SEE SHEET NO. 137.

FOR CONTINUATION SEE SHEET NO. 132.

SP-1 SIGN NO.37B

SP-3 SIGN NO.37

SP-2 SIGN NO.37A

SP-4 SIGN NO.37C

PREEMPT DETECTOR (TYPICAL)

PB 14 PULL BOX, 713.081, 13"x18" STA.108+05, 51.7' LT.

3" 713.04 CONDUIT

PB 18 PULL BOX, 713.081, 10"x14" STA.108+05, 26' RT.

2" 713.04 CONDUIT

1 STORY FRAME CROCKER'S RESTAURANT

COMBINATION SIGNAL POLE SP 4 STA.43+94, 58.5' LT.

PB 17 PULL BOX, 713.081, 10"x14" STA.44+00, 39.5' LT.

FRONT STREET

PB 15 PULL BOX, 713.081, 13"x18" STA.42+93, 48' LT.

SP 3 COMBINATION SIGNAL POLE STA.42+65, 38.5' LT.

EDISON STREET

PB 16 PULL BOX, 713.081, 10"x14" STA.42+46, 33' LT.

4" 713.04 CONDUIT

2" 713.04, CONDUIT IN COMMON TRENCH

PB 13 PULL BOX, 713.081, 10"x14" STA.44+75, 36.5' RT.

PB 20 PULL BOX, 713.081, 10"x14" STA.45+60, 41' RT.

PB 12 PULL BOX, 713.081, 13"x18" STA.43+93, 43' RT.

PB 23 PULL BOX, 713.081, 10"x14" STA.45+60, 42.5' RT.

6" 713.04 CONDUIT

2-4" 713.04 CONDUIT

UTILITY POLE WITH 2-CONDUIT RISER, 2" STA.45+63.5, 41.5' RT.

CONTROLLER WITH MASTER CONTROLLER C 2 STA.43+93, 48.3' RT.

AERIAL INTERCONNECT CABLE

PB 22 PULL BOX, 713.081, 10"x14" STA.43+88, 45.5' RT.

2" 713.04 CONDUIT

3" 713.04 CONDUIT

COMBINATION SIGNAL POLE SP 1 STA.43+70, 48.5' RT.

PAN-TILT-ZOOM CAMERA

EXISTING PULL BOX, 24" STA.106+19, 28' RT.

EXIST. CONDUIT 3" 713.04

EXISTING PULL BOX, 24" STA.105+20, 33' RT.

HUDSON DRIVE

ONE WAY

EXISTING PULL BOX, 13"x18" STA.105+94.5, 59' LT.

3" 713.04 CONDUIT

SP 2 COMBINATION SIGNAL POLE STA.42+63.5, 68.5' RT.

2" 713.04 CONDUIT

PB 11 PULL BOX, 713.081, 10"x14" STA.41+05, 44' RT.

EXIST. CONDUIT 2" 713.04

EXISTING PULL BOX, 18" STA.105+30, 39' LT.

2" 713.04 CONDUIT

IN COMMON TRENCH WITH LIGHTING

PB 10 PULL BOX, 713.081, 10"x14" STA.40+65, 44' RT.

CONDUIT 6" 713.04

4" 713.04 CONDUIT

2" 713.04 CONDUIT

SIGNALS

4,8 — 1,3,5,7 — 2,6

ALL PEDESTRIAN SIGNAL TYPE D-2

TO CROSS FRONT PUSH BUTTON WAIT FOR WALK SIGNAL R-73A-9

TO CROSS HUDSON PUSH BUTTON WAIT FOR WALK SIGNAL R-73A-9

LEGEND

- SIGNAL POLE
- GROUND MOUNTED CONTROLLER
- PULL BOX
- VEHICULAR SIGNAL 3-SECTION
- VEHICULAR SIGNAL 5-SECTION
- PEDESTRIAN SIGNAL
- LOOP DETECTOR
- QUADRAPOLE LOOP DETECTOR
- CONDUIT
- PEDESTAL, 8'
- PREEMPT DETECTOR
- CONFIRMATION LIGHT

FOR SIGNING AND PAVEMENT MARKING PLANS, SEE SHEET NO. 122.

FOR PHASING, TIMING, DETECTORS, AND POLE CHART, SEE SHEET NO. 139.

FOR WIRING DIAGRAM SEE SHEET NO. 140.

FOR SIGNAL QUANTITIES SEE SHEET NO. 141.

(IN FEET) 1 inch = 20' /L.

CALCULATED T.K.L. CHECKED E.W.K.

FRONT STREET SIGNAL PLAN
INTERSECTION AT HUDSON DRIVE

SUM - 59-4.93

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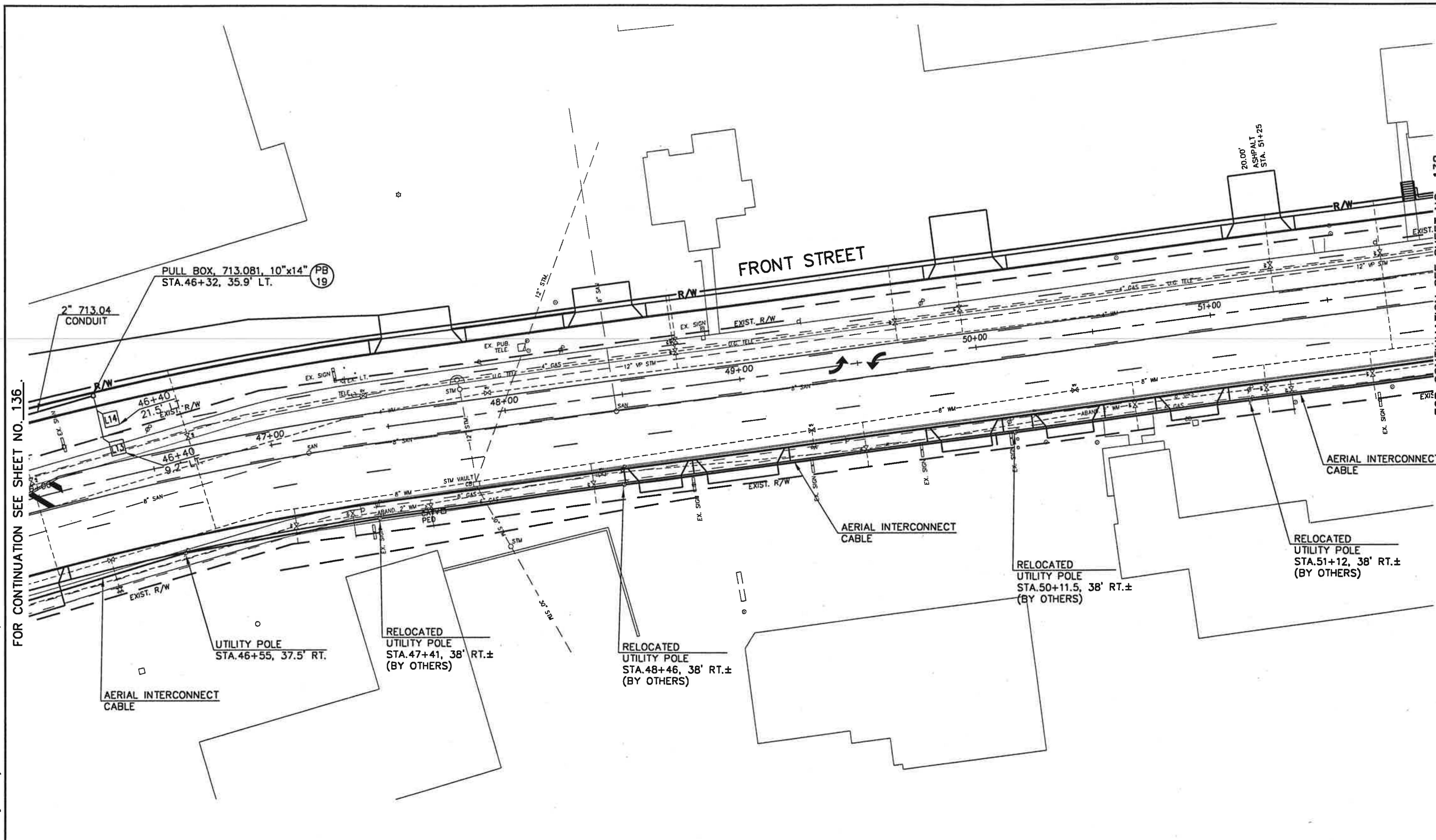


FRONT STREET
PULL BOX, 713.081, 10"x14" PB 19
STA.46+32, 35.9' LT.
2" 713.04 CONDUIT
FOR CONTINUATION SEE SHEET NO. 136
FOR CONTINUATION SEE SHEET NO. 138
46+40 21.5' LT.
46+40 9.2' LT.
L14
L13
47+00
48+00
49+00
50+00
51+00
R/W
EXIST. R/W
20.00' ASHPALT STA. 51+25
AERIAL INTERCONNECT CABLE
UTILITY POLE STA.46+55, 37.5' RT.
RELOCATED UTILITY POLE STA.47+41, 38' RT.± (BY OTHERS)
RELOCATED UTILITY POLE STA.48+46, 38' RT.± (BY OTHERS)
RELOCATED UTILITY POLE STA.50+11.5, 38' RT.± (BY OTHERS)
RELOCATED UTILITY POLE STA.51+12, 38' RT.± (BY OTHERS)
(IN FEET) 1 inch = 20 ft.

LEGEND

- SIGNAL POLE
- GROUND MOUNTED CONTROLLER W/WORK PAD
- PULL BOX
- VEHICULAR SIGNAL 3-SECTION
- VEHICULAR SIGNAL 5-SECTION
- PEDESTRIAN SIGNAL
- LOOP DETECTOR
- QUADRAPOLE LOOP DETECTOR
- CONDUIT
- AERIAL INTERCONNECT CABLE

FOR SIGNING AND PAVEMENT MARKING PLANS, SEE SHEET NO. 122.

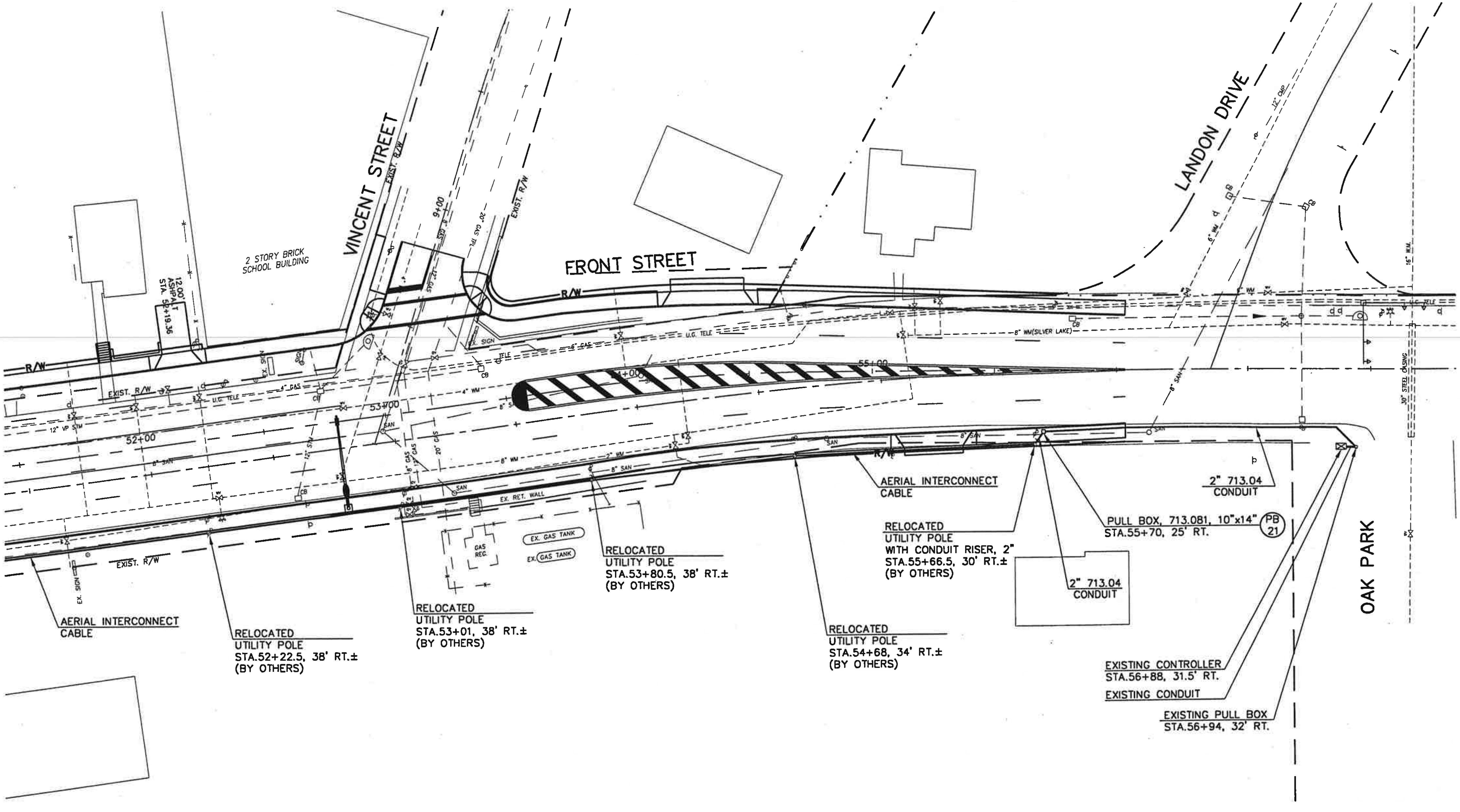
FOR WIRING DIAGRAM SEE SHEET NO. 140.

FOR SIGNAL QUANTITIES SEE SHEET NO. 141.

CALCULATED T.K.L. CHECKED E.W.K.

SIGNAL PLAN FRONT STREET

SUM-59-4.93



VINCENT STREET
FRONT STREET
LANDON DRIVE
OAK PARK
2 STORY BRICK SCHOOL BUILDING
12.00' ASHPALT STA. 52+19.36
EXIST. R/W
R/W
52+00
53+00
54+00
55+00
U.G. TELE
6" GAS
8" WM(SILVER LAKE)
EX. RET. WALL
GAS REC.
EX. GAS TANK
EX. GAS TANK
AERIAL INTERCONNECT CABLE
RELOCATED UTILITY POLE STA.52+22.5, 38' RT.± (BY OTHERS)
RELOCATED UTILITY POLE STA.53+01, 38' RT.± (BY OTHERS)
RELOCATED UTILITY POLE STA.53+80.5, 38' RT.± (BY OTHERS)
RELOCATED UTILITY POLE STA.54+68, 34' RT.± (BY OTHERS)
AERIAL INTERCONNECT CABLE
RELOCATED UTILITY POLE WITH CONDUIT RISER, 2" STA.55+66.5, 30' RT.± (BY OTHERS)
PULL BOX, 713.081, 10"x14" STA.55+70, 25' RT.
PB 21
2" 713.04 CONDUIT
2" 713.04 CONDUIT
EXISTING CONTROLLER STA.56+88, 31.5' RT.
EXISTING CONDUIT
EXISTING PULL BOX STA.56+94, 32' RT.

FOR CONTINUATION SEE SHEET NO. 137

LEGEND

- SIGNAL POLE
- GROUND MOUNTED CONTROLLER W/WORK PAD
- PULL BOX
- VEHICULAR SIGNAL 3-SECTION
- VEHICULAR SIGNAL 5-SECTION
- PEDESTRIAN SIGNAL
- LOOP DETECTOR
- QUADRAPOLE LOOP DETECTOR
- CONDUIT

FOR SIGNING AND PAVEMENT MARKING PLANS, SEE SHEET NO. 123.

FOR WIRING DIAGRAM SEE SHEET NO. 140.

FOR SIGNAL QUANTITIES SEE SHEET NO. 141.

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(IN FEET) 1 inch = 20 ft.

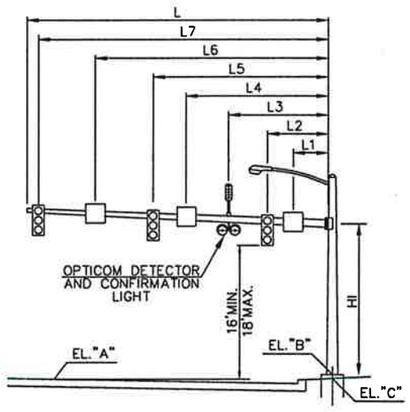
CALCULATED T.K.I. CHECKED E.W.K.

SIGNAL PLAN FRONT STREET AT OAK PARK

SUM - 59 - 4.93

TRAFFIC SIGNAL DETECTORS

DETECTOR	SIZE	NO. OF TURNS	PULSE OR PRESENCE	DELAY OR EXTENSION (SEC.)	DET. UNIT NO.	PHASE	REMARKS
L1	6' x 35'	3	PRESENCE	2 DELAY	1	5	–
L2	6' x 35'	3	PRESENCE	2 DELAY	2	1	–
L3	6' x 35'	3	PRESENCE	2 DELAY	3	7	–
L4	6' x 35'	3	PRESENCE	–	4	4	–
L5	6' x 35'	3	PRESENCE	–	5	4	–
L6	6' x 35'	3	PRESENCE	–	6	4	–
L7	6' x 35'	3	PRESENCE	8 DELAY	7	3	–
L8	6' x 35'	3	PRESENCE	–	8	8	–
L9	6' x 35'	3	PRESENCE	8 DELAY	9	8	–
L10	6' x 6'	4	PRESENCE	4 EXTENSION	10	2	–
L11	6' x 6'	4	PRESENCE	4 EXTENSION	11	2	–
L12	6' x 6'	4	PRESENCE	4 EXTENSION	12	2	–
L13	6' x 6'	4	PRESENCE	4 EXTENSION	13	6	–
L14	6' x 6'	4	PRESENCE	4 EXTENSION	14	6	–
L15	6' x 6'	4	PRESENCE	–	15	–	SYSTEM
L16	6' x 6'	4	PRESENCE	–	16	–	SYSTEM
L17	6' x 6'	4	PRESENCE	–	17	–	SYSTEM
L18	6' x 6'	4	PRESENCE	–	18	–	SYSTEM
L19	6' x 6'	4	PRESENCE	–	19	–	SYSTEM
L20	6' x 6'	4	PRESENCE	–	20	–	SYSTEM
L21	6' x 6'	4	PRESENCE	–	21	–	EXISTING/SYSTEM
L22	6' x 6'	4	PRESENCE	–	22	–	EXISTING/SYSTEM



LAY CHART

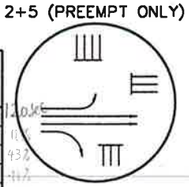
PHASE	ø 2+5(PREEMPT ONLY)				ø 2+5												ø 3+7				ø 4+8				ø 4+7				ø 3+8				
DISPLAY																																	
SIGNAL																																	FLASH
1	G/EG	G/EY	G		G/EG	G/EY	G										R	R	R		R	R	R		R	R	R		R	R	R		Y
2	G/G>	G/Y>	G		G/G>	G/Y>	G										R/G>	R/Y>	R		R	R	R		R	R	R		R	R	R		Y
3	R	R	R		R	R	R										R	R	R		R	R	R		R	R	R		R	R	R		Y
4	R	R	R		R	R	R										R	R	R		R	R	R		R	R	R		R	R	R		Y
5	R	R	R		R	R	R										R/EG	R/EY	R		G	Y	R		G/EG	Y/EY	R		R	R	R		R
6	R	R	R		R/G>	R/Y>	R										R	R	R		G	Y	R		G/G>	Y/Y>	R		R	R	R		R
7	R	R	R		R	R	R										R/EG	R/EY	R		G	Y	R		R	R	R		G/EG	Y/EY	R		R
8	R	R	R		R	R	R										R	R	R		G	Y	R		R	R	R		G	Y	R		R
A–A	DW	DW	DW		DW	DW	DW										DW	DW	DW		W	FDW	DW		DW	DW	DW		DW	DW	DW		OFF
B–B	DW	DW	DW		DW	DW	DW		DW	DW	DW		W	FDW	DW		DW	DW	DW		DW	DW	DW		DW	DW	DW		DW	DW	DW		OFF

COORDINATION TIMING

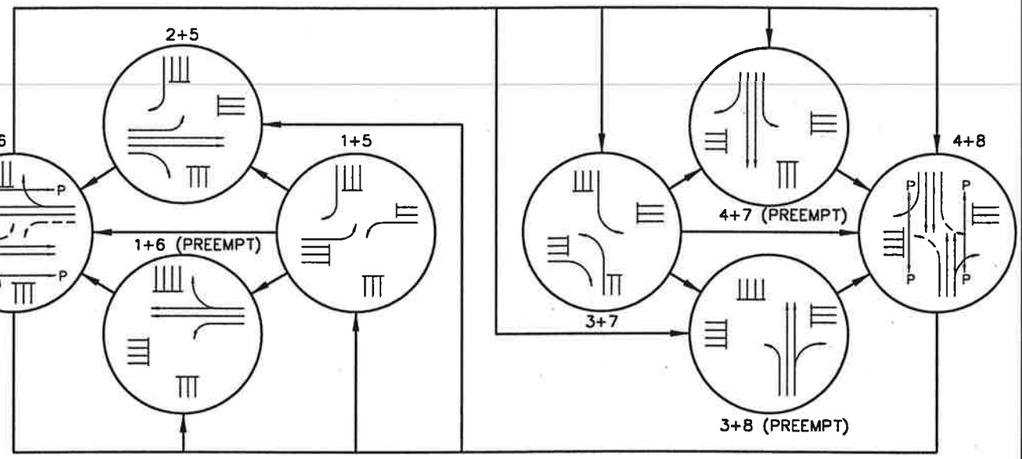
	DIAL 1	DIAL 2	DIAL 3
CYCLE LENGTH	80 SEC.	90 SEC.	100 SEC.
PHASE 1 SPLIT	14%	14%	13%
PHASE 2 SPLIT	39%	36%	41%
PHASE 3 SPLIT	13%	14%	13%
PHASE 4 SPLIT	35%	36%	33%
PHASE 5 SPLIT	14%	14%	13%
PHASE 6 SPLIT	39%	36%	41%
PHASE 7 SPLIT	13%	14%	13%
PHASE 8 SPLIT	35%	36%	33%
PERMISSIVE	5%	5%	5%
OFFSET	0%	0%	0%
TIME OF DAY SCHEDULE	6:30AM TO 9:00AM MON–SAT	9:00AM TO 3:00PM MON–SAT	3:00PM TO 6:00PM MON–SAT

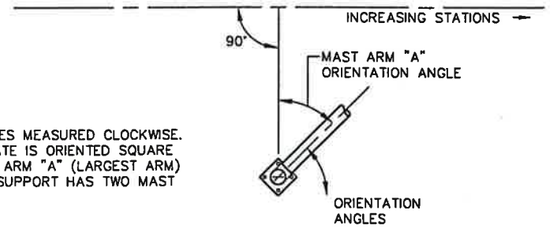
NOTES:
1. PHASE SPLITS SHALL INCLUDE ALL GREEN PLUS YELLOW & ALL RED.
2. PERMISSIVES SHALL START AT THE ZERO POINT OF THE CYCLE.
3. OFFSETS SHALL BE REFERENCED TO THE BEGINNING OF PHASE 2+6 YELLOW.

2+5 (PREEMPT ONLY)



PHASING DIAGRAM





NOTES:
1) ALL ANGLES MEASURED CLOCKWISE.
2) BASE PLATE IS ORIENTED SQUARE TO MAST ARM "A" (LARGEST ARM) EVEN IF SUPPORT HAS TWO MAST ARMS.

SIGNAL SUPPORT TYPE TC–81.20

ARM	POLE NO.	POLE DESIGN NO.	ARM DESIGN NO.	POLE HEIGHT (FT.)	HI	L	L1	L2	L3	L4	L5	L6	L7	ELEVATIONS "A"	ELEVATIONS "B"	ELEVATIONS "C"	MAST ARM "A" ORIENTATION ANGLE	ANGLES (DEG.) FROM MAST ARM "A": HANDHOLE	PEDESTRIAN SIGNAL BRACKET	PEDESTRIAN PUSHBUTTON	PEDESTRIAN SIGNAL BRACKET	PEDESTRIAN PUSHBUTTON	LUMINAIRE BRACKET		
	SP1	11	11	27.2'	20'	44'	5.5'	19'	37'	–	–	–	43'	1015.81	1015.44	1015.44	0°	180	0	0	270	270	0		
	SP2	3	3	27.2'	20'	33'	5'	11'	26'	–	–	–	32'	1014.53	1014.40	1014.40	90°	180	0	0	270	270	0		
	SP3	2	2	27.2'	19.5'	32'	5'	13'	25'	–	–	–	31'	1015.54	1015.70	1015.70	0°	180	0	0	270	270	0		
	SP4	3	3	27.2'	19'	33'	5.5'	15'	26'	–	–	–	32'	1016.77	1017.12	1017.12	90°	180	0	0	270	270	0		

PEDESTRIAN SIGNALS SHALL BE ATTACHED TO SIGNAL POLES AS PER TC–85.10, NOTE 4c.

TIMING CHART

INTERVAL OR FEATURE			NEMA PHASE NO. 1	2	3	4	5	6	7	8
INTERSECTION MOVEMENT			WB LT	EB TH	NB LT	SB TH	EB LT	WB TH	SB LT	NB TH
MINIMUM GREEN (INITIAL)		(SEC.)	7	30	7	25	7	30	7	25
PASSAGE		(SEC.)	2.5	–	2.5	4	2.5	–	2.5	4
MAXIMUM GREEN I		(SEC.)	15	–	15	45	15	–	15	45
YELLOW CHANGE		(SEC.)	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
ALL RED CLEARANCE		(SEC.)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
WALK		(SEC.)	–	5	–	5	–	5	–	5
PEDESTRIAN CLEARANCE		(SEC.)	–	22	–	22	–	22	–	22
RECALL	MAXIMUM	(ON/OFF)	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
	MINIMUM	(ON/OFF)	OFF	ON	OFF	OFF	OFF	ON	OFF	OFF
	PEDESTRIAN	(ON/OFF)	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
MEMORY		(ON/OFF)	OFF	ON	OFF	ON	OFF	ON	OFF	ON

PREEMPT CHANNELS

CHANNEL 1 = ø1 & ø6 (WESTBOUND ONLY) ø3 & ø8 (NORTHBOUND ONLY)
CHANNEL 2 = ø2 & ø5 (EASTBOUND ONLY) ø4 & ø7 (SOUTHBOUND ONLY)

PREEMPT NOTES

1. ACTIVE WALK INDICATIONS SHALL IMMEDIATELY GO TO "DON'T WALK" UPON RECEIVING PREEMPTION SIGNAL.
2. IF PHASE ACTIVE CONFLICTS WITH PREEMPT PHASE CALLED, IT SHALL IMMEDIATELY TIME IT'S YELLOW AND ALL RED CLEARANCES.
3. IF ACTIVE PHASE = THE PREEMPT PHASE, THEN THE PHASE SHALL HOLD FOR THE DURATION OF THE PREEMPT SIGNAL.
4. AFTER RELEASE FROM PREEMPT, YELLOW AND ALL RED CLEARANCE SHALL BE DISPLAYED AND RETURN PHASE SHALL BE ø2 AND ø6.
5. IF PREEMPT PHASES = RETURN PHASES THEN YELLOW AND ALL RED CLEARANCE AFTER PREEMPT SHALL NOT BE DISPLAYED.

CALCULATED T.K.I. CHECKED K.P.W.

PHASING, TIMING, DETECTORS, AND POLE CHART FRONT STREET AT HUDSON DRIVE

SUM - 59-4.93

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WIRING DIAGRAM
FRONT STREET AT HUDSON DRIVE

CALCULATED T.K.L. | CHECKED K.P.W.

SUM - 59-493

140 / 171

TO C3 AT HUDSON DR.. AND SECOND ST.

PULL BOX PB-16

PULL BOX PB-14

PULL BOX PB-15

L6 L5 L4 L3

L16 L15

SIGNAL POLE SP-3

EXISTING PULL BOX STA. 105+94.5

SIGNAL POLE SP-2

L1

POWER POLE

L19 L20

PULL BOX PB-18

PULL BOX PB-17

PULL BOX PB-19

SIGNAL POLE SP-4

L14 L13

L2

PULL BOX PB-13

L17 L18

SIGNAL POLE SP-1

TO CONTROLLER AT FRONT ST. AND OAK PARK

PULL BOX PB-12

L12 L11 L10

PULLBOX PB-10

TO C-1 AT FRONT ST. AND W. BAILEY ROAD

EXISTING PULL BOX STA. 105+30

TO C-1 AT HUDSON DR. AND GAYLORD GROVE RD.

L22 L21

NOTE: ALL PEDESTRIAN PUSHBUTTONS SHALL BE WIRED WITH TWO CONDUCTOR LOOP DETECTOR LEAD-IN CABLE.

L7 L8 L9

EXISTING PULL BOX STA. 106+19

INTERCONNECT, 12
INTERCONNECT, 96

CONTROLLER C-2

PREEMPT 3/C 5/C 7/C
CAMERA CABLE LU
POWER CABLE 7/C
INTERCONNECT, 12

FOR LEGEND SEE SHEET NO. 134

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TRAFFIC SIGNAL QUANTITY SUBSUMMARY

SHEET No.	REFERENCE No.	STATION TO STATION	SIDE	GROUND ROD	GROUND ROD, AS PER PLAN	PULL BOX, 713.081, 10" x 14", AS PER PLAN	PULL BOX, 713.081, 13" x 18", AS PER PLAN	TRENCH	CONDUIT, 2", 713.04	CONDUIT, 3", 713.04	CONDUIT, 4", 713.04	CONDUIT, 6", 713.04	CONDUIT JACKED OR DRILLED UNDER PAVEMENT, 3"	PLASTIC CAUTION TAPE	VEHICULAR SIGNAL HEAD, 3-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, AS PER PLAN	VEHICULAR SIGNAL HEAD, 5-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, AS PER PLAN	PEDESTRAIN SIGNAL HEAD, TYPE D2, AS PER PLAN	PEDESTRIAN PUSHBUTTON	LOOP DETECTOR UNIT	LOOP DETECTOR UNIT, DELAY AND EXTENSION TYPE, AS PER PLAN	DETECTOR LOOP	SIGNAL SUPPORT FOUNDATION	COMBINATION SIGNAL SUPPORT, TYPE TC-81.20, DESIGN 2, AS PER PLAN	COMBINATION SIGNAL SUPPORT, TYPE TC-81.20, DESIGN 3, AS PER PLAN	COMBINATION SIGNAL SUPPORT, TYPE TC-81.20, DESIGN 11, AS PER PLAN	CONDUIT RISER, 2" DIA., AS PER PLAN	SIGNAL CABLE, 5 CONDUCTOR NO.14 AWG	SIGNAL CABLE, 7 CONDUCTOR NO.14 AWG	SIGNALIZATION, MISC.: INTERCONNECT CABLE, 12 FIBER	SIGNALIZATION, MISC.: INTERCONNECT CABLE, 96 FIBER	LOOP DETECTOR LEAD-IN CABLE	POWER CABLE, 3 CONDUCTOR NO.6 AWG	POWER SERVICE, AS PER PLAN	COVERING OF VEHICULAR SIGNAL HEAD	COVERING OF PEDESTRAIN SIGNAL HEAD	REMOVAL OF TRAFFIC SIGNAL INSTALLATION, AS PER PLAN		CONTROLLER, MASTER, TRAFFIC RESPONSIVE, AS PER PLAN	CONTROLLER, ACTUATED, 8-PHASE, SOLID STATE DIGITAL MICROPROCESSOR, AS PER PLAN	PREEMPTION, AS PER PLAN	CONCRETE FOR CABINET FOUNDATION	CONTROLLER ITEM, MISC.: PAN-TILT-ZOOM CAMERA	
LOCATION				ITEM NUMBERS 625											632																							633					
				EACH	EACH	EACH	EACH	L.F.	L.F.	L.F.	L.F.	L.F.	EACH	L.F.	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	EACH	EACH	EACH	EACH		EACH	EACH	EACH	C.Y.	EACH	
136	C2	43+93	RT.		1																															1		1	1	1	1.85	1	
	PB-12	43+93 TO 43+93	RT.				1	5			10			5															30	30													
	PB-13	43+93 TO 44+75	RT.			1		82	82					82															87														
	SP-1	43+93 TO 43+70	RT.	1				24		24				24								1			1																		
	EX. PB	43+93 TO 106+19	RT.					140				140		140															145	290													
	EX. PB	106+19 TO 105+94.5	LT.					90				90		90															95	95													
	SP-2	105+95.5 TO 42+63.5	RT.	1				20		20				20								1		1																			
	PB-11	105+95.5 TO 41+05	RT.			1		154	154					154															159														
	–	41+05 TO 40+65	RT.					40					40	40															45														
	PB-17	43+93 TO 44+00	LT.			1		83			83			83																													
	SP-4	44+00 TO 43+94	LT.	1				20		20				20								1	1																				
136	PB-18	44+00 TO 108+05	RT.			1		86	86					86																													
137	PB-19	44+00 TO 46+32	LT.			1		234	234					234																													
136	PB-15	105+94.5 TO 42+93	LT.				1	104			104			104																109													
	PB-16	42+93 TO 42+46	LT.			1		51	51					51																													
	SP-3	42+93 TO 42+65	LT.	1				30		30				30								1		1																			
	PB-14	42+93 TO 108+05	LT.			1		78		78			32	110																115													
	PB-20	44+75 TO 45+60	RT.			1		85	85					85															90														
136	–	PB-20 TO POWER POLE	RT.					4	4					4												1			34														
138	PB-21	55+66.5 TO 55+70	RT.			1		6	6					6															1077														
138	EX. PB	55+70 TO 56+94	RT.					131	131					131															136														
138	EX. PB	56+94 TO EX. CONTROLLER	RT.																										11														
136	PB-22	43+70 TO 43+88	RT.			1		18	18					18																													
	PB-23	43+88 TO 45+60	RT.			1		173	173					173																													
	–	PB-23 TO POWER POLE	RT.					4	4					4												1																	
136	–	SP-1 TO C2	RT.					23	23					23																													
		POWER SERVICE																														284	1										
		C2 TO VEHICULAR SIGNAL 1 AND 2														2												196						2									
		C2 TO VEHICULAR SIGNAL 3 AND 4													1	1												464						2									
		C2 TO VEHICULAR SIGNAL 5 AND 6														2												650						2									
		C2 TO VEHICULAR SIGNAL 7 AND 8													1	1												185						2									
		C2 TO PEDESTRIAN SIGNAL A AND B (SP-1)															2	2									106				98				2								
		C2 TO PEDESTRIAN SIGNAL A AND B (SP-2)															2	2									578				570				2								
		C2 TO PEDESTRIAN SIGNAL A AND B (SP-3)															2	2									816				808				2								
		C2 TO PEDESTRIAN SIGNAL A AND B (SP-4)															2	2									274				266				2								
		C2 TO LOOP DETECTOR L1																		1	1										255												
		C2 TO LOOP DETECTOR L2																		1	1										103												
		C2 TO LOOP DETECTOR L3, L4, L5, AND L6																		4	4										1456												
		C2 TO LOOP DETECTOR L7, L8, AND L9																		3	3										480												
		C2 TO LOOP DETECTOR L10, L11, AND L12																	3		3										1377												
		C2 TO LOOP DETECTOR L13, AND L14																	2		2										684												
		C2 TO LOOP DETECTOR L15, AND L16																	2		2										840												
		C2 TO LOOP DETECTOR L17, AND L18																	2		2										204												
		C2 TO LOOP DETECTOR L19, AND L20																	2		2										388												
		C2 TO LOOP DETECTOR L21, AND L22																	2		2										664												
TOTAL				4	1	11	2	1685	1051	172	197	230	72	1717	2	6	8	8	13	9	22	4	1	2	1	2	1774	1495	1909	639	8193	83	1	8	8	1		1	1	1	1.85	1	

CALCULATED T.K.I.
CHECKED K.P.W.

TRAFFIC SIGNAL SUBSUMMARY
FRONT STREET AT HUDSON DRIVE

SUM - 59-4.93

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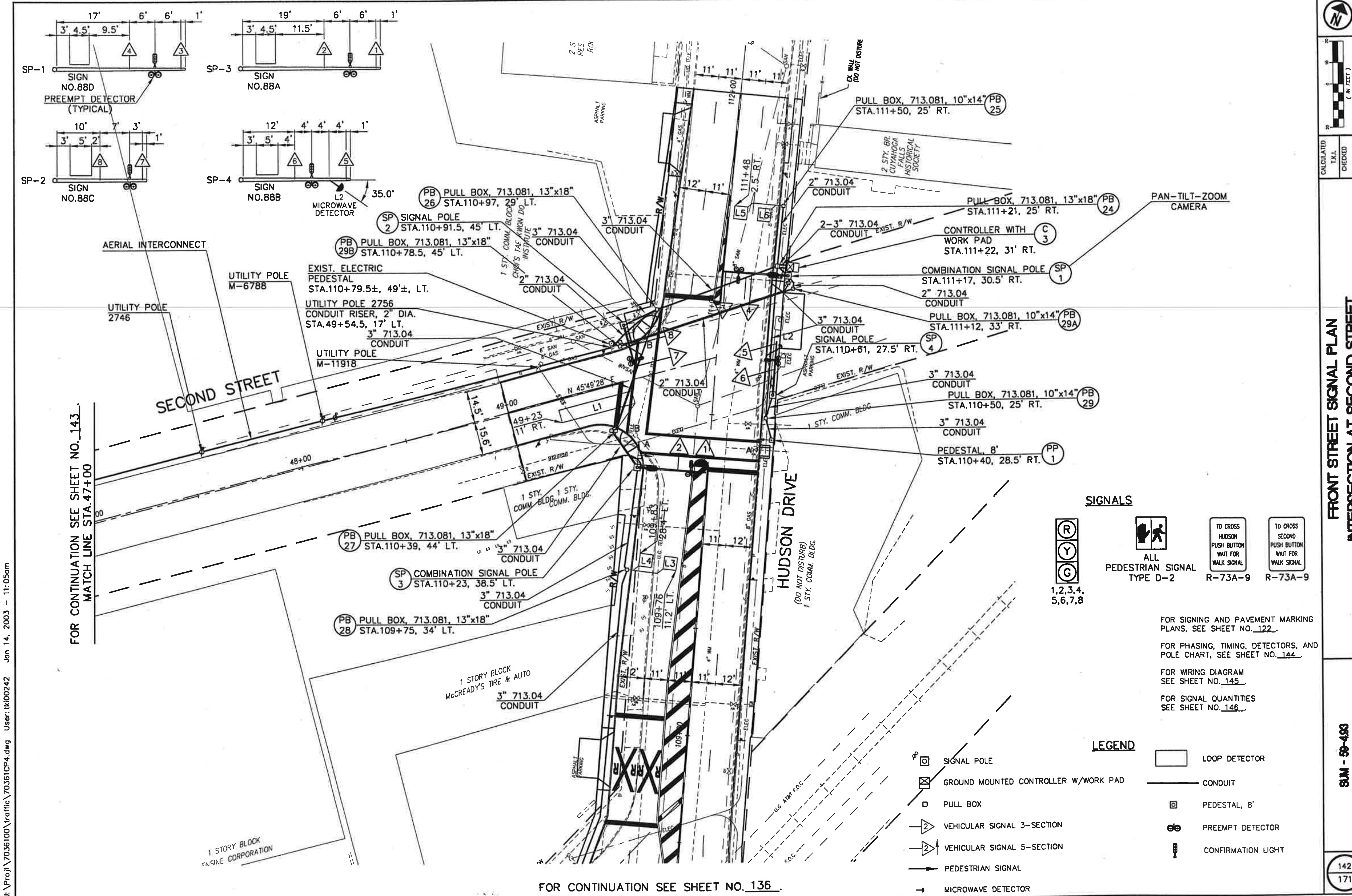

SP-1
SIGN NO.88D
PREEMPT DETECTOR (TYPICAL)
SP-2
SIGN NO.88C
SP-3
SIGN NO.88A
SP-4
SIGN NO.88B
L2 MICROWAVE DETECTOR
35.0°
AERIAL INTERCONNECT
UTILITY POLE 2746
UTILITY POLE M-6788
EXIST. ELECTRIC PEDESTAL STA.110+79.5±, 49'±, LT.
UTILITY POLE 2756 CONDUIT RISER, 2" DIA. STA.49+54.5, 17' LT.
3" 713.04 CONDUIT
UTILITY POLE M-11918
PB 26 PULL BOX, 713.081, 13"x18" STA.110+97, 29' LT.
SP 2 SIGNAL POLE STA.110+91.5, 45' LT.
PB 29B PULL BOX, 713.081, 13"x18" STA.110+78.5, 45' LT.
3" 713.04 CONDUIT
2" 713.04 CONDUIT
PB 25 PULL BOX, 713.081, 10"x14" STA.111+50, 25' RT.
2" 713.04 CONDUIT
PB 24 PULL BOX, 713.081, 13"x18" STA.111+21, 25' RT.
2-3" 713.04 CONDUIT
C 3 CONTROLLER WITH WORK PAD STA.111+22, 31' RT.
PAN-TILT-ZOOM CAMERA
SP 1 COMBINATION SIGNAL POLE STA.111+17, 30.5' RT.
2" 713.04 CONDUIT
PB 29A PULL BOX, 713.081, 10"x14" STA.111+12, 33' RT.
3" 713.04 CONDUIT
SP 4 SIGNAL POLE STA.110+61, 27.5' RT.
3" 713.04 CONDUIT
PB 29 PULL BOX, 713.081, 10"x14" STA.110+50, 25' RT.
3" 713.04 CONDUIT
PP 1 PEDESTAL, 8' STA.110+40, 28.5' RT.
2" 713.04 CONDUIT
SECOND STREET
HUDSON DRIVE
(DO NOT DISTURB) 1 STY. COMM. BLDG.
2 STY. BR. CUYAHOGA FALLS HISTORICAL SOCIETY
1 STY. COMM. BLOCK CHOI'S TAE KWON DO INSTITUTE
EX. WALL (DO NOT DISTURB)
ASPHALT PARKING
EXIST. R/W
N 45°49'28" E
49+00
49+23 11' RT.
48+00
111+48 2.5' RT.
109+83 28.4' LT.
109+76 11.2' LT.
1 STY. COMM. BLDG.
PB 27 PULL BOX, 713.081, 13"x18" STA.110+39, 44' LT.
3" 713.04 CONDUIT
SP 3 COMBINATION SIGNAL POLE STA.110+23, 38.5' LT.
3" 713.04 CONDUIT
PB 28 PULL BOX, 713.081, 13"x18" STA.109+75, 34' LT.
1 STORY BLOCK McCREADY'S TIRE & AUTO
3" 713.04 CONDUIT
1 STORY BLOCK ENGINE CORPORATION
FOR CONTINUATION SEE SHEET NO. 143 MATCH LINE STA.47+00
FOR CONTINUATION SEE SHEET NO. 136 .
SIGNALS
R Y G
1,2,3,4, 5,6,7,8
ALL PEDESTRIAN SIGNAL TYPE D-2
TO CROSS HUDSON PUSH BUTTON WAIT FOR WALK SIGNAL R-73A-9
TO CROSS SECOND PUSH BUTTON WAIT FOR WALK SIGNAL R-73A-9
FOR SIGNING AND PAVEMENT MARKING PLANS, SEE SHEET NO. 122 .
FOR PHASING, TIMING, DETECTORS, AND POLE CHART, SEE SHEET NO. 144 .
FOR WIRING DIAGRAM SEE SHEET NO. 145 .
FOR SIGNAL QUANTITIES SEE SHEET NO. 146 .
LEGEND
SIGNAL POLE
GROUND MOUNTED CONTROLLER W/WORK PAD
PULL BOX
VEHICULAR SIGNAL 3-SECTION
VEHICULAR SIGNAL 5-SECTION
PEDESTRIAN SIGNAL
MICROWAVE DETECTOR
LOOP DETECTOR
CONDUIT
PEDESTAL, 8'
PREEMPT DETECTOR
CONFIRMATION LIGHT
(IN FEET) 1 inch = 20 ft.
CALCULATED T.K.I.
CHECKED E.W.K.
FRONT STREET SIGNAL PLAN
INTERSECTION AT SECOND STREET
SUM-59-4.93
142
171
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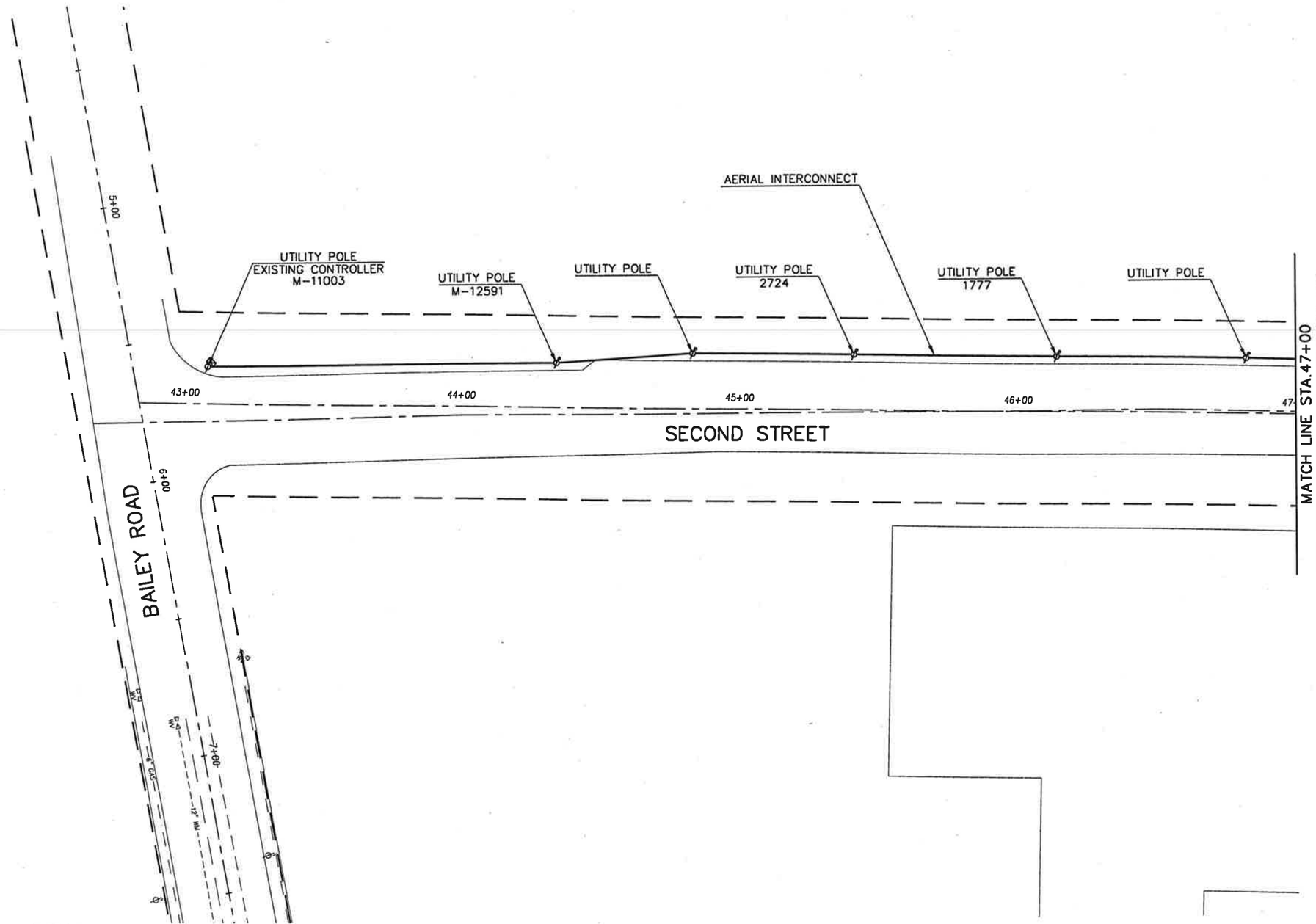

LEGEND

- SIGNAL POLE
- GROUND MOUNTED CONTROLLER W/WORK PAD
- PULL BOX
- VEHICULAR SIGNAL 3-SECTION
- VEHICULAR SIGNAL 5-SECTION
- PEDESTRIAN SIGNAL
- LOOP DETECTOR
- QUADRAPOLE LOOP DETECTOR
- CONDUIT

FOR WIRING DIAGRAM
SEE SHEET NO. 145 .

FOR SIGNAL QUANTITIES
SEE SHEET NO. 146 .

(IN FEET)
1 inch = 20 ft.

CALCULATED T.K.I.
CHECKED E.W.K.

SIGNAL PLAN
SECOND STREET AT BAILEY ROAD

SUM - 59-493

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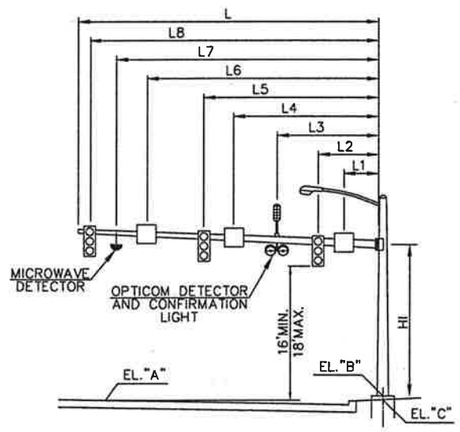
TRAFFIC SIGNAL DETECTORS

DETECTOR	SIZE	NO. OF TURNS	PULSE OR PRESENCE	DELAY OR EXTENSION (SEC.)	DET. UNIT NO.	PHASE	REMARKS
L1	6' x 35'	3	PRESENCE	–	5	2	–
L2	–	–	PRESENCE	–	6	6	MICROWAVE
L3	6' x 6'	4	PRESENCE	–	6	–	SYSTEM
L4	6 x 6'	4	PRESENCE	–	7	–	SYSTEM
L5	6' x 6'	4	PRESENCE	–	8	–	SYSTEM
L6	6' x 6'	4	PRESENCE	–	9	–	SYSTEM



DISPLAY CHART

PHASE	ø 3+8									ø 2+6				ø 2+5				ø 1+6				
DISPLAY																						FLASH
SIGNAL																						
1,2	R	R	R		G	G	G		G	Y	R		R	R	R		R	R	R		R	R	R		Y
3,4	G	G	G		R	R	R		G	Y	R		R	R	R		R	R	R		R	R	R		Y
5,6	R	R	R		R	R	R		R	R	R		G	Y	R		G	Y	R		R	R	R		R
7,8	R	R	R		R	R	R		R	R	R		G	Y	R		R	R	R		G	Y	R		R
A–A	DW	DW	DW		DW	DW	DW		DW	DW	DW		W	FDW	DW		DW	DW	DW		DW	DW	DW		OFF
B–B	DW	DW	DW		DW	DW	DW		W	FDW	DW		DW	DW	DW		DW	DW	DW		DW	DW	DW		OFF

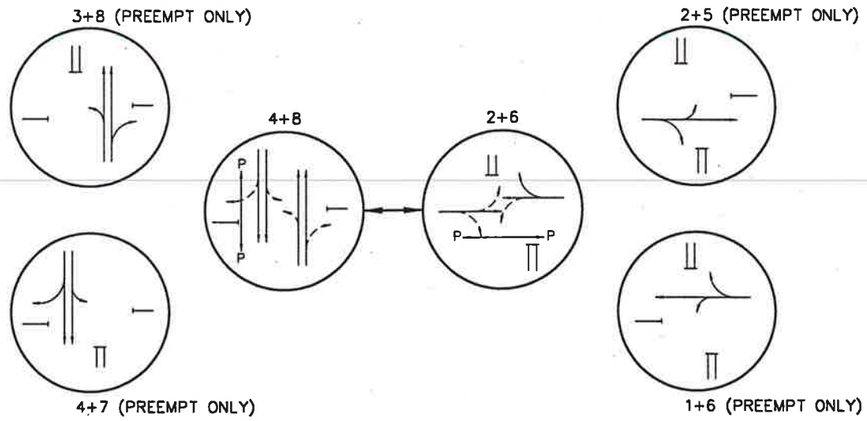
COORDINATION TIMING

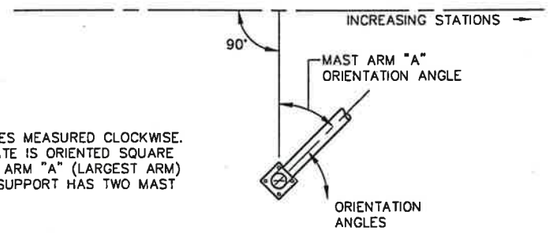
	DIAL 1	DIAL 2	DIAL 3
CYCLE LENGTH	80 SEC.	90 SEC.	100 SEC.
PHASE 2 SPLIT	31%	27%	25%
PHASE 4 SPLIT	69%	73%	75%
PHASE 6 SPLIT	31%	27%	25%
PHASE 8 SPLIT	69%	73%	75%
PERMISSIVE	5%	5%	5%
OFFSET	6%	6%	5%
TIME OF DAY SCHEDULE	6:30AM TO 9:00AM MON–SAT	9:00AM TO 3:00PM MON–SAT	3:00PM TO 6:00PM MON–SAT

120 sec.
25%
75%
25%
75%
5%

NOTES:
1. PHASE SPLITS SHALL INCLUDE ALL GREEN PLUS YELLOW & ALL RED.
2. PERMISSIVES SHALL START AT THE ZERO POINT OF THE CYCLE.
3. OFFSETS SHALL BE REFERENCED TO THE BEGINNING OF PHASE 2+6 YELLOW.

PHASING DIAGRAM





NOTES:
1) ALL ANGLES MEASURED CLOCKWISE.
2) BASE PLATE IS ORIENTED SQUARE TO MAST ARM "A" (LARGEST ARM) EVEN IF SUPPORT HAS TWO MAST ARMS.

SIGNAL SUPPORT TYPE TC-81.20

ARM	POLE NO.	POLE DESIGN NO.	ARM DESIGN NO.	POLE HEIGHT (FT.)	HI	L	L1	L2	L3	L4	L5	L6	L7	L8	ELEVATIONS "A"	ELEVATIONS "B"	ELEVATIONS "C"	MAST ARM "A" ORIENTATION ANGLE	ANGLES (DEG.) FROM MAST ARM "A": HANDHOLE	PEDESTRIAN SIGNAL BRACKET	PEDESTRIAN PUSHBUTTON	PEDESTRIAN SIGNAL BRACKET	PEDESTRIAN PUSHBUTTON	LUMINAIRE BRACKET		
	SP1	2	2	27.2'	19.5'	30'	5'	17'	23'	–	–	–	–	29'	1021.83	1022.02	1022.02	0°	180	–	–	–	–	0		
	SP2	1	1	23'	19'	21'	5.5'	10'	17'	–	–	–	–	20'	1020.61	1021.09	1021.09	71°	180	270	0	–	–	–		
	SP3	2	2	27.2'	19.5'	32'	5'	19'	25'	–	–	–	–	31'	1021.07	1021.15	1021.15	0°	180	0	0	270	270	0		
	SP4	1	1	23'	19.5'	25'	5.5'	12'	16'	–	–	–	20'	24'	1021.75	1021.55	1021.55	90°	180	–	–	–	–	–		

PEDESTRIAN SIGNALS SHALL BE ATTACHED TO SIGNAL POLES AS PER TC-85.10, NOTE 4c.

TIMING CHART

INTERVAL OR FEATURE			NEMA PHASE NO. 1	2	3	4	5	6	7	8
INTERSECTION MOVEMENT			WB LT	EB TH	NB LT	SB TH	EB LT	WB TH	SB LT	NB TH
MINIMUM GREEN (INITIAL)		(SEC.)		7		30		7		30
PASSAGE		(SEC.)		3		–		3		–
MAXIMUM GREEN I		(SEC.)		20		–		20		–
YELLOW CHANGE		(SEC.)		3.6		3.6		3.6		3.6
ALL RED CLEARANCE		(SEC.)		1.5		2.0		1.5		2.0
WALK		(SEC.)		5		5		5		5
PEDESTRIAN CLEARANCE		(SEC.)		14		12		14		12
RECALL	MAXIMUM	(ON/OFF)	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
	MINIMUM	(ON/OFF)	OFF	OFF	OFF	ON	OFF	OFF	OFF	ON
	PEDESTRIAN	(ON/OFF)	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
MEMORY		(ON/OFF)	OFF	OFF	OFF	ON	OFF	OFF	OFF	ON

PREEMPT CHANNELS

CHANNEL 1 = ø1 & ø6 (WESTBOUND ONLY) ø3 & ø8 (NORTHBOUND ONLY)
CHANNEL 2 = ø2 & ø5 (EASTBOUND ONLY) ø4 & ø7 (SOUTHBOUND ONLY)

PREEMPT NOTES

1. ACTIVE WALK INDICATIONS SHALL IMMEDIATELY GO TO "DON'T WALK" UPON RECEIVING PREEMPTION SIGNAL.
2. IF PHASE ACTIVE CONFLICTS WITH PREEMPT PHASE CALLED, IT SHALL IMMEDIATELY TIME IT'S YELLOW AND ALL RED CLEARANCES.
3. IF ACTIVE PHASE = THE PREEMPT PHASE, THEN THE PHASE SHALL HOLD FOR THE DURATION OF THE PREEMPT SIGNAL.
4. AFTER RELEASE FROM PREEMPT, YELLOW AND ALL RED CLEARANCE SHALL BE DISPLAYED AND RETURN PHASE SHALL BE ø4 AND ø8.
5. IF PREEMPT PHASES = RETURN PHASES THEN YELLOW AND ALL RED CLEARANCE AFTER PREEMPT SHALL NOT BE DISPLAYED.

CALCULATED T.K.L. CHECKED K.P.W.

PHASING, TIMING, DETECTORS, AND POLE CHART
HUDSON DRIVE AT SECOND STREET

SUM - 59-4.93

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SIGNAL POLE SP-2

PULL BOX PB-26

SIGNAL POLE SP-1

L6

L7

PULL BOX PB-25

PULL BOX PB-24

B

8

7

D

3

4

CONTROLLER C-3

LLI
LLI
3/C PREEMPT
7/C CAMERA CABLE
3/C PREEMPT
7/C
5/C
LLI
LLI
5/C
LLI
3/C PREEMPT
7/C
5/C
LLI
LLI
LLI
INTERCONNECT, 12
INTERCONNECT, 96
5/C
LLI
MICROWAVE
3/C PREEMPT
7/C

PE-90

TO EXISTING CONTROLLER AT SECOND ST. AND W. BAILY RD.

L1

PULL BOX PB-27

PE-90

POWER CABLE

L2

PULL BOX PB-29A

PULL BOX PB-29B

EX. ELECTRIC PEDESTAL

5

6

SIGNAL POLE SP-4

SIGNAL POLE SP-3

B

2

1

A

NOTE: ALL PEDESTRIAN PUSHBUTTONS SHALL BE WIRED WITH TWO CONDUCTOR LOOP DETECTOR LEAD-IN CABLE.

A

PEDESTAL PP-1

PULL BOX PB-29

LEGEND

2	VEHICULAR SIGNAL HEAD, 3-SECTION
1	VEHICULAR SIGNAL HEAD, 5-SECTION
←	PEDESTRIAN SIGNAL
•	PEDESTRIAN PUSHBUTTON
L1	LOOP DETECTOR
→	MICROWAVE DETECTOR
	PAN-ZOOM-TILT CAMERA
	PREEMPT DETECTOR
	CONFIRMATION LIGHT
----------	POWER CABLE, 3-CONDUCTOR NO.6 AWG
. . . . .	SIGNAL CABLE, 3-CONDUCTOR NO.14 AWG
— — —	SIGNAL CABLE, 5-CONDUCTOR NO.14 AWG
———	SIGNAL CABLE, 7-CONDUCTOR NO.14 AWG
— — — —	LOOP DETECTOR LEAD-IN CABLE
— — — · —	INTERCONNECT CABLE, 12 FIBER
——— — ———	INTERCONNECT CABLE, 96 FIBER
- - - - -	2-CONDUCTOR PHONE DROP
——— - ———	PREEMPT DETECTOR CABLE
———	MICROWAVE DETECTOR WIRE
— — —	CAMERA CABLE

PULL BOX PB-28

L3

L4

TO C2 AT FRONT ST. AND HUDSON DR.

CALCULATED T.K.I.
CHECKED K.P.W.

WIRING DIAGRAM
HUDSON DRIVE AT SECOND STREET

SUM - 59-4.93

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171

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TRAFFIC SIGNAL QUANTITY SUBSUMMARY

CALCULATED T.K.I. | CHECKED K.P.W.

SHEET No.	REFERENCE No.	STATION TO STATION	SIDE	625 GROUND ROD	625 GROUND ROD, AS PER PLAN	625 PULL BOX, 713.081, 10" x 14", AS PER PLAN	625 PULL BOX, 713.081, 13" x 18", AS PER PLAN	625 TRENCH	625 CONDUIT, 2", 713.04	625 CONDUIT, 3", 713.04	625 PLASTIC CAUTION TAPE	632 VEHICULAR SIGNAL HEAD, 3-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, AS PER PLAN	632 PEDESTRAIN SIGNAL HEAD, TYPE D2, AS PER PLAN	632 PEDESTRIAN PUSHBUTTON	632 LOOP DETECTOR UNIT	632 LOOP DETECTOR UNIT, DELAY AND EXTENSION TYPE, AS PER PLAN	632 DETECTOR LOOP	632 SIGNAL SUPPORT FOUNDATION	632 PEDESTAL FOUNDATION	632 SIGNAL SUPPORT, TYPE TC-81.20, DESIGN 1, AS PER PLAN	632 COMBINATION SIGNAL SUPPORT, TYPE TC-81.20, DESIGN 2, AS PER PLAN	632 PEDESTAL, 8'	632 CONDUIT RISER, 2" DIA., AS PER PLAN	632 SIGNAL CABLE, 5 CONDUCTOR NO.14 AWG	632 SIGNAL CABLE, 7 CONDUCTOR NO.14 AWG	632 SIGNALIZATION, MISC.: INTERCONNECT CABLE, 12 FIBER	632 SIGNALIZATION, MISC.: INTERCONNECT CABLE, 96 FIBER	632 LOOP DETECTOR LEAD-IN CABLE	632 POWER CABLE, 3 CONDUCTOR NO.6 AWG	632 POWER SERVICE, AS PER PLAN	632 COVERING OF VEHICULAR SIGNAL HEAD	632 COVERING OF PEDESTRAIN SIGNAL HEAD	632 REMOVAL OF TRAFFIC SIGNAL INSTALLATION, AS PER PLAN	633 CONTROLLER, ACTUATED, 8-PHASE, SOLID STATE DIGITAL MICROPROCESSOR, AS PER PLAN	633 PREEMPTION, AS PER PLAN	633 CONCRETE FOR CABINET FOUNDATION	633 CONTROLLER WORK PAD	633 CONTROLLER ITEM, MISC.: PAN-TILT-ZOOM CAMERA	633 CONTROLLER ITEM, MISC.: MICROWAVE DETECTOR UNIT
				EACH	EACH	EACH	EACH	L.F.	L.F.	L.F.	L.F.	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	EACH	EACH	EACH	EACH	EACH	EACH	C.Y.	S.F.	EACH	EACH
142	C3	111+22	RT.		1																												1	1	1	1.85	11.16	1	
	PB-24	111+22 TO 111+21	RT.				1	6		12	6															16	16												
	PB-25	111+21 TO 111+50	RT.			1		28	28		28																												
	SP-1	111+21 TO 111+17	RT.	1				7		7	7							1			1																		
	PB-26	111+21 TO 110+97	LT.				1	59		59	59															64	64												
	SP-2	110+97 TO 110+88.5	LT.	1				17		17	17							1		1																			
	2756	110+97 TO 49+54.5	LT.					28	28		28												1			58													
	PB-27	110+97 TO 110+39	LT.				1	60		60	60																65												
	SP-3	110+39 TO 110+23	LT.	1				20		20	20							1			1						25												
	PB-28	110+23 TO 109+75	LT.				1	48		48	48																53												
	-	109+75 TO 108+05	LT.					256		256	256																261												
	PB-29	111+21 TO 110+50	RT.			1		71		71	71																												
	SP-4	110+50 TO 110+61	RT.	1				11		11	11							1		1																			
	PP-1	110+50 TO 110+40	RT.	1				11		11	11								1			1																	
	M-11918	UTILITY POLE 2756 TO UTILITY POLE M-11918																								46													
	M-6788	UTILITY POLE M-11918 TO UTILITY POLE M-6788																								109													
142	2746	UTILITY POLE M-6788 TO UTILITY POLE 2746																								63													
143	-	UTILITY POLE 2746 TO UTILITY POLE 46+82, LT.																								80													
	1777	UTILITY POLE 46+82, LT. TO UTILITY POLE 1777																								73													
	2724	UTILITY POLE 1777 TO UTILITY POLE 2724																								78													
	-	UTILITY POLE 2724 TO UTILITY POLE 44+83, LT.																								63													
	M-12591	UTILITY POLE 44+83, LT. TO UTILITY POLE M-12591																								54													
143	M-11003	UTILITY POLE M-12591 TO EX. CONTROLLER																								156													
		POWER SERVICE																											140	1									
	PB-29A	111+17 TO 111+12	RT.			1		4			4																												
	PB-29B	111+12 TO 110+78.5	LT.			1																																	
	-	110+78.5 TO EX. ELEC. PEDESTAL	LT.					4			4																												
		C3 TO VEHICULAR SIGNAL 1 AND 2										2													234						2								
		C3 TO VEHICULAR SIGNAL 3 AND 4										2													83						2								
		C3 TO VEHICULAR SIGNAL 5 AND 6										2													158						2								
		C3 TO VEHICULAR SIGNAL 7 AND 8										2													148						2								
		C3 TO PEDESTRIAN SIGNAL A (PP-1)											1	1										117				113				1							
		C3 TO PEDESTRIAN SIGNAL A (SP-3)											1	1										179				175				1							
		C3 TO PEDESTRIAN SIGNAL B (SP-3)											1	1										179				175				1							
		C3 TO PEDESTRIAN SIGNAL B (SP-2)											1	1										111				107				1							
		C3 TO LOOP DETECTOR L1														1	1											145											
		C3 TO DETECTOR L2														1																							1
		C3 TO LOOP DETECTOR L3													1		1											223											
		C3 TO LOOP DETECTOR L4													1		1											223											
		C3 TO LOOP DETECTOR L5													1		1											49											
		C3 TO LOOP DETECTOR L6													1		1											49											
		TOTAL		5	1	4	4	630	56	572	630	8	4	4	4	2	5	4	1	2	2	1	1	586	623	860	484	1259	140	1	8	4	1	1	1	1.85	11.16	1	1

TRAFFIC SIGNAL SUBSUMMARY
HUDSON DRIVE AT SECOND STREET

SUM - 59-4.93

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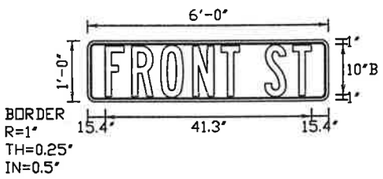
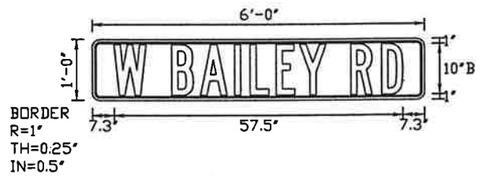


SIGN NUMBER	26, 37A, 37C
WIDTH x HGHT.	6'-0" x 1'-0"
BORDER WIDTH	0.25"
CORNER RADIUS	1"
MOUNTING	Overhead
BACKGROUND	TYPE: Reflective
	COLOR: Green
LEGEND/BORDER	TYPE: Reflective
	COLOR: White

Dimensions are in inches.tenths

Letter locations are panel edge to lower left corner

LETTER POSITIONS (X)																				LENGTH	SERIES/SIZE
F	R	O	N	T		S	T														B10
15.4	8.6	14.3	20.7	26.4	30.2	35.2	40.9													41.3	

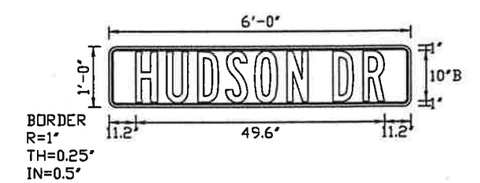


SIGN NUMBER	24, 26A
WIDTH x HGHT.	6'-0" x 1'-0"
BORDER WIDTH	0.25"
CORNER RADIUS	1"
MOUNTING	Overhead
BACKGROUND	TYPE: Reflective
	COLOR: Green
LEGEND/BORDER	TYPE: Reflective
	COLOR: White

Dimensions are in inches.tenths

Letter locations are panel edge to lower left corner

LETTER POSITIONS (X)																				LENGTH	SERIES/SIZE
W		B	A	I	L	E	Y		R	D											B10
7.3	10.5	15.5	21.2	28	31.1	36.4	41.1	46.4	51.4	57.5										57.5	

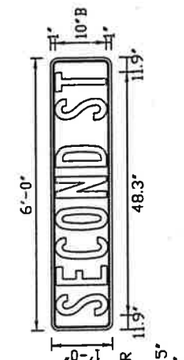


SIGN NUMBER	37, 37B
WIDTH x HGHT.	6'-0" x 1'-0"
BORDER WIDTH	0.25"
CORNER RADIUS	1"
MOUNTING	Overhead
BACKGROUND	TYPE: Reflective
	COLOR: Green
LEGEND/BORDER	TYPE: Reflective
	COLOR: White

Dimensions are in inches.tenths

Letter locations are panel edge to lower left corner

LETTER POSITIONS (X)																				LENGTH	SERIES/SIZE
H	U	D	S	O	N		D	R													B10
11.2	11.3	17.4	23.1	28.8	35.2	39.5	44.5	50.6												49.6	



SIGN NUMBER	name
WIDTH x HGHT.	6'-0" x 1'-0"
BORDER WIDTH	0.25"
CORNER RADIUS	1"
MOUNTING	Overhead
BACKGROUND	TYPE: Reflective
	COLOR: Green
LEGEND/BORDER	TYPE: Reflective
	COLOR: White

Dimensions are in inches.tenths

Letter locations are panel edge to lower left corner

LETTER POSITIONS (X)																				LENGTH	SERIES/SIZE
S	E	C	O	N	D		S	T													B10
11.9	9	14.2	19.9	26.3	32.4	36.7	41.7	47.4												48.3	

TRAFFIC CONTROL DETAILS
STREET SIGNS

CALCULATED T.I.C.
CHECKED K.P.W.

SUM - 59-4.93

147
171

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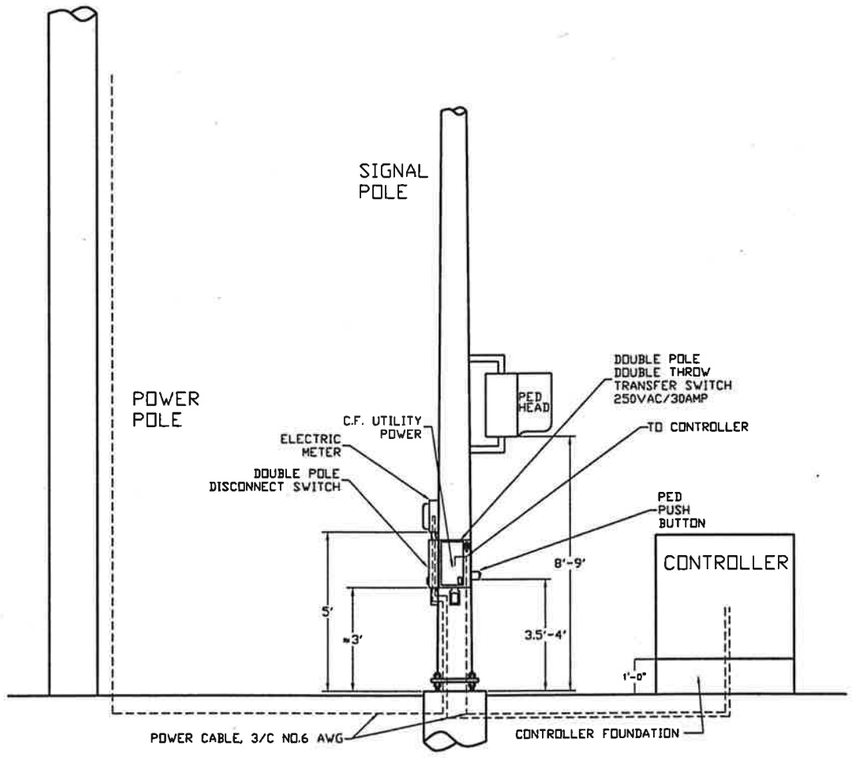
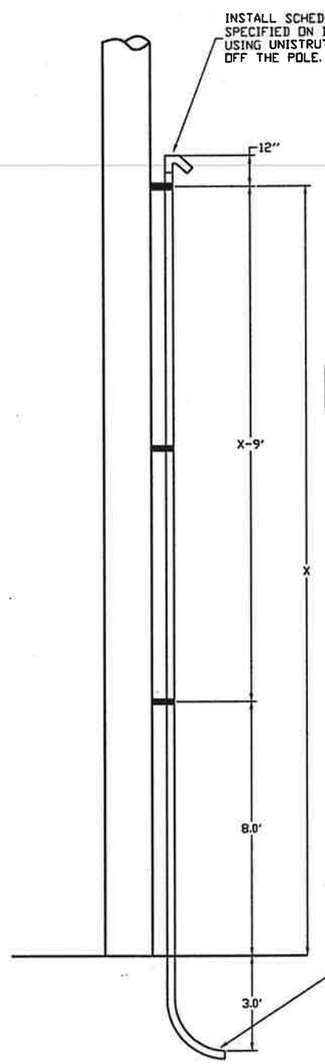


POWER SERVICE DETAIL



PRIMARY	SECONDARY
X 25'	12" BELOW EXIST MAIN LINE SECONDARY

NOTE:
ALL NATIONAL ELECTRICAL CODE STANDARDS MUST BE MAINTAINED ON ALL SECONDARY WORK.

ALL LABOR & MATERIALS TO BE SUPPLIED BY CONTRACTOR.

CONTRACTOR TO COORDINATE LOCATION OF CONDUIT ON POLE WITH CFES.

CONDUIT RISER DETAIL

CALCULATED TKI
CHECKED KPW

TRAFFIC CONTROL DETAILS
POWER SERVICE AND CONDUIT RISER

SUM - 59-493

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ITEM NO.	SHEET NUMBER				PARTICIPATION		ITEM NO.	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	AS PER PLAN SHEET REF.
	151	152			100% CITY	PROJECT						
202		5				5	202	75403	5	EACH	LIGHT POLE REMOVED FOR STORAGE, AS PER PLAN	150
202		5				5	202	75500	5	EACH	LIGHT POLE FOUNDATION REMOVED	150
202		5				5	202	75505	5	EACH	LUMINAIRE REMOVED FOR STORAGE, AS PER PLAN	150
202		3				3	202	75800	3	EACH	DISCONNECT EXISTING CIRCUIT	
603		280				280	603	00400	280	LIN FT	4" CONDUIT, TYPE E	
625		32				32	625	00500	32	EACH	CONNECTOR KIT, TYPE II	
		8				8	625	00600	8	EACH	CONNECTOR KIT, TYPE III	
625		48				48	625	01500	48	EACH	CABLE SPLICING KIT	
625		5				5	625	14000	5	EACH	LIGHT POLE FOUNDATION 24 IN. X 6' DEEP	
625		12				12	625	18000	12	EACH	BRACKET ARM = 10 FT.	
625		4768				4768	625	23200	4768	LIN FT	NO. 4 AWG, 5000 V. DISTRIBUTION CABLE	
625		1480				1480	625	23400	1480	LIN FT	NO. 10 AWG, POLE AND BRACKET CABLE	
625		800				800	625	24000	800	LIN FT	1-1/2" DUCT CABLE W/ 2 NO. 4 AWG, 600 V. CABLES	
625		792				792	625	25402	792	LIN FT	CONDUIT, 2", 713.07, TYPE DB	
625		454				454	625	25803	454	LIN FT	CONDUIT, CONCRETE ENCASED, 3", AS PER PLAN	151
625		70				70	625	25900	70	LIN FT	CONDUIT, JACKED OR DRILLED, 3"	
625		12				12	625	26250	12	EACH	LUMINAIRE CONVENTIONAL, STYLE B TYPE 2, 200 W. H.P.S., 713.12, 480 V.	
625		773				773	625	29002	773	LIN FT	TRENCH, 24 IN. DEEP	
625							625	29600		LIN FT	TRENCH IN PAVED AREAS, TYPE B	
625		14				14	625	31200	14	EACH	PULL BOX, 713.081, 13" X 18"	
625		5				5	625	32000	5	EACH	GROUND ROD	
625		4				4	625	34001	4	EACH	POWER SERVICE, AS PER PLAN	151
625		5				5	625	35011	5	EACH	REMOVE AND REERECT EXISTING LIGHT POLE, AS PER PLAN	150
SPECIAL		773				773	SPECIAL	62536000	773	LIN FT	SPECIAL - PLASTIC CAUTION TAPE	151
SPECIAL	LUMP					LUMP	SPECIAL	62540000	LUMP		SPECIAL - MAINTAIN EXISTING LIGHTING	151

CALCULATED E.D.R.
CHECKED J.A.N.

LIGHTING GENERAL SUMMARY

SUM - 59-493

LIGHTING GENERAL NOTES

SPECIFICATIONS

THESE NOTES ARE SUPPLEMENTAL TO ITEMS 625 AND 713 OF THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS.

REFERENCE SHALL BE MADE TO STANDARD CONSTRUCTION DRAWINGS LISTED ON THE TITLE SHEET OF THESE PLANS.

GENERAL

THE POWER SUPPLYING AGENCY FOR THIS PROJECT IS CITY OF CUYAHOGA FALLS ELECTRIC SYSTEM, OHIO

CITY OF CUYAHOGA FALLS ELECTRIC SYSTEM
2550 BAILEY RD.
CUYAHOGA FALLS, OH 44221
(330) 971-8046

THE PROJECT WILL RECEIVE 120 VOLT/240 VOLT THREE-WIRE SECONDARY SERVICE FROM CITY OF CUYAHOGA FALLS ELECTRIC SYSTEM.

THE PROJECT HAS BEEN DESIGNED ON THE BASIS OF 5 PERCENT VOLTAGE DROP WITH A MAXIMUM UNIFORMITY RATIO OF 4:1 AVG/MIN, 10:1 MAX/MIN CONVENTIONAL UNITS.

ELECTRICAL ENERGY FROM EXISTING POWER SERVICES SHALL CONTINUE TO BE CHARGED TO THE MAINTAINING AGENCY. THE CONTRACTOR SHALL PAY ELECTRICAL ENERGY CHARGES FOR NEW POWER SERVICES ESTABLISHED BY THIS PROJECT. UPON COMPLETION OF THIS PROJECT, POWER SERVICE ELECTRICAL ENERGY ACCOUNTS SHALL BE TRANSFERRED TO THE MAINTAINING AGENCIES NOTED IN THE PLANS. THIS SHALL INCLUDE NEW POWER SERVICE ESTABLISHED BY THIS PROJECT AS WELL AS REASSIGNMENT OF THE EXISTING SERVICE DUE TO WORK PERFORMED BY THIS PROJECT.

ITEM 202 - LIGHT POLE FOUNDATION REMOVED

THIS ITEM WILL CONSIST OF REMOVING AN EXISTING LIGHT POLE FOUNDATION TO A MINIMUM OF 1 FT. BELOW GRADE, BACKFILLING THE RESULTANT DEPRESSION WITH COMPACTED SOIL AND RESTORING TO MATCH THE SURROUNDING AREA.

PAYMENT WILL BE MADE AT THE UNIT BID FOR EACH ITEM 202, LIGHT POLE REMOVED

INCLUDING ALL LABOR, MATERIAL, EQUIPMENT AND INCIDENTALS TO COMPLETE THE ITEM.

ITEM 202 - LUMINAIRE REMOVED FOR STORAGE, AS PER PLAN

THIS ITEM OF WORK SHALL CONSIST OF REMOVING AN EXISTING POST TOP LUMINAIRES AND STORING IT ON THE PROJECT SITE FOR REMOVAL BY CITY FORCES.

PAYMENT WILL BE MADE FOR EACH ITEM 202 - LUMINAIRE REMOVED FOR STORAGE, AS PER PLAN.

ITEM 202 - LIGHT POLE REMOVED FOR STORAGE, AS PER PLAN

THE ITEM OF WORK SHALL CONSIST OF REMOVING AN EXISTING POST TOP LIGHT POLE INCLUDING THE BRACKET ARM(S). THE EXISTING WIRING SHALL BE REMOVED FROM THE POLE AND BRACKET ARM AND DISPOSED OF. THE POLE, BRACKET ARM(S) SHALL BE SEPARATED AND STORED ON THE SITE FOR REMOVAL BY CITY FORCES.

ITEM 625 - REMOVE AND REERECT EXISTING LIGHT POLE, AS PER PLAN

AT THE LOCATION INDICATED ON THE PLANS, THE CONTRACTOR SHALL CAREFULLY REMOVE THE EXISTING LIGHT POLE, BRACKET ARMS, LUMINAIRES, AND LAMPS FROM THE EXISTING FOUNDATION. THE LUMINAIRES SHALL BE WASHED AND RE-LAMPED IN KIND BEFORE REERECTION. THE EXISTING BRACKET CABLE SHALL BE REMOVED. THE LIGHT POLE AND BRACKET ARMS AND LUMINAIRES SHALL BE REERECTED ON A NEW LIGHT POLE FOUNDATION, AND ORIENTED AS DIRECTED ON THE PLANS. PAYMENT FOR THIS ITEM OF WORK SHALL BE AT THE CONTRACT BID PRICE PER EACH ITEM 625 - REMOVE AND REERECT EXISTING LIGHT POLE AS PER PLAN, AND SHALL INCLUDE ALL LABOR, MATERIALS, INCLUDING THE NEW LAMP, ALL EQUIPMENT, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK AS SPECIFIED.

CONNECTOR KITS

WHEN TYPE II OR TYPE III CABLE CONNECTION KITS ARE SPECIFIED, TYPE IX KITS MAY NOT BE SUBSTITUTED.

CONDUIT

AS PER 625.13, ALL CONDUIT WHICH WILL NOT HAVE CIRCUIT WIRE OR CABLE PULLED INTO IT DURING CONSTRUCTION SHALL HAVE A NO. 10 AWG COPPER-CLAD OR ALUMINUM-CLAD PULL WIRE INSTALLED IN IT AND THE ENDS SHALL BE CLOSED WITH CAPPED BUSHINGS OR OTHERWISE SEALED IN AN APPROVED MANNER TO COMPLETELY KEEP ALL MOISTURE AND FOREIGN MATTER OUT OF THE CONDUIT.

HIGH VOLTAGE DIRECT CURRENT TEST

A HIGH VOLTAGE DIRECT CURRENT TEST, AS DESCRIBED IN SUPPLEMENTAL SPECIFICATION 1003, SHALL BE PERFORMED ON ALL (DISTRIBUTION CABLE) SYSTEMS TO BE INSTALLED ON THIS PROJECT. THE TEST SHALL NOT BE PERFORMED UNTIL AFTER ALL NEW CONSTRUCTION, SUCH AS GUARDRAIL, FENCE, DELINEATOR POSTS, SIGN SUPPORTS, ETC., IN THE IMMEDIATE VICINITY OF THE LOCATION OF THE CABLE RUN BEING TESTED, HAS BEEN COMPLETED.

THE CONTRACTOR SHALL NOT TEST EXISTING CABLES.

HAZARDOUS MATERIALS

NO MATERIAL FURNISHED UNDER THIS SPECIFICATION SHALL CONTAIN POLYCHLORINATED BIPHENYLS (PCBs). TRANSFORMERS, BALLASTS, AND CAPACITORS SHALL BE MARKED "NO PCBs" IN ACCORDANCE WITH FEDERAL ENVIRONMENTAL PROTECTION AGENCY REGULATION 40 CFR 761.

HIGH-PRESSURE SODIUM LAMPS

HIGH-PRESSURE SODIUM LAMPS SHALL BE GENERAL ELECTRIC "LUCALOX", SYLVANIA "LUMALUX", WESTINGHOUSE "CERAMALUX", OR EQUAL APPROVED BY THE ENGINEER AND SHALL CONFORM TO SECTION 713.14 OF THE SPECIFICATIONS.

UNDERDRAINS FOR PULL BOXES

REFERENCE IS MADE TO STANDARD DRAWING HL-30.11M FOR DETAILS OF DRAINING PULL BOXES. UNDERDRAINS FOR PULL BOXES SHALL BE USED AS DIRECTED BY THE ENGINEER AND SHALL BE PROVIDED WHERE THE LENGTH REQUIRED FOR A SATISFACTORY OUTLET DOES NOT EXCEED APPROXIMATELY 20 FT., AN ESTIMATED QUANTITY OF ITEM 603. 4" CONDUIT, TYPE E" HAS BEEN PROVIDED IN THE LIGHTING GENERAL SUMMARY FOR THIS PURPOSE.

ITEM SPECIAL - MAINTAIN EXISTING LIGHTING

EXISTING ROADWAYS WHICH ARE TO REMAIN OPEN TO TRAFFIC DURING CONSTRUCTION OF THIS PROJECT AND WHICH ARE LIGHTED SHALL HAVE THE LIGHTING MAINTAINED AS DESCRIBED HEREIN.

BEFORE ANY WORK IS STARTED IN THE IMMEDIATE VICINITY OF ANY EXISTING LIGHTING CIRCUITS, REPRESENTATIVES OF THE CITY, THE MAINTAINING AGENCY, AND THE CONTRACTOR SHALL MAKE A VISUAL INSPECTION OF THE EXISTING ROADWAY LIGHTING CIRCUITS TO BE MAINTAINED. DURING THIS INSPECTION, A WRITTEN RECORD OF THE CONDITION OF THE EXISTING LIGHTING SHALL BE MADE BY THE CITY'S REPRESENTATIVE. THIS WRITTEN REPORT SHALL NOTE INDIVIDUAL LUMINAIRES WHICH ARE NOT IN WORKING ORDER, INDIVIDUAL POLES WHICH ARE NOT STANDING, AND INDIVIDUAL CIRCUITS WHICH ARE NOT IN WORKING ORDER. THE COMPLETED REPORT SHALL BE SIGNED BY THE REPRESENTATIVES OF THE CITY, THE MAINTAINING AGENCY, AND THE CONTRACTOR.

IF, AS A RESULT OF THIS INSPECTION, IT IS DETERMINED THAT THE CONDITION OF THE EXISTING SYSTEM IS BELOW THAT REQUIRED FOR THE SAFETY OF THE TRAVELING PUBLIC, THEN THE MAINTAINING AGENCY SHALL MAKE REPAIRS NECESSARY TO RETURN THE SYSTEM TO AN ACCEPTABLE CONDITION. FOLLOWING THESE REPAIRS, THE SYSTEM SHALL AGAIN BE INSPECTED AND A REPORT MADE AND SIGNED AS OUTLINED HEREIN.

WHEN THE EXISTING SYSTEM IS IN AN ACCEPTABLE CONDITION, IT SHALL BE TURNED OVER TO THE CONTRACTOR WHO SHALL THEN BE REQUIRED TO MAINTAIN THE EXISTING LIGHTING TO THE CONDITION OUTLINED IN THIS REPORT WITH THE EXCEPTION OF KNOCKDOWNS DUE TO TRAFFIC ACCIDENTS.

REPLACEMENT OF KNOCKED-DOWN UNITS SHALL BE DONE ONLY WHEN THE ENGINEER HAS DETERMINED THAT THE REPLACEMENT OF THE KNOCK-DOWN UNIT IS NECESSARY AND SHALL BE PAID SEPARATELY ON A UNIT BASIS.

BETTERMENTS SHALL BE COVERED IN ITEMS OF WORK PERTAINING TO THE CONSTRUCTION OF PERMANENT IMPROVEMENTS.

SHOULD THE CONTRACTOR DESIRE THE REMOVAL OF THE EXISTING LIGHTING BEFORE THE NEW LIGHTING IS OPERATIONAL, THE CONTRACTOR SHALL THEN BE RESPONSIBLE FOR ADEQUATE TEMPORARY LIGHTING OF THAT PORTION OF THE EXISTING ROADWAY AFFECTED BY THE REMOVAL OF THE EXISTING LIGHTING.

PRIOR TO INSTALLING SUCH LIGHTING, THE CONTRACTOR SHALL PREPARE AND SUBMIT FOUR (4) SETS OF THE TEMPORARY LIGHTING PLAN TO THE DIRECTOR FOR REVIEW AND APPROVAL.

THIS PLAN SHALL SHOW LOCATION OF POLES, LENGTH OF BRACKET ARMS, STYLE OF LUMINAIRES, MOUNTING HEIGHT, WIRING METHODS, AND OTHER PERTINENT INFORMATION. THE TEMPORARY LIGHTING SHALL PROVIDE AN AVERAGE INITIAL INTENSITY OF 1.2 FOOTCANDLES WITH AN AVERAGE TO MINIMUM UNIFORMITY NOT TO EXCEED 4:1. MOUNTING HEIGHT FOR TEMPORARY LUMINAIRES SHALL NOT BE LESS THAN 27 FT. AND MINIMUM OVERHEAD CONDUCTOR CLEARANCE SHALL BE 20 FT. TEMPORARY OVERHEAD CONSTRUCTION SHALL NOT BE LESS THAN GRADE "A" FOR STRENGTH REQUIREMENT AS DEFINED BY THE NATIONAL ELECTRIC SAFETY CODE. WOOD POLES WITH OVERHEAD WIRING MAY BE USED. HOWEVER, TEMPORARY LIGHTING SHALL MEET FEDERAL AND STATE SAFETY CRITERIA. IF BREAKAWAY POLES ARE USED TO MEET THESE CRITERIA, THEN UNDERGROUND WIRING SHALL BE USED. RECONDITIONED OR USED MATERIALS MAY BE FURNISHED FOR TEMPORARY LIGHTING.

CALCULATED E.D.R. CHECKED JAN.

LIGHTING GENERAL NOTES

SUM - 59-4.93

150
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LIGHTING GENERAL NOTES

ITEM SPECIAL - MAINTAIN EXISTING LIGHTING (CONT.)

ALL MATERIALS NECESSARY TO COMPLETE THE TEMPORARY LIGHTING SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR. WHEN NO LONGER NEEDED, THE TEMPORARY LIGHTING INSTALLATION SHALL BE REMOVED AND PROPERLY DISPOSED OF BY THE CONTRACTOR.

THE MAINTAINING AGENCY WILL PAY FOR ELECTRICAL ENERGY CONSUMED BY EXISTING POWER SERVICES AND BY PROPOSED PERMANENT POWER SERVICES AFTER ACCEPTANCE. THE CONTRACTOR WILL PAY FOR ELECTRICAL ENERGY, INSTALLATION, REMOVAL, AND MAINTENANCE OF ANY TEMPORARY POWER SERVICES.

THE LUMP SUM PRICE BID FOR ITEM SPECIAL - MAINTAINING EXISTING LIGHTING, SHALL INCLUDE PAYMENT FOR ALL LABOR, EQUIPMENT, AND MATERIALS, AND INCIDENTALS NECESSARY TO MAINTAIN THE EXISTING LIGHTING AS SPECIFIED HEREIN.

ITEM 625 - CONDUIT, CONCRETE ENCASED, AS PER PLAN

CONDUIT AND FITTINGS SHALL BE POLYVINYL CHLORIDE CONDUIT, TYPE DB 120 OR EQUAL, AS PER 713.07 OF THE SPECIFICATIONS. CONDUIT SHALL BE ENCASED WITH A MINIMUM 3 IN. ENVELOPE OF CLASS C CONCRETE (499 OF THE SPECIFICATIONS).
LABOR AND MATERIALS FOR PROVIDING CONCRETE ENCASEMENT SHALL BE INCLUDED

ALL OTHER PORTIONS OF SECTION 625 OF THE SPECIFICATIONS SHALL APPLY.

CONDUIT BENDS

ALL CONDUIT BENDS SHALL HAVE A MINIMUM RADIUS OF 3 FT. UNLESS OTHERWISE NOTED.

FINAL INSPECTION

IN THE UNIT PRICE BID FOR ITEM 625 - CONDUIT, CONCRETE ENCASED, AS PER PLAN, A FINAL INSPECTION OF THE CONDUIT SYSTEM SHALL BE MADE BY THE CITY OF CUYAHOGA FALLS ELECTRIC SYSTEM PRIOR TO FINAL ACCEPTANCE. ALL CONDUITS SHALL BE BRUSHED AND MANDRELLED. A PULL STRING (JET LINE) RATED 200 LBS. MINIMUM SHALL BE PLACED IN EACH CONDUIT. CONDUIT WHICH DOES NOT TERMINATE IN A MANHOLE, PULL BOX OR HANDHOLE SHALL BE CAPPED WITH A PVC CAP OR PLUG. THIS WORK SHALL BE CONSIDERED INCIDENTAL AND INCLUDED IN THE UNIT PRICE BID FOR THE APPROPRIATE 625 CONDUIT ITEM.

ITEM 202 - DISCONNECT EXISTING CIRCUIT

THIS ITEM OF WORK SHALL CONSIST OF THE DISCONNECTION OF AN EXISTING LIGHT CIRCUIT AT A PULL BOX OR A LIGHT POLE.

DISCONNECTION AT A PULL BOX SHALL INVOVLE CUTTNG THE EXISTING CIRCUIT AND REMOVING ALL SPLICE KITS. ANY CABLE THAT IS ABANDONED SHALL BE TERMINATED IN A MANNER SUCH THAT NO CABLE IS LEFT REMAINING IN THE PULL BOX.

ANY CABLE THAT IS TO BE REUSED IN A PULL BOX OR A LIGHT POLE SHALL BE CUT IN A MANNER SO THAT THERE IS SUFFICIENT LENGTH OF CABLE LEFT FOR RECONNECTION. CABLE SPLICE KITS WILL BE PAID FOR UNDER ITEM 625.

PAYMENT WILL BE MADE AT THE UNIT BID PRICE FOR EACH ITEM 202 'DISCONNECT EXISTING CIRCUIT' AND SHALL BE FULL COMPENSATION INCLUDING ALL LABOR, MATERIALS, AND INCIDENTALS REQUIRED TO COMPLETE THE WORK.

ITEM SPECIAL - PLASTIC CAUTION TAPE

ALL LOCATIONS OF UNDERGROUND DUCT CABLE OR NON-METALLIC CONDUIT SHALL BE MARKED BY THE USE OF A CONTINUOUS IDENTIFYING TAPE BURIED IN THE TRENCH ABOVE THE LINE. THE IDENTIFYING MARK SHALL BE AN INERT MATERIAL, APPROXIMATELY 6" WIDE, COMPOSED OF POLYETHYLENE PLASTIC HIGHLY RESISTANT TO ALKALIS, ACID OR OTHER CHEMICAL COMPONENTS LIKELY TO BE ENCOUNTERED IN SOILS. THE TAPE SHALL BE BRIGHT RED WITH IDENTIFYING PRINTING "ELECTRIC" IN BLACK LETTERS, ONE SIDE ONLY. TAPES SHALL BE SUPPLIED IN CONTINUOUS ROLLS WITH THE IDENTIFYING LETTERING REPEATED CONTINUOUSLY THE FULL LENGTH OF THE TAPE. IDENTIFYING TAPES SHALL BE BURIED IN THE ELECTRIC LINE TRENCH WITH ONE STRIP PLACED APPROXIMATELY DOWN THE CENTERLINE AND LOCATED APPROXIMATELY 8" TO 12" BELOW THE FINAL FINISHED GRADE. THE TAPE SHALL BE PLACED IN THE TRENCH WITH PRINTED SIDE UP AND SHALL BE ESSENTIALLY PARALLEL WITH THE FINISHED SURFACED. THE CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS TO INSURE THAT THE TAPE IS NOT PULLED, DISTORTED OR OTHERWISE MISPLACED IN COMPLETING THE TRENCH BACKFILL. TAPE SHALL BE ALLEN SYSTEM 'S' TERRA TAPE, TECTA TAPE OR EQUAL AS APPROVED BY THE ENGINEER.

THE TAPE SHALL BE PAID FOR PER LINEAR FEET OF "ITEM SPECIAL - PLASTIC CAUTION TAPE" COMPLETE AND IN PLACE.

ITEM 625 - LUMINAIRE, CONVENTIONAL

STYLE B LUMINARIES SHALL BE SINGLE RATED 120 VOLT, 250 WATT WITH INTEGRAL REGULATOR BALLASTS FOR USE WITH HIGH-PRESSURE SODIUM LAMPS AND SHALL BE GENERAL ELECTRIC M-400, CROUSE-HINDS OVM, AMERICAN 25/26, OR EQUAL APPROVED BY THE ENGINEER. ALL LUMINAIRES SHALL CONFORM TO SECTION 713.11 OF THE SPECIFICATIONS.

ITEM 625- POWER SERVICE, AS PER PLAN

THE POWER SUPPLYING AGENCY FOR THIS PROJECT IS:

CUYAHOGA FALLS ELECTRIC SYSTEM
2550 BAILEY ROAD
CUYAHOGA FALLS, OHIO, 44221

POWER SUPPLIED SHALL BE 120/240V, SINGLE PHASE GROUNDED NEUTRAL. THIS ITEM SHALL INCLUDE ALL COSTS OF EQUIPMENT, MATERIALS AND LABOR TO CONSTRUCT THIS ITEM AS DETAILED ON SHEET 157.

SERVICE CONDUIT LOCATIONS AND TERMINATION HEIGHTS ON THE SERVICE POLES SHALL BE AS DIRECTED BY THE UTILITY COMPANY. THE CONTRACTOR SHALL ARRANGE WITH THE UTILITIY COMPANY FOR A FIELD INSPECTION OF EACH SERVICE LOCATION PRIOR TO THE INSTALLATION OF THE SERVICE EQUIPMENT.

THIS ITEM SHALL BE IN ACCORDANCE WITH THIS NOTE AND 625 OF THE SPECIFICATIONS AND BE PAID FOR ON AN EACH BASIS FOR ITEM 625-POWER SERVICE, AS PER PLAN.

CALCULATED E.D.R. | CHECKED J.A.N.

LIGHTING GENERAL NOTES

SUM - 59-4.93

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					202				603	625																SPECIAL
SHEET No.	REFERENCE No.	STATION		SIDE	LIGHT POLE REMOVED FOR STORAGE, AS PER PLAN	LIGHT POLE FOUNDATION REMOVED	LUMINAIRE REMOVED FOR STORAGE, AS PER PLAN	DISCONNECT EXISTING CIRCUIT	4" CONDUIT, TYPE E	GROUND ROD	TRENCH, 24 IN. DEEP	CONDUIT, 2", 713.07, TYPE DB	CONDUIT, CONCRETE ENCASED 3 IN., AS PER PLAN	NO. 4 AWG, 5000 V. DISTRIBUTION CABLE	NO. 10 AWG, POLE AND BRACKET CABLE	CONNECTOR KIT, TYPE II	PULL BOX, 713.081, 13" X 18",	CABLE SPLICING KIT	REMOVE AND REERECT EXISTING LIGHT POLE, AS PER PLAN	POWER SERVICE AS PER PLAN	LIGHT POLE FOUNDATION 24" x 6' DEEP	LUMINAIRE, CONVENTIONAL	BRACKET ARM = 10 FT.	1-1/2" DUCT CABLE W/ 2 NO. 4 AWG, 600 V. CABLES	CONNECTOR KIT, TYPE III		CONDUIT JACKED OR DRILLED, 3"	PLASTIC CAUTION TAPE
		FROM	TO		EACH	EACH	EACH	EACH	L.F.	EACH	L.F.	L.F.	L.F.	L.F.	L.F.	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	L.F.	L.F.		L.F.	L.F.
154		31+10	32+96	LT.	1	1	1	1		1	186				104	2			1		1			196	2			186
154		51+60	52+60 2ND. ST.	LT.	1	1	1	1		1	100				104	2			1		1			110	2			100
154		52+60	53+65 2ND. ST.	LT.	1	1	1			1	105				104	1			1		1			115	1			105
154		32+05	33+90	RT.	1	1	1	1		1	185				104	2			1		1			195	2			185
154		33+90	35+64	RT.	1	1	1			1	174				104	1			1		1			184	1			174
		Circuit A																										
154		PS-A	PB-3	RT.					20		8	8		54			1	3		1								8
154		PB-3	PB-2	RT./LT.					20				74	252			1	3										
154		PB-2	SP-1	LT.								7		51	80	2							1	1				
154		PB-3	PB-4	RT.					20			39		147			1	3										
154		PB-4	SP-2	RT.								10		60	80	2							1	1				
154		PB-4	PB-5	RT.					20			101		333			1	3										
154		PB-5	SIGN #28	RT.							5	5		45	80	2							1	1				5
		PB-1 NOT USED																										
		Circuit B																										
155		PS-B	PB-13						20			5		45			1	3		1								
155		PB-13	PB-12						20			167		531			1	3										
155		PB-12	PB-10						20				85	285			1	3										
155		PB-10	PB-11						20			189		597			1	3										
155		PB-11	SIGN #44								5	5		45	80	2							1	1				5
155		PB-10	SP-4									10		60	80	2							1	1				
155		PB-12	SP-1									16		78	80	2							1	1				
155		PB-12	EX. PB-9									45		165				3										
155		EX. PB-9	EX. PB-8										90	300				3										
155		EX. PB-8	SP-2									15		45	80	2							1	1				
155		EX. PB-8	PB-7						20				108	354			1	3										
155		PB-7	SP-3									25		105	80	2							1	1				
155		PB-7	PB-6						20					240			1	3									70	
155		PB-6	SIGN #77									64		222	80	2							1	1				
		Circuit C																										
155		PS-C	PB-15						20			4		52			1	3		1								
155		PB-15	PB-14									50		180			1	3										
155		PB-14	SP-3						20			18		84	80	2							1	1				
155		PB-15	PB-16						20				84	282			1	3										
155		PB-16	SP-1									4		42	80	2							1	1				
		Circuit D																										
156		PS-D	PB-16						20				13	69			1	3		1								
156		PB-17	SIGN #61								5	5		45	80	2							1	1				5
156																												
GRAND TOTAL CARRIED TO GENERAL SUMMARY					5	5	5	3	280	5	773	792	454	4768	1480	32	14	48	5	4	5	12	12	800	8		70	773

CALCULATED E.D.R.
CHECKED J.A.N.

LIGHTING SUBSUMMARY

SUM - 59-4.93

THIS SHEET WAS INTENTIONALLY LEFT BLANK

LIGHTING PB-1 (NOT USED)

STA.37+86, 35' LT.
PULL BOX, 713.081, 13"x18"
LIGHTING PB-2

STA.37+80, 39' LT.
COMB. LIGHT &
SIGNAL POLE SP-1
BRACKET ARM=10FT.
CIR. A

STA.53+65, 20' LT.
A12B40
23FR (14) G
REMOVE AND REERECT

STA.52+60, 21' LT.
A12B40
23FR (13) G
REMOVE AND REERECT

EXIST.
STA.51+60, 20' LT.
23FR (12) G

EXIST
STA.31+10, 27' LT.
26FR (7) G

STA.32+96, 20' LT.
A12B40
26FR (8) G
REMOVE AND REERECT

EXIST.
STA.32+05, 32 RT.
25FR (6) G

STA.33+90, 31 RT.
A12B40
25FR (7) G
REMOVE AND REERECT

STA.35+64, 37 RT.
A12B40
25FR (8) G
REMOVE AND REERECT

STA.38+10, 35' RT.
PULL BOX, 713.081, 13"x18"
LIGHTING PB-3

STA.38+14±, 41.5'±, RT.
EXISTING ELECTRIC PEDESTAL
POWER SERVICE, APP
1 PHASE 120/240V 3 WIRE
CIRCUIT A

STA.38+49, 45' RT.
PULL BOX, 713.081, 13"x18"
LIGHTING PB-4

STA.38+57, 41.5 RT.
COMB. LIGHT &
SIGNAL POLE SP-2
BRACKET ARM=10FT.
CIR. A

SECOND STREET

FRONT STREET

W. BAILEY ROAD

RAMP "M"

MATCH LINE STA.39+00
SEE SHEET NO. 155

FOR LIGHTING CRITERIA SEE SHEET 114.
FOR LIGHTING GENERAL NOTES SEE SHEETS 150-151.
FOR LIGHTING QUANTITIES SEE SHEETS 152-153.
FOR TRENCH AND CONDUIT DETAILS SEE
ELECTRIC PLANS SHEET 159-188.
FOR TRAFFIC SIGNAL PLANS SEE SHEETS 115-148.

(IN FEET)
1 inch = 40 ft.

CALCULATED E.D.R.
CHECKED J.A.N.

LIGHTING PLAN
STA. 27+50 TO STA. 39+00

SUM - 59-4.93

154
171

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STA.110+79.5±, 49'± LT.
EXISTING ELECTRIC PEDESTAL
POWER SERVICE, APP
CIRCUIT C
1ø 120/240V. 3-WIRE

STA.110+80.5, 45' LT.
PULL BOX, 713.081, 13"x18"
LIGHTING PB-15

SECOND STREET

STA.111+17, 30.5' RT.
COMB. LIGHT &
SIGNAL POLE SP-1
BRACKET ARM=10FT.
CIR. C

STA.111+12, 30' RT.
PULL BOX, 713.081, 13"x18"
LIGHTING PB-16

STA.110+39, 46' LT.
PULL BOX, 713.081, 13"x18"
LIGHTING PB-14

STA.110+23, 38.5' LT.
COMB. LIGHT &
SIGNAL POLE SP-3
BRACKET ARM=10FT.
CIR. C

STA.107+52, 52' LT.
PULL BOX, 713.081, 13"x18"
LIGHTING

STA.42+91, 49' LT.
PULL BOX, 713.081, 13"x18"
LIGHTING PB-7

STA.108+35, 47' LT.
COMB. LIGHT &
SIGN SUPPORT (#77)
BRACKET ARM=10FT.
CIR. B

STA.42+65, 38.5' LT.
COMB. LIGHT &
SIGNAL SUPPORT SP-3,
BRACKET ARM=10FT.
CIR. B

HUDSON DRIVE

EDISON STREET

STA.43+94, 58.5' LT
COMB. LIGHT &
SIGNAL SUPPORT SP-4,
BRACKET ARM=10FT.
CIR. B

#2740

STA.45+91, 38' LT.
PULL BOX, 713.08, 18"
LIGHTING PB-11

STA.44+02, 40' LT.
PULL BOX, 713.08, 18"
LIGHTING PB-10

STA.45+96, 38' LT.
COMB. LIGHT &
SIGN SUPPORT (#44)
BRACKET ARM=10FT.
CIR. B

#2730

#2704

FRONT STREET

#2764

FRONT STREET

SEE SHEET NO. 154
MATCH LINE STA.39+00

MATCH LINE STA.50+00
SEE SHEET NO. 156

STA.43+90, 45' RT.
PULL BOX, 713.081, 13"x18"
LIGHTING PB-12

#2719

STA.43+70, 48.5' RT.
COMB. LIGHT &
SIGNAL SUPPORT SP-1
BRACKET ARM=10FT.
CIR. B

STA.45+63.5, 41.5' RT.
POWER SERVICE, APP
CIRCUIT B
1ø 120/240V. 3-WIRE

STA.39+50, 46' RT.
PULL BOX, 713.081, 13"x18"
LIGHTING PB-5

EXIST.
STA.105+92, 60' LT.
PULL BOX, 713.081, 13"x18"
LIGHTING PB-8

STA.39+55, 48' RT.
COMB. LIGHT & SIGN SUPPORT (#28)
BRACKET ARM = 10 FT.
CIR. A

STA.42+63.5, 68.5' RT.
COMB. LIGHT &
SIGNAL SUPPORT SP-2
BRACKET ARM=10FT.
CIR. B

EXIST.
STA.106+18', 30' RT.
PULL BOX, 713.081, 13"x18"
LIGHTING PB-9

#2721

STA.45+60, 40' RT.
PULL BOX, 713.08, 18"
LIGHTING PB-13

HUDSON DRIVE

FOR LIGHTING CRITERIA SEE SHEET 114.
FOR LIGHTING GENERAL NOTES SEE SHEETS 150-151.
FOR LIGHTING QUANTITIES SEE SHEETS 152-153.
FOR TRENCH AND CONDUIT DETAILS SEE
ELECTRIC PLANS SHEET 159-188.
FOR TRAFFIC SIGNAL PLANS SEE SHEETS 115-148.

(IN FEET)
1 inch = 40 ft.

CALCULATED E.D.R.
CHECKED J.A.R.

LIGHTING PLAN
STA. 39+00 TO STA. 50+00

SUM - 59-493

155
171

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SEE SHEET NO. 155
MATCH LINE STA.50+00

VINCENT STREET

FRONT STREET

LANDON DRIVE

#2796

8+00

9+00

50+00

51+00

52+00

53+00

54+00

55+00

56+00

57+00

58+00

59+00

60+00

61+00

STA.53+01, 38' RT.
POWER SERVICE, APP
CIRCUIT D
1ø 120/240V. 3-WIRE

STA.52+85, 38' RT.
PULL BOX, 713.081, 13"x18"
LIGHTING PB-17

STA.52+80, 35.5' RT.
COMB. LIGHT &
SIGN SUPPORT
BRACKET ARM=10FT.
CIR. D

FOR LIGHTING CRITERIA SEE SHEET 114.
FOR LIGHTING GENERAL NOTES SEE SHEETS 150-151.
FOR LIGHTING QUANTITIES SEE SHEETS 152-153.
FOR TRENCH AND CONDUIT DETAILS SEE ELECTRIC PLANS SHEET 159-188.
FOR TRAFFIC SIGNAL PLANS SEE SHEETS 115-148.

CALCULATED E.D.R.
CHECKED J.A.N

(IN FEET)
1 inch = 10 ft.

LIGHTING PLAN
STA. 50+00 TO STA. 61+00

SLM - 59-4.93

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171

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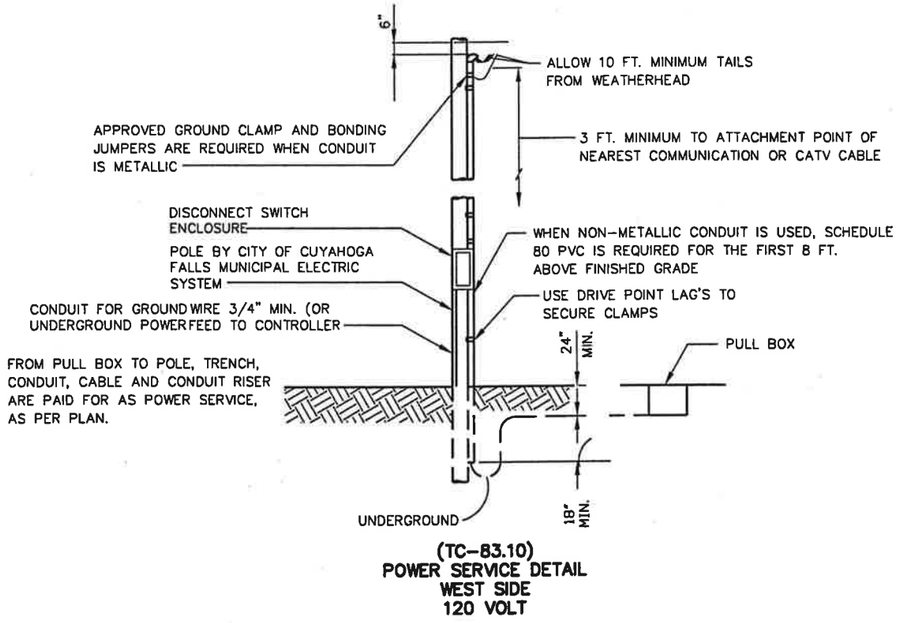
LIGHTING DESIGN CRITERIA

LEGEND

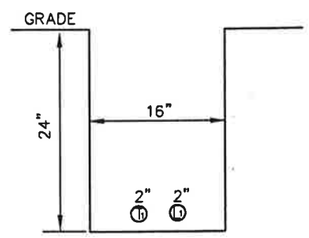
- LUMINAIRE, STYLE B, 250 WATT HIGH-PRESSURE SODIUM, TYPE III
- EXISTING LIGHT POLE
- EXISTING LIGHT POLE TO BE REMOVED
- COMBINATION SIGNAL POLE
- COMBINATION OVERHEAD SIGN
- BRACKET ARM, 8'-0" OR 10'-0" TYPICAL
- EXISTING CABLES AND CONDUITS TO BE ABANDONED
- PULL BOX, 713.081, 13"x18"
- TRENCH SECTIONS — FOR TRENCH DETAILS SEE THIS SHEET.

MAXIMUM ROADWAY WIDTH CONSIDERED	72 FT.
LUMINAIRE	
OVERHANG (FOR 8'-0"), (FOR 12'-0")	1 FT. , 1 FT.
MOUNTING HEIGHT	30 FT. , 40 FT.
DISTRIBUTION	
LATERAL	TYPE III
VERTICAL	MEDIUM
VERTICAL CONTROL	CUTOFF
LAMP LIGHT CHARACTERISTICS	
TYPE	HPS
WATTS	250
DESIGNATION	
INITIAL VERTICAL	27500 LUMENS, 37000 LUMENS
INITIAL HORIZONTAL	27500 LUMENS, 37000 LUMENS
END OF LIFE	20075 LUMENS, 27010 LUMENS
FACTORS	
DIRT	0.95
MAINTENANCE	0.6935
ILLUMINATION LEVEL	1 f.c. (AVERAGE MAINTAINED)
UNIFORMITY RATIO	4:1
CIRCUIT TYPE	MULTIPLE
CONDUCTOR SIZE	#4 AWG (EXCEPT AS INDICATED)
CIRCUIT VOLTAGE	1ø 120/240 VOLT 3 WIRE
TRANSFORMER	
CAPACITY	25 KVA
TYPE	POLE MOUNTED
VOLTAGE	CONSULT AT POWER CO. (120V./240V.)
VOLTAGE DROP	5% MAXIMUM
BALLAST	
CAPACITY	250 WATTS
TYPE	REGULATOR
POWER FACTOR	98%
MOUNTING	BUILT IN
RATED INPUT VOLTAGE	120 VOLTS

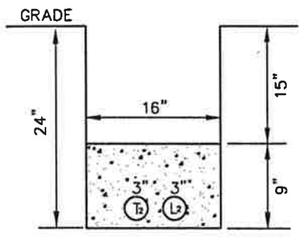


(TC-83.10)
POWER SERVICE DETAIL
WEST SIDE
120 VOLT

POWER SERVICE, AS PER PLAN



SIDEWALK AREA
SECTION A-A



PAVEMENT AREA
SECTION B-B

- L1 ITEM 625 - CONDUIT, 713.07, 2" TYPE DB (LIGHTING)
- T1 ITEM 625 - CONDUIT, 713.07, 2" TYPE DB (TRAFFIC)
- L2 ITEM 625 - CONDUIT, 713.07, 3" TYPE DB (LIGHTING)
- T2 ITEM 625 - CONDUIT, 713.07, 3" TYPE DB (TRAFFIC)

TRENCH DETAILS

SEE ELECTRIC PLANS FOR COMBINED TRENCH DETAILS

CALCULATED E.D.R.
CHECKED G.P.N.

LIGHTING DETAILS

SUM-59-4.93

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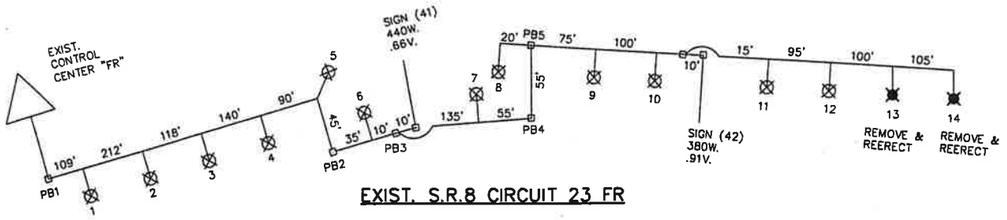
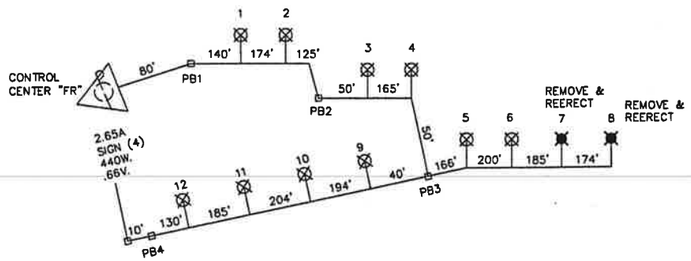
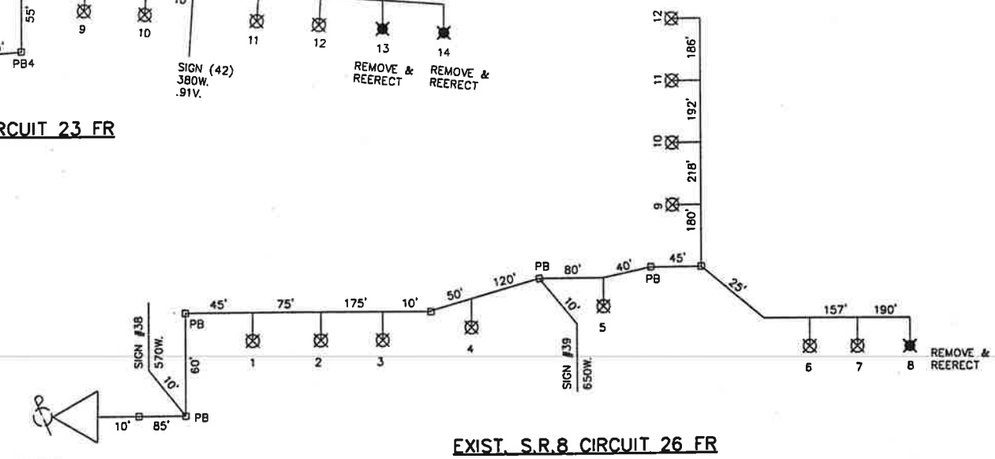


EXIST. S.R.8 CIRCUIT 23 FR

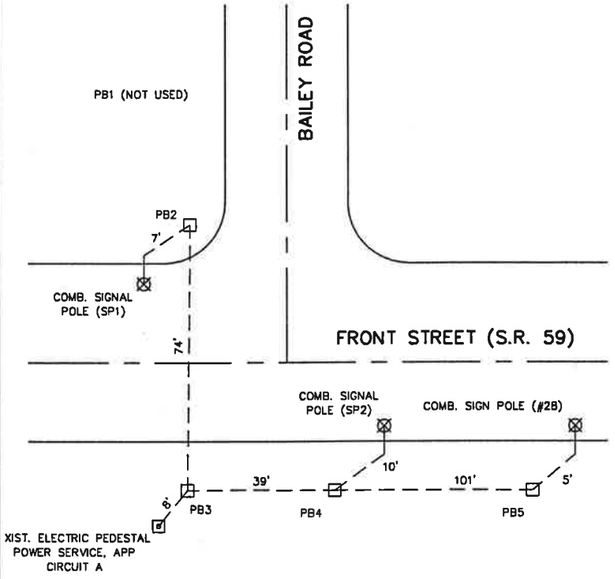


EXIST. S.R.8 CIRCUIT 25 FR

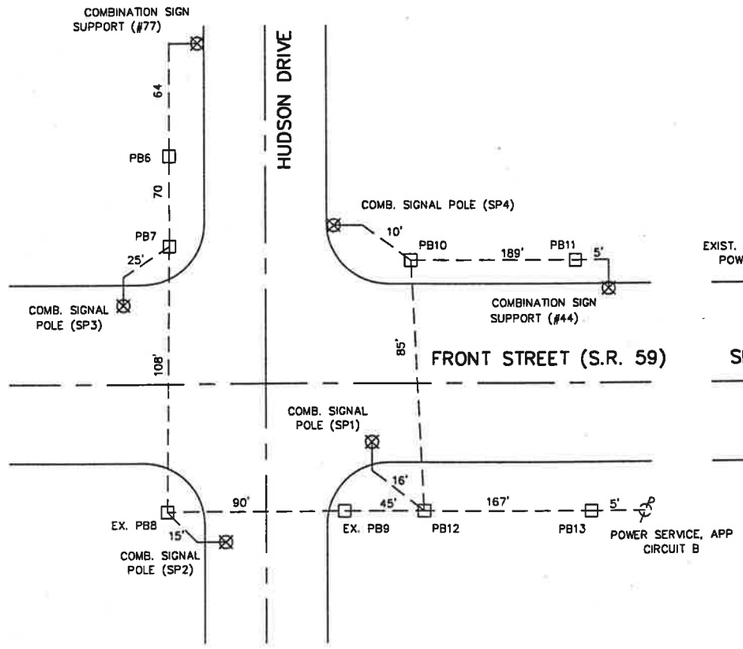


EXIST. S.R.8 CIRCUIT 26 FR

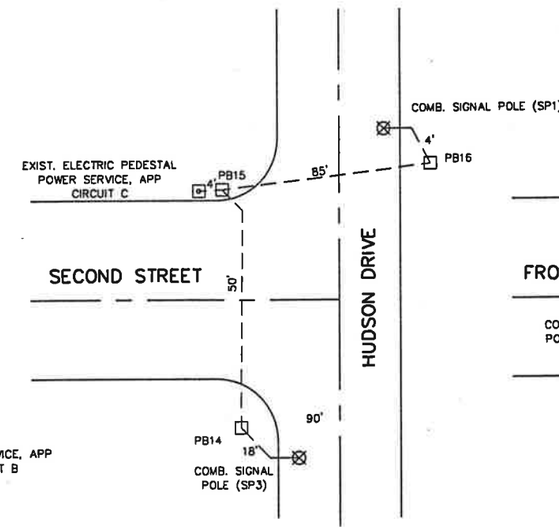
EXISTING
CONTROL CENTER 50'± SOUTH OF CL FRONT ST. & 50' WEST OF CL NORTHLAND AVE.
PAD MOUNTED
60 AMP 480 V. 1 ø 2-WIRE



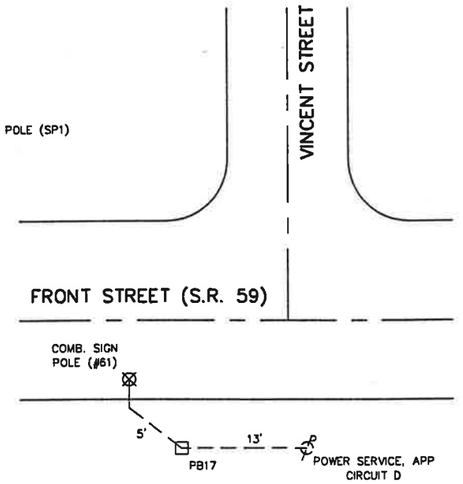
CIRCUIT "A"
FRONT STREET AND BAILEY ROAD



CIRCUIT "B"
FRONT STREET AND HUDSON DRIVE



CIRCUIT "C"
HUDSON DRIVE AND SECOND STREET



CIRCUIT "D"
FRONT STREET AND VINCENT DRIVE

CALCULATED
CHECKED

CIRCUIT SCHEMATIC

SUM - 59-493

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THE PROPOSED RIGHT OF WAY SHALL BE REFERENCED FROM THE CENTERLINE OF RIGHT OF WAY.

ADJUSTABLE CENTERLINE MONUMENTS, REFERENCE MONUMENTS AND RIGHT OF WAY MONUMENTS ARE SHOWN ON STANDARD CONSTRUCTION DRAWING RM 1.1M (REV. 4-8-97) OF THE OHIO DEPARTMENT OF TRANSPORTATION. THE PLACING OF MONUMENTS SHALL BE UNDER THE DIRECTION OF A REGISTERED SURVEYOR AND ARE TO BE SET, AS SHOWN BY THE HIGHWAY CONTRACTOR AT THE TIME OF CONSTRUCTION. ANY ALTERATIONS, WITH PRIOR APPROVAL OF THE OHIO DEPARTMENT OF TRANSPORTATION, SHALL BE NOTED AND O.D.O.T. SHALL BE NOTIFIED OF THE NEW LOCATIONS.

MONUMENTS TO BE SET DURING CONSTRUCTION				
STATION	DISTANCE FROM CL LEFT	DISTANCE FROM CL RIGHT	ADJUSTABLE CL MONUMENT	RIGHT OF WAY MONUMENT
43+24.36			1	
P.C. 45+98.08			1	
P.T. 47+98.54			1	
P.C. 54+07.27			1	
P.T. 56+06.98			1	
TOTAL			5	

Plat Approved By TAX MAP DEPARTMENT
T.N.N. 6-6-02

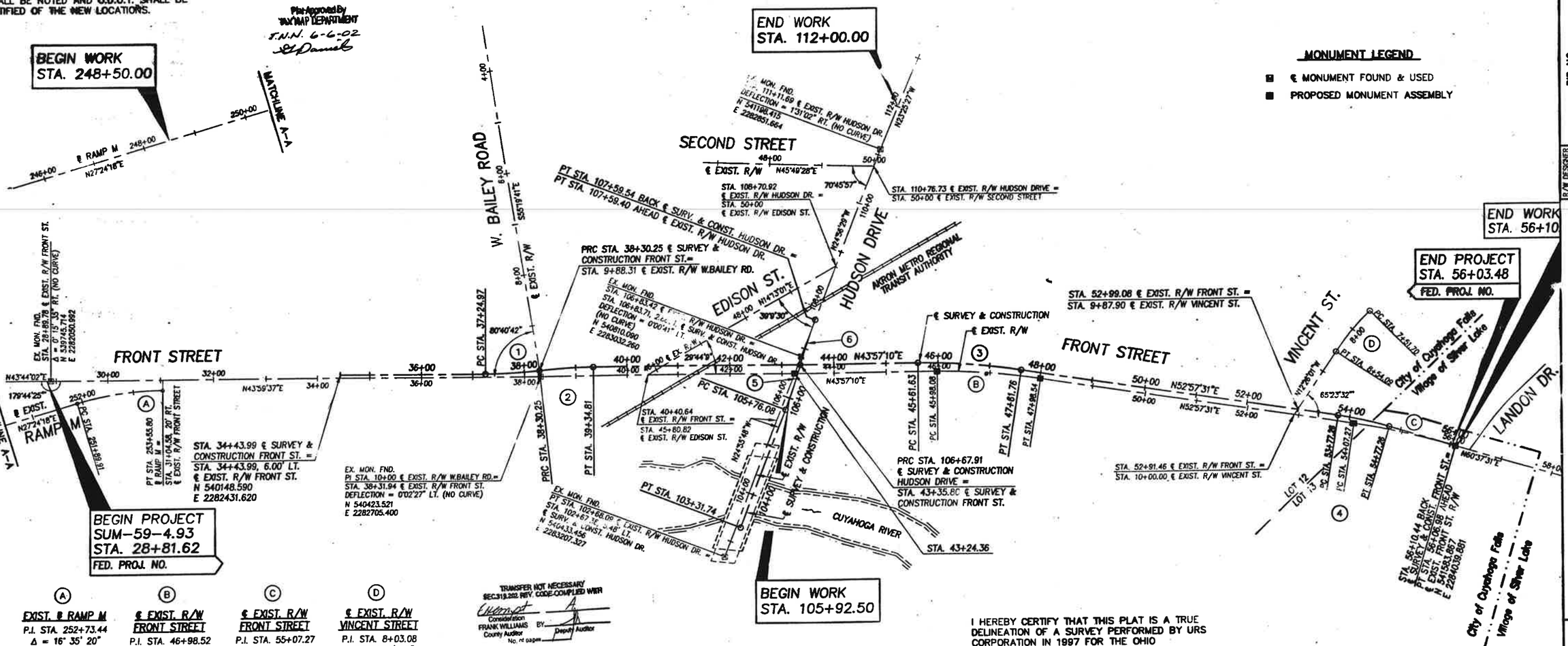
CITY OF CUYAHOGA FALLS
LOT 12, T-3N R-10W
ORIGINAL STOW TOWNSHIP
COUNTY OF SUMMIT

BASIS FOR BEARINGS:

ALL BEARINGS SHOWN ARE BASED ON THE OHIO STATE PLANE COORDINATE GRID SYSTEM, NORTH ZONE, NAD 83.

NOTE: THE EXISTING R/W WIDTH AND LOCATION WERE DETERMINED USING FRONT ST. WIDENING PLANS DATED 8/22/69 (BAILEY RD. TO HUDSON DR.), FRONT ST. WIDENING PLANS DATED 5/22/74 (HUDSON DR. TO OAKPARK BLVD.), DEEDS, TAX MAPS AND CENTERLINE MONUMENTS FOUND.

MONUMENT LEGEND
- ℄ MONUMENT FOUND & USED
- PROPOSED MONUMENT ASSEMBLY



Ⓐ EXIST. ℄ RAMP M	Ⓑ ℄ EXIST. R/W FRONT STREET	Ⓒ ℄ EXIST. R/W FRONT STREET	Ⓓ ℄ EXIST. R/W VINCENT STREET
P.I. STA. 252+73.44	P.I. STA. 46+98.52	P.I. STA. 55+07.27	P.I. STA. 8+03.08
Δ = 16° 35' 20"	Δ = 9° 00' 21"	Δ = 7° 40' 00"	Δ = 11° 43' 57"
R = 572.96'	R = 1275.31'	R = 1492.44'	R = 500.00'
T = 83.53'	T = 100.44'	T = 100.00'	T = 51.37'
L = 165.89'	L = 200.46'	L = 199.70'	L = 102.39'
E = 6.06'	E = 3.95'	E = 3.35'	E = 2.63'
e_{max} = 0.041	e_{max} = NC	e_{max} = NC	e_{max} = NC

TRANSFER NOT NECESSARY
SEC.319.202 REV. CODE-COMPLIED WITH
Exempt Consideration
FRANK WILLIAMS County Auditor BY: Deputy Auditor
No. of pages

TRANSFER NOT NECESSARY
6/6/02
Frank Williams County Auditor

Ⓐ ℄ SURVEY & CONSTRUCTION FRONT STREET	Ⓑ ℄ SURVEY & CONSTRUCTION FRONT STREET	Ⓒ ℄ SURVEY & CONSTRUCTION FRONT STREET	Ⓓ ℄ SURVEY & CONSTRUCTION FRONT STREET	Ⓔ ℄ SURVEY & CONSTRUCTION HUDSON DRIVE	Ⓕ ℄ SURVEY & CONSTRUCTION HUDSON DRIVE
P.I. STA. 37+77.65	P.I. STA. 38+82.56	P.I. STA. 46+61.90	P.I. STA. 54+27.33	P.I. STA. 106+22.03	P.I. STA. 107+13.76
Δ = 6° 01' 55"	Δ = 5° 59' 28"	Δ = 9° 00' 22"	Δ = 7°37'59"	Δ = 5°15'42"	Δ = 5°15'00"
R = 1000.00'	R = 1000.00'	R = 1273.24'	R = 750.63'	R = 1000.00'	R = 1000.00'
T = 52.69'	T = 52.33'	T = 100.28'	T = 50.07'	T = 45.95'	T = 45.85'
L = 105.28'	L = 104.56'	L = 200.14'	L = 100.00'	L = 91.83'	L = 91.63'
E = 1.39'	E = 1.37'	E = 3.94'	E = 1.67'	E = 1.06'	E = 1.05'
e_{max} = NC	e_{max} = NC	e_{max} = NC	e_{max} = NC	e_{max} = NC	e_{max} = NC

I HEREBY CERTIFY THAT THIS PLAT IS A TRUE DELINEATION OF A SURVEY PERFORMED BY URS CORPORATION IN 1997 FOR THE OHIO DEPARTMENT OF TRANSPORTATION.

THE ESTABLISHMENT OF THE PROPERTY LINES AND EXISTING RIGHT OF WAY LINES SHOWN ON THIS PLAN AS OF THIS DATE WAS PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION.

STATE OF OHIO
RICHARD E. ROCKICH
5680
REGISTERED SURVEYOR

Richard E. Rockich 6-03-02
RICHARD E. ROCKICH P.S. 5680 DATE

54710010
FRANK WILLIAMS, SUMMIT CO AUDITOR
Page: 1 of 1
06/06/2002 01:47P
FEE 21.00

RECEIVED _____, 20____

RECORDED _____, 20____

BOOK _____ PAGE _____

COUNTY RECORDER

PID NO. 20891

R/W DESIGNER

R/W REVIEWER

CENTERLINE PLAT

SUM - 59-4.93

1 / 13

159
171

J:\PROJ\7036100\ROADWAY\ROWFRONT\7036IRCA.DWG User: jam81152 Jun 03, 2002 - 2:26pm

CITY OF CUYAHOGA FALLS
LOTS 12 - 13, T-3N R-10W
ORIGINAL STOW TOWNSHIP
COUNTY OF SUMMIT

STRUCTURE KEY
- RESIDENTIAL
- COMMERCIAL
- OUT BUILDING

BEGIN ACQUISITION
SUM-59-4.93
STA. 34+25.31

BEGIN PROJECT
SUM-59-4.93
STA. 28+81.62
FED. PROJ. NO.

END WORK
STA. 112+00

END WORK
STA. 56+10.44

END PROJECT
STA. 56+03.48
FED. PROJ. NO.

END WORK
STA. 105+92.50

END ACQUISITION
STA. 55+75.51

SECOND STREET
FRONT STREET
BAILEY ROAD
HUDSON DRIVE
EDISON
VINCENT STREET
LANDON DRIVE
OAK PARK BLVD.
EX. R/W
R/W
L/A
EX. L/A
O.L. 12
O.L. 13
City of Cuyahoga Falls
Village of Silver Lake

UNDERGROUND UTILITIES:

THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS OF THE UTILITY AS REQUIRED BY SECTION 153.64 O.R.C.

UTILITY OWNERS	
TYPE	NAME & ADDRESS
TELEPHONE	AMERITECH 50 W. BOWERY STREET 4TH FLOOR AKRON, OHIO 44308 ATTN: JAMES MCLAUGHLIN 330-384-8057
ELECTRIC	OHIO EDISON COMPANY 1910 W. MARKET STREET AKRON, OHIO 44313 ATTN: GLENN BOWMAN 330-384-4711
ELECTRIC	CUYAHOGA FALLS ELECTRIC SYSTEM 2550 BAILEY ROAD CUYAHOGA FALLS, OHIO 44221 ATTN: ROBERT BYE 330-971-8046
GAS	EAST OHIO GAS COMPANY 2100 EASTWOOD AVENUE AKRON, OHIO 44305 ATTN: GEORGE TURNER 330-798-7104
CABLE	TIME WARNER CABLE 1655 BRITTAIN ROAD AKRON, OHIO 44310-3998 ATTN: CHARLIE TONEY 330-633-9203
WATER & SANITARY SEWER	CITY OF CUYAHOGA FALLS DIVISION OF ENGINEERING 2310 SECOND STREET CUYAHOGA FALLS, OHIO 44221 ATTN: PETER BELL 330-971-8180

PARCEL NO.	OWNER
1	LEAF INVESTMENTS LIMITED
2	NOT USED
3	SNUG HARBOR LIMITED PARTNERSHIP
4	LYNN ANN ASENTE
5	JAMES L. HUMMEL & KATHY A. HUMMEL
6	YUN S. YEE & YUK H. YEE
7	VITO A. CAETTA & JEAN M. CAETTA, TRUSTEES
8	NOT USED
9	NOT USED
10	ENSINE CORPORATION
11	HAROLD McCREADY, Jr. & DIANE E. McCREADY
12	FILOMENA McINTYRE
13	TONG CHOD CHOI & PATRICIA JEAN CHOI
14	METRO REGIONAL TRANSIT AUTHORITY
15	NOT USED
16	RICHARD L. HURLEY & ELIZABETH A. HURLEY
17	LINDA M. ARMENT
18	ANTHONY BRANDT
19	BILL R. GOVE, Jr.
20	CITY OF CUYAHOGA FALLS
21	ROBERT J. CURRIER, JR.
22	ESTILL M. GARRETSON
23	NOT USED
24	MYERS FAMILY LIMITED PARTNERSHIP
25	RYAN PROPERTIES, LIMITED
26	VILLAGE PROPERTY GROUP LTD.
27	DENNIS M. WHITE
28	JIM & SONS TRANSMISSION SERVICE, INCORPORATED
29	JOHN F. ROBBIE, Jr. & BREDA ROBBIE
30	VERONICA DIMEGO
31	BOARD OF EDUCATION OF THE CUYAHOGA FALLS CITY SCHOOL DISTRICT
32	JAMES D. STAHL & DAVID E. PETERSON
33	STATE OF OHIO
34	GREGORY T. PLESICH, TRUSTEE
35	HOLLAND OIL COMPANY, AN OHIO CORPORATION
36	MICHAEL V. KOROLY
37	MONICA L. STANLEY

CONVENTIONAL SIGNS

CENTER LINE 110+00 — 111+00
TREES ○ (TO BE REMOVED) ⊠
UTILITY POLES: LIGHT ∅ , TELEPHONE ∅ , POWER ∅
RIGHT OF WAY (ONLY) ——R/W——
LIMITED ACCESS (ONLY) ——L/A——
EXISTING RIGHT OF WAY — EXIST. R/W —
PROPERTY LINE ——℄——
TEMP. RIGHT OF WAY — TEMP. EASEMENT
CONSTRUCTION LIMITS CONSTRUCTION LIMITS

REV.	DATE	DESCRIPTION
1	6/3/02	Name Change Par. 14
2	6/3/02	Revise Par. 14 Prop. R/W
3	7/02	Added Parcel 33
4	8/02	Name Change Par. 26
5	8/02	Rev. R/W Bailey Road

DATE COMPLETED

PID NO. 20891

R/W DESIGNER BHB
R/W REVIEWER RER

PROPERTY MAP

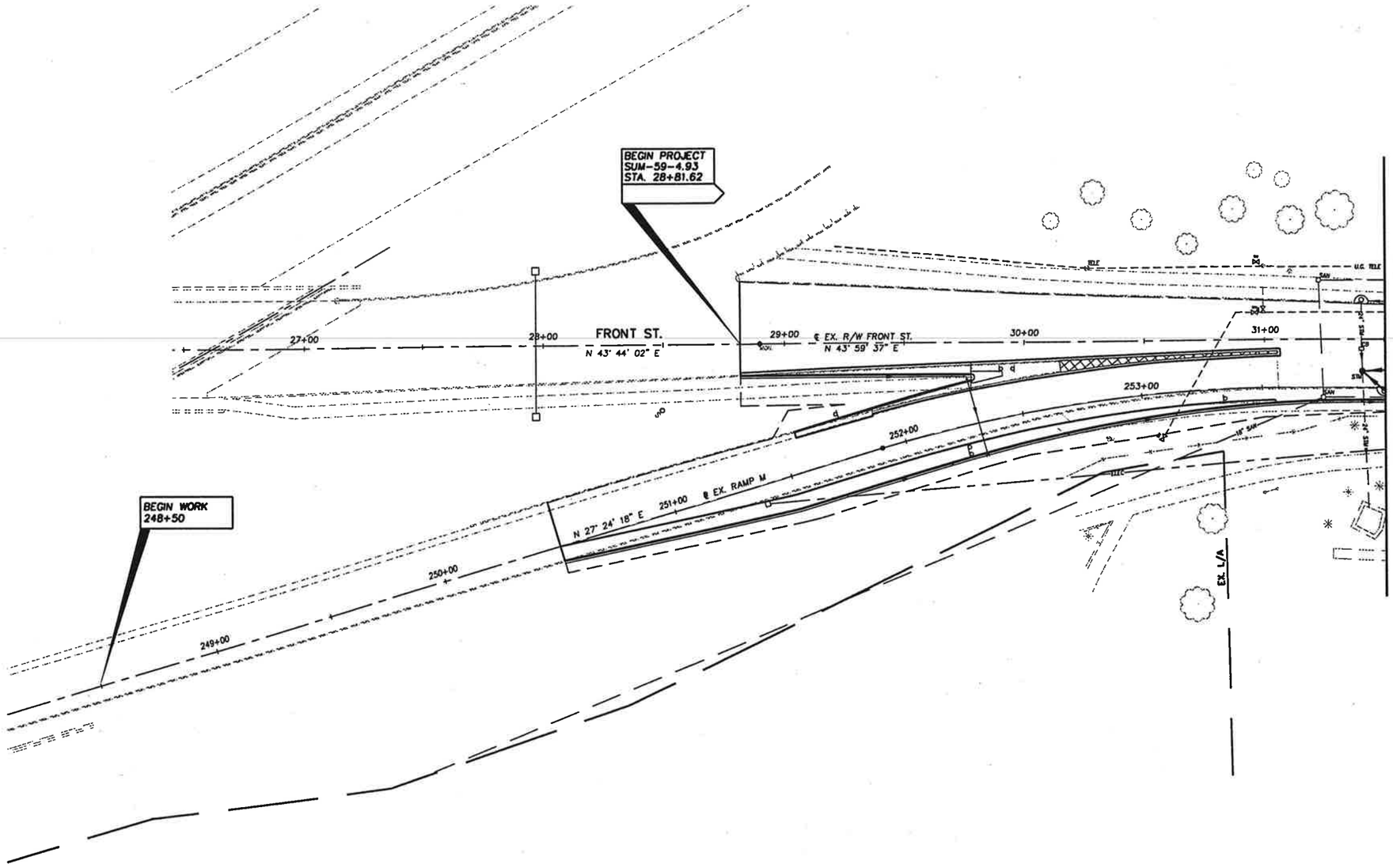
SUM - 59-4.93

2 / 13

160
171

J:\Proj\7036100\ROADWAY\ROWFront\70361rma.dwg User: jm81152 Oct 17, 2002 - 12:15pm

CITY OF CUYAHOGA FALLS, COUNTY OF SUMMIT, ORIGINAL STOW TOWNSHIP, LOT 12, T 3 N, R 10 W



CITY OF CUYAHOGA FALLS, COUNTY OF SUMMIT, ORIGINAL STOW TOWNSHIP, LOT 12, T 3 N, R 10 W

NO.	DATE	DESCRIPTION	BY

COMPLETION DATE:

(IN FEET) 1 INCH = 50 ft.

PID 20891

CALCULATED BHB | CHECKED JAN

RIGHT OF WAY PLAN
STA. 27+50 TO STA. 31+50

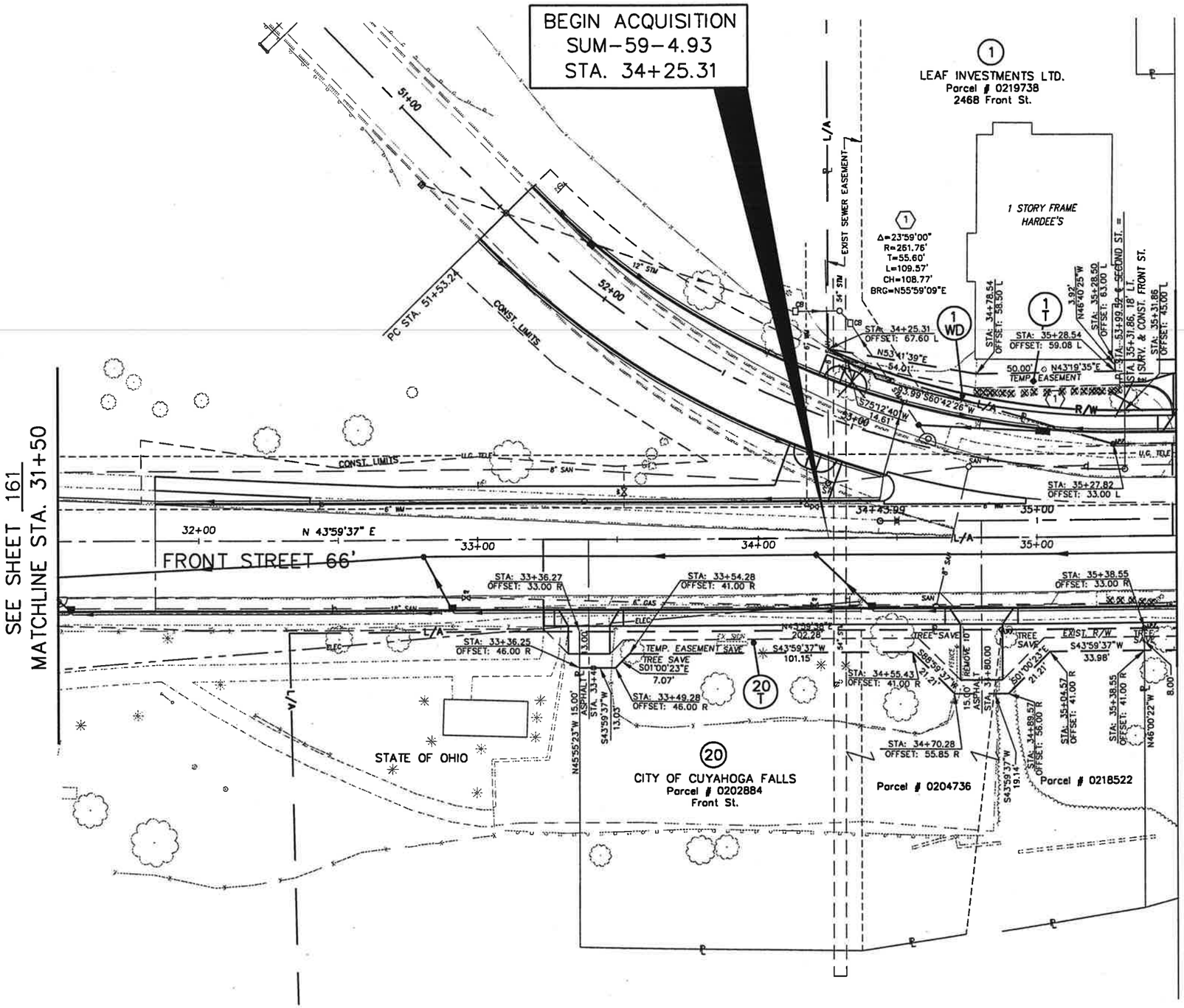
SUM - 59-4.93

3 / 13

161
171

J:\Proj\7036100\ROADWAY\ROWFront\70361RNA.DWG User: jan81152 Oct 15, 2002 - 11:41am

CITY OF CUYAHOGA FALLS, COUNTY OF SUMMIT, ORIGINAL STOW TOWNSHIP, LOT 12, T 3 N, R 10 W



CITY OF CUYAHOGA FALLS, COUNTY OF SUMMIT, ORIGINAL STOW TOWNSHIP, LOT 12, T 3 N, R 10 W

NO.	DATE	DESCRIPTION	BY

COMPLETION DATE:

(IN FEET) 1 inch = 20 ft.

PID 20891

CALCULATED BHB CHECKED JAN

RIGHT OF WAY PLAN
STA. 31+50 TO STA. 35+50

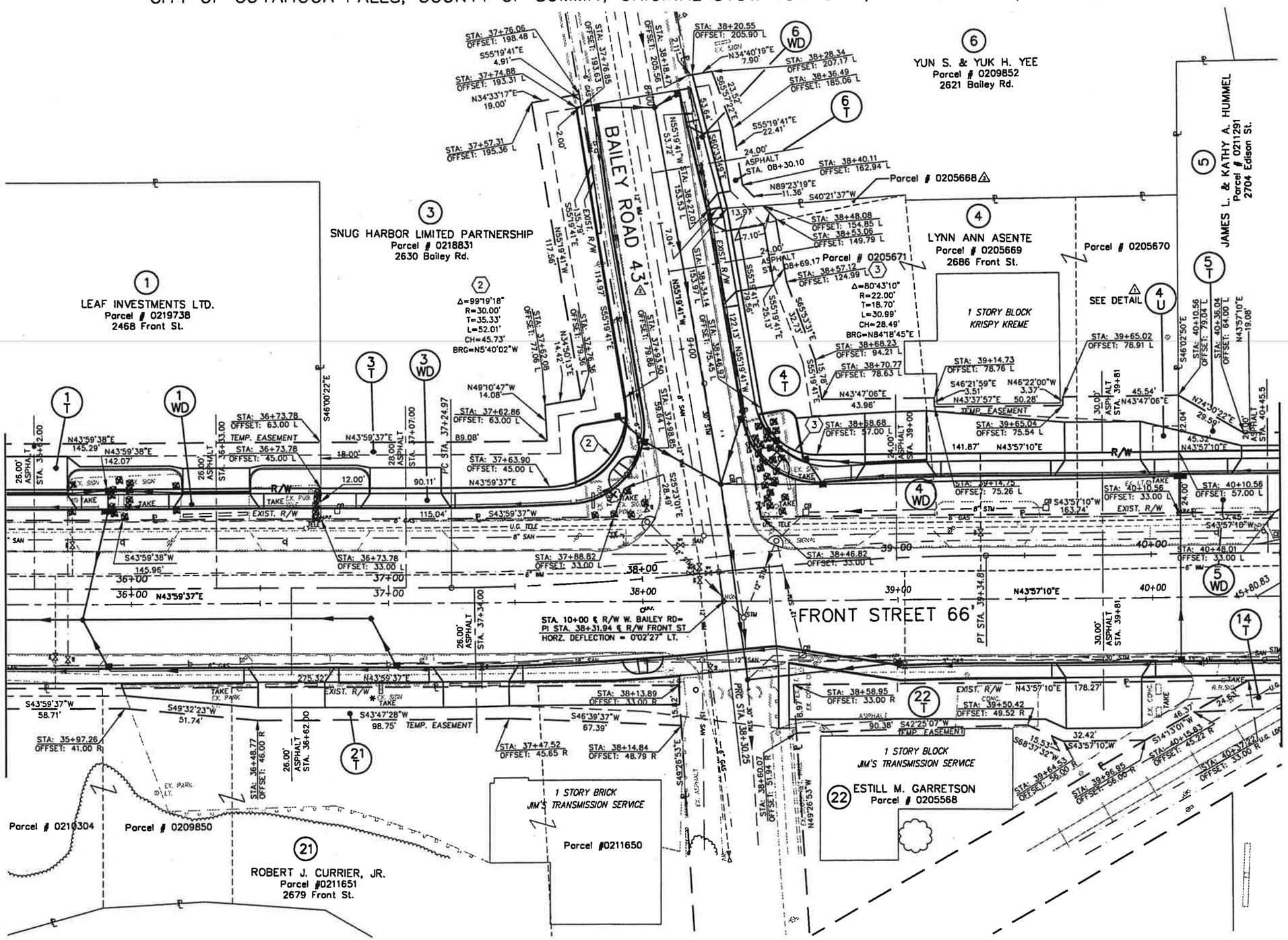
SUM - 59-4.93

4 / 13

162
171

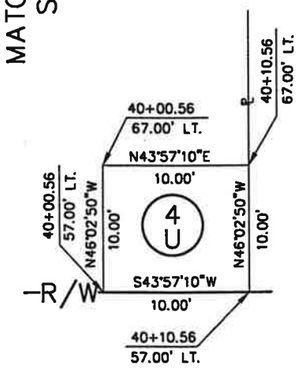
J:\Proj\7036100\ROADWAY\ROWFront\70361rnb.dwg User: jan81152 Oct 15, 2002 - 11:43am

CITY OF CUYAHOGA FALLS, COUNTY OF SUMMIT, ORIGINAL STOW TOWNSHIP, LOT 12 T 3 N, R 10 W



℄ SURVEY & CONSTRUCTION FRONT ST.
P.I. STA. 37+77.65
Δ = 06° 01' 55"
R = 1000'
T = 52.69'
L = 105.28'
E = 1.39'
e_{max} = N.C.

℄ SURVEY & CONSTRUCTION FRONT ST.
P.I. STA. 38+82.58
Δ = 05° 59' 28"
R = 1000'
T = 52.33'
L = 104.56'
E = 1.39'
e_{max} = N.C.



NO.	DATE	DESCRIPTION	BY
1	3/05/02	ADDED PARCEL 4U	BHB
2	8/12/02	REV. R/W WIDTH BAILEY RD.	BHB
3	9/18/02	ADDED AUDITOR PAR. 0205668	BHB

COMPLETION DATE:

CALCULATED BHB CHECKED JAN

PID 20891

RIGHT OF WAY PLAN
STA. 35+50 TO STA. 40+50

SUM - 59-493

5 / 13

163 / 171

CITY OF CUYAHOGA FALLS, COUNTY OF SUMMIT, ORIGINAL STOW TOWNSHIP, LOT 12 T 3 N, R 10 W

J:\Proj\7036100\ROADWAY\ROWFront\70361rnc.dwg User: jan81152 Oct 15, 2002 - 11:45am

CITY OF CUYAHOGA FALLS COUNTY OF SUMMIT ORIGINAL STOW TOWNSHIP, LOT 12, T 3 N, R 10 W

(10) ENSINE CORPORATION
Parcel # 0215285
2743 Second St.

(11) HAROLD, JR. & DIANE E. McCREADY
Parcel # 0207201
2726 Hudson Dr.

(7) VITO A. & JEAN M. CAETTA, TRUSTEES
Parcel # 0210509
2708 Edison St.

(5) JAMES L. & KATHY A. HUMMEL
Parcel # 0211292
2704 Edison St.

1 STORY BLOCK
CONSOLIDATED PRINTING & PUBLISHING CO.

1 STORY BRICK
SILVER SWAN TAVERN

EDISON ST. 50'

METRO REGIONAL TRANSIT AUTHORITY
Parcel # 217992

HUDSON DR. 60'

(25) RYAN PROPERTIES LIMITED
Parcel # 0217503
2730 Front St.

Parcel # 0217502
1 STORY FRAME
CROCKER'S RESTAURANT

Parcel # 0200198

BILL R. GOVE, JR.
Parcel # 0212252
2718 Front St.

1 STORY COMM. BLDG. (TO BE REMOVED)

FRONT ST. 66'

EX. ℄ R/W
N43° 57' 10" E

℄ SURV. & CONST.
N43° 57' 10" E

HOLLAND OIL CO.

1 STORY BRICK
HOLLAND OIL (CITGO)

1 STORY BLOCK
COMMERCIAL PROPERTY
2719 Front St.

(24) MYERS FAMILY
LIMITED PARTNERSHIP LTD.
Parcel # 0214895
2737 Front St.

Parcel # 0209977

BEGIN WORK
STA. 105+92.50

SEE SHEET 163
MATCHLINE STA. 40+50

MATCHLINE STA. 45+50
SEE SHEET 165

(8) ℄ SURVEY & CONSTRUCTION HUDSON DR.
P.I. STA. 106+22.03
Δ = 05° 15' 42"
R = 1000'
T = 45.95'
L = 91.83'
E = 1.06'
e_{max} = NC

(9) ℄ SURVEY & CONSTRUCTION HUDSON DR.
P.I. STA. 107+13.76
Δ = 05° 15' 00"
R = 1000'
T = 45.85'
L = 91.63'
E = 1.05'
e_{max} = NC

NO.	DATE	DESCRIPTION	BY
2	6/3/02	DELETE 14WD – RENAME 14SH	DS
3	6/3/02	DELETE PARCEL 14T-1	DS
4	6/3/02	RENUMBER 14T-2 TO 14T-1	DS
△	3/05/02	ADDED PARCEL 25U	BHB

COMPLETION DATE:

PID 20891
CALCULATED BHB
CHECKED JAN

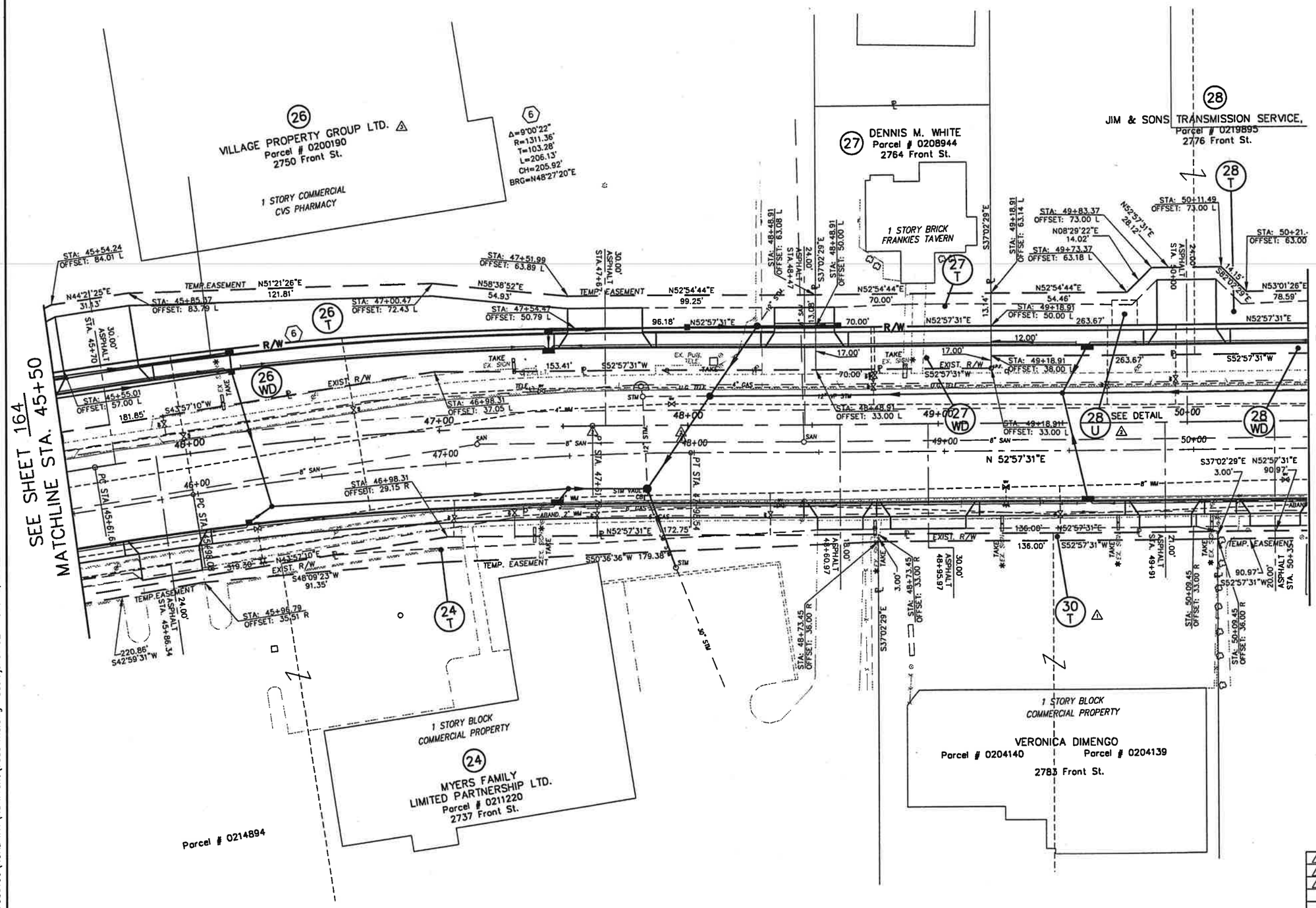
RIGHT OF WAY PLAN
STA. 40+50 TO STA. 45+50

SUM - 59-4.93

6 / 13
164 / 171

J:\Proj\7036100\ROADWAY\ROWFront\70361RND.DWG User: jan81152 Oct 15, 2002 - 11:47am

CITY OF CUYAHOGA FALLS, COUNTY OF SUMMIT , ORIGINAL STOW TOWNSHIP, LOT 12, T 3 N, R 10 W



© ℄ EXIST. R/W FRONT ST.
P.I. STA. 46+98.52
Δ = 09° 00' 21"
R = 1275.31'
T = 100.44'
L = 200.46'
E = 3.95'
CH = 200.26'
CH BRG. N48°27'20"E

④ ℄ SURVEY & CONSTRUCTION FRONT ST.
P.I. STA. 46+61.91
Δ = 09° 00' 22"
R = 1273.24'
T = 100.28'
L = 200.14'
E = 3.94
CH = 199.93'
e_{max} = NC

NO.	DATE	DESCRIPTION	BY
1	2/12/02	ADDED PARCEL 30T	BHB
2	3/05/02	ADDED PARCEL 28U	BHB
3	8/05/02	CHANGED NAME PARCEL 26	BHB

COMPLETION DATE:

(IN FEET) 1 inch = 20 ft.

PID 20891

CALCULATED BHB CHECKED JAN

RIGHT OF WAY PLAN
STA. 45+50 TO STA. 50+50

SUM - 59-4.93

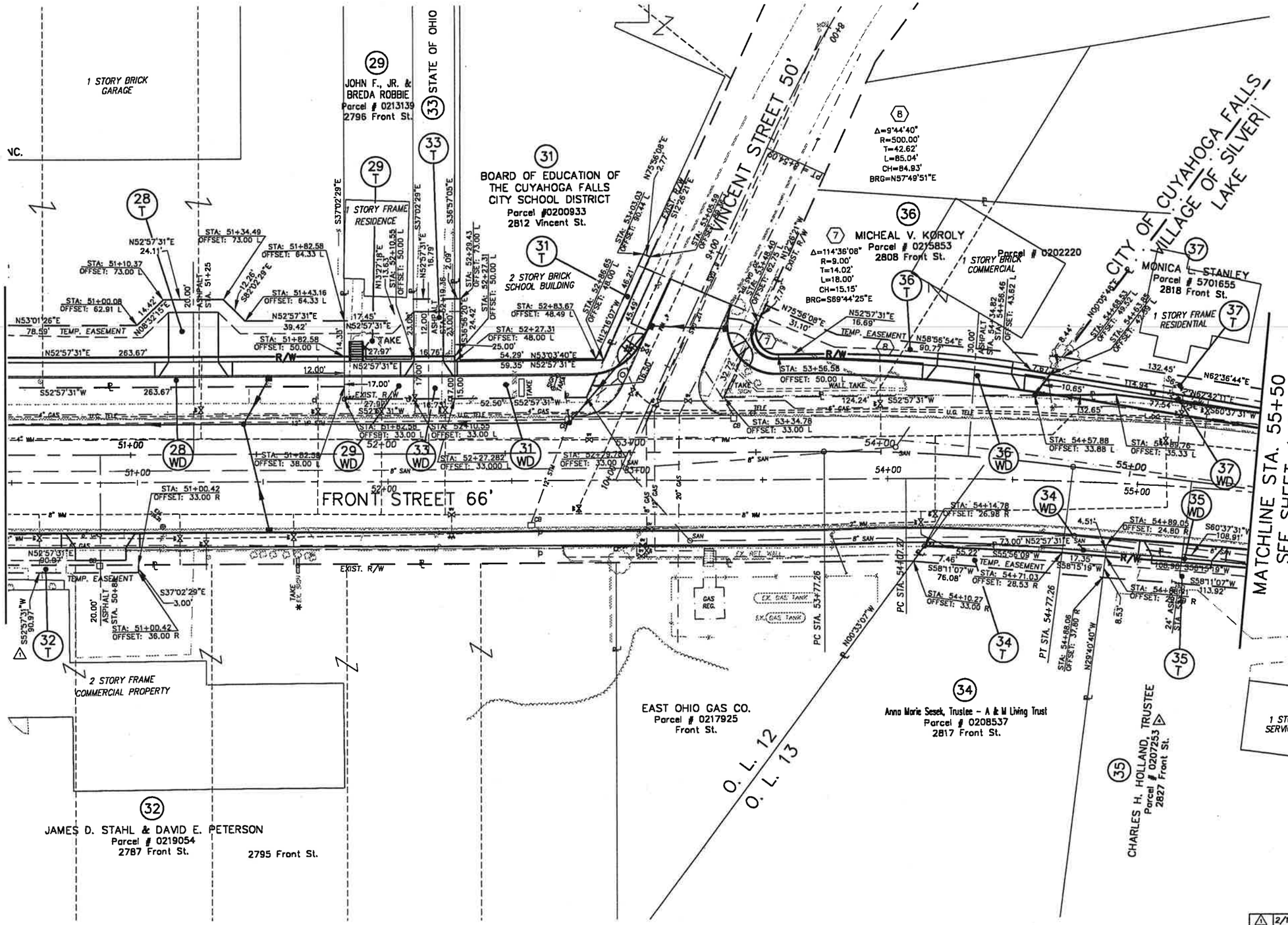
7 / 13

165 / 171

J:\Proj\7036100\ROADWAY\ROWFront\70361rne.dwg User: jon81152 Oct 15, 2002 - 11:48am

CITY OF CUYAHOGA FALLS, COUNTY OF SUMMIT , ORIGINAL STOW TOWNSHIP, LOT 12, T 3 N, R 10 W

CITY OF CUYAHOGA FALLS, COUNTY OF SUMMIT, ORIGINAL STOW TOWNSHIP, LOT 12, T 3 N, R 10 W



D
EX. ℄ R/W
FRONT ST.
P.I. STA. 55+07.27
Δ = 07° 40' 00"
R = 1492.44'
T = 100.00'
L = 199.70'
E = 3.35'
e_{max} = NC

5
℄ SURVEY &
CONSTRUCTION FRONT ST.
P.I. STA. 54+27.33
Δ = 07° 37' 59"
R = 750.63'
T = 50.07'
L = 100.00'
E = 1.67'
e_{max} = NC

NO.	DATE	DESCRIPTION	BY
1	2/12/02	REVISED PARCEL 32T	BHB
2	6/3/02	REV. BRG/DIST. PARCEL 36T	DS
3	7/30/02	REV. PCL. 31, ADDED PCL. 33	BHB
1	11/26/02	REV. AUDITOR'S PCL. NO.	BHB

COMPLETION DATE:

PID 20891
CALCULATED BHB
CHECKED JAN

RIGHT OF WAY PLAN
FRONT STREET - STA. 50+50 TO STA. 55+50

SUM - 59-4.93

8 / 13

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J:\Proj\7036100\ROADWAY\ROWFront\70361rnf.dwg User:bhb00125 Nov 26, 2002 - 9:58am

CITY OF CUYAHOGA FALLS, COUNTY OF SUMMIT, ORIGINAL STOW TOWNSHIP, LOT 12, T 3 N, R 10 W

VILLAGE OF SILVER LAKE, COUNTY OF SUMMIT, ORIGINAL STOW TOWNSHIP, LOT 13, T 3 N, R 10 W

END ACQUISITION
SUM-59-4.93
STA. 55+75.51

END PROJECT
SUM-59-4.93
STA. 56+03.48

END WORK
STA. 56+10.44

LANDON DRIVE 50' R/W

(9) Δ=8°22'51" R=70.00' T=5.13' L=10.24' CH=10.23' BRG=S56°26'03"W

(10) Δ=18°41'45" R=70.00' T=11.52' L=22.84' CH=22.74' BRG=S42°53'38"W

(37) MONICA L. STANLEY
Parcel # 5701655
2818 Front St.

(37 T) STA: 55+75.51 OFFSET: 31.71 L TEMP. EASEMENT

VILLAGE OF SILVER LAKE

CITY OF CUYAHOGA FALLS

(37 WD) STA: 55+65.50 OFFSET: 31.21 L

(35 WD) S60°37'31"W 108.91'

N60°37'31"E 5.02'

STA: 56+05.02 OFFSET: 29.38 R

108.98' S58°15'19"W

S58°11'07"W 113.92' TEMP. EASEMENT

S29°01'53"E 8.19'

STA: 55+99.90 OFFSET: 29.36 R

STA: 56+04.95 OFFSET: 37.56 R

(35 T) 1 STORY BRICK SERVICE STATION
Parcel # 0207253 ⚠

STA. 56+10.44 END ℄ CONST. FRONT ST. (BK) = PT STA. 56+06.98 ℄ EX. R/W (AHD)

(35) CHARLES H. HOLLAND, TRUSTEE
Parcel # 0207252 ⚠
2827 Front St.

OAKPARK BOULEVARD 100' R/W

CITY OF CUYAHOGA FALLS
VILLAGE OF SILVER LAKE

FRONT STREET 60' R/W

56+00 57+00 58+00 59+00 60+00

SEE SHEET 166
MATCHLINE STA. 55+50

CITY OF CUYAHOGA FALLS, COUNTY OF SUMMIT, ORIGINAL STOW TOWNSHIP, LOT 13, T 3 N, R 10 W

J:\Proj\7036100\ROADWAY\ROWFront\703611rng.dwg User:bhb00125 Nov 26, 2002 - 10:09am

NO.	DATE	DESCRIPTION	BY
⚠	11/26/02	REV. AUDITOR'S PAR. NO.	BHB
COMPLETION DATE:			

PID 20891
CALCULATED BHB
CHECKED JAN

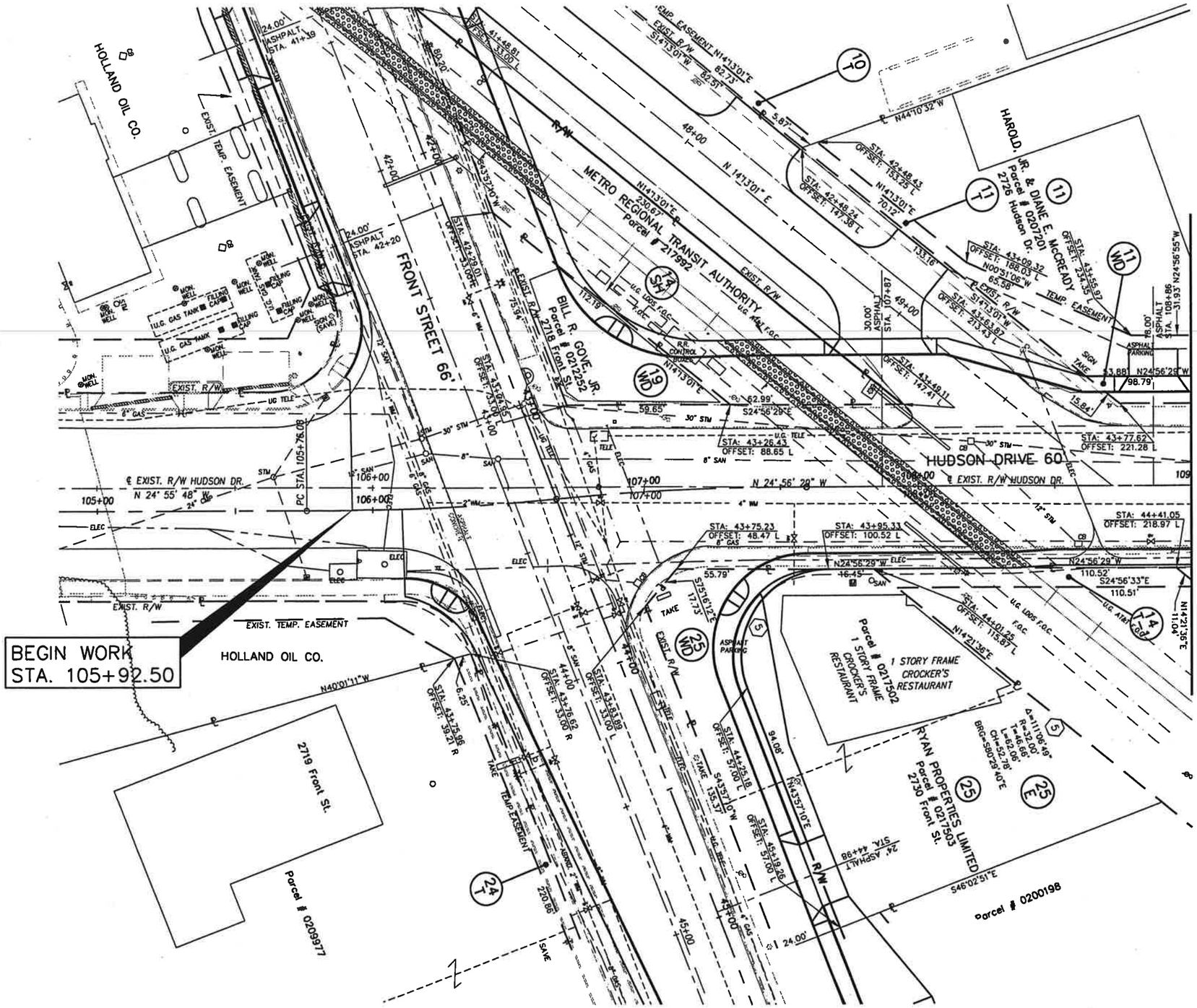
RIGHT OF WAY PLAN
FRONT STREET - STA. 55+50 TO STA. 60+00

SUM - 59-4.93

9 / 13

167
171

CITY OF CUYAHOGA FALLS, COUNTY OF SUMMIT, ORAGINAL STOW TOWNSHIP, LOT 12, T 3 N, R 10 W



CITY OF CUYAHOGA FALLS, COUNTY OF SUMMIT, ORIGINAL STOW TOWNSHIP, LOT 12, T 3 N, R 10 W

NO.	DATE	DESCRIPTION	BY
2	6/3/02	DEL. 14T1, RENAME 14T2 TO 14T1	DS
1	6/3/02	DEL. 14WD, REV. LIMITS TO 14SH	DS

COMPLETION DATE:

PID 20891

CALCULATED BHB

CHECKED RER

RIGHT OF WAY PLAN
HUDSON DRIVE – STA. 106+00 TO STA. 110+00

SUM - 59-4.93

10 / 13

168
171

J:\Proj\7036100\ROADWAY\ROWFront\703611rnh.dwg User: jan81152 Oct 16, 2002 - 8:29am

CITY OF CUYAHOGA FALLS, COUNTY OF SUMMIT ORIGINAL STOW TOWNSHIP, LOT 12, T 3 N, R 10 W

MATCHLINE STA. 109+00 SEE SHEET 168

(10) ENSINE CORPORATION
Parcel # 0215286
2743 Second St.

(12) FILOMENA McINTYRE
Parcel # 0208662
2638 Hudson Dr.

(13) TONG CHOD & PATRICIA JEAN CHOI
Parcel # 0217398
2743 Hudson Dr. (3)

SECOND STREET 66'

HUDSON DRIVE 60'

Δ=109°02'31"
R=7.54'
T=10.58'
L=14.35'
CH=12.28'
BRG=S79°27'44"E

1 STORY BLOCK McGREADY'S TIRE & AUTO

1 STY. COMM. BLDG.

1 STY. COMM. BLOCK CHOI'S TAE KWON DO INSTITUTE

2 STY. BRICK RESTAURANT ROCKNE'S

END WORK STA. 112+00

(DO NOT DISTURB) 1 STY. COMM. BLDG.

ANTHONY BRANDT
Parcel # 0201675
2735 Hudson Dr.

2 STY. BR. CUYAHOGA FALLS HISTORICAL SOCIETY

LINDA M. ARMENT
Parcel # 0200463
2751 Hudson Dr.

(16) RICHARD L. & ELISABETH A. HURLEY
Parcel # 0214239
2753 Hudson Dr.

RICHARD L. HURLEY
Parcel # 0207604
Hudson Dr.

EX. WALL (DO NOT DISTURB)

NO.	DATE	DESCRIPTION	BY
1	5/6/02	ADDED EX. WALL TO PARCEL 16	JAN
2	7/22/02	ADDED CURVE TO EX. R/W	BHB
3	9/18/02	REVISED AUDITORS PARCEL No.	JAN

COMPLETION DATE:

PID 20891

CALCULATED BHB CHECKED JAN

RIGHT OF WAY PLAN
HUDSON DRIVE – STA. 110+00 TO STA. 115+00

SUM - 59-4.93

11 / 13

169 / 171

J:\Proj1\7036100\ROADWAY\ROWFront\703611rni.dwg User: jan81152 Oct 15, 2002 – 11:54am

CITY OF CUYAHOGA FALLS, COUNTY OF SUMMIT ORIGINAL STOW TOWNSHIP, LOT 12, T 3 N, R 10 W

SUMMARY OF ADDITIONAL RIGHT OF WAY

TOTAL NUMBER OF :

30 OWNERSHIPS
51 PARCELS
1 TOTAL TAKES

1 OWNERSHIPS WITH STRUCTURES INVOLVED
0 OWNERSHIPS WITH "P" ITEMS

NET RESIDUE = RECORD AREA – TOTAL P.R.O. – NET TAKE

ALL AREAS IN SQUARE FEET

PARCEL NO.	OWNER	SHEET NO.	OWNER'S RECORD BOOK	OWNER'S RECORD PAGE	AUDITOR'S PARCEL	RECORD AREA (A.C.)	TOTAL P.R.O.	GROSS TAKE	P.R.O. IN TAKE	NET TAKE	STRUCTURE	NET RESIDUE LEFT	NET RESIDUE RIGHT	TYPE FUND	REMARKS & PERSONALLTY	AS REQUIRED BOOK	AS REQUIRED PAGE	
1WD	LEAF INVESTMENTS LIMITED		REC.	NO.	219738	33,436	0	2,998	0	2,998	S(2)	30,438	------					
1T			54395987					3,478	0	3,478					GRADING & RECONNECT DRIVE			
2	NOT USED																	
3WD	SNUG HARBOR LIMITED PARTNERSHIP		O.R. 1717	525	218831	135,472	0	1,931	0	1,931	S	133,541	------					5
3T								4,499	0	4,499					GRADING & RECONNECT DRIVE			
4WD	LYNN ANN ASENTE		7452	733	205668	362	0	63	0	63		299						6
					205671	8,628	0	2,193	0	2,193	S	6,435						
					205670	4,974	0	960	0	960		4,014						
					205669	7,521	0	1,518	0	1,518		6,003						
	TOTAL PARCEL 4WD					21,485	0	4,734	0	4,734		16,751	------					
4T								4,859	0	4,859					GRADING & RECONNECT DRIVE			
4U								100	0	100					UTILITY EASEMENT			1
5WD	JAMES L. HUMMEL & KATHY A. HUMMEL		6925	100	211291	6,970	0	840	0	840	S	6,130			•SIGN			
					211292	9,982	0	498	0	498		9,484						
	TOTAL PARCEL 5WD					16,952	0	1,338	0	1,338		15,614	------					
5T								680	0	680					GRADING & RECONNECT DRIVE			
6WD	YUN S. YEE & YUK H. YEE		REC.	NO.	209852	21,392	0	241	0	241	NO	21,151	------					5
6T			54236758					503	0	503					GRADING & RECONNECT DRIVE			
7T	VITO A. CAETTA & JEAN M. CAETTA, TRUSTEES		O.R. 1644	200		9,375	0	427	0	427	NO	9,375	------		GRADING			
8	NOT USED																	
9	NOT USED																	
10WD	ENSINE CORPORATION		7092	338	215286	7,104	0	327	0	327	NO	6,777						
					215285	6,300	0	0	0	0		6,300						
					215284	4,200	0	0	0	0		4,200						
					215283	18,426	0	0	0	0		18,426						
	TOTAL PARCEL 10WD					36,030	0	327	0	327		35,703	------					
10T								413		413					GRADING			
11WD	HAROLD McCREADY, Jr. & DIANE E. McCREADY		6087	679	207201	14,790	0	944	0	944	S	13,846	------					
11T								1,820	0	1,820					GRADING & RECONNECT DRIVE			
12WD	FILOMENA McINTYRE		O.R. 336	874	208662	3,464	0	324	0	324	NO	3,140	------					4
13WD	TONG CHOD CHOI & PATRICIA JEAN CHOI		7321	525	217397	18,163	0	0	0	0	NO	18,163						6
					217398	8,712	0	194	0	194		8,518						6
					217399	14,970	0	0	0	0		14,970						
					214343	6,142	0	0	0	0		6,142						
	TOTAL PARCEL 13WD					47,987	0	194	0	194		47,793	------					
13–T								935	0	935					GRADING			
14SH	METRO REGIONAL TRANSIT AUTHORITY		IMG# 54697545		217992	145,926	0	6,819	0	6,819	NO	139,107						
14T								779	0	779					GRADING			
14T–1								773	0	773					GRADING			
15	NOT USED																	
16T	RICHARD L. HURLEY & ELIZABETH A. HURLEY		6784	21		7,200	0	92	0	92	NO	7,200	------		GRADING			
17T	LINDA M. ARMENT		O.R. 1624	305		5,280	0	385	0	385	NO	5,280	------		GRADING			
18	NOT USED																	

NOTE:
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NOTE:
ALL TEMPORARY PARCELS TO BE OF 18 MONTHS DURATION.

• DENOTES RIGHT OF WAY ENCROACHMENT

NO.	DATE	DESCRIPTION	
1	3/05/02	ADDED PARCEL 4U	BHB
2	6/3/02	UPDATE NAME PAR 14, DEL 14WD, REV TO 14SH	DS
3	6/3/02	DEL ORIG. 14T1, REVISE ORIG 14T2 TO 14T1	DS
4	7/22/02	REVISED AREAS PARCEL 12	BHB
5	8/12/02	REV. PAR. 3WD,3T,4WD,4T & 6T ADDED 6WD	BHB
6	9/18/02	REV. PAR. 13WD, 4WD	JAN

OWNERSHIP VERIFIED BY: DATE:
COMPLETION DATE:

FEDERAL PROJECT NO.
STATE JOB NO.
PID
CALCULATED BHB CHECKED JAN

SUMMARY OF ADDITIONAL RIGHT OF WAY
PARCEL 1 TO PARCEL 18

SUM - 59-483

12 / 13

170
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SUMMARY OF ADDITIONAL RIGHT OF WAY

NET RESIDUE = RECORD AREA – TOTAL P.R.O. – NET TAKE
ALL AREAS IN SQUARE FEET

PARCEL NO.	OWNER	SHEET NO.	OWNER'S RECORD BOOK	OWNER'S RECORD PAGE	AUDITOR'S PARCEL	RECORD AREA (A.C.)	TOTAL P.R.O.	GROSS TAKE	P.R.O. IN TAKE	NET TAKE	STRUC-TURE	NET RESIDUE LEFT	NET RESIDUE RIGHT	TYPE FUND	REMARKS & PERSONALLTY	AS REQUIRED BOOK	AS REQUIRED PAGE
19WD	BILL R. GOVE, Jr.		O.R. 338	907	212252	2,113	0	2,113	0	2,113	YES	0	-------		TOTAL TAKE		
20T	CITY OF CUYAHOGA FALLS		6500	475		23,210		2,208		2,208	NO	-------	23,210		GRADING & RECONNECT DRIVE		
			7465	262													
21T	ROBERT J. CURRIER, JR.		6579	93		39,020	0	3,226	0	3,226	S	-------	39,020		•SIGN, RECONNECT DRIVE		
22T	ESTILL M. GARRETSON		3051	629		8,750	0	3,100	0	3,100	NO	-------	8,750		GRADING & RECONNECT DRIVE		
23	NOT USED																
24T	MYERS FAMILY LIMITED PARTNERSHIP		REC. NO. 54099528			85,641	0	2,695	0	2,695	S(3)	-------	85,641		•SIGNS(3)		
25WD	RYAN PROPERTIES, LIMITED		REC. NO. 4007829		217502	7,282	0	2,436	0	2,436	S	4,846					
					217503	7,665	0	1,440	0	1,440		6,225					
	TOTAL PARCEL 25WD					14,947	0	3,876	0	3,876		11,071	-------				
25E								11,071	0	11,071								⚠
26WD	VILLAGE PROPERTY GROUP LTD.		REC. NO. 54594912		200198	4,356	0	1,440	0	1,440	S(2)	2,916			•SIGN(1)			⚠
					200190	89,298	0	5,128	0	5,128		84,170					
	TOTAL PARCEL 26WD					93,654	0	6,568	0	6,568		87,086	-------				
26T								6,454	0	6,454					GRADING & RECONNECT DRIVE		
27WD	DENNIS M. WHITE		O.R. 819	236	208944	7,385	0	1,190	0	1,190	S	6,195	-------		•SIGN		
27-T								918	0	918					GRADING & RECONNECT DRIVE		
28WD	JIM & SONS TRANSMISSION SERVICE, INC.		REC. NO. 54664020		0219895	43,560	0	3,164	0	3,164	NO	40,396	-------				
28T								4,209	0	4,209					GRADING & RECONNECT DRIVE		
28U								100	0	100					UTILITY EASEMENT			⚠
29WD	JOHN F. ROBBIE, Jr. & BREDA ROBBIE		6681	506	213139	4,620	0	475	0	475	NO	4,145	-------				
29T								446	0	446					GRADING		
30T	VERONICA DIMENGO		7108	357		25,410	0	408	0	408	S(3)	-------	25,410		•SIGNS(3)			⚠
			7108	359														⚠
31WD	BOARD OF EDUCATION OF THE CUYAHOGA		4600	72	200933	26,623	0	839	0	839	S(2)	25,784	-------				
	FALLS CITY SCHOOL DISTRICT																
31T								212	0	212					GRADING		
32T	JAMES D. STAHL & DAVID E. PETERSON		REC. NO. 54236139		219054	20,735	0	273	0	273	S	-------	20,735		•SIGN			⚠
33WD	STATE OF OHIO				200933	2,867	0	285	0	285	NO	2,582	-------					⚠
33T								386	0	386					RECONNECT DRIVE		
34WD	Anna Marie Sesek, Trustee – A & M Living Trust		REC. NO. 54238272		208537	25,265	0	144	0	144	NO	-------	25,121					⚠
34T								571	0	571					GRADING		
35WD	HOLLAND OIL COMPANY, AN OHIO CORPORATION		REC. NO. 54387931		207252	15,000	0	2	0	2	NO		14,998					⚠
					207253	21,200	0	243	0	243			20,957					
	TOTAL PARCEL 35WD					36,200	0	245	0	245		-------	35,955					
35T								963	0	963					GRADING		
36WD	MICHAEL V. KOROLY		O.R. 1186	439	202220	5,946	0	1,126	0	1,126	S	4,820					
					215853	5,978	0	785	0	785		5,193					
	TOTAL PARCEL 36WD					11,924	0	1,911	0	1,911		10,013	-------				
36-T								994	0	994					GRADING & RECONNECT DRIVE		
37WD	MONICA L. STANLEY		O.R. 645	811	5701655	13,504	0	395	0	395	NO	13,109	-------				
37T								953	0	953					GRADING		

NOTE:
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NOTE:
ALL TEMPORARY PARCELS TO BE OF 18 MONTHS DURATION.

• DENOTES RIGHT OF WAY ENCROACHMENT

NO.	DATE	DESCRIPTION	BY
⚠	2/12/02	ADDED PARCEL 30T	BHB
⚠	3/05/02	ADDED PARCELS 25U & 28U	BHB
③	6/3/02	REVISE AREA 36-T	DS
⚠	7/30/02	REV. PCL. 31, ADDED PCL. 33	BHB
⚠	8/05/02	NAME CHANGE PARCEL 26	BHB
⚠	9/27/02	OWNERSHIP CHANGE PARCEL 34	JAN
⚠	11/26/02	REV. PCL. 35WD	BHB

FIELD REVIEW BY: DATE:
OWNERSHIP VERIFIED BY: DATE:
COMPLETION DATE:

FEDERAL PROJECT NO.
STATE JOB NO.
PID
CALCULATED BHB
CHECKED JAN

SUMMARY OF ADDITIONAL RIGHT OF WAY
PARCEL 19 TO PARCEL 37

SUM - 59-4.93

13 / 13

171
171

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INTRODUCTION

THIS REPORT CONSISTS OF THE SOILS INVESTIGATION A 0.43 MILE SECTION OF THE SR-59, SUM-FRONT STREET IMPROVEMENTS BEGINNING AT SR-8 NORTHBOUND OFF RAMP (STA 34+ 20), TERMINATING AT LANDON DRIVE (STA 57+ 00). INCLUDED IN THIS REPORT IS A SOIL PROFILE OF SR-59.

MAXIMUM PROPOSED CUT AND FILL EMBANKMENTS ARE SHOWN IN THE PROJECT INDEX ON THIS SHEET.

GEOLOGY AND OBSERVATIONS OF THE PROJECT

THE PROJECT IS LOCATED ON THE GLACIATED, MODERATELY ROLLING ALLEGHENY PLATEAU AT ELEVATIONS RANGING FROM 1,025 TO 1030. THE CUYAHOGA RIVER IS LOCATED APPROXIMATELY 250 FEET SOUTHEAST PARALLEL TO THE PROJECT SITE. SANDSTONE FORMED OF SHARON CONGLOMERATE IN MASSIVE FORMATION LIES AT VERY SHALLOW DEPTHS ALONG THE PROJECT SITE.

EXPLORATION

EXPLORATORY BORINGS WERE MADE BY MEANS OF A MECHANICALLY POWERED HOLLOW-STEM ROTARY AUGER MOUNTED ON A MOBILE PLATFORM, PERFORMED IN DECEMBER 1997. INCLUDED IN THIS REPORT IS A LOG OF TEST BORINGS MADE FOR THE ROADWAY IMPROVEMENTS PROJECT.

INVESTIGATIONAL FINDINGS

TEST BORINGS R-1, R-2, R-4 AND R-5 WERE ADVANCED THROUGH VARIABLE TYPES OF PAVEMENT STRUCTURES, INCLUDING ASPHALT CONCRETE, PAVING BRICKS AND REINFORCED CONCRETE BASE. A SUMMARY OF PAVEMENT STRUCTURES IS INCLUDED IN THIS REPORT.

SUBGRADE SOILS ENCOUNTERED ALONG THE PROJECT WERE PREDOMINANTLY SANDY SILT (A-4a), AND GRAVEL AND STONE FRAGMENTS WITH SAND (A-1-b). NATURAL MOISTURE CONTENTS IN THE SUBGRADE SAMPLE OBTAINED FROM THE UPPER TWO FEET OF THE SUBGRADE WERE FOUND TO BE GENERALLY IN THE LOWER (SAMPLES FROM BORING R-1 AND R-2) AND TO HIGHER (SAMPLES FROM BORING R-4 AND R-5(RANGE OF THEIR PLASTIC LIMITS.)

SANDSTONE BEDROCK WAS ENCOUNTERED IN ALL FOUR TEST BORINGS AT DEPTHS OF 3.0, 4.5, 3.5 AND 10.0 FEET IN TEST BORINGS R-1, R-2, R-3 AND R-4, RESPECTIVELY. ALL TEST BORINGS WERE TERMINATED IN THE SANDSTONE. BASED ON INFORMATION OBTAINED FROM THE TEST BORINGS ON SUM-HUDSON DR. BRIDGE SITE, MASSIVE SANDSTONE BEDROCK IS ANTICIPATED ON THE SITE.

FREE WATER WAS NOT ENCOUNTERED IN ANY OF THE TEST BORINGS

FOR SPECIFIC SUBSURFACE CONDITIONS AT VARIOUS DEPTHS, REFER TO THE INDIVIDUAL TEST BORING LOGS THAT FORM A PART OF THESE PLANS.

PROJECT INDEX

STATIONS FROM	STATIONS TO	PLAN VIEW SHEET	PROFILE SHEET	CUT MAX.	FILL EMB. MAX.
FRONT STREET					
34+20	45+50	2	2	--	--
45+50	57+00	3	3	--	--

LEGEND FOR PROJECT AVERAGE RESULTS OF TESTS – 16 SAMPLES TESTED

DESCRIPTION	OHIO CLASS	% AGG.	% C. SAND	% F. SAND	% SILT	% CLAY	LL	P.I.	Wn %	SAMPLES TESTED
GRAVEL AND/OR STONE FRAGMENTS	A-1-A ( )	--	--	--	--	--	--	--	--	0
GRAVEL AND/OR STONE FRAGMENTS WITH SAND	A-1-B ( )	47	15	25	*	13	--	--	14	2
FINE SAND	A-3 ( )	--	--	--	--	--	--	--	--	0
COARSE AND FINE SAND	A-3A ( )	--	--	--	--	--	--	--	--	0
GRAVEL AND/OR STONE FRAGMENTS WITH SAND AND SILT	A-2-4 ( )	--	--	--	--	--	--	--	--	0
GRAVEL AND/OR STONE FRAGMENTS WITH SAND, SILT, AND CLAY	A-2-6 ( )	--	--	--	--	--	--	--	--	0
SANDY SILT	A-4A (4)	10	11	30	16	33	25	9	20	4
SILT	A-4B 0	--	--	--	--	--	--	--	--	0
ELASTIC SILT AND CLAY WITH OR WITHOUT ORGANIC MATERIAL	A-5 ( )	--	--	--	--	--	--	--	--	0
SILT AND CLAY	A-6A ( )	--	--	--	--	--	--	--	--	0
SILTY CLAY	A-6B ( )	--	--	--	--	--	--	--	--	0
ELASTIC CLAY	A-7-5 ( )	--	--	--	--	--	--	--	--	0
CLAY	A-7-6 ( )	--	--	--	--	--	--	--	--	0
TOP SOIL										VISUAL CLASSIFICATION
ROCK–SOIL MIXTURE										VISUAL CLASSIFICATION
PEAT OR ORGANIC MATERIAL										VISUAL CLASSIFICATION
LIMESTONE										VISUAL CLASSIFICATION
SANDSTONE										VISUAL CLASSIFICATION
SHALE										VISUAL CLASSIFICATION

- AUGER BORING – PLAN VIEW
- DRIVE SAMPLE AND/OR CORE BORING – PLAN VIEW
- AUGER BORING PLOTTED TO VERTICAL SCALE ONLY
- DRIVE SAMPLE AND/OR CORE BORING PLOTTED TO VERTICAL SCALE ONLY

- ● WATER CONTENT NEARLY EQUAL TO OR GREATER THAN LIQUID LIMIT.
- ⊖ INDICATES A NON PLASTIC MATERIAL WITH A HIGH WATER CONTENT
- ▼ —— FREE WATER
- ▼ —— STATIC WATER LEVEL
- X–Y–Z NUMBER OF BLOWS FOR "STANDARD PENETRATION" TEST.
  X=NUMBER OF BLOWS FOR FIRST 6 INCHES
  Y=NUMBER OF BLOWS FOR SECOND 6 INCHES
  Z=NUMBER OF BLOWS FOR THIRD 6 INCHES

NOTE: FIGURES BESIDE BORINGS INDICATE WATER CONTENT IN PERCENT. e.g. 15
* DENOTES COMBINED SILT AND CLAY CONTENT.
SYMBOLS SHOWN HEREIN CORRESPOND TO LOCATION AND DESIGN MANUAL, VOLUME I, ROADWAY DESIGN, DATED DECEMBER 1990 (REF. SECTION 701.2 – LEGEND AND CLASSIFICATION OF SOILS).

NOTES

INFORMATION SHOWN BY THIS SUBGRADE PROFILE WAS OBTAINED SOLELY FOR USE IN ESTABLISHING DESIGN CONTROLS FOR THE PROJECT. J&L LABORATORIES, INC. ONLY GUARANTEES THAT DATA WHERE ACTUAL SAMPLES WERE SECURED AND TESTED. VARIATIONS WITHIN THE SAMPLING INTERVALS AS WELL AS AMONG THE TEST LOCATIONS, MAY AND PROBABLY DO EXIST. INFORMATION PROVIDED HERE IS NOT TO BE CONSTRUED AS A PART OF THE PLANS GOVERNING CONSTRUCTION OF THE PROJECT.

ALL AVAILABLE SOIL AND BEDROCK INFORMATION WHICH CAN BE CONVENIENTLY SHOWN ON THE SOIL PROFILE SHEETS HAS BEEN SO REPORTED. ADDITIONAL SUBSURFACE INVESTIGATIONS, SOIL TEST, AND BEDROCK BORINGS MAY HAVE BEEN MADE TO STUDY SOME SPECIAL ASPECT OF THE PROJECT. COPIES OF THIS DATA, IF ANY MAY BE INSPECTED IN THE DISTRICT DEPUTY DIRECTOR'S OFFICE, THE OFFICE OF MATERIALS MANAGEMENT AT 1600 WEST BROAD STREET, THE OFFICE OF ROADWAY ENGINEERING OR THE OFFICE OF STRUCTURAL ENGINEERING AT 1980 WEST BROAD STREET.

LOCATION MAP

Recon. – J.X. – 12/15/97
Drilling – Auger – O.T.B. – 12/18/97
Drafting – L.L.C. – 12/12/99 – 12/18/99

PAVEMENT CORE DATA

CORE NUMBER	STATION · OFFSET	PAVEMENT TYPE	THICKNESS (IN)
C-1	37+77.4	ASPHALT CONCRETE	4
	17.8' LT	CONCRETE	9
C-2	42+19.0	ASPHALT CONCRETE	3
	17.1' RT	RED PAVING BRICK	4
		CONCRETE	4
C-3	(FOR HUDSON DRIVE PROJECT)		
C-4	46+95.4	ASPHALT CONCRETE	6
	23.5' LT	RED PAVING BRICK	4
		SAND	1
		CONCRETE	7
C-5	52+12.0	ASPHALT CONCRETE	4
	17.8' RT	CONCRETE	8

SUMMARY OF SOIL TEST DATA

NOTE: NP SHOWN IN LIQUID LIMIT AND PLASTICITY INDEX COLUMNS INDICATES THAT THE MATERIAL IS NON–PLASTIC.
* DENOTES COMBINED SILT AND CLAY CONTENT.

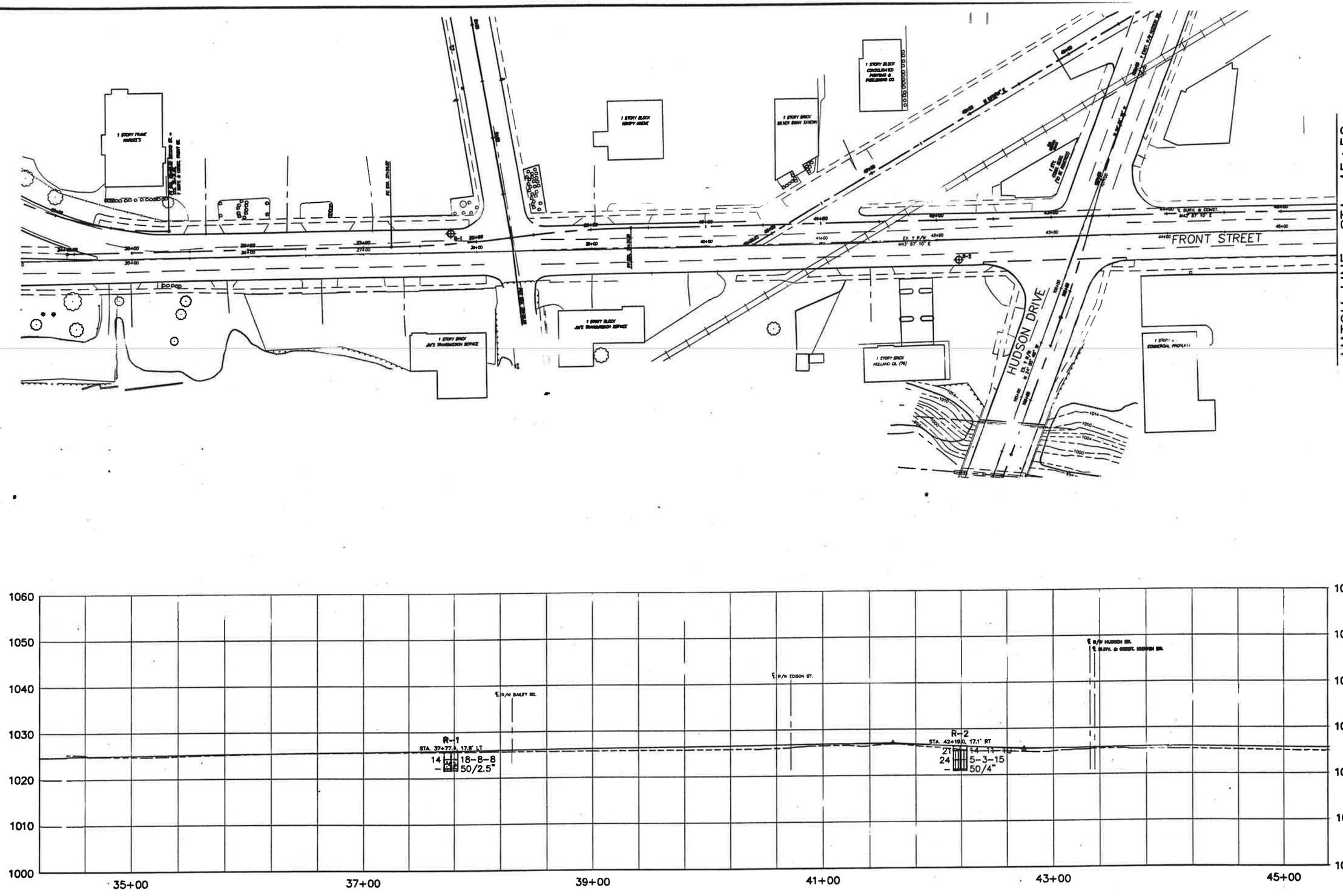
STATION & OFFSET	DEPTH FROM		TO	% AGG.	% C.S.	% F.S.	% SILT	% CLAY	LL	P.I.	% W.C.	ODOT CLASS.
0+ 177.58, 7.60 m Lt. (R-1)	1.1	-	1.5	BROWN/GRAY GRAVEL AND STONE FRAGMENTS W/ SAND (FILL)							...	VISUAL
	1.5	-	2.0	42	21	24	*	13			14	A-1-b
	2.0	-	2.5	BROWN/GRAY GRAVEL AND STONE FRAGMENTS W/ SAND (FILL)							10	VISUAL
	2.5	-	3.0	BROWN/GRAY GRAVEL AND STONE FRAGMENTS W/ SAND (FILL)							9	VISUAL
	3.0	-	4.0	BROWN WEATHERED SANDSTONE							...	VISUAL
0+ 177.58, 7.60 m Lt. (R-2)	0.9	-	1.5	BROWN SANDY SILT (FILL)							12	VISUAL
	1.5	-	2.0	BROWN SANDY SILT (FILL)							21	VISUAL
	2.0	-	2.5	3	10	37	*	50	22	8	12	A-4a
	2.5	-	3.0	BROWN SANDY SILT (FILL)							..	VISUAL
	3.0	-	4.5	BROWN SANDY SILT (FILL)							24	VISUAL
	4.5	-	5.0	TAN/BROWN WEATHERED SANDSTONE							12	VISUAL
	5.0	-	5.3	TAN/BROWN WEATHERED SANDSTONE							..	VISUAL

STATION & OFFSET	DEPTH FROM		TO	% AGG.	% C.S.	% F.S.	% SILT	% CLAY	LL	P.I.	% W.C.	ODOT CLASS.
0+ 177.58, 7.60 m Lt. (R-4)	1.5	-	3.0	7	11	38	*	44	NP	NP	23	A-4a
	3.0	-	3.5	BROWN SANDY SILT							21	VISUAL
	3.5	-	4.0	BROWN WEATHERED SANDSTONE							12	VISUAL
0+ 177.58, 7.60 m Lt. (R-5)	1.0	-	2.0	BROWN GRAVE W/ SAND							16	VISUAL
	2.0	-	3.0	5	9	18	22	46	28	10	27	A-4a
	3.0	-	4.0	BROWN SANDY SILT (FILL)							22	VISUAL
	4.0	-	5.0	BROWN SANDY SILT (FILL)							20	VISUAL
	5.0	-	6.0	26	12	25	*	37	NP	NP	17	A-4a
	6.0	-	7.0	BROWN SANDY SILT (FILL)							14	VISUAL
	7.0	-	8.0	BROWN SANDY SILT (FILL)							13	VISUAL
	8.0	-	9.0	52	10	26	*	12	--	--	14	A-1-b
	9.0	-	10.0	BROWN GRVEL AND STONE FRAGMENTS W/ SAND							10	VISUAL
	10.0	-	10.5	BROWN WEATHERED SANDSTONE							--	VISUAL

J&L LABORATORIES, INC.
GEOTECHNICAL CONSULTING & TESTING
215 RAINBOW STREET
WADSWORTH, OH 44281-1444

DRAWN	REVIEWED	DATE	CALCULATED	CHECKED
LLC	JX	12/15/99	--	JX

SOIL PROFILE
FRONT STREET IMPROVEMENTS
SUM–FRONT STREET



DRAWN LLC | REVIEWED JX | DATE 12/10/98 | CALCULATED - - - | CHECKED JX

VERTICAL AND HORIZONTAL SCALE 1"=40'

SOIL PROFILE
FRONT STREET IMPROVEMENTS

SUM-FRONT STREET

2 / 3

MATCH LINE STA. 45+50

1 STORY COMMERCIAL
CVS PHARMACY

1 STORY BRICK
GARAGE

1 STORY FRAME
BUSINESS
REMODEL

1 STORY BLOCK
COMMERCIAL PROPERTY

1 STORY BLOCK
COMMERCIAL PROPERTY

2 STORY FRAME
COMMERCIAL PROPERTY

R-5
STA. 46+19.0 23.5' LT
23 1-1-1
8 75/6"

R-4
STA. 52+12.0 17.8' RT
16 1-2-1
22 1-2-3
17 6-7-7
13 6-9-13
10 8-26-34

℄ R/W VINCENT ST.

1060
1050
1040
1030
1020
1010
1000

47+00
49+00
51+00
53+00
55+00

DRAWN LLC
REVIEWED JX
DATE 12/10/98
CALCULATED ----
CHECKED JX

0 20 40
VERTICAL AND HORIZONTAL SCALE
1"=40'

SOIL PROFILE
FRONT STREET IMPROVEMENTS

SUM-FRONT STREET

2/3