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CITY OF DETROIT STANDARD PLANS

WHERE THE FOLLOWING ITEMS ARE CALLED FOR ON THE PLANS THEY ARE TO BE CONSTRUCTED ACCORDING TO THE STANDARD PLAN GIVEN BELOW OPPOSITE EACH ITEM UNLESS OTHERWISE INDICATED AS INCLUDED IN THE PROPOSAL.

STANDARD CURB DETAILS	C-4380
DETAIL OF ALLEY RETURN AND DRIVE APPROACH	C-4384
STANDARD SEWER AND DROP MANHOLES	C-4387
MANHOLE FRAME AND COVER	C-4391
FLAT TYPE GRATE AND FRAME	C-4392
DOME GRATE AND FRAME	C-4394
STANDARD CATCH BASINS "A" AND "B" AND FLAT GRATE AND FRAME	C-5028

MDOT STANDARD PLANS

WHERE THE FOLLOWING ITEMS ARE CALLED FOR ON THE PLANS THEY ARE TO BE CONSTRUCTED ACCORDING TO THE STANDARD PLAN GIVEN BELOW OPPOSITE EACH ITEM UNLESS OTHERWISE INDICATED.

DRIVEWAY OPENINGS & APPROACHES AND CONCRETE SIDEWALKS	R-29-D
INTEGRAL CURB AND INTEGRAL CURB & GUTTER	R-31-C
TEMPORARY CONCRETE BARRIER	R-52-E
CHAIN LINK FENCE (USING TENSION WIRE)	R-98-B
MOLDING, BEVEL, LIGHT STANDARD ANCHOR BOLT ASSEMBLY AND NAME PLATE DETAILS	B-103-D

MDOT SPECIAL DETAILS

WHERE THE FOLLOWING ITEMS ARE CALLED FOR ON THE PLANS THEY ARE TO BE CONSTRUCTED ACCORDING TO THE SPECIAL DETAIL GIVEN BELOW OPPOSITE EACH ITEM UNLESS OTHERWISE INDICATED.

SIDEWALK RAMP DETAILS	R-28-F
SOIL EROSION & SEDIMENTATION CONTROL MEASURES	R-96-D
PLACEMENT OF TEMPORARY CONCRETE BARRIER	R-126-F
BRIDGE RAILING, AESTHETIC PARAPET TUBE	B-25-E

*SEE W2D-125-D FOR TEMPORARY TRAFFIC CONTROL DEVICE DETAILS.

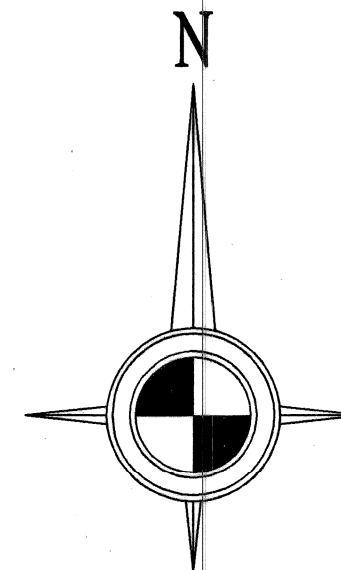
TITLE SHEET LEGEND

PROPOSED BRIDGE PROJECT	
EXISTING ROADS	
CITY STREET	
COUNTY	
STATE ROUTES	
FEDERAL DIVIDED ROUTES	
FEDERAL DIVIDED INTERSTATE ROUTES	
SECTION LINE	
CITY, VILLAGE OR TOWNSHIP LIMITS	
RAILROADS	

CITY OF DETROIT
IN COOPERATION WITH
MICHIGAN DEPARTMENT OF TRANSPORTATION
AND
FEDERAL HIGHWAY ADMINISTRATION

PLAN AND PROFILE OF PROPOSED
REPLACEMENT OF THE
ANTIETAM AVENUE BRIDGE
OVER THE
DEQUINDRE CUT GREENWAY

STATE BRIDGE NO.: S02 of 82-22-97
JOB NO.: 83945A
CONTROL SECTION NO.: BRO 82022
FEDERAL PROJECT NO.: BRO 0782 (068)
FEDERAL ITEM NO.: RR 5680



CITY OF DETROIT
PROJECT LOCATION
S02 of 82-22-97

TRAFFIC DATA:	YEAR	YEAR
	1997	2026
ADT	1,433	2,545
DHV	143	255
COMM%	5.0%	5.0%
DESIGN SPEED		25 MPH
POSTED SPEED		25 MPH

GENERAL NOTES

THE DESIGN OF THIS STRUCTURE IS BASED ON CURRENT AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES HS20-44 LOADING. LIVE LOAD PLUS IMPACT DEFLECTION DOES NOT EXCEED 1/1000 OF SPAN LENGTH. THE LOAD FACTOR METHOD OF DESIGN WAS USED FOR THIS STRUCTURE.

EXCEPT WHERE OTHERWISE INDICATED ON THESE PLANS, OR IN THE PROPOSAL AND SUPPLEMENTAL SPECIFICATIONS CONTAINED HEREIN, ALL MATERIALS AND WORKMANSHIP SHALL BE ACCORDING TO THE MICHIGAN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION 2003 EDITION.

ALL EXPOSED CONCRETE CORNERS SHOWN SQUARE ON THE PLANS SHALL BE BEVELED WITH 1/2" TRIANGULAR MOLDINGS EXCEPT AS OTHERWISE NOTED.

THE PROPOSED IMPROVEMENTS COVERED BY THESE PLANS ARE IN ACCORDANCE WITH THE AASHTO: A POLICY ON GEOMETRIC DESIGN OF HIGHWAYS AND STREETS, 2004.

THE DESIGN OF THE STRUCTURAL MEMBERS IS BASED ON MATERIAL OF THE FOLLOWING GRADES AND STRESSES:

CONCRETE GRADE S2	f'c = 3,000 psi
CONCRETE GRADE D	f'c = 4,000 psi
STEEL REINFORCEMENT	fy = 60,000 psi

CONTRACT FOR: STRUCTURE REPLACEMENT, RELATED APPROACH WORK, AND TRAFFIC IMPROVEMENTS FOR ANTIETAM AVENUE OVER THE DEQUINDRE CUT GREENWAY

BRIDGE PLANS WERE PREPARED FOR THE CITY OF DETROIT
CITY ENGINEERING DEPARTMENT
BY



Ronald G. Woolpe
LICENSED PROFESSIONAL ENGINEER

5/15/07
DATE



LOCAL AUTHORITY APPROVAL
CITY OF DETROIT
CITY ENGINEERING DIVISION
DEPARTMENT OF PUBLIC WORKS

APPROVED BY _____ HEAD ENGINEER DATE _____

APPROVED BY *Greg Kubit* CITY ENGINEER DATE 5/16/07

PREPARED UNDER THE SUPERVISION OF

Roberto Flores
LICENSED PROFESSIONAL ENGINEER

5-17-07
DATE

CITY OF DETROIT
ORGANIZATION

CITY ENGINEERING DIVISION
900 CADILLAC TOWER
DETROIT, MI 48226

ADDRESS



CONTROL SECTION	JOB NUMBER	FEDERAL NUMBERS		SHEET NO.
		PROJECT	ITEM	
BRO 82022	83945A	BRO 0782 (068)	RR 5680	1

BRO 82022-83945A

CONTROL SECTION — JOB NUMBER

DATE: 9/7/06

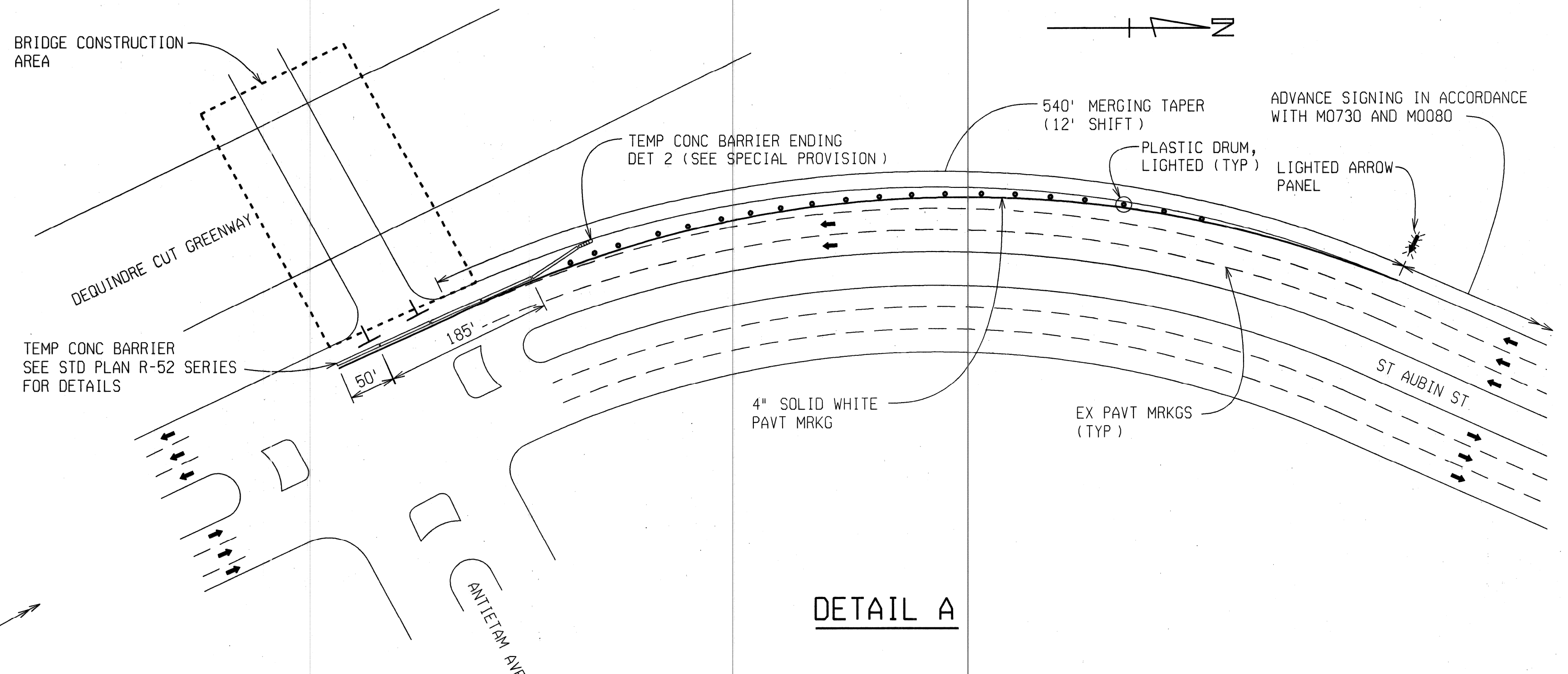
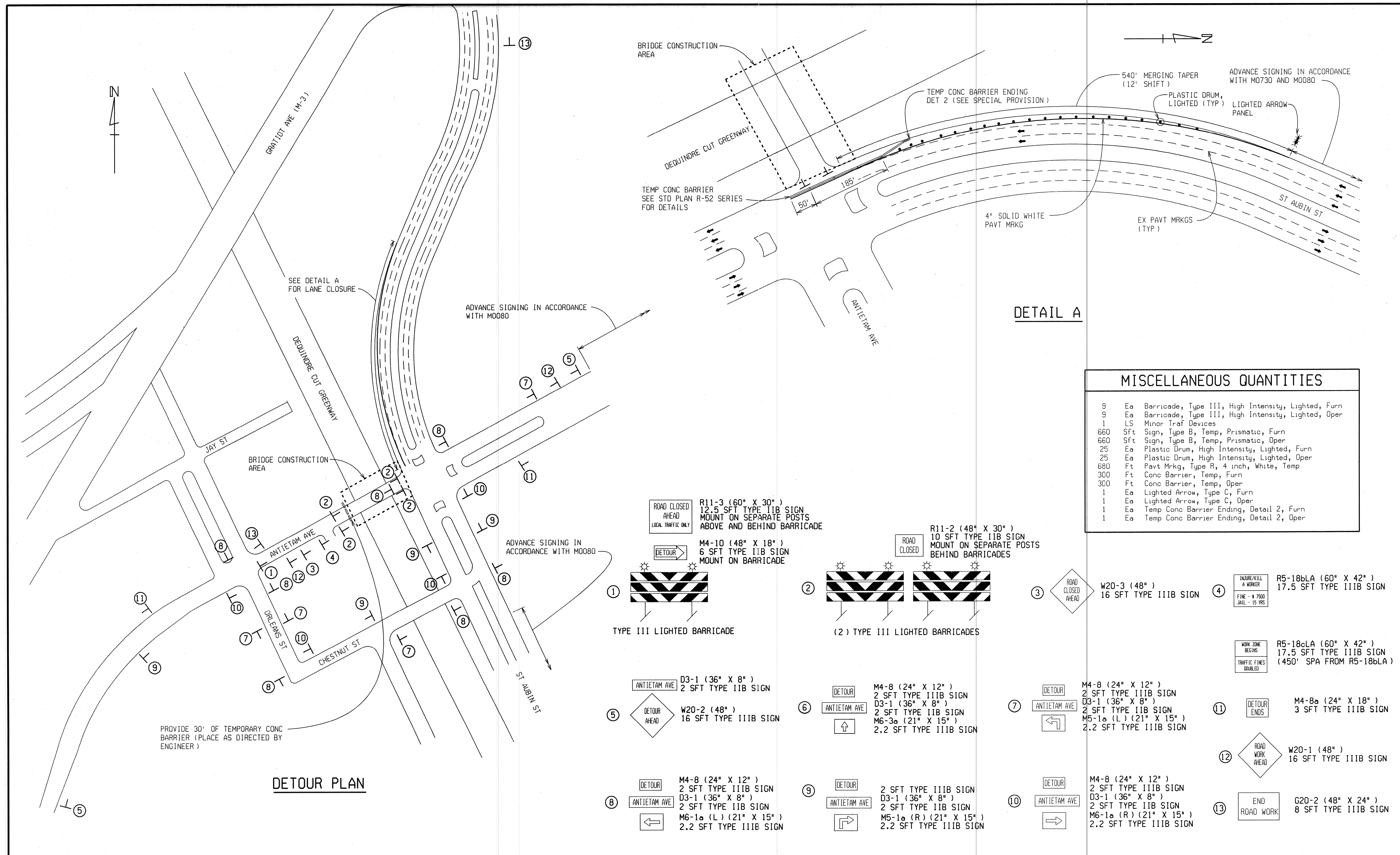
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CHECKED BY: TNB

DATE: 1/10/06

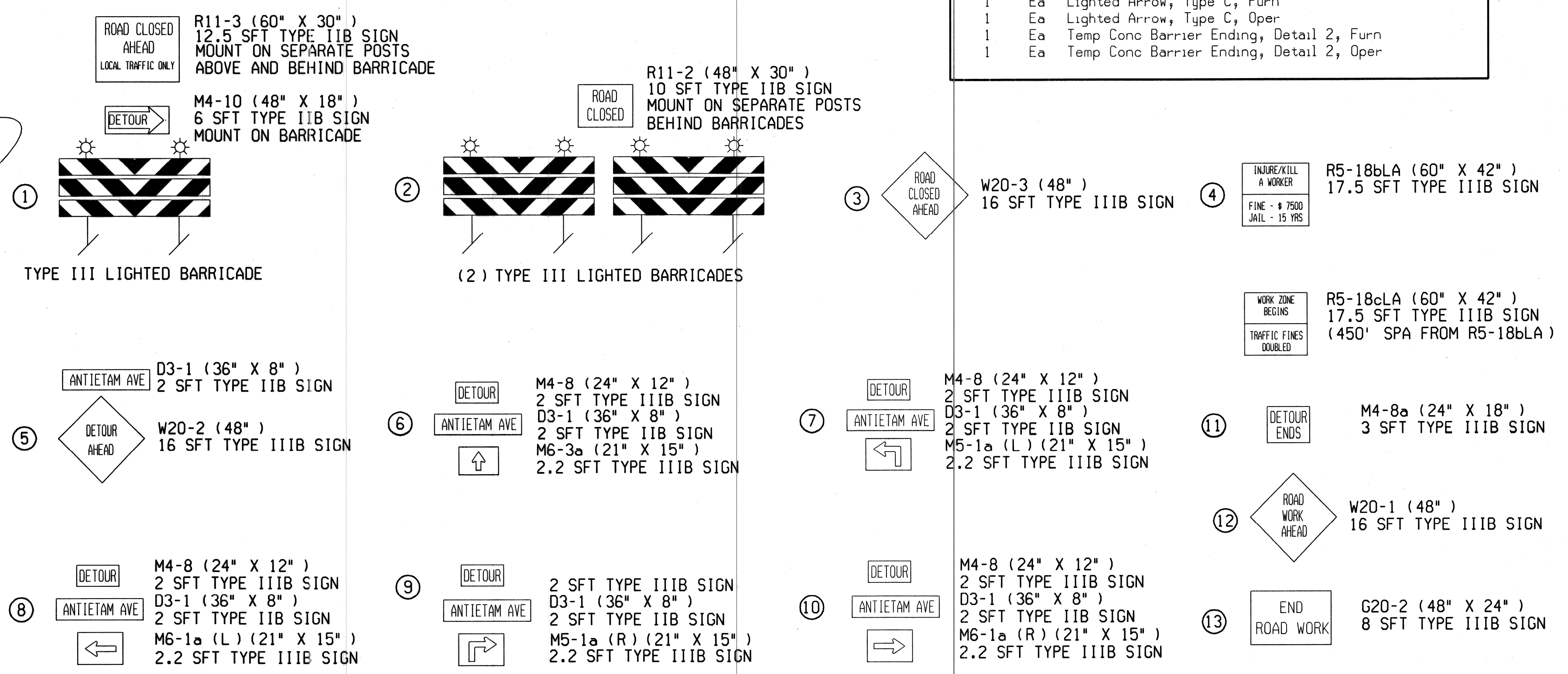
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FILE NAME: Antieta-ttitle.dgn



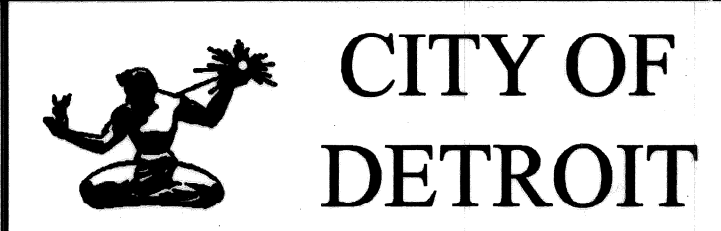
DETAIL A

MISCELLANEOUS QUANTITIES	
9	Ea Barricade, Type III, High Intensity, Lighted, Furn
9	Ea Barricade, Type III, High Intensity, Lighted, Oper
1	LS Minor Traf Devices
660	Sft Sign, Type B, Temp, Prismatic, Furn
660	Sft Sign, Type B, Temp, Prismatic, Oper
25	Ea Plastic Drum, High Intensity, Lighted, Furn
25	Ea Plastic Drum, High Intensity, Lighted, Oper
680	Ft Pavt Mrkg, Type R, 4 inch, White, Temp
300	Ft Conc Barrier, Temp, Furn
300	Ft Conc Barrier, Temp, Oper
1	Ea Lighted Arrow, Type C, Furn
1	Ea Lighted Arrow, Type C, Oper
1	Ea Temp Conc Barrier Ending, Detail 2, Furn
1	Ea Temp Conc Barrier Ending, Detail 2, Oper



DETOUR PLAN

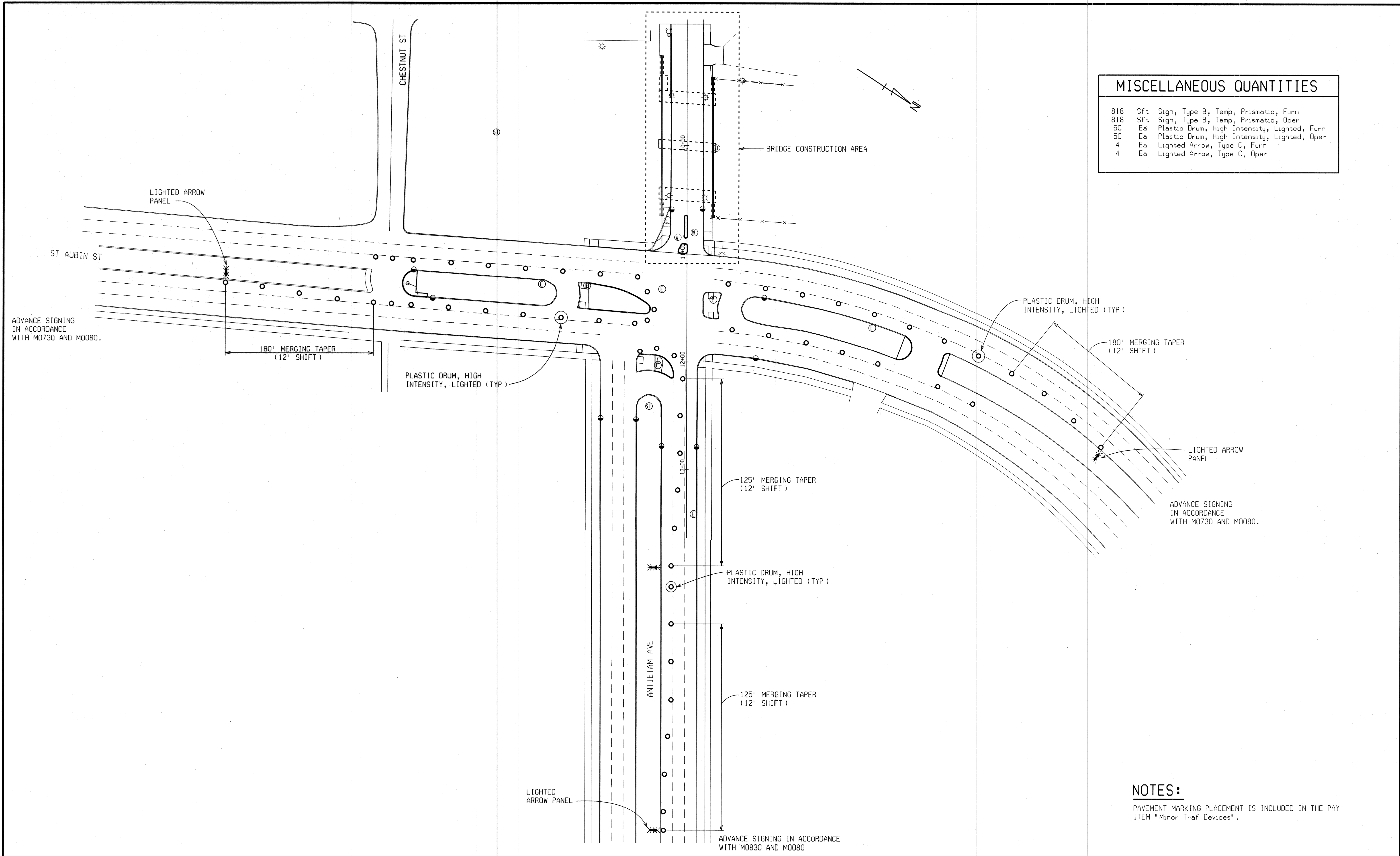
REVISIONS	DESCRIPTION	DATE	BY



ANTIETAM AVENUE OVER DEQUINDRE CUT GREENWAY
 MDOT JOB NO. 83945A STRUCTURE NO. S02 of 82-22-97

DETOUR ROUTE

DATE: 4/13/07
 DLZ JOB NO. 0641-6053-00
 SHEET NO. 2 OF 48



MISCELLANEOUS QUANTITIES		
818	Sft	Sign, Type B, Temp, Prismatic, Furn
818	Sft	Sign, Type B, Temp, Prismatic, Oper
50	Ea	Plastic Drum, High Intensity, Lighted, Furn
50	Ea	Plastic Drum, High Intensity, Lighted, Oper
4	Ea	Lighted Arrow, Type C, Furn
4	Ea	Lighted Arrow, Type C, Oper

ADVANCE SIGNING
IN ACCORDANCE
WITH M0730 AND M0080.

ADVANCE SIGNING
IN ACCORDANCE
WITH M0730 AND M0080.

NOTES:
PAVEMENT MARKING PLACEMENT IS INCLUDED IN THE PAY
ITEM "Minor Traf Devices".

REVISIONS	DESCRIPTION	DATE	BY



ANTIETAM AVENUE OVER
DEQUINDRE CUT GREENWAY
MDOT JOB NO. 83945A | STRUCTURE NO. S02 of 82-22-97

CONSTRUCTION STAGING DETAILS

DATE: 4/13/07
DLZ JOB NO. 0641-6053-00
SHEET NO. 3 OF 48

DATE: 2/9/07 CORRECTED BY: TNB
DATE: 2/9/07 CHECKED BY: KCK
DATE: 2/9/07 DRAWN BY: TNB
FILE NAME: antietam-cs.dgn

WITNESSES

WITNESSES TO CP2: 2 INCH MAGNAIL SET IN HMA NEAR C ANTLETAM AVENUE 100 FT WEST OF BRIDGE
 NORTHING: 5048.11 EASTING: 10083.24
 STA 8+58.28 ; OFF 5.06 FT LT

S 80° E TOP CENTER FIRE HYDRANT 40.1 FT
 S 30° E NW CORNER OF CATCH BASIN 16.45 FT
 S 40° W CENTER LIGHT POLE 58.1 FT
 N 30° W NE CORNER OF CATCH BASIN 6.2 FT

WITNESSES TO CP3: 2 INCH MAGNAIL FOUND IN CONCRETE ISLAND AT EAST SIDE OF ANTIETAM & ST. AUBIN INTERSECTION
 NORTHING: 5193.9426 EASTING: 10395.8944
 STA 12+01.62 ; OFF 29.25 FT RT

N 10° E CENTER LIGHT MANHOLE 2.3 FT
 N 70° E BACK OF CURB 6.2 FT
 S 20° E BACK OF CURB 17.7 FT
 S 70° W BACK OF CURB 7.65 FT

BENCH MARKS

BM 100 EL - 138.85
 ARROW AT TOP OF FIRE HYDRANT IN NORTH MEDIAN OF INTERSECTION OF ANTIETAM AVENUE AND ORLEANS STREET

NORTHING: 4975.19 EASTING: 9878.88
 STATION: 6+45.33 ; OFFSET: 46.76 FT LT

BM 200 EL - 138.29
 DETROIT MONUMENT 39-357 FOUND IN NORTHEAST QUADRANT OF ANTIETAM AVENUE AND ST. AUBIN STREET

NORTHING: 5237.38 EASTING: 10371.44
 STATION: 12+02.71 ; OFFSET: 20.61 FT LT

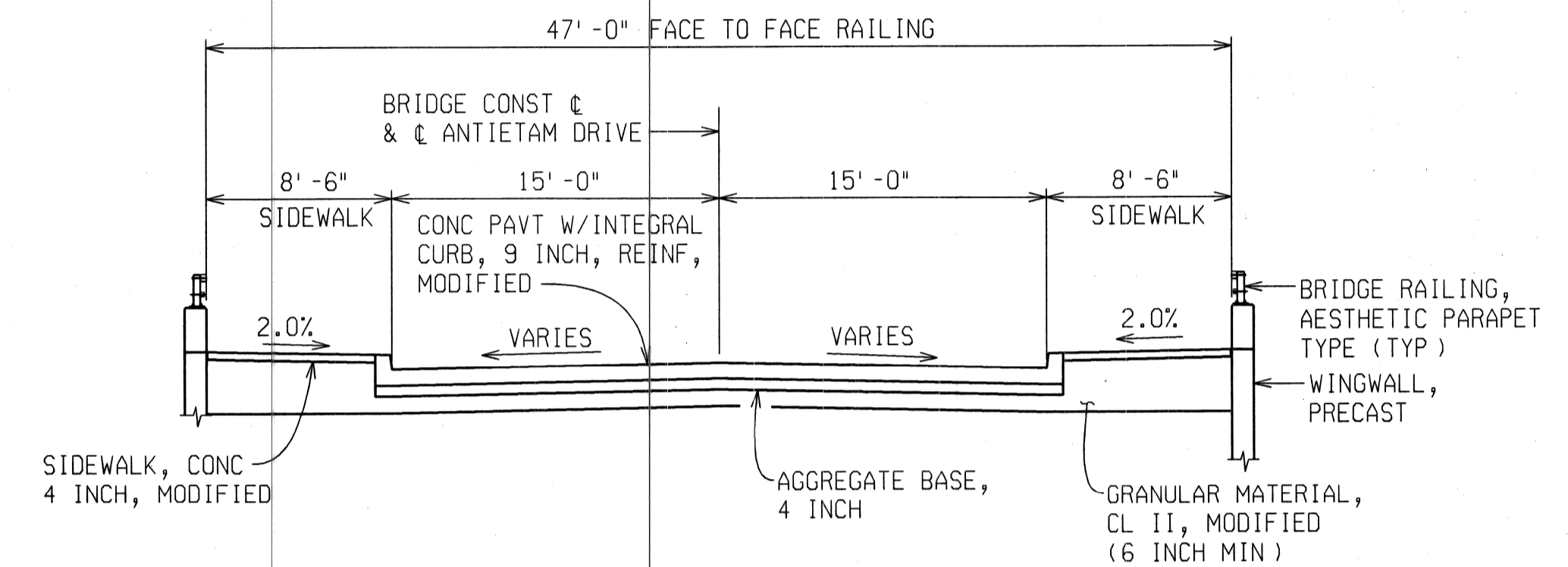
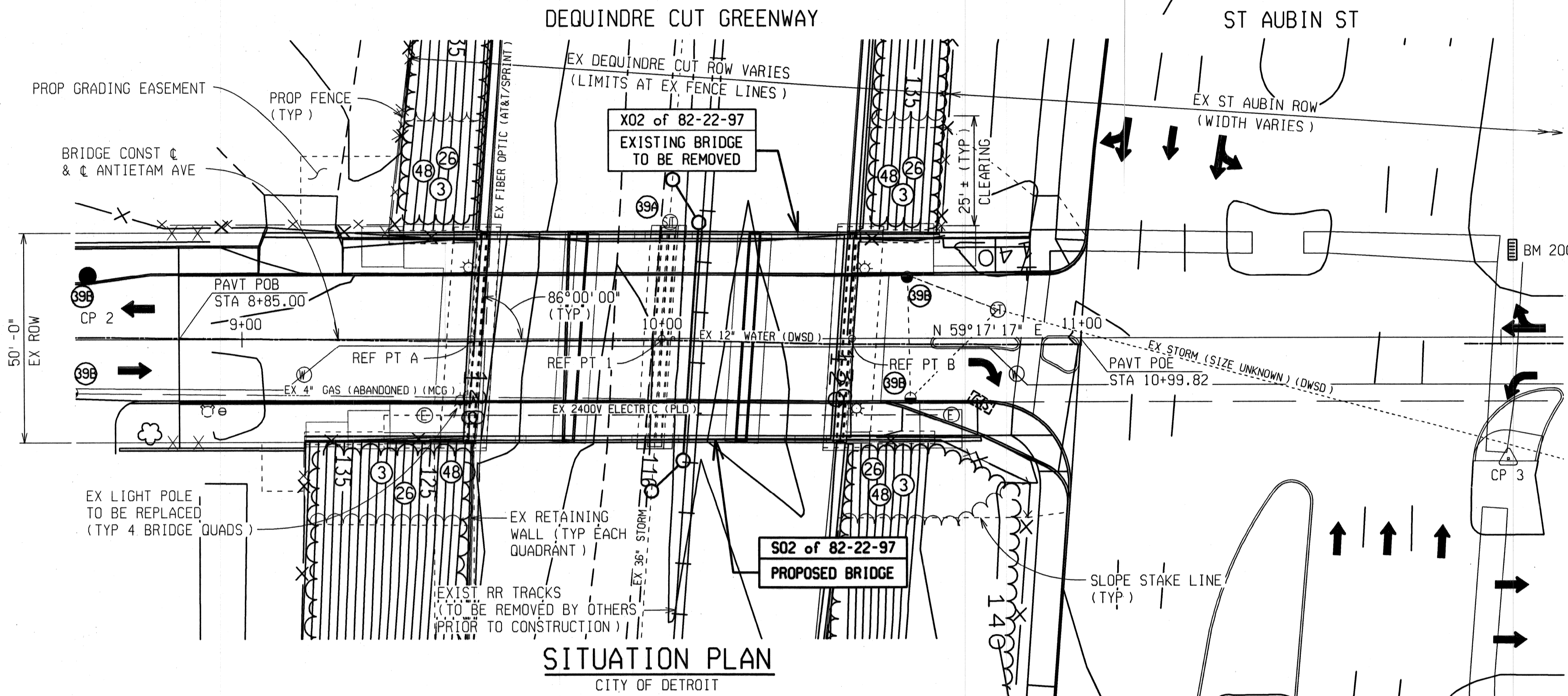
EXISTING STRUCTURE

THE EXISTING STRUCTURE IS A 3 SPAN BRIDGE WITH A TOTAL SPAN LENGTH OF 85 FEET. THE EXISTING SUPERSTRUCTURE CONSISTS OF CONCRETE ENCASED ROLLED STEEL BEAMS. THE ABUTMENTS ARE ON PILES AND THE PIERS ARE ON SPREAD FOOTINGS. THE BRIDGE WAS BUILT IN 1930.

EROSION AND SEDIMENTATION CONTROL MEASURES

	KEY NO.
100 Ft Erosion Control, Silt Fence	29
4 Ea Erosion Control, Inlet Protection, Fabric Drop	99A
4 Ea Erosion Control, Inlet Protection, Geotextile and Stone	99B
200 Syd Slope Restoration	3
200 Syd Mulch Blanket	4B

* PLACE AS DIRECTED BY THE ENGINEER



TYPICAL APPROACH SECTION

UTILITIES

CITY OF DETROIT, PUBLIC LIGHTING DEPT (PLD) 9449 GRINNELL DETROIT, MI 48213 ATTN.: STAN TOPOLEWSKI PHONE NO.: (313) 267-7228	ELECTRIC, LIGHTING
CITY OF DETROIT DETROIT WATER & SEWERAGE DEPT (DWSO) J MADISON BLDG 1420 WASHINGTON BLVD., SUITE 100 DETROIT, MI 48226 ATTN.: MICHAEL KUBIAN PHONE NO.: (313) 967-1508	WATER, SEWER
DTE ENERGY MICHIGAN CONSOLIDATED GAS CO. (MCG) MAIN REPLACEMENT TEAM, 2ND FLOOR 3200 HOBSON DETROIT, MI 48201 ATTN.: PAUL HARTMAN PHONE NO.: (313) 577-7236	GAS
AT&T 2152 S. 114TH STREET WEST ALLIS, WI 53227 ATTN.: JOHN KOTZ PHONE NO.: (414) 290-8927	FIBER OPTIC
SPRINT 5600 NORTH RIVER ROAD ROSEMONT, IL 60018 ATTN.: GERRY CRAIN PHONE NO.: (847) 318-3010	FIBER OPTIC

NOTES:

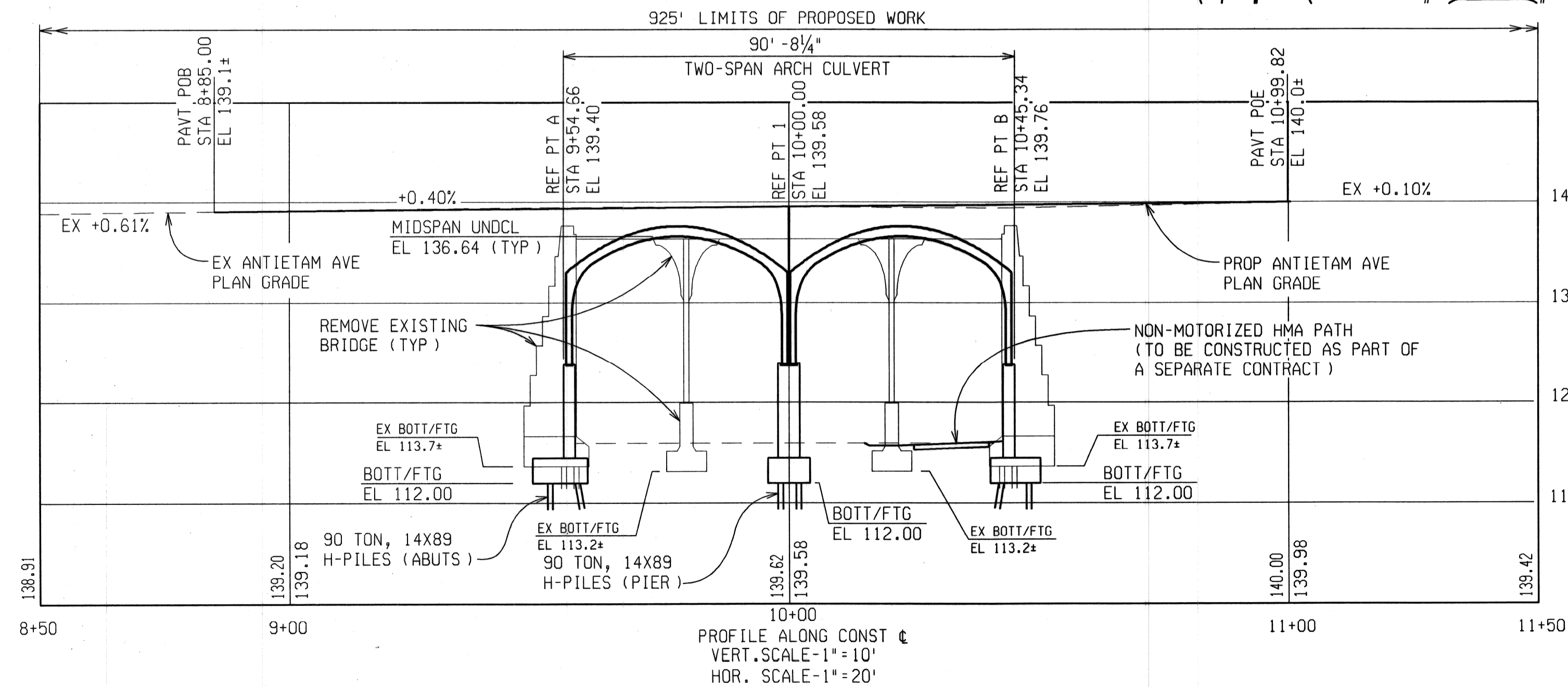
THE WORK COVERED BY THESE PLANS INCLUDES CLEARING, GRUBBING, EARTH EXCAVATION, MAINTAINING TRAFFIC, TRAFFIC IMPROVEMENTS, REMOVAL OF THE EXISTING BRIDGE, CONSTRUCTION OF THE PROPOSED BRIDGE AND APPROACHES TO THE LIMITS SHOWN.

THE CONTRACTOR SHALL LOCATE ALL ACTIVE UNDERGROUND UTILITIES PRIOR TO STARTING WORK AND SHALL CONDUCT HIS OPERATIONS IN SUCH A MANNER AS TO ENSURE THAT THOSE UTILITIES NOT REQUIRING RELOCATION WILL NOT BE DISTURBED.

ANTIETAM AVENUE TRAFFIC IS TO BE DETOURED OVER OTHER EXISTING ROADS.

PLAN ELEVATIONS REFER TO CITY OF DETROIT DATUM.

TOPOGRAPHY SHOWN HERE REPRESENTS CONDITIONS EXISTING AT THE TIME THE FIELD SURVEY WAS MADE. HOWEVER, THESE CONDITIONS MAY HAVE BEEN MATERIALLY ALTERED BY THE OPERATIONS OF OTHERS PRIOR TO THIS CONTRACT.

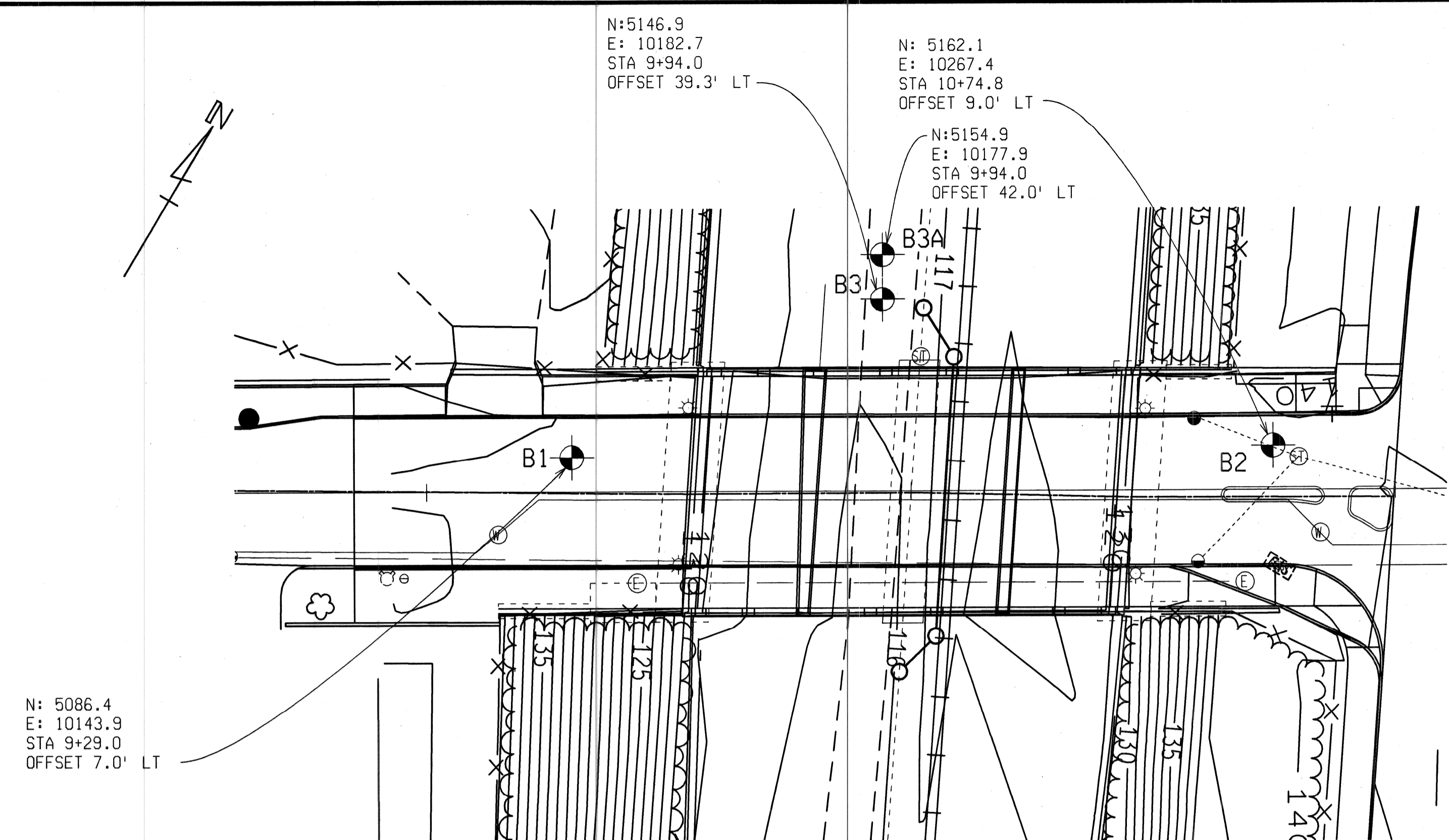
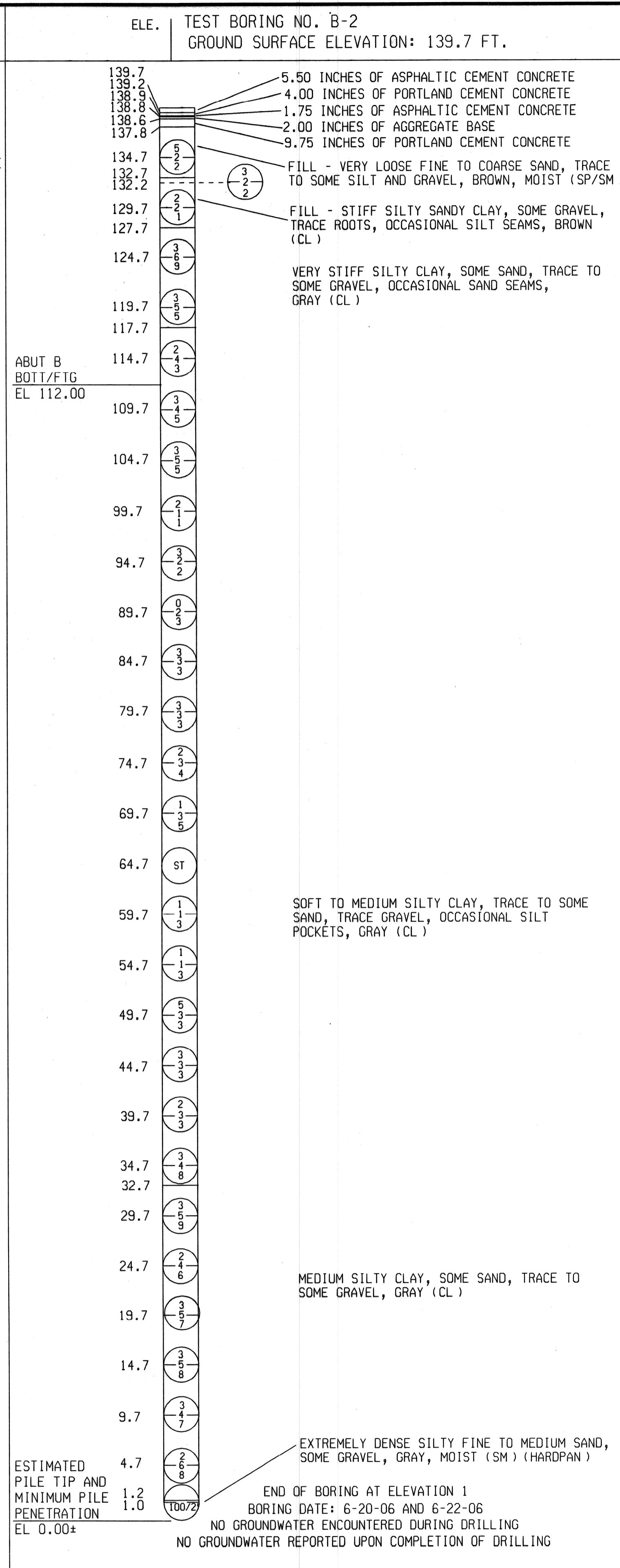
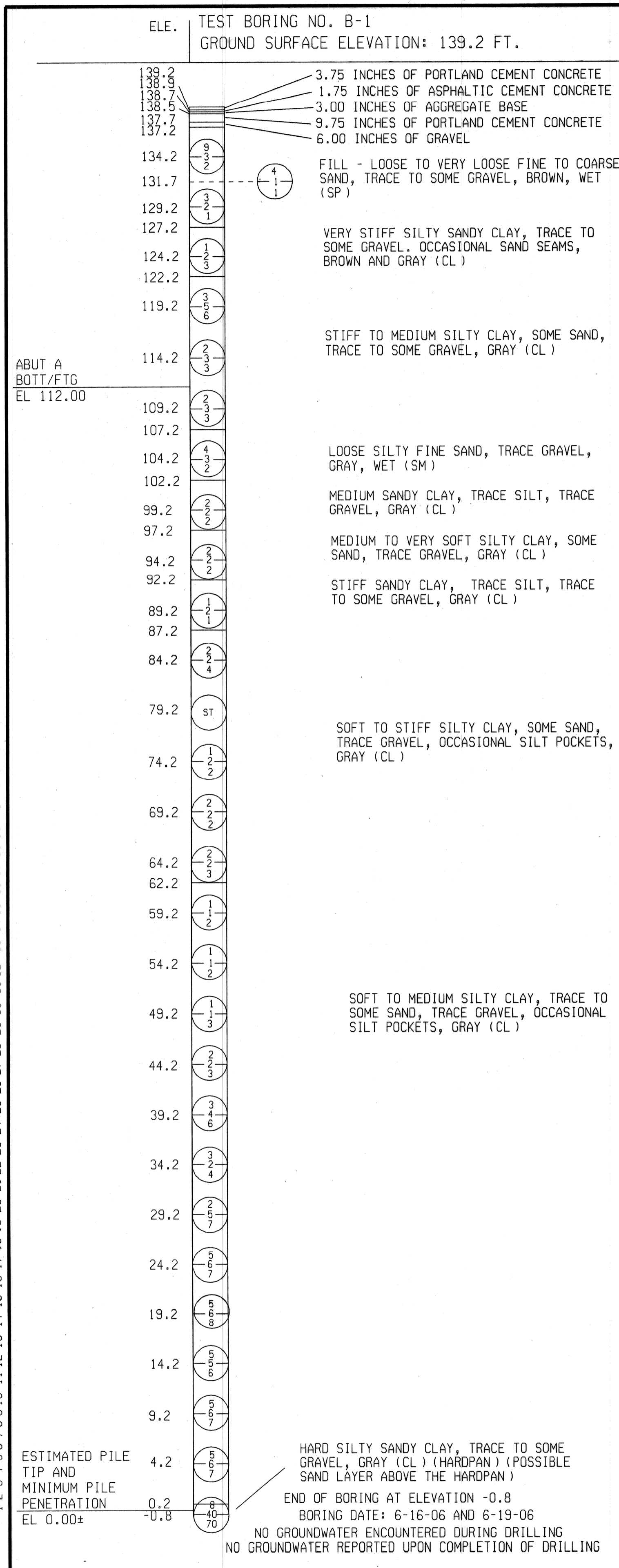


REVISIONS	DESCRIPTION	DATE	BY

		ANTIETAM AVENUE OVER DEQUINDRE CUT GREENWAY	GENERAL PLAN OF SITE	DATE: 4/13/07
		MDOT JOB NO. 83945A STRUCTURE NO. S02 of 82-22-97		DLZ JOB NO. 0641-6053-00 SHEET NO. 4 OF 48

DATE: 9/7/06
 CORRECTED BY: TNG
 DATE: 9/6/06
 CHECKED BY: BMW
 DATE: 05/18/06
 DRAWN BY: bmw
 FILE NAME: anti-etam-s.dgn

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63



NOTES:

NUMBERS IN CIRCLES DENOTE NUMBER OF BLOWS REQUIRED TO DRIVE A 2" O.D. (1 1/2" I.D.) SPLIT SPOON SAMPLER 3 SUCCESSIVE 6 inch INCREMENTS USING A 140 lb HAMMER FALLING 2.5 ft.

CONSISTENCY WAS DETERMINED BY INSPECTION OF SAMPLES AND SUBSTANTIATED BY SOILS RESISTANCE TO DRILLING TOOLS.

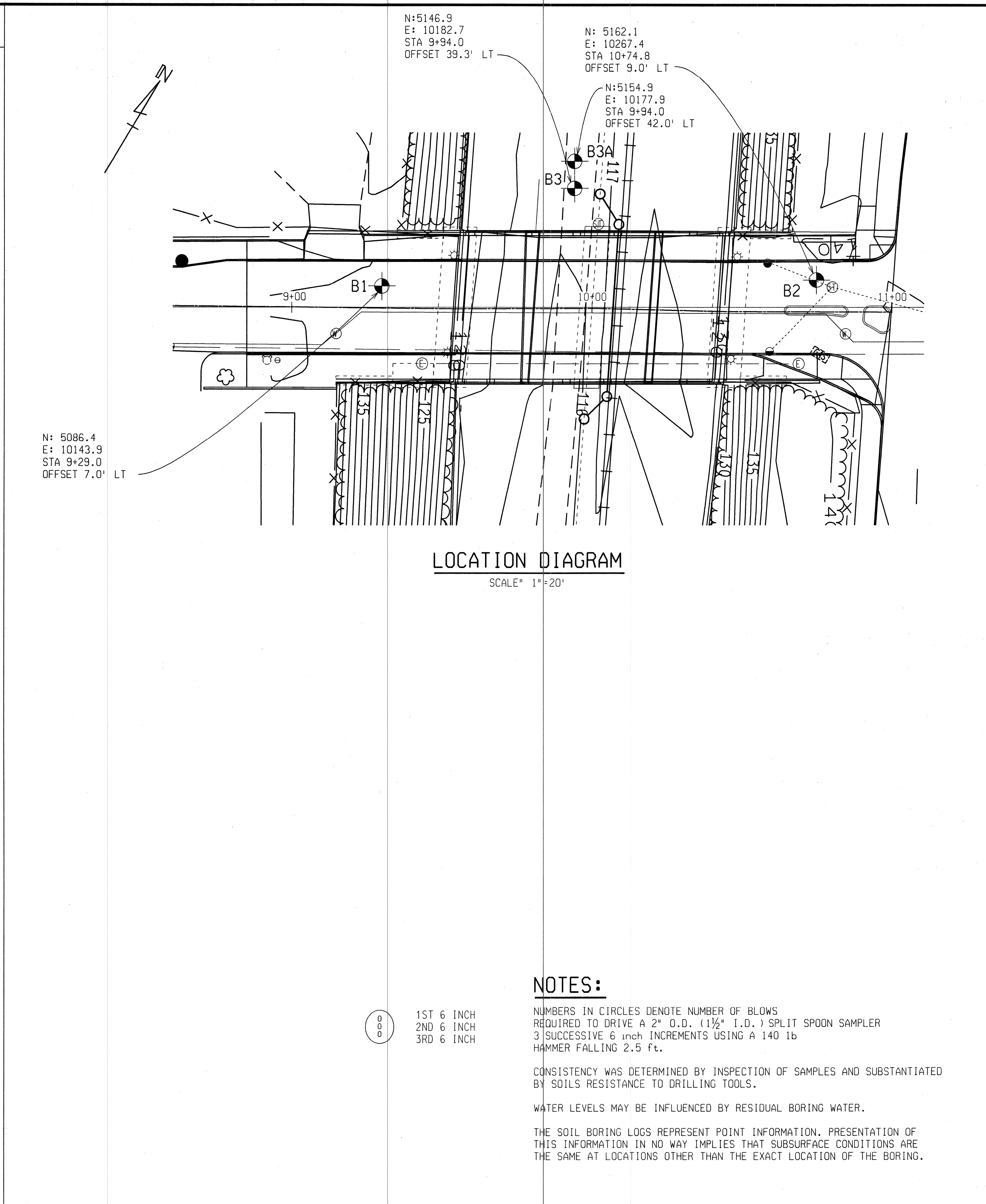
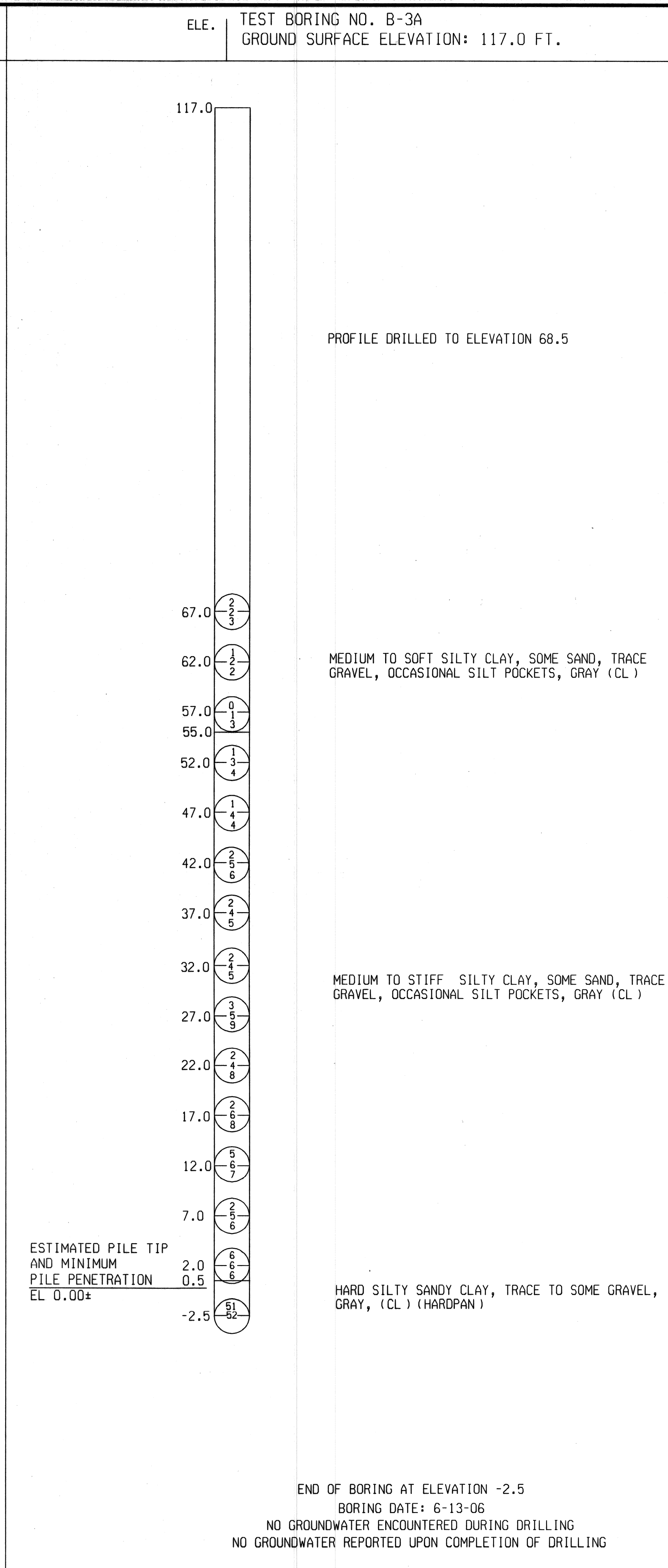
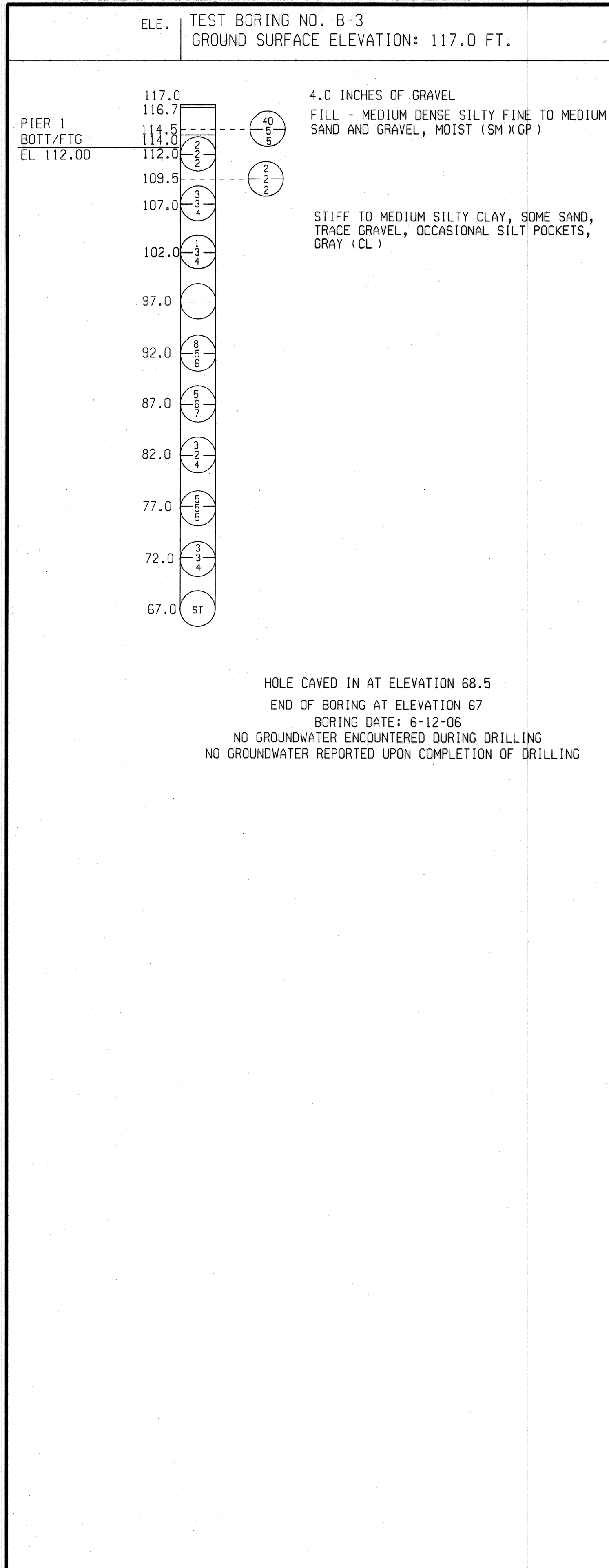
WATER LEVELS MAY BE INFLUENCED BY RESIDUAL BORING WATER.

THE SOIL BORING LOGS REPRESENT POINT INFORMATION. PRESENTATION OF THIS INFORMATION IN NO WAY IMPLIES THAT SUBSURFACE CONDITIONS ARE THE SAME AT LOCATIONS OTHER THAN THE EXACT LOCATION OF THE BORING.

REVISIONS	DESCRIPTION	DATE	BY

		ANTIETAM AVENUE OVER DEQUINDRE CUT GREENWAY	DATE: 4/13/07
		MDOT JOB NO. 83945A STRUCTURE NO. S02 of 82-22-97	DLZ JOB NO. 0641-6053-00
			SHEET NO. 5 OF 48

DATE: 9/7/06 CORRECTED BY: TNB DATE: 6/14/06 CHECKED BY: BMW DATE: 9/7/06 FILE NAME: antietam-sb1.dgn DRAWN BY: bmx



REVISIONS	DESCRIPTION	DATE	BY

**CITY OF
DETROIT**

**ANTIETAM AVENUE OVER
DEQUINDRE CUT GREENWAY**

MDOT JOB NO. 83945A STRUCTURE NO. S02 of 82-22-97

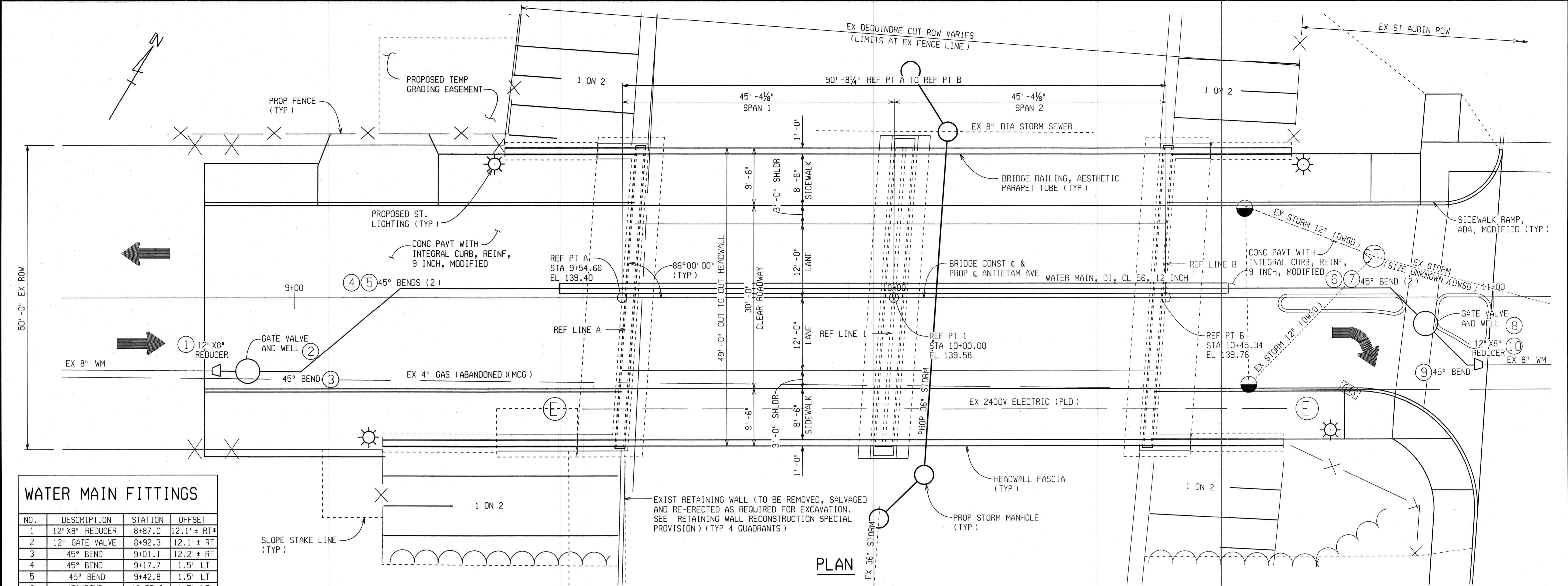
SOIL BORING LOG

DATE: 4/13/07
DLZ JOB NO. 0641-6053-00
SHEET NO. 6 OF 48

DATE: 6/14/06

DRAWN BY: bmv

FILE NAME: antietam-sb2.dgn

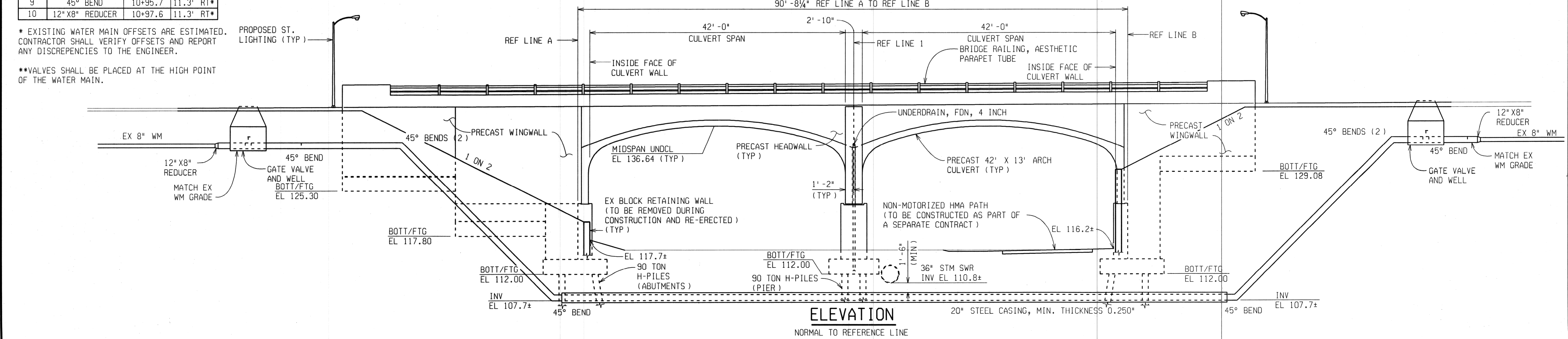


WATER MAIN FITTINGS

NO.	DESCRIPTION	STATION	OFFSET
1	12" X 8" REDUCER	8+87.0	12.1' ± RT*
2	12" GATE VALVE	8+92.3	12.1' ± RT
3	45° BEND	9+01.1	12.2' ± RT
4	45° BEND	9+17.7	1.5' LT
5	45° BEND	9+42.8	1.5' LT
6	45° BEND	10+57.2	1.5' LT
7	45° BEND	10+82.9	1.5' LT
8	12" GATE VALVE	10+88.7	4.4' RT
9	45° BEND	10+95.7	11.3' RT*
10	12" X 8" REDUCER	10+97.6	11.3' RT*

* EXISTING WATER MAIN OFFSETS ARE ESTIMATED. CONTRACTOR SHALL VERIFY OFFSETS AND REPORT ANY DISCREPANCIES TO THE ENGINEER.

** VALVES SHALL BE PLACED AT THE HIGH POINT OF THE WATER MAIN.



REVISIONS	DESCRIPTION	DATE	BY

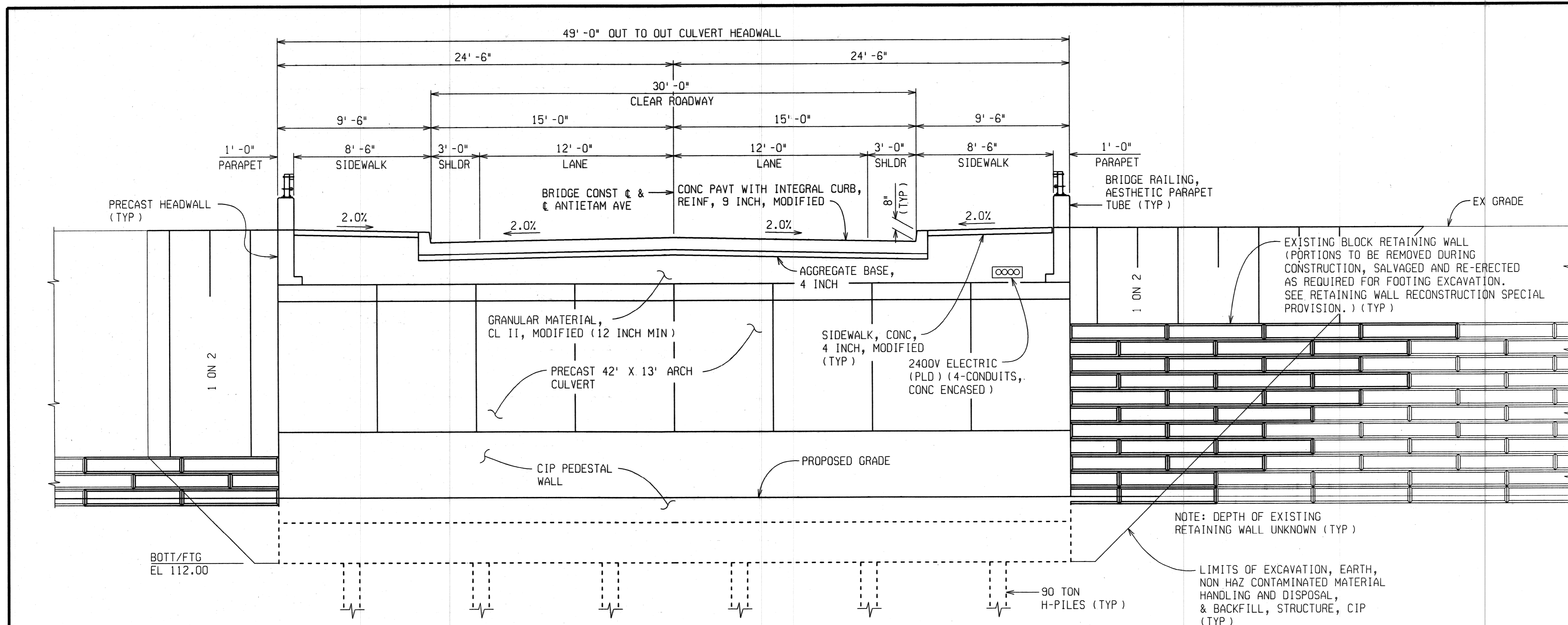


ANTIETAM AVENUE OVER DEQUINDRE CUT GREENWAY

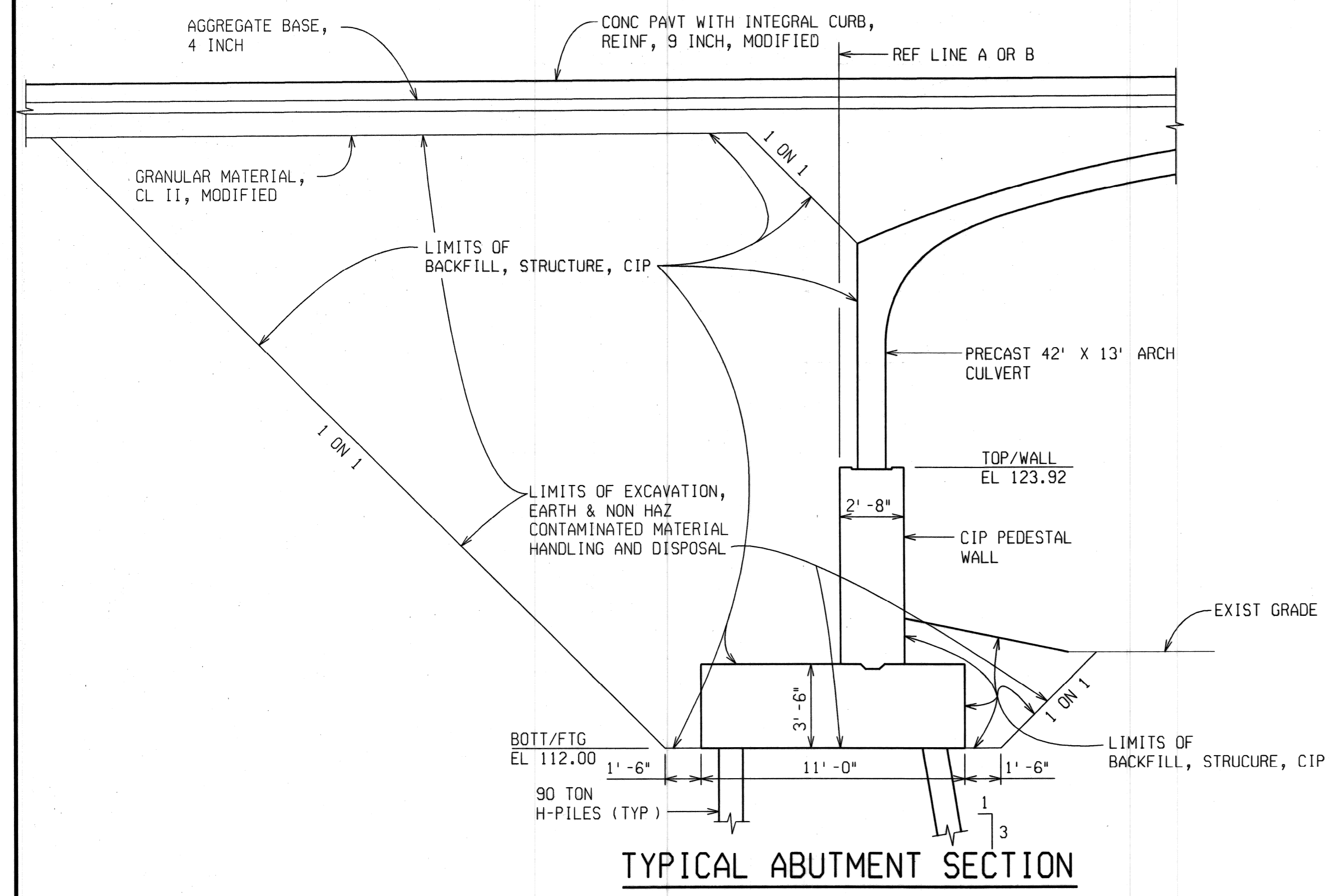
MDOT JOB NO. 83945A STRUCTURE NO. S02 of 82-22-97

GENERAL PLAN OF STRUCTURE

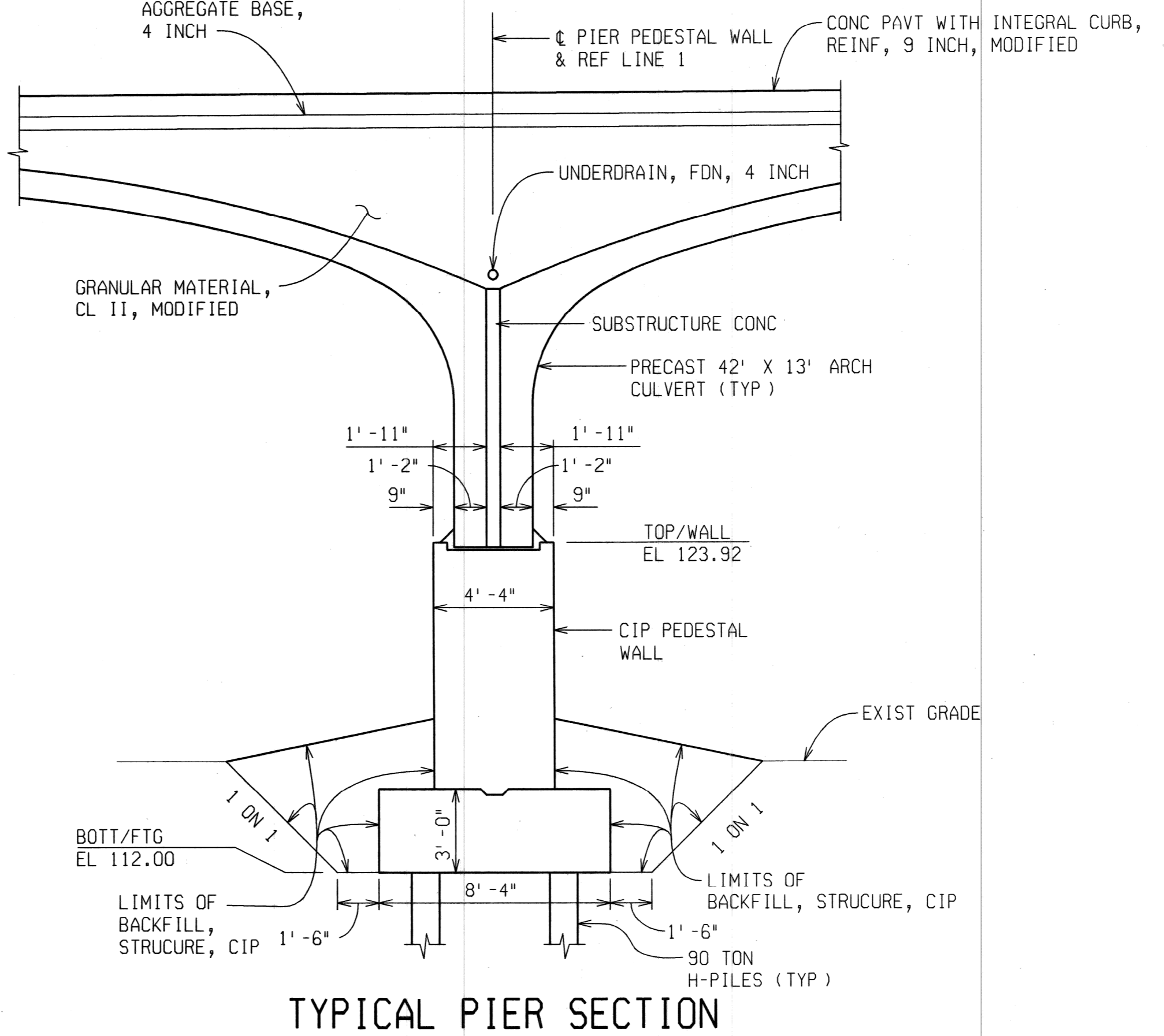
DATE: 4/13/07
 DLZ JOB NO. 0641-6053-00
 SHEET NO. 7 OF 48



TYPICAL DECK SECTION
LOOKING UPSTATION



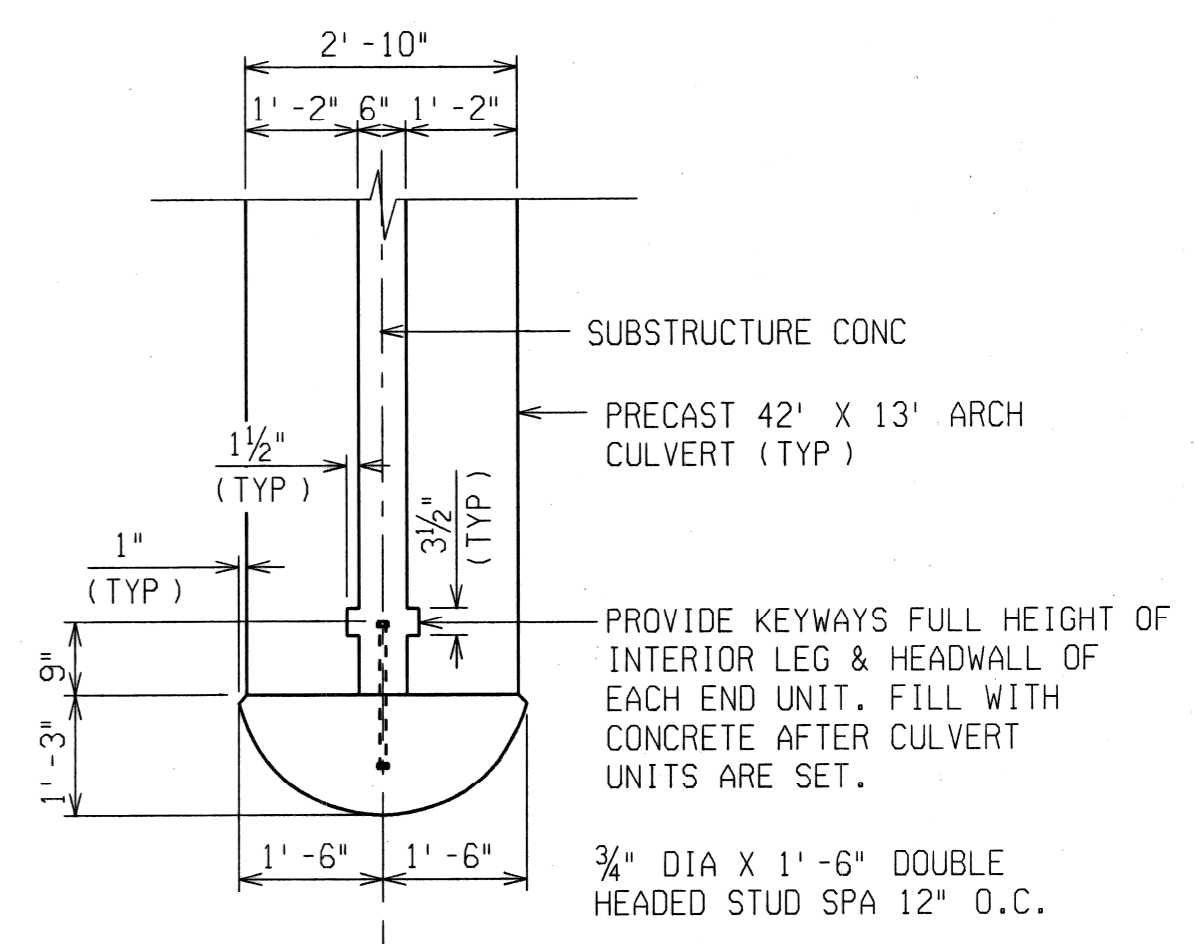
TYPICAL ABUTMENT SECTION



TYPICAL PIER SECTION

MISCELLANEOUS QUANTITIES	
1	LS Structures, Rem
4190	Cyd Backfill, Structure, CIP
2000	Cyd Non Haz Contaminated Material Handling and Disposal
200	Cyd Excavation, Earth
242	Ft Water Main, DI, Cl 56, 12 inch
400	Sft Retaining Wall Reconstruction
100	Ft Culv, Precast Three-Sided or Arch, 42 foot by 13 foot, Modified
1228	Sft Wingwall, Precast

* AS DIRECTED BY THE ENGINEER

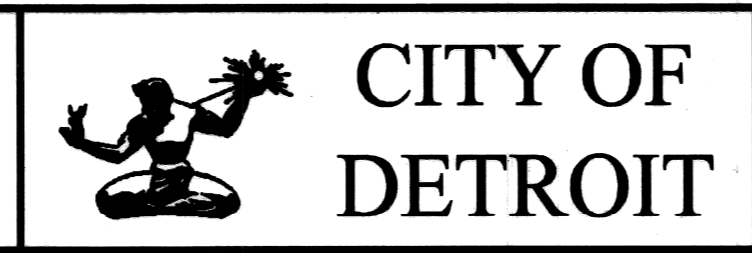


NOSING DETAIL

NOTES:

THE DESIGN OF THIS STRUCTURE IS BASED ON CURRENT AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES HS20-44. LIVE LOAD PLUS IMPACT DEFLECTION DOES NOT EXCEED 1/1000 OF SPAN LENGTH. THE LOAD FACTOR METHOD OF DESIGN WAS USED FOR THIS STRUCTURE.
SEE PIER SHEET 14 OF 48 FOR UNDERDRAIN OUTLET DETAILS.

REVISIONS	DESCRIPTION	DATE	BY

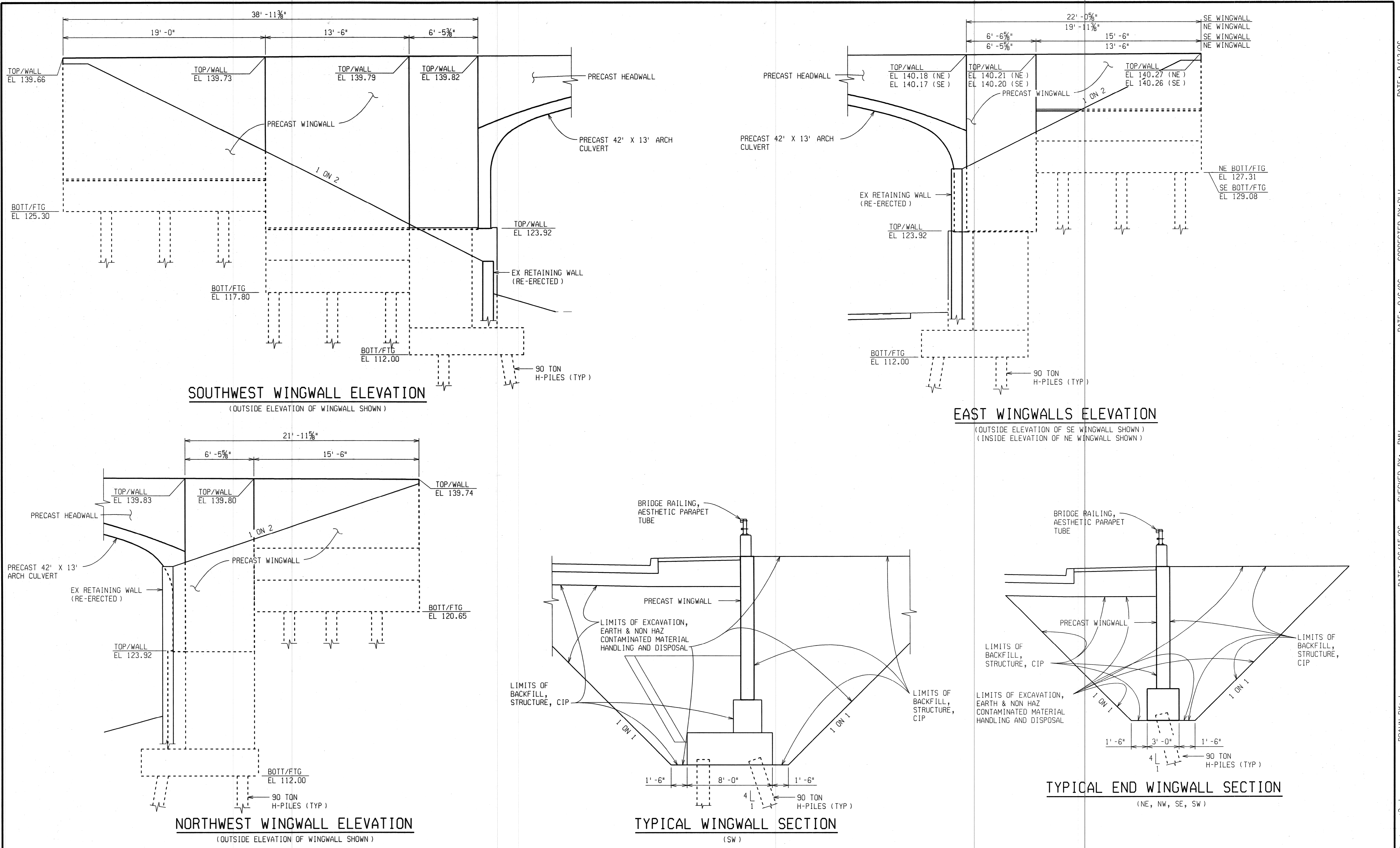


ANTIETAM AVENUE OVER
DEQUINDRE CUT GREENWAY
MDOT JOB NO. 83945A STRUCTURE NO. S02 of 82-22-97

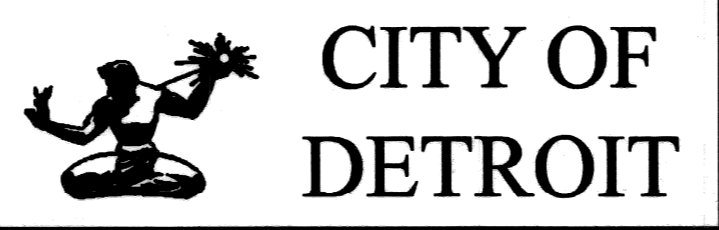
GENERAL PLAN OF STRUCTURE

DATE:	4/13/07
DLZ JOB NO.	0641-6053-00
SHEET NO.	8 OF 48

DATE: 06/15/06 DRAWN BY: bmx FILE NAME: antietam-st2.dgn



REVISIONS	DESCRIPTION	DATE	BY



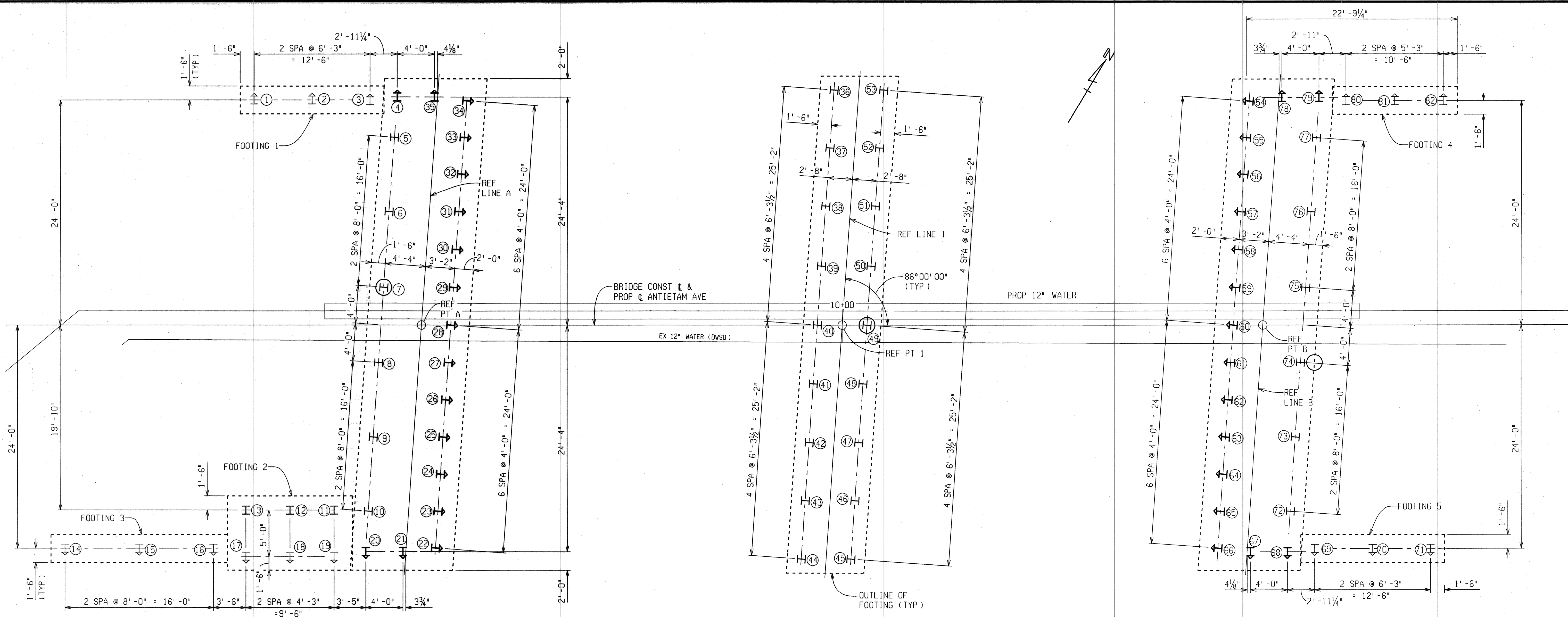
ANTIETAM AVENUE OVER
DEQUINDRE CUT GREENWAY

MDOT JOB NO. 83945A STRUCTURE NO. S02 of 82-22-97

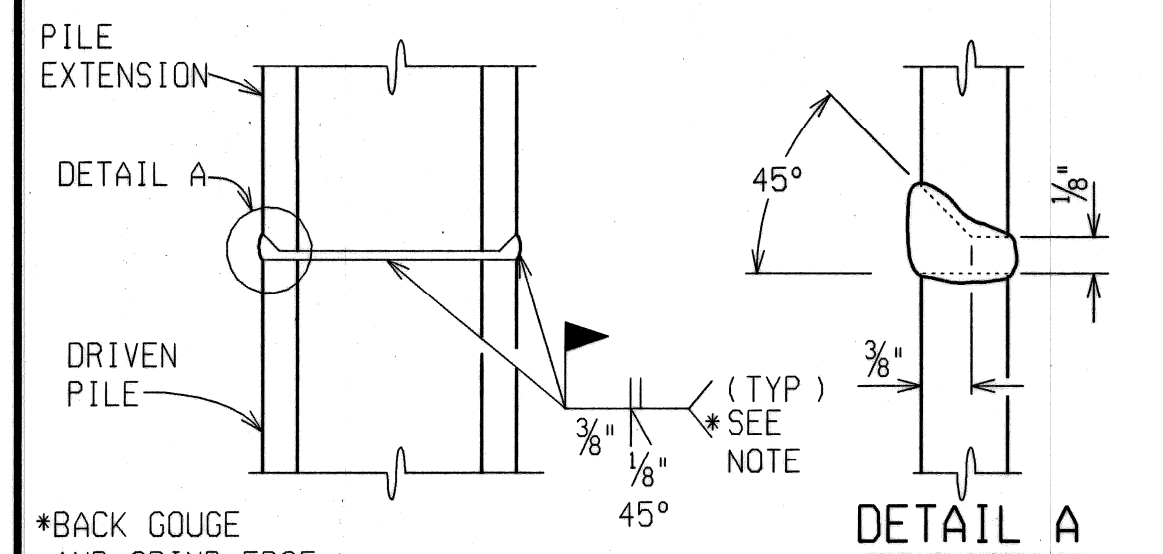
GENERAL PLAN OF STRUCTURE

DATE: 4/13/07
DLZ JOB NO. 0641-6053-00
SHEET NO. 9 OF 48

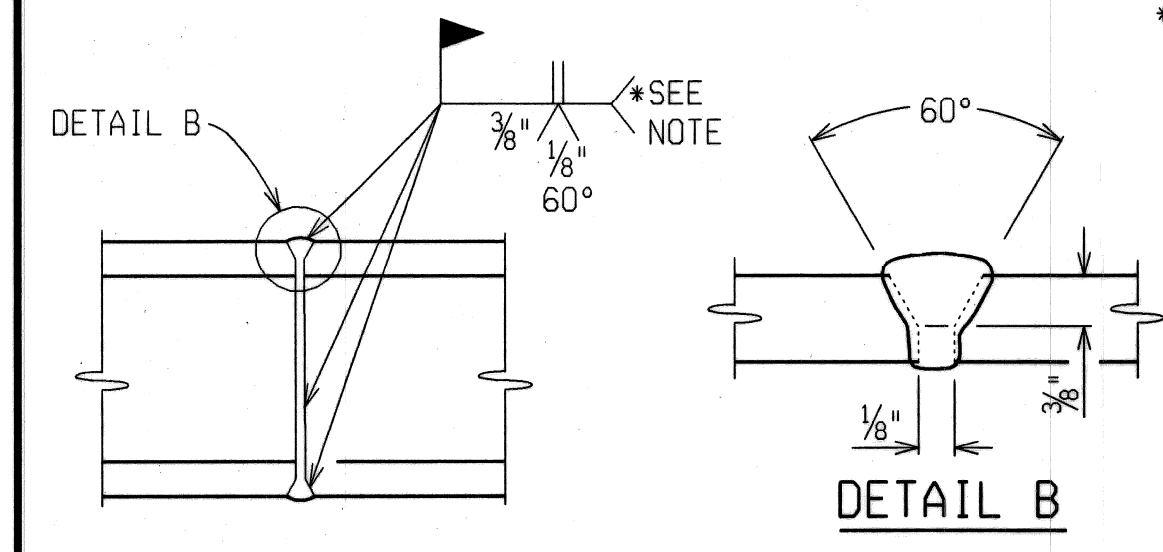
DATE: 9/12/06 DATE: 9/6/06 CORRECTED BY: DLW CHECKED BY: BMW DATE: 06/15/06 DRAWN BY: bmw FILE NAME: anti-etam-st3.dgn



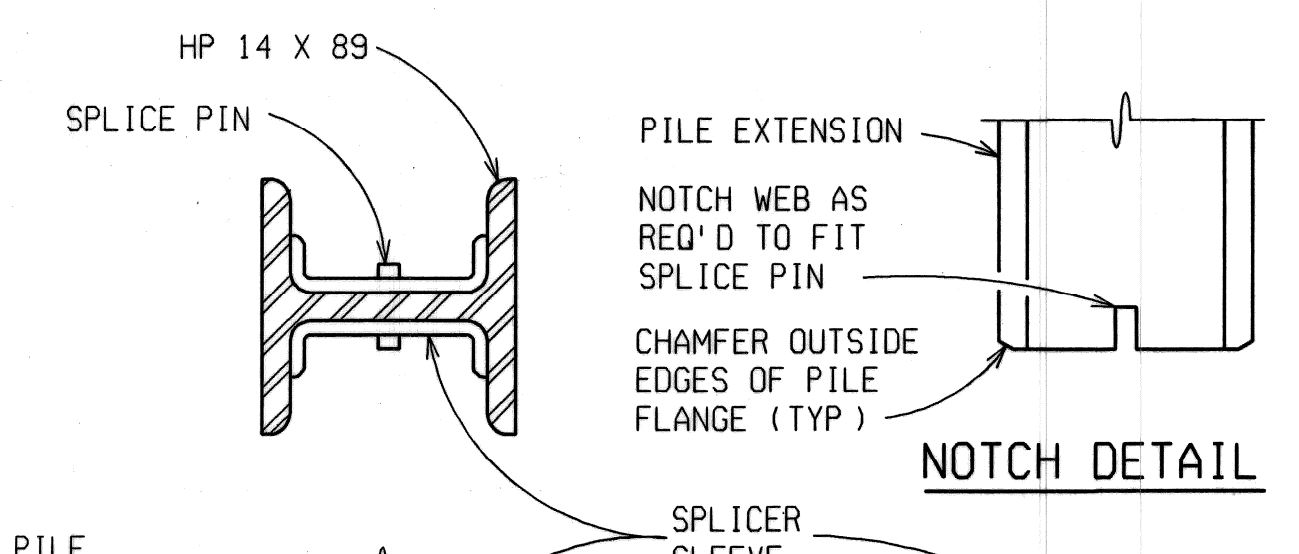
PLAN OF PILE LAYOUT



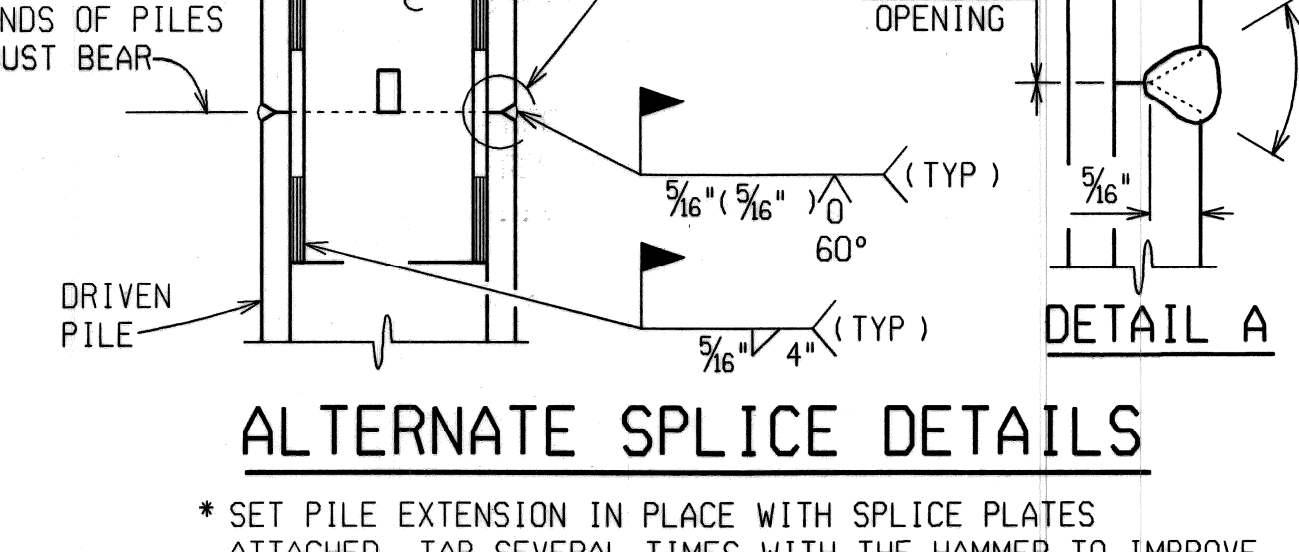
SPLICE DETAILS FOR PILES IN PLACE (HORIZONTAL JOINT)



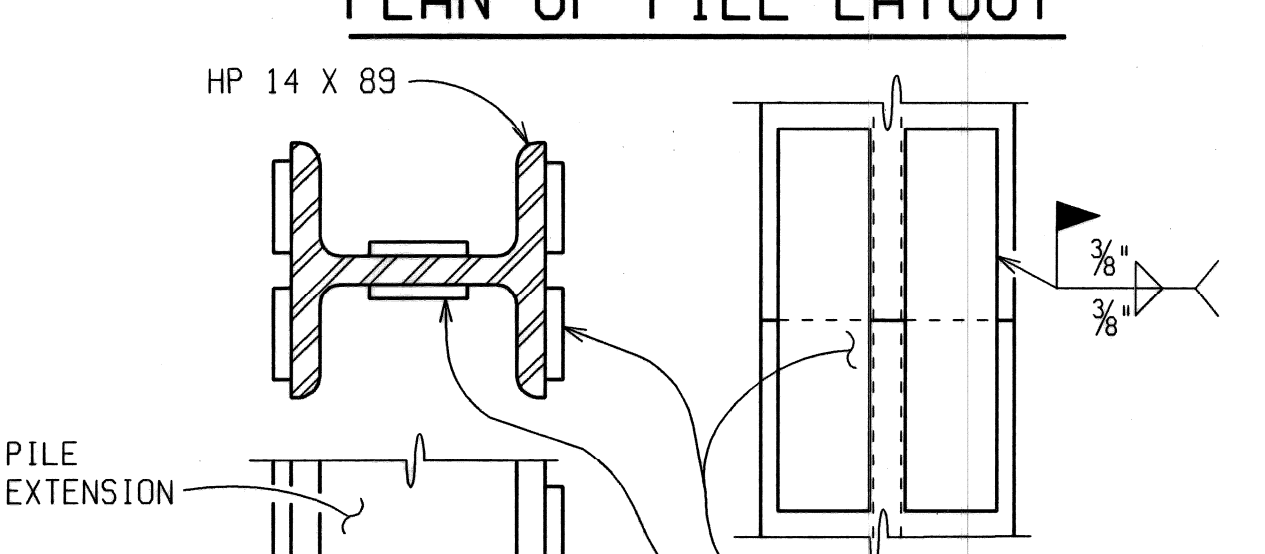
SPLICE DETAILS FOR PILES IN HORIZONTAL POSITION



NOTCH DETAIL



ALTERNATE SPLICE DETAILS



SPLICE DETAILS

* ENDS OF PILES MUST BEAR

* SET PILE EXTENSION IN PLACE WITH SPLICE PLATES ATTACHED, TAP SEVERAL TIMES WITH THE HAMMER TO IMPROVE BEARING CONTACT, THEN COMPLETE WELDING OF PLATES TO THE LOWER SECTION.

PILES - FURNISHED AND DRIVEN						
LOCATION	PILE TYPE	NUMBER OF PILES	ESTIMATED LENGTH FURNISHED & DRIVEN EACH FEET TOTAL FEET		MIN PILE PENETRATION EL	CUT-OFF EL
ABUT A	TEST	1	125	125		
	VERTICAL BATTERED	5	115	575	0.00	112.50
ABUT B	TEST	1	125	125		
	VERTICAL BATTERED	5	115	575	0.00	112.50
PIER 1	TEST	1	125	125		
	VERTICAL BATTERED	17	115	1955	0.00	112.50
FOOTING 1	VERTICAL	0	0	0		
	BATTERED	3	125	375	0.00	121.15
FOOTING 2	VERTICAL	3	120	360	0.00	118.30
	BATTERED	3	125	375		
FOOTING 3	VERTICAL	0	0	0		
	BATTERED	3	130	390	0.00	125.80
FOOTING 4	VERTICAL	0	0	0		
	BATTERED	3	135	405	0.00	127.81
FOOTING 5	VERTICAL	0	0	0		
	BATTERED	3	135	405	0.00	129.58
TOTAL		82				

MISCELLANEOUS QUANTITIES	
1	LS Pile Driving Equipment, Furn
9870	Ft Pile, Steel, Furn and Driven, 14 inch
82	Ea Pile Point, Steel
3	Ea Test Pile, Steel, 14 inch

NOTES:

- ⊥ -- DENOTES VERTICAL PILES.
- ⊥ -- DENOTES 3V:1H BATTERED PILES.
- ⊥ -- DENOTES 4V:1H BATTERED PILES.
- ⊙ -- DENOTES VERTICAL TEST PILES.

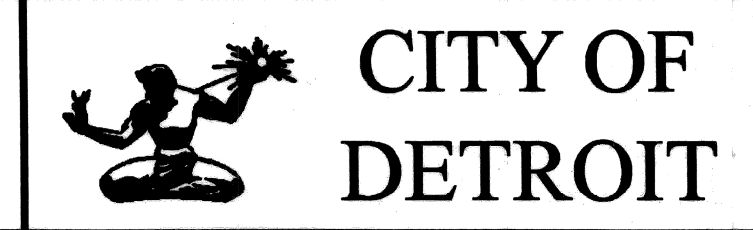
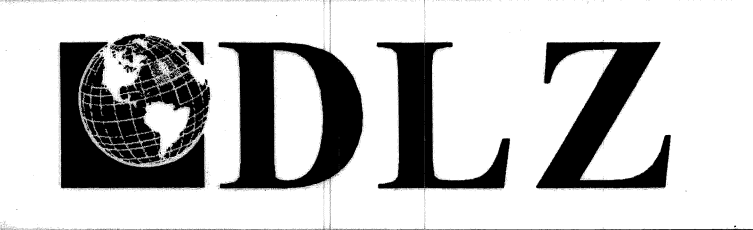
ABUTMENT AND PIER PILES SHALL BE DRIVEN TO A MINIMUM BEARING CAPACITY OF 90 TONS.

THE ESTIMATED PILE LENGTH IS BASED ON THE STATIC FORMULA.

STEEL PILES SHALL BE HP 14 X 89.

PILES ARE TO BE DRIVEN TO SUCH ACCURACY THAT THE ENDS OF THE PILES TO BE EMBEDDED IN THE CONCRETE ARE WITHIN 3" OF THE LOCATION SHOWN ON THE PLANS.

REVISIONS	DESCRIPTION	DATE	BY



ANTIETAM AVENUE OVER DEQUINDRE CUT GREENWAY

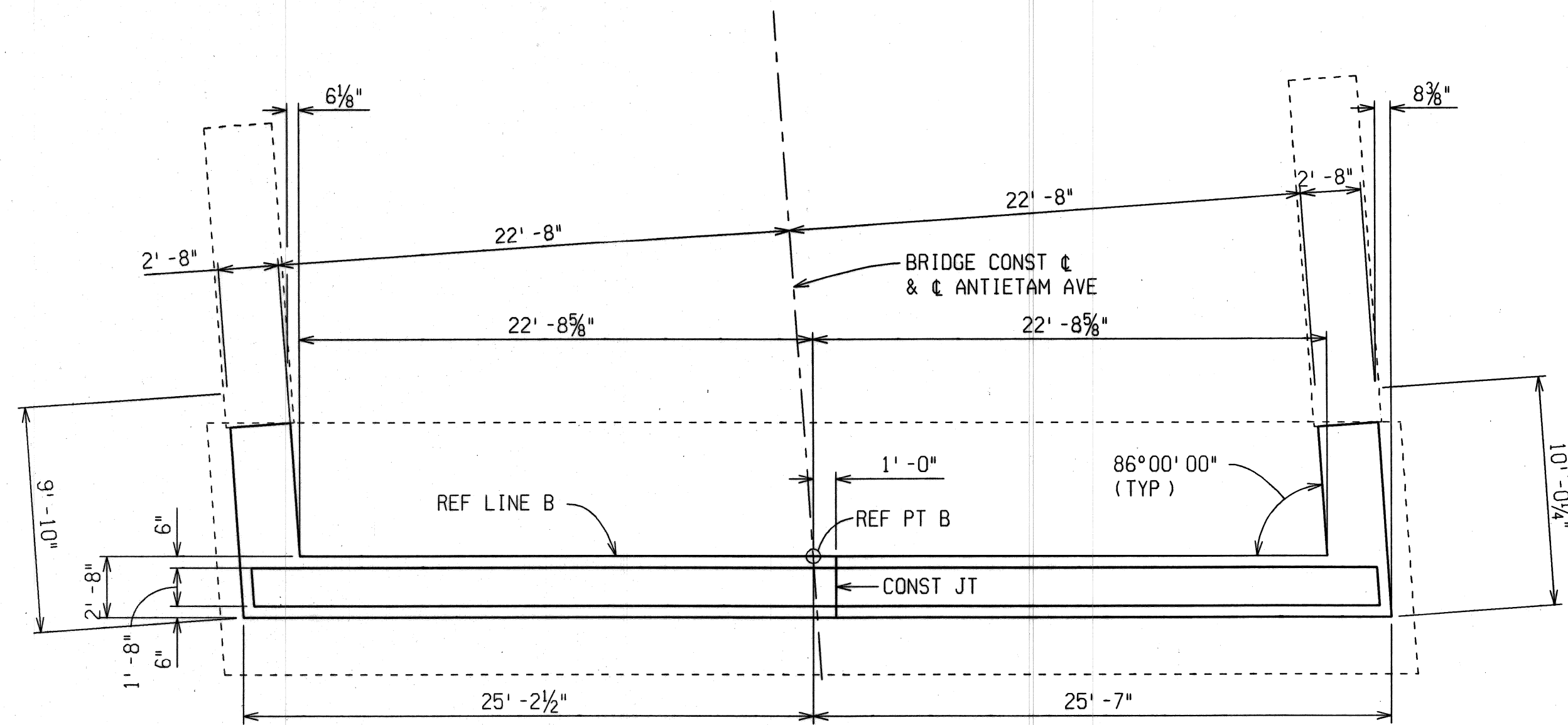
MDOT JOB NO. 83945A STRUCTURE NO. S02 of 82-22-97

PILE DETAILS

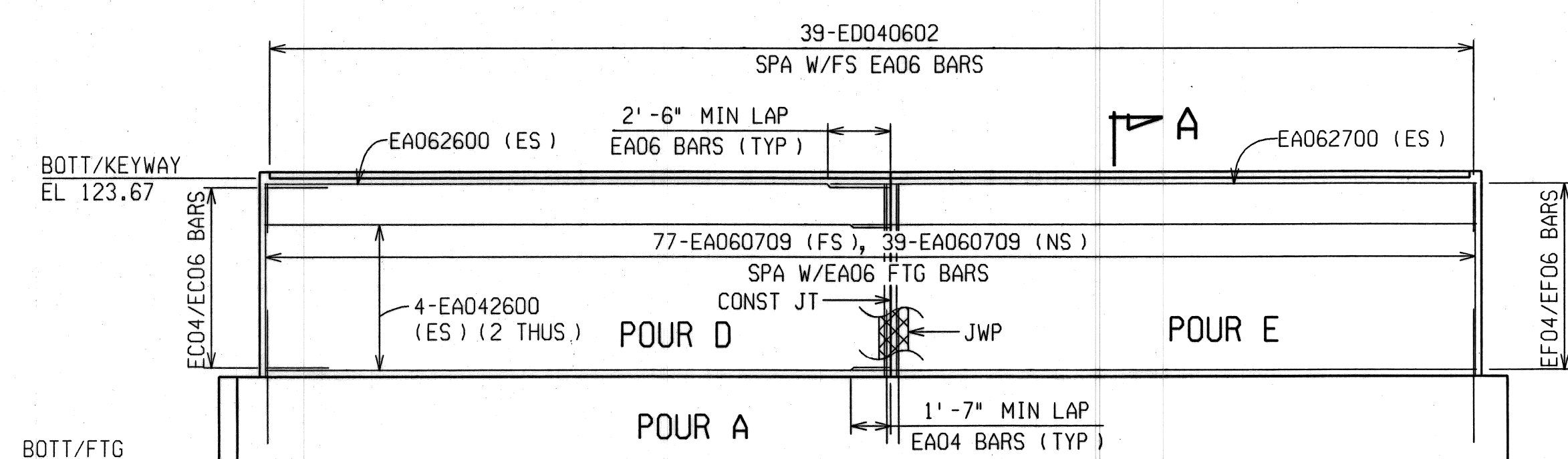
DATE: 4/13/07

DLZ JOB NO. 0641-6053-00

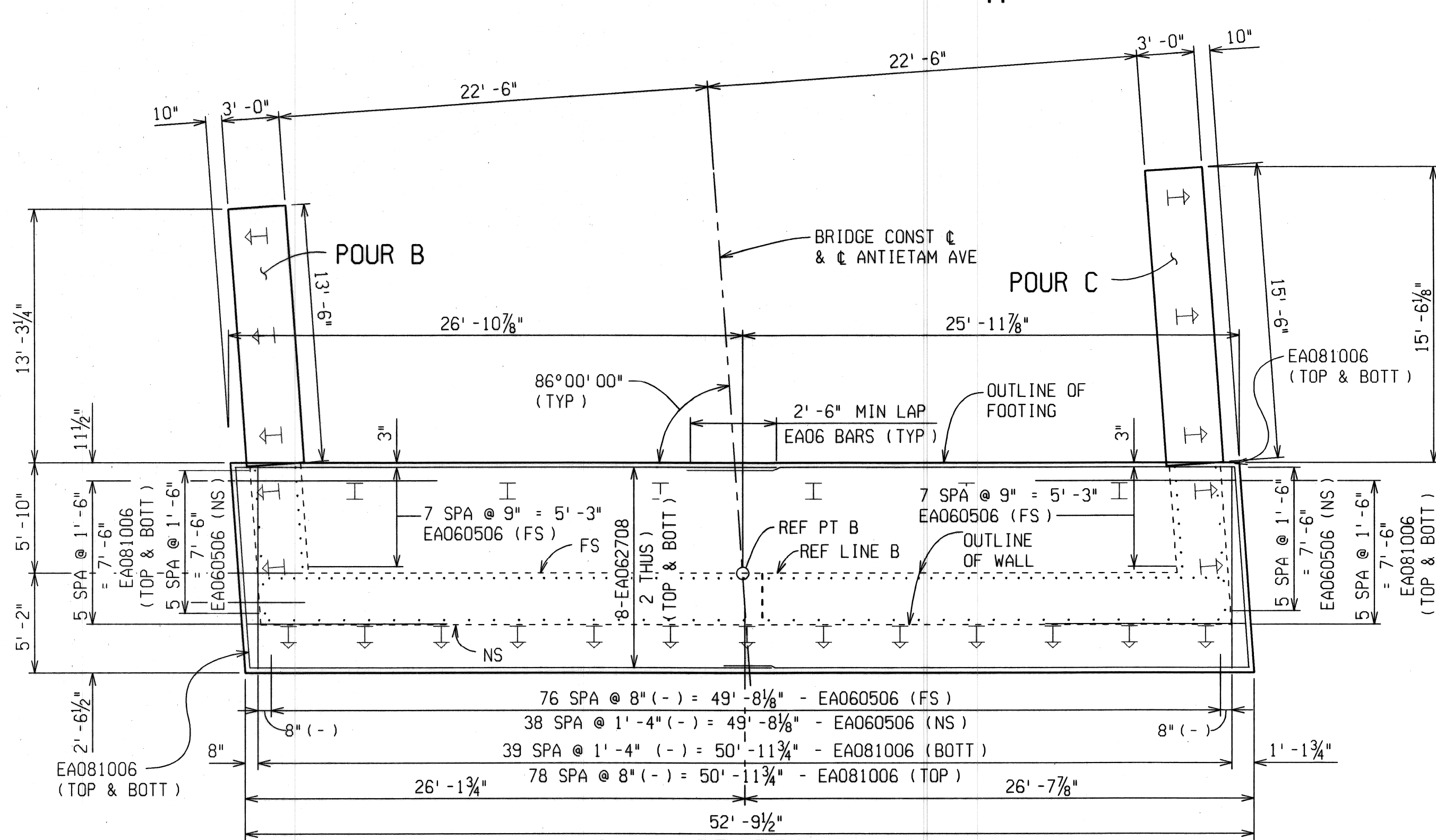
SHEET NO. 10 OF 48



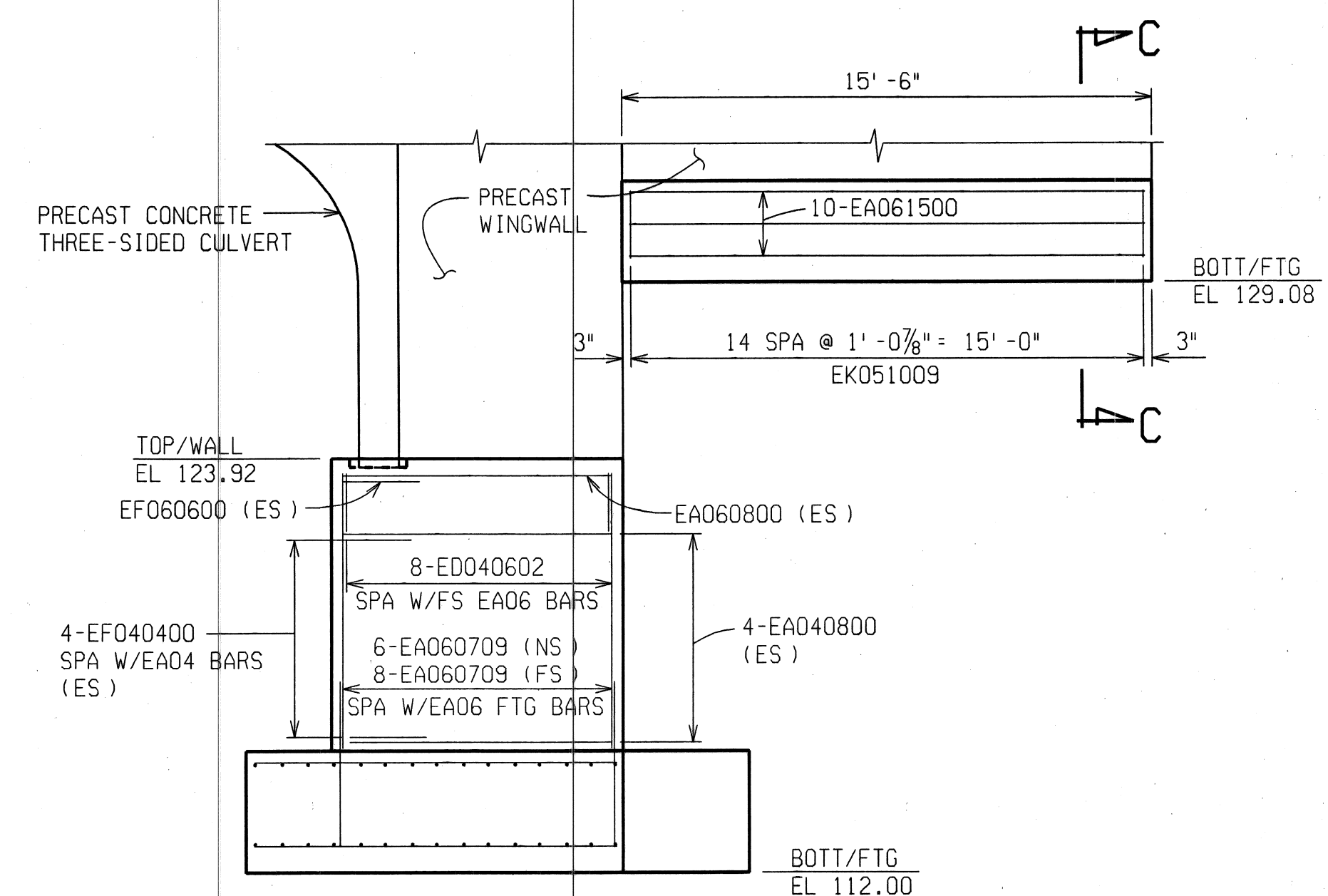
PLAN OF TOP



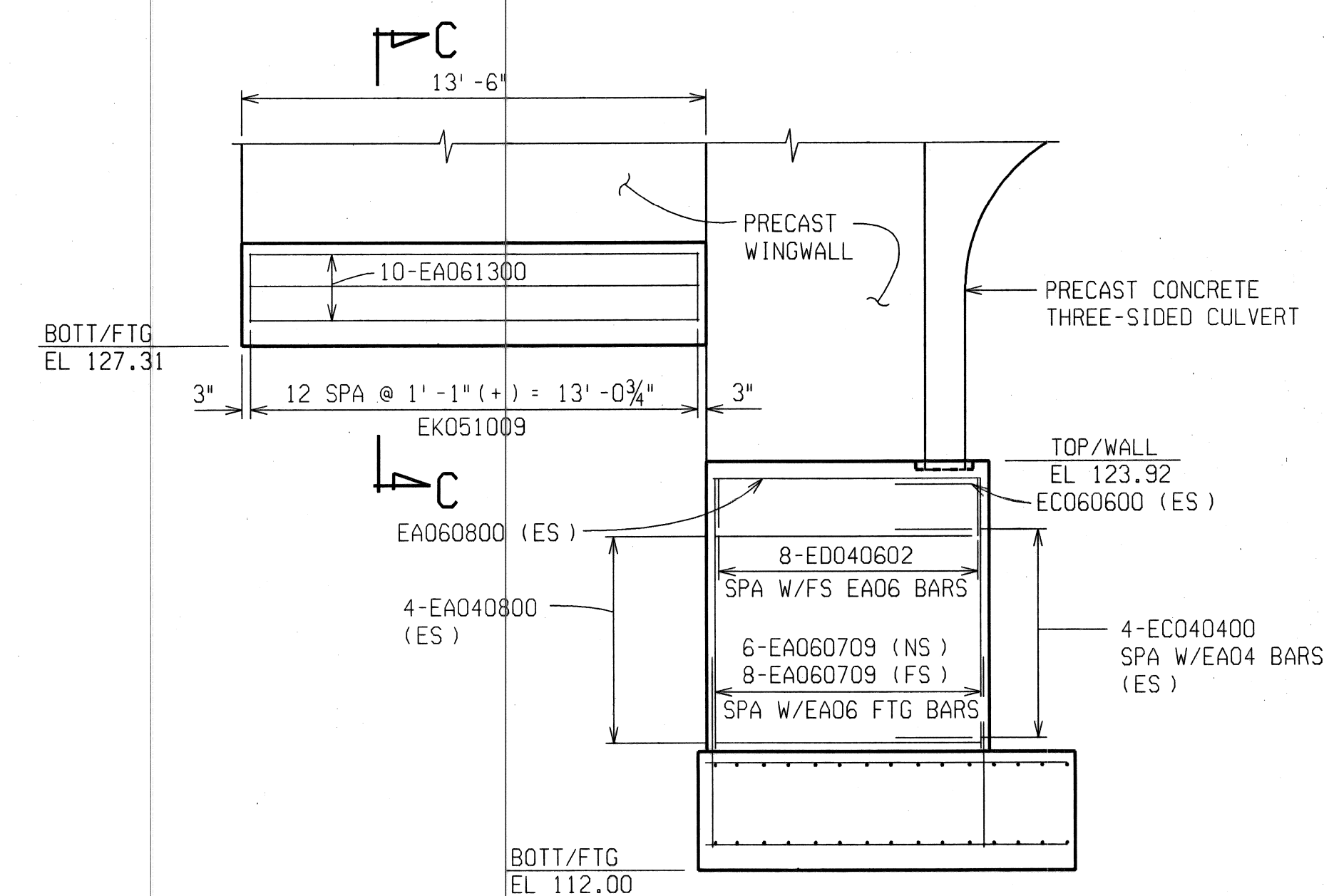
ABUTMENT ELEVATION



PLAN OF FOOTING



SOUTH WINGWALL ELEVATION
(PILES OMITTED FOR CLARITY)



NORTH WINGWALL ELEVATION
(PILES OMITTED FOR CLARITY)

REVISIONS	DESCRIPTION	DATE	BY

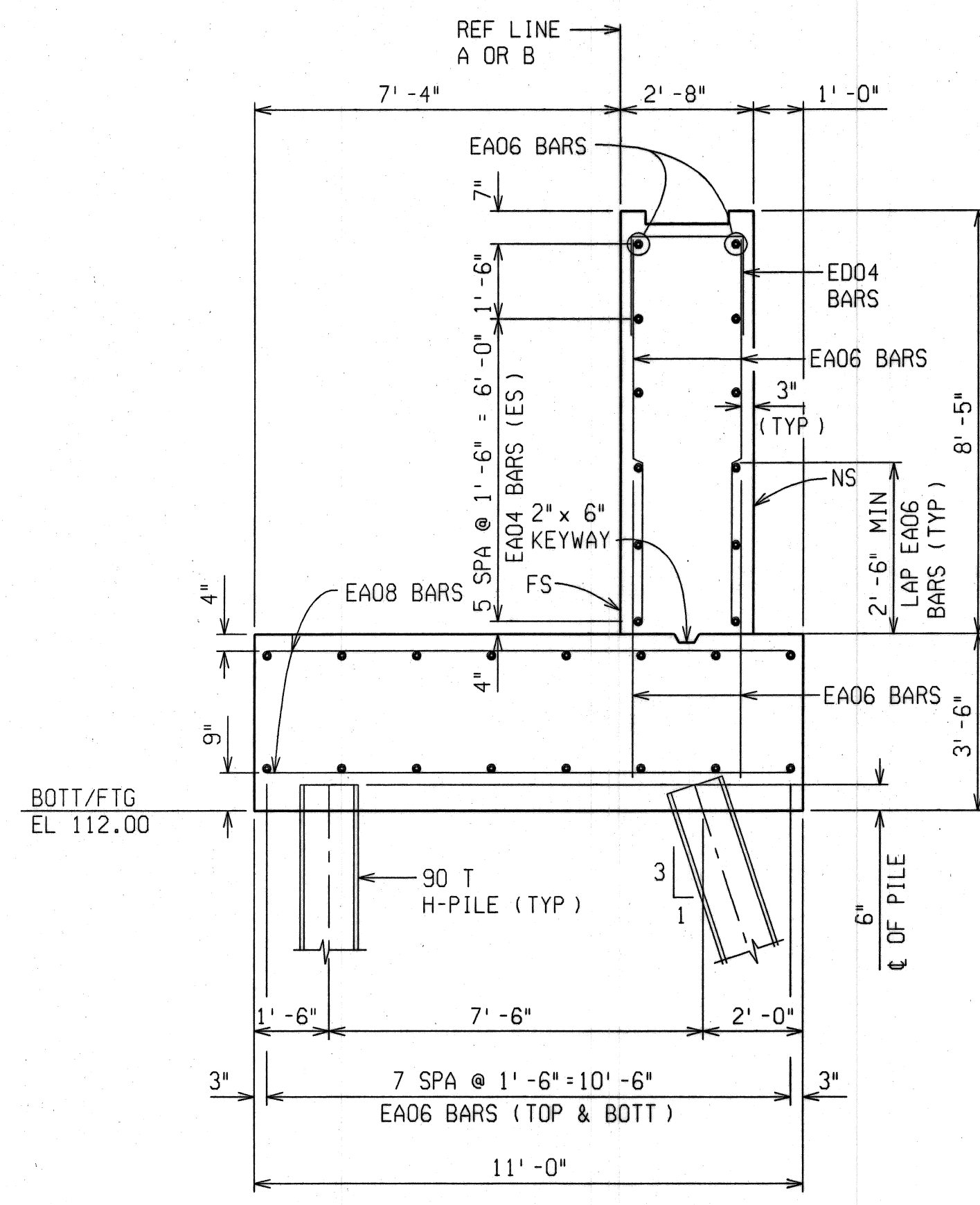


ANTIETAM AVENUE OVER DEQUINDRE CUT GREENWAY	
MDOT JOB NO. 83945A	STRUCTURE NO. S02 of 82-22-97

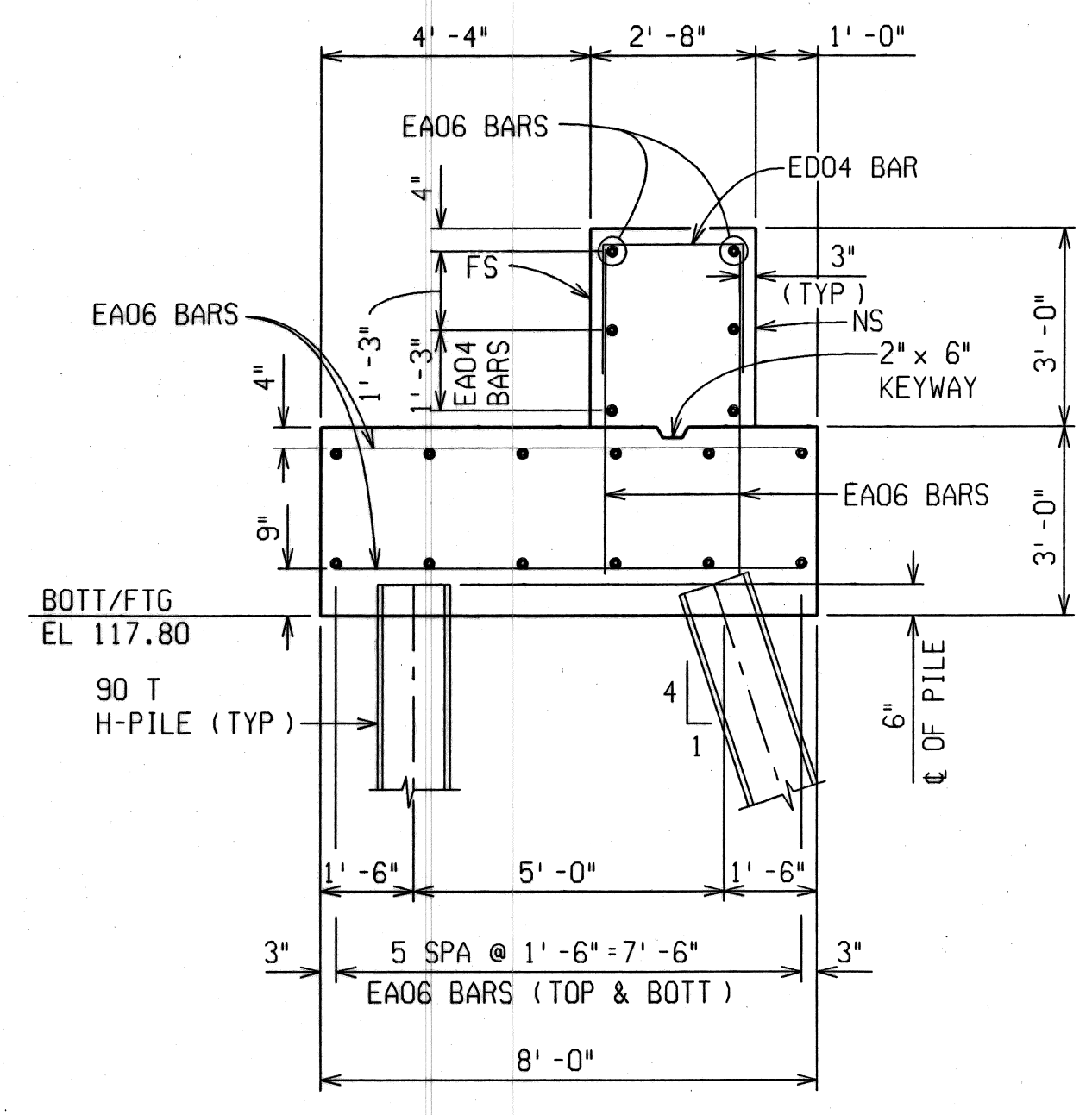
ABUTMENT B DETAILS	
DATE:	4/13/07
DLZ JOB NO.	0641-6053-00
SHEET NO.	12 OF 48

FILE NAME: antietam-abb1.dgn
 DRAWN BY: BMW
 CHECKED BY: TNB
 DATE: 08/31/06
 CORRECTED BY: DLW
 DATE: 9/06/06
 DATE: 9/12/06

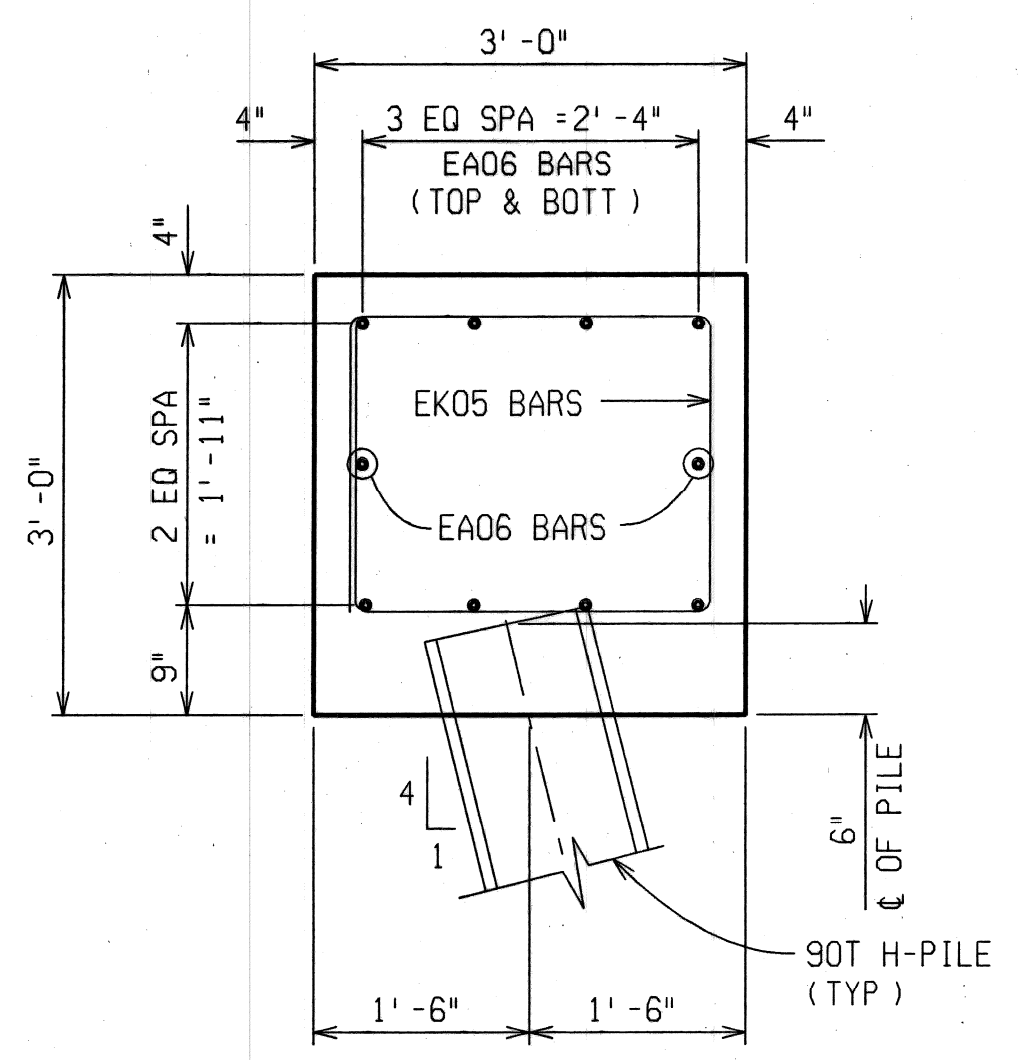
DATE: 9/12/06 CORRECTED BY: DLW DATE: 9/6/06 CHECKED BY: BMW DATE: 8/31/06 DRAWN BY: bmw FILE NAME: antuetam-abl.dgn



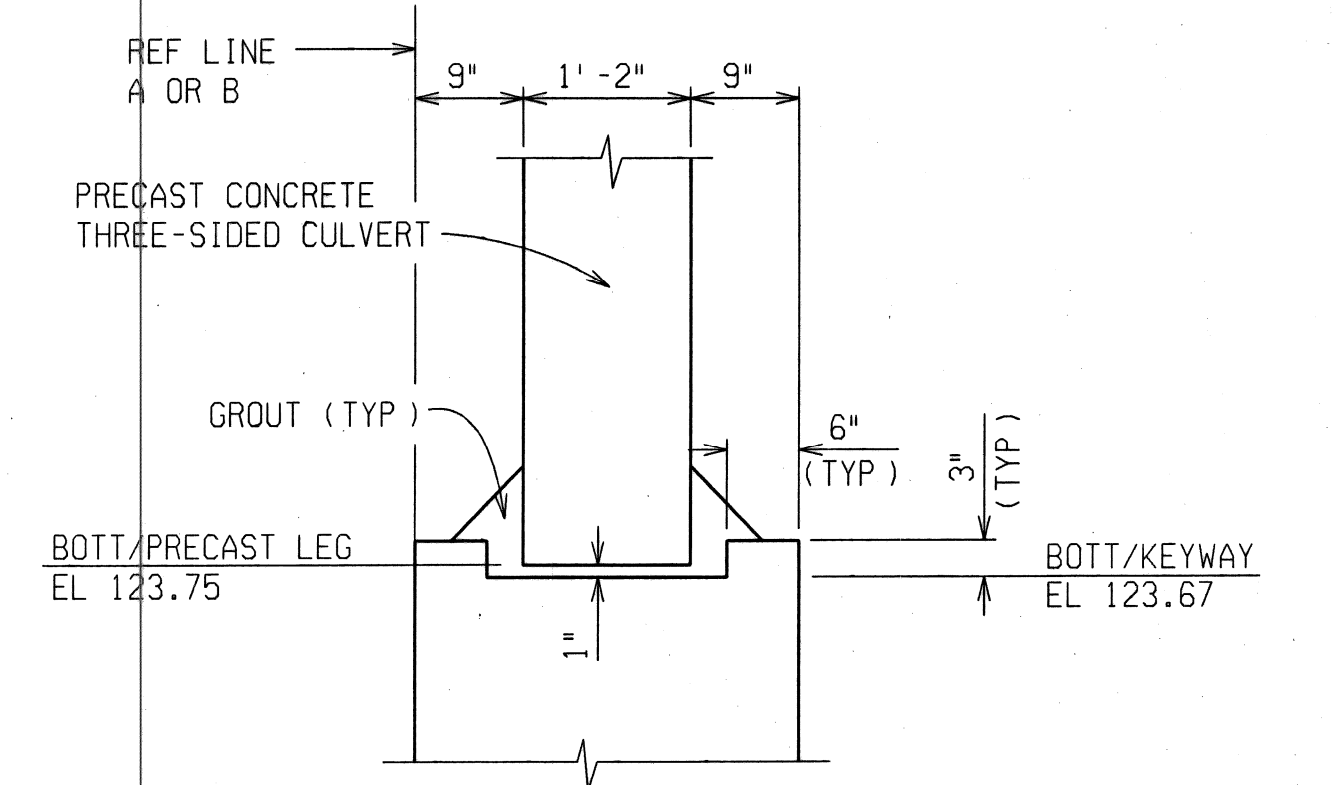
SECTION A-A



SECTION B-B



SECTION C-C



DETAIL OF KEYWAY

MISCELLANEOUS QUANTITIES	
32	Sft Joint Waterproofing

SUBSTRUCTURE CONC QUANTITIES		
POUR	ABUT A	ABUT B
A	74.5	75.5
B	12.0	4.5
C	6.5	5.0
D	5.0	26.5
E	26.5	25.0
F	25.0	
G	4.0	
TOTAL	153.5	136.5
GRAND TOTAL	290 CYD	

NOTES:
 JWP DENOTES JOINT WATERPROOFING.
 NS DENOTES NEAR SIDE.
 FS DENOTES FAR SIDE.
 ES DENOTES EACH SIDE.
 FOR BEVEL AND MOLDING DETAILS, SEE STANDARD PLAN B-103 SERIES.
 WORK THIS SHEET WITH SHEETS 11-12 OF 48.
 FOR PILE QUANTITIES, LAYOUT AND NOTES, SEE SHEET 10 OF 48.
 LOW TEMPERATURE PROTECTION OF CONCRETE SHALL BE APPLIED ACCORDING TO SECTION 706.03J, OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION. LOW TEMPERATURE PROTECTION OF CONCRETE WILL NOT BE PAID FOR SEPARATELY, BUT WILL BE INCLUDED IN THE BID ITEM "Substructure Conc".

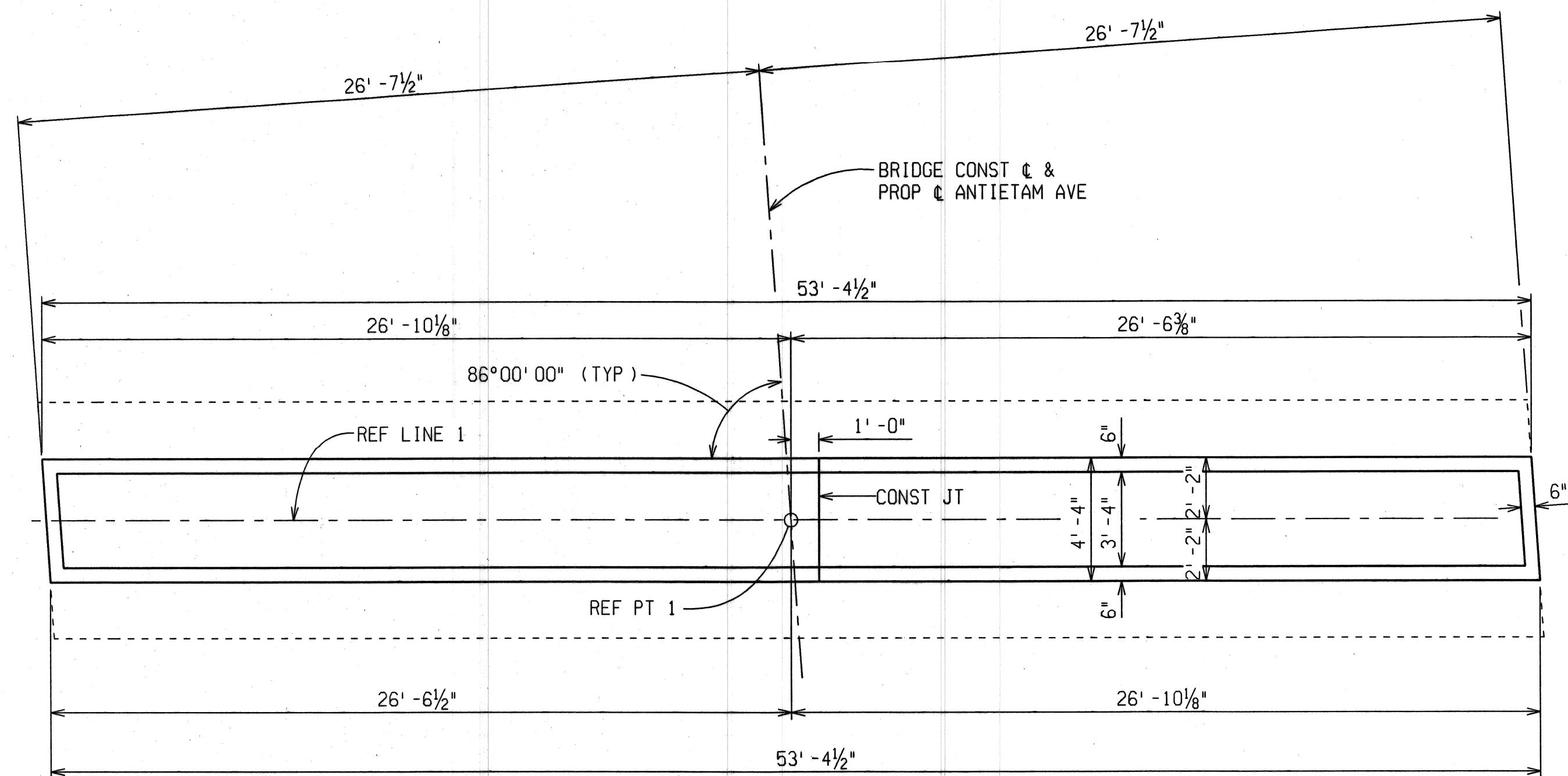
REVISIONS	DESCRIPTION	DATE	BY



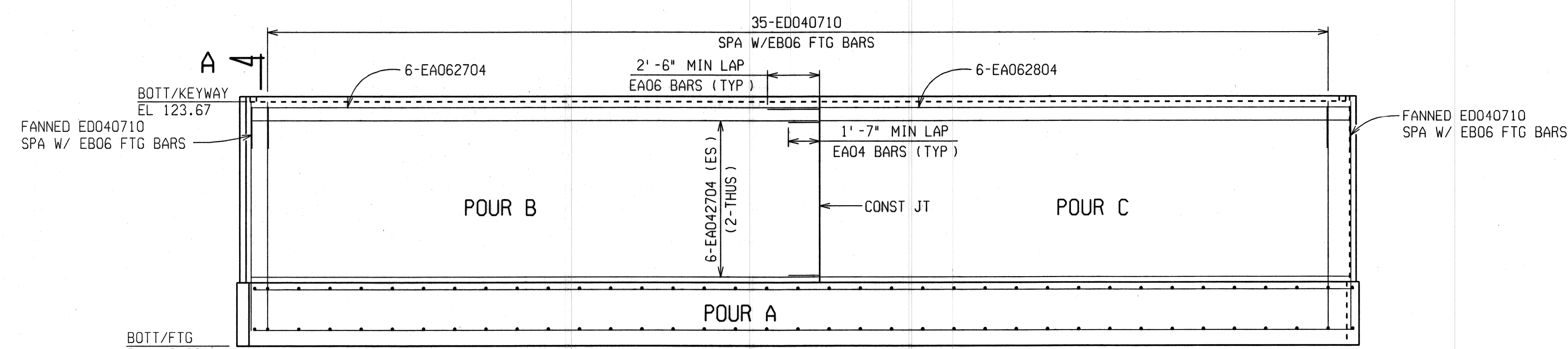
ANTIETAM AVENUE OVER
 DEQUINDRE CUT GREENWAY
 MDOT JOB NO. 83945A STRUCTURE NO. S02 of 82-22-97

ABUTMENT DETAILS

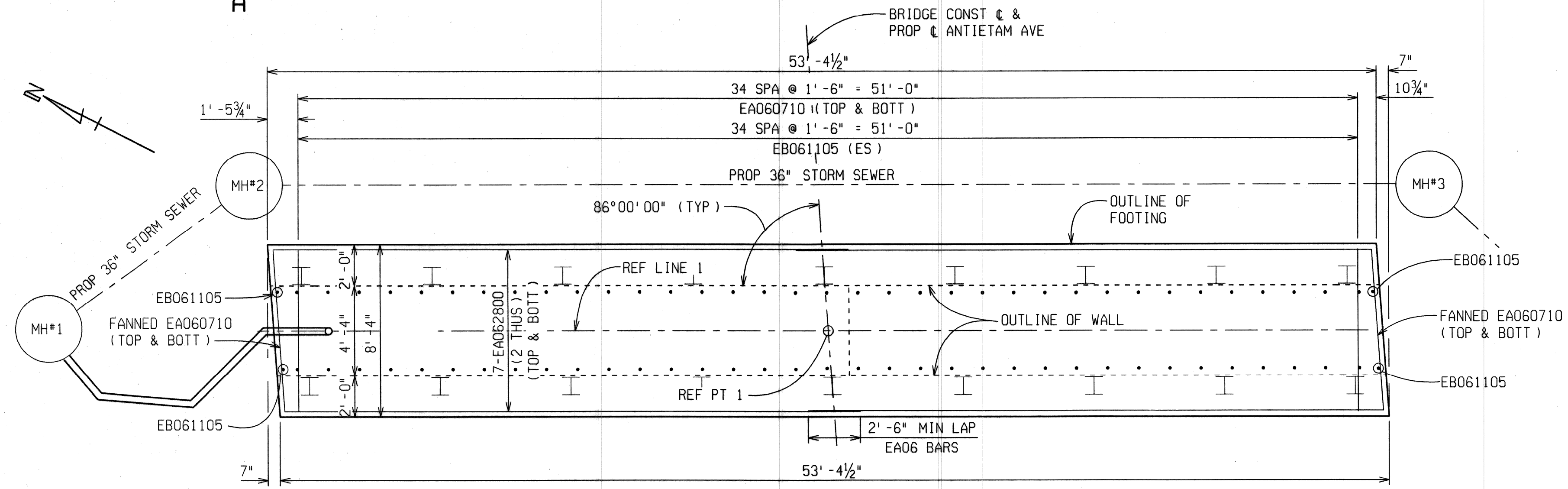
DATE: 4/13/07
 DLZ JOB NO. 0641-6053-00
 SHEET NO. 13 OF 48



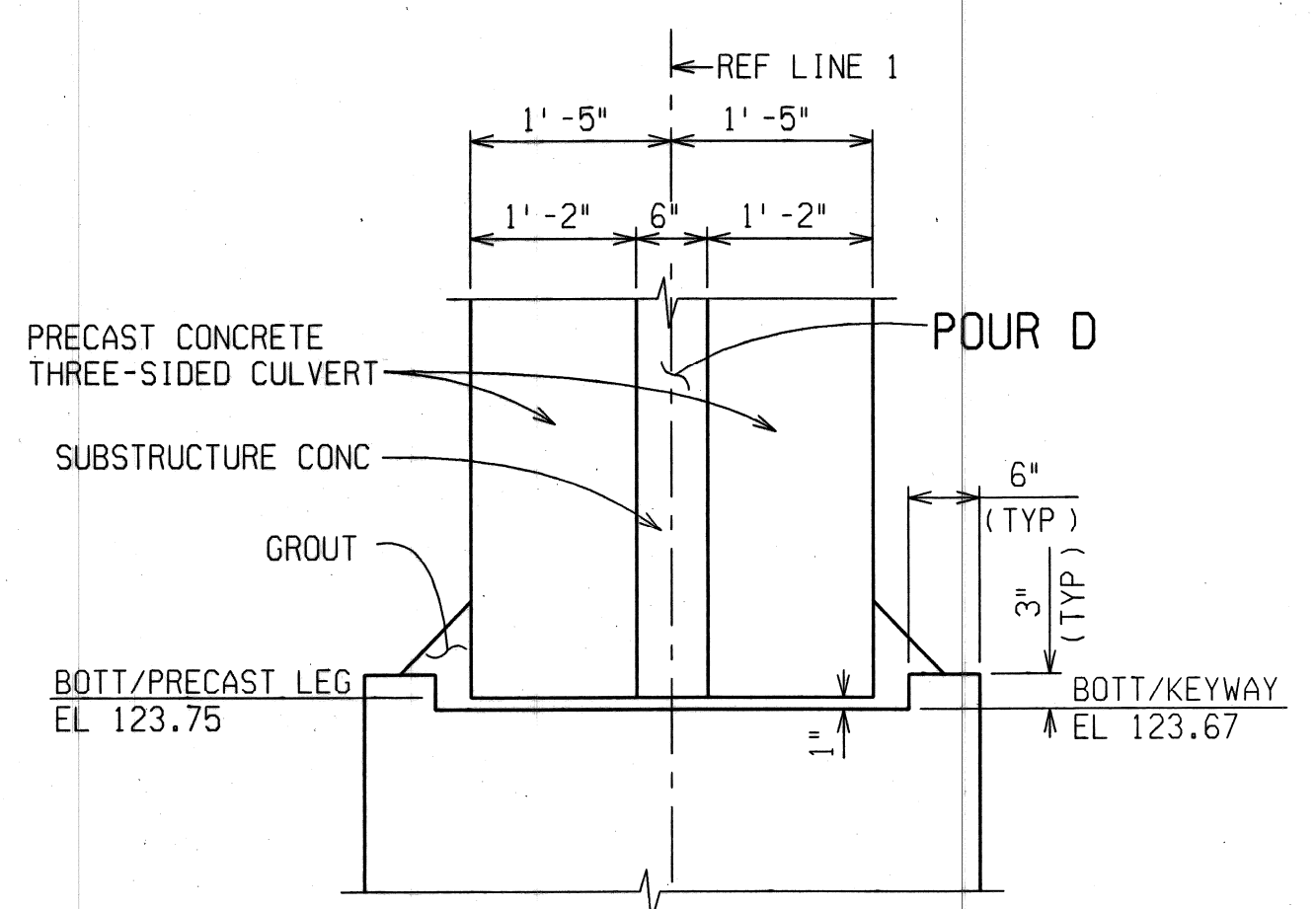
PLAN OF TOP



ELEVATION



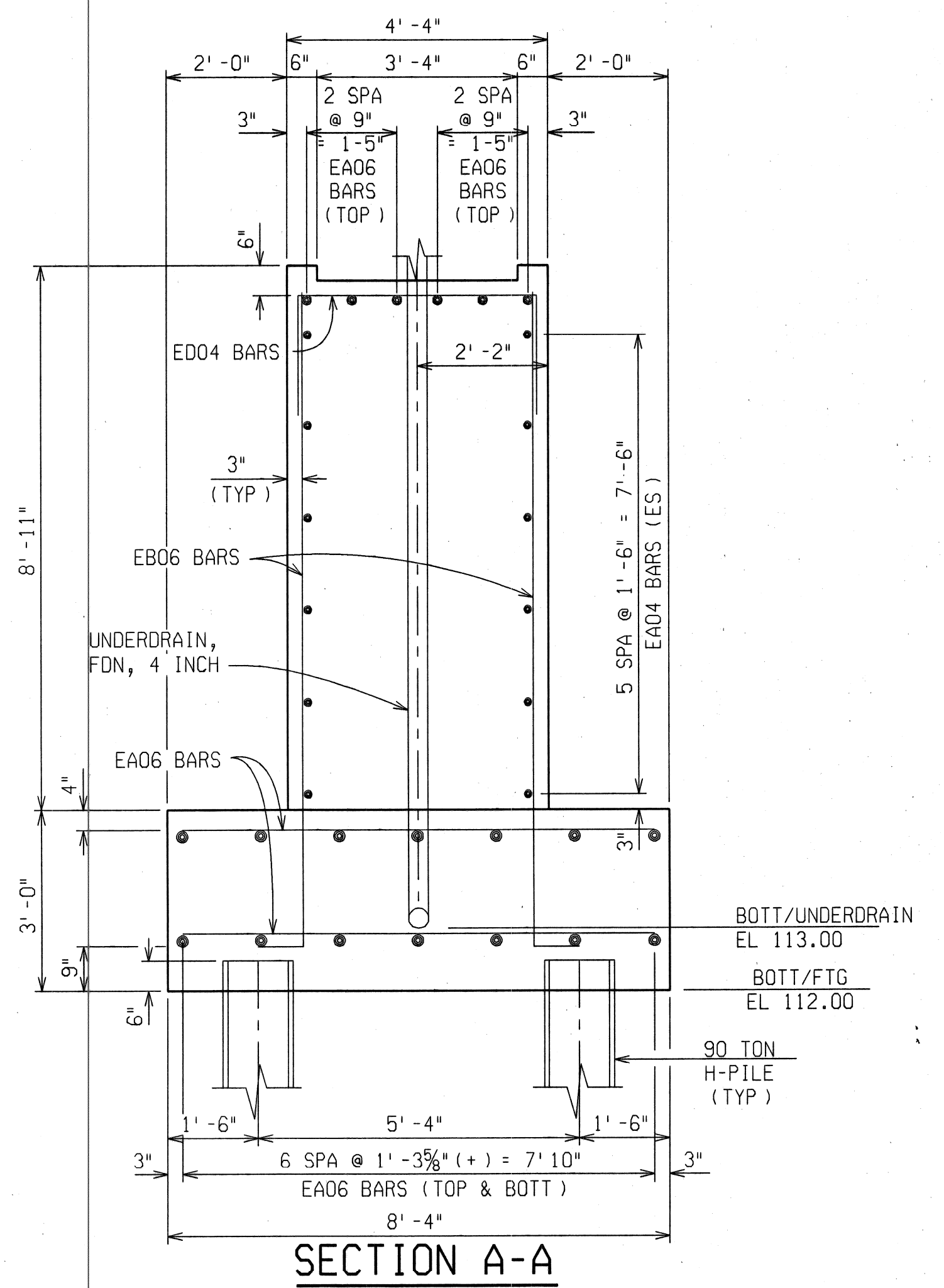
PLAN OF FOOTING



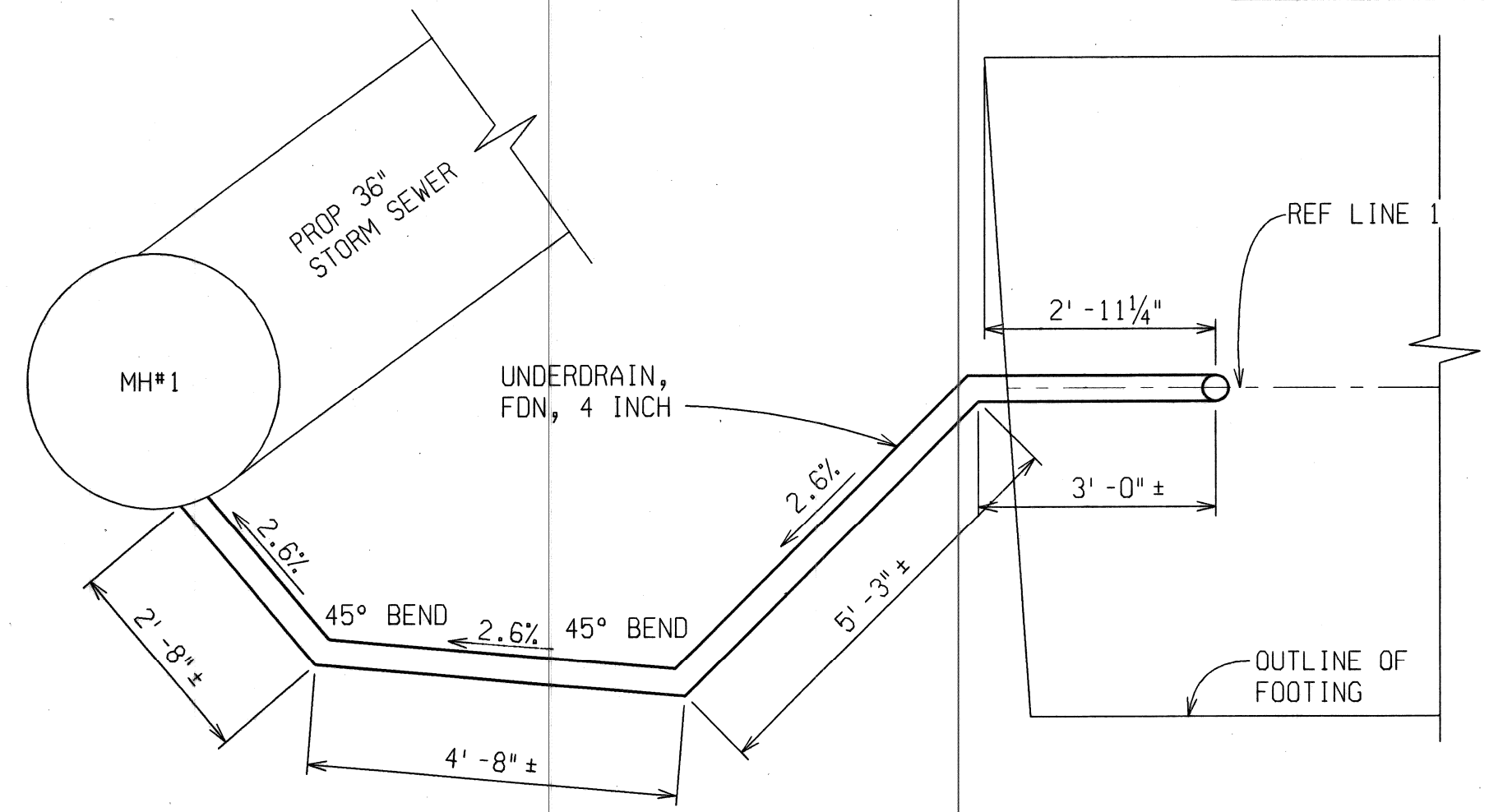
DETAIL OF KEYWAY

SUBSTRUCTURE CONC QUANTITIES

POUR	CYD
A	49.0
B	39.0
C	36.0
D	9.0
TOTAL	133



SECTION A-A



UNDERDRAIN DETAIL

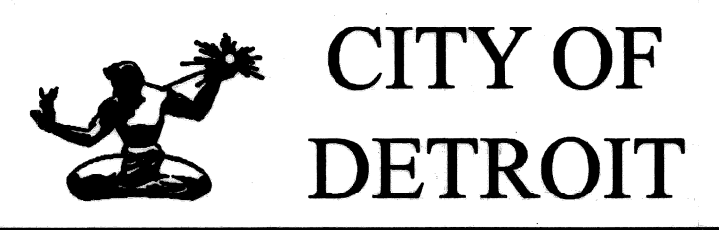
MISCELLANEOUS QUANTITIES

86	Ft	Underdrain, Fdn, 4 inch
1	Ea	Sewer Top, 4 inch

NOTES:

- ES DENOTES EACH SIDE.
- FS DENOTES FAR SIDE.
- NS DENOTES NEAR SIDE.
- FOR BEVEL AND MOLDING DETAILS, SEE STANDARD PLAN B-103 SERIES.
- FOR PILE QUANTITIES, LAYOUT AND NOTES, SEE SHEET 10 OF 48.
- LOW TEMPERATURE PROTECTION OF CONCRETE SHALL BE APPLIED ACCORDING TO SECTION 706.03J, OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION. LOW TEMPERATURE PROTECTION OF CONCRETE WILL NOT BE PAID FOR SEPARATELY, BUT WILL BE INCLUDED IN THE BID ITEM "Substructure Conc".

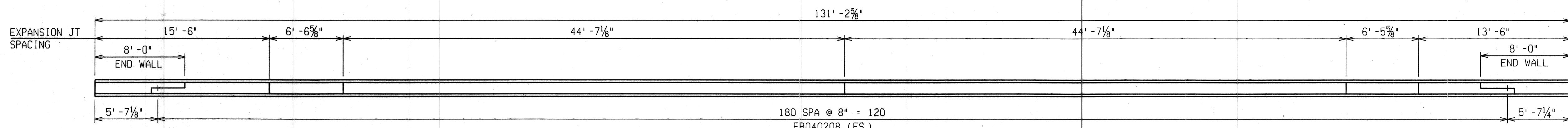
REVISIONS	DESCRIPTION	DATE	BY



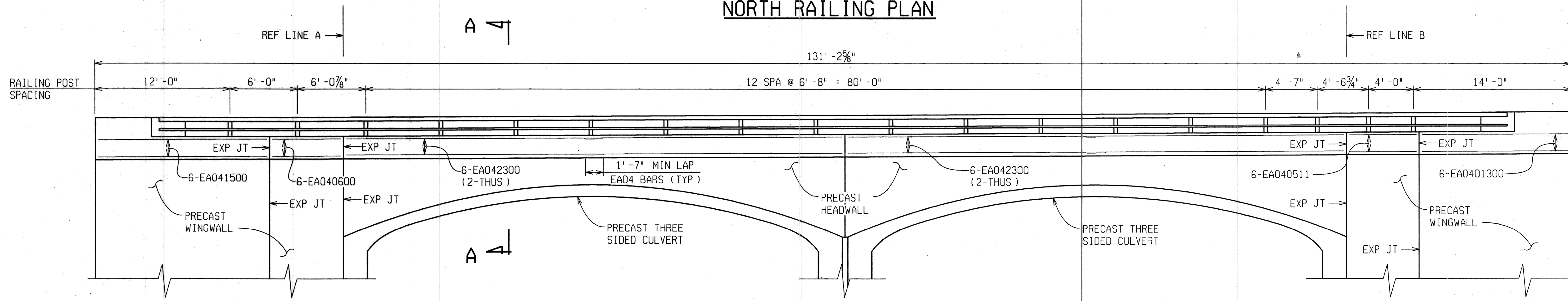
ANTIETAM AVENUE OVER DEQUINDRE CUT GREENWAY
 MDOT JOB NO. 83945A STRUCTURE NO. S02 of 82-22-97

DATE: 4/13/07
 DLZ JOB NO. 0641-6053-00
 SHEET NO. 14 OF 48

DATE: 09/12/06 CORRECTED BY: DLW DATE: 09/06/06 CHECKED BY: BMW DATE: 09/01/06 DRAWN BY: DLW FILE NAME: antietam-pi.dgn

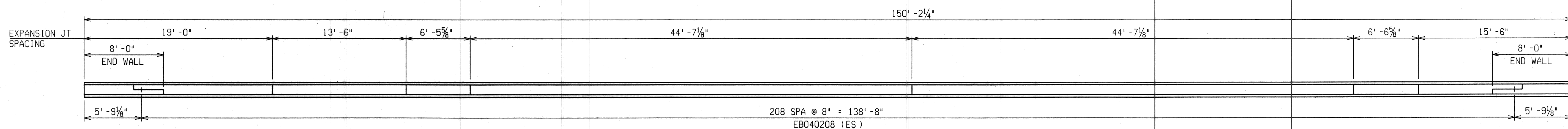


NORTH RAILING PLAN

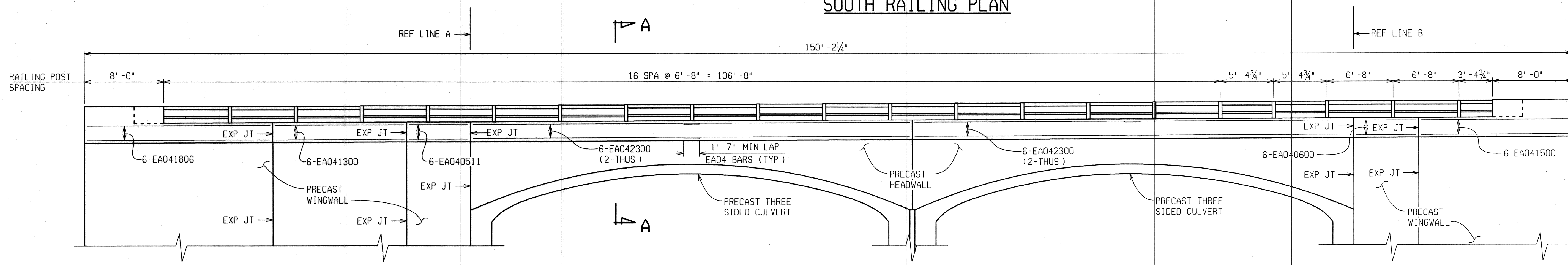


NORTH RAILING ELEVATION

INSIDE FACE SHOWN



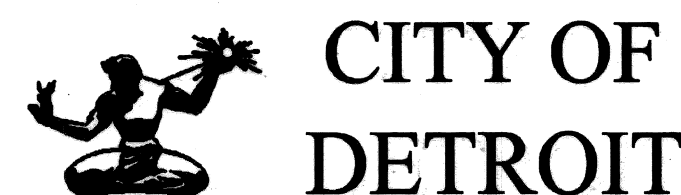
SOUTH RAILING PLAN



SOUTH RAILING ELEVATION

OUTSIDE FACE SHOWN

REVISIONS	DESCRIPTION	DATE	BY

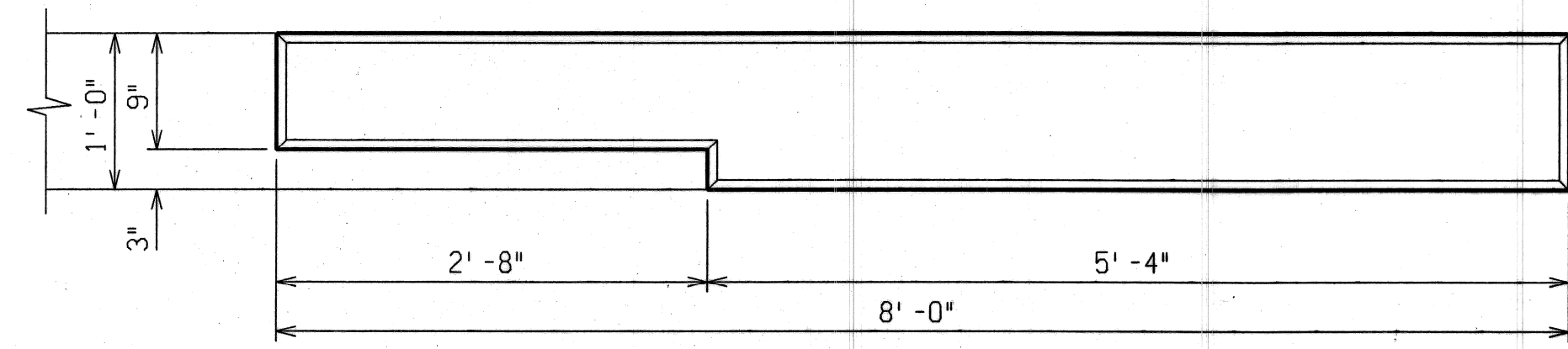


ANTIETAM AVENUE OVER
DEQUINDRE CUT GREENWAY
MDOT JOB NO. 83945A STRUCTURE NO. S02 of 82-22-97

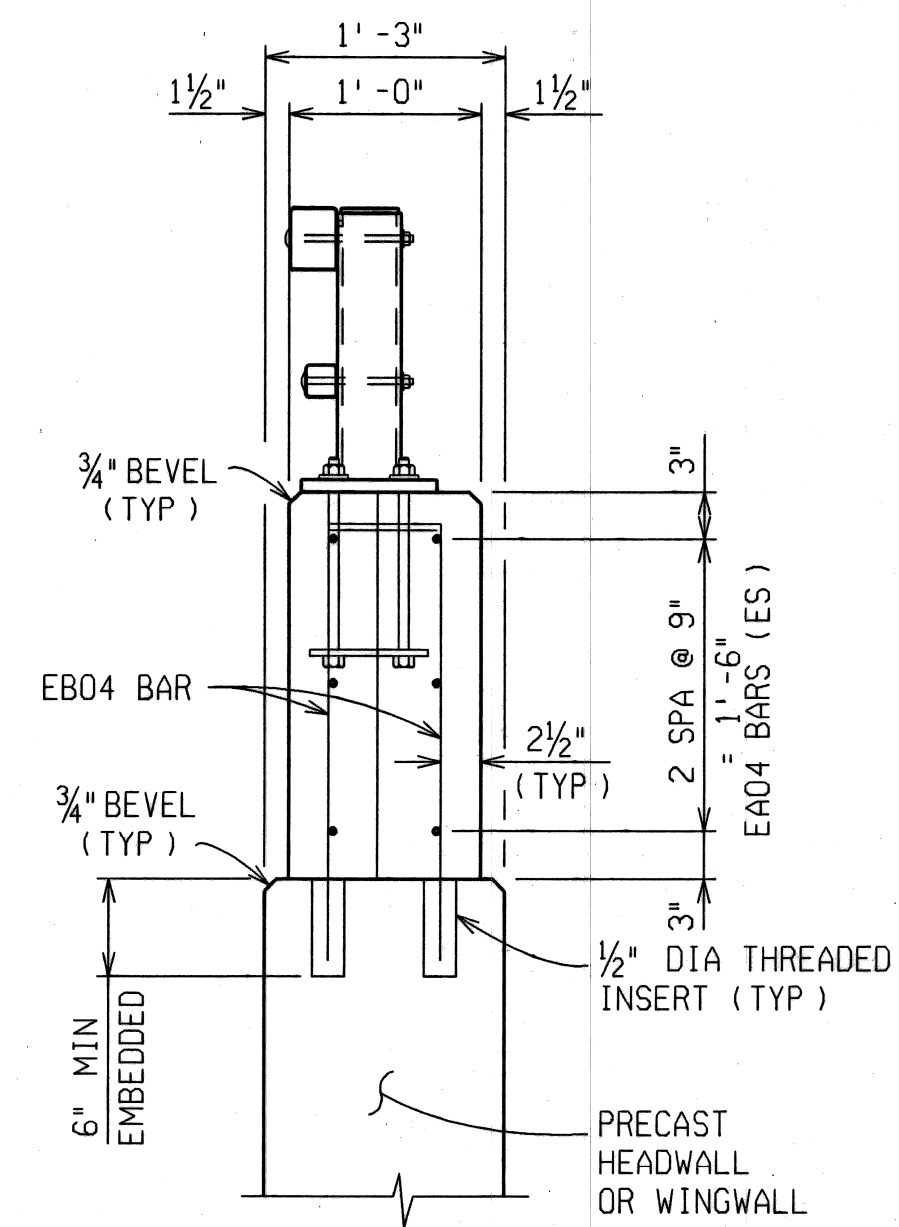
SUPERSTRUCTURE DETAILS

DATE: 4/13/07
DLZ JOB NO. 0641-6053-00
SHEET NO. 15 OF 48

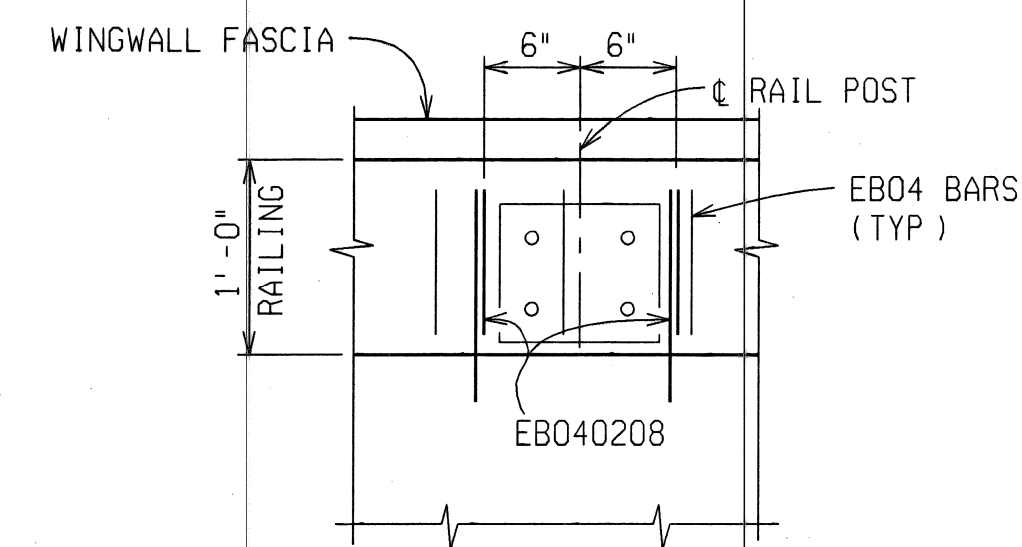
DATE: 9/12/06 CORRECTED BY: DLW DATE: 9/16/06 CHECKED BY: BMW DATE: 9/11/06 DRAWN BY: bmw FILE NAME: antietam-dk1.dgn



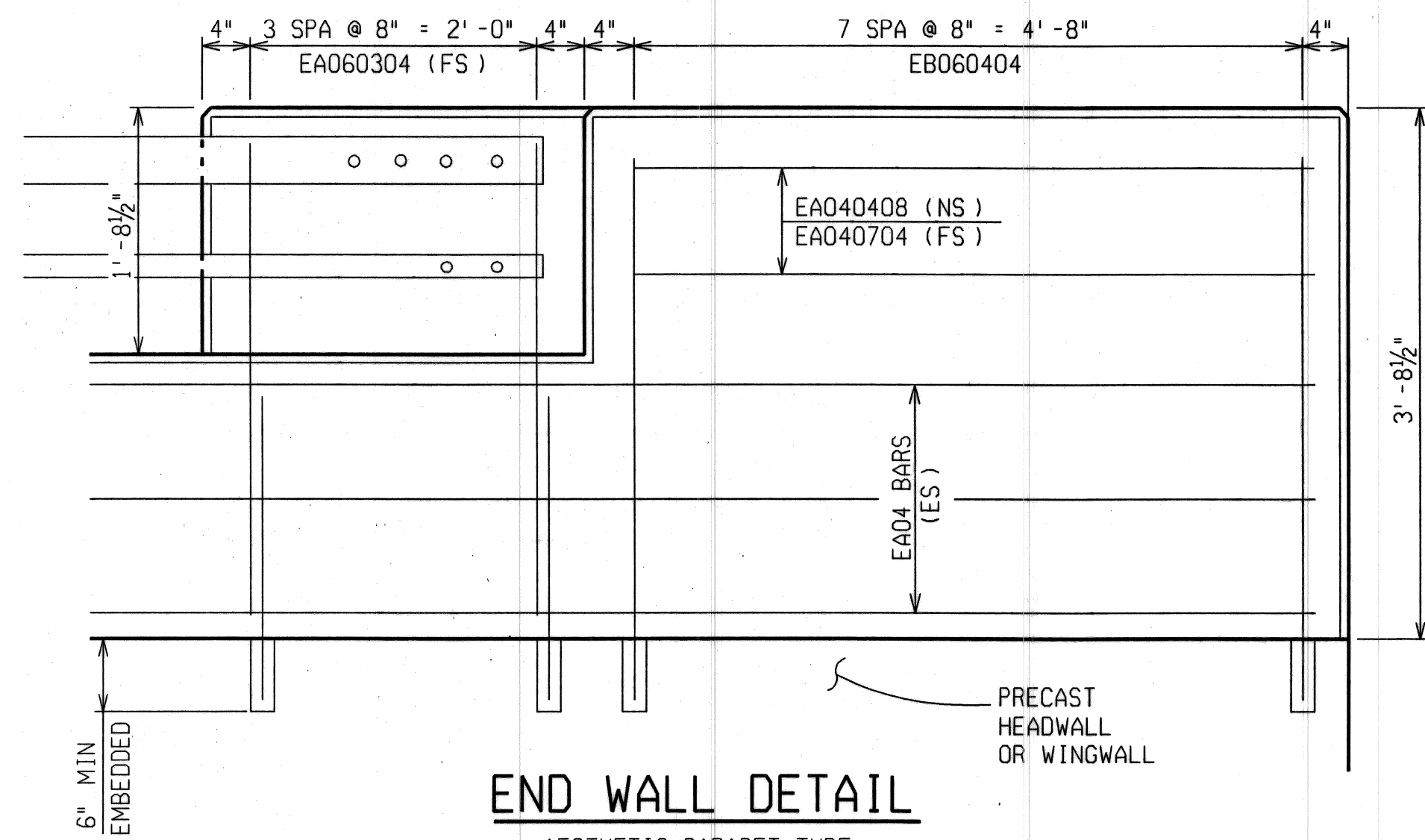
PLAN - END WALL
AESTHETIC PARAPET TUBE



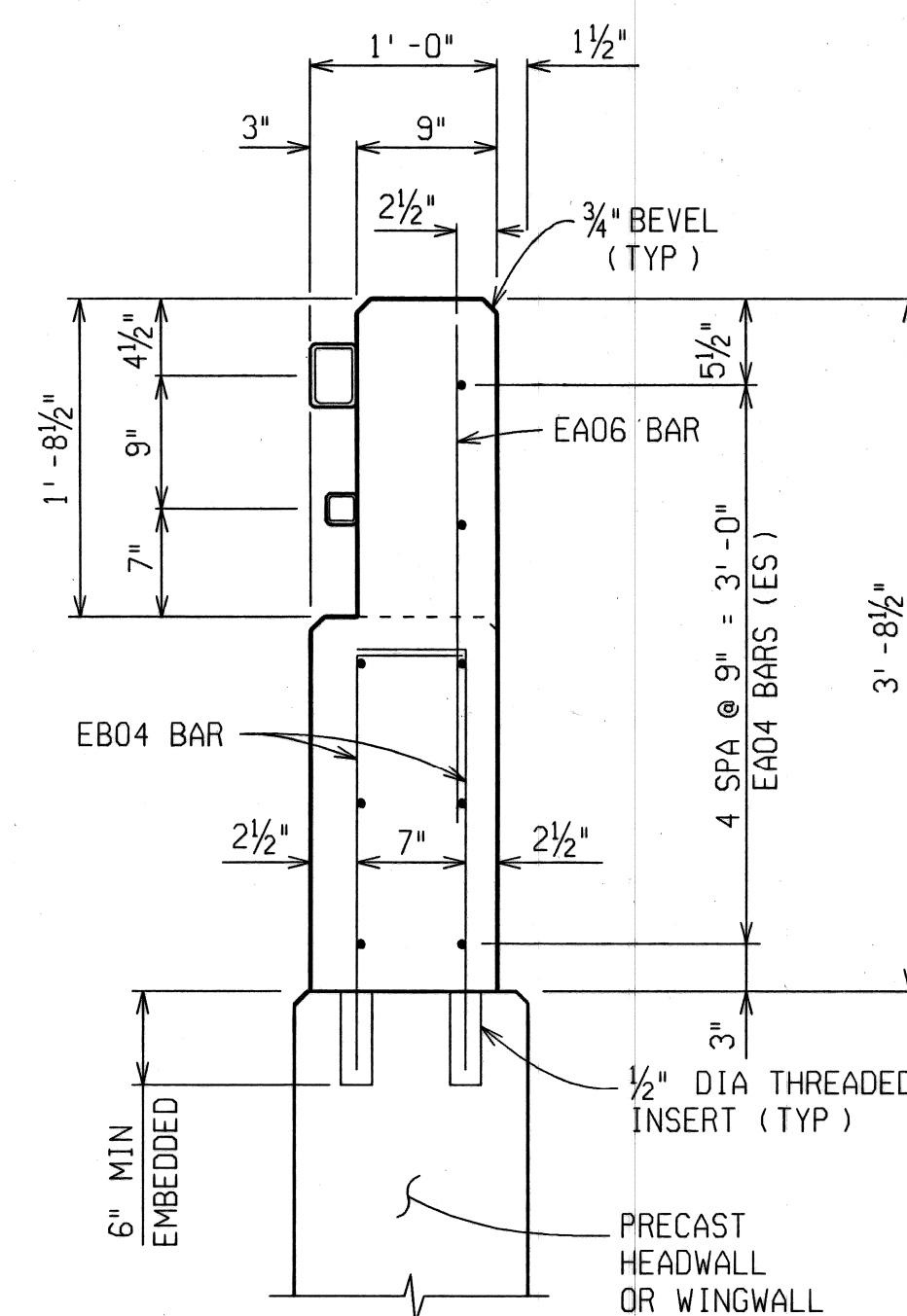
SECTION A-A
(FULL CONCRETE AREA)



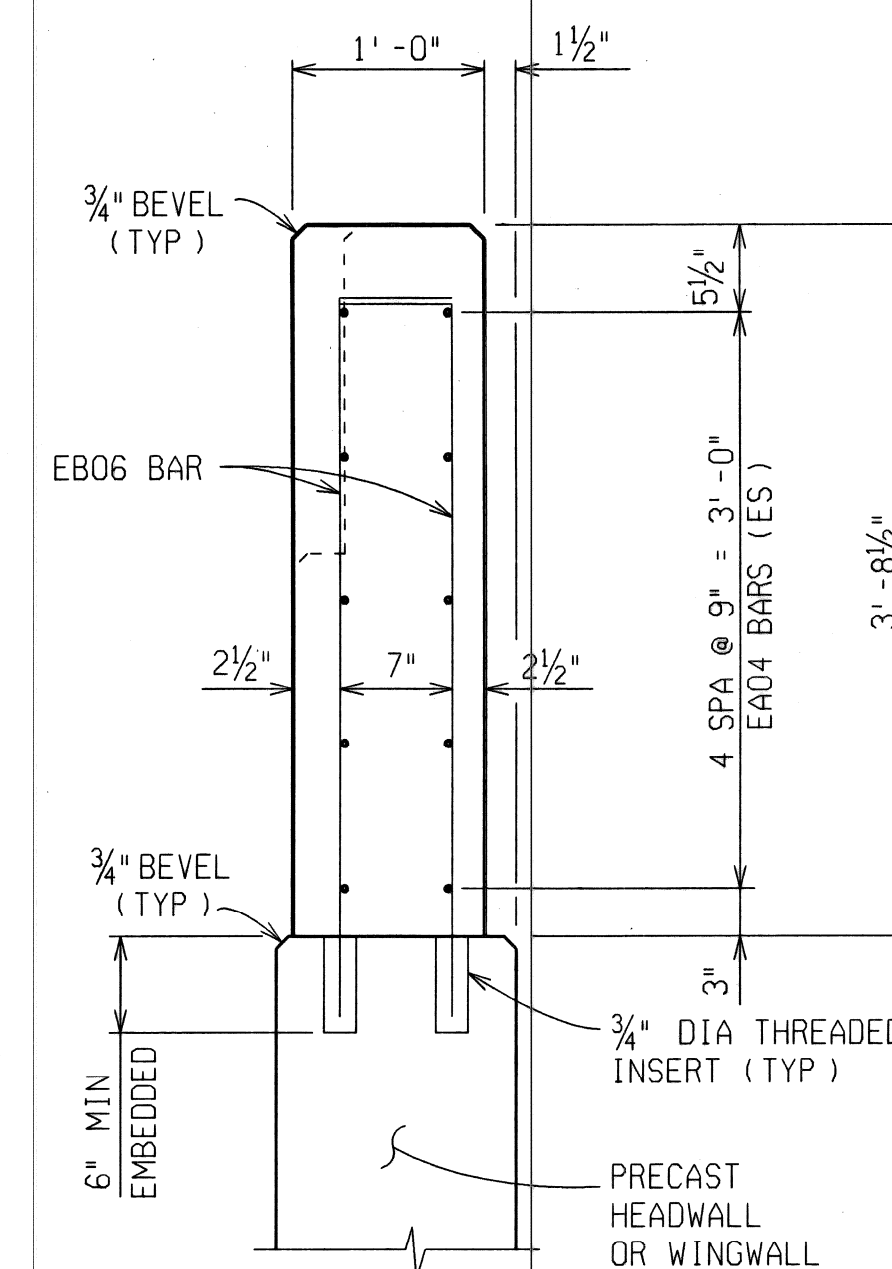
RAIL POST DETAIL
(TYP 38 POSTS)



END WALL DETAIL
AESTHETIC PARAPET TUBE



SECTION AT END WALL
(TUBE CONNECTION AREA)



SECTION AT END WALL
(FULL CONCRETE AREA)

MISCELLANEOUS QUANTITIES

282 Ft Bridge Railing, Aesthetic Parapet Tube
5 Cyd Conc, Grade D

NOTES:

- NS DENOTES NEAR SIDE.
- FS DENOTES FAR SIDE.
- ES DENOTES EACH SIDE.
- FOR BEVEL AND MOLDING DETAILS, SEE STANDARD PLAN B-103 SERIES.
- WORK THIS SHEET WITH SHEET 15 OF 48.

REVISIONS	DESCRIPTION	DATE	BY

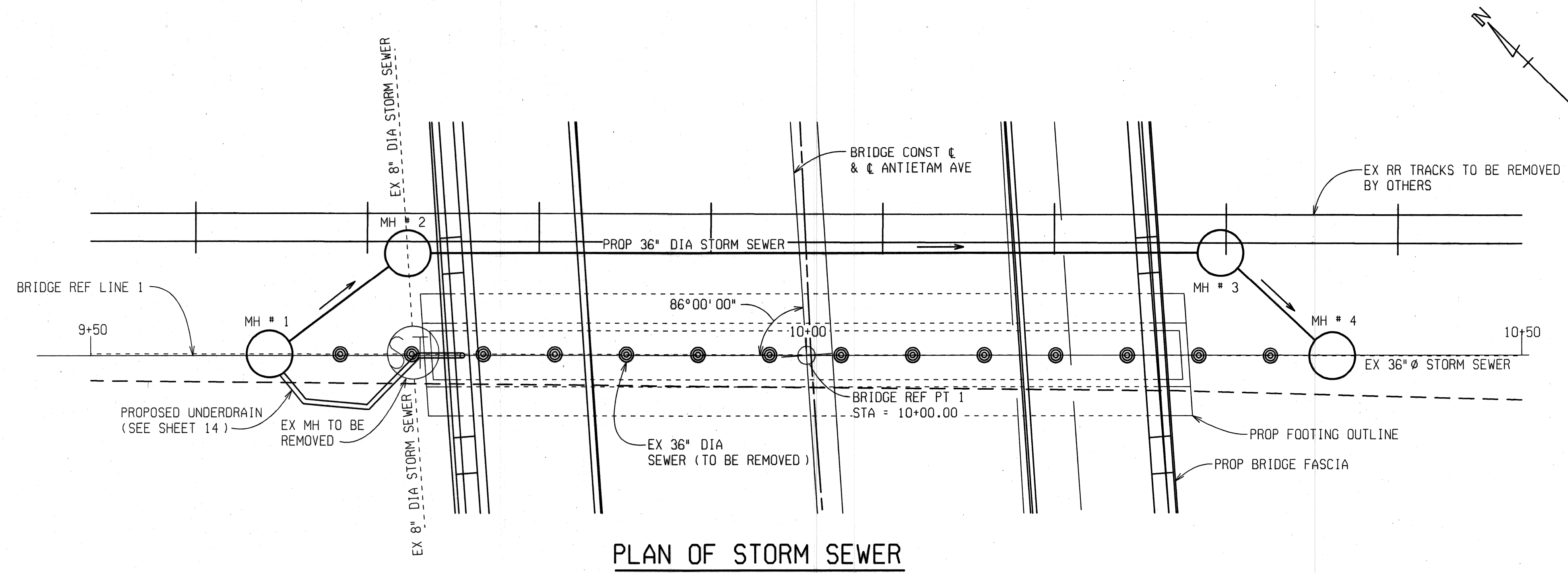


ANTIETAM AVENUE OVER
DEQUINDRE CUT GREENWAY
MDOT JOB NO. 83945A STRUCTURE NO. S02 of 82-22-97

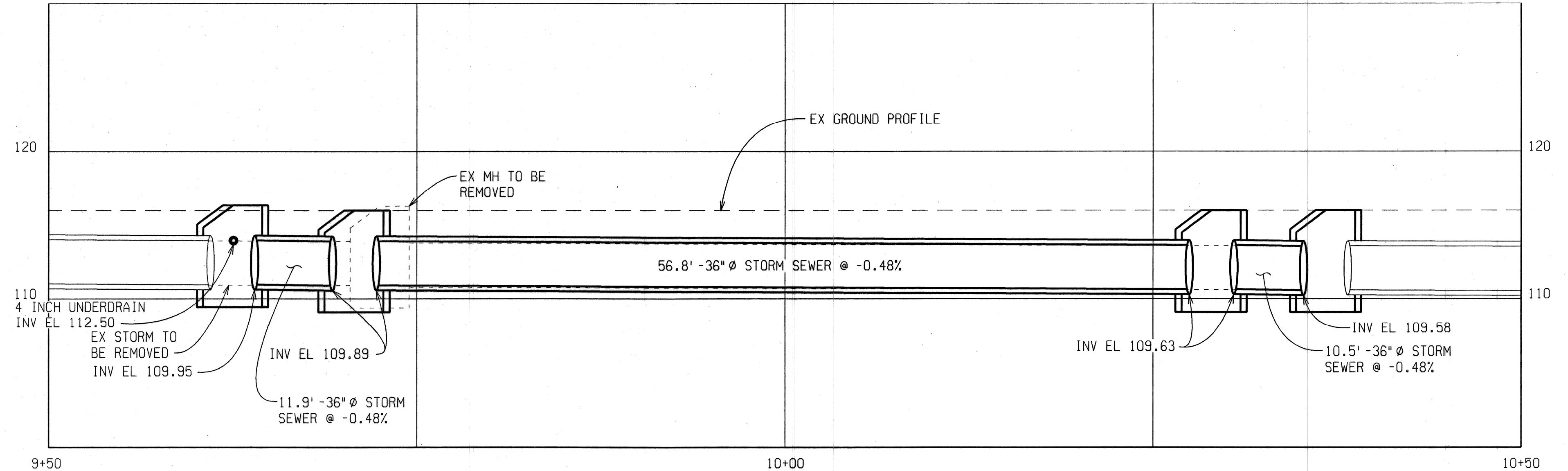
SUPERSTRUCTURE DETAILS

DATE: 4/13/07
DLZ JOB NO. 0641-6053-00
SHEET NO. 16 OF 48

DRAWN BY: BMW CHECKED BY: BMW DATE: 8/08/06 CORRECTED BY: DLW DATE: 9/12/06 FILE NAME: anti-etam-ck2.dgn



PLAN OF STORM SEWER



PROFILE

MISCELLANEOUS QUANTITIES	
80	Ft Sewer, CI C 76 IV, 36 inch, Tr Det B, Modified
4	Ea Manhole, 4 Foot, Standard, Modified
25	Ft Sewer Cleanout, Modified
80	Ft Video Taping Sewer and Culv Pipe
1	Ea Sewer Tap, 8 inch

* PERFORATED, DOMED COVER

REVISIONS	DESCRIPTION	DATE	BY



ANTIETAM AVENUE OVER
DEQUINDRE CUT GREENWAY
MDOT JOB NO. 83945A STRUCTURE NO. S02 of 82-22-97

STORM SEWER DETAILS

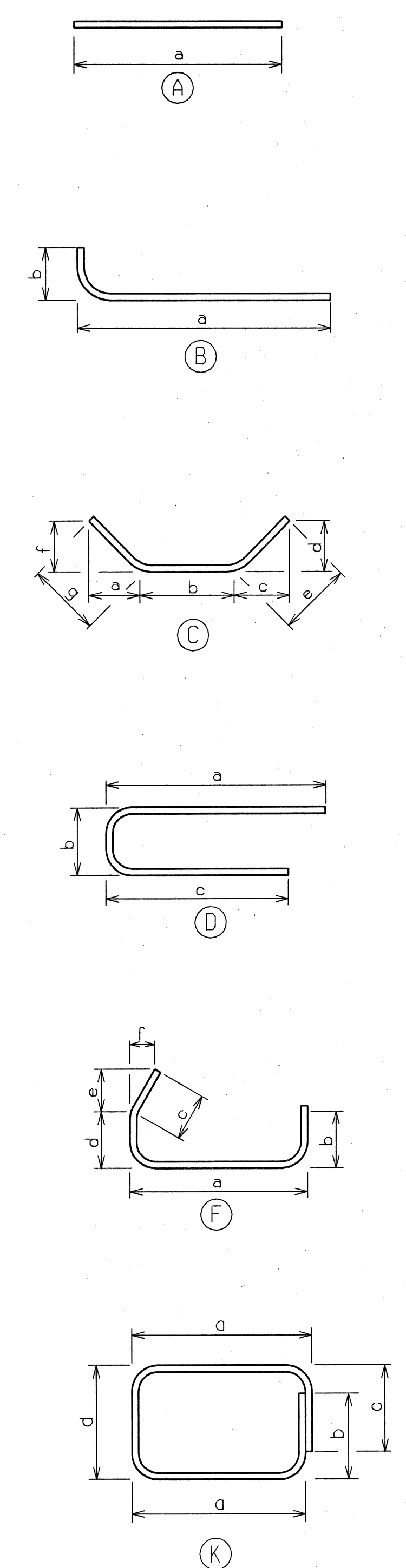
DATE:	4/13/07
DLZ JOB NO.	0641-6053-00
SHEET NO.	17 OF 48

FILE NAME: antietam-opp3.dgn DRAWN BY: bmv CHECKED BY: TNB DATE: 9/6/06 CORRECTED BY: TNB DATE: 2/6/07 DATE: 2/6/07

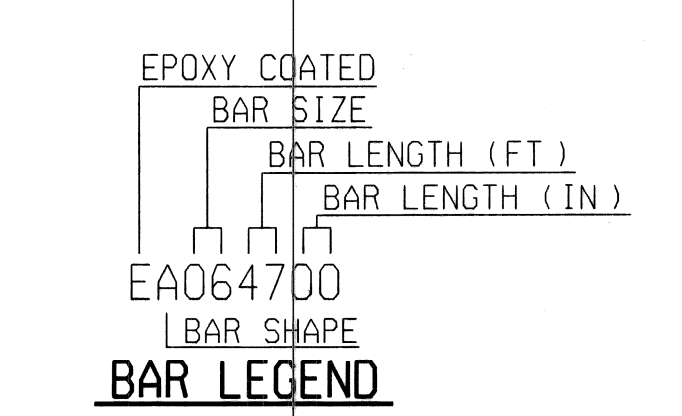
	BAR	DIMENSIONS							NO. REQ'D	TOTAL WT.
		a	b	c	d	e	f	g		
ABUTMENT A	EA040800	8' -0"							16	86
	EA042600	26' -0"							16	278
	EA060506	5' -6"							169	1397
	EA060706	7' -6"							26	293
	EA060709	7' -9"							144	1677
	EA060800	8' -0"							4	49
	EA061300	13' -0"							14	274
	EA041300	13' -0"							4	35
	EA061500	15' -0"							10	226
	EA061806	18' -6"							10	278
	EA062600	26' -0"							2	79
	EA062700	27' -0"							2	82
	EA062708	27' -8"							32	1330
	EA081006	10' -6"							147	4122
	EC040400		2' -0"	0' -1 1/2"	2' -0"	2' -0"			8	22
EC060600		3' -0"	0' -2 1/2"	3' -0"	3' -0"			2	19	
ED040602	2' -0"	2' -2"	2' -0"					68	281	
EF040400	2' -0"		2' -0"		2' -0"	0' -1 1/2"		8	22	
EF060600	3' -0"		3' -0"		3' -0"	0' -2 1/2"		2	19	
EK051009	2' -6"	1' -11"	1' -11"	1' -11"				35	201	
ABUTMENT B	EA040800	8' -0"							16	43
	EA042600	26' -0"							16	65
	EA060506	5' -6"							144	1190
	EA060709	7' -9"							144	1677
	EA060800	8' -0"							4	49
	EA061300	13' -0"							10	196
	EA061500	15' -0"							10	226
	EA062600	26' -0"							2	79
	EA062700	27' -0"							2	82
	EA062708	27' -8"							32	1330
	EA081006	10' -6"							147	4122
	EC040400		2' -0"	0' -1 1/2"	2' -0"	2' -0"			8	22
	EC060600		3' -0"	0' -2 1/2"	3' -0"	3' -0"			2	19
	ED040602	2' -0"	2' -2"	2' -0"					55	227
	EF040400	2' -0"		2' -0"		2' -0"	0' -1 1/2"		8	22
EF060600	3' -0"		3' -0"		3' -0"	0' -2 1/2"		2	19	
EK051009	2' -6"	1' -11"	1' -11"	1' -11"				28	314	
PIER	EA042704	27' -4"							24	439
	EA060710	7' -10"							74	871
	EA062704	27' -4"							6	247
	EA062800	28' -0"							28	1178
	EA062804	28' -4"							6	256
EB061105	10' -8"	0' -9"						74	1269	
ED040710	3' -10"	2' -0"	2' -0"					37	194	

	BAR	DIMENSIONS										NO. REQ'D	TOTAL WT.	
		a	b	c	d	e	f	g	h	j				
	EA040408	4' -8"											8	25
	EA040511	5' -11"											12	48
	EA040600	6' -0"											12	49
	EA040704	7' -4"											8	40
	EA041300	13' -0"											12	105
	EA041500	15' -0"											12	121
	EA041806	18' -6"											6	75
	EA042300	23' -0"											48	738
	EA060304	3' -4"											16	81
	*EB040208	2' -3"	0' -5"										856	1525
	*EB060404	3' -11"	0' -5"										32	209

* DENOTES THREADED BARS

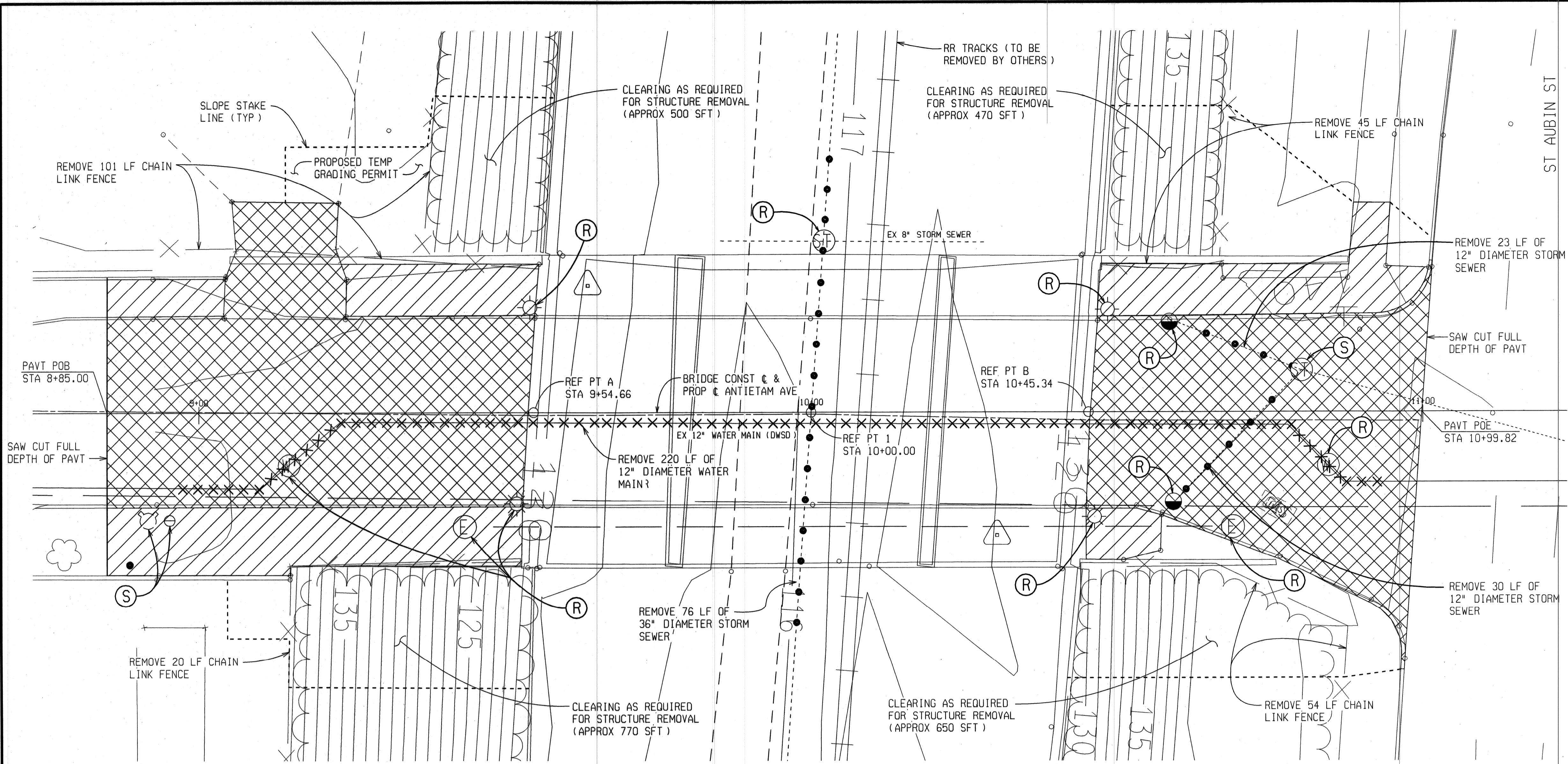


MISCELLANEOUS QUANTITIES	
27,922 Lb	Reinforcement, Steel, Epoxy Coated

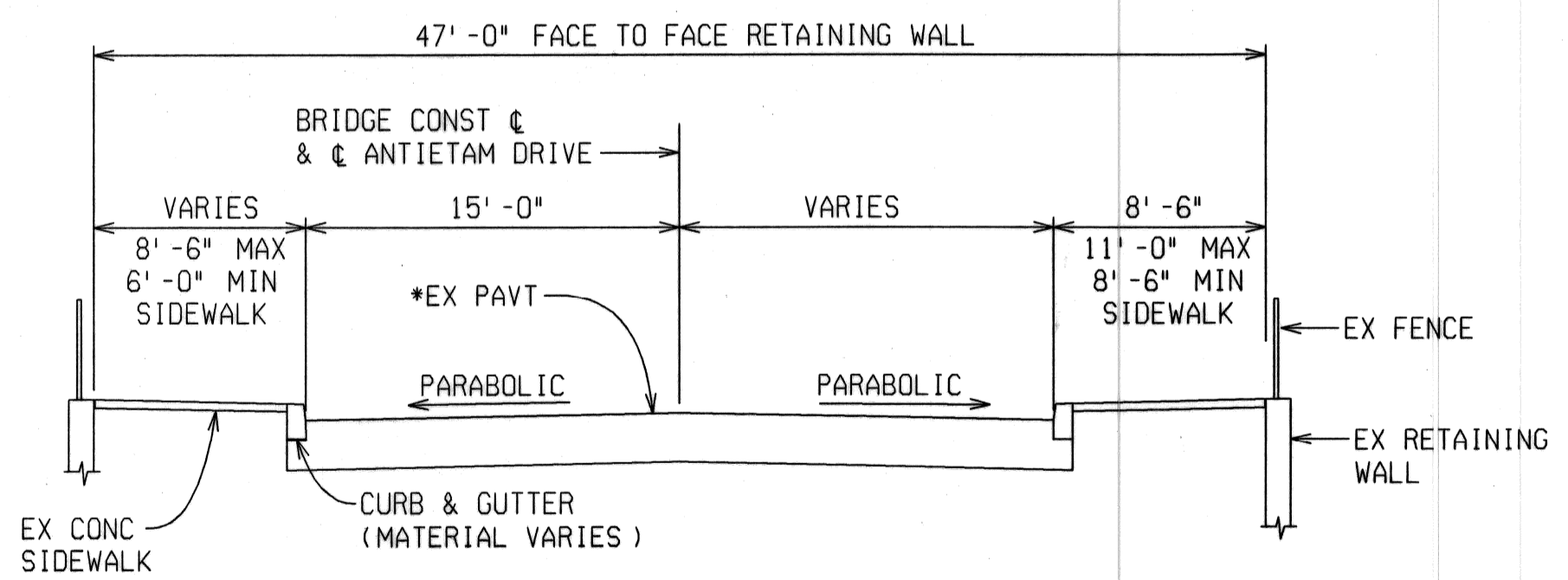


NOTE:
REINFORCEMENT SHALL BE BUNDLED AND TAGGED AS TO THE LOCATION AS SHOWN ON THIS SHEET.

DATE: 9/12/06
CORRECTED BY: DLW
DATE: 1/10/05
CHECKED BY: BMW
DATE: 9/8/06
DRAWN BY: BMW
FILE NAME: antietam-appl.dgn



PLAN OF APPROACH



EXISTING APPROACH SECTION

(LOOKING EAST)
* EX PAVEMENT CONTAINS LAYERS OF CONCRETE, GRAVEL AND HMA
SEE LOG OF BORING SHEETS 5 AND 6 FOR FURTHER INFORMATION

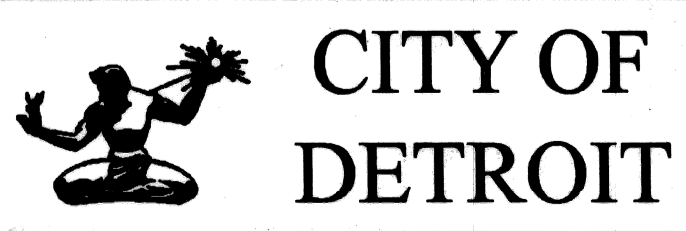
REMOVAL LEGEND	
REMOVING SIDEWALK	
REMOVING PAVEMENT	
REMOVING SEWER	
REMOVING WATER MAIN	
SAVE	
REMOVE	

MISCELLANEOUS QUANTITIES		
PARTICIPATING QUANTITY	NON-PARTICIPATING QUANTITY	ITEM
0.1		Acre Clearing
3		Ea Dr Structure, Rem
220		Ft Fence, Rem
190		Syd Sidewalk, Rem
53		Ft Sewer, Rem, Less than 24 inch
75		Ft Sewer, Rem, 24 inch to 48 inch
506		Syd Pavt, Rem, Modified
220		Ft Water Main, Rem

NOTES:

SEE SHEET 7 OF 48 FOR WATER MAIN DETAILS.
SEE SHEET 17 OF 48 FOR STORM SEWER DETAILS.
SEE SHEETS 26-48 OF 48 FOR ELECTRICAL DETAILS.
SAWCUTTING IS INCLUDED IN THE PAY ITEM "Pavt, Rem, Modified" and "Sidewalk, Rem".
CURB REMOVAL IS INCLUDED IN THE PAY ITEM "Pavt, Rem, Modified".

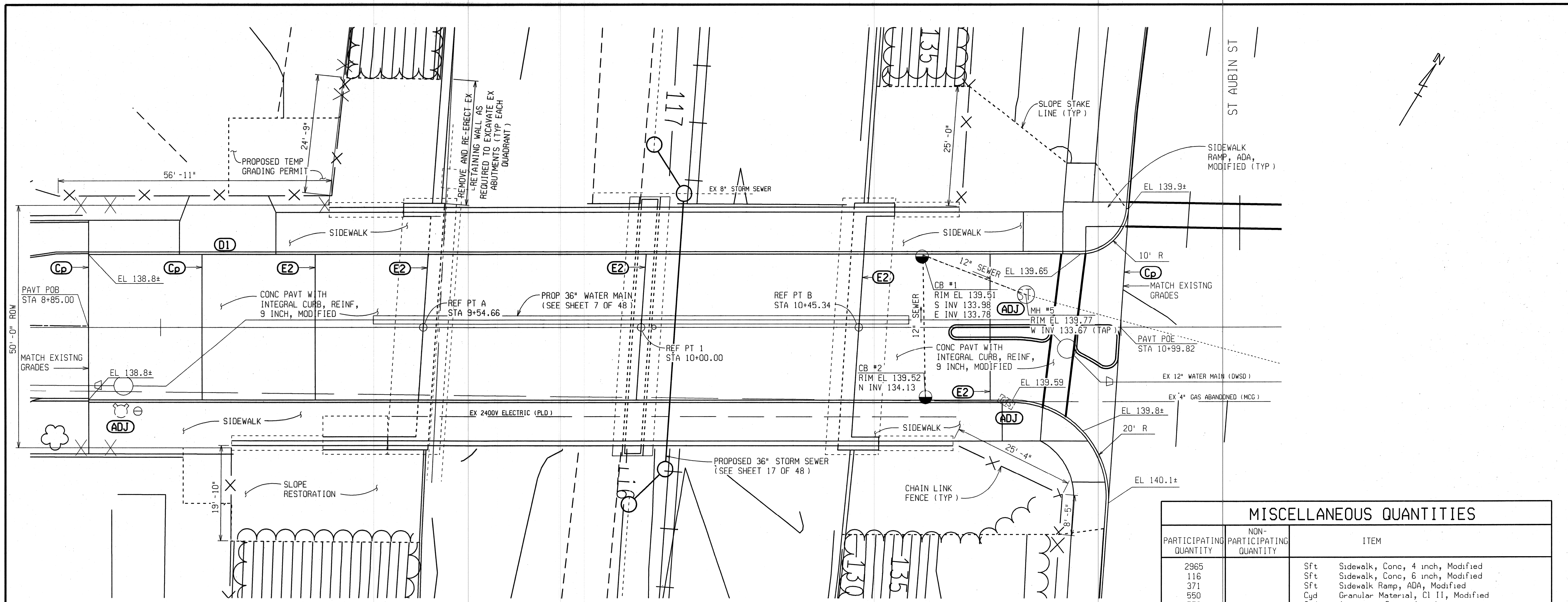
REVISIONS	DESCRIPTION	DATE	BY



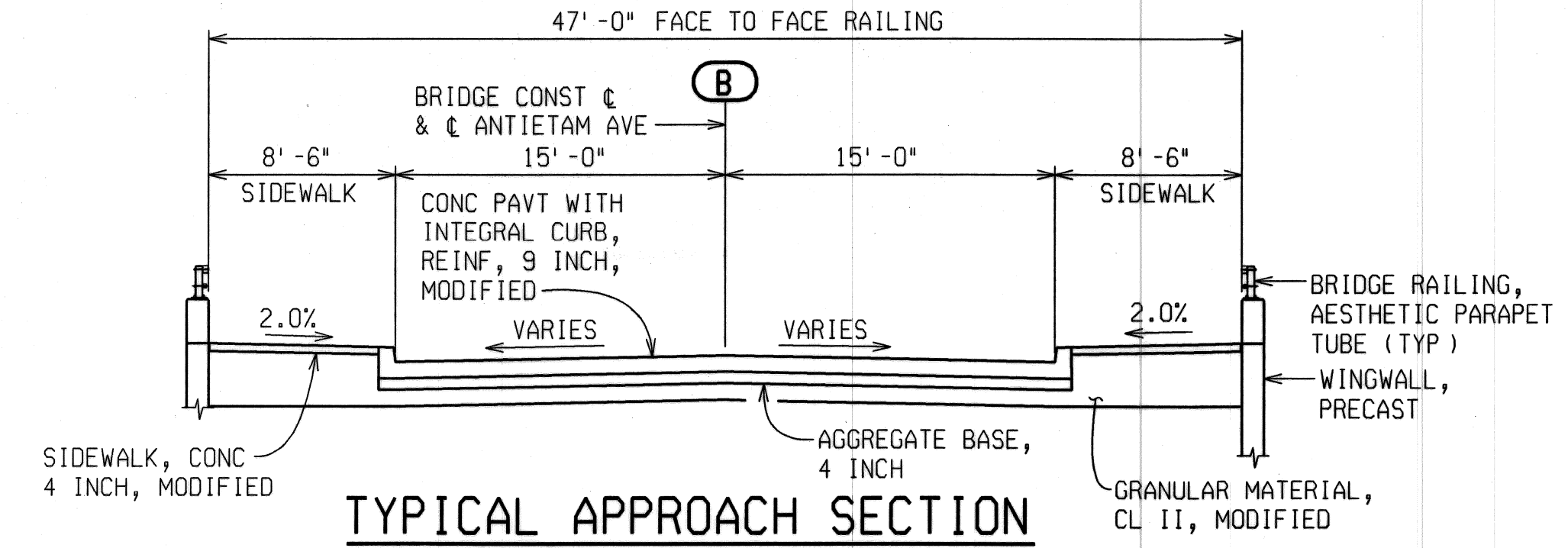
ANTIETAM AVENUE OVER DEQUINDRE CUT GREENWAY
MDOT JOB NO. 83945A STRUCTURE NO. S02 of 82-22-97

APPROACH REMOVAL DETAILS

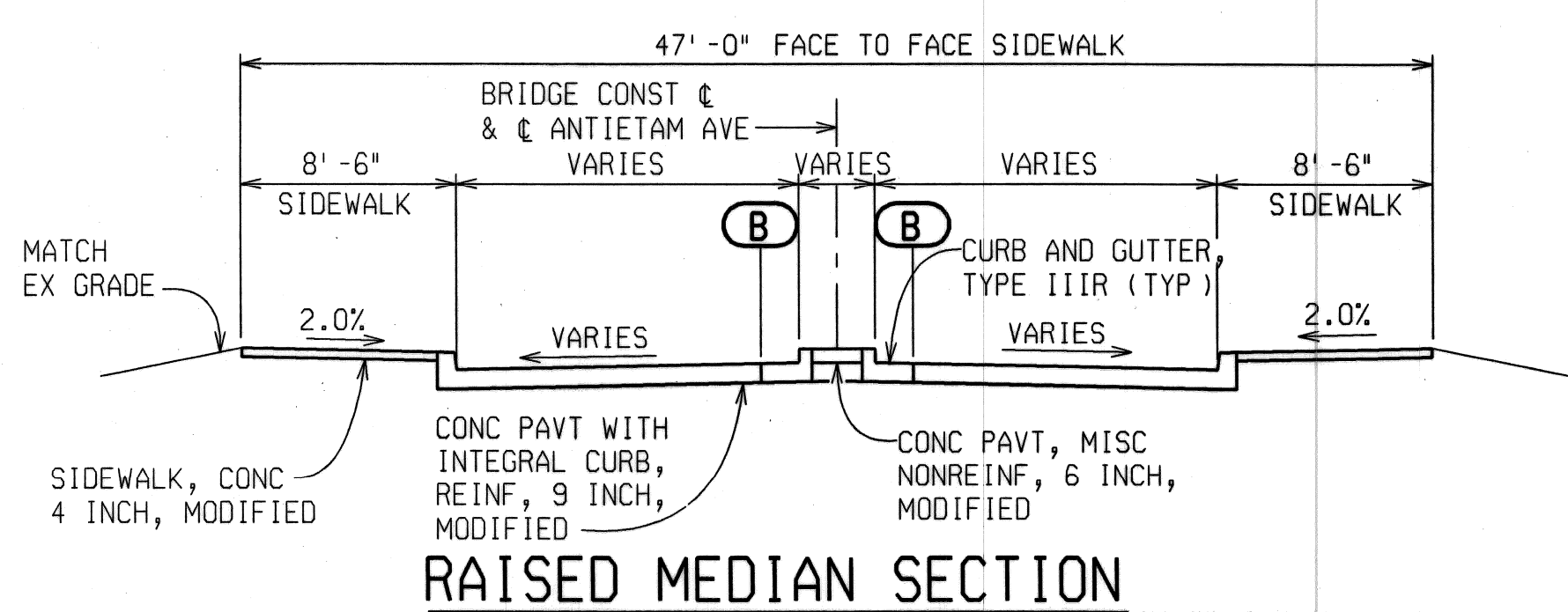
DATE: 4/13/07
DLZ JOB NO. 0641-6053-00
SHEET NO. 19 OF 48



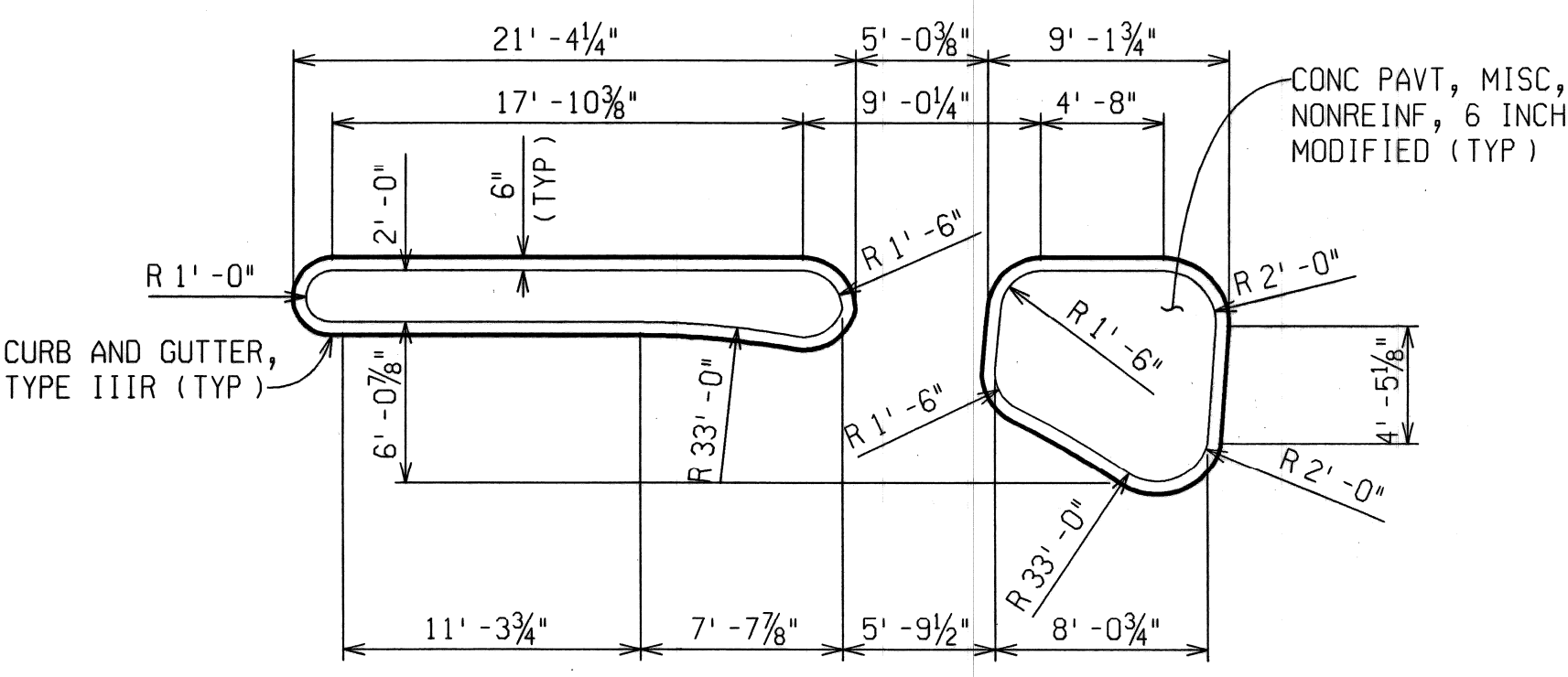
PLAN OF APPROACH



TYPICAL APPROACH SECTION



RAISED MEDIAN SECTION



RAISED MEDIAN DETAIL

MISCELLANEOUS QUANTITIES		
PARTICIPATING QUANTITY	NON-PARTICIPATING QUANTITY	ITEM
2965		Sft Sidewalk, Conc, 4 inch, Modified
116		Sft Sidewalk, Conc, 6 inch, Modified
371		Sft Sidewalk Ramp, ADA, Modified
550		Cyd Granular Material, Cl II, Modified
779		Syd Aggregate Base, 4 inch
779		Syd Conc Pavt with Integral Curb, Reinf, 9 Inch, Modified
120		Ft Joint, Expansion, E2
128		Ft Joint, Contraction, Cp
20		Ft Joint, Plane-of-Weakness, D1
161		Ft Fence, Chain Link, 48 inch
53		Ft Sewer, Cl C 76 IV, 12 inch, Tr Det B, Modified
1		Ea Catch Basin A, Modified
1		Ea Catch Basin B with Trap, Modified
1		Ea Dr Structure Cleaning, Modified
1		Ea Dr Structure Cover, Adj, Case 2, Modified
25		Ft Sewer Cleanout, Modified
11		Syd Conc Pavt, Misc, Nonreinf, 6 inch, Modified
71		Ft Curb and Gutter, Type IIIR
2		Ea Water Shutoff, Adj, Modified
1		Ea Sewer Tap, 12 inch

LEGEND	
ADJUST DR STR RIM	(ADJ)
JOINT, EXPANSION, E3	(E3)
JOINT, EXPANSION, E2	(E2)
JOINT, PLANE OF WEAKNESS	(D1)
LONGITUDINAL BULKHEAD JOINT	(B)
JOINT, CONTRACTION, CP	(Cp)

NOTES:

CB#1 SHALL BE "Catch Basin A, Modified".

CB#2 SHALL BE "Catch Basin B with Trap, Modified".

FOR BRIDGE RAILING DETAILS AND QUANTITIES, SEE SHEET 16 OF 48.

SEE SPECIAL PROVISION FOR SIDEWALK CONC, 4 INCH, MODIFIED FOR LOCATIONS OF 4 INCH AND 6 INCH SIDEWALK.

REVISIONS	DESCRIPTION	DATE	BY



ANTIETAM AVENUE OVER DEQUINDRE CUT GREENWAY

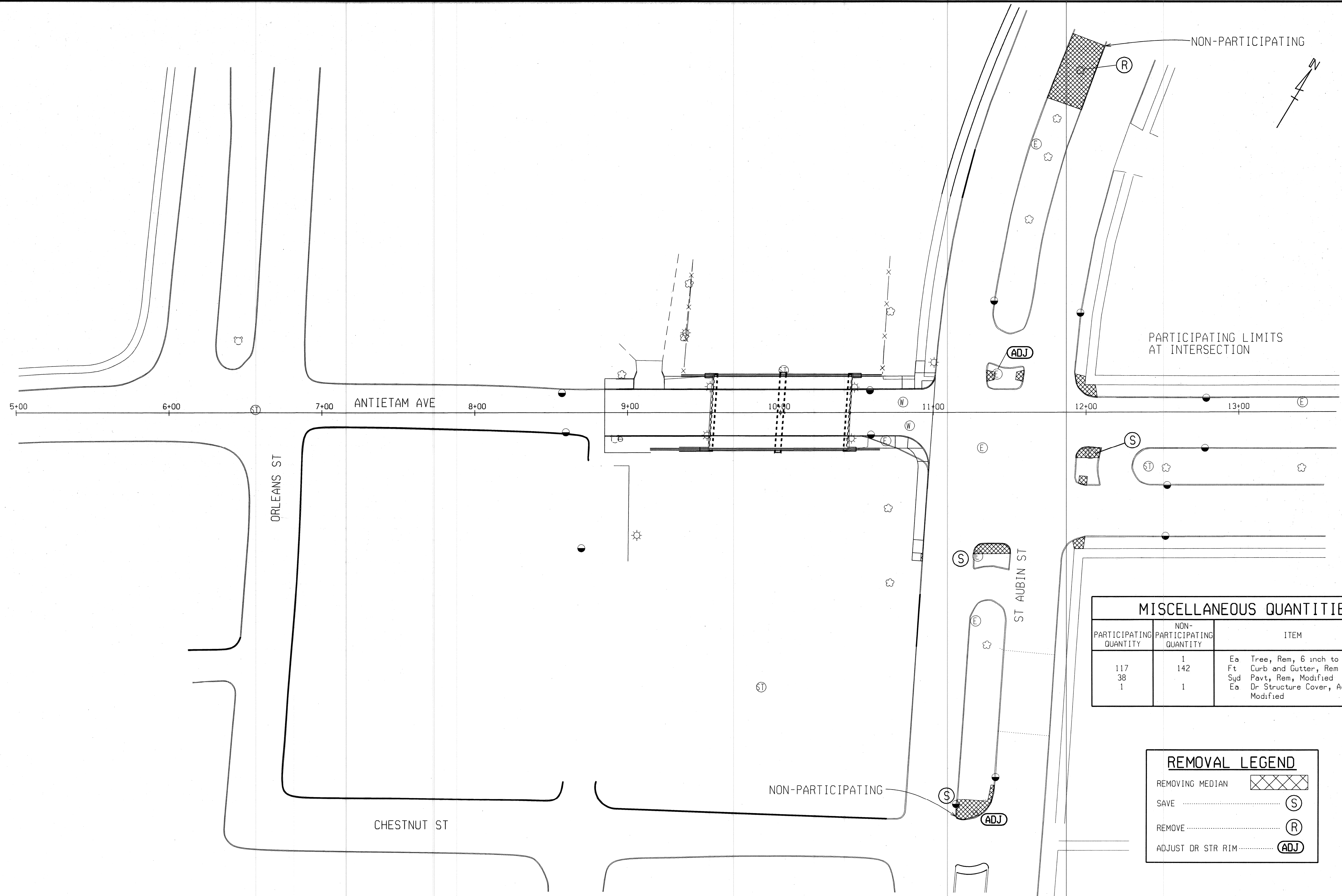
MDOT JOB NO. 83945A STRUCTURE NO. S02 of 82-22-97

APPROACH CONSTRUCTION DETAILS

DATE: 4/13/07

DLZ JOB NO. 0641-6053-00

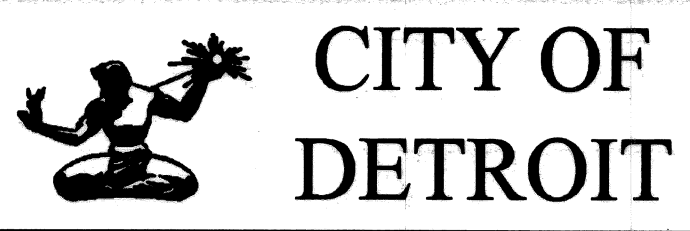
SHEET NO. 20 OF 48



MISCELLANEOUS QUANTITIES		
PARTICIPATING QUANTITY	NON-PARTICIPATING QUANTITY	ITEM
117	1	Ea Tree, Rem, 6 inch to 18 inch
38		Ft Curb and Gutter, Rem
1	1	Syd Pavt, Rem, Modified
		Ea Dr Structure Cover, Adj, Case 2, Modified

REMOVAL LEGEND	
REMOVING MEDIAN	
SAVE	
REMOVE	
ADJUST DR STR RIM	

REVISIONS	DESCRIPTION	DATE	BY

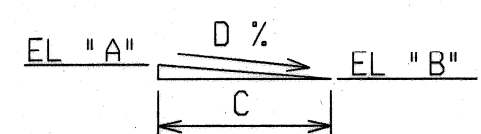


ANTIETAM AVENUE OVER
 DEQUINDRE CUT GREENWAY
 MDOT JOB NO. 83945A STRUCTURE NO. S02 of 82-22-97

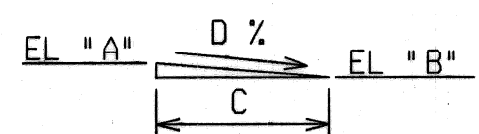
TRAFFIC IMPROVEMENT
 REMOVAL DETAILS

DATE: 4/13/07
 DLZ JOB NO. 0641-6053-00
 SHEET NO. 21 OF 48

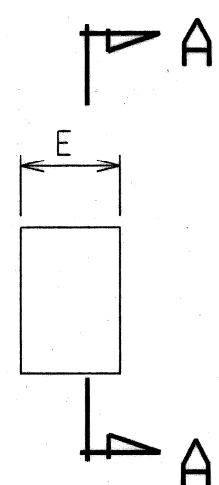
FILE NAME: antietam-app3.dgn DRAWN BY: TNB DATE: 1/25/07 CHECKED BY: AJH DATE: 1/31/07 CORRECTED BY: TNB DATE: 2/1/07



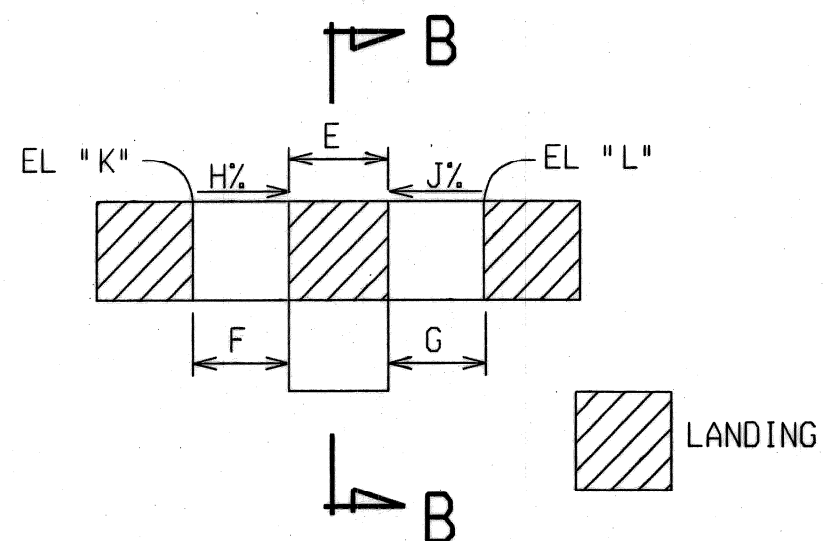
SECTION A-A



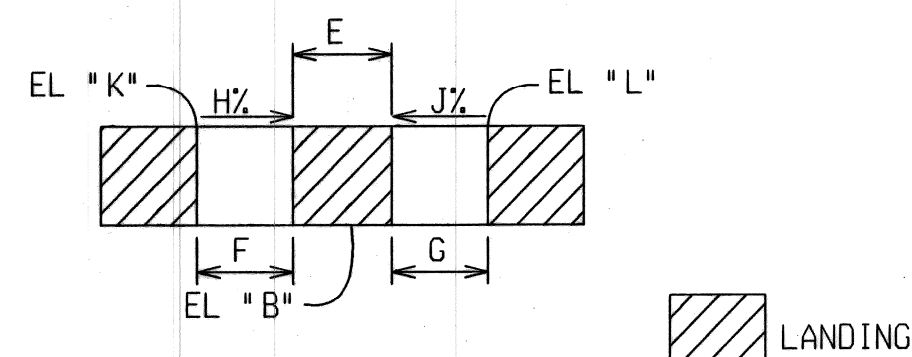
SECTION B-B



SIDEWALK RAMP TYPE R



SIDEWALK RAMP TYPE C



SIDEWALK RAMP TYPE P

CONC PAVT, MISC, NONREINF, 6 INCH, MODIFIED

CURB AND GUTTER, TYPE IIIIR

NON-PARTICIPATING

ST AUBIN ST

PARTICIPATING LIMITS AT INTERSECTION

ANTIETAM AVE

8+00

9+00

10+00

11+00

12+00

13+00

SIDEWALK RAMP, ADA, MODIFIED*												
RAMP	TYPE	A	B	C	D	E	F	G	H	J	K	L
1	P		139.65±			5'-0"	8'-3"	8'-0"	8.1%		140.32±	
2	C	139.90±	139.90±	7'-6"	0.0%	5'-0"		8'-0"		8.1%		140.55±
3	R	139.35±	139.70±	5'-6"	6.4%	5'-0"						
4	R	139.25±	139.70±	5'-6"	8.2%	5'-0"						
5	R	138.35±	139.70±	5'-0"	7.0%	6'-0"						
6	R	138.20±	139.70±	6'-0"	8.3%	6'-0"						
7	R	138.35±	138.90±	7'-0"	7.9%	5'-0"						
8	R	138.63±	139.00±	5'-0"	7.4%	6'-0"						
9	R	138.45±	138.85±	5'-6"	7.3%	6'-0"						
10	R	138.55±	138.95±	7'-9"	5.2%	5'-0"						
11	R	138.75±	139.20±	5'-6"	8.2%	5'-0"						
12	R	139.45±	139.70±	5'-0"	5.0%	5'-0"						
13	P		139.70±			5'-0"	8'-6"		8.2%		140.40±	
14	P		139.70±			6'-0"	8'-6"		8.2%	8.2%	140.40±	140.40±
15	M											

*SEE SPECIAL PROVISION FOR SIDEWALK RAMP, ADA, MODIFIED AND MDT STANDARD PLAN R-28-F FOR DETAILS

MISCELLANEOUS QUANTITIES		
PARTICIPATING QUANTITY	NON-PARTICIPATING QUANTITY	ITEM
169	114	Ft Curb and Gutter, Type IIIIR
244	114	Syd Conc Pavt, Misc, Nonreinf, 6 inch, Modified
	1	Cyd Topsoil Surface, Furn, LM
470		Sft Sidewalk Ramp, ADA, Modified
345		Sft Sidewalk, Conc, 4 inch, Modified

SEE SHEET 20 OF 49

CURB AND GUTTER, TYPE IIIIR

RAMP #13

RAMP #12

RAMP #11

RAMP #10

CONC PAVT, MISC, NONREINF, 6 INCH, MODIFIED

SIDEWALK RAMP, ADA, MODIFIED (TYP)

R 2'

R 37.68'

R 18.32'

R 5.1'

R 91.38'

R 73.13'

R 21.18'

R 49.64'

R 17.07'

R 14.08'

R 10.21'

R 9.58'

R 23.23'

R 131.14'

TOPSOIL SURFACE, FURN, LM

CHESTNUT ST

CURB AND GUTTER, TYPE IIIIR

NON-PARTICIPATING

NOTES:

MEDIAN RADII MAY REQUIRE ADJUSTMENTS TO MATCH EXISTING MEDIAN GEOMETRY.

REVISIONS	DESCRIPTION	DATE	BY



ANTIETAM AVENUE OVER DEQUINDRE CUT GREENWAY
MDOT JOB NO. 83945A STRUCTURE NO. S02 of 82-22-97

TRAFFIC IMPROVEMENT CONSTRUCTION DETAILS

DATE: 4/13/07
DLZ JOB NO. 0641-6053-00
SHEET NO. 22 OF 48

FILE NAME: anti-etam-app4.dgn

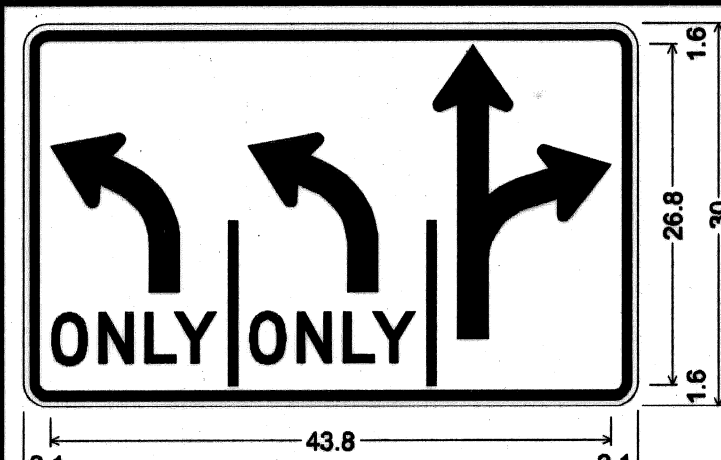
DRAWN BY: TNB

DATE: 1/25/07

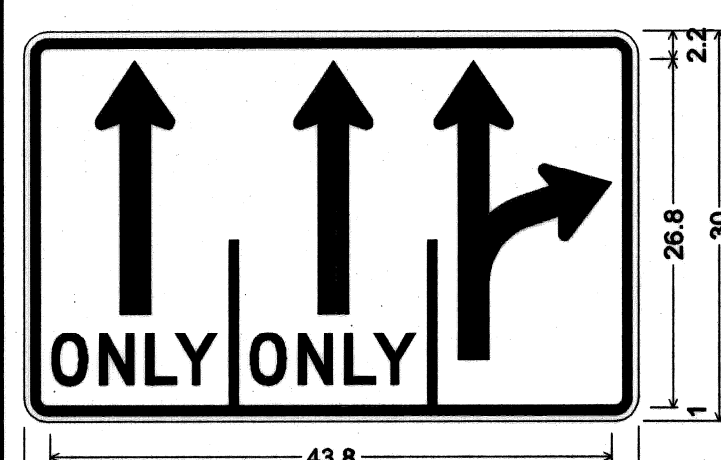
CHECKED BY: AJH

DATE: 1/31/07 CORRECTED BY: TNB

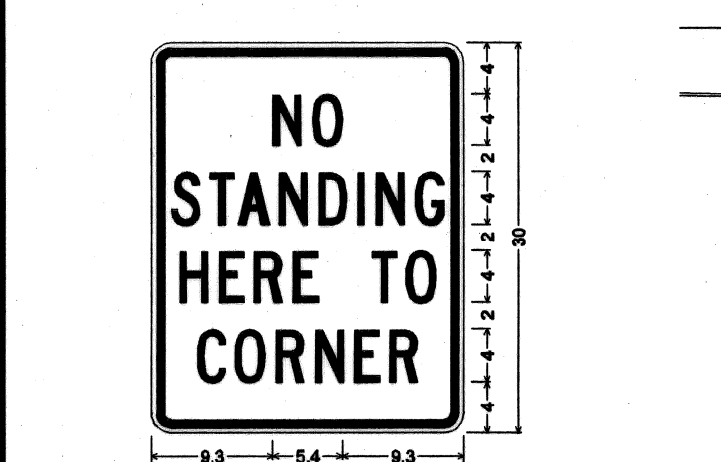
DATE: 2/1/07



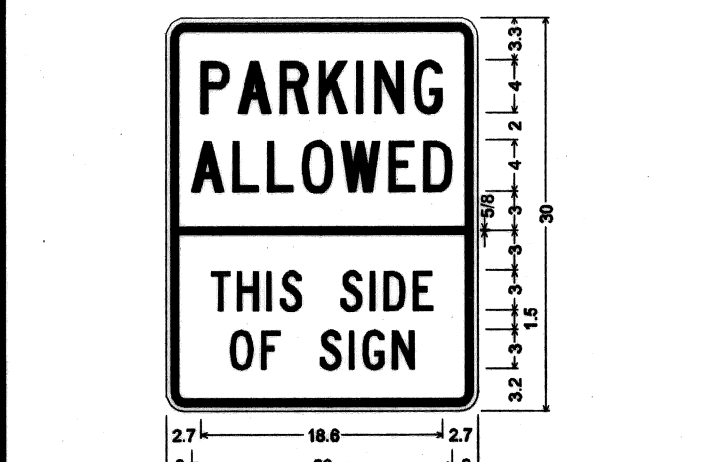
R3-8AL MODIFIED_48x30;
1.9" Radius, 0.8" Border, 0.5" Indent, White on White;
ACD;
SPECIAL DETAIL A



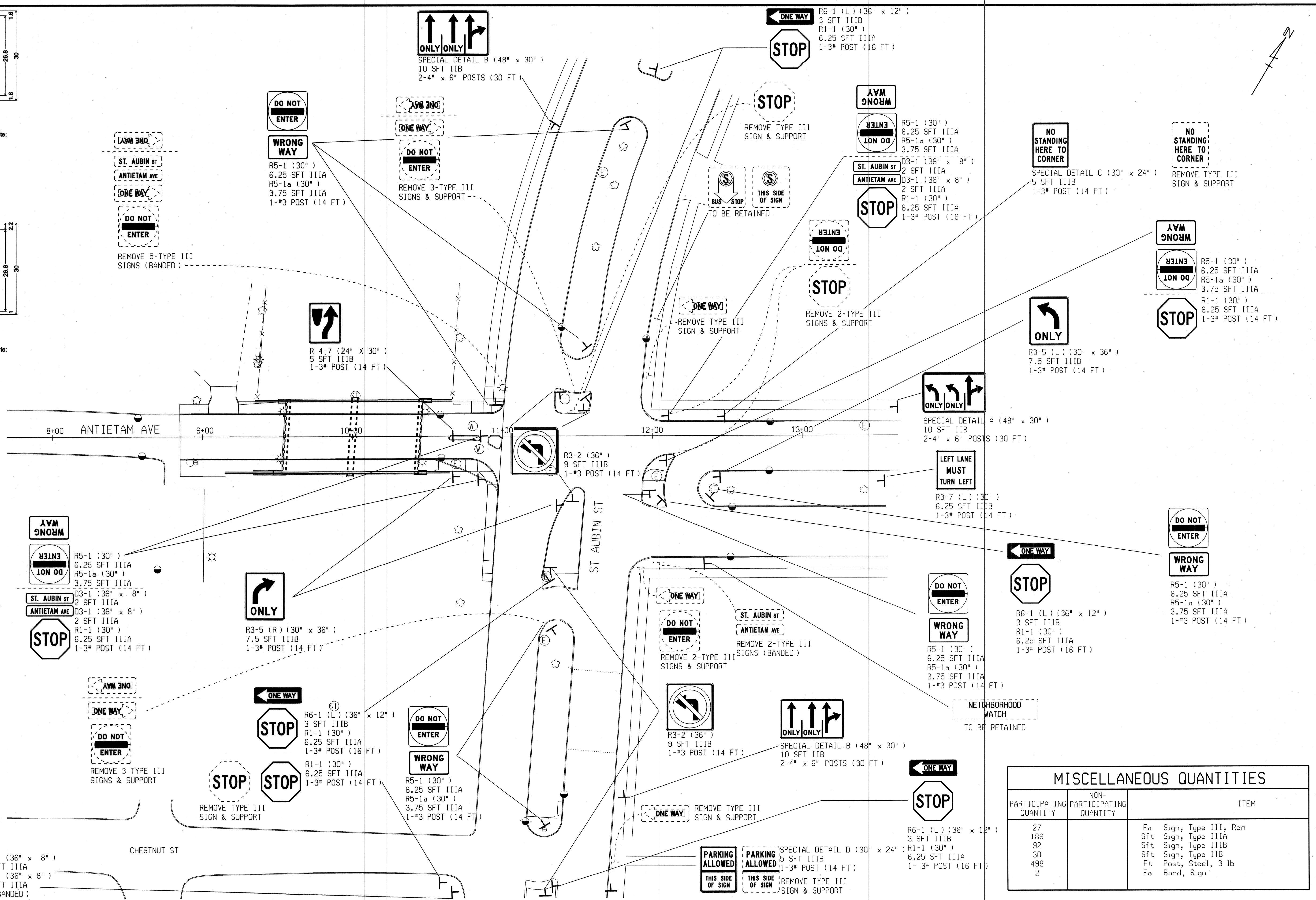
R3-8AL MODIFIED_48x30;
1.9" Radius, 0.8" Border, 0.5" Indent, White on White;
ACD;
SPECIAL DETAIL B



1.6" Radius, 0.6" Border, 0.4" Indent, Black on White;
[NO] C; [STANDING] C;
[HERE TO] C; [CORNER] C;
SPECIAL DETAIL C



1.5" Radius, 0.6" Border, 0.4" Indent, Black on White;
[PARKING] C; [ALLOWED] C;
[THIS SIDE] C; [OF SIGN] C;
SPECIAL DETAIL D



MISCELLANEOUS QUANTITIES		
PARTICIPATING QUANTITY	NON-PARTICIPATING QUANTITY	ITEM
27		Ea Sign, Type III, Rem
189		Sft Sign, Type IIIA
92		Sft Sign, Type IIIB
30		Sft Sign, Type IIB
498		Ft Post, Steel, 3 lb
2		Ea Band, Sign

REVISIONS	DESCRIPTION	DATE	BY

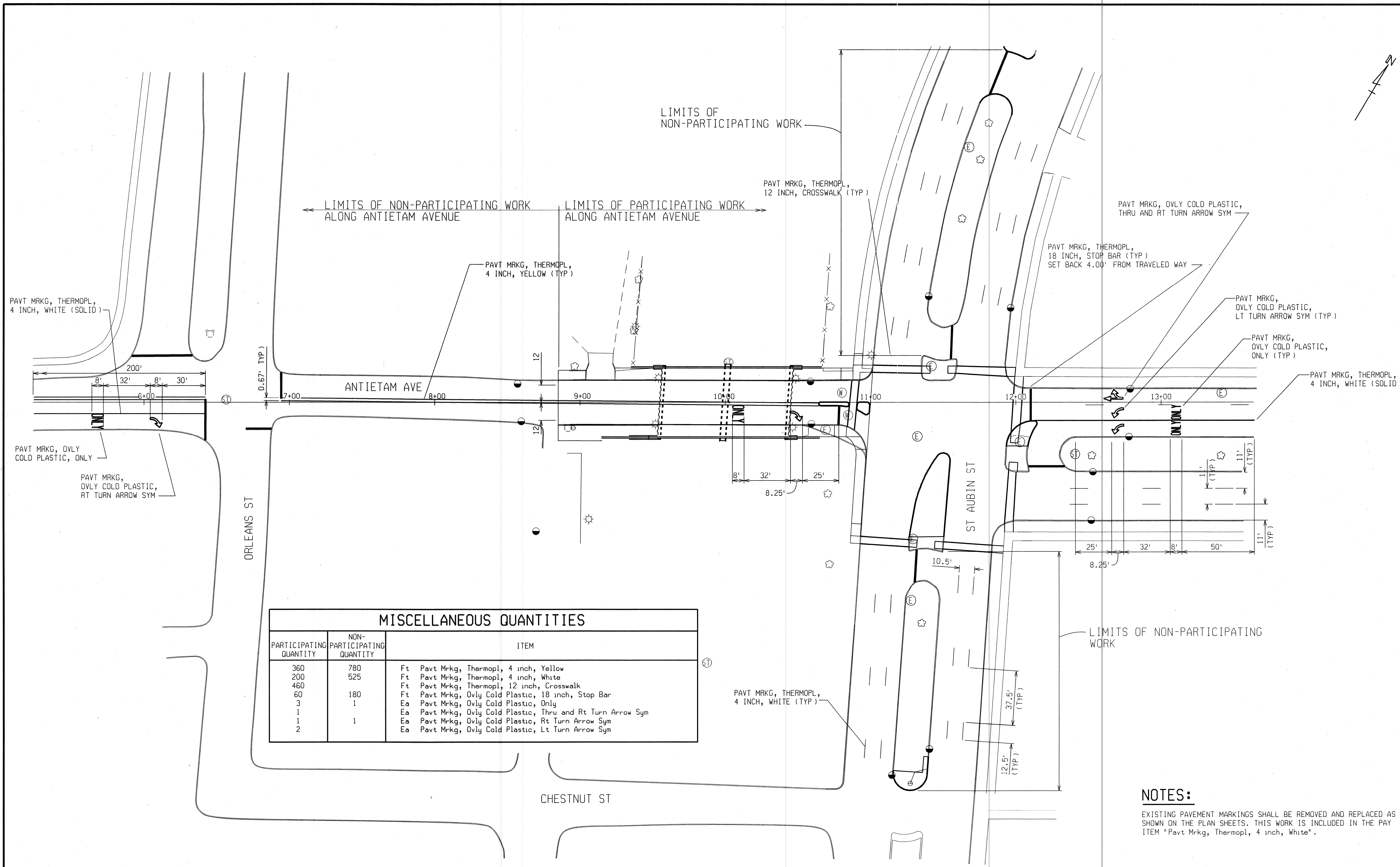


ANTIETAM AVENUE OVER
DEQUINDRE CUT GREENWAY
MDOT JOB NO. 83945A STRUCTURE NO. S02 of 82-22-97

SIGNING DETAILS

DATE: 4/13/07
DLZ JOB NO. 0641-6053-00
SHEET NO. 23 OF 48

DATE: 2/1/07 DATE: 1/31/07 CORRECTED BY: TNB DATE: 1/29/07 CHECKED BY: AJH DRAWN BY: JAP FILE NAME: antietam-sign1.dgn



MISCELLANEOUS QUANTITIES		
PARTICIPATING QUANTITY	NON-PARTICIPATING QUANTITY	ITEM
360	780	Ft Pavn Mrkg, Thermopl, 4 inch, Yellow
200	525	Ft Pavn Mrkg, Thermopl, 4 inch, White
460		Ft Pavn Mrkg, Thermopl, 12 inch, Crosswalk
60	180	Ft Pavn Mrkg, Ovly Cold Plastic, 18 inch, Stop Bar
3	1	Ea Pavn Mrkg, Ovly Cold Plastic, Only
1		Ea Pavn Mrkg, Ovly Cold Plastic, Thru and Rt Turn Arrow Sym
1	1	Ea Pavn Mrkg, Ovly Cold Plastic, Rt Turn Arrow Sym
2		Ea Pavn Mrkg, Ovly Cold Plastic, Lt Turn Arrow Sym

NOTES:
 EXISTING PAVEMENT MARKINGS SHALL BE REMOVED AND REPLACED AS SHOWN ON THE PLAN SHEETS. THIS WORK IS INCLUDED IN THE PAY ITEM "Pavn Mrkg, Thermopl, 4 inch, White".

REVISIONS	DESCRIPTION	DATE	BY



ANTIETAM AVENUE OVER
 DEQUINDRE CUT GREENWAY
 MDOT JOB NO. 83945A STRUCTURE NO. S02 of 82-22-97

PAVEMENT MARKING DETAILS

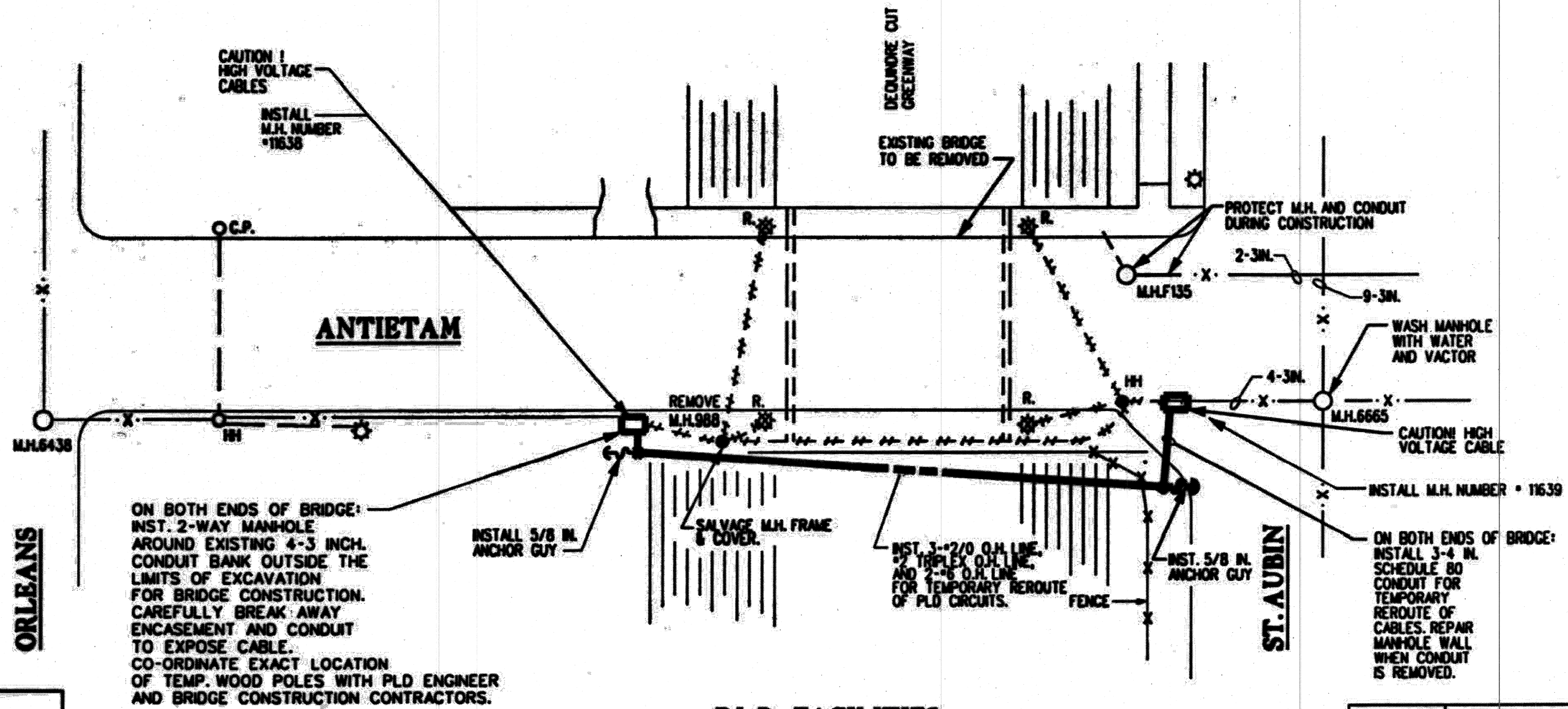
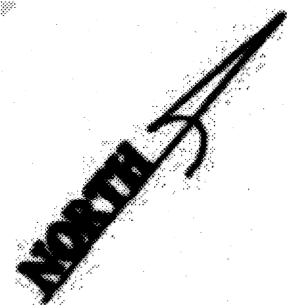
DATE: 4/13/07
 DLZ JOB NO. 0641-6053-00
 SHEET NO. 25 OF 48

MAPLE 900A

4800 V.

T-39C

CRS 4



**P.L.D. FACILITIES
REMOVAL & TEMPORARY REROUTE PLAN**

PLAN LEGEND	
	INST. 2-WAY MANHOLE
	EXISTING P.L.D. CONDUIT BANK
	INST. HANDHOLE (30 IN. DIA.)
	REMOVE & SALVAGE O.P. IN USEABLE CONDITION- REMOVE FOUNDATION
	REMOVE MANHOLE OR HANDHOLE
	REMOVE CABLE & DEMOLISH DUCT BANK
	SET TEMPORARY 45FT. CL2 WOOD POLE FIT UP AS PRIMARY C.P. & SEC. C.P.
	INST. 1-3/4 IN. EB20 TC6 CONDUIT
	INST. ST. LT. FOUNDATION, CODE 009 STANDARD, B.A., WITH 250 S.V. LUMINAIRE AS INDICATED
	INST. TEMPORARY 5/8 IN. ANCHOR GUY
	INST. TEMPORARY O.H. LINES AS INDICATED

NOTE:

1. ALL MATERIALS MUST BE APPROVED BY P.L.D. ENGINEERING DIVISION.
2. EXISTING CABLES MAY HAVE ASBESTOS FIREPROOFING.
3. FOLLOW P.L.D. U.G. STANDARDS & SPECIFICATIONS FOR CONSTRUCTION & MATERIALS. SUPPLEMENTAL SHEETS PROVIDING DETAILS ARE ATTACHED.
4. PROPOSED P.L.D. U.G. FACILITIES MUST CLEAR OTHER U.G. UTILITIES OR STRUCTURES BY 1 FT. VERTICAL AND 3.5 FT. HORIZONTAL.
5. SEAL THE ENDS OF ALL UNUSED CABLES AFTER PULLING THEM INTO MANHOLES.
6. VERTICAL CONDUIT TRANSITIONS MUST NOT EXCEED 4" IN 8' OF DUCT.
7. INSTALL 3/16" DIAMETER YELLOW POLYPROPYLENE ROPE IN ALL NEW CONDUIT.
8. THESE PLANS DO NOT SHOW UTILITIES NOT OWNED BY P.L.D.
9. PERMANENT AND TEMPORARY DUCT ENTRANCE INTO P.L.D. MANHOLES OR HANDHOLES ARE TO BE SAWCUT.
10. ALL SALVAGED MATERIAL IS TO BE DELIVERED TO P.L.D. BY CONTRACTOR IN USABLE CONDITION.
11. CONTRACTOR SHALL REMOVE CONSTRUCTION DEBRIS FROM P.L.D. STRUCTURES.
12. ALL CABLES ARE TO BE TAGGED WITH P.L.D. STANDARD TAGS PROVIDED BY THE CONTRACTOR, TRAIN AND RACK ALL CABLES. USE SUR-RACK STANCHIONS & CABLE ARMS. USE STAINLESS STEEL HARDWARE. (INCIDENTAL TO "INSTALL CABLE").
13. HANDHOLES ON ST. LTG. STANDARDS ARE TO FACE AWAY FROM ON-COMING TRAFFIC.
14. WHERE TEMPORARY DUCTS ARE REMOVED OR ABANDONED, NEATLY PATCH THE STRUCTURE WALL WITH BRICK OR MORTAR DEPENDENT UPON THE STRUCTURE COMPOSITION.
15. CALL P.L.D. SYSTEMS OPERATOR (313-267-4150) TO DE-ENERGIZE & ENERGIZE CIRCUITS.
16. CALL P.L.D. ENGINEER (313-267-7216) FOR INSPECTION OF CONSTRUCTION BEFORE POURING CONCRETE.
17. IF PROBLEMS OCCUR ON THE CIRCUITS AT THE TEMPORARY REROUTED LOCATIONS, THE CONTRACTOR WILL BE RESPONSIBLE FOR CORRECTION IN A TIMELY MANNER.
18. SERIES STREET LIGHTING CABLE SPLICES ARE LEAD WIPE TYPE.

CALL MISS DIG

* QUANTITIES MAY VARY DUE TO FIELD CONDITIONS.

INSTALL	PAYMENT ITEMS
2 Ea	45 Ft. CL2 Wood Pole (Fit Up as Prim. & Sec. C.P.)
2 Ea	Code 009-00 St. Ltg. Standard & Foundation
2 Ea	6 Ft. Clamp-On Bracket Arm (36" Rise)
2 Ea	PLD Handhole (30in. Round) W/Frame & Cover
300 Ft*	Conduit, Encased, EB20 TC6 1-3"
200 Ft*	Conduit, Encased, EB20 TC6 6-5"
50 Ft*	Conduit, DB 80, TC2 3-4"
200 Ft*	Cable, St. Ltg., 7.5KV, 2-1/C *8 L.C.
200 Ft*	Cable, St. Ltg., 2KV, 3-1/C *2 RHH & RHW (Color-Coded)
50 Ft*	Cable, St. Ltg., 2KV, 2-1/C *2 RHH & RHW (Color-Coded)
100 Ft*	Cable, St. Ltg., 2KV, 1/C *2 RHH & RHW (Color-Coded)
100 Ft*	Cable, 15KV., 3-1/C *350KCM, U.R.D./P.J.
200 Ft*	Cable, 7KV., 1-3/C * 350KCM, P.L.L.C.P.J.
2 Ea	Luminaire, 250 S.V. Cobra Head
2 Ea	Manhole, 2-Way
100 Ft*	Cable, 15KV, 2-1/C *2 U.R.D./P.J.
200 Ft*	Triplex, *2 O.H. Line
200 Ft*	3-2/0 O.H. Line
200 Ft*	2-#6 O.H. Line Wire
2 Ea	H.H. (OR M.H.), Remove
4 Ea	Remove & Salvage O.P., Luminaire, Coil
300 Ft*	Remove Cable and Duct Bank
2 Ea	Wood Pole, Remove
6 Ea*	Remove O.H. Lines Installed for Temp.
30 Ea*	Make Cable Splice
2 Ea*	Vactor Out Manhole
50 Ft*	Conduit Repair
4 Ea	Remove Foundation
1 Ea*	Trim Tree

F.W.O. 934614, 41, 42, 44, 45, 51, 52, 53, 54, 57B, 58

DATE	DESCRIPTION	CHECKED BY
10-6-06	REVISED MISC. NOTES	
12-20-06	SHEET NOS., QUANTITIES AS INDICATED	
2-13-07	SHEET NOS., PAYMENT ITEMS	

**RECONSTRUCTION OF ANTIETAM BRIDGE
OVER DEQUINDRE CUT GREENWAY
DRAWING NOT TO SCALE**

DRAWN BY C.L.BWB
CHECKED BY D.W.
APPROVED BY M.L.



**PUBLIC LIGHTING
DEPARTMENT
CITY OF DETROIT**

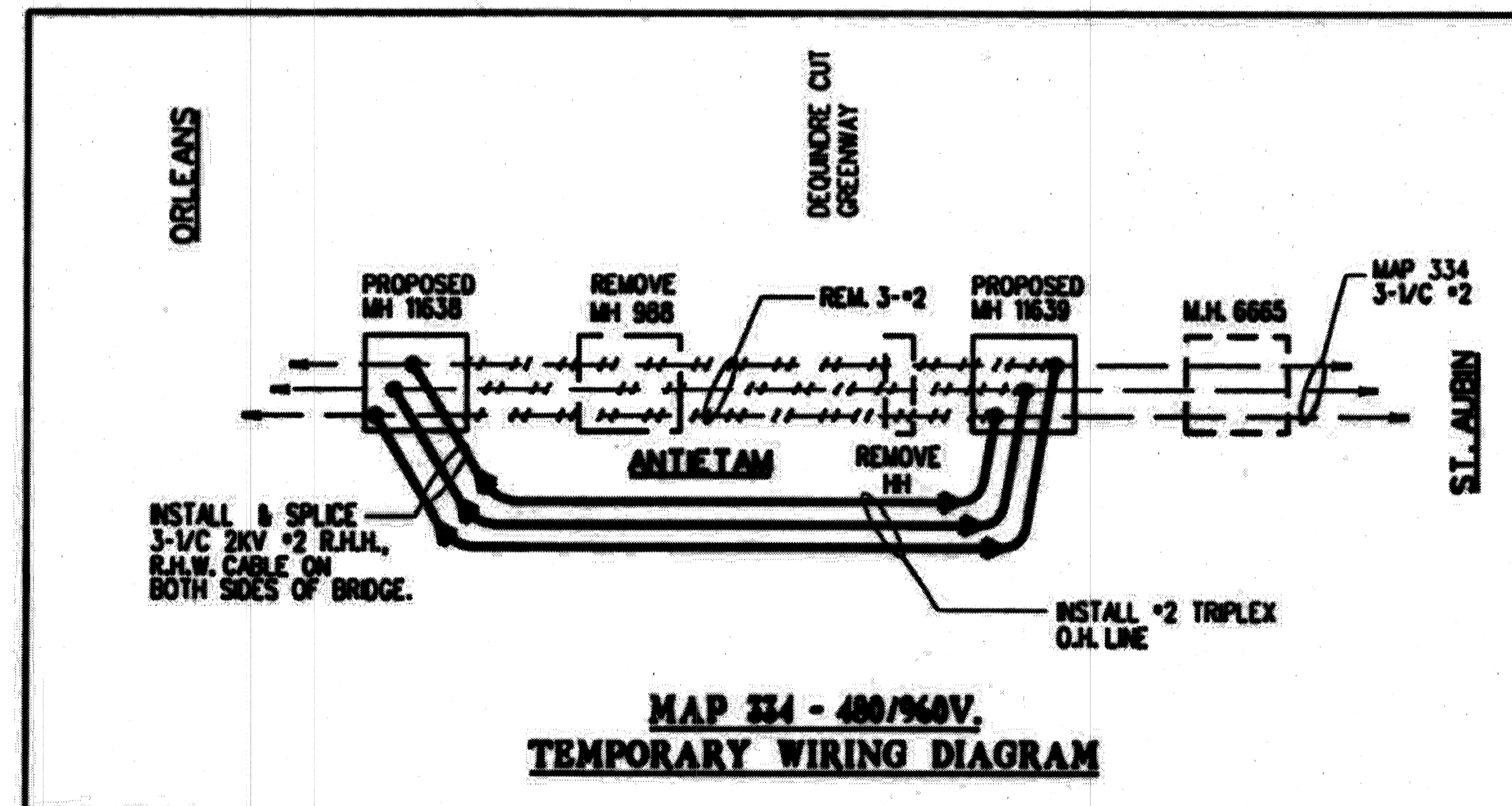
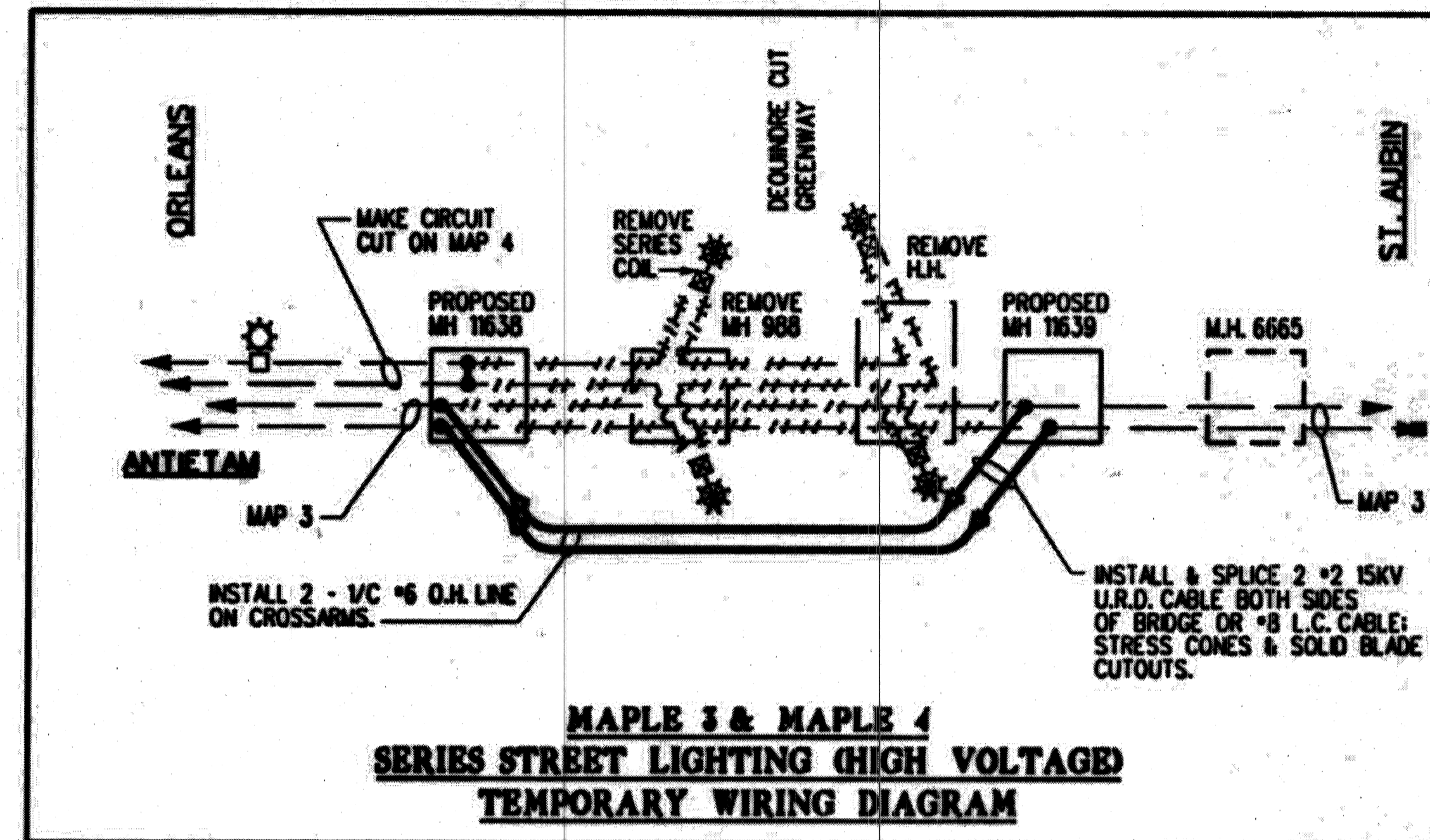
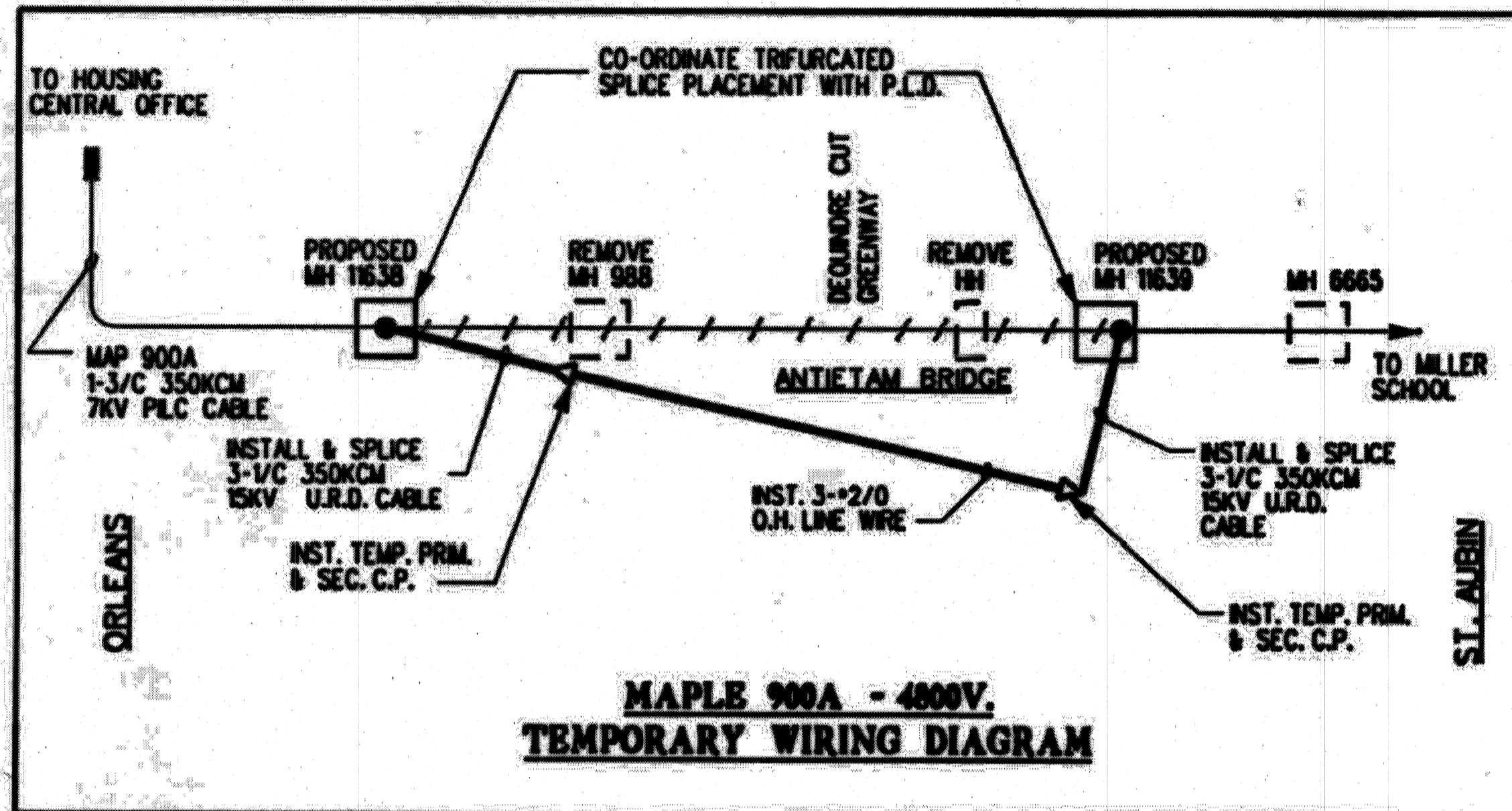
FILE NO 27-1122
SHEET NO 26
DATE

MAPLE 900A

4800 V.

T-39C

CRS 4



CALL MISS DIG

F.W.O. 9346.14. 41. 42. 44. 45. 51. 52. 53. 54. 57B. 58

REVISIONS	DATE	DESCRIPTION	CHECKED BY
1	10-30-06	REVISED MISC. NOTES	
2	2-13-07	SHEET NOS. - PAYMENT ITEMS	

**RECONSTRUCTION OF ANTIETAM BRIDGE
OVER DEQUINDRE CUT GREENWAY**
DRAWING NOT TO SCALE

DRAWN BY
C. LEWIS
CHECKED BY
B.W.
APPROVED BY
M.L.



**PUBLIC LIGHTING
DEPARTMENT
CITY OF DETROIT**

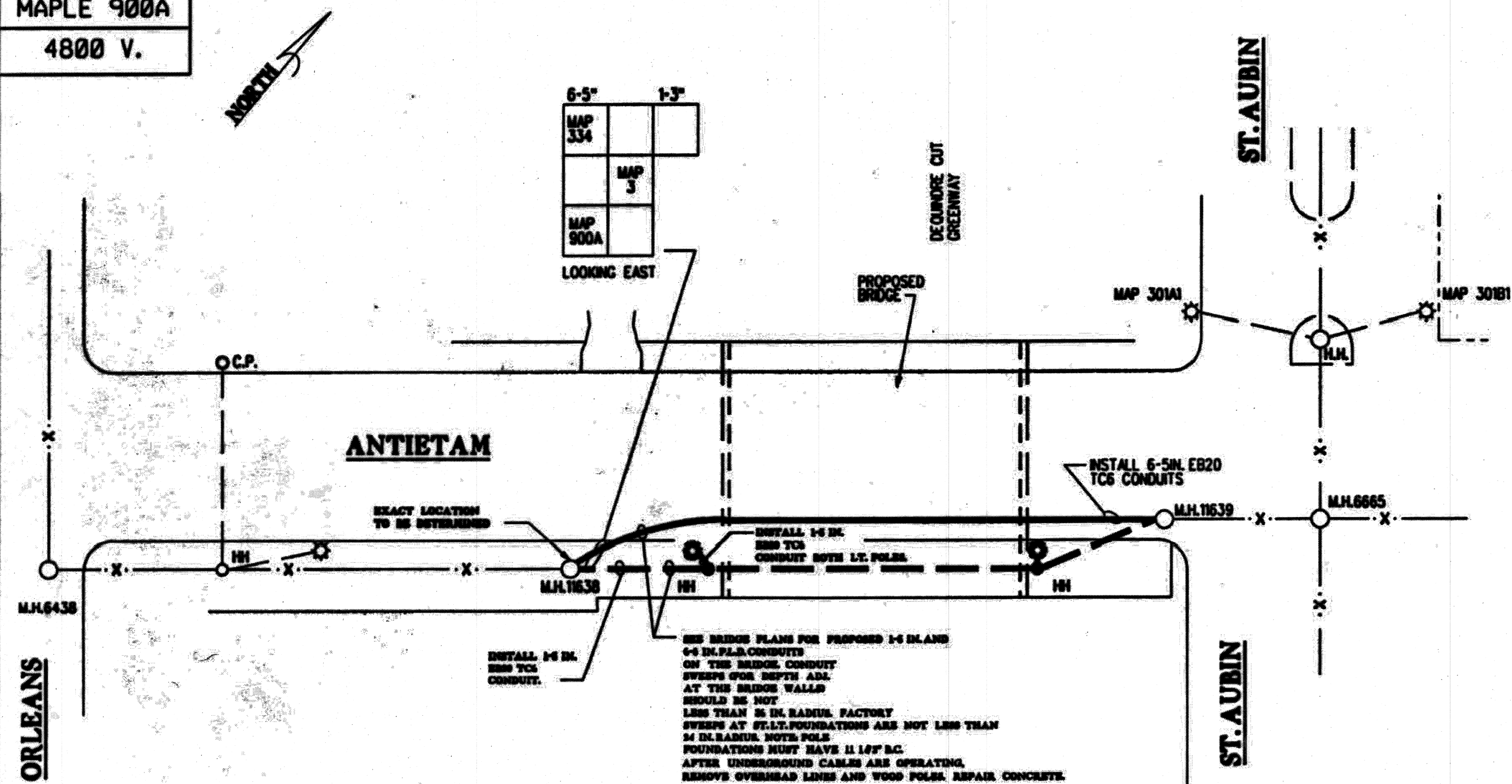
FILE NO
27-1122
SHEET NO
27
DATE

MAPLE 900A

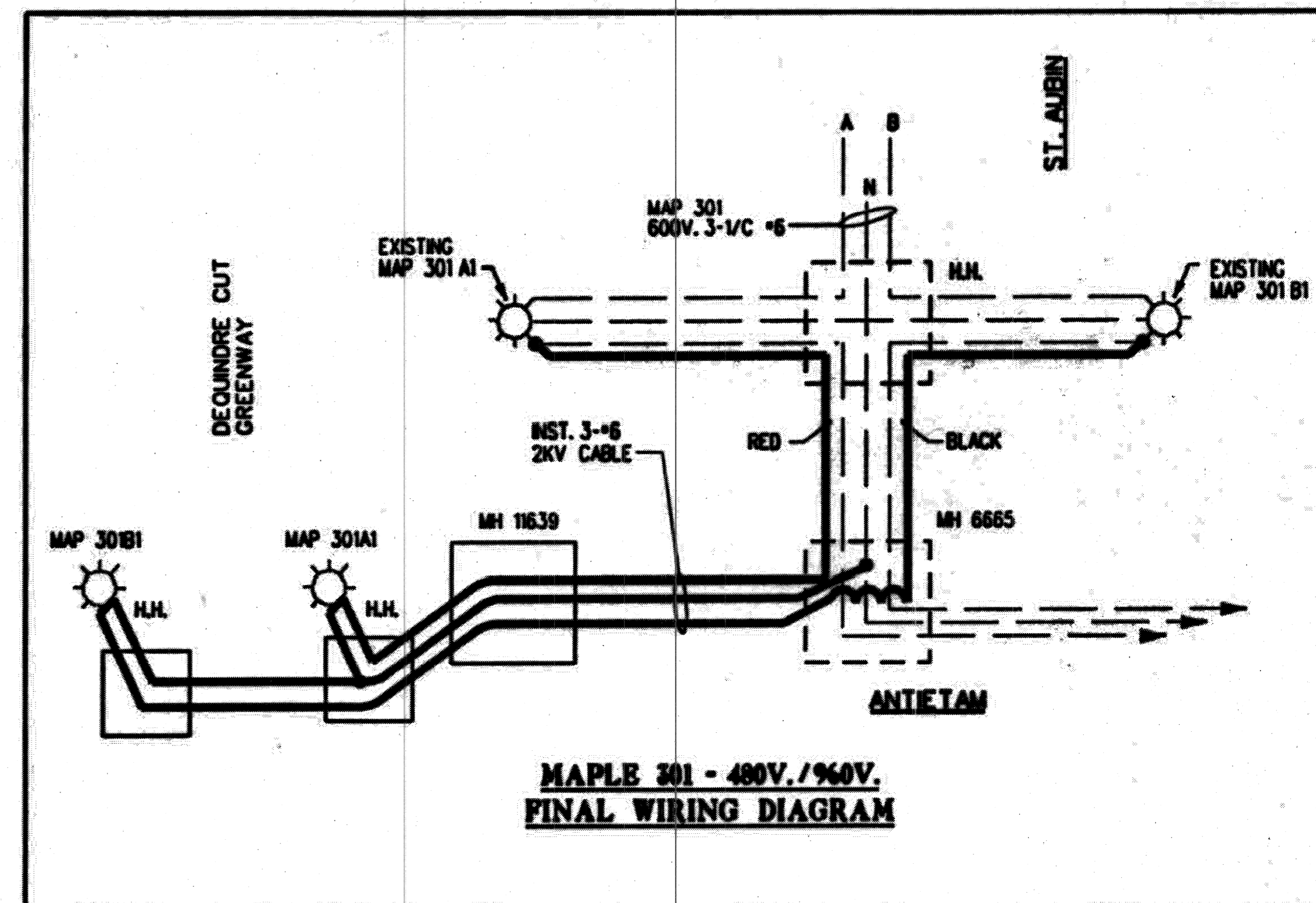
4800 V.

T-39C

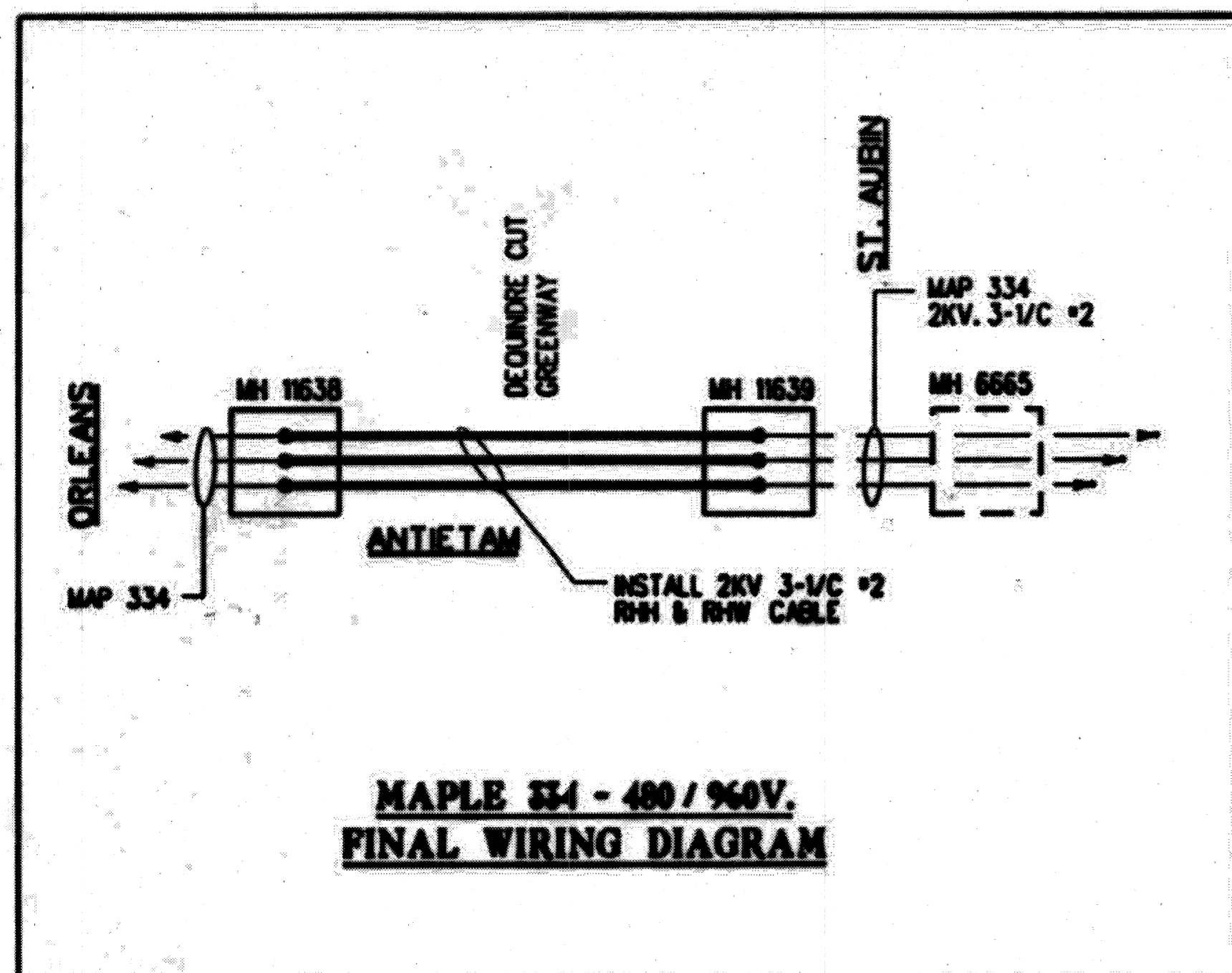
CRS 4



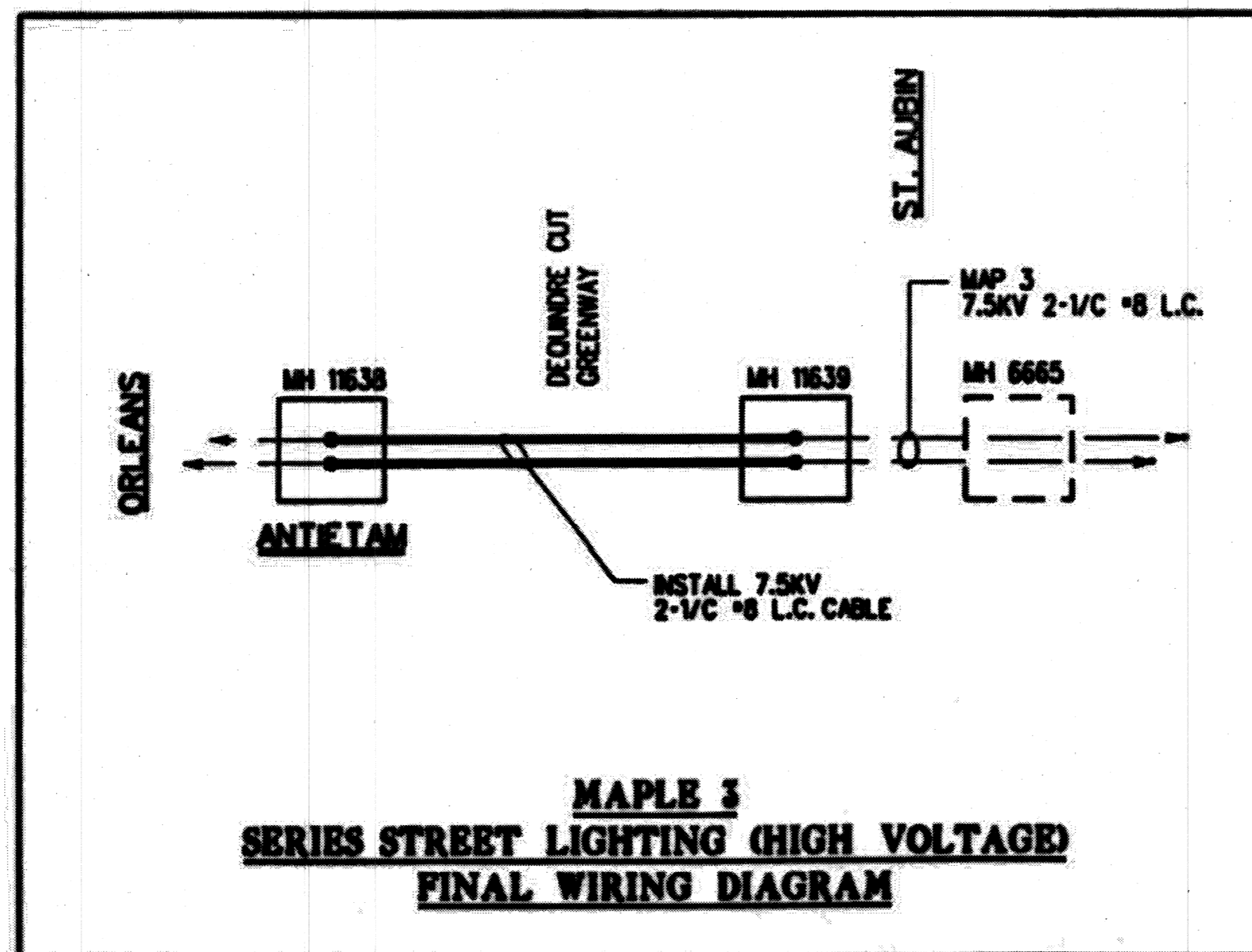
**P.L.D. FACILITIES
PROPOSED FINAL PLAN**



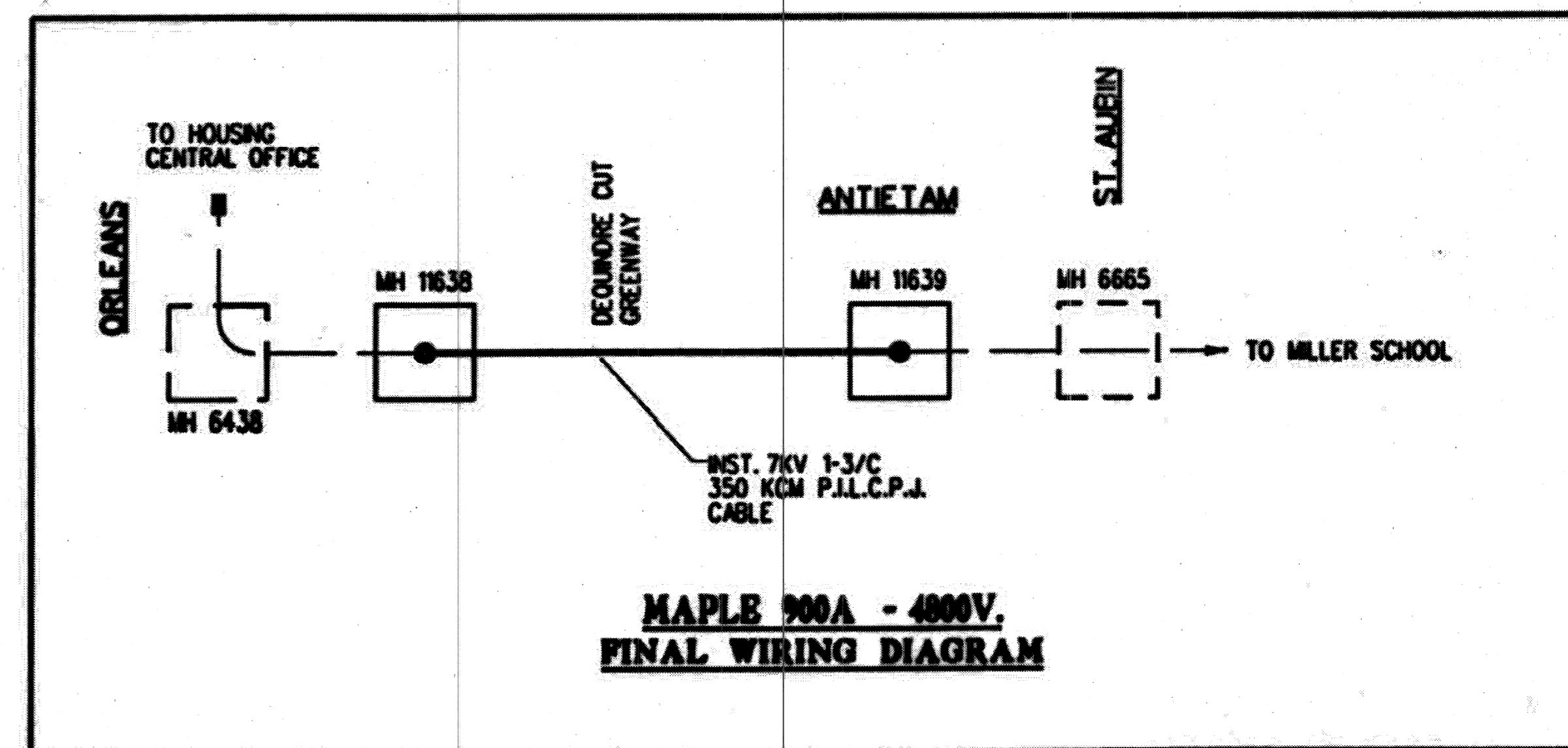
**MAPLE 301 - 480V./960V.
FINAL WIRING DIAGRAM**



**MAPLE 334 - 480 / 960V.
FINAL WIRING DIAGRAM**



**MAPLE 3
SERIES STREET LIGHTING (HIGH VOLTAGE)
FINAL WIRING DIAGRAM**



**MAPLE 900A - 4800V.
FINAL WIRING DIAGRAM**

CALL MISS DIG

F.W.O. 9346.14. 41. 42. 44. 45. 51. 52. 53. 54. 57B. 58

REVISIONS	DATE	DESCRIPTION	CHECKED BY
	10-6-06	REVISED MISC. NOTES	
	2-13-07	SHEET NOS., PAYMENT ITEMS	

**RECONSTRUCTION OF ANTIETAM BRIDGE
OVER DEQUINDRE CUT GREENWAY**
DRAWING NOT TO SCALE

DRAWN BY
G.LEWIS
CHECKED BY
D.W.
APPROVED BY
M.L.



**PUBLIC LIGHTING
DEPARTMENT
CITY OF DETROIT**

FILE NO
27-1122
SHEET NO
28
DATE

GENERAL INFORMATION

1. CALL MISS DIG (647-7344) 48HRS. PRIOR TO ANY EXCAVATION FOR THE LOCATIONS OF UNDERGROUND UTILITIES.
2. A MINIMUM CLEARANCE OF 3'-6" HORIZONTAL & 1'-0" VERTICAL MUST BE MAINTAINED BETWEEN PROPOSED P.L.D. FACILITIES & EXISTING U.G. WATER FACILITIES.
3. CONTRACTOR TO NOTIFY MICH. CONS. GAS CO. AT 491-6301 IF PROTECTIVE COATED GAS MAIN IS EXPOSED OR DAMAGED.
4. CONTRACTOR TO NOTIFY D.E.CO., MR. J. TYSON AT 237-9564 IF PROTECTIVE COATING OF ANY D.E.CO. HIGH VOLTAGE UNDERGROUND LINE IS EXPOSED OR DAMAGED.
5. ALL EXISTING P.L.D. LIGHTING, TRAFFIC SIGNAL, PRIMARY, TRANSMISSION ETC. CIRCUITS SHALL ALWAYS BE MAINTAINED IN AN OPERATIONAL CONDITION (EXCEPT WHERE OTHERWISE NOTED). NOTIFY P.L.D. SYSTEM OPERATOR AT 224-0500 48HRS. PRIOR TO BEGINNING WORK ON P.L.D. CIRCUITS & KEEP HIM INFORMED ON A DAILY BASIS.
6. EXISTING O.H. & T.S. FACILITIES ARE NOT NECESSARILY SHOWN ON PLANS.
7. CROSSARMS SHALL BE REMOVED AFTER ALL CONTACTS ARE REMOVED. (INCLUDED WITH THE REMOVAL OF OVERHEAD LINES).
8. ALL OVERHEAD WIRES & UNDERGROUND CABLES SHALL CONSIST OF COPPER CONDUCTORS AS PER SPECIFICATIONS.
9. ALL REMOVED WOOD POLES & CROSSARMS SHALL BE DELIVERED TO P.L.D. FOR DISPOSAL BY P.L.D.
10. ALL NEW ANCHOR GUYS SHALL BE INSTALLED ON A 1:1 RATIO OR AS NEARLY AS POSSIBLE (EXCEPT WHERE OTHERWISE NOTED). (STRUT GUYS ARE EXCEPTED).
11. ARM GUYS SHALL BE SIEMENS-MARTIN GRADE. ANCHOR AND POLE GUYS SHALL BE EXTRA HIGH STRENGTH GRADE.
12. INSTALL WOOD POLES SO AS NOT TO INTERFERE WITH TRAFFIC OR FUTURE CONSTRUCTION STAGES.
13. ALL SALVAGED WOOD POLES DIRECTED TO BE INSTALLED SHALL BE POLES PREVIOUSLY INSTALLED NEW ON THIS CONTRACT.
14. ALL TRANSFORMER POLES AND CABLE POLES SHALL BE FITTED UP WITH 120" ARMS. (EXCEPT WHERE OTHERWISE INDICATED).
15. INSTALLATION OF ARMS FOR EQUIPMENT, CUTOUTS, POTHEADS, TRANSFORMERS, ETC. NOT SHOWN ON NEW CABLE AND TRANSFORMER POLES SHALL BE INSTALLED AS PER THE DETAIL DRWG. REQUIREMENT AND SHALL BE INCLUDED IN THE FITTING-UP OF THE CABLE AND/OR TRANSFORMER POLE.
16. ALL POTHEADS ON PRIMARY DISTRIBUTION CABLE POLES SHALL BE FLAT DIVERGENT DISCONNECTING TYPE.
17. WHERE A P.L.D. WOOD POLE WITH OTHER UTILITY CONTACTS IS TO BE REMOVED THE P.L.D. INSPECTOR WILL INDICATE IF THE POLE IS IN FACT TO BE REMOVED.
18. ALL TRAFFIC STREET SIGNS SUCH AS "NO PARKING", "NO STANDING" ETC. SHALL BE TRANSFERRED FROM OLD STD. OR POLE TO NEW STD. OR POLE AT SAME LOCATION OR IN CLOSE PROXIMITY BY DEPT. OF TRANSPORTATION.
19. ALL TRAFFIC SIGNALS SHALL BE MOUNTED WITH NEW STANDARD TRAFFIC SIGNAL BRACKETS & FITTINGS.
20. ALL TRAFFIC SIGNAL ITEMS, AS CALLED FOR ON PLANS, SHALL INCLUDE AS INCIDENTAL TO THE TRAFFIC SIGNAL ALL CABLES FROM THE CONTROLLER TO THE TRAFFIC SIGNALS & FOUNDATIONS AS INDICATED.
21. WHEN ENTERING PROPOSED CONDUIT INTO EXISTING MANHOLES & HANDHOLES EXERCISE CAUTION NOT TO DISTURB EXISTING CABLES. WALLS SHALL BE CORE DRILLED ONLY FOR ENTRANCE OF CONDUITS. NEW CONDUITS SHALL NOT INTERFERE WITH RACKING AND / OR TRAINING OF CABLES.

22. ALL SALVAGED TRAFFIC SIGNALS DIRECTED TO BE INSTALLED SHALL BE TRAFFIC SIGNALS PREVIOUSLY INSTALLED NEW ON THIS CONTRACT. (EXCEPT AS OTHERWISE INDICATED).
23. FOR TRAFFIC SIGNAL SPAN WIRE USE 3/8" SIEMENS-MARTIN GRADE AS PER SPECIFICATIONS.
24. SIDEWALK RAMPS OF THE TYPE & LOCATION AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER SHALL BE CONSTRUCTED.
25. SEAL-END OF CABLE WHERE COILING OF CABLE IS CALLED FOR ON PLANS. (CONTRACTOR SHALL RECEIVE PAYMENT FOR COILED-UP CABLES).
26. CONTRACTOR SHALL DELIVER WHERE REQUIRED TO THE PUBLIC LIGHTING DEPARTMENT THE T.S. CONTROLLER FOR TIMING. CONTRACTOR SHALL PICK-UP CONTROLLER FROM P.L.D. WHEN READY FOR INSTALLATION.
27. PROPOSED T.S. SHALL BE PUT INTO OPERATION AT TIME OF REMOVAL OF EXISTING T.S. FACILITIES. CONTRACTOR SHALL NOTIFY THE P.L.D. INSPECTOR IF HE IS UNABLE TO MAINTAIN T.S. IN AN OPERABLE CONDITION AT ALL TIMES.
28. THE CANDLEPOWER DISTRIBUTION FOR ALL MERCURY VAPOR & SODIUM VAPOR ST. LTG. LUMINAIRES SHALL BE SEMI-CUTOFF, MEDIUM DISTRIBUTION OF TYPE AS INDICATED ON THE PLANS.
29. ALL LUMINAIRES SHALL BE PROVIDED WITH 240V. INTERNAL BALLASTS AS CALLED FOR ON PLANS. (EXCEPT WHERE OTHERWISE INDICATED.)
30. WHERE REMOVAL OF LUMINAIRES IS CALLED FOR ON PLANS THE ASSOCIATED O.H. SERIES COIL SHALL BE REMOVED BY THE CONTRACTOR. (REMOVE O.H. COIL IS INCLUDED WITH THE REMOVAL OF LUMINAIRE).
31. WHERE INSTALLATION OF NEW MANHOLES OR HANDHOLES OVER EXISTING CONDUITS (TO ACCOMMODATE NEW & EXISTING CONDUITS) IS CALLED FOR ON PLANS, CONTRACTOR SHALL CAREFULLY & SO AS NOT TO DAMAGE EXIST. CABLES, REMOVE THE EXISTING CONDUITS & ENCASEMENT WITHIN HOLES. EXIST. CABLES SHALL BE EXTENDED & PROPERLY TRAINED, RACKED & SUPPORTED.
32. WHERE ABANDONING OF U.G. CABLES IS CALLED FOR ON PLANS OR DIAGRAMS, CONTRACTOR SHALL CUT & REMOVE CABLES WITHIN MANHOLES & HANDHOLES.
33. FOR LOCATIONS OF P.L.D. INSTALLATIONS ON STRUCTURES SUCH AS CONDUITS, HANDHOLES, CONDUIT SLEEVES, GALVANIZED STEEL CONDUITS & ST. LTG. STD. ANCHOR BOLTS SEE STRUCTURE PLANS.
34. PAVEMENT, SIDEWALK, CURB REMOVAL, REPLACEMENT AND EXCAVATION & BACKFILL SHALL BE DONE ACCORDING TO CITY OF DETROIT SPECIFICATIONS.
35. UNDERGROUND CABLE QUANTITIES ARE ITEMIZED ON GENERAL PLANS. ALL CABLES SHALL BE TAGGED IN ALL M.H.'S & H.H.'S. THIS INCLUDES EXIST. CABLES THAT ARE CONVERTED TO MULTIPLE, RECONNECTED TO OTHER CIRCUITS OR RENDERED DEAD.
36. ALL NEW, SALVAGED & CONVERTED STEEL ST. LTG. STD.'S SHALL BE PAINTED.
37. ALL ST. LTG. UNITS INSTALLED ON THIS CONTRACT AND EXIST. ST. LTG. UNITS CONVERTED OR RE-CONNECTED TO OTHER CIRCUITS SHALL BE STENCILLED OR RE-STENCILLED AS SHOWN ON PLANS. (INCLUDED TO ST. LTG. UNITS)
38. STENCILLING SHALL BE ON THE CURB SIDE OF THE POLE, LOCATED BETWEEN 4' AND 5' ABOVE GRADE. ALL LETTERS AND NUMBERS SHALL BE 2" IN HEIGHT. THE STENCILLING SHALL BE DONE WITH A WEATHER-RESISTANT ENAMEL: BLACK ON GRAY OR ALUMINUM POLES, AND YELLOW OR WHITE ON BLACK OR BRONZE COLORED POLES.

39. WHERE U.G. UTILITIES INTERFERE WITH THE INSTALLATION OF A NEW FOUNDATION, INSTALL THE SPECIAL FOUNDATION OF PARTICULAR DIMENSIONS AS INDICATED ON THE DETAIL DRWG. TO SUIT THE FIELD CONDITION. THERE WILL BE NO EXTRA PAYMENT FOR THE SPECIAL FOUNDATION. IT WILL BE PAID FOR AS A NORMAL FOUNDATION.
40. ALL NEW CONDUIT RUNS SHALL BE BUILT STRAIGHT AS POSSIBLE, BENDS SHALL HAVE NO LESS THAN 26 FT. RADIUS AND NO REVERSE OR "S" BENDS.
41. WHERE TRIMMING OF TREES ON CITY PROPERTY IS CALLED FOR ON PLANS THE CONTRACTOR SHALL OBTAIN A PERMIT FROM THE RECREATION DEPT. OF THE CITY OF DETROIT AND SHALL HAVE SUCH WORK DONE BY A LICENSED TREE SERVICE CONTRACTOR. CALL 931-3950.
42. ALL TREE TRIMMING REQUIRED TO CLEAR NEW OR SALVAGED ST. LTG. & TRAFFIC SIGNAL STD.'S AND O.H. ST. LTG. & TRAFFIC SIGNAL UNITS & O.H. WIRES SHALL BE INCLUDED WITH THE PAY-ITEM & NO EXTRA PAYMENT SHALL BE MADE.
43. WHERE IT IS SHOWN ON PLANS TO HAND DIG FOUNDATION, EXCAVATE BY HAND ENTIRE DEPTH OF FOUNDATION.
44. CONTRACTOR SHALL NOTIFY THE P.L.D. SYSTEM OPERATOR AT 224-0500 & THE D.D.O.T. AFTER COMPLETION OF WORK AT ANY TRAFFIC SIGNAL INTERSECTION.
45. ALL CABLES SHALL BE TRAINED & PROPERLY RACKED IN ALL EXISTING MANHOLES & HANDHOLES. RACKS ARE TO BE INSTALLED WHERE NECESSARY & ARE INCLUDED IN THE INSTALLATION OF U.G. CABLE.
46. ALL CONDUITS NOT TERMINATING IN STRUCTURES SUCH AS MANHOLES, HANDHOLES OR FOUNDATIONS SHALL EXTEND 3FT BEYOND PAVEMENT LIMIT (EXCEPT AS OTHERWISE INDICATED). ALL UNOCCUPIED CONDUITS SHALL BE PLUGGED.
47. ALL NEW U.G.-FED ST. LTG. UNITS SHALL BE INSTALLED 2'-6" BACK OF FACE OF CURB UNLESS OTHERWISE INDICATED ON PLANS.
48. D.S.R. STREETCAR RAILS AND FOUNDATIONS (TRACKS) ARE SHOWN ON THE PLANS IN ACCORDANCE WITH THE BEST AVAILABLE INFORMATION. EXACT LOCATIONS WITHIN THE STREETS & INTERSECTIONS ARE NOT KNOWN. SOME RAILS MAY BE REMOVED.

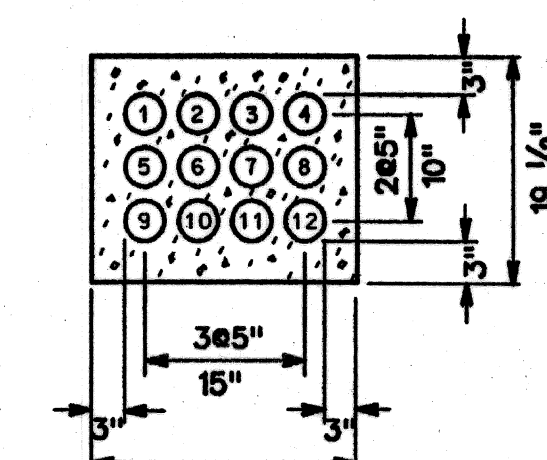
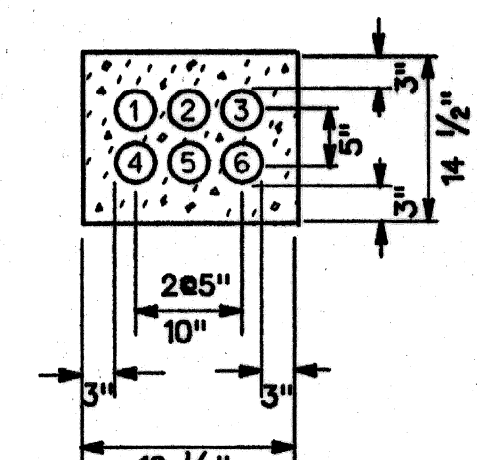
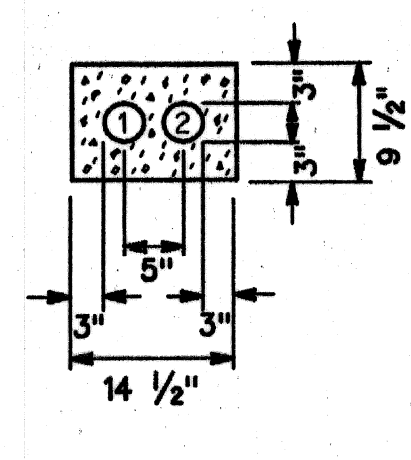
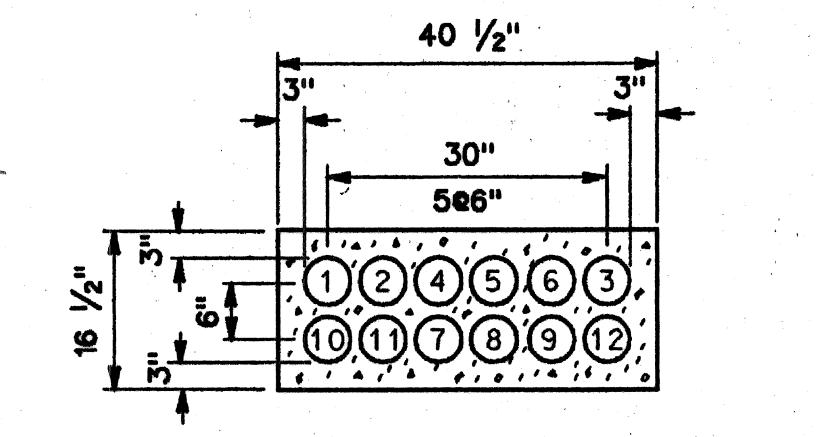
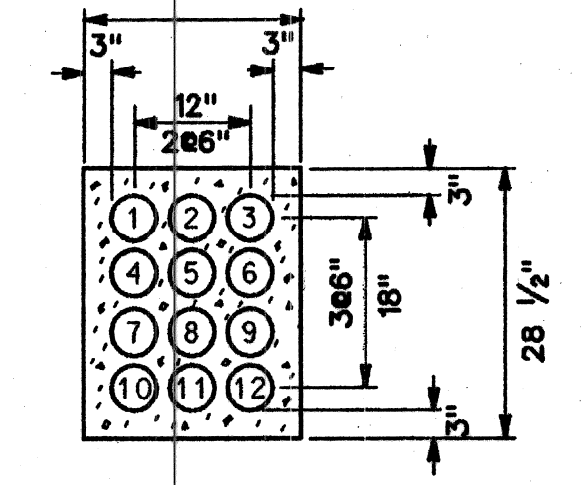
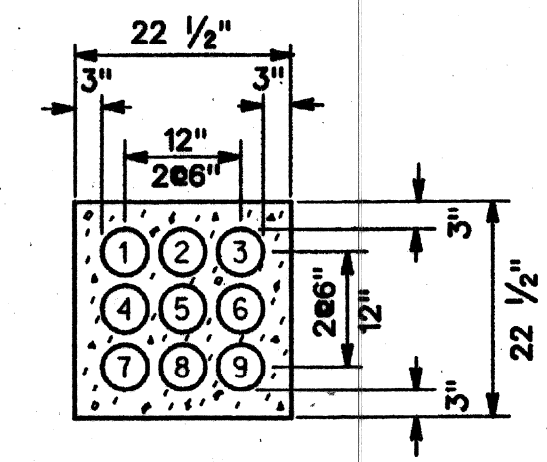
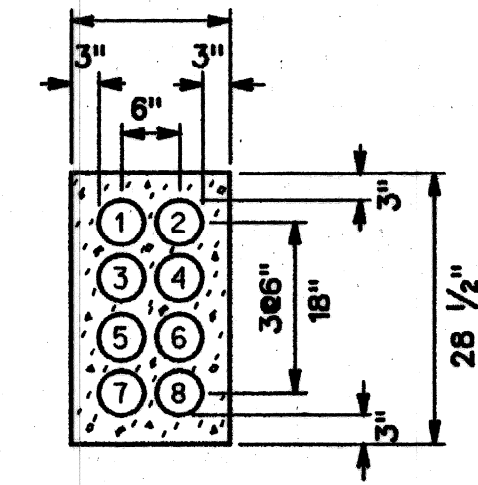
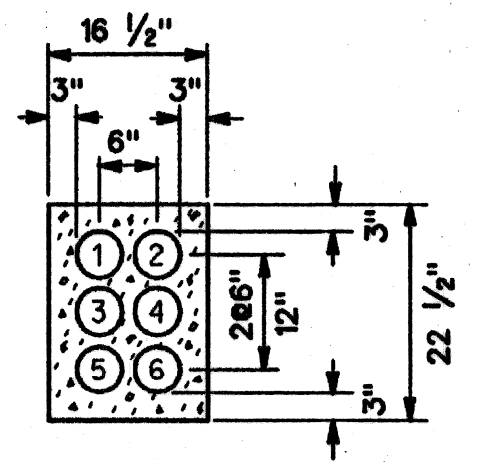
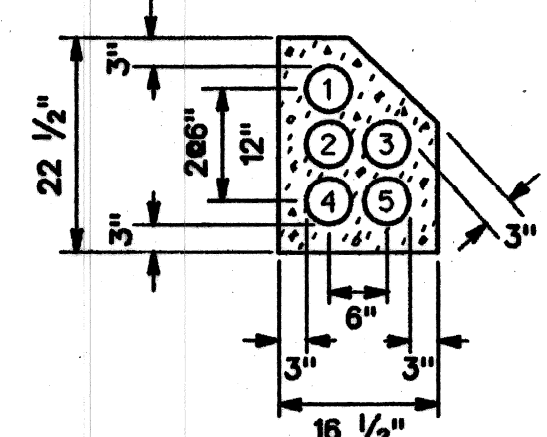
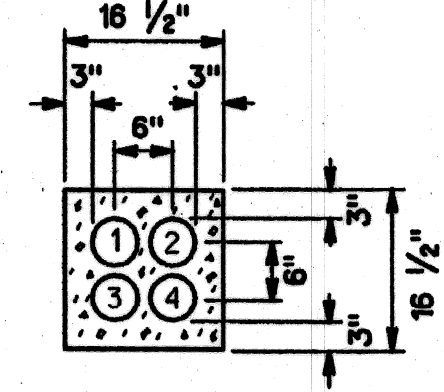
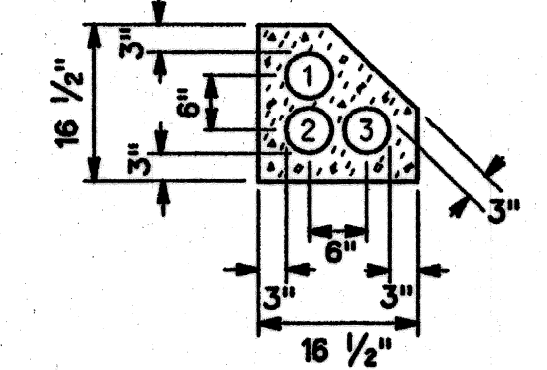
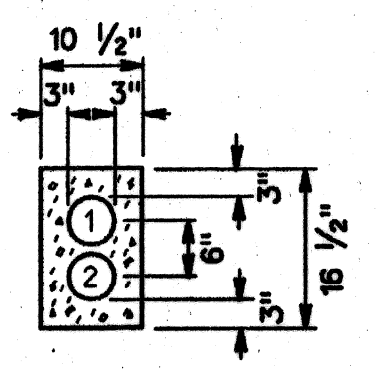
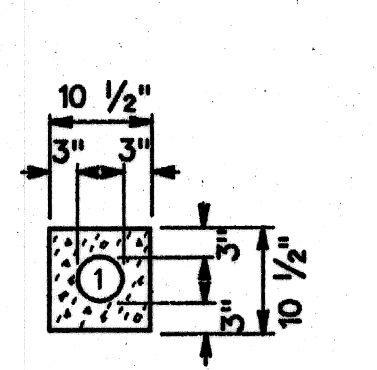
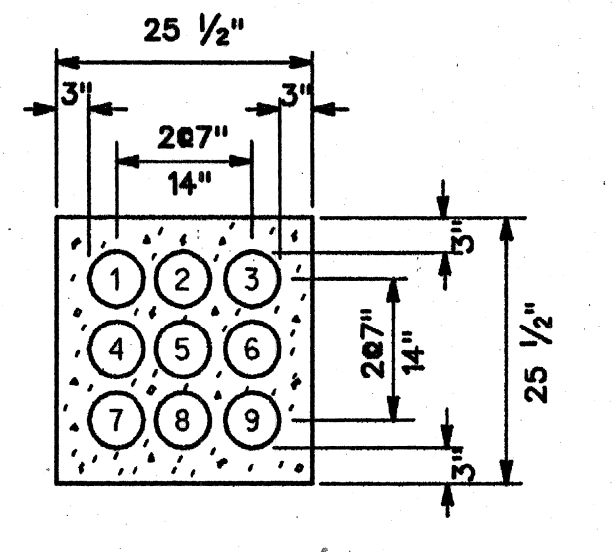
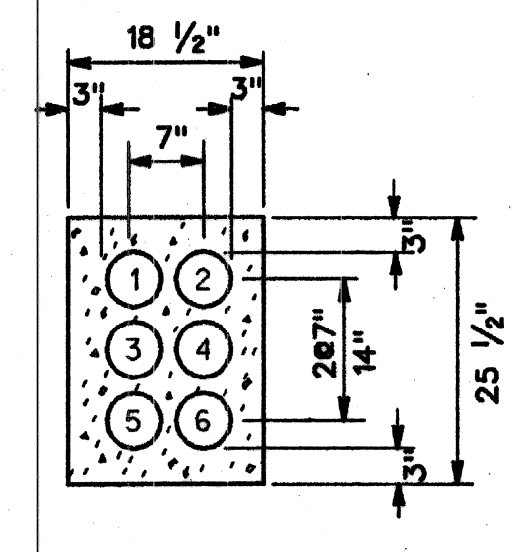
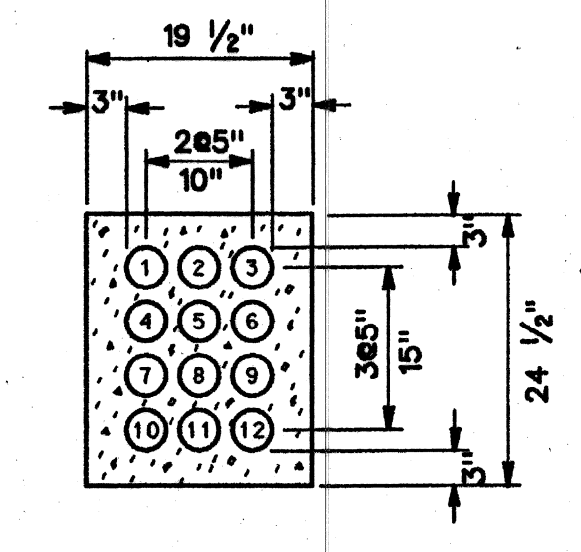
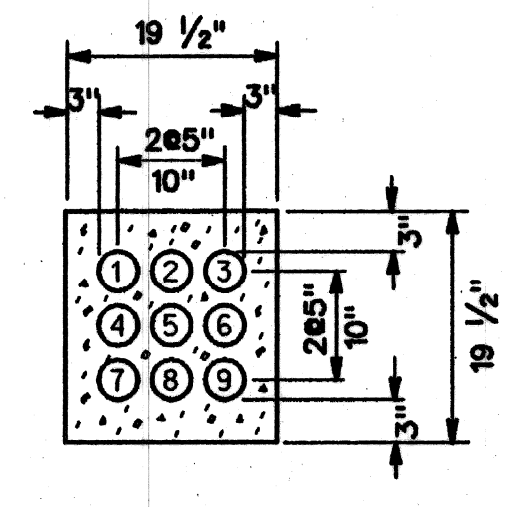
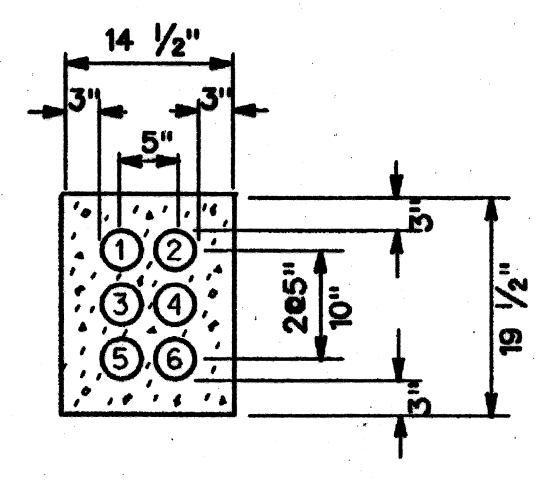
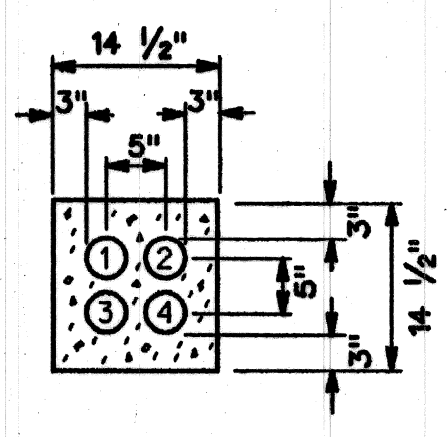
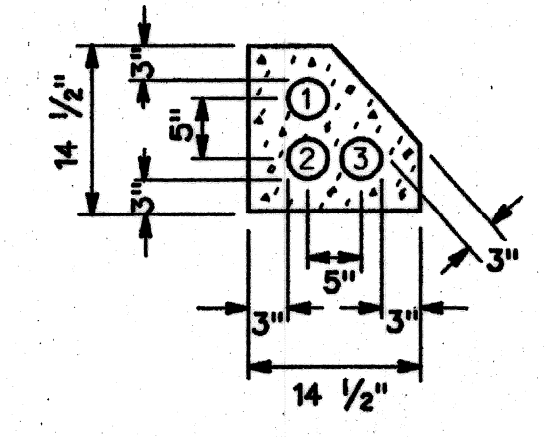
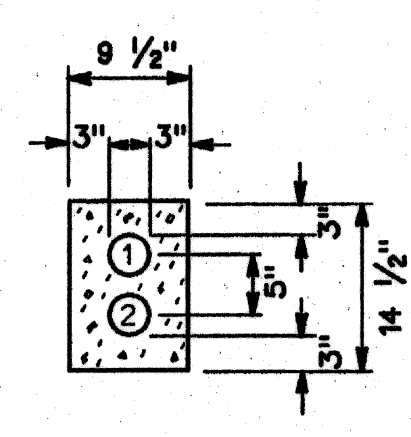
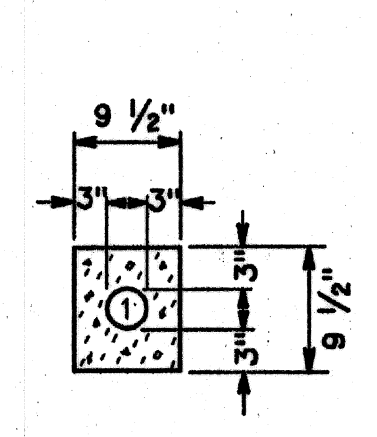
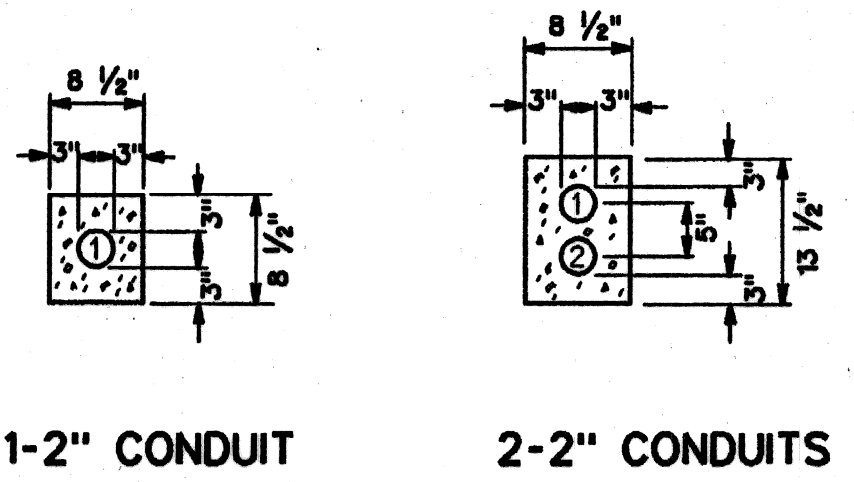
LIST OF MATERIAL	
ITEM	QUANTITIES
CONDUIT REPAIR-UNDER PAVEMENT	1 EACH
CONDUIT REPAIR-UNDER SIDEWALK OR DIRT	- EACH
REMOVING STREETCAR RAIL AND FOUNDATION	- LIN.FT.

THE ITEMS AND QUANTITIES LISTED ABOVE SHALL APPLY TO ALL LOCATIONS AS DIRECTED BY THE ENGINEER.

REVISIONS	DATE	DESCRIPTION	CHKD. BY

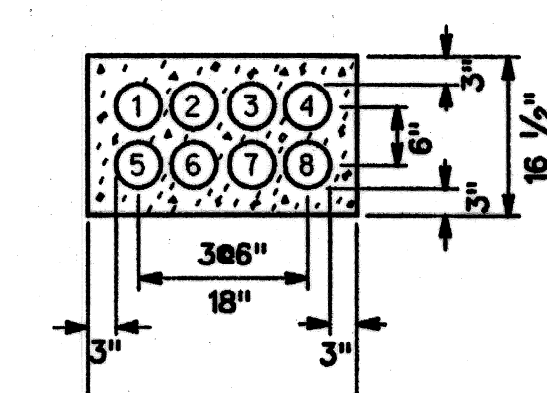
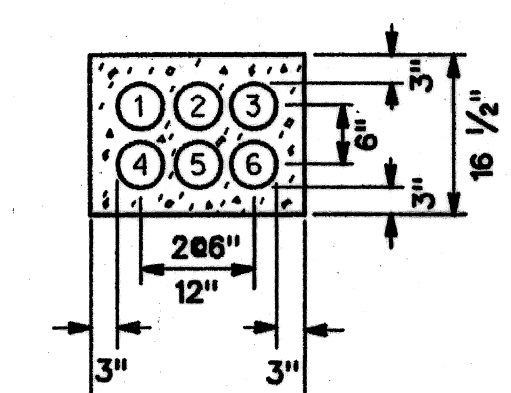
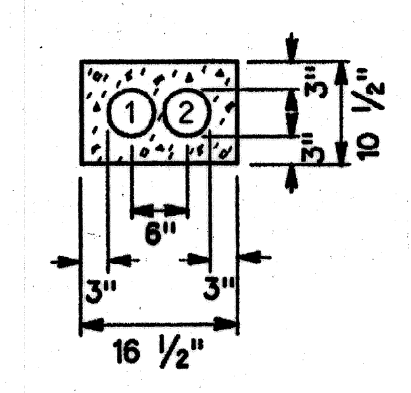
GENERAL INFORMATION & AREA MAP

DRAWN CEA	PLAN PREPARED BY CONSULTING ENGINEERING ASSOCIATES INC. ENGINEERING CONSULTANTS	CHECKED BY	PUBLIC LIGHTING DEPARTMENT	FILE NO.
APPROVED 	16580 WYOMING DETROIT, MICH. 48221	APPROVED BY	DATE	SHEET NO. 29 of 48
DATE JULY 90	DRWG. NO. 2 OF 12	FILE NO. CEA 1202	DATE	DATE



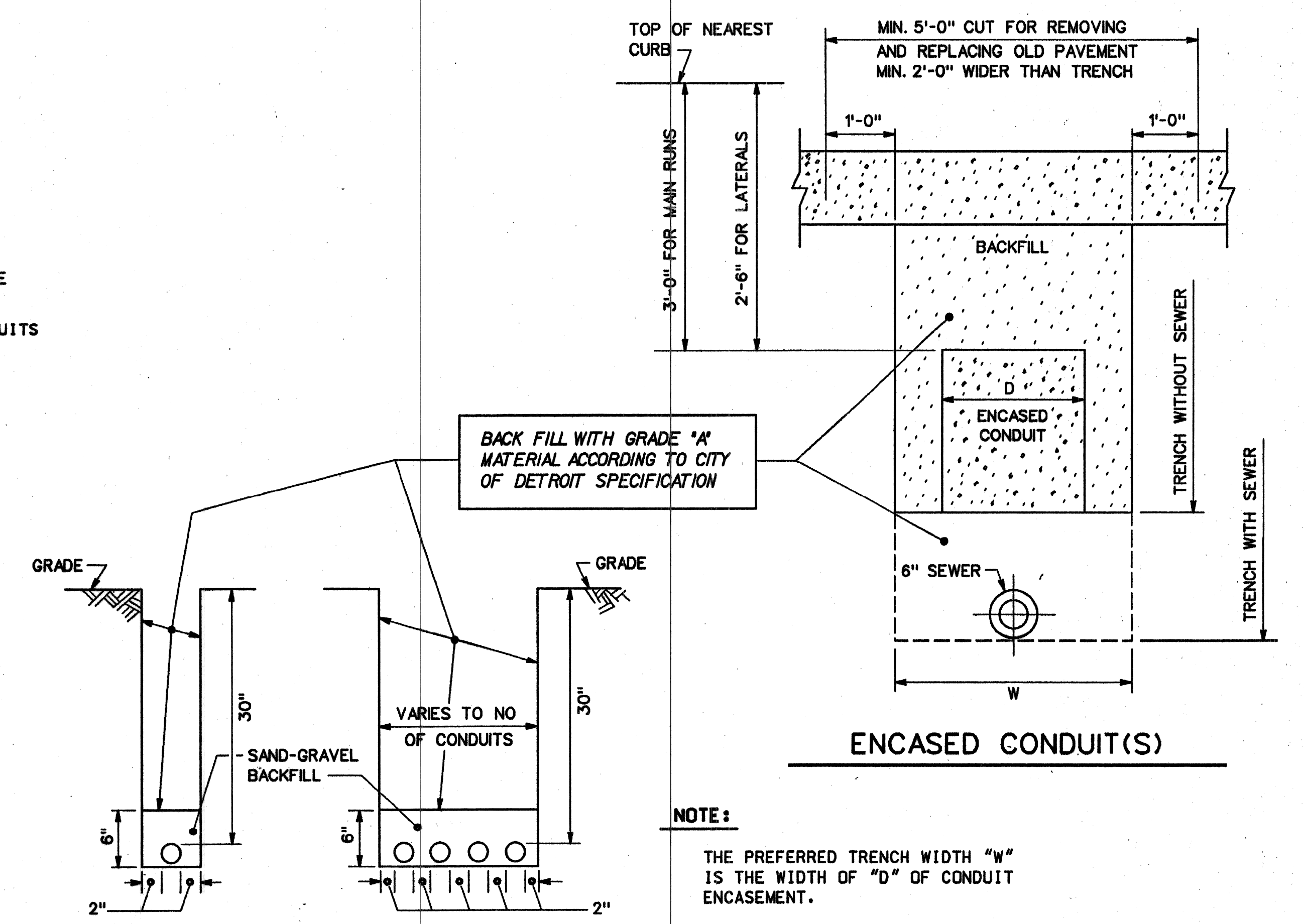
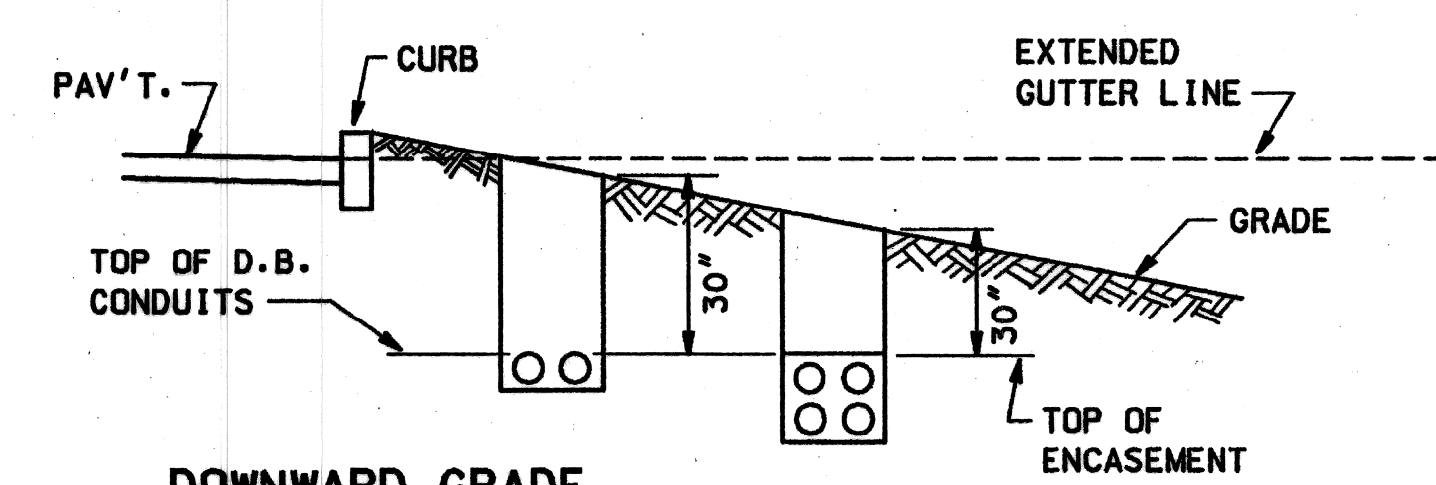
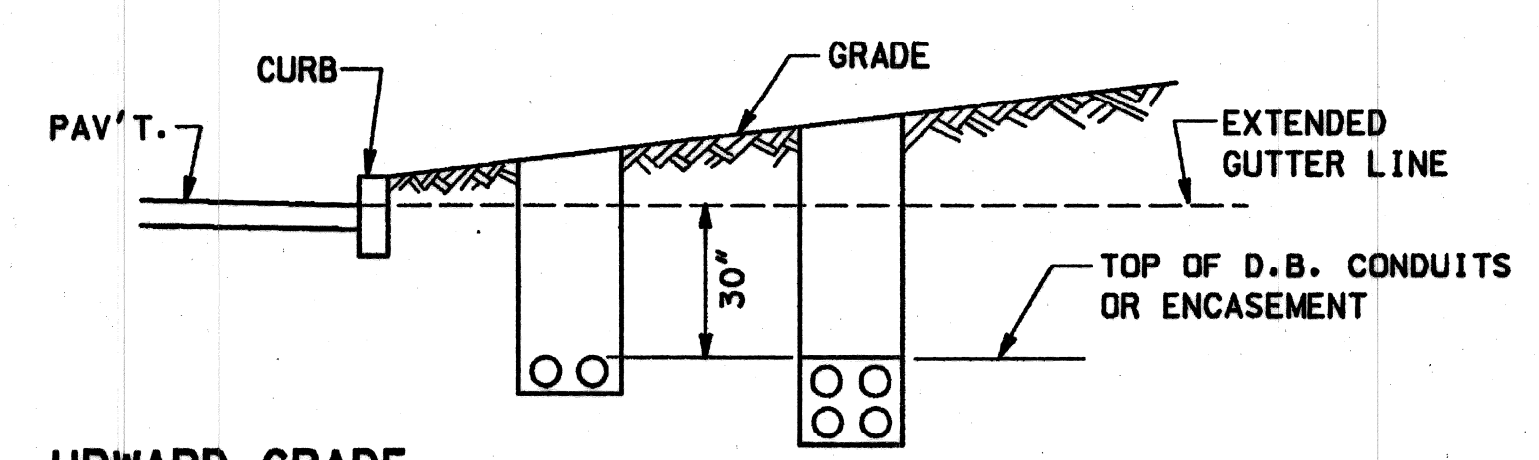
ALTERNATE ARRANGEMENT OF 3" CONDUIT

(TO SUIT FIELD CONDITIONS)
(TO BE APPROVED BY THE ENGINEER)



ALTERNATE ARRANGEMENT OF 4" CONDUIT

(TO SUIT FIELD CONDITIONS)
(TO BE APPROVED BY THE ENGINEER)



DISK FILE: PLD 101

Date	Description	Chkd. by

ENCASED CONDUIT

Drawn **CEA**
Checked
Approved
Date

Consulting Engineering Associates, Inc.
1650 WYOMING AVE. DETROIT MICHIGAN 48221
TELEPHONE: (313) 341-5797 FAX: 341-0205

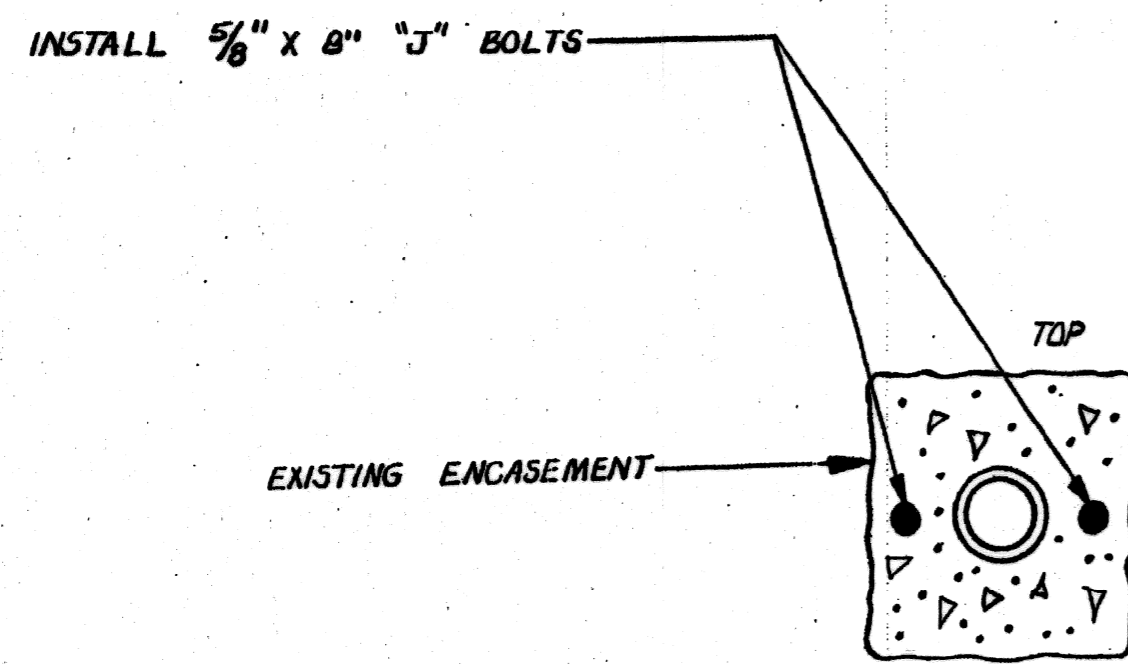
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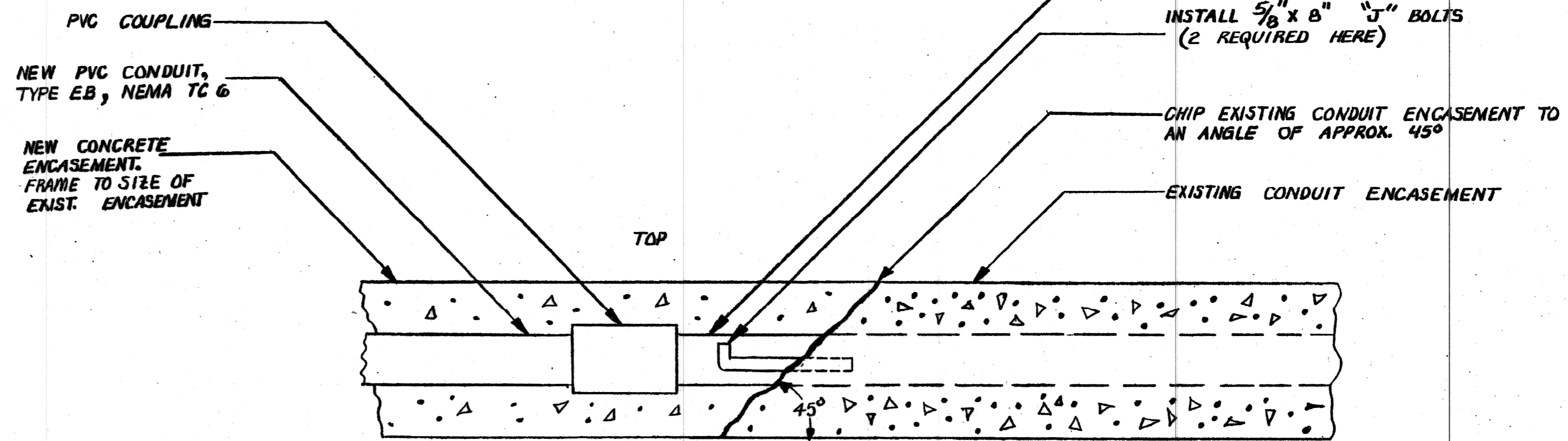
PUBLIC LIGHTING DEPARTMENT
CITY OF DETROIT

File No. Sheet No. Date

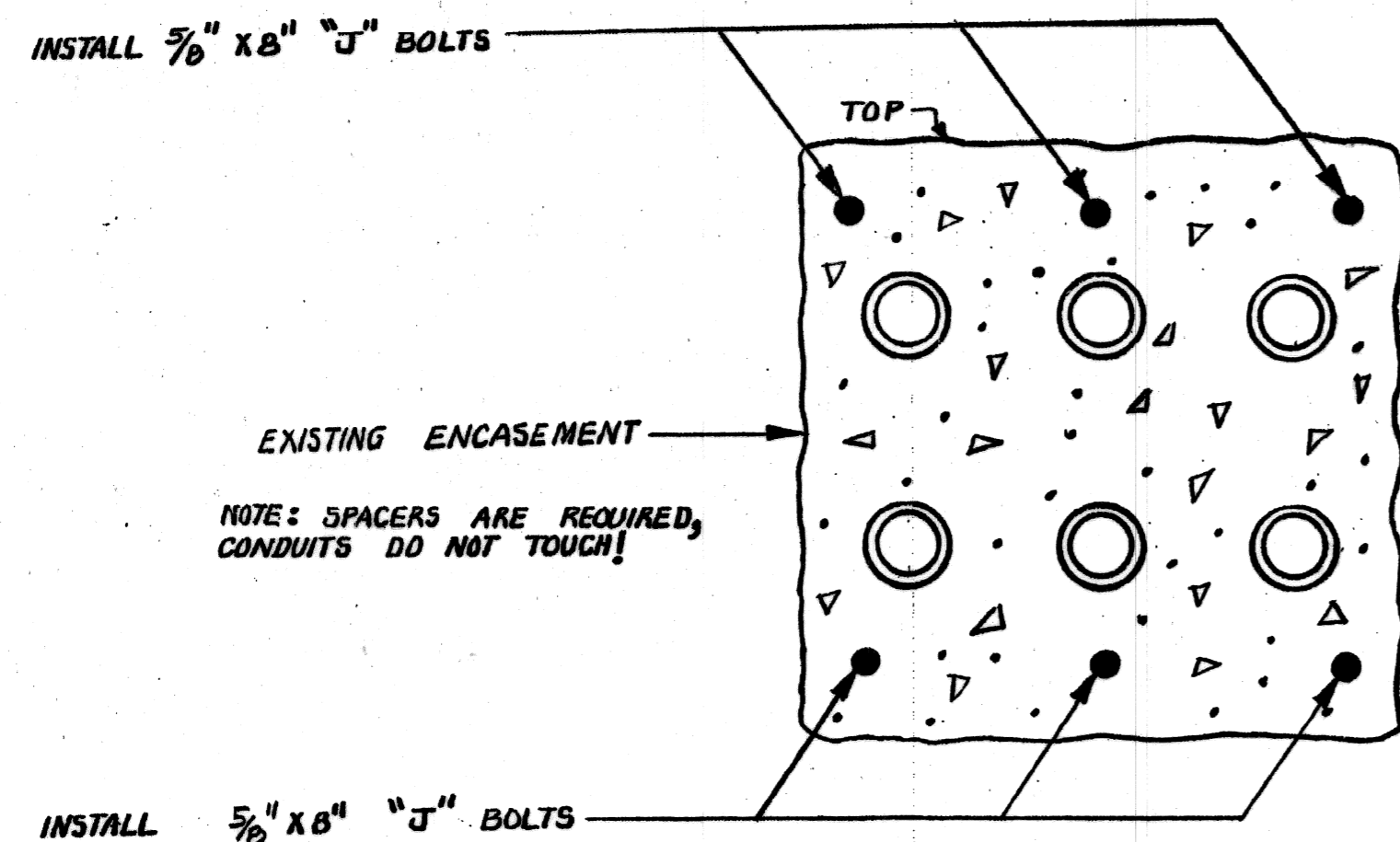
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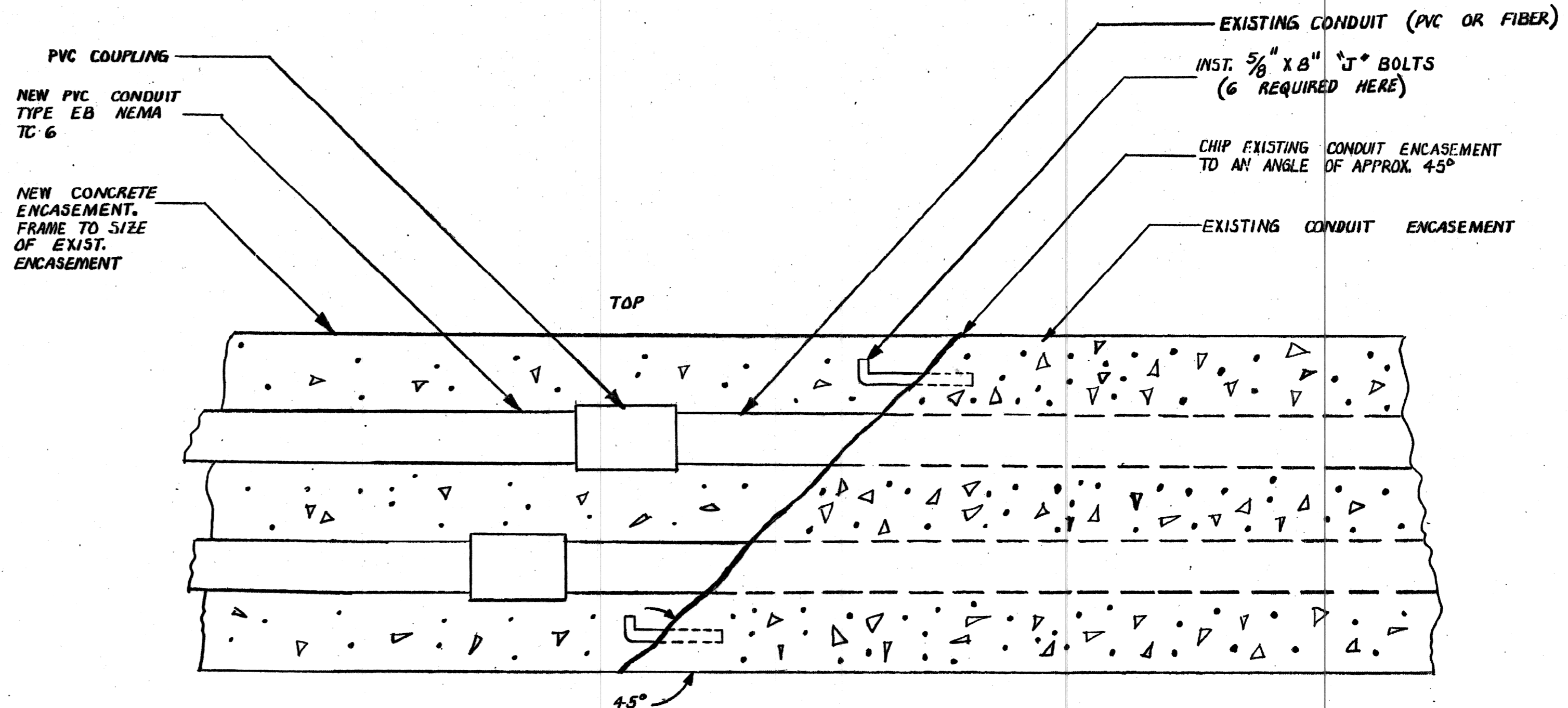
DETAIL A
(N.T.S.)
END VIEW OF CONDUIT ENCASEMENT
SHOWING APPROX. LOCATION OF "J" BOLTS



DETAIL A
(N.T.S.)
SIDE VIEW OF A SINGLE CONDUIT ENCASEMENT



DETAIL B
(N.T.S.)
END VIEW OF CONDUIT ENCASEMENT
SHOWING APPROX. LOCATION OF "J" BOLTS
(6 REQUIRED)



DETAIL B
(N.T.S.)
SIDE VIEW OF A MULTIPLE CONDUIT ENCASEMENT

NOTE: TO TERMINATE A NEW CONDUIT BANK FOR FUTURE EXTENSION, REFERENCE P.L.D. DRAWING # 44-0308

DATE	DESCRIPTION	CHKD BY

DETAIL FOR JOINING CONDUIT ENCASEMENTS

DRAWN BY
M. LASKOWSKI

CHECKED BY
M.L.

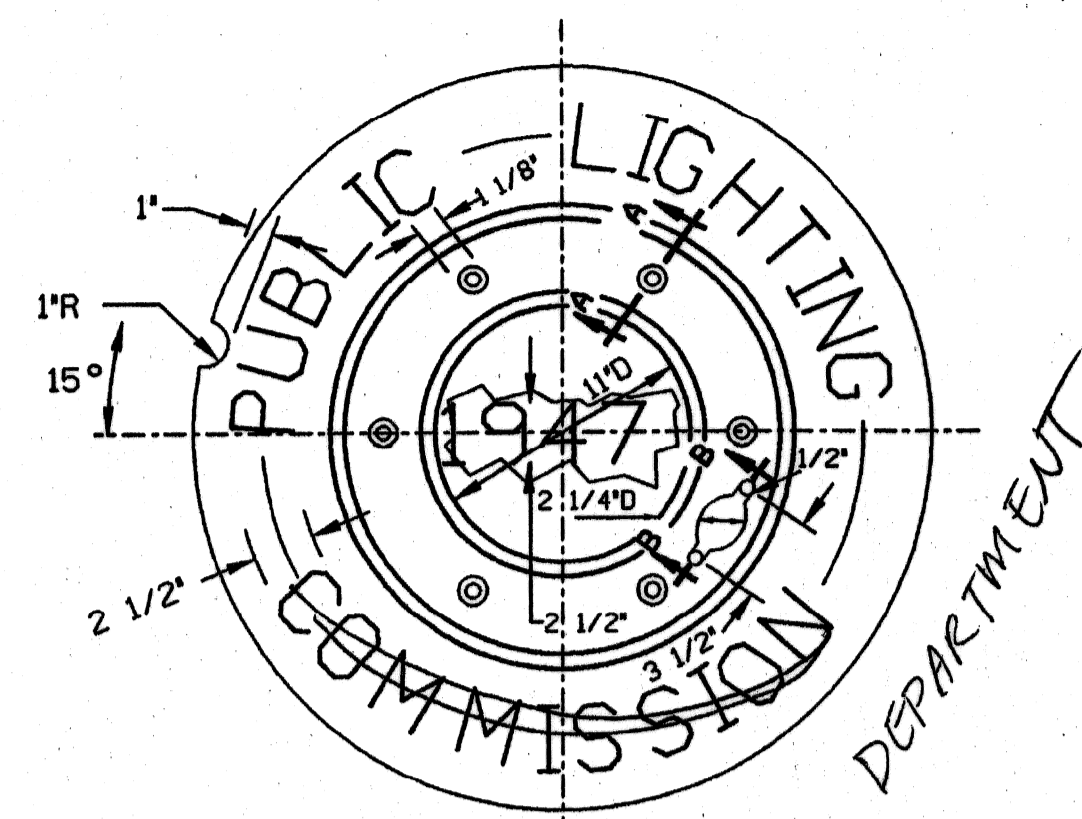
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M.L.

**PUBLIC LIGHTING
COMMISSION
CITY OF DETROIT**

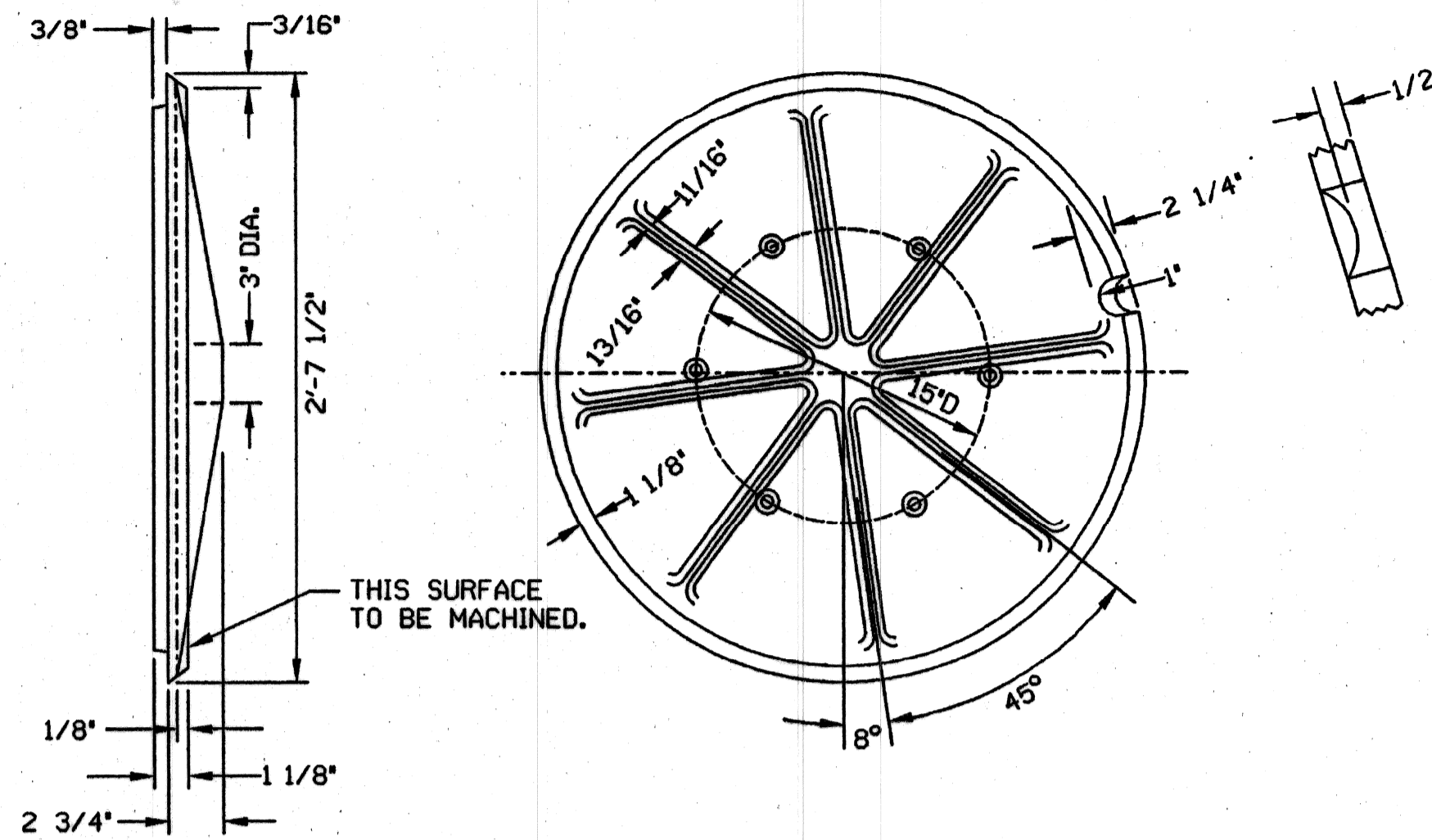
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101 A

SHEET NO.
3 OF 48

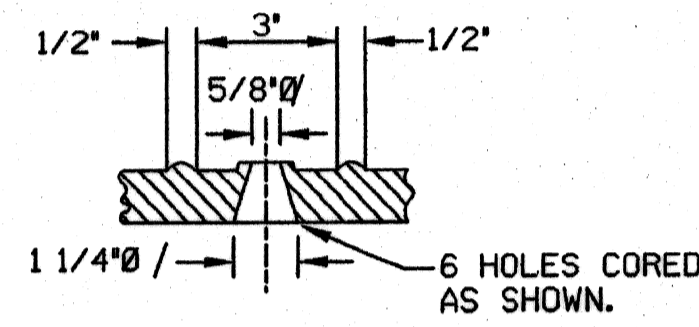
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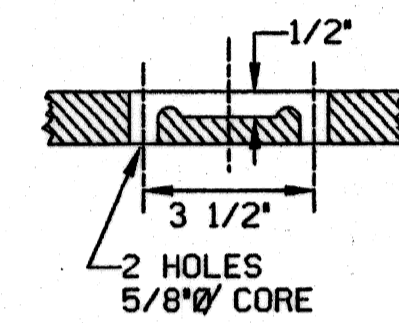
LETTERING & BEAD RAISED 3/8" ABOVE FACE.
YEAR ON COVER TO BE YEAR OF CASTING.
CONTRACTOR TO CHANGE PATTERN IF REQUIRED.



A.S.T.M. CLASS 30 GREY IRON
P.L.C.PATT. NO. 418
APPROX. WT.-245*

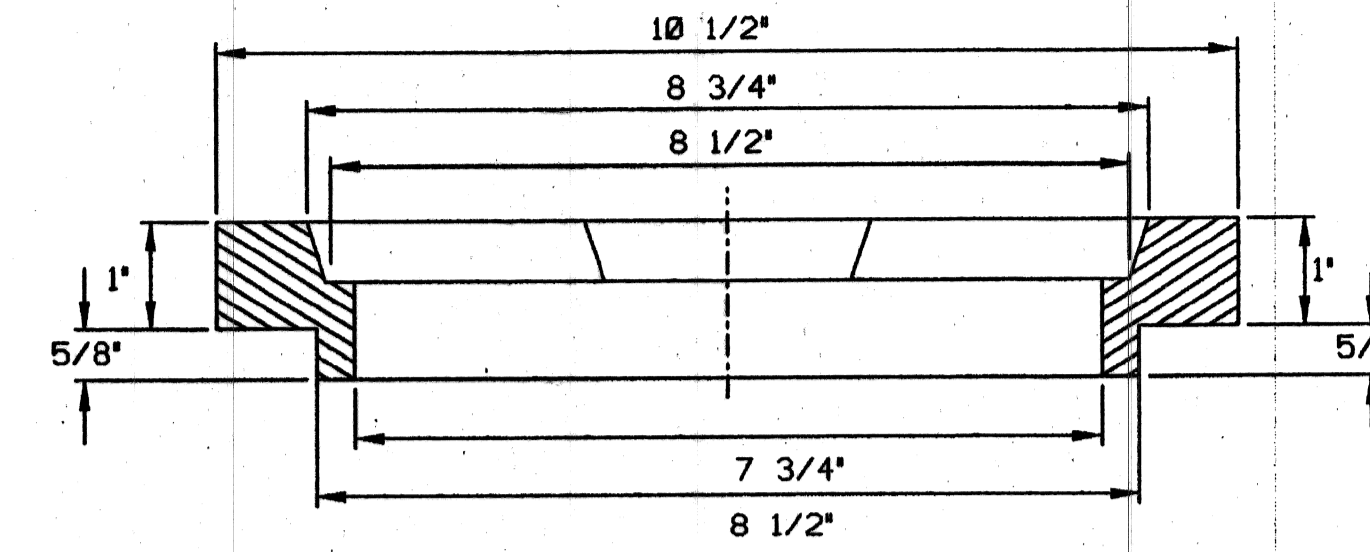


SECTION A-A
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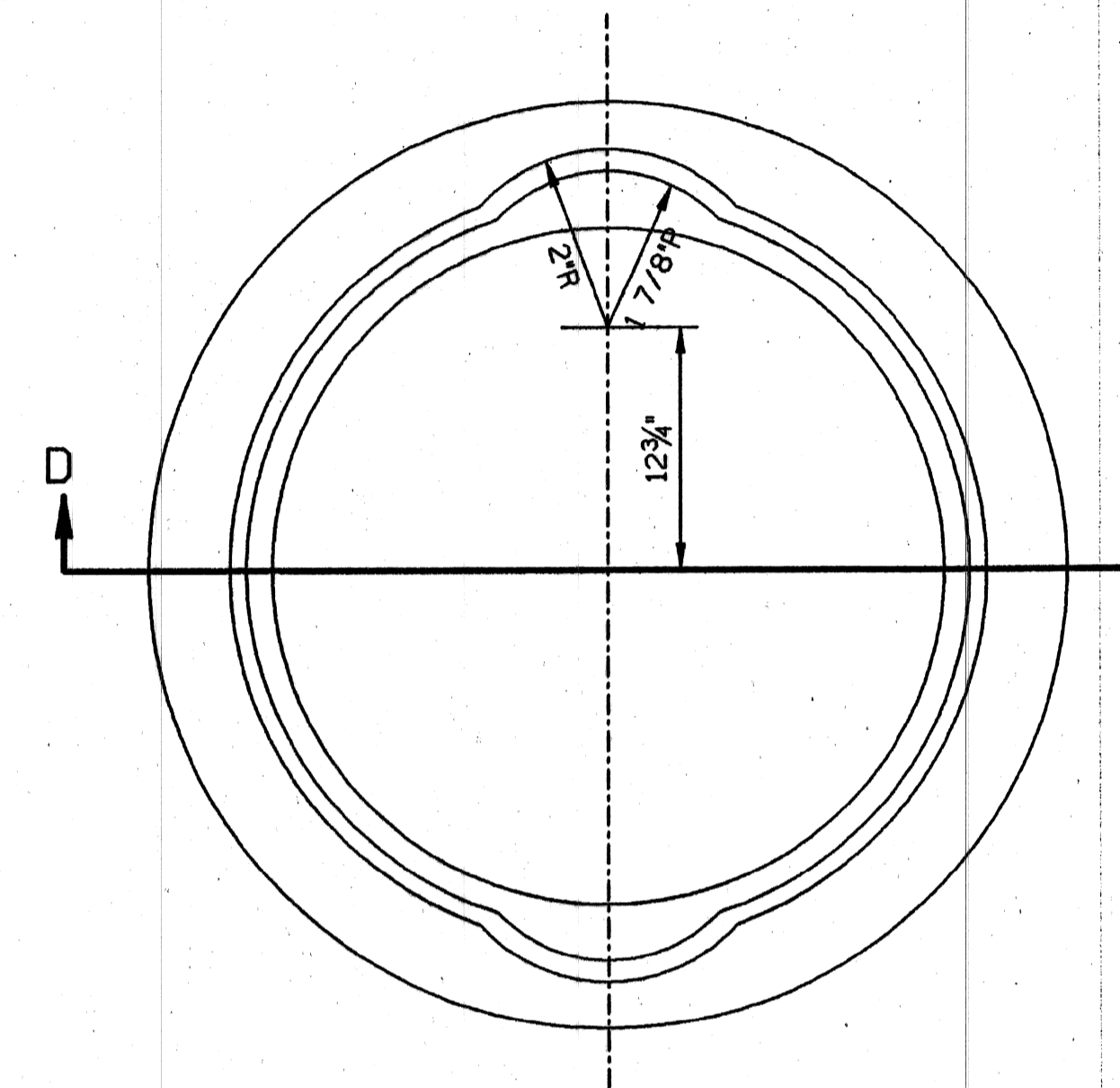


SECTION B-B
N.T.S.

MANHOLE COVER
N.T.S.

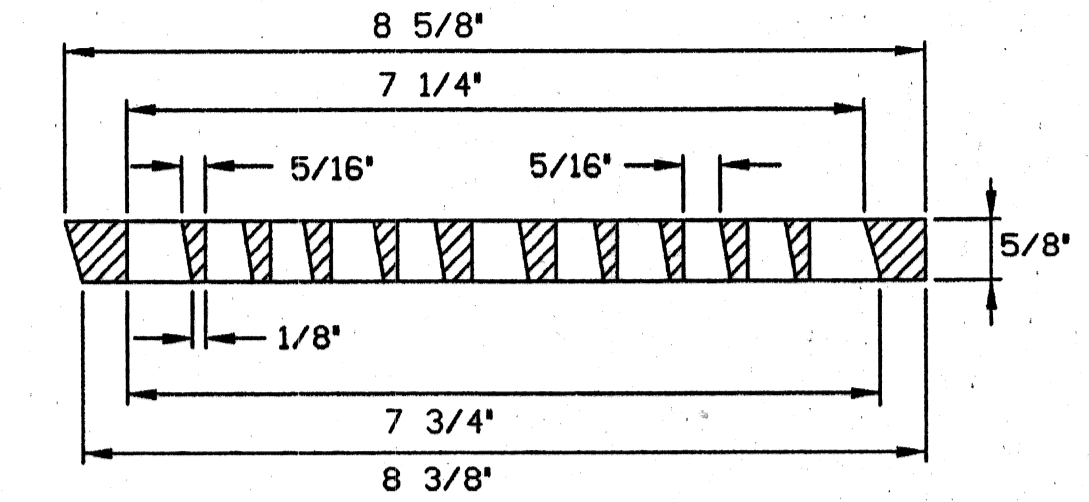


SECTION D-D
N.T.S.

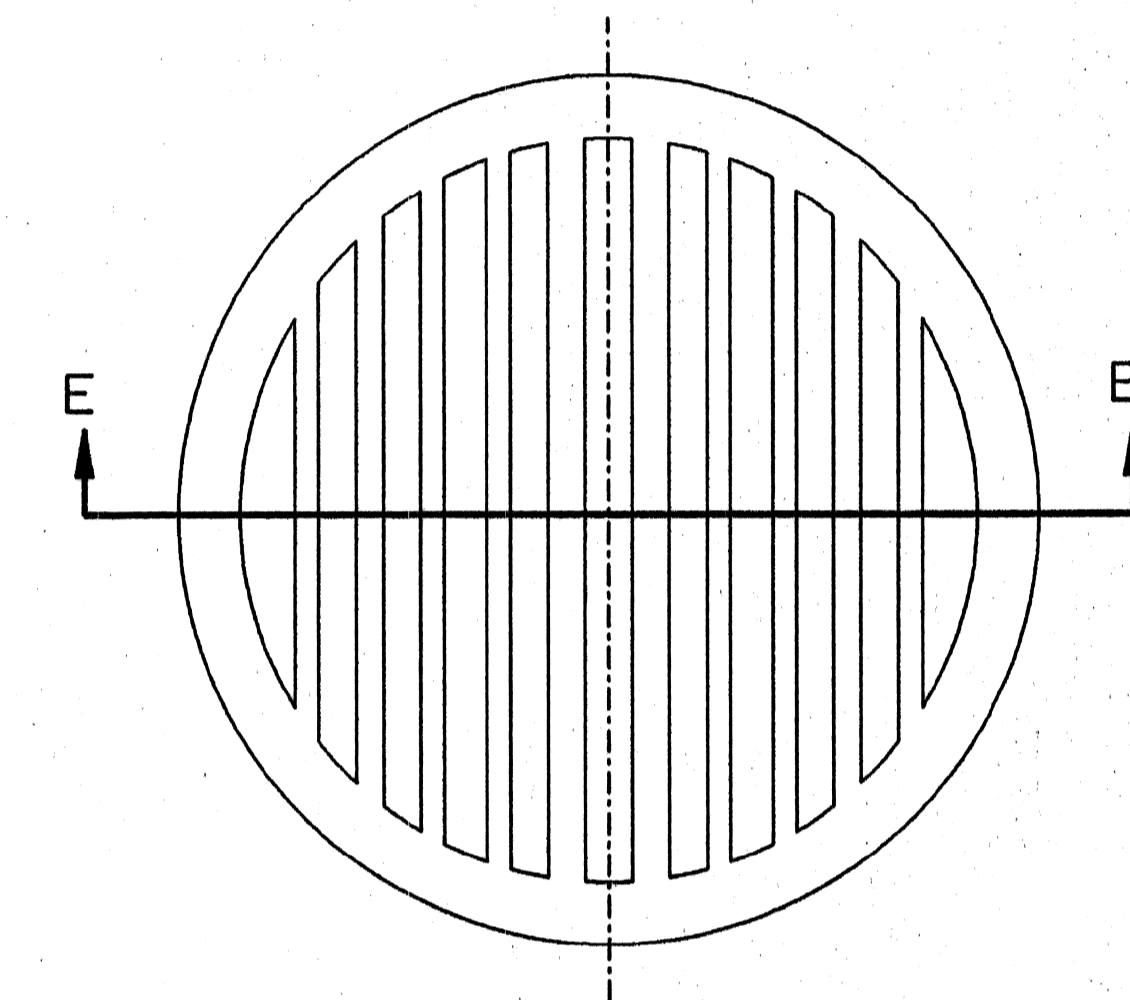


A.S.T.M. CLASS 20 OR 30 GREY IRON
P.L.C. PATT. NO.318-A
APPROX. WT-9*

SEWER RING
N.T.S.

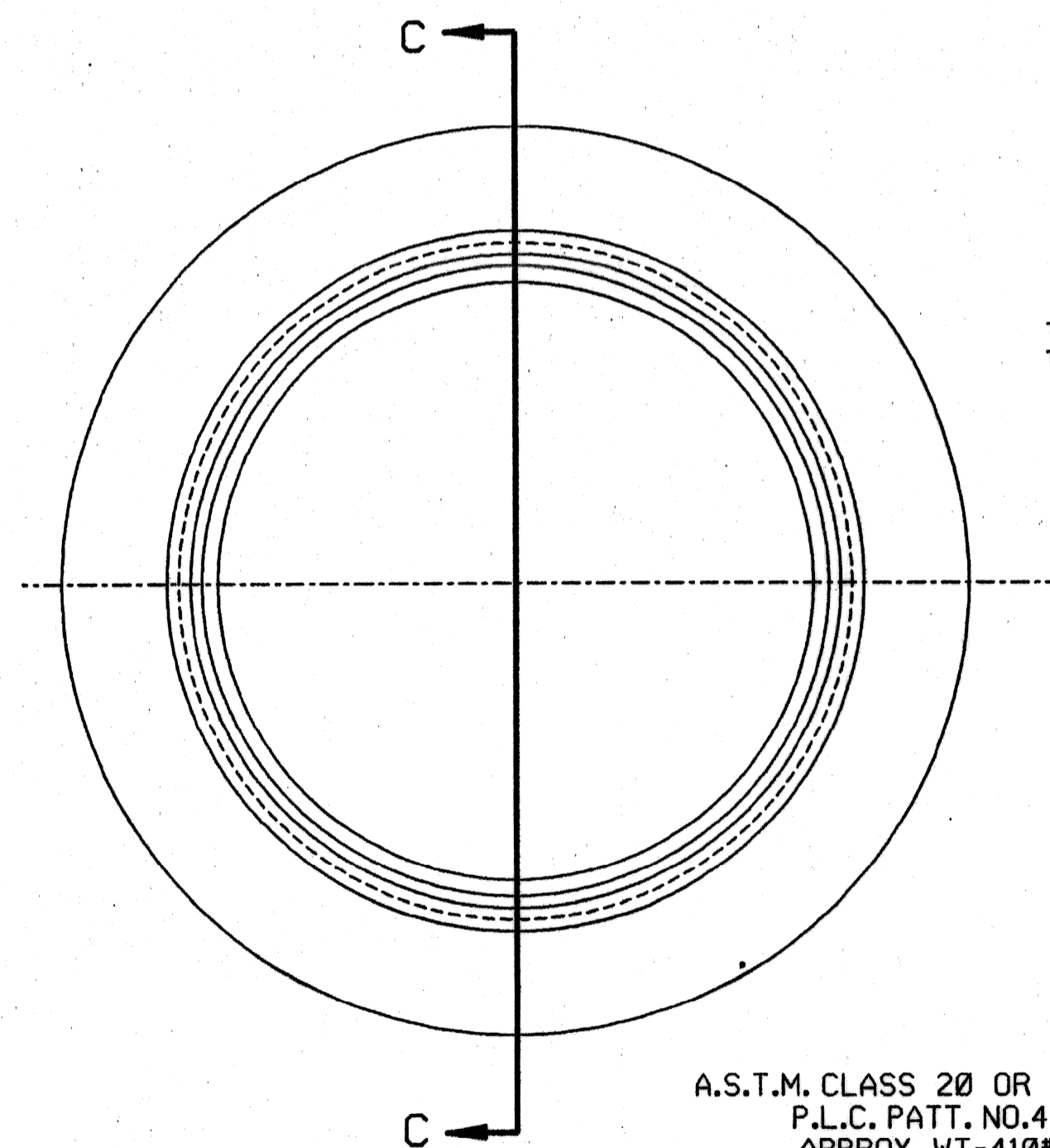


SECTION E-E
N.T.S.



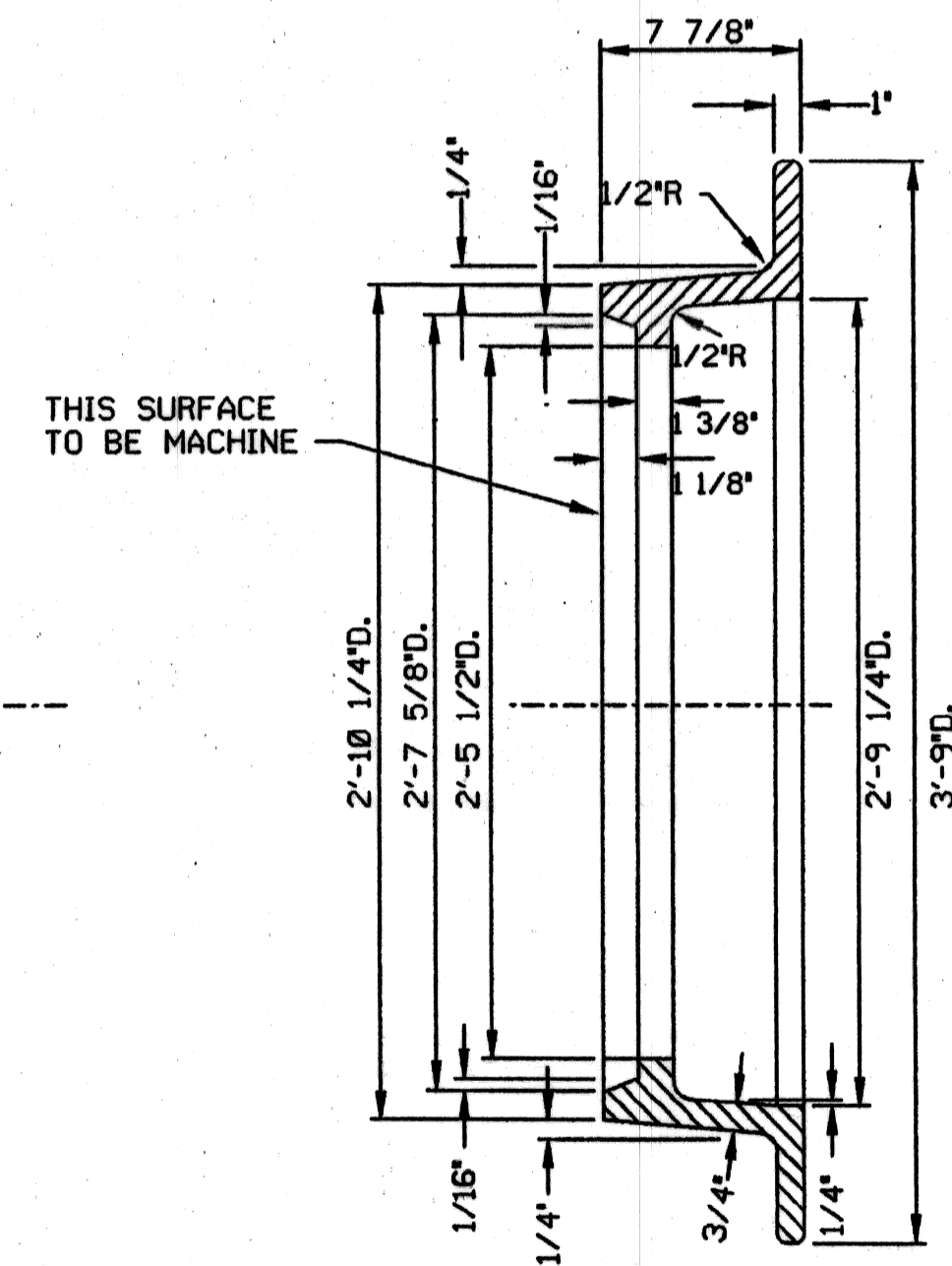
A.S.T.M. CLASS 20 OR 30 GREY IRON
P.L.C. PATT. NO.318
APPROX. WT-4.5*

SEWER GRATE
N.T.S.



A.S.T.M. CLASS 20 OR 30 GREY IRON
P.L.C. PATT. NO.417
APPROX. WT-410*

MANHOLE FRAME
N.T.S.



SECTION C-C
N.T.S.

10-01-96 108

Date	Description	Chkd. by

MANHOLE FRAMES &
COVERS - SEWER GRATE & RING

Drawn CEA
Checked
Approved
Date

Consulting Engineers, Inc.
16580 WYOMING AVE., DETROIT MICHIGAN 48221
TELEPHONE: (313) 341-8797 FAX: 341-0208

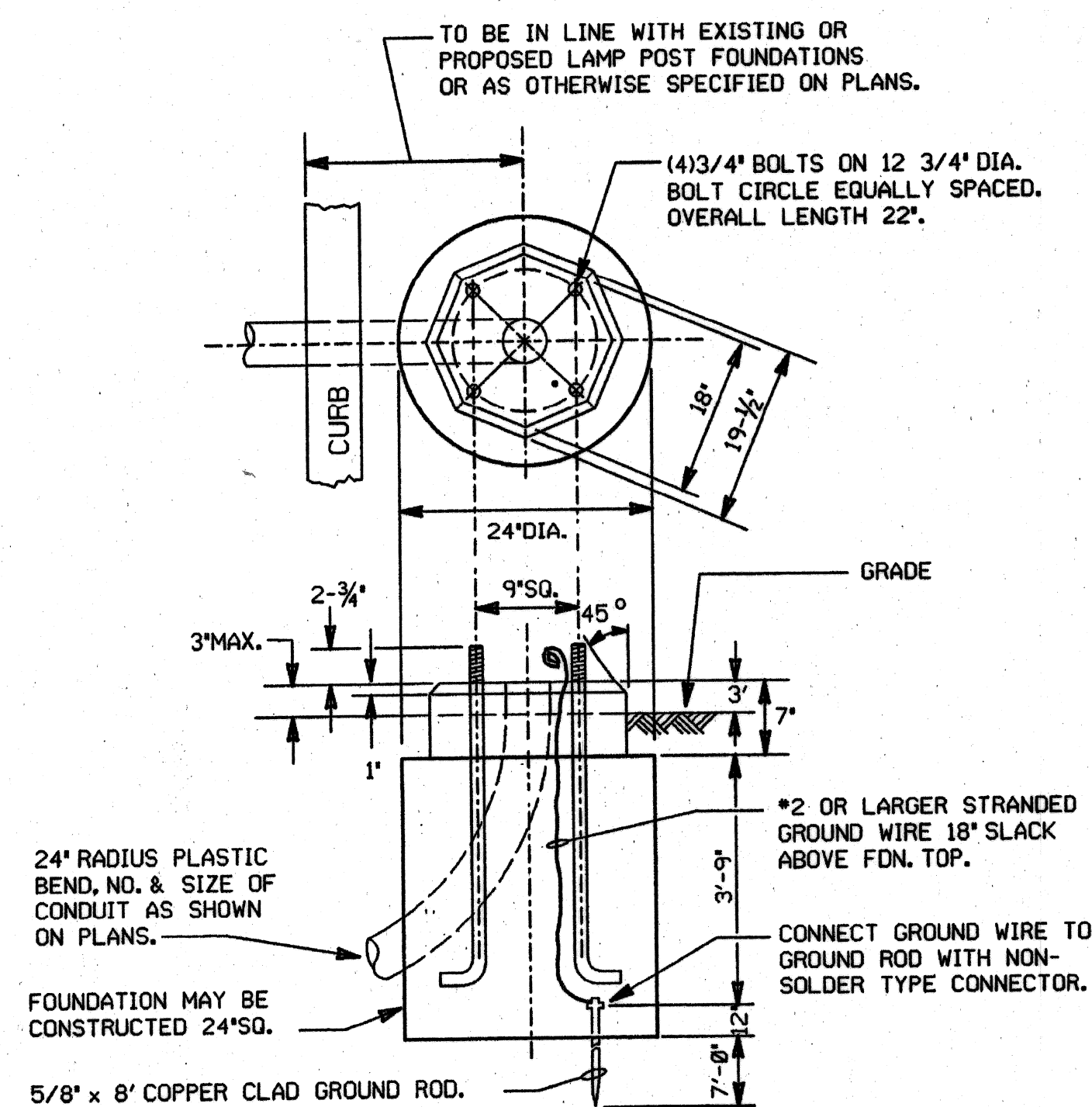
Drwg. No. OF CEA
File No.

Checked by
Approved by

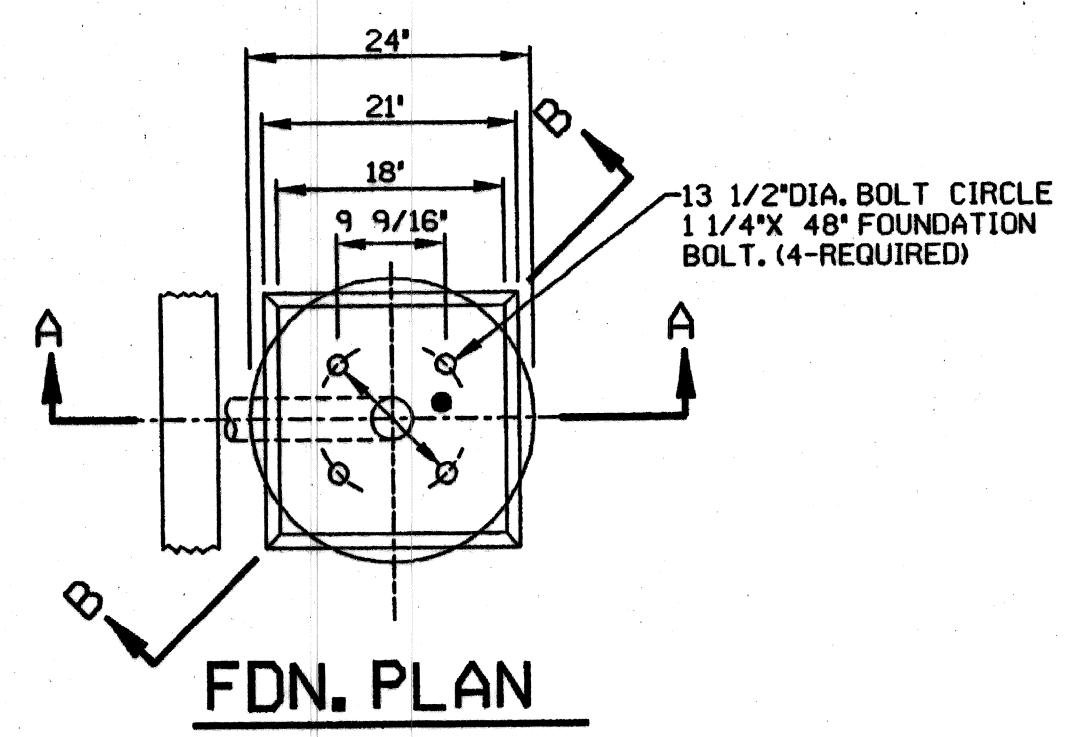
PUBLIC LIGHTING DEPARTMENT
CITY OF DETROIT

File No.
Sheet No. 34 of 48
Date

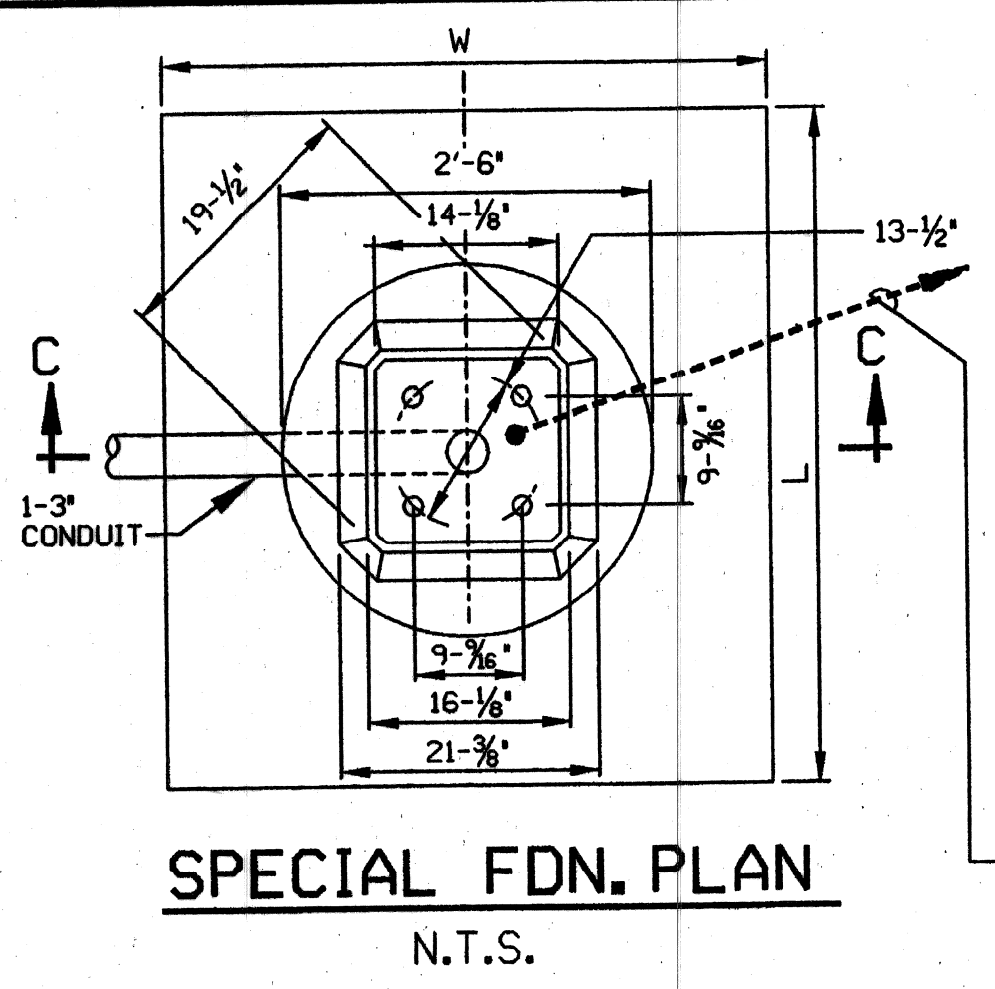
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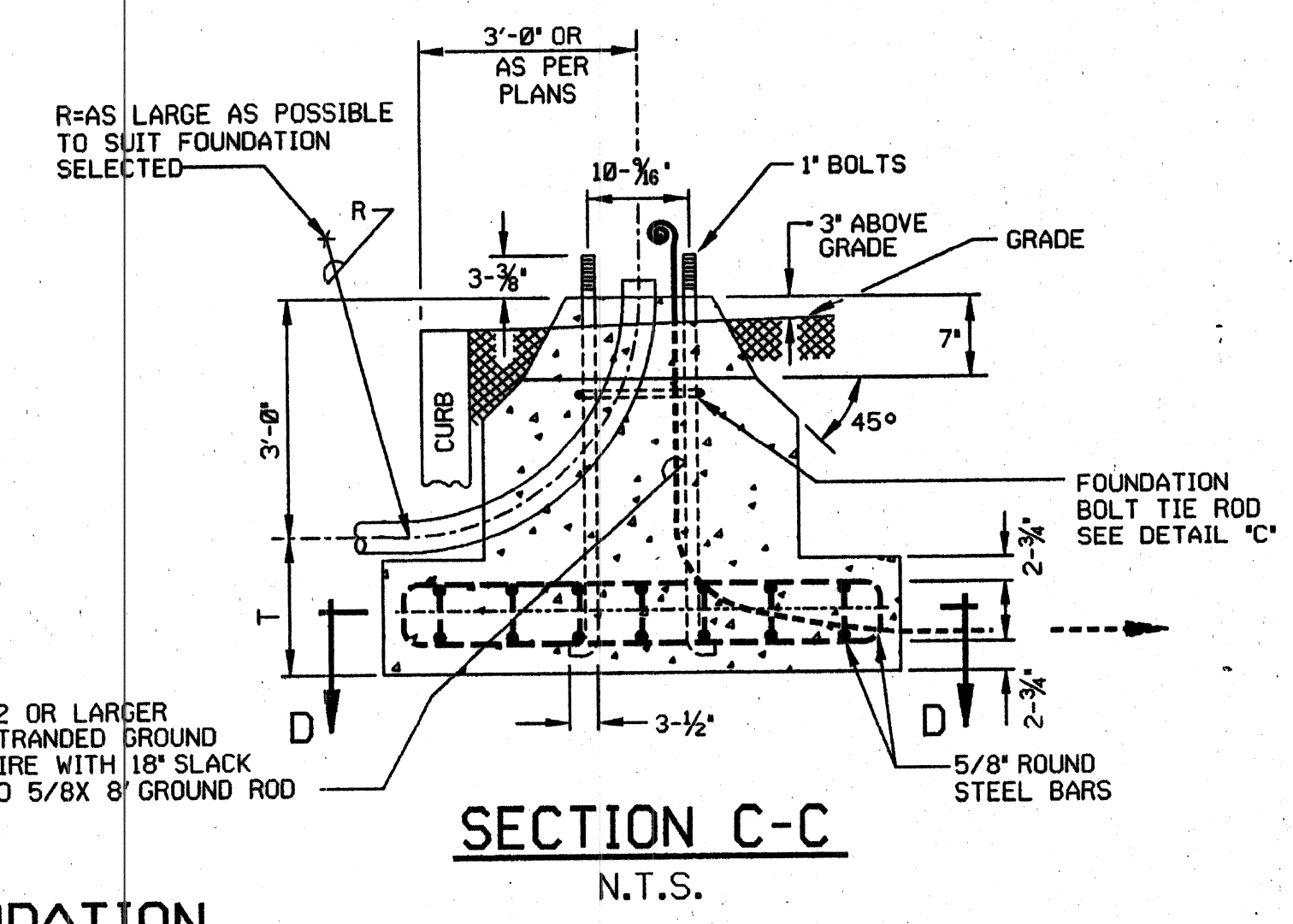
FDN. FOR OCTAGON BASE PEDESTAL FOR TRAFFIC SIGNALS OR CONTROLLER
N.T.S.



FDN. PLAN



SPECIAL FDN. PLAN
N.T.S.

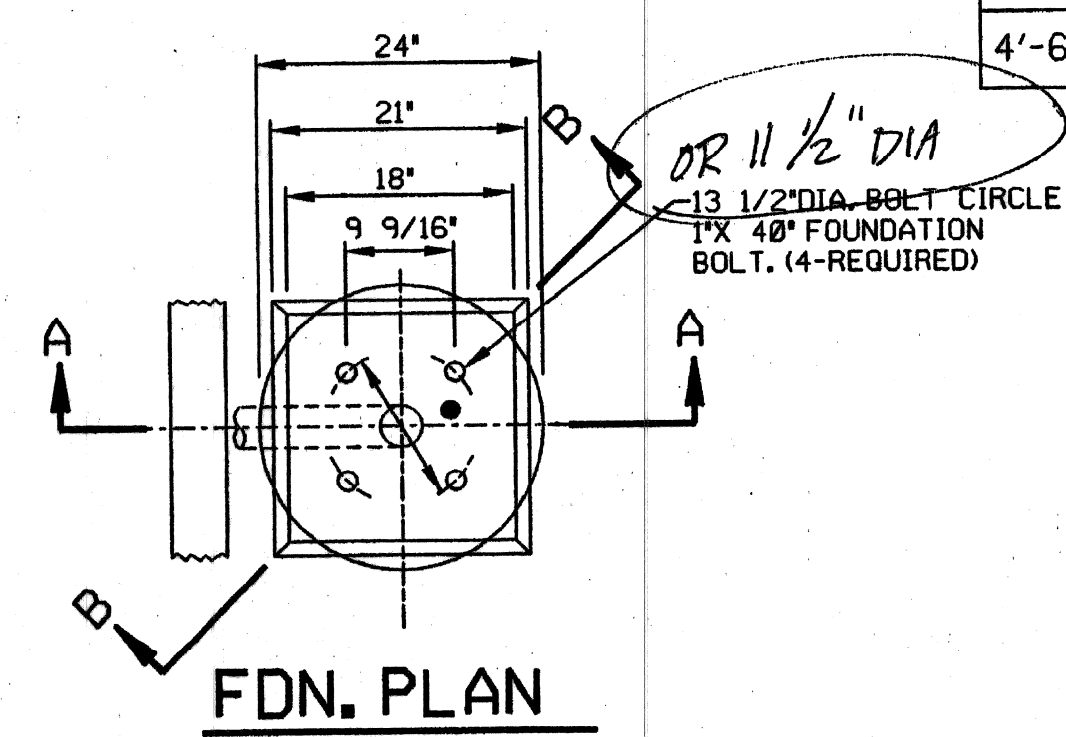


SECTION C-C
N.T.S.

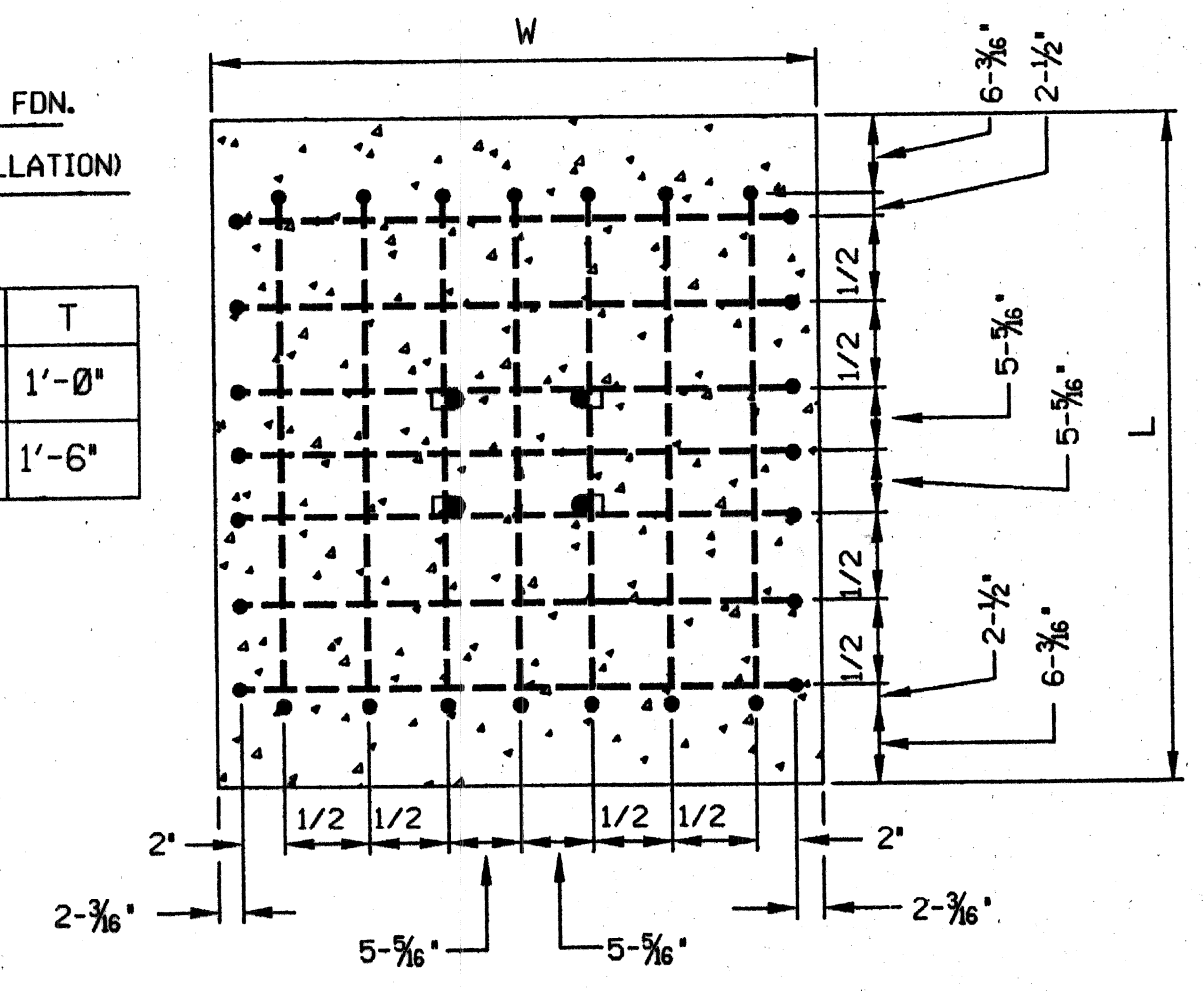
SPECIAL FOUNDATION

THERE SHALL BE NO EXTRA PAYMENT FOR SPECIAL FDN.
(TO BE PAID FOR AS A NORMAL ST. LTG. STD. FDN. INSTALLATION)

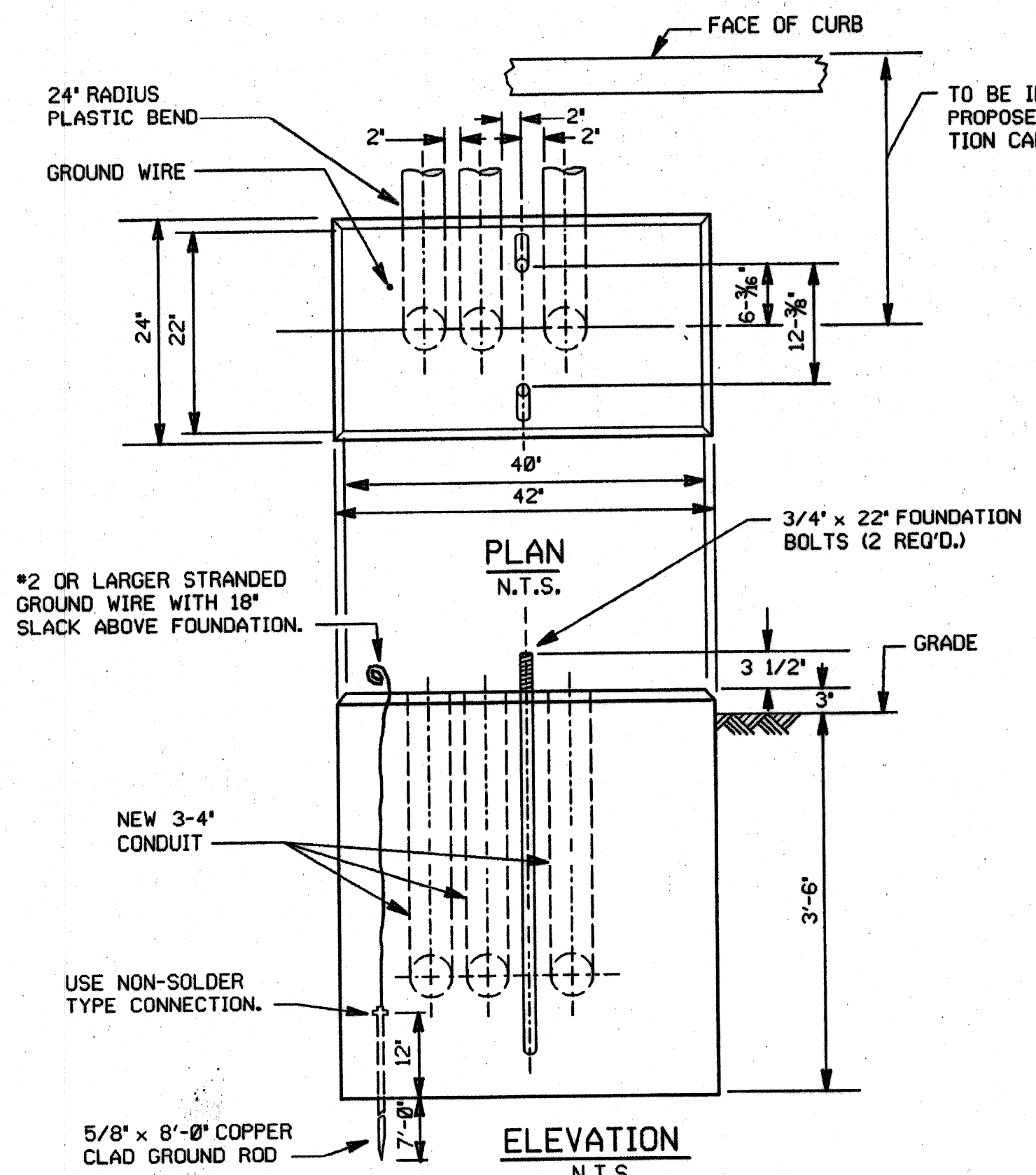
L	W	T
5'-0"	4'-3"	1'-0"
4'-6"	3'-6"	1'-6"



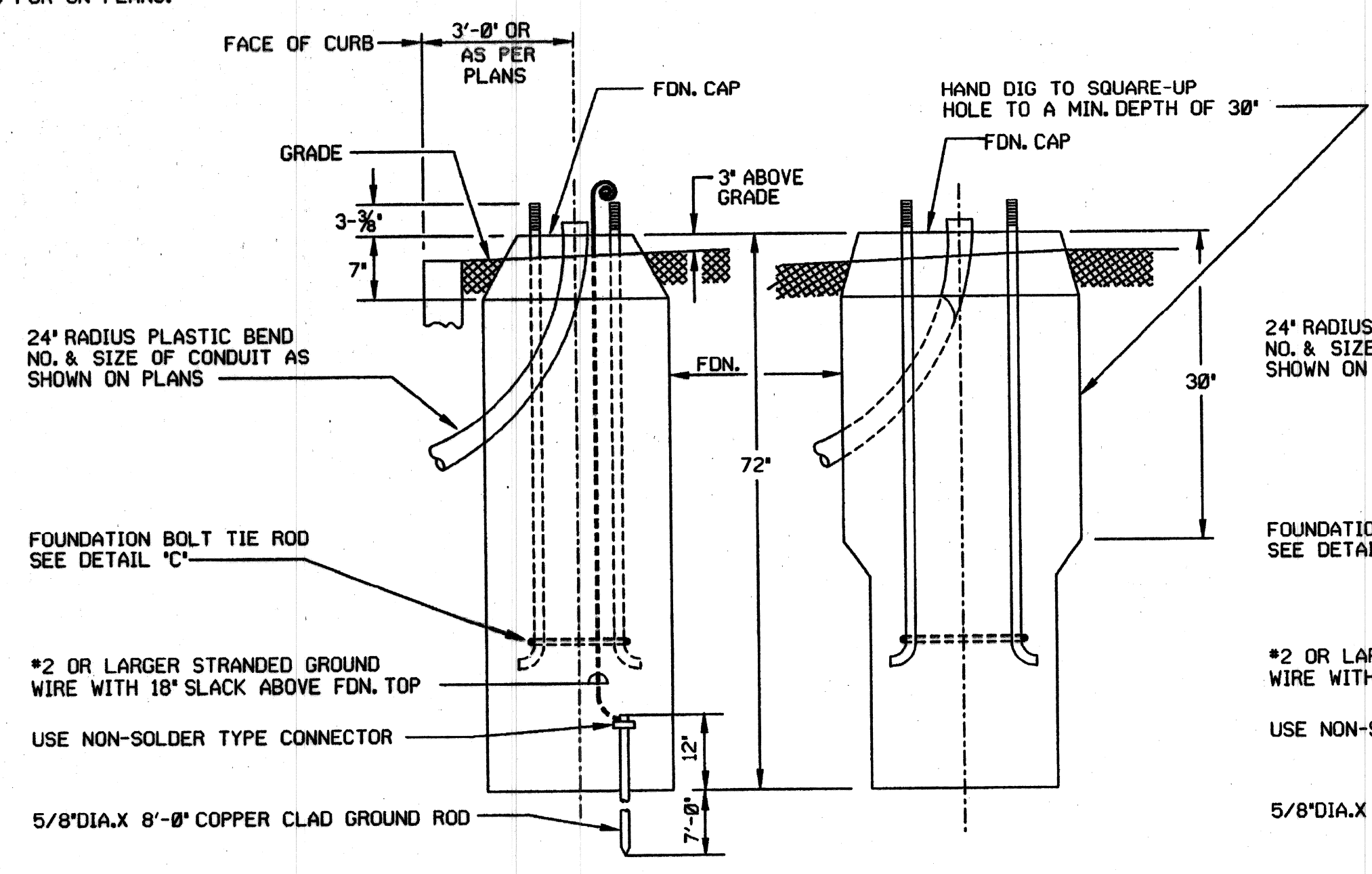
FDN. PLAN



SECTION D-D
N.T.S.

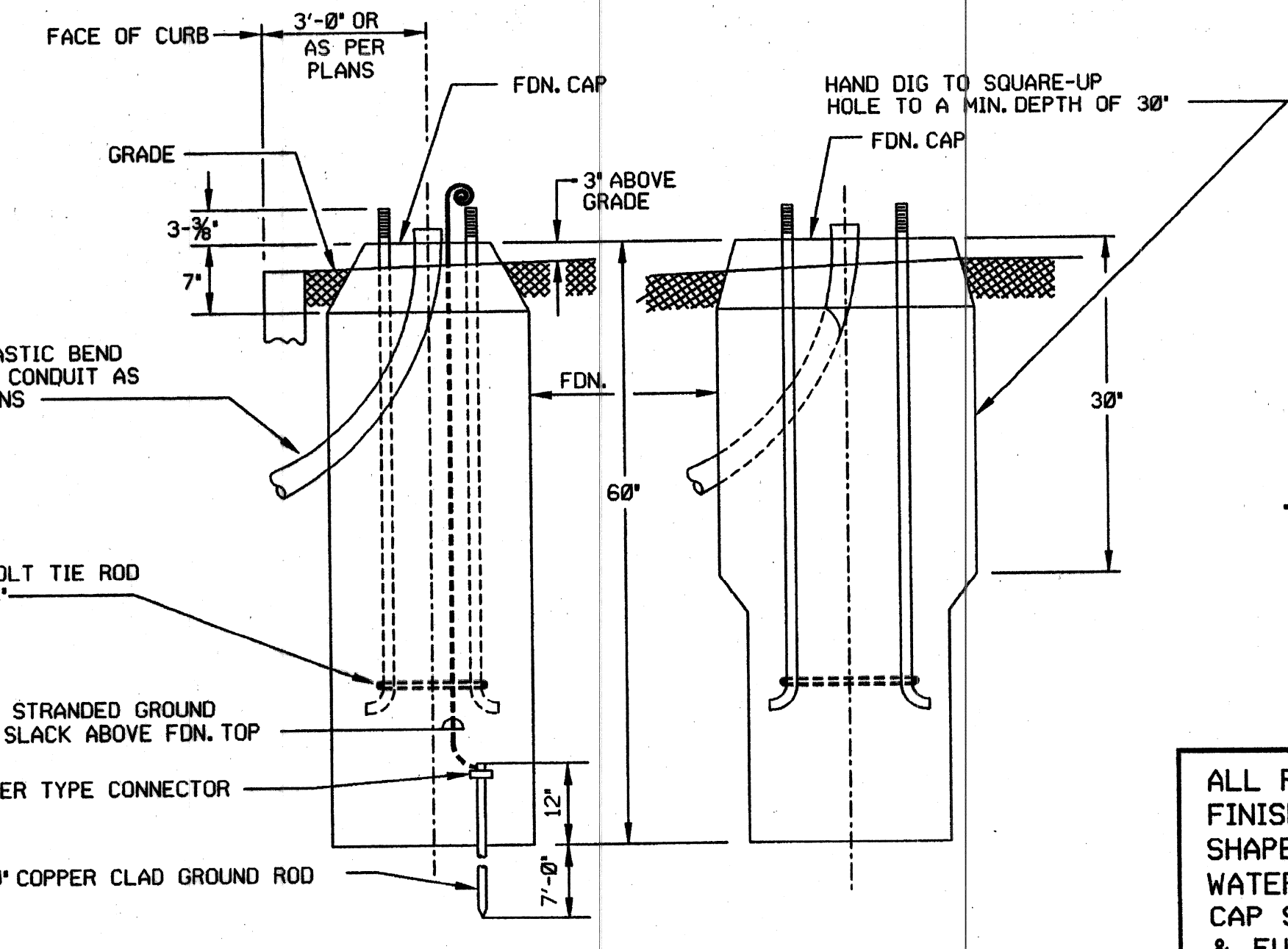


FOUNDATION FOR BASE MOUNTED T.S. CONTROLLER & CABINET (M-36)
N.T.S.



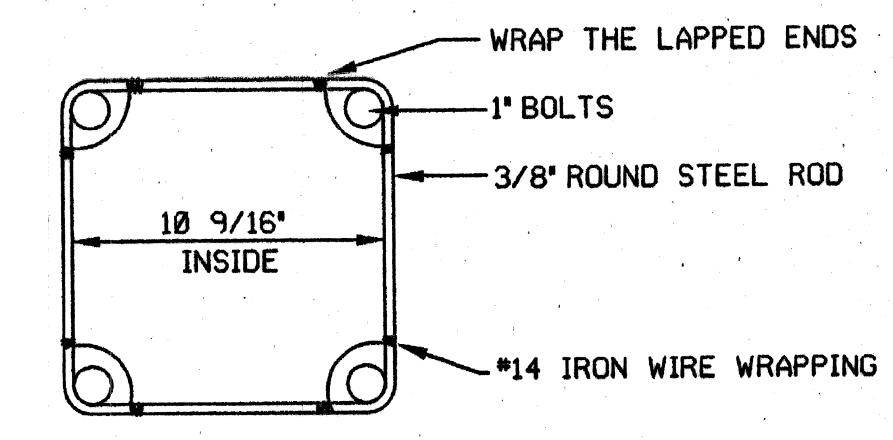
SECTION A-A N.T.S. **SECTION B-B** N.T.S.

ANCHOR BASE STD. FOUNDATION
CODE 118-06,119-06,117-10-10



SECTION A-A N.T.S. **SECTION B-B** N.T.S.

ANCHOR BASE STD. FOUNDATION
CODE 009-00,010-06,116-02



DETAIL 'C'
FDN. BOLT TIE ROD
N.T.S.

ALL FOUNDATION CAPS SHALL HAVE A SMOOTH FINISH WITH BEVELED EDGES & SHALL BE SHAPED TO ALLOW COMPLETE DRAINAGE OF WATER. ANCHOR BOLT PROJECTIONS ABOVE CAP SHALL BE CLEANED OF ALL CONCRETE & FULLY USABLE THEIR FULL LENGTH.

DISK FILE

Date	Description	Chkd. by

FOUNDATIONS

Drawn CEA
Checked
Approved
Date

Consulting Engineering Associates, Inc.
16580 WYOMING AVE. DETROIT MICHIGAN 48221
TELEPHONE: (313) 341-8797 FAX: 341-0205

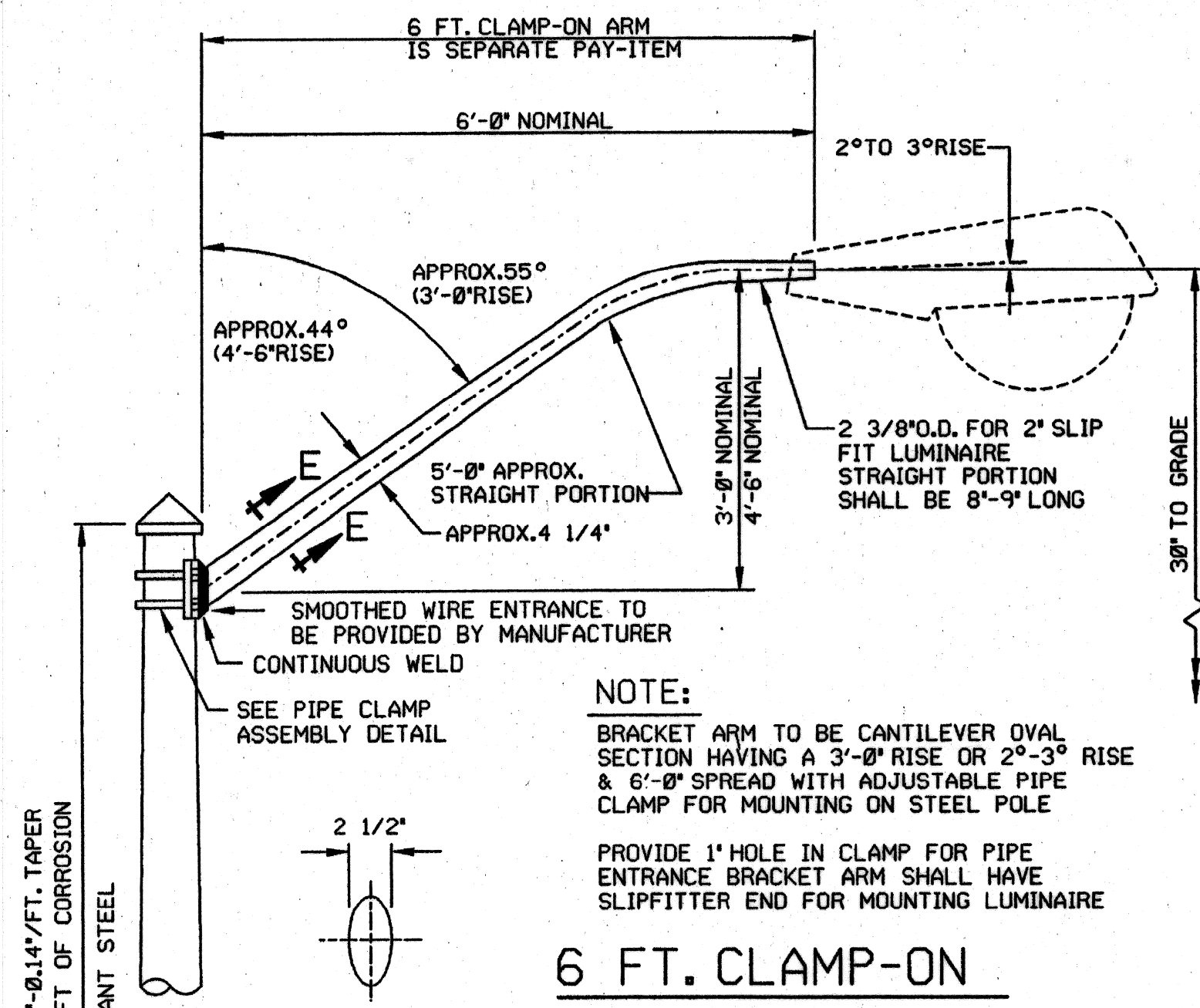
Drwg. No. OF CEA
File No.

Checked by
Approved by

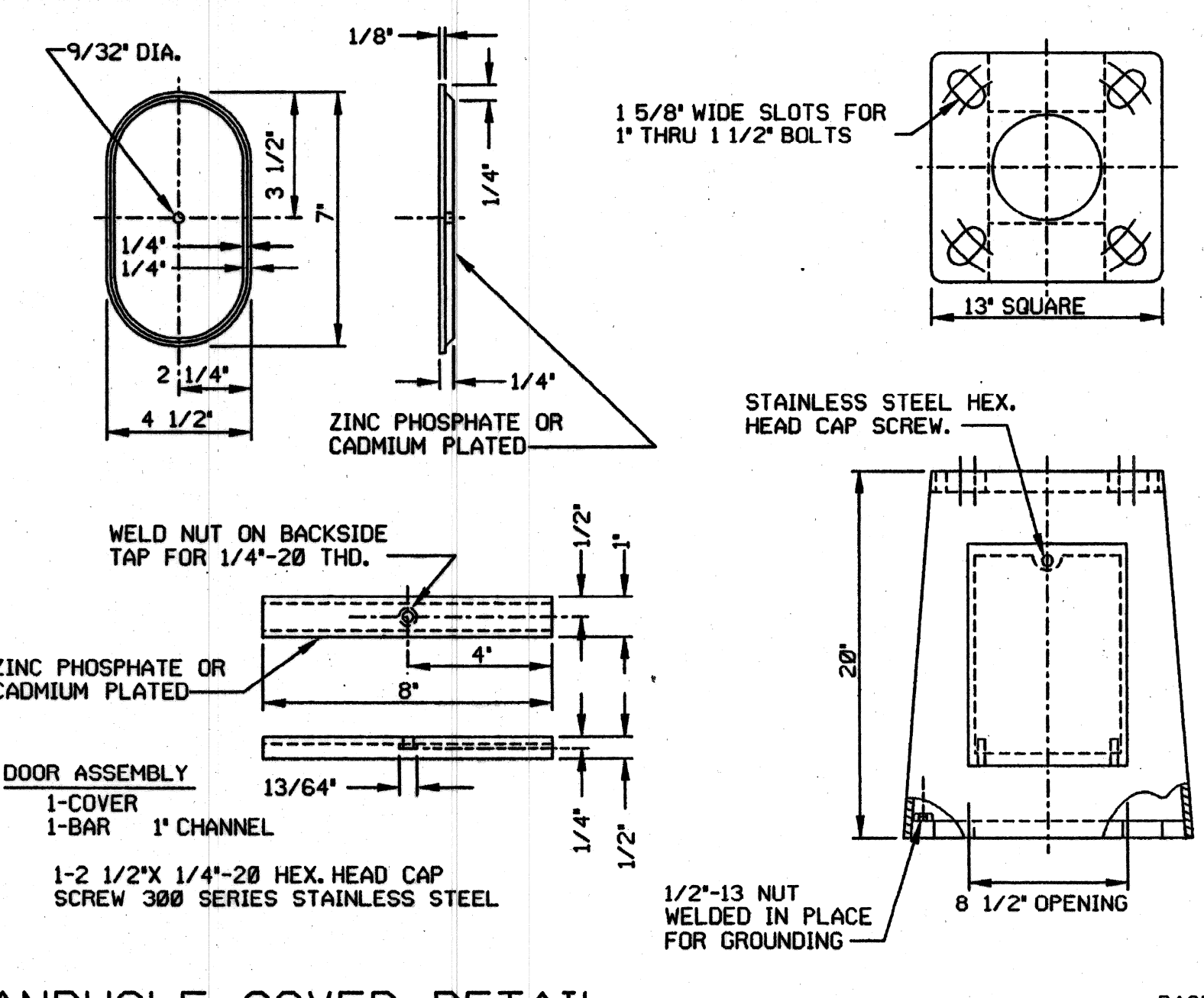
PUBLIC LIGHTING DEPARTMENT
CITY OF DETROIT

File No. 109
Sheet No. 35 of 48
Date

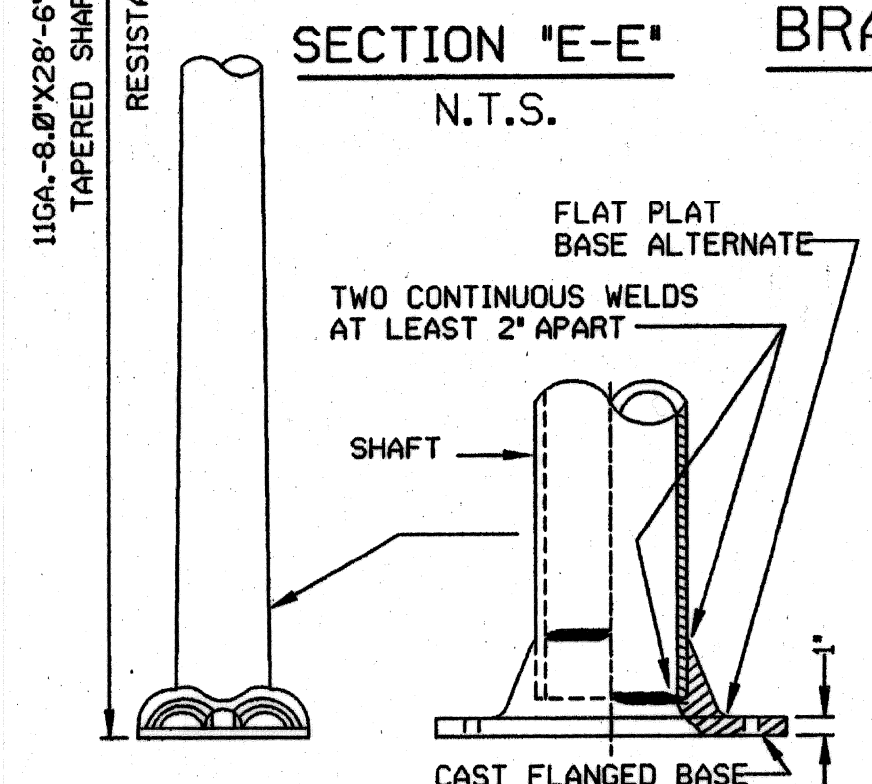
10-01-96 109



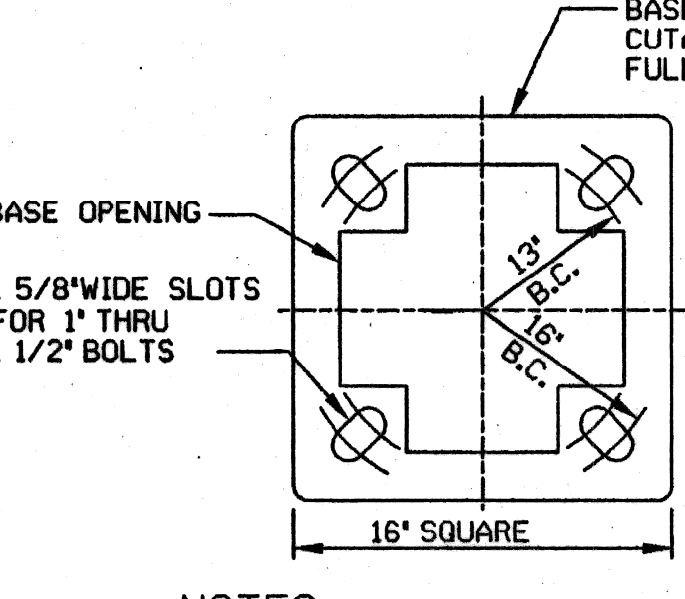
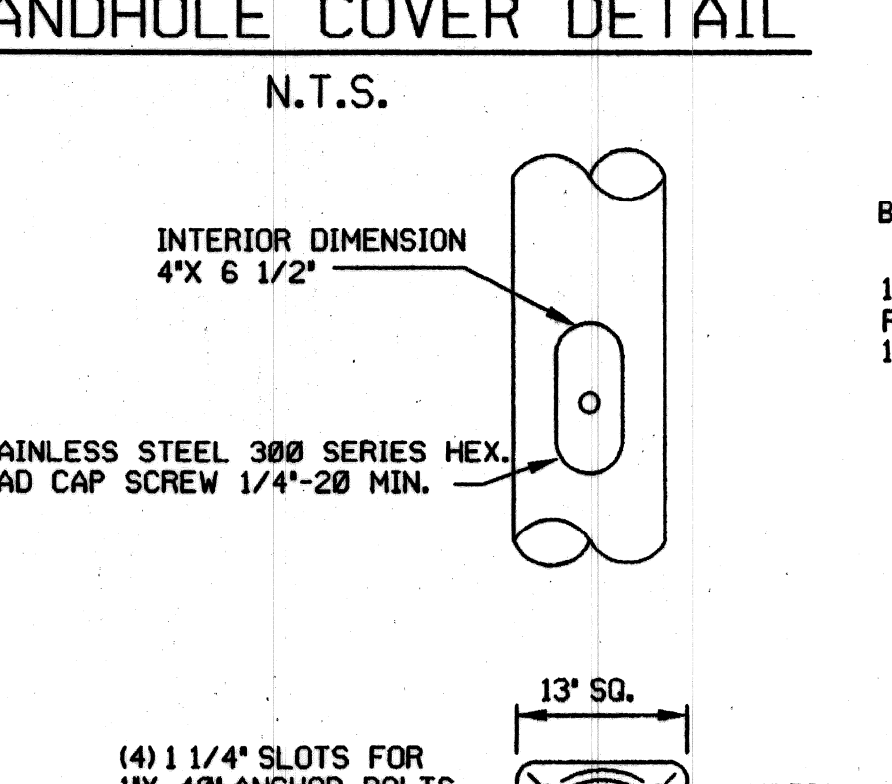
6 FT. CLAMP-ON BRACKET ARM
N.T.S.



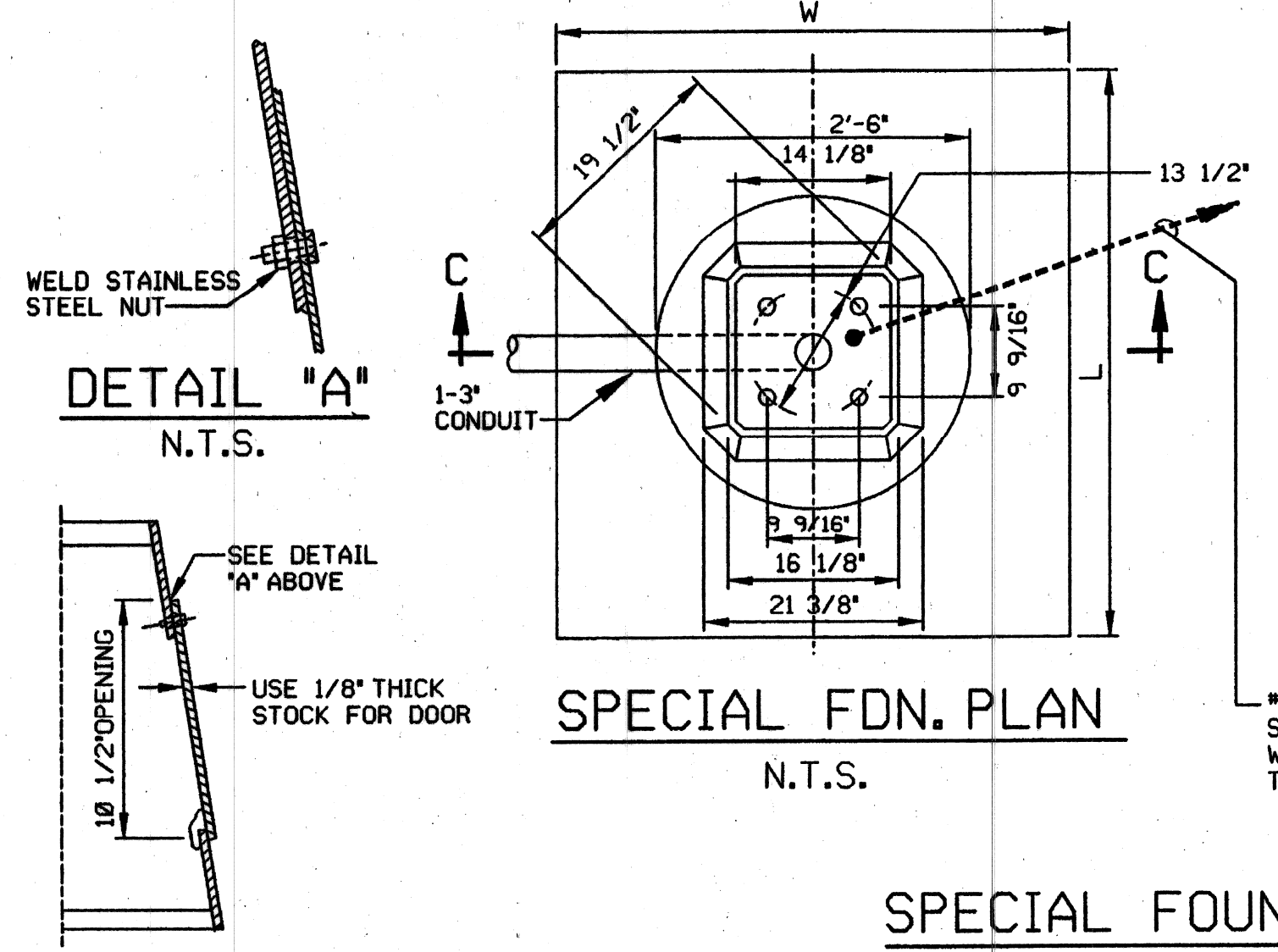
HANDHOLE COVER DETAIL
N.T.S.



SHAFT MODIFICATION
N.T.S.



P.L.D. UNIVERSAL STEEL TRANSFORMER BASE
N.T.S.

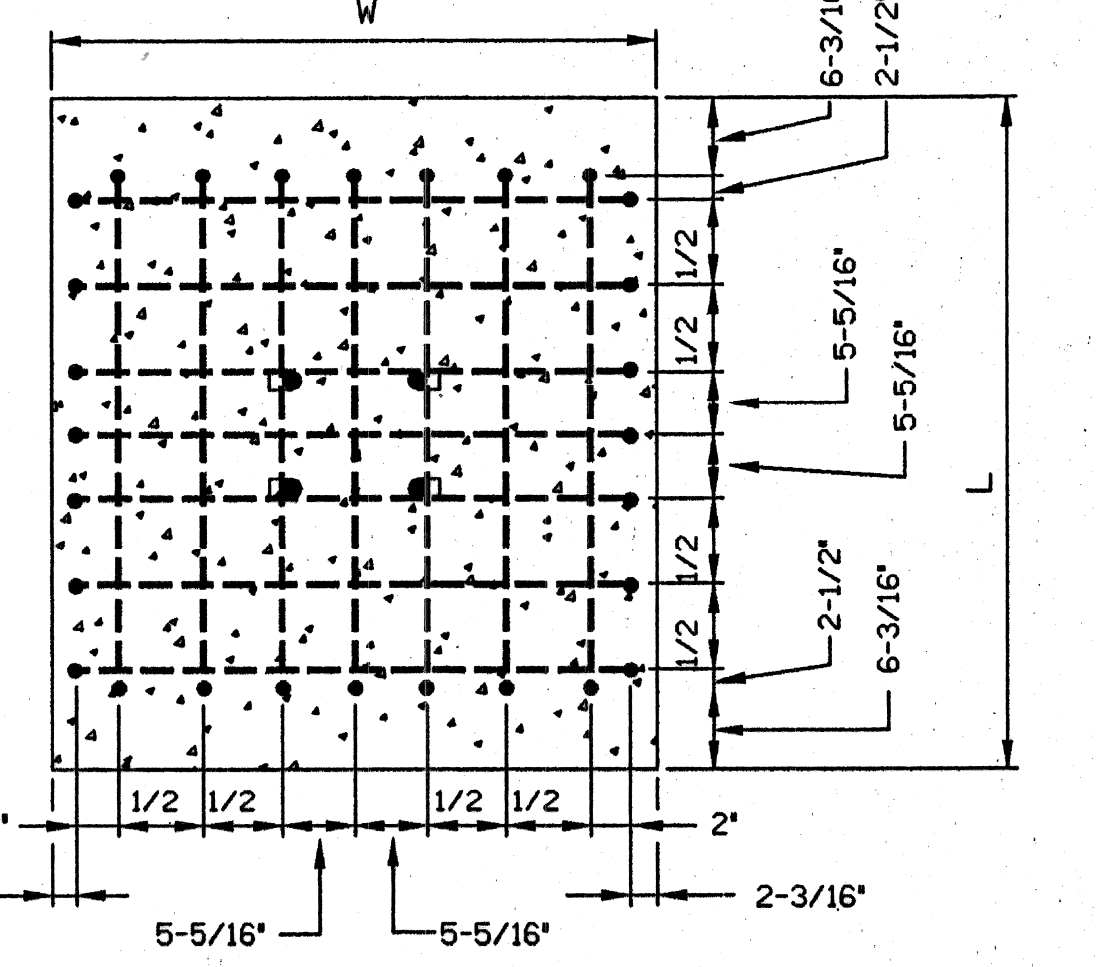


SPECIAL FDN. PLAN
N.T.S.

SPECIAL FOUNDATION

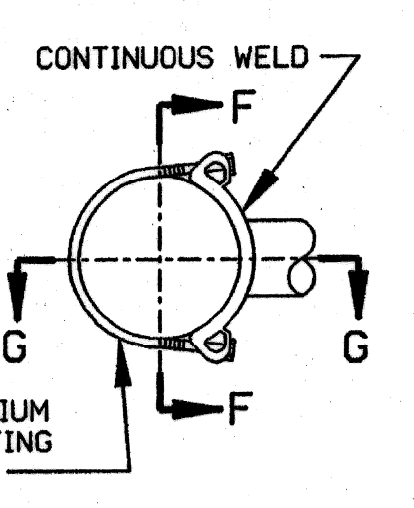
THERE SHALL BE NO EXTRA PAYMENT FOR SPECIAL FDN. (TO BE PAID FOR AS A NORMAL ST. LTG. STD. FDN. INSTALLATION)

L	W	T
5'-0"	4'-3"	1'-0"
4'-6"	3'-6"	1'-6"



SECTION D-D
N.T.S.

CODE 009-00
STREET LIGHTING STANDARD
N.T.S.



SECTION "G-G"

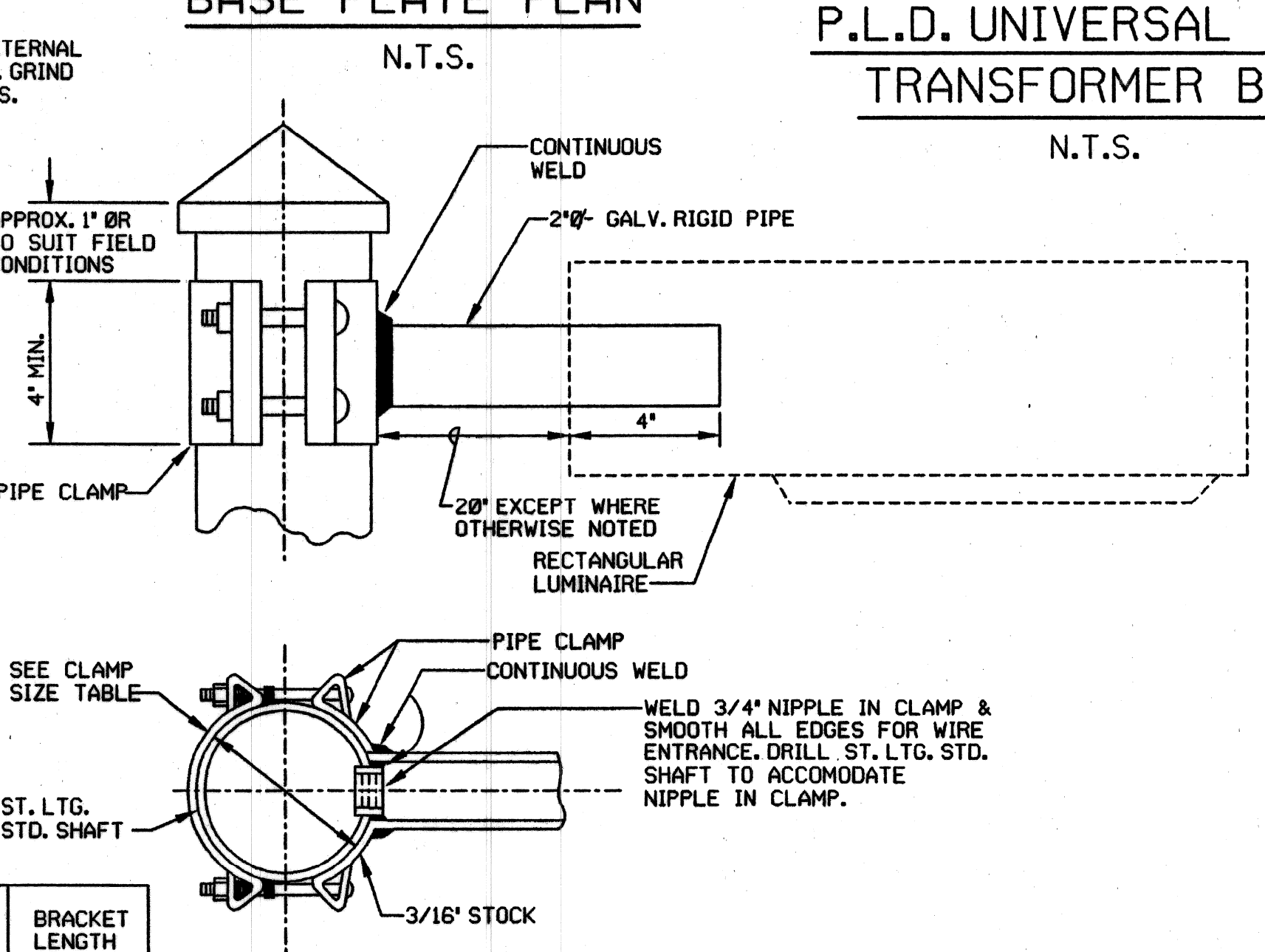
TYPE	POLE DIAMETER
A	3.6"-4.5"
B	6.1"-6.9"
C	7.5"-8.5"

CLAMP SIZE TABLE

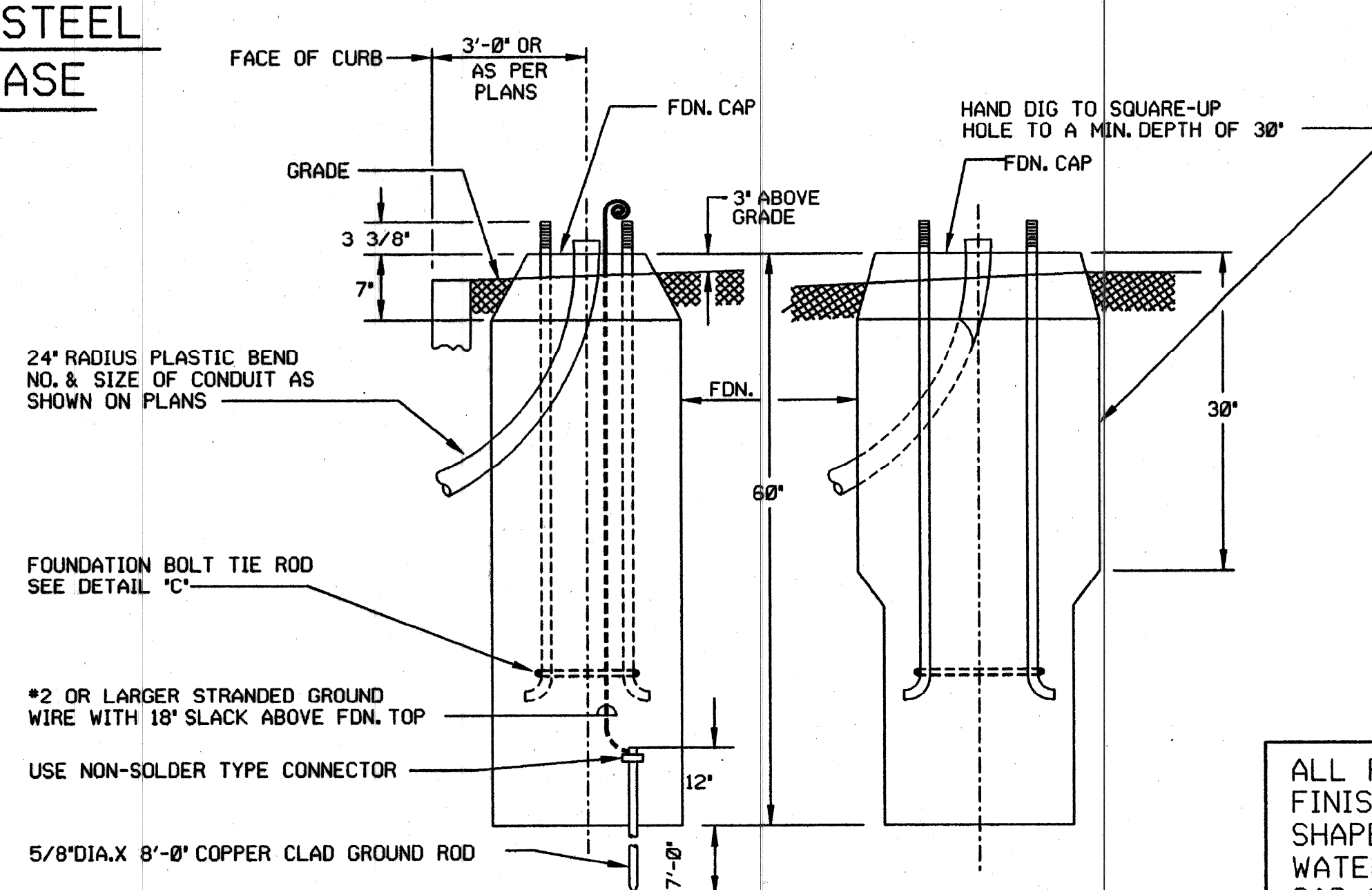
SECTION "F-F"

PIPE CLAMP DETAILS
N.T.S.

NOTE:
ENTIRE BRACKET ASSEMBLY, EXCEPT MOUNTING HARDWARE, TO BE HOT DIP GALVANIZED



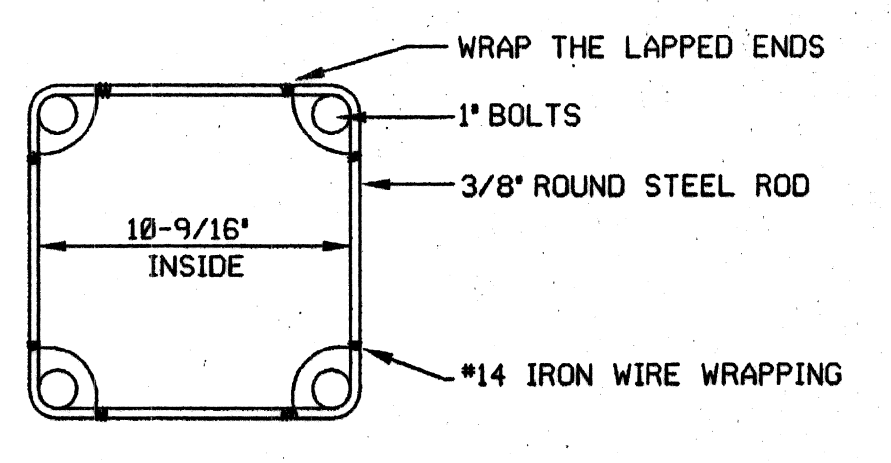
CLAMP-ON BRACKET & RECTANGULAR LUMINAIRE
N.T.S.



SECTION A-A
N.T.S.

SECTION B-B
N.T.S.

ANCHOR BASE STD. FOUNDATION



DETAIL "C"

FDN. BOLT TIE ROD
N.T.S.

ALL FOUNDATION CAPS SHALL HAVE A SMOOTH FINISH WITH BEVELED EDGES & SHALL BE SHAPED TO ALLOW COMPLETE DRAINAGE OF WATER. ANCHOR BOLT PROJECTIONS ABOVE CAP SHALL BE CLEANED OF ALL CONCRETE & FULLY USABLE THEIR FULL LENGTH.

REVISIONS

Date	Description	Chkd. by

ANCHOR BASE ST. LTG. STD. (CODE 009-00)

Drawn **CEA**
Checked
Approved
Date

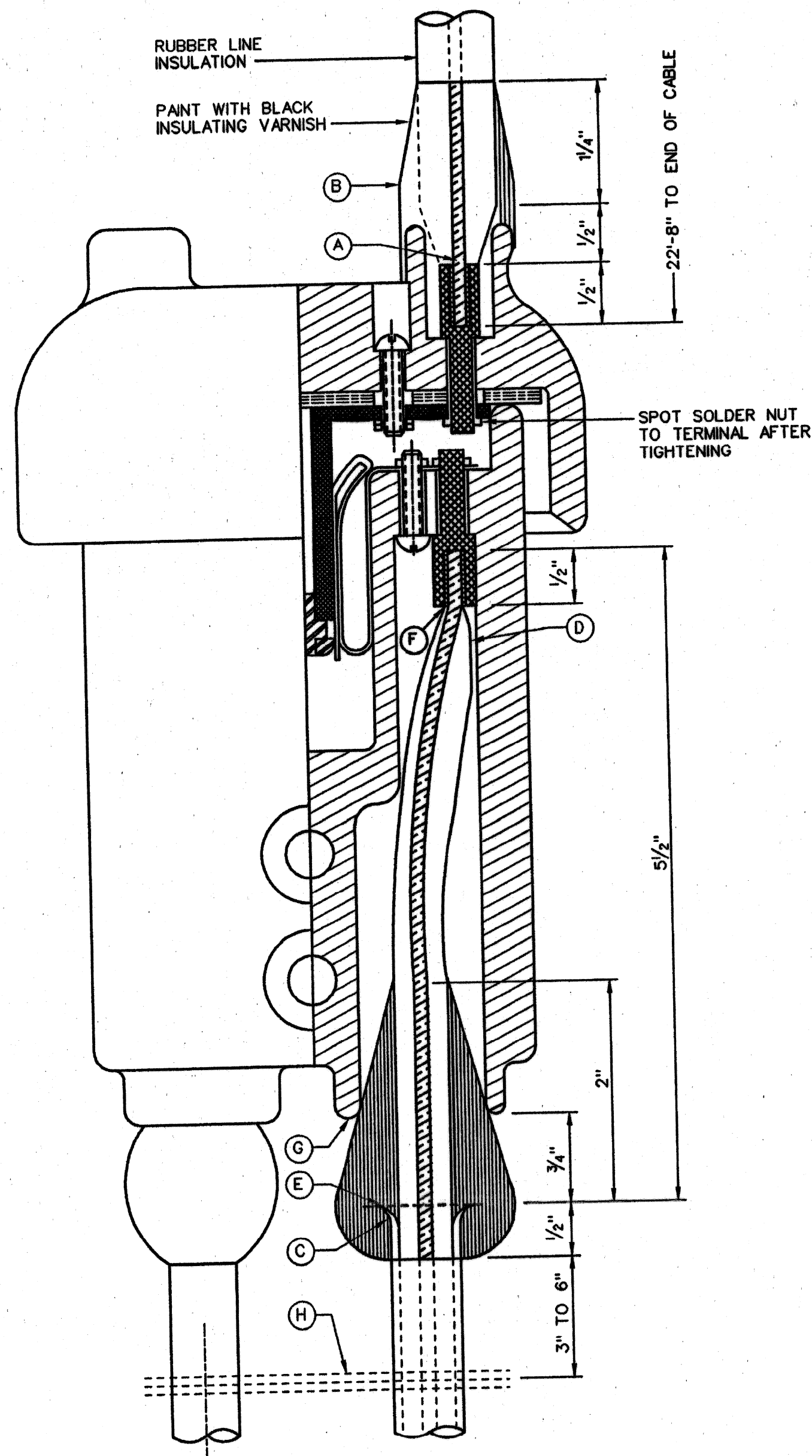
Consulting Engineering, Inc.
1550 WYOMING AVE. DETROIT MICHIGAN 48221
TELEPHONE: (313) 341-6797 FAX: 341-0205

Drwg. No. **CEA**
File No.

Checked by
Approved by

PUBLIC LIGHTING DEPARTMENT
CITY OF DETROIT

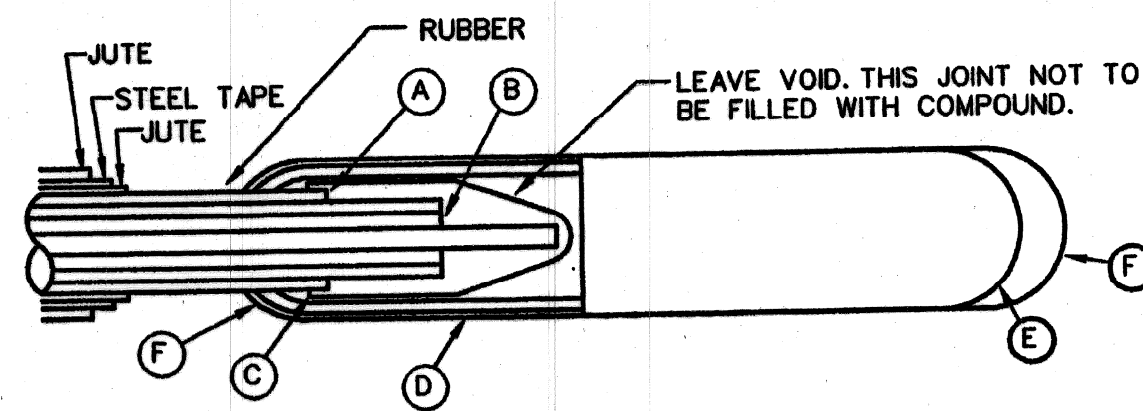
File No.
Sheet No. **37 of 48**
Date



CONNECTION FOR SERIES CUTOUT
N.T.S.

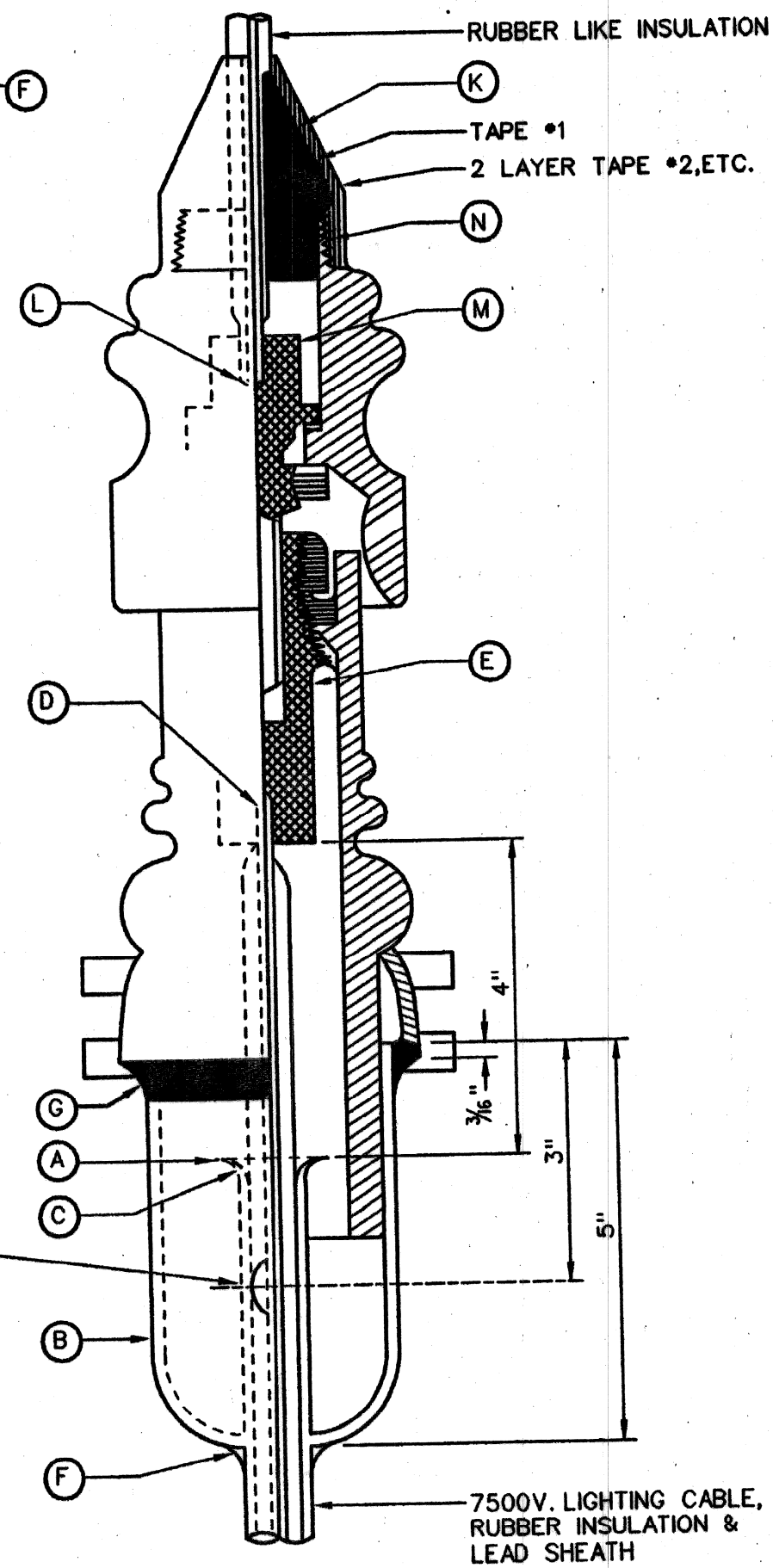
- A - SWEAT TERMINAL & PENCIL RUBBER INSULATION TO FIT SNUGLY IN PORCELAIN CAP OPENING SO THAT THE CONNECTOR NUT IS TIGHTENED, THE OPENING IS COMPLETELY & TIGHTLY FILLED.
- B - BUILD UP WITH #1 TAPE AS SHOWN, & COVER WITH 2 LAYERS, HALF LAP, WITH #2 TAPE. PAINT WITH ONE COAT OF BLACK INSULATING VARNISH.
- C - USE TUBE CUTTER TO SCORE LEAD SHEATH & CHIP OFF WITH CHIPPING IRON. DO NOT BREAK OFF BY BENDING.
- D - CUT INSULATION & PENCIL SMOOTHLY FOR CONNECTION.
- E - BELL LEAD SHEATH. REMOVE TAPE COMPLETELY, INCLUDING AS MUCH AS CAN BE REMOVED INSIDE OF BELL. FILL SHEATH CAVITY WITH RUBBER CEMENT.
- F - SWEAT CONDUCTOR INTO TERMINAL.
- G - APPLY TAPE #1 OVER BELL AS SHOWN TO FORM A TIGHT FIT BETWEEN INSULATION AND PORCELAIN AT "C" WHEN NUT IS TIGHTENED. COVER TAPE #1 WITH 2 LAYERS OF TAPE #2 APPROX. 3/4" FROM END OF TAPE #1.
- H - #18 SERVICE WIRE OR BRAID 4 WRAPS BETWEEN CABLES & SWEATED TO LEAD SHEATH FOR BOND TIE TO GROUND WIRE.

NOTE:
1. FOR PARKWAY CABLE, STRIP JUTE & STEEL TAPE DOWNWARD TO DUCT ENTRANCE.
2. THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER FOR APPROVAL A LIST OF ALL SPLICING MATERIALS HE PROPOSES TO USE WITH SUPPORTING DATA THAT THE MATERIAL IS SUITABLE FOR THE APPLICATION AS SHOWN ON THE DRAWINGS.



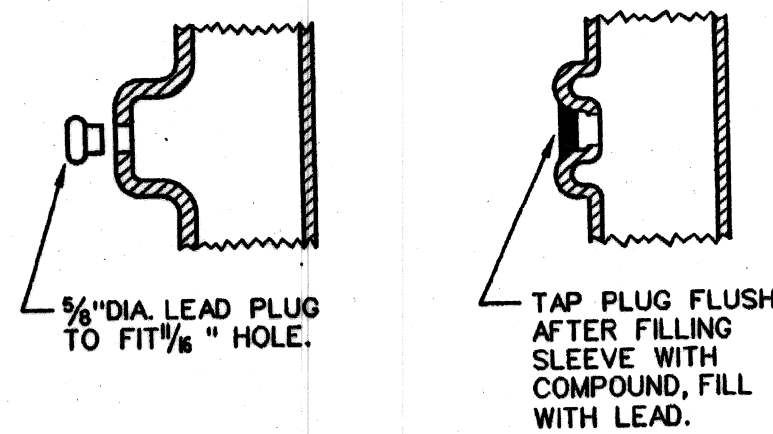
#8 LIGHTING CABLE DEAD END CAP

- A - SCORE LEAD SHEATH WITH TUBE CUTTER & CHIP OFF WITH CHIPPING IRON. DO NOT BREAK OFF BY BENDING.
- B - CUT INSULATION TO EXPOSE 1" BARE COPPER.
- C - OVERLAP WITH TAPE #2 APPROXIMATELY 1/4" FROM END OF LEAD SHEATH, AT LEAST 2 LAYERS OF TAPE AT THIS POINT.
- D - 1 1/4" X 8" X 1/8" LEAD SLEEVE.
- E - SHAPE AND BEAT LEAD SLEEVE TO FORM A CLOSED END.
- F - CADMIUM ALLOY WIPING METAL. DO NOT POUR METAL FOR WIPE. USE TORCH AND FINGER WIPE MINIMUM OF HEAT.



#8 LIGHTING CABLE JOINT
N.T.S.

- A - 1/2" #8 TINNED COPPER SLEEVE, 2 CIRCUMFERENTIAL CRIMPS ON EACH END.
- B - SCORE LEAD SHEATH WITH TUBE CUTTER & CHIP OFF WITH CHIPPING IRON. DO NOT BREAK OFF BY BENDING.
- C - CUT INSULATION & PENCIL SMOOTHLY AS SHOWN, AFTER REMOVING TAPE.
- D - APPLY TAPE #1 APPROXIMATELY 1" DIAMETER OVERALL.
- E - OVERLAP WITH TAPE #1 APPROXIMATELY 1/4" FROM END OF LEAD SHEATH, AT LEAST 2 LAYERS OF TAPE AT THIS POINT.
- F - TWO LAYERS OF TAPE #2 APPLIED HALF LAP.
- G - 1/2" X 8" X 1/8" LEAD SLEEVE.
- H - TWO LAYERS OF TAPE #2 HALF LAP, ON ARMORED PARKWAY CABLE ONLY.

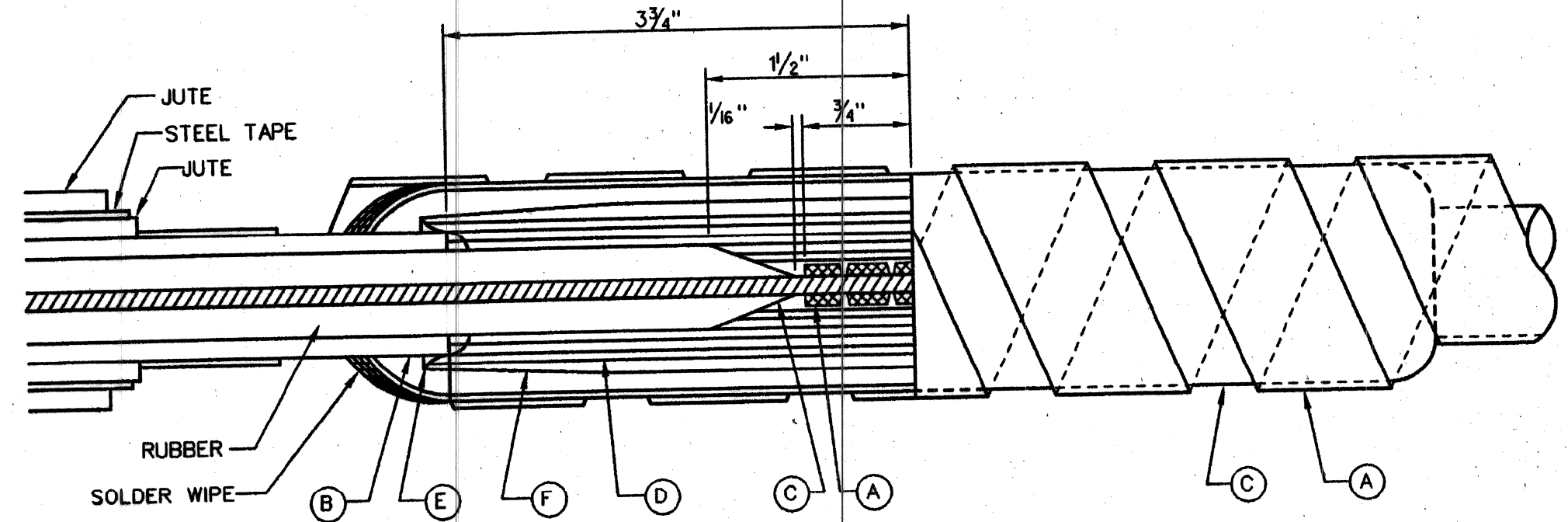


CONNECTIONS FOR 1/C 7500V. POTHEAD
N.T.S.

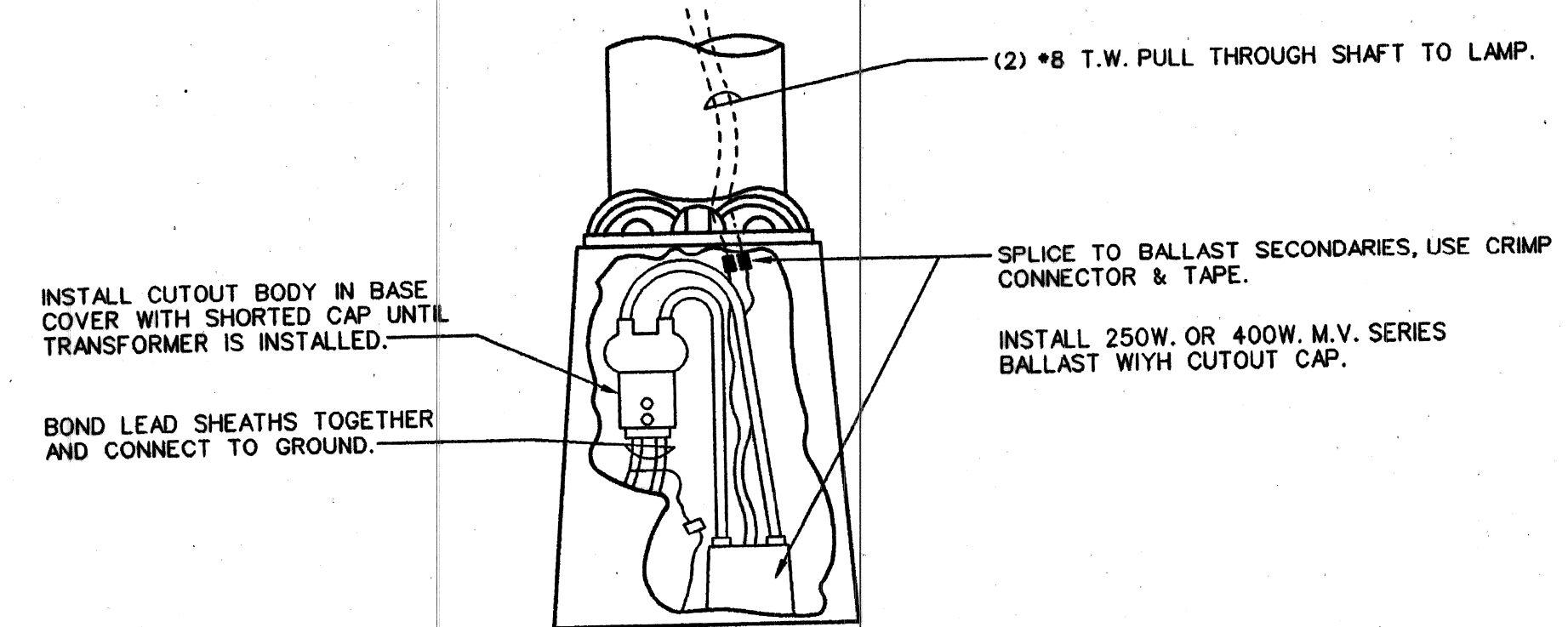
- A - USE TUBE CUTTER TO SCORE LEAD SHEATH AND CHIP OFF WITH CHIPPING IRON. DO NOT BREAK OFF BY BENDING. 4" OF INSULATION TO REMAIN, NOT INCLUDING BARED CONDUCTOR.
- B - FORM BOTTOM OF EMBOSSED SLEEVE & SLIP OVER CABLE. HOLE IN FRONT.
- C - BELL LEAD SHEATH, REMOVE TAPE FROM INSULATION, INCLUDING AS MUCH AS POSSIBLE FROM WITHIN BELLED SHEATH.
- D - SWEAT CONDUCTOR INTO TERMINAL & PENCIL INSULATION SMOOTHLY FOR 3/4"
- E - MOUNT TERMINAL FIRMLY INTO PORCELAIN.
- F - PUSH SLEEVE INTO CAST IRON COLLAR AND WIPER SMOOTHLY TO LEAD SHEATH.
- G - INVERT & FILL JOINT BETWEEN IRON COLLAR AND SLEEVE WITH EPOXY RESIN.
- H - LAY POTHEAD HORIZONTAL & FILL COMPLETELY WITH APPROVED COMPOUND.
- I - INSERT LEAD PLUG INTO EMBOSSED HOLE, TAP FLUSH & FILL WITH LEAD
- J - TRAIN CABLE & MOUNT POTHEAD ON CROSS ARM.
- K - SLIP THE CONE SHAPED RUBBER BUSHING ON THE RUBBER INSULATED CABLE RISER.
- L - SWEAT CONDUCTOR INTO TERMINAL FIRMLY INTO POTHEAD CAP.
- M - MOUNT THE TERMINAL FIRMLY INTO THE POTHEAD CAP.
- N - BUILD UP WITH TAPE #1 AND CARRY 2 LAYERS OVER THE CAP TO POINT "N" AS SHOWN. COVER WITH 2 LAYERS TYPE #2-HALF LAP. PAINT WITH APPROVED BLACK INSULATING VARNISH.

MATERIAL TYPES

TAPE #1 - CORONA RESISTING HIGH VOLTAGE RUBBER TAPE ONLY.
TAPE #2 - BLACK PLASTIC ELECTRICAL TAPE.



INCANDESCENT TO MERCURY CONVERSION
N.T.S.



DISK FILE: PLD 201

REVISIONS	Date	Description	Chkd. by

RUBBER INSULATED LEAD SHEATHED SPLICE & CONNECTIONS

Drawn **CEA**
Checked
Approved
Date

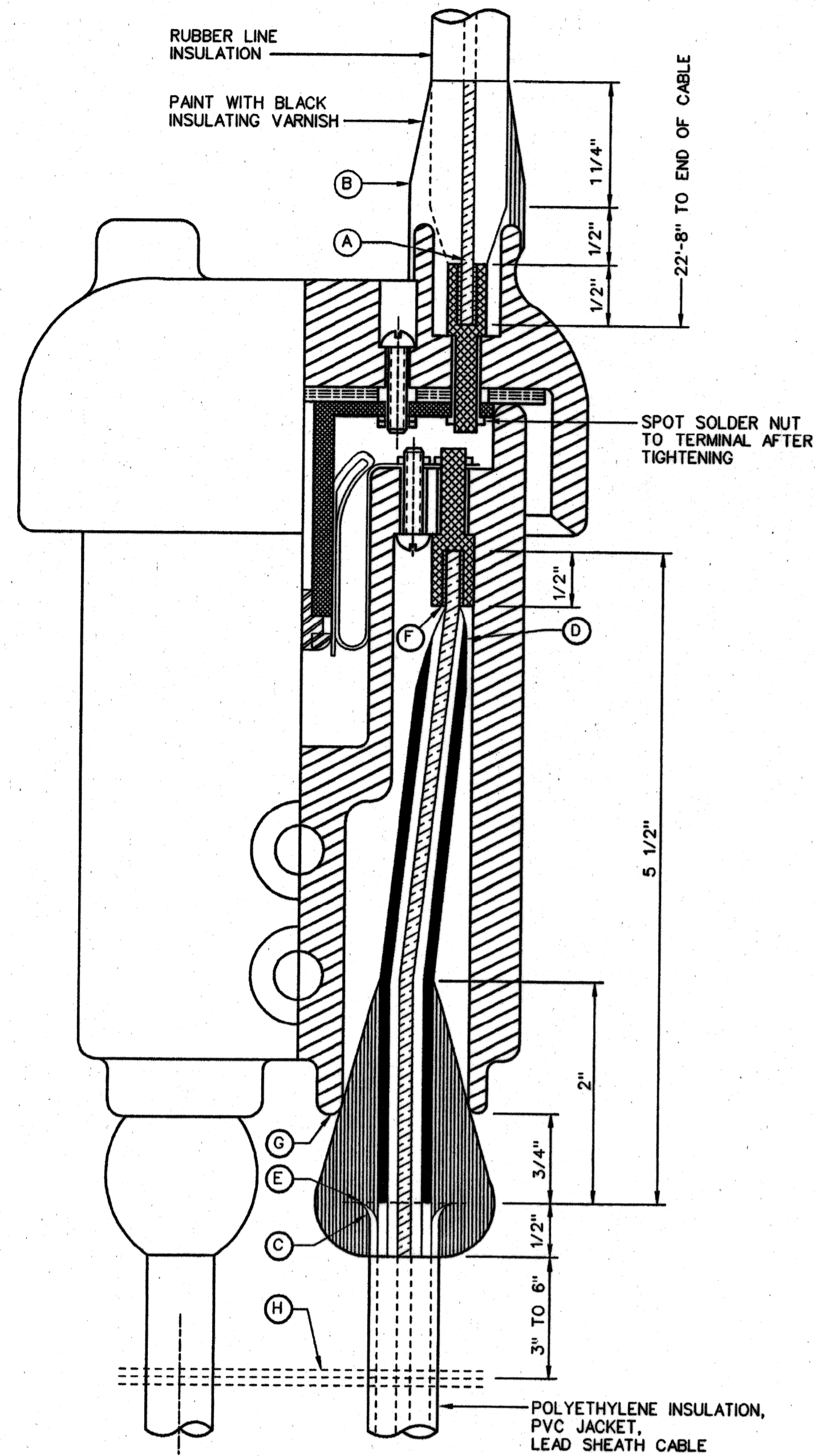
Consulting Engineering Associates, Inc.
7550 WITKINS AVE. - DETROIT MICHIGAN 48221
TELEPHONE: (313) 341-5797 FAX: 341-0205

Drwg. No. --- OF ---
File No. CEA ---

Checked by
Approved by

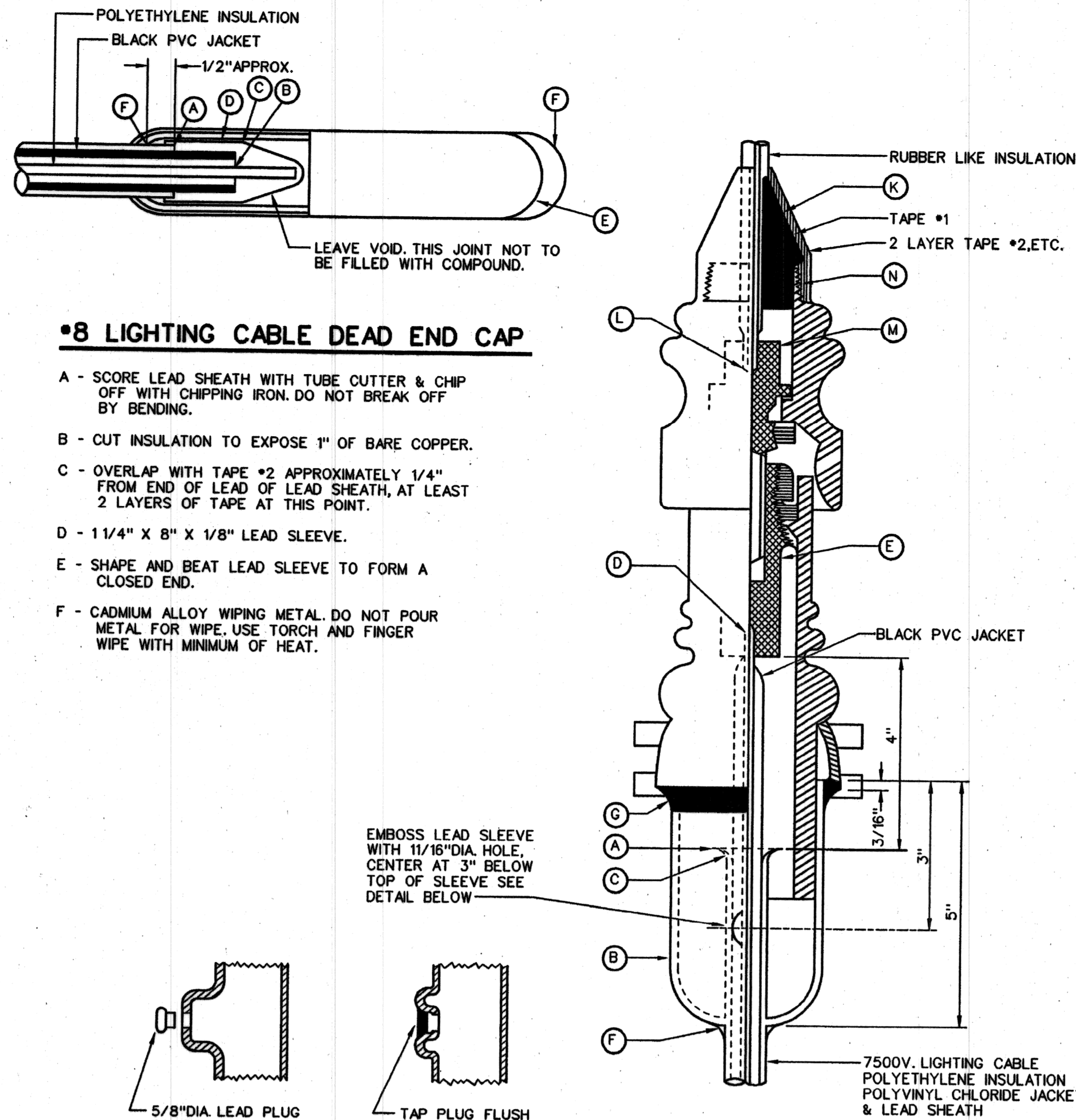
PUBLIC LIGHTING DEPARTMENT
CITY OF DETROIT

File No. ---
Sheet No. **38 of 48**
Date



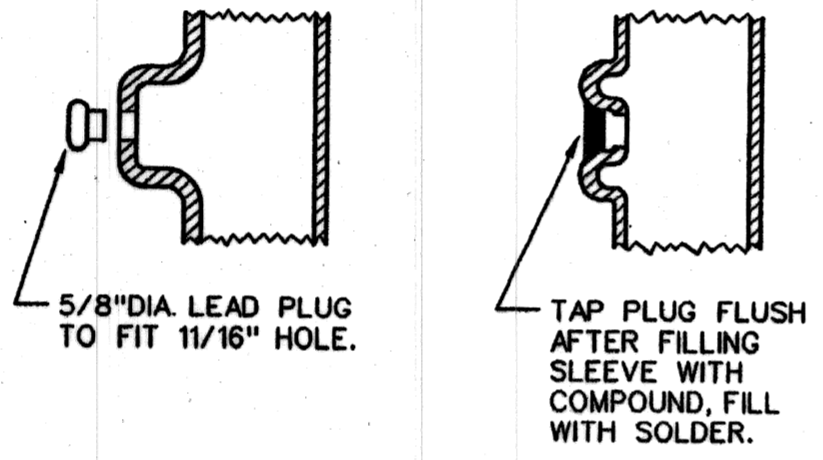
CONNECTION FOR SERIES CUTOUT
N.T.S.

- A - SWEAT TERMINAL & PENCIL INSULATION TO FIT SNUGLY IN PORCELAIN OPENING SO THAT AS NUT IS DRAWN UP TIGHT THE OPENING IS COMPLETELY AND TIGHTLY FILLED.
- B - BUILD UP WITH *3 TAPE AS SHOWN, & COVER WITH 2 LAYERS, HALF LAP, WITH *2 TAPE AS NOTED.
- C - USE TUBE CUTTER TO SCORE LEAD SHEATH & CHIP OFF WITH CHIPPING IRON. DO NOT BREAK OFF BY BENDING.
- D - CUT INSULATION & PENCIL SMOOTHLY FOR CONNECTION.
- E - BELL LEAD SHEATH AND FILL SHEATH CAVITY WITH APPROVED ADHESIVE.
- F - SWEAT CONDUCTOR INTO TERMINAL.
- G - APPLY TAPE *1 OVER BELL SUFFICIENTLY TO FORM A TIGHT FIT BETWEEN CABLE AND PORCELAIN AT "G" COVER TAPE *1 WITH 2 LAYERS OF TAPE *2 TO ABOUT 3/4" FROM END OF TAPE *1.
- H - *18 SERVICE WIRE OR BRAID 4 WRAPS BETWEEN CABLES & SWEATED TO LEAD SHEATH FOR BOND TIE TO GROUND WIRE.



#8 LIGHTING CABLE DEAD END CAP

- A - SCORE LEAD SHEATH WITH TUBE CUTTER & CHIP OFF WITH CHIPPING IRON. DO NOT BREAK OFF BY BENDING.
- B - CUT INSULATION TO EXPOSE 1" OF BARE COPPER.
- C - OVERLAP WITH TAPE *2 APPROXIMATELY 1/4" FROM END OF LEAD OF LEAD SHEATH, AT LEAST 2 LAYERS OF TAPE AT THIS POINT.
- D - 1 1/4" X 8" X 1/8" LEAD SLEEVE.
- E - SHAPE AND BEAT LEAD SLEEVE TO FORM A CLOSED END.
- F - CADMIUM ALLOY WIPING METAL. DO NOT POUR METAL FOR WIPE. USE TORCH AND FINGER WIPE WITH MINIMUM OF HEAT.



CONNECTIONS FOR 1/C 7500V. POTHEAD
N.T.S.

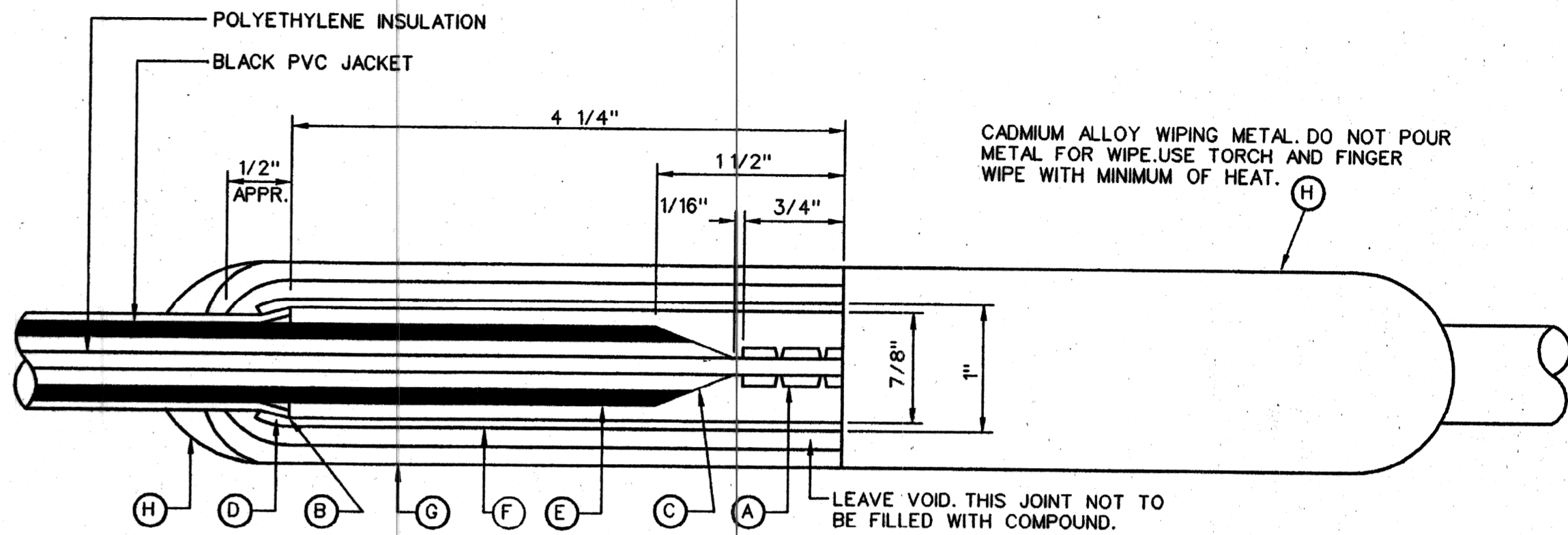
- A - USE TUBE CUTTER TO SCORE LEAD SHEATH AND CHIP OFF WITH CHIPPING IRON. DO NOT BREAK OFF BY BENDING. 4" OF INSULATION TO REMAIN, NOT INCLUDING BARED CONDUCTOR.
- B - FORM BOTTOM OF EMBOSSED SLEEVE & SLIP OVER CABLE, HOLE IN FRONT.
- C - BELL LEAD SHEATH.
- D - SWEAT CONDUCTOR INTO TERMINAL & PENCIL INSULATION SMOOTHLY FOR 3/4"
- E - MOUNT TERMINAL FIRMLY INTO PORCELAIN HOUSING.
- F - PUSH SLEEVE INTO CAST IRON COLLAR AND FINGER WIPE TO CABLE SHEATH WITH LOW TEMPERATURE CADMIUM ALLOY. USE MINIMUM OF HEAT. DO NOT POUR METAL.
- G - INVERT & FILL JOINT BETWEEN IRON COLLAR AND LEAD SLEEVE WITH APPROVED EPOXY RESIN.
- H - LAY POTHEAD HORIZONTAL & FILL WITH APPROVED COMPOUND. DO NOT HEAT COMPOUND MORE THAN NECESSARY FOR POURING.
- I - INSERT 5/8" DIA. LEAD PLUG INTO SLEEVE HOLE, TAP FLUSH & FILL WITH SOLDER.
- J - TRAIN THE CABLE AND MOUNT POTHEAD ON CROSS ARM.
- K - SLIP THE CONE SHAPED RUBBER BUSHING ON THE RUBBER INSULATED CABLE RISER.
- L - SWEAT CONDUCTOR INTO TERMINAL "L" AND PENCIL INSULATION AS SHOWN.
- M - MOUNT THE TERMINAL FIRMLY INTO THE POTHEAD CAP.
- N - BUILD UP WITH TAPE *3 AND CARRY 2 LAYERS OVER END OF THE CAP TO POINT "N" AS SHOWN. COVER WITH 2 LAYERS TAPE *2-HALF LAP. PAINT WITH APPROVED BLACK INSULATING VARNISH.

MATERIAL & SPECIAL PRECAUTIONS

1. TAPE *1: CLEAR POLYETHYLENE TAPE, 0.02" THICK X 3/4" WIDE
TAPE *2: BLACK PVC PLASTIC ELECTRICAL TAPE.
TAPE *3: APPROVED A.S.T.M. RUBBER TAPE.
FILLING COMPOUND: APPROVED COMPOUND.
WIPING METAL: APPROVED LOW TEMPERATURE CADMIUM ALLOY WIPING METAL.
2. USE SMALL HAND TORCH FOR WIPING JOINTS, AT MINIMUM TEMPERATURE.
3. WHEN IT IS NECESSARY TO SPLICE POLYETHYLENE INSULATED CABLE TO RUBBER CABLE, USE ABOVE MATERIALS.
4. APPLY ADHESIVE INSIDE BELLED SHEATH CAVITY ONLY. APPLY TAPE AFTER ADHESIVE HAS BECOME TACKY.

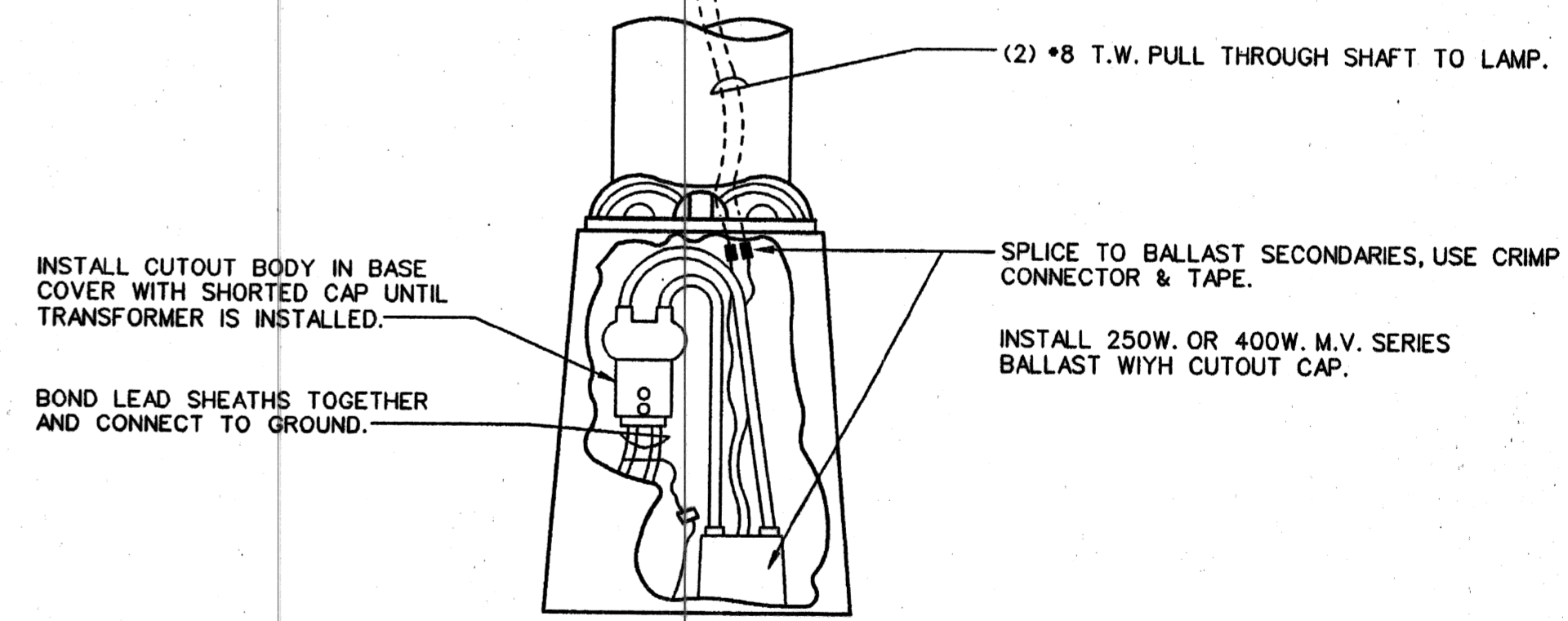
NOTE:

THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER FOR APPROVAL A LIST OF ALL SPLICING MATERIALS HE PROPOSES TO USE WITH SUPPORTING DATA THAT THE MATERIAL IS SUITABLE FOR APPLICATION AS SHOWN ON THE DRAWINGS.



#8 LIGHTING CABLE JOINT
N.T.S.

- A - 1 1/2" #8 TINNED COPPER SLEEVE, 2 CIRCUMFERENTIAL CRIMPS ON EACH END.
- B - SCORE LEAD SHEATH WITH TUBE CUTTER & CHIP OFF WITH CHIPPING IRON. DO NOT BREAK OFF BY BENDING.
- C - CUT INSULATION & PENCIL SMOOTHLY AS SHOWN.
- D - BELL LEAD SHEATH TO DIAMETER SHOWN AND FILL SHEATH CAVITY WITH APPROVED ADHESIVE.
- E - APPLY TAPE *1 OVER PVC JACKET AND BELLED SHEATH TO A DIA. OF 1". OVERLAP BELLED SHEATH WITH TAPE APPROX. 1/4"
- F - TWO LAYERS OF TAPE *2 APPLIED HALF LAP.
- G - LEAD SLEEVE 10" LONG, 1/8" WALL, 1 1/4" INSIDE DIAMETER.
- H - SPECIAL LOW TEMPERATURE CADMIUM ALLOY WIPING METAL.



INCANDESCENT TO MERCURY CONVERSION
N.T.S.

REV.	Date	Description	Chkd. by

POLYETHYLENE INSUL. P.J. LEAD SHEATHED SPLICE & CONN.

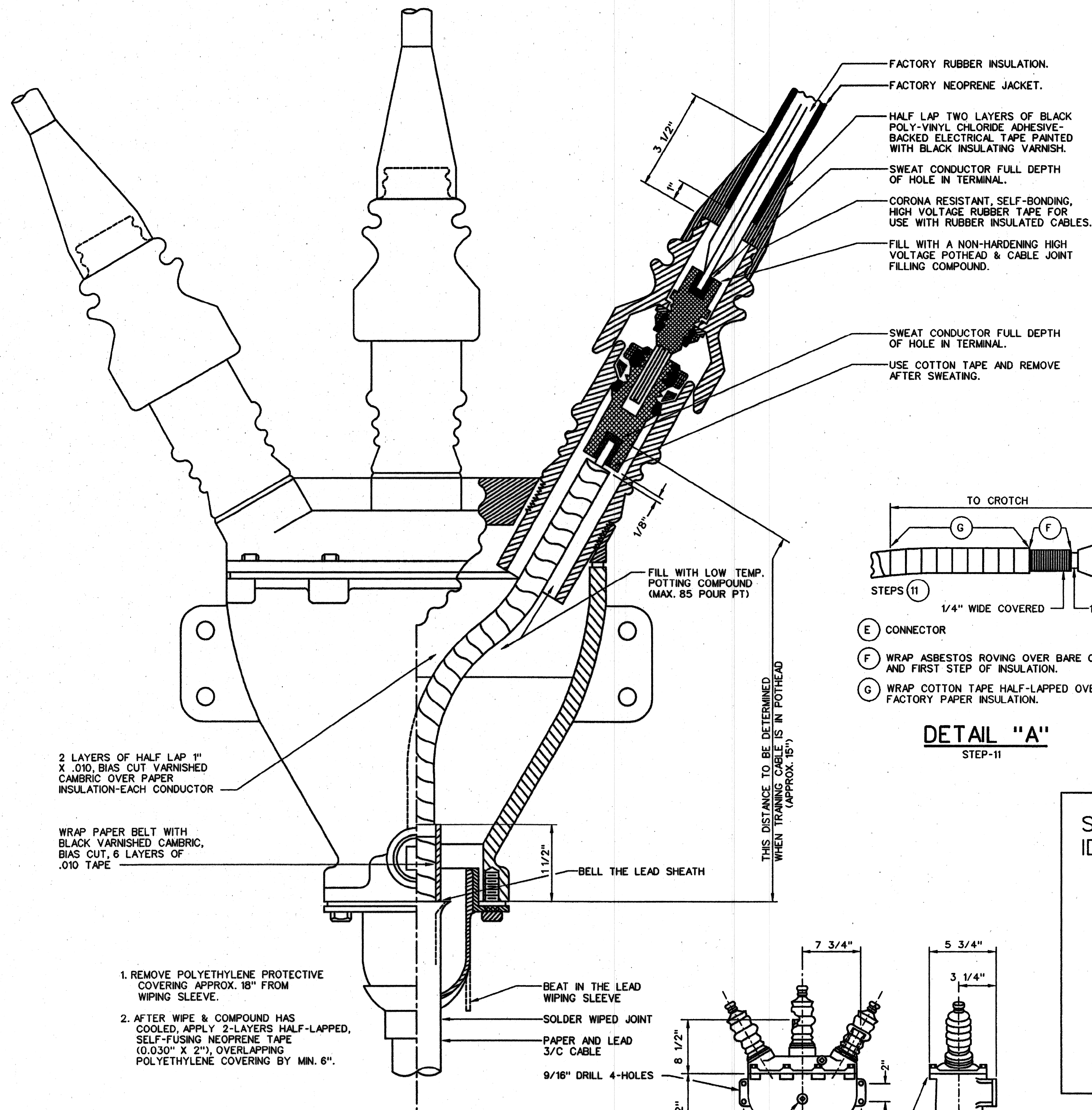
Drawn **CEA**
Checked
Approved
Date

Consulting Engineering Associates, Inc.
16580 WYOMING AVE. DETROIT MICHIGAN 48221
TELEPHONE: (313) 341-5797 FAX: 341-0205

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OF CEA

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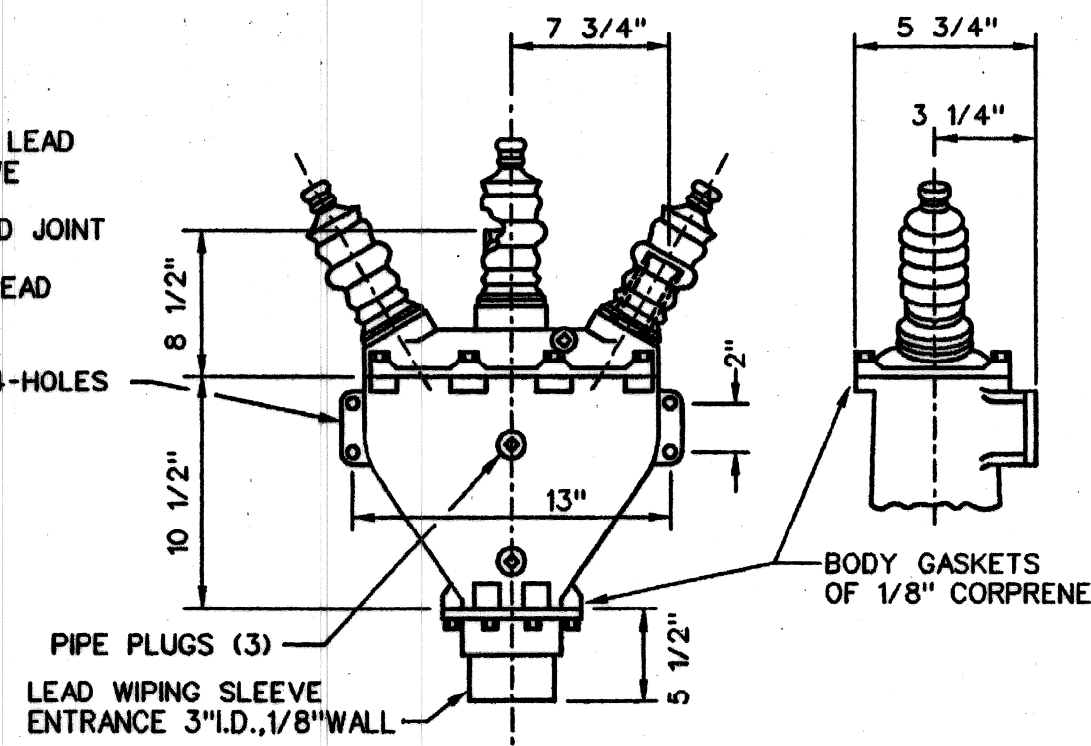
PUBLIC LIGHTING DEPARTMENT
CITY OF DETROIT



5000V. & 7500V. 3/C DISC. POTHEAD
N.T.S.

NOTES:

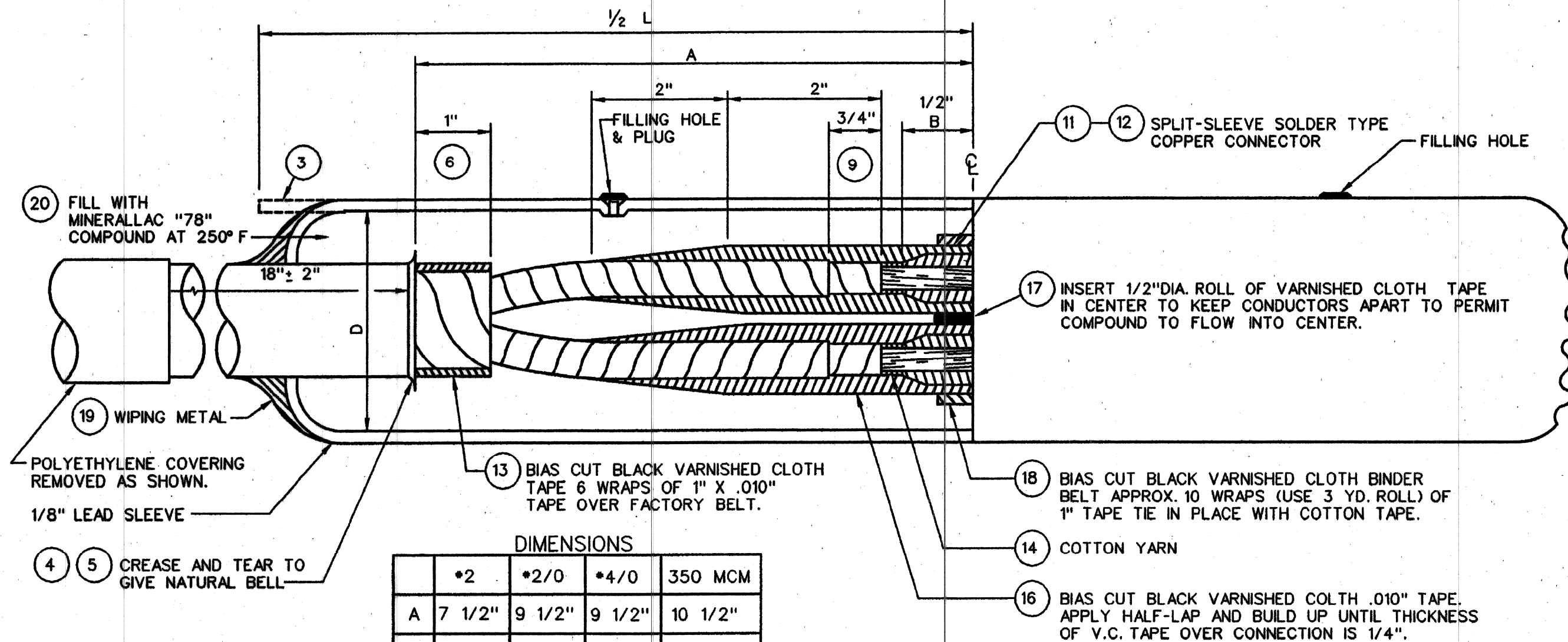
- SEE SPECIFICATIONS OR P.L.D., WHERE REQUIRED, FOR MATERIAL SPECIFICATIONS.
- THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER FOR APPROVAL A LIST OF ALL SPLICING MATERIALS HE PROPOSES TO USE WITH SUPPORTING DATA THAT MATERIAL IS SUITABLE FOR APPLICATION AS SHOWN ON THE DRAWINGS.



ASSEMBLED POTHEAD

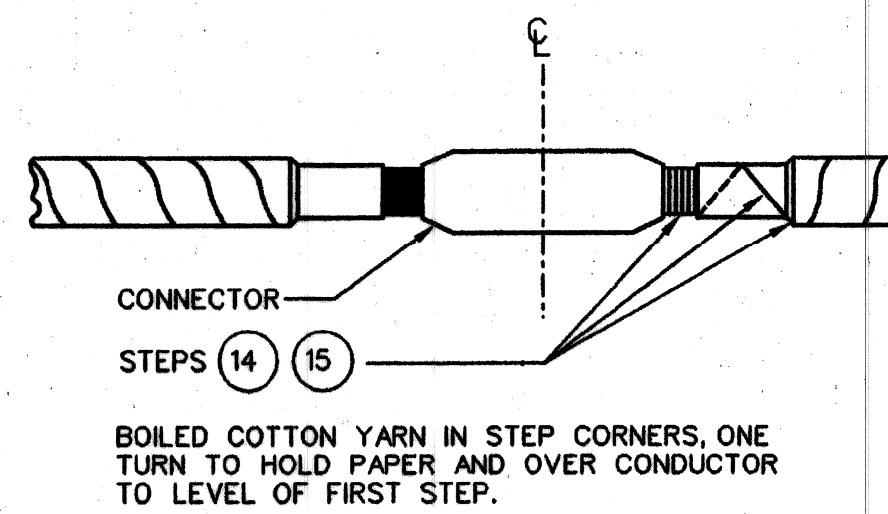
NOTE:

DIMENSIONS APPLY TO BOTH 250A. & 500A. POTHEADS.
POTHEADS FURNISHED SHALL INCLUDE ENTRANCE SLEEVE & CAPS.



DIMENSIONS

	*2	*2/0	*4/0	350 MCM
A	7 1/2"	9 1/2"	9 1/2"	10 1/2"
B	1"	1"	1 1/4"	1 1/4"
D	3"	3 1/2"	3 1/2"	4"
L	18"	24"	24"	24"



DETAIL "A"
STEP-11

DETAIL "B"
STEP-15

SUBSTATION CIRCUIT ABBREVIATIONS ON IDENTIFICATION TAGS SHALL BE SPELLED AS FOLLOWS

BEL	KSG	POR
BUT	LAB	RVS
CAN	LEE	STA
COB	LOT	STO
CON	LUD	TOW
CUS	MAP	TRI
GRF	MCC	TUR
HUD	MON	WAL
JSC	PAL	WSU
JOY	PHI	JEF

NOTE:

ASBESTOS TAPE CAN ONLY BE USED WITH PERMISSION OF THE P.L.D.

INSTRUCTIONS FOR 3/C 5.0 & 7.0KV. P. & L. BELTED CABLE JOINTS

- TRAIN CABLE. DO NOT BEND TO RADIUS LESS THAN THE FOLLOWING SPECIFIED MINIMUM: *2 AND *2/0-16", *4/0-17", 350 MCM-20".
- ESTABLISH CENTERLINE OF JOINT. CUT CABLES THRU CENTERLINE.
- CLEAN AND CANDLE OUTSIDE OF SLEEVE FOR 2" AT BELL ENDS. SLIDE SLEEVE OVER CABLE.
- CREASE LEAD SHEATHS THE SPECIFIED DISTANCE FROM CABLE END (DIM.A), CLEAN AND PROTECT SURFACES OF SHEATH WITH STEARINE WHERE WIPES ARE TO BE MADE.
- REMOVE SHEATH TO CREASE, TEAR SO AS TO GIVE THE SHEATH A NATURAL BELL.
- REMOVE ALL BINDER TAPES TO 1" FROM END OF SHEATH.
- REMOVE FILLERS FROM CROTCH, CUTTING WITH KNIFE DIRECTED AWAY FROM INSULATION.
- TEST FILLER FOR MOISTURE (IN PARAFFIN AT 250 F.).
- STEP INSULATION BY USE OF GILLING TWINE. FOR THE SINGLE STEP REMOVE HALF OF FACTORY INSULATION THICKNESS.
- REMOVE INSULATION FROM CONDUCTOR FOR THE CONNECTOR BY CUTTING SQUARE WITHOUT NICKING CONDUCTOR.
- PUT CONNECTORS IN PLACE WITH SPLIT OPENINGS TURNED UPWARD. COVER BARE CONDUCTOR AND FIRST STEPS WITH ASBESTOS ROVING COVER PAPER INSULATION WITH HALF-LAPPED COTTON TAPE. SEE DETAIL "A".
- SWEAT CONNECTORS IN PLACE. REMOVE ANY SHARP EDGES OF THE CONNECTOR OR SOLDER. REMOVE COTTON TAPE AND ASBESTOS ROVING BEING CAREFUL TO KEEP METAL PARTICLES OFF OF CONDUCTOR AND PAPER INSULATION.
- APPLY 6 WRAPS OF 1" BLACK V.C. TAPE OVER THE FACTORY BELT ON EACH END OF SPLICE.
- APPLY STRANDED COTTON YARN BOILED IN PETROLATUM TO FILL IN BETWEEN INSULATION AND CONNECTOR TO LEVEL OF FIRST STEP.
- ALSO APPLY BOILED COTTON YARN OVER STEPS TO HOLD PAPER TAPE IN PLACE WHILE APPLYING V.C. INSULATION. SEE DETAIL "B".
- APPLY V.C. TAPE HALF-LAPPED TO EACH CONDUCTOR, BUILDING UP TO A THICKNESS OF 1/4" OVER THE CONNECTOR, TAPERING ENDS AS SHOWN AND HAND WIPING THIN COATING OF PETROLATUM BETWEEN LAYERS OF V.C. TAPE.
- APPLY 1/2" DIA SPACER ROLL OF 1" BLACK V.C. TAPE IN CENTER OF CONDUCTOR.
- INSTALL BINDER BELT OF 1" BLACK V.C. TAPE APPROX. 10 LAYERS (USE 3YD. ROLL) TIE IN PLACE WITH COTTON TAPE.
- PULL UP AND CENTER SLEEVE. WIPE SLEEVE TO CABLE SHEATHS. DO NOT USE STEARINE FOR COOLING AT THIS STAGE.
- FILL JOINT WITH COMPOUND AT 250° F. COOL FOR 45 MINUTES, REFILL, AND COOL FOR 15 MINUTES. REPEAT REFILLS TWICE IF NECESSARY.
- WHILE JOINT IS COOLING, ATTACH BONDING CONNECTION, FIREPROOF CABLE AND ATTACH CABLE TAGS.
- SEAL FILLING HOLES AND FINISH FIREPROOFING.
- APPLY 2" WIDE TAPE NEOPRENE COVERING OVER SLEEVE.

DISK FILE: P.L.D. 203

Date	Description	Chkd. by

5000V. & 7000V. BELTED P. & L. CABLE JOINT & POTHEAD SPLICE

Drawn CEA
Checked
Approved
Date

Consulting Engineering Associates, Inc.
16880 WYOMING AVE. DETROIT MICHIGAN 48221
TELEPHONE: (313) 341-8797 FAX: 341-0205

Drwg. No. OF CEA
File No.

Checked by
Approved by

PUBLIC LIGHTING DEPARTMENT
CITY OF DETROIT

File No.
Sheet No. 40 of 48
Date

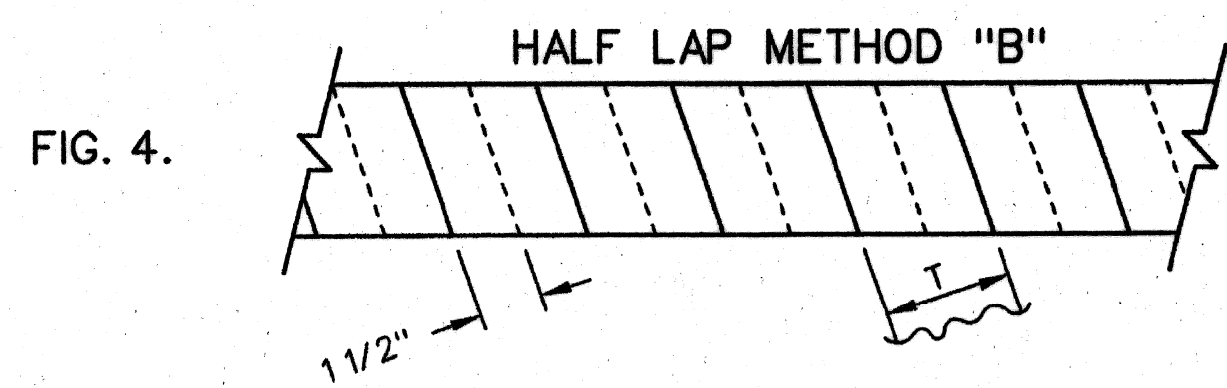
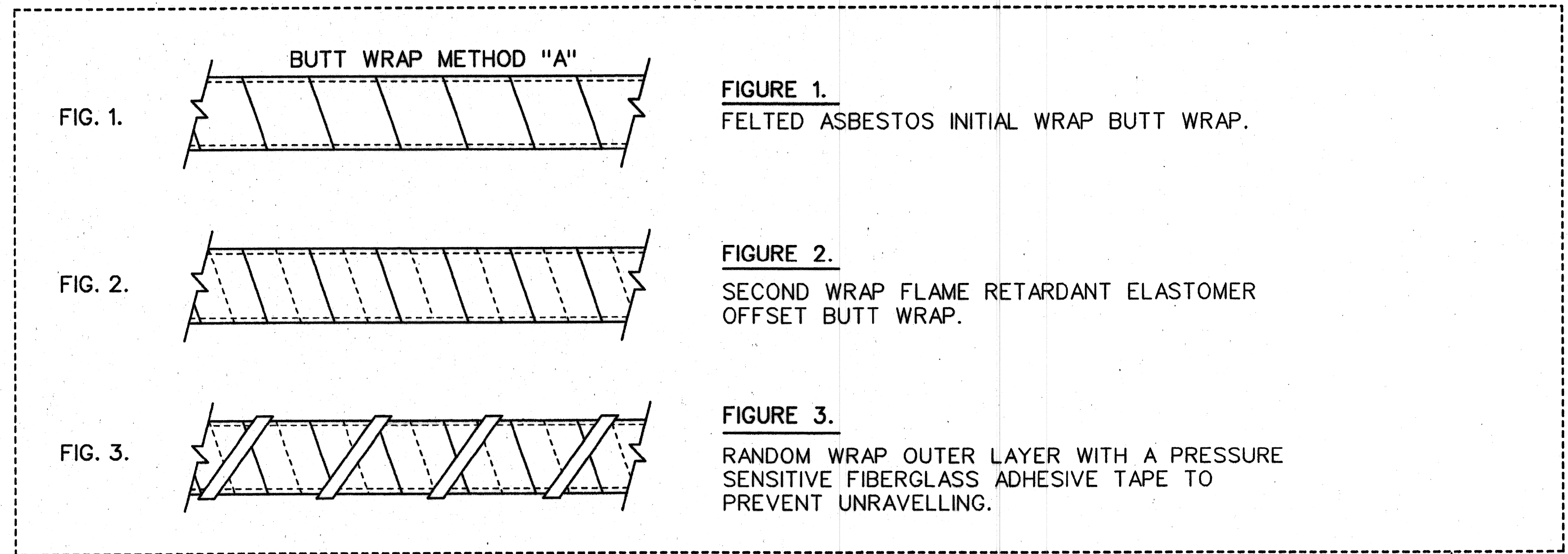


FIGURE 4.
ONE WRAP FLAME RETARDANT ELASTOMER 1/2 OVERLAPPED RANDOM WRAP WITH PRESSURE SENSITIVE FIBERGLASS ADHESIVE TAPE.

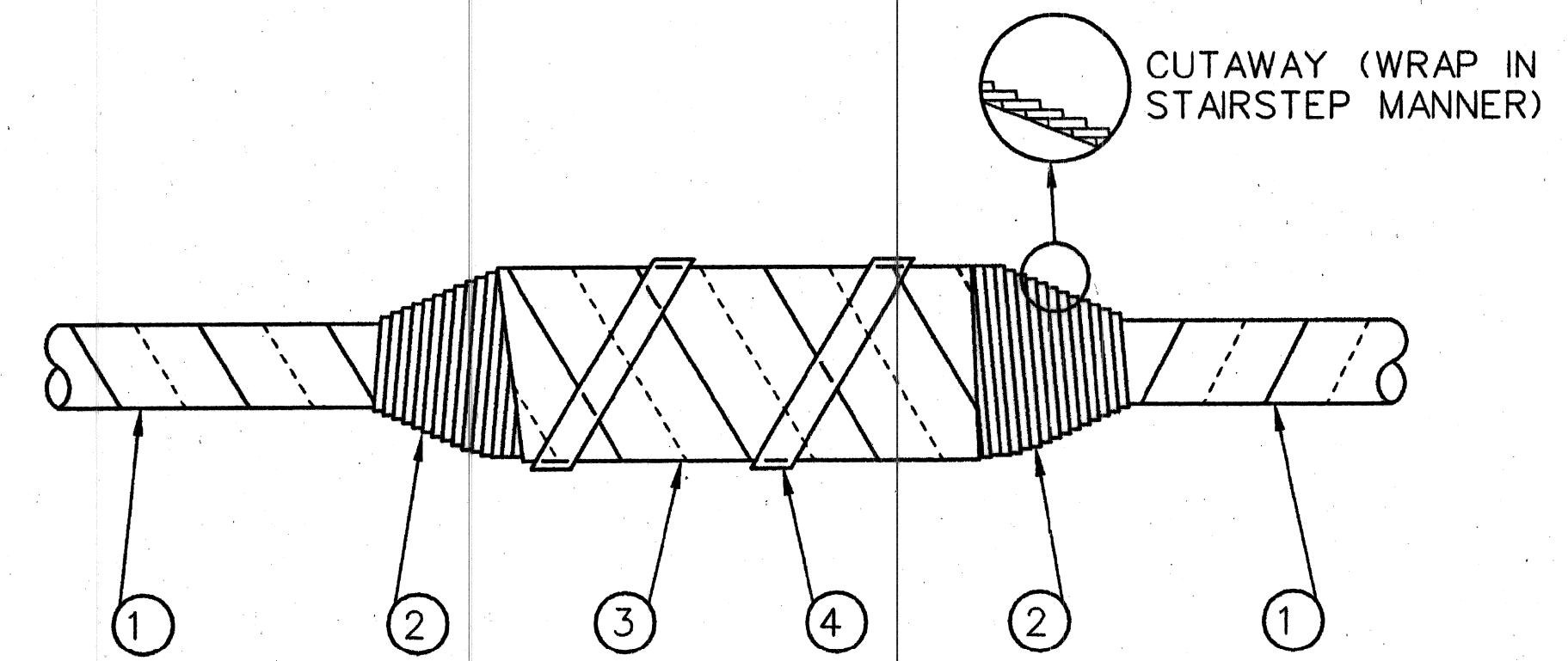
NOTE: ELASTOMER TAPE TO BE APPLIED WITH SMOOTH SIDE ON CABLE (ROUGH OR FABRIC SIDE OUT).

APPROXIMATE QUANTITIES REQUIRED PER MANHOLE

METHOD "A"
5 ROLLS 3"X 15'-0" FELTED ASBESTOS TAPE
4 ROLLS 3"X 20'-0" ELASTOMER TAPE
1 ROLL FIBERGLASS TAPE

METHOD "B"
8 ROLLS 3"X 20'-0" ELASTOMER TAPE (FLAME RETARDANT)
1 ROLL FIBERGLASS TAPE

METHOD "A" (ASBESTOS TAPE) CAN ONLY BE USED WITH PERMISSION OF THE P.L.D.



- ① WRAP CABLE WITH 3" WIDE TAPE METHOD "A" OR "B".
- ② WRAP WIPE WITH 1 1/2" WIDE ELASTOMER TAPE AS SHOWN (SPLIT 3" TAPE WITH SKINNING KNIFE FOR THIS STEP).
- ③ WRAP SPLICE SLEEVE WITH 3" WIDE TAPE THE SAME AS IN #1 ABOVE.
- ④ RANDOM WRAP FIBERGLASS TAPE TO HOLD IN PLACE.

NOTE: WRAP CABLE ON BOTH SIDES OF SPLICE FIRST. NEXT WRAP BOTH WIPES AND THEN COVER THE SLEEVE.

DISK FILE: P.L.D. 204

Date	Description	Chkd. by

CABLE FIREPROOFING

Drawn	CEA
Checked	
Approved	
Date	

Drwg. No. _____ OF _____ File No. CEA _____

Consulting Engineering, Inc.
16550 WYOMING AVE. DETROIT MICHIGAN 48221
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Checked by	
Approved by	

PUBLIC LIGHTING DEPARTMENT
CITY OF DETROIT

File No.	
Sheet No.	41 of 48
Date	

CERTIFIED TEST REPORTS

SHIPMENTS OF WIRE AND CABLE SHALL NOT BE CONSIDERED COMPLETE UNTIL CERTIFIED TEST REPORTS ARE RECEIVED AND APPROVED. TEST REPORTS FOR VARIOUS ITEMS OF WIRE AND CABLE SHOWN ON SHEET 1 SHALL CONTAIN THE FOLLOWING TEST RESULTS:

ITEMS 1 - 5 INCLUSIVE - OVERHEAD LINE WIRE

1. CONDUCTOR CONTINUITY, RESISTANCE, TENSILE STRENGTH AND ELONGATION TESTS.
2. COVERING THICKNESS, PHYSICAL AND AGING TESTS.
3. WEIGHT OF FINISHED WIRE.

ALL TESTS IN ACCORDANCE WITH THE LATEST REVISION OF ASA 8.34 (NEOPRENE COVERING) OR ASA 8.35 (POLYETHYLENE COVERING).

ITEMS 6 - 10 INCLUSIVE

1. CONDUCTOR CONTINUITY, RESISTANCE, TENSILE STRENGTH, AND ELONGATION TESTS IN ACCORDANCE WITH THE LATEST REVISIONS OF ASTM B8, B33 OR B189.
2. THE PHYSICAL AND OTHER TESTS FOR THE SPECIFIED INSULATION SHOWN ON SHEET 2.
3. INSULATION THICKNESS MEASUREMENTS.
4. THE ALTERNATING-CURRENT VOLTAGE TEST IN ACCORDANCE WITH THE LATEST REVISION OF IPCEA S-61-402.
5. INSULATION RESISTANCE TEST. INSULATION RESISTANCE CONSTANT AS SHOWN ON SHEET 2.
6. (CABLE ITEM 8 ONLY) MINIMUM, MAXIMUM AND AVERAGE LEAD THICKNESS MEASUREMENTS SHALL ALSO BE INCLUDED.
7. (CABLE ITEM 10 ONLY) A RIP TEST SHALL ALSO BE INCLUDED AS FOLLOWS:

A SIX-FOOT SAMPLE OF THE COMPLETED 2 CONDUCTOR WIRE WITH CLEANLY CUT ENDS SHALL BE SUBJECTED TO A TEMPERATURE OF -10° F. FOR ONE HOUR, WHILE STILL COLD. THE TWO INSULATED CONDUCTORS SHALL BE SEPARATED AT ONE END FOR A DISTANCE OF APPROXIMATELY 3 INCHES AND THEN SHALL BE TORN APART WITH STEADY PULL AT A RATE OF 33 INCHES IN ONE SECOND OR LESS. THERE SHALL BE NO DAMAGE TO THE INSULATION.

ITEMS 11 - 16 INCLUSIVE - DISTRIBUTION CABLES UNDER 10KV. RATING

1. CONDUCTOR RESISTANCE.
2. SHEATH THICKNESS MEASUREMENTS.
3. HIGH VOLTAGE TEST.
4. MECHANICAL INTEGRITY TEST.
5. BENDING TEST.
6. SPARK TEST ON COVERING OVER LEAD SHEATH ON EACH LENGTH IF COVERING IS SPECIFIED.

ALL TESTS SHALL BE IN ACCORDANCE WITH THE LATEST REVISION OF "SOLID TYPE IMPREGNATED-PAPER-INSULATED LEAD-COVERED CABLE SPECIFICATION" PUBLISHED BY THE ASSOCIATION OF EDISON ILLUMINATING COMPANIES.

ITEMS 17 - 18 INCLUSIVE - SERIES STREET LIGHTING CABLE

1. CONDUCTOR RESISTANCE AND CONTINUITY, IN ACCORDANCE WITH THE LATEST REVISION OF ASTM B-3.
2. THE PHYSICAL AND OTHER TESTS FOR HIGH MOLECULAR WEIGHT POLYETHYLENE INSULATION AS SHOWN ON SHEET 2.
3. THE PHYSICAL AND OTHER TESTS FOR 60° C POLYVINYL-CHLORIDE INSULATION AS SHOWN ON SHEET 2.
4. THE FOLLOWING TESTS SHALL ALSO BE MADE AND REPORTED:

HIGH VOLTAGE TEST-AFTER NOT LESS THAN SIX(6)HOURS IMMERSION IN WATER AT 60° F. AND WHILE STILL IMMERSED, EACH REEL OF INSULATION CABLE WITHOUT LEAD, SHALL WITHSTAND A 60 CYCLE POTENTIAL OF 30,000 VOLTS FOR A PERIOD OF FIVE (5) MINUTES.

INSULATION RESISTANCE TEST-THE INSULATION RESISTANCE SHALL NOT BE LESS THAN 26,500 MEGOHMS PER THOUSAND FEET AT 60° F. THIS TEST SHALL BE CONDUCTED UPON COMPLETION OF THE HIGH VOLTAGE TEST.

SHORT-TIME DIELECTRIC STRENGTH TEST - A TEN(10)FT. SAMPLE OF THE FINISHED CABLE WITH ONLY THE LEAD REMOVED, AFTER TWELVE (2) HOURS SUBMERSION IN WATER AND WHILE STILL IMMERSED, SHALL WITHSTAND A VOLTAGE TEST OF 60,000 VOLTS 60 CYCLE A.C. FOR FIVE (5) MINUTES. ON COMPLETION OF THIS TEST, THE VOLTAGE WILL BE GRADUALLY RAISED IN ACCORDANCE WITH I.P.C.E.A. SPECIFICATIONS, UNTIL THE INSULATION IS PUNCTURED. THIS VOLTAGE SHALL BE RECORDED AND SHALL BE NOT LESS THAN 72,000 VOLTS.

EXTERNAL CORONA TEST-THIS TEST SHALL BE CONDUCTED ON ONE(1)SAMPLE PER 10,000 FT. OF COMPLETED CABLE EIGHTEEN(18)INCHES LONG WITH ONLY THE LEAD SHEATH REMOVED, AFTER WHICH SHALL BE WIPED WITH A CLEAN DRY CLOTH. THESE SAMPLES SHALL BE BENT AND MAINTAINED IN A "U-SHAPE" HAVING A BENDING DIAMETER EQUAL TO FIVE TIMES THE INSULATED CABLE DIAMETER. THE BENT SAMPLES SHALL THEN BE PLACED IN A VERTICAL POSITION ON A FLAT METALLIC GROUNDED PLATE AND 60 CYCLE A.C. VOLTAGE SHALL BE GRADUALLY APPLIED WITH A CORONA-LEVEL TEST APPARATUS OF THE FILTER-CIRCUIT TYPE, MAINTAINING SUFFICIENT AMPLIFICATION TO INDICATE THE EXISTENCE OF CORONA DISCHARGE. THIS VOLTAGE SHALL BE RAISED UNTIL CORONA IS INDICATED, AND SHALL NOT BE LESS THAN 8,200 VOLTS RMS.

THE VOLTAGE SHALL THEN BE RAISED TO 25,000 VOLTS AND MAINTAINED FOR SIX(6) HOURS WITHOUT FAILURE OF THE INSULATION. THE VOLTAGE SHALL NOT BE RAISED IN 10% STEPS AT TEN(10) MINUTE INTERVALS UNTIL FAILURE OF THE INSULATION OR FLASHOVER OCCURS.

THESE VOLTAGES SHALL BE RECORDED AND REPORTED.

INTERNAL-CORONA-LEVEL-EACH LENGTH OF COMPLETED CABLE SHALL BE TESTED IN ACCORDANCE WITH SECTION 6.13 OF THE LATEST REVISION OF I.P.C.E.A. STANDARD S-61-402, EXCEPT THAT THE MINIMUM CORONA LEVEL SHALL BE 8,200 VOLTS.

ITEMS 19 - 21 INCLUSIVE - TRANSMISSION CABLES.

1. CONDUCTOR RESISTANCE
2. SHEATH THICKNESS MEASUREMENT
3. HIGH VOLTAGE TEST
4. MECHANICAL INTEGRITY TEST
5. BENDING TEST
6. IONIZATION TEST
7. HIGH VOLTAGE-TIME TEST) ONE TEST PER ORDER OR
8. DIELECTRIC POWER TEST) THERE IS A QUANTITY LIMITATION OF
9. POWER FACTOR TEST) 25,000 FT. ON THESE TESTS PER AEC
10. SPARK TEST ON COVERING OVERHEAD SHEATH ON EACH LENGTH

ALL TESTS SHALL BE IN ACCORDANCE WITH THE LATEST REVISION OF "SOLID-TYPE IMPREGNATED-PAPER-INSULATED LEAD-COVERED CABLE SPECIFICATION," PUBLISHED BY THE ASSOCIATION OF EDISON ILLUMINATING COMPANIES.

ITEMS 22 -23 INCLUSIVE - MULTI-CONDUCTOR TRAFFIC SIGNAL CABLE

1. INDIVIDUAL CONDUCTOR RESISTANCE IN ACCORDANCE WITH THE LATEST REVISION OF ASTM B3.
2. INSULATION THICKNESS MEASUREMENTS.
3. INSULATION PHYSICAL AND OTHER TESTS FOR 60° C POLYVINYL CHLORIDE IS SHOWN ON SHEET 2.
4. ALTERNATING CURRENT VOLTAGE TEST.
5. INSULATION RESISTANCE TEST INSULATION RESISTANCE CONSTANT AS SHOWN ON SHEET 2.
6. (CABLE ITEM 23 ONLY)
 - a. POLYVINYL CHLORIDE JACKET PHYSICAL AND OTHER TESTS SHOWN ON SHEET 2.
 - b. JACKET THICKNESS MEASUREMENTS.
7. (CABLE ITEM 22 ONLY), LEAD SHEATH THICKNESS MEASUREMENTS.

TESTS NO. 4-7, INCLUSIVE, SHALL BE MADE IN ACCORDANCE WITH THE LATEST REVISION OF I.P.C.E.A. S-61-402, EXCEPT THAT THE INSULATION RESISTANCE CONSTANT SHALL BE 1000 AT 15.0 C.

ITEM 24 - 8/C SERIES STREET LIGHTING CABLE

1. CONDUCTOR CONTINUITY AND RESISTANCE IN ACCORDANCE WITH THE LATEST REVISION OF ASTM B-33.
2. LEAD SHEATH THICKNESS MEASUREMENTS.
3. A HIGH VOLTAGE TEST CONSISTING OF 22,500 VOLTS, 60 CYCLES A.C. FOR A DURATION OF 5 MINUTES, BETWEEN CONDUCTORS AND FROM EACH CONDUCTOR TO THE LEAD SHEATH.

ITEM 25 - FLEXIBLE OVERHEAD TRAINER WIRE

1. CONDUCTOR RESISTANCE, TENSILE STRENGTH AND ELONGATION IN ACCORDANCE WITH THE LATEST REVISION OF ASTM B-173.
2. INSULATION PHYSICAL AND OTHER TESTS SHOWN ON SHEET-2.
3. ADDITIONAL INSULATION TESTS IN ACCORDANCE WITH THE LATEST REVISION OF I.P.C.E.A. S-19-81 AS FOLLOWS:
 - a. ALTERNATING-CURRENT VOLTAGE TEST.
 - b. INSULATION RESISTANCE TEST.
 - c. DIRECT-CURRENT VOLTAGE TEST.
 - d. CORONA LEVEL TEST.
 - e. SHORT-TIME DIELECTRIC STRENGTH TEST.
 - f. COLD-BENDING AND LONG-TIME DIELECTRIC STRENGTH TEST.
 - g. CAPACITY AND POWER FACTOR TEST.
 - h. OZONE RESISTANCE TEST.
4. PHYSICAL AND OTHER TESTS ON THE NEOPRENE JACKET (GENERAL PURPOSE OR HEAVY DUTY), AS SHOWN ON SHEET 2.
5. JACKET THICKNESS MEASUREMENTS

ITEM 26 - SUPERVISORY CONTROL CABLE (MULTI-CONDUCTOR)

1. CONDUCTOR RESISTANCE, TENSILE STRENGTH AND ELONGATION, IN ACCORDANCE WITH THE LATEST REVISION OF ASTM B-3.
2. INSULATION PHYSICAL FOR 60° C PVC INSULATION AND OTHER TESTS SHOWN ON SHEET 2.
3. INSULATION RESISTANCE TESTS.
4. VOLTAGE TESTS PER IPCEA S-61-402.
5. INSULATION THICKNESS.
6. LEAD SHEATH THICKNESS.
7. THICKNESS OF COVERING OVER LEAD SHEATH.
8. SPARK TEST ON COVER LEAD SHEATH ON EACH LENGTH.

ITEM 27 - INTEGRAL MESSENGER COMMUNICATIONS CABLE (MULTI-PAIR)

ITEM 28 - COMMUNICATIONS CABLE

ITEM 29 - COMMUNICATIONS CABLE, LEAD SHEATH

ITEM 30 - COMMUNICATIONS CABLE, LEAD SHEATH, DIRECT BURIAL

MULTI-PAIR COMMUNICATION CABLES (Maximum Mutual Capacities = 90 nf per mile) (ALSO FOR TRAFFIC SIGNAL CHRONOPLAN) AND SUPERVISORY

ITEM NO.	USE AND RATING	CONDUCTOR	INSULATION (b)	TAPE OVER INSULATION CONDUCTORS	INNER BELT	SHIELD OVER TAPE OR BELT	JACKET OR SHEATH	COVERING OVER SHEATH
27	(a) AERIAL 600V.		0.025 IN. (c) CLASS B POLYETHYLENE (ASTM D 1351)				BLACK POLYETHYLENE (ASTM D 2308). THICKNESSES OVER CORE AND MESSENGER AND WEB DIMENSIONS IN ACCORDANCE WITH REA SPECIFICATION PE-38.	
28	IN DUCT 600V.	*6 0R #19 AWG, SOLID, UNCOATED COPPER (ASTM B3)-NUMBER OF PAIRS AS REQUIRED		12.5 PERCENT MINIMUM LAP, POLYETHYLENE TEREPHTHALATE	BLACK POLY-ETHYLENE (ASTM D 2308) 0.010-IN. MIN. 0.030-IN. MAX. THICKNESS	CORRUGATED, LONGITUDINAL, ANNEALED, (c) 0.004-IN. COPPER	BLACK POLYETHYLENE (ASTM D 2308). THICKNESS IN ACCORDANCE WITH PARAGRAPH 3.6, 7.3.7 AND TABLE IV OF FED. SPEC. J.C.111.	
29	IN DUCT 600V.		0.031 IN. (c) DI-OCTYL PHTHALATE PLASTICIZED PVC (ASTM D 2219)				LEAD-ANTIMONY THICKNESS PER ITEM 26 EXCEPT 0.063-IN. MIN. THICKNESS (c)	
30	DIRECT BURIAL 600V.	*6 0R #19 AWG, SOLID, TINNED COPPER (ASTM B 33)-NUMBER OF PAIRS AS REQUIRED					COMMERCIALLY PURE LEAD, THICKNESS PER ITEMS 22 & 23.	ASPHALTUM-SATURATED JUTE STEEL ARMOR PER ITEMS 17 & 18.

TEST REPORTS

SHIPMENTS OF WIRE AND CABLE SHALL NOT BE CONSIDERED COMPLETE UNTIL CERTIFIED TEST REPORTS ARE RECEIVED AND APPROVED. TEST REPORTS FOR THE VARIOUS ITEMS ABOVE SHALL SHOW COMPLIANCE WITH CITED SPECIFICATIONS, LISTING TEST RESULTS, AS WELL AS THE FOLLOWING TESTS:

1. CONDUCTOR RESISTANCE OF EACH LENGTH OF EACH CONDUCTOR IN OHMS PER 1000 FT.
2. CERTIFICATION OF MUTUAL CAPACITANCE OF ALL CABLES AND OF NON-INJURIOUS EFFECT OF FLOODING COMPOUND ON ITEM 27.

(a) "FIGURE 8" CONSTRUCTION, MESSENGER SHALL BE 7 STRAND EHS GALVANIZED, CLASS A, 1/4-IN. NORMAL DIAM. (ASTM A 475) AND SHALL BE FULL FLOODED.

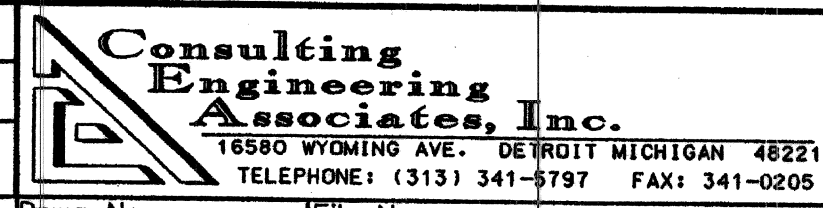
(b) COLOR CODED PER FEDERAL SPECIFICATION J-C-111.

(c) NOMINAL THICKNESS, INCHES.

REVISIONS	Date	Description	Chkd. by

CABLE & WIRE SPECIFICATIONS

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 Date
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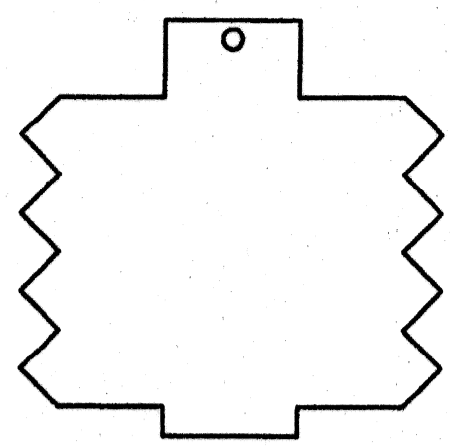
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PUBLIC LIGHTING DEPARTMENT
 CITY OF DETROIT

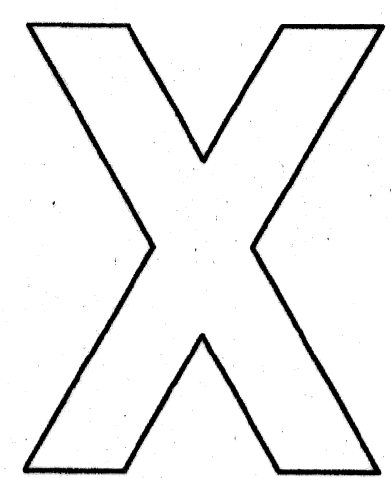
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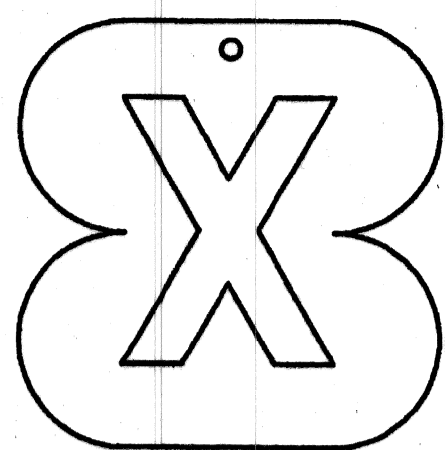
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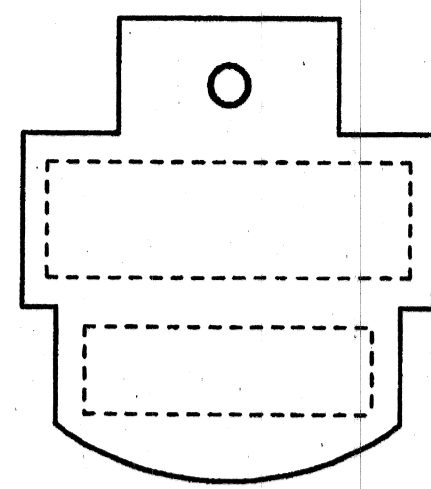
24,000 VOLT TRUNK LINE



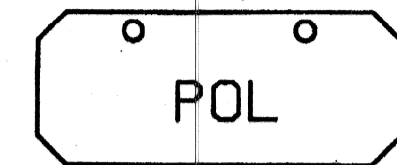
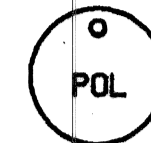
O.H. LINE PHASE TAG



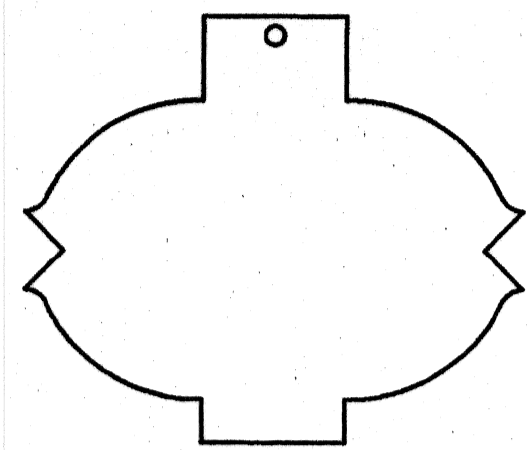
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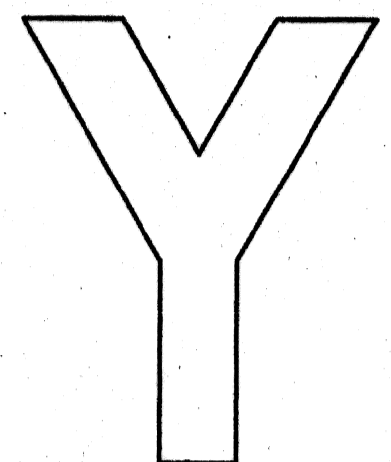
MULTIPLE STREET LIGHTING ALL VOLTAGES



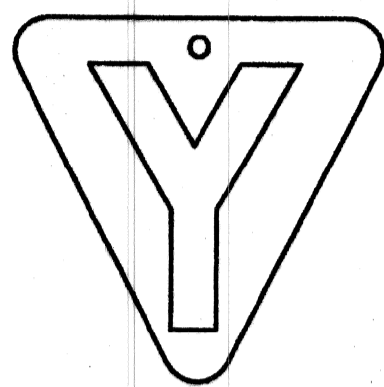
COMMUNICATION



24,000 VOLT FEEDER



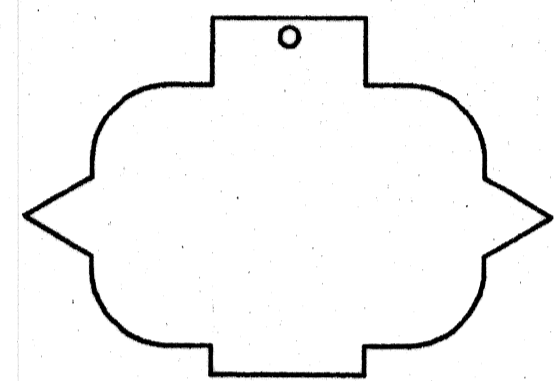
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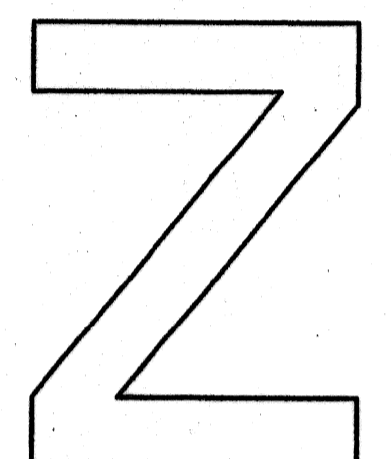
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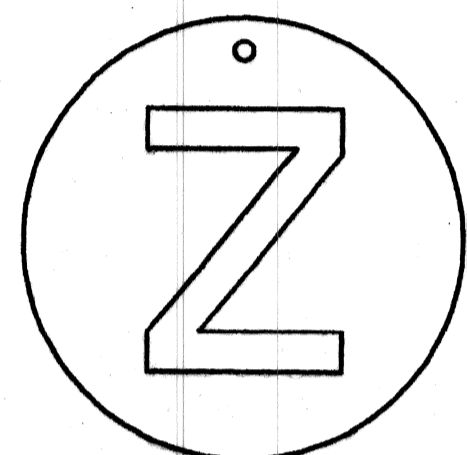
MULTIPLE INC. LTG.



13200 VOLT FEEDER



O.H. LINE PHASE TAG



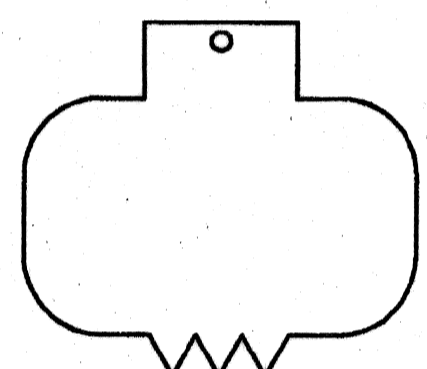
O.H. LINE ØR POTHEAD PHASE TAG



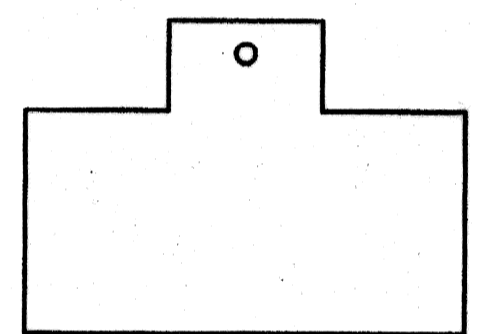
TRAFFIC SIGNALS

SUBSTATION & CIRCUIT ABBREVIATIONS ON IDENTIFICATION TAGS SHALL BE SPELLED AS FOLLOWS

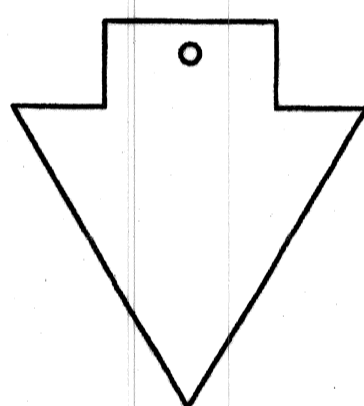
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BUT.	LAB.	RUS.
CAN.	LEE.	STA.
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CON.	LUD.	TOW.
CUS.	MAP.	TRI.
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HUD.	MDN.	WAL.
JSC.	PAL.	WSU.
JOY.	PHI.	JEF.



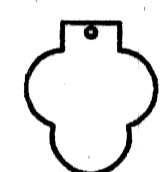
7200 VOLT FEEDER



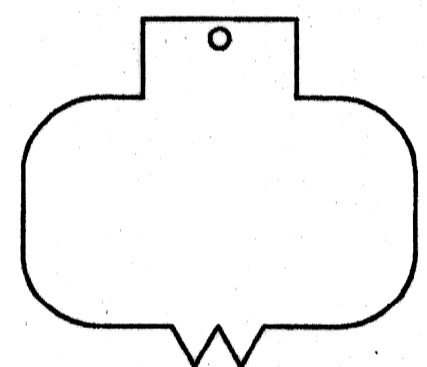
SUPERVISORY CONTROL



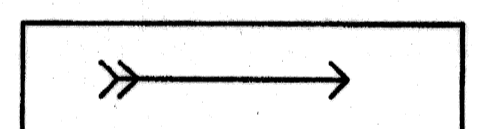
DEAD CABLE



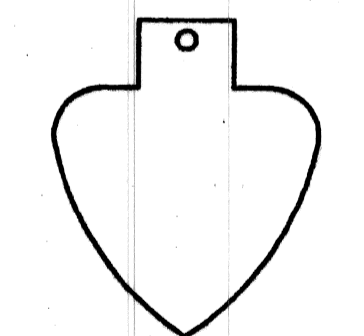
SECONDARY POWER TO SAFETY ISLANDS & TRAFFIC SIGNALS



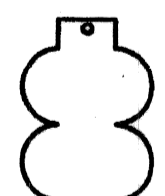
4800 & 5500 VOLT FEEDER



CIRCUIT DIRECTION



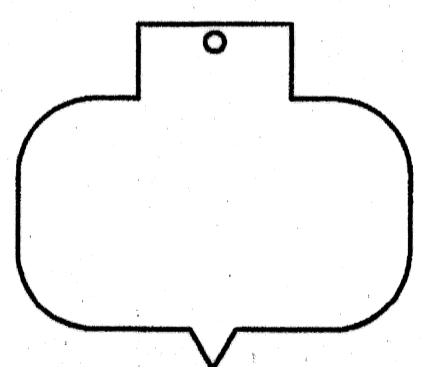
8/C COND. CABLE



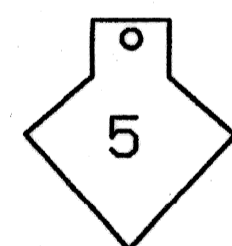
TRAFFIC SIGNAL CHRONOLIZER

NOTE:

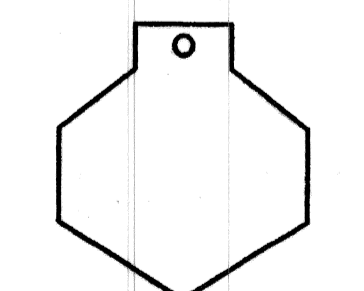
LEAD CABLE IDENTIFICATION TAGS WILL BE FURNISHED TO CONTRACTOR BY P.L.D. CABLE TAG MARKINGS SUCH AS SUBSTATION OR CABLE MARKINGS WILL BE AS SHOWN ON PLANS OR WILL BE FURNISHED BY P.L.D.



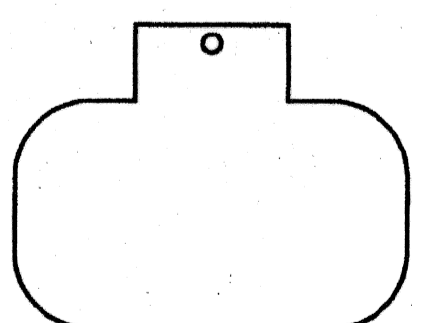
2400 VOLT FEEDER



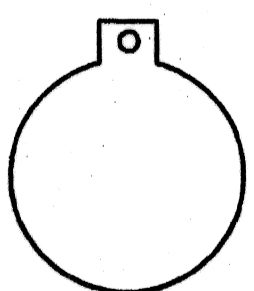
ST. LTG. COND. NO.(FROM 8/C CABLE)



MULTIPLE LTG, CONTROL



MISCELLANEOUS



ST. LTG. CIRC. NUMBER

IDENTIFICATION TAGS

MATERIAL : LEAD

10-01-96 208

Revisions	Date	Description	Chkd. by

CABLE TAGS DETAILS

Drawn CEA
 Checked
 Approved
 Date

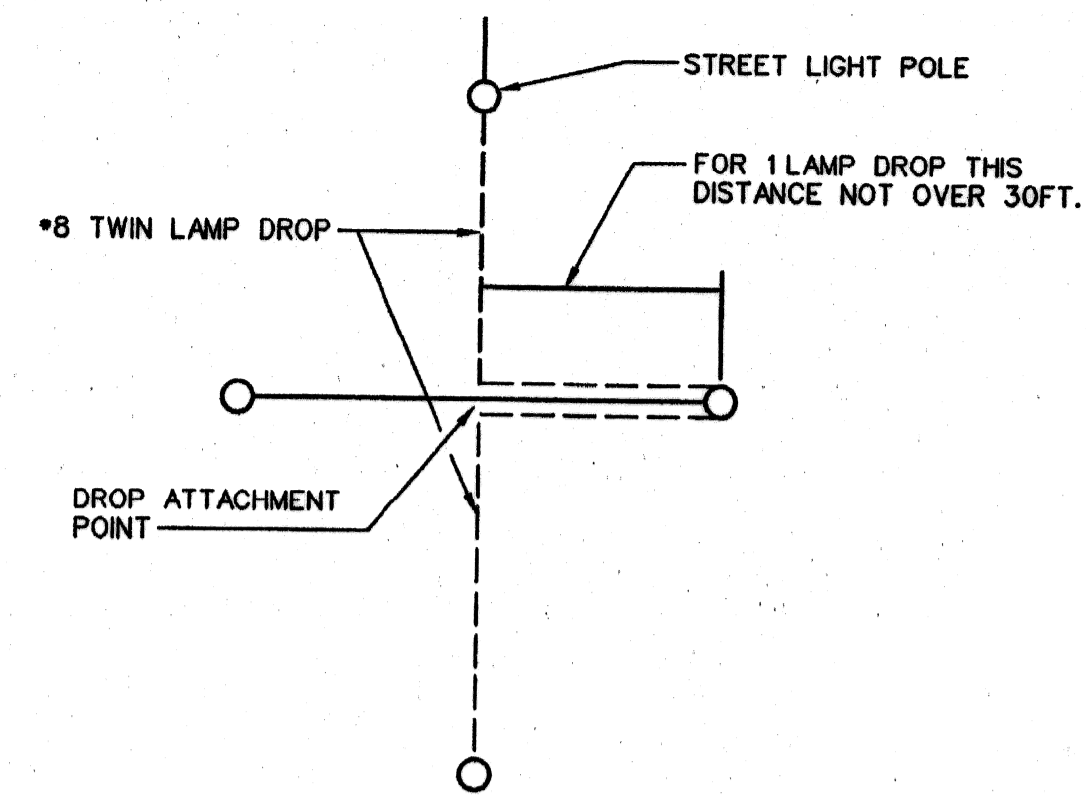
Consulting Engineering Associates, Inc.
 16580 WYOMING AVE. DETROIT MICHIGAN 48221
 TELEPHONE: (313) 341-8797 FAX: 341-0205

Drwg. No. OF CEA
 File No.

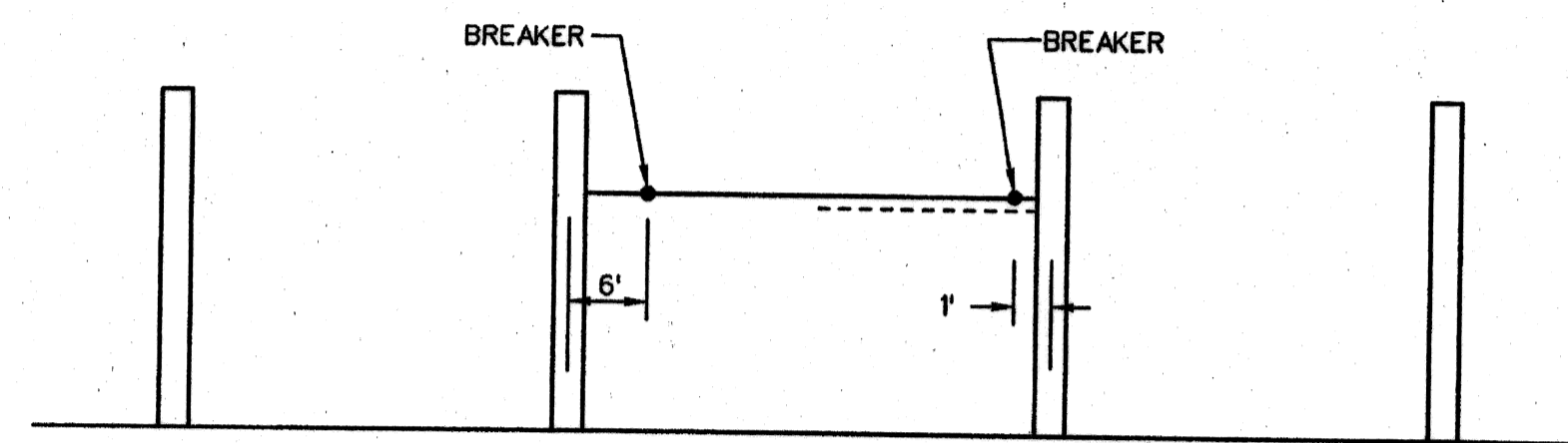
Checked by
 Approved by

PUBLIC LIGHTING DEPARTMENT
 CITY OF DETROIT

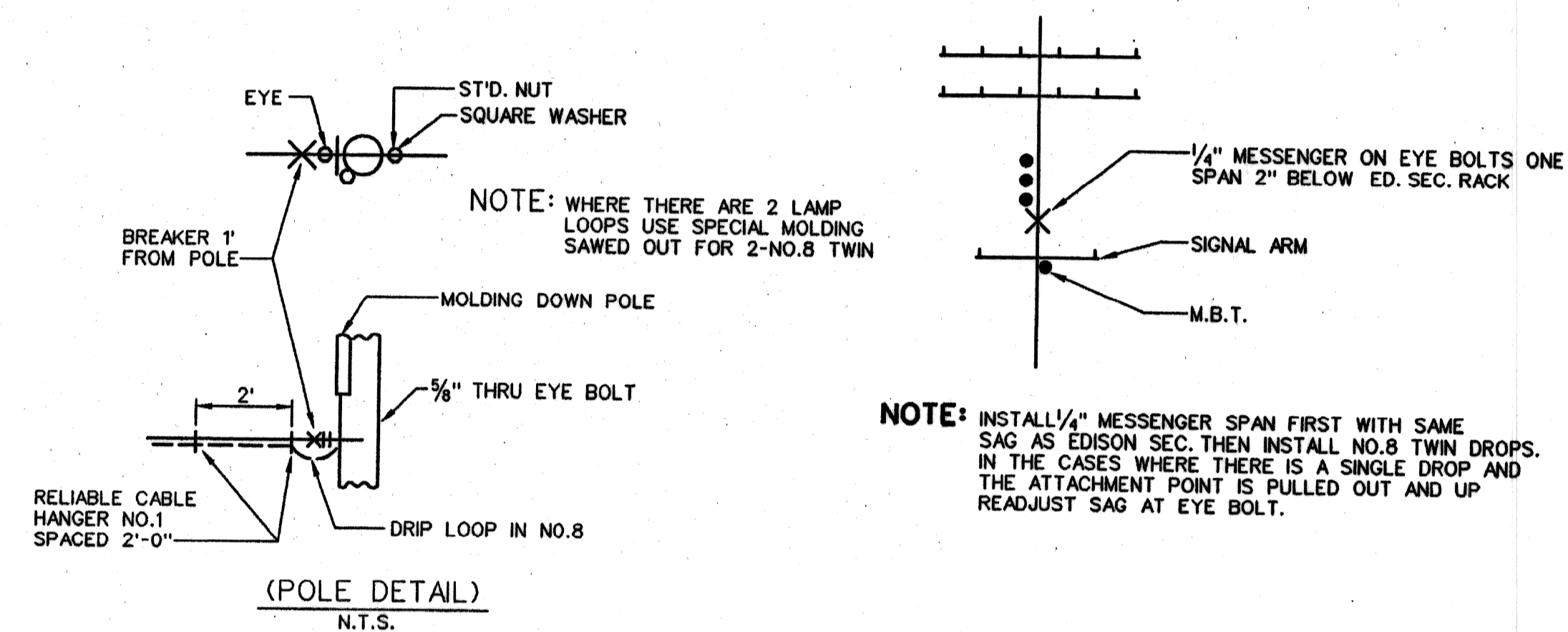
File No.
 Sheet No. 45 of 48
 Date



PLAN
N.T.S.

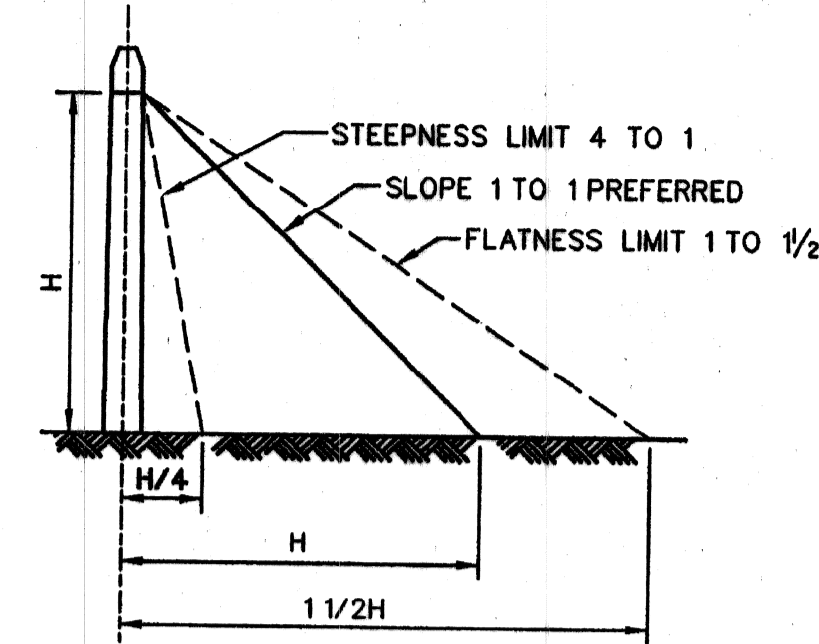


ELEVATION
N.T.S.

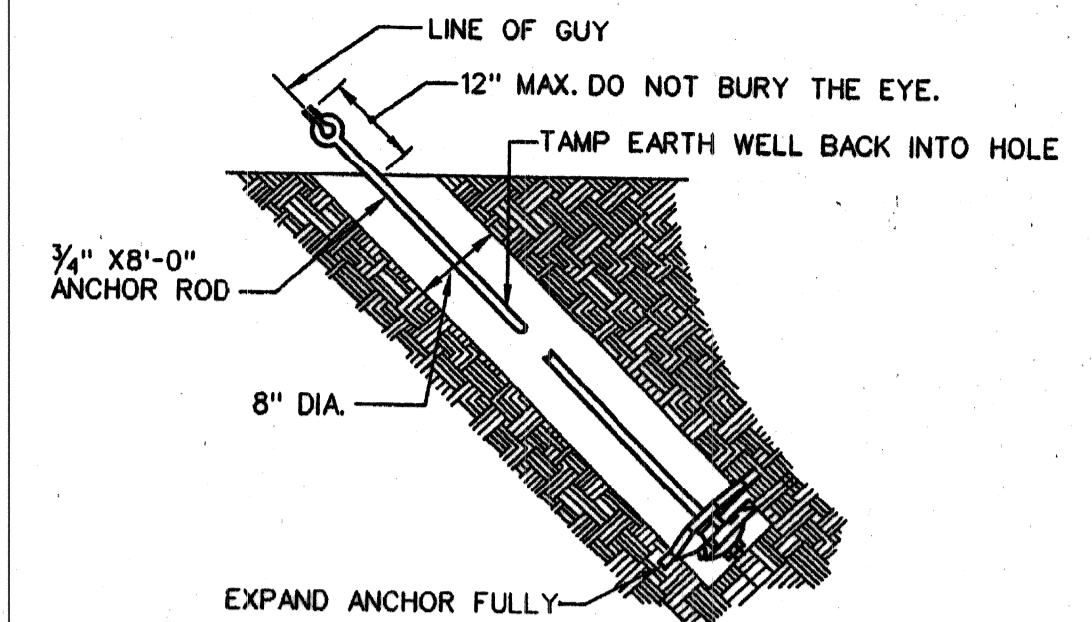


(POLE DETAIL)
N.T.S.

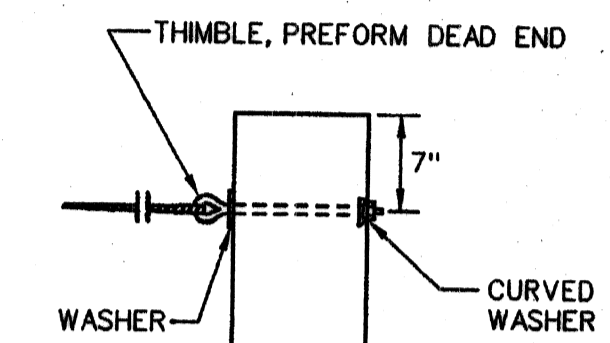
MESSENGER WIRE LAMP DROP SUPPORT: STANDARD INSTALLATION METHOD



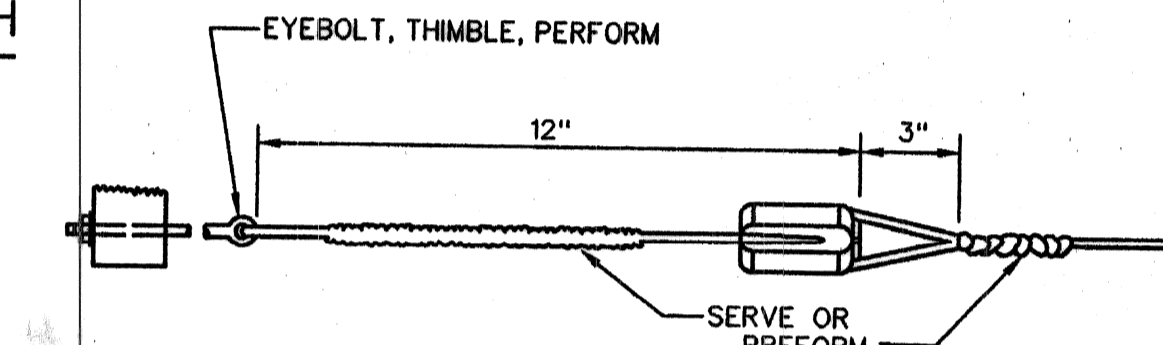
SLOPE LIMITS FOR ANCHOR GUYS



EXPANDING ANCHOR



POLE GUY



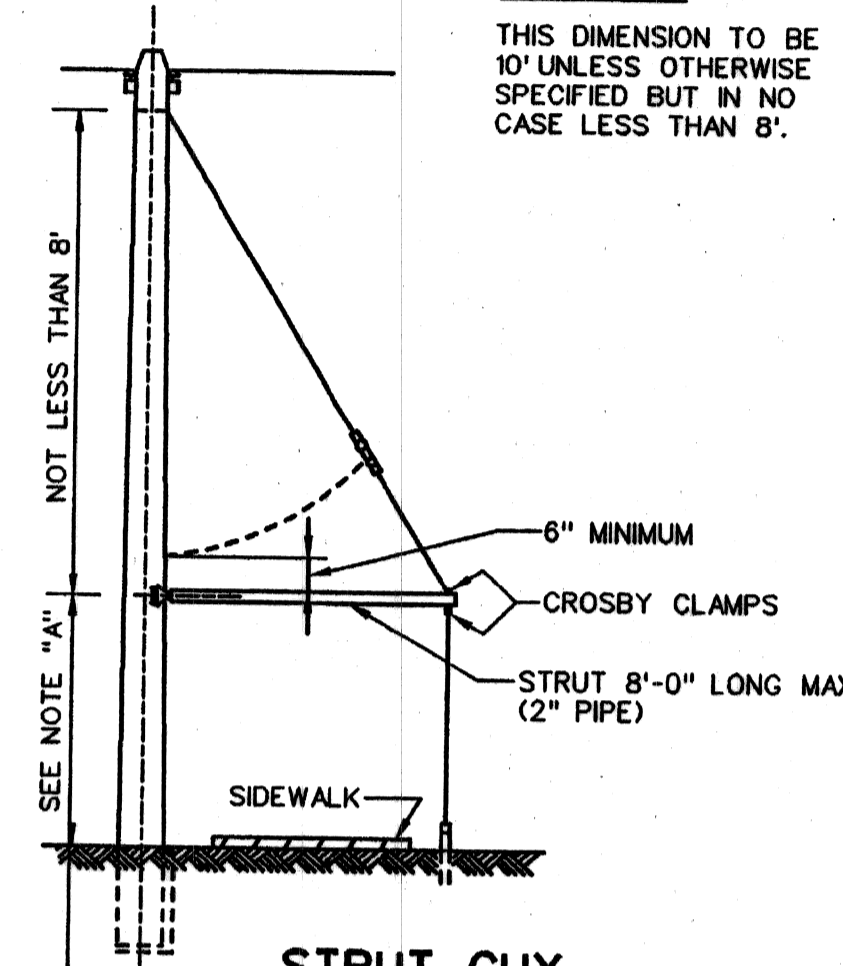
ARM GUY DETAILS

NOTE "A"

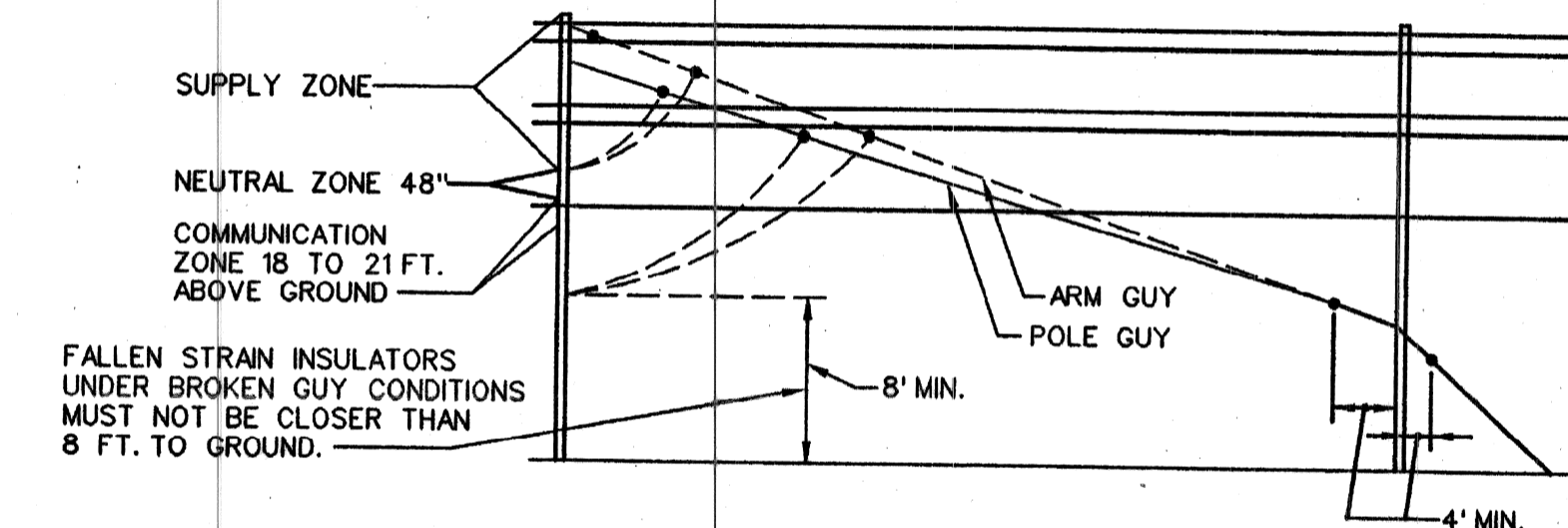
THIS DIMENSION TO BE 10' UNLESS OTHERWISE SPECIFIED BUT IN NO CASE LESS THAN 8'.

POLE HEIGHT	SETTING DEPTH
30'	6.0'
35'	6.0'
40'	6.0'
45'	6.5'
50'	7.0'
55'	7.5'
60'	8.0'

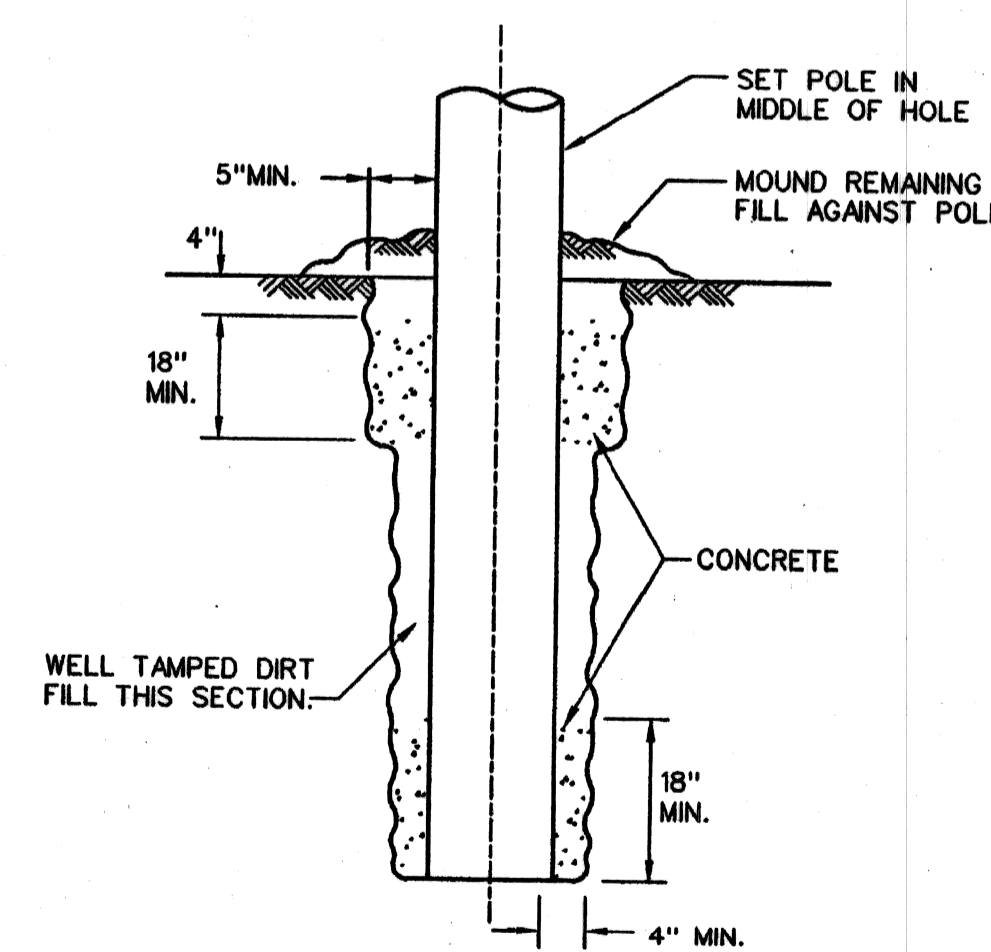
TYPICAL POLE SETTING DEPTH



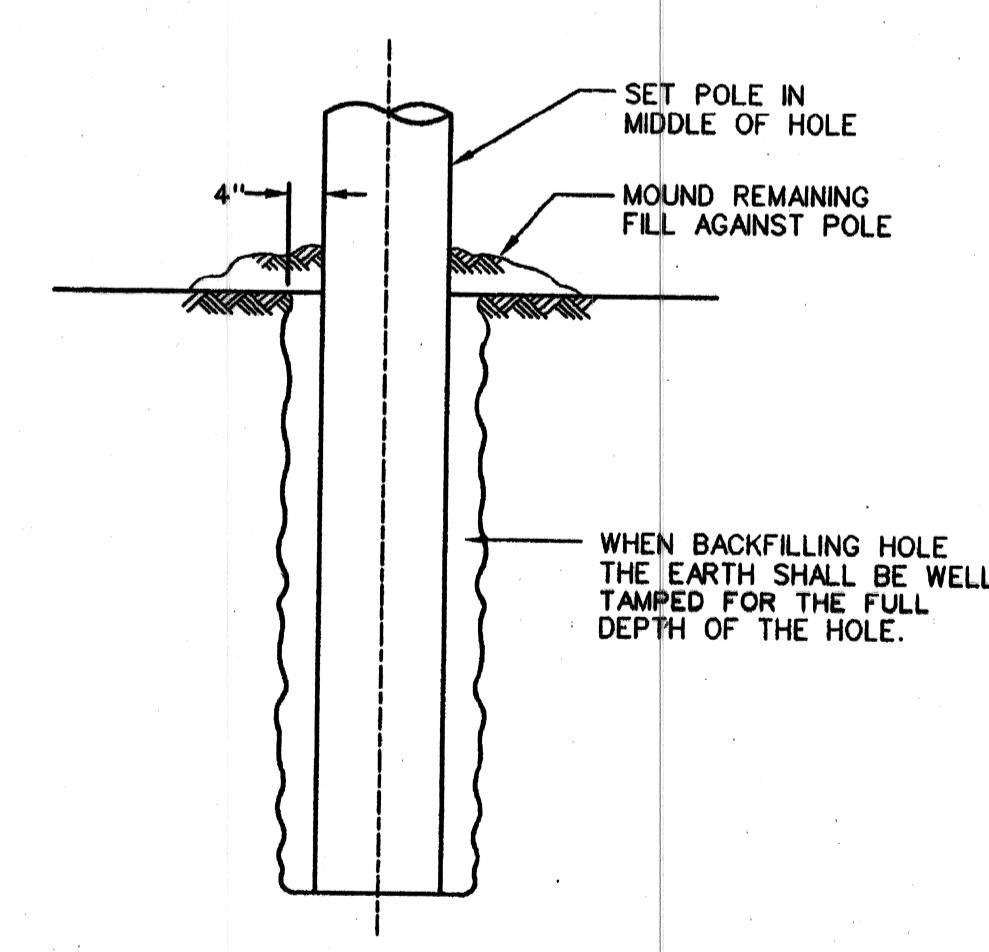
STRUT GUY



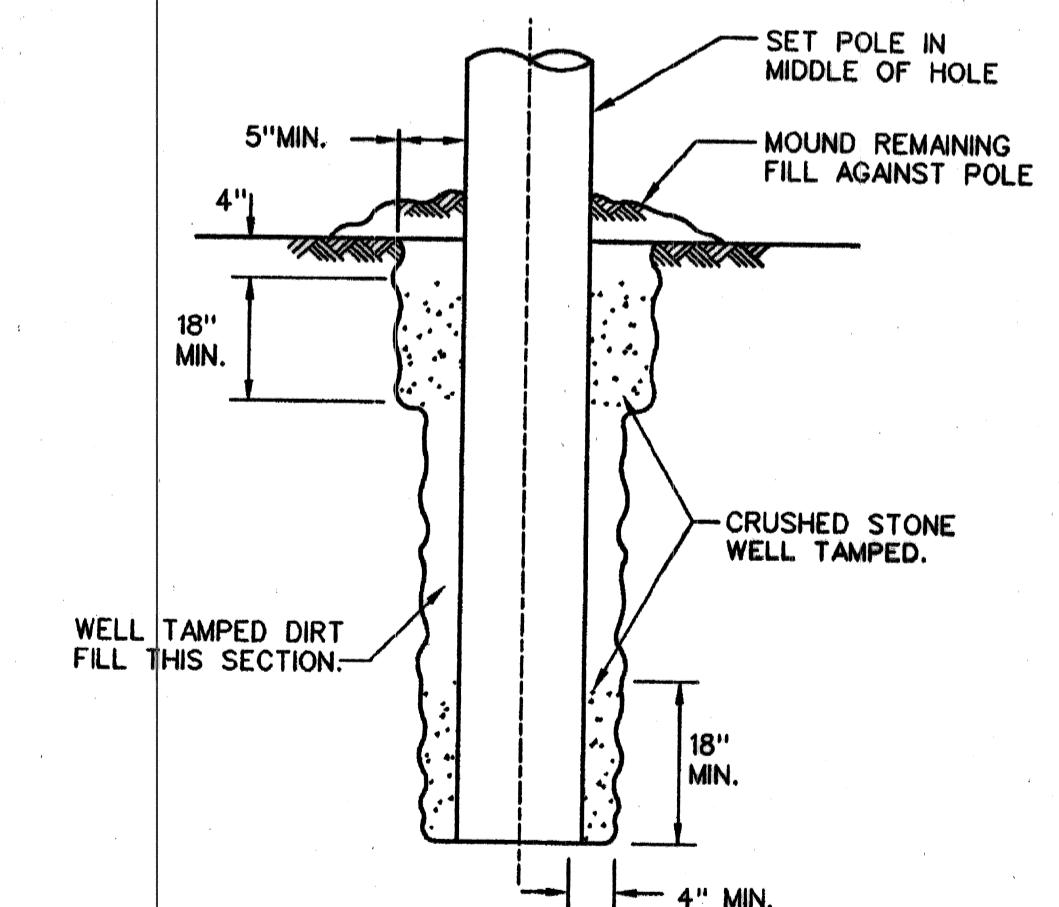
STRAIN INSULATOR POSITION IN GUY WIRES



WOOD POLE IN CONCRETE
N.T.S.



WOOD POLE INSTALLATION
N.T.S.



M.S.S.
SELF-SUPPORTING WOOD POLE IN CRUSHED STONE

DISK FILE: PLD 302

REVISIONS	Date	Description	Chkd. by

MESSENGER WIRE INSTALLATION & MISC.

Drawn CEA
Checked
Approved
Date

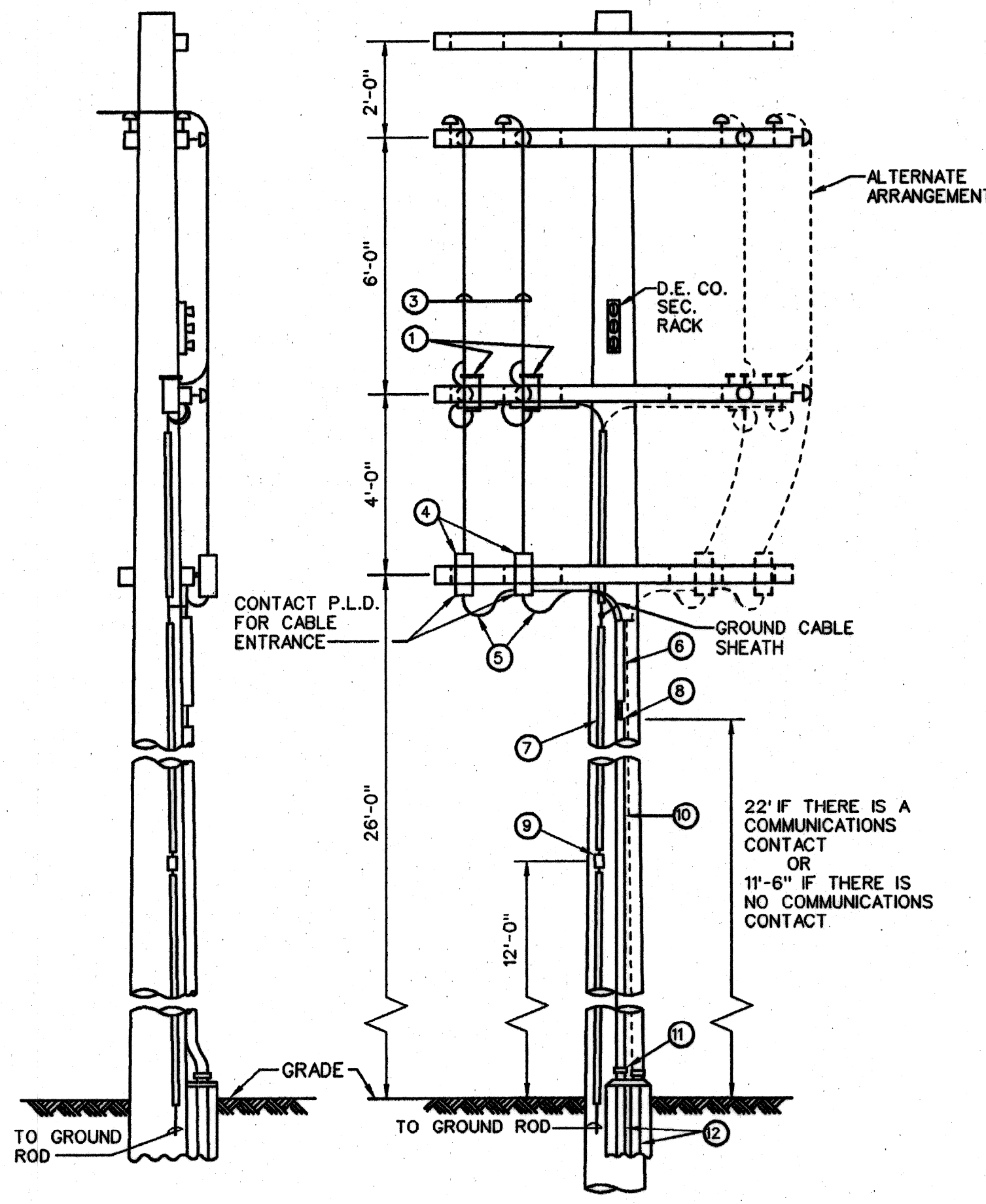
Consulting Engineering Associates, Inc.
15550 WYOMING AVE. DETROIT MICHIGAN 48221
TELEPHONE: (313) 341-5787 FAX: 341-0205

Checked by
Approved by

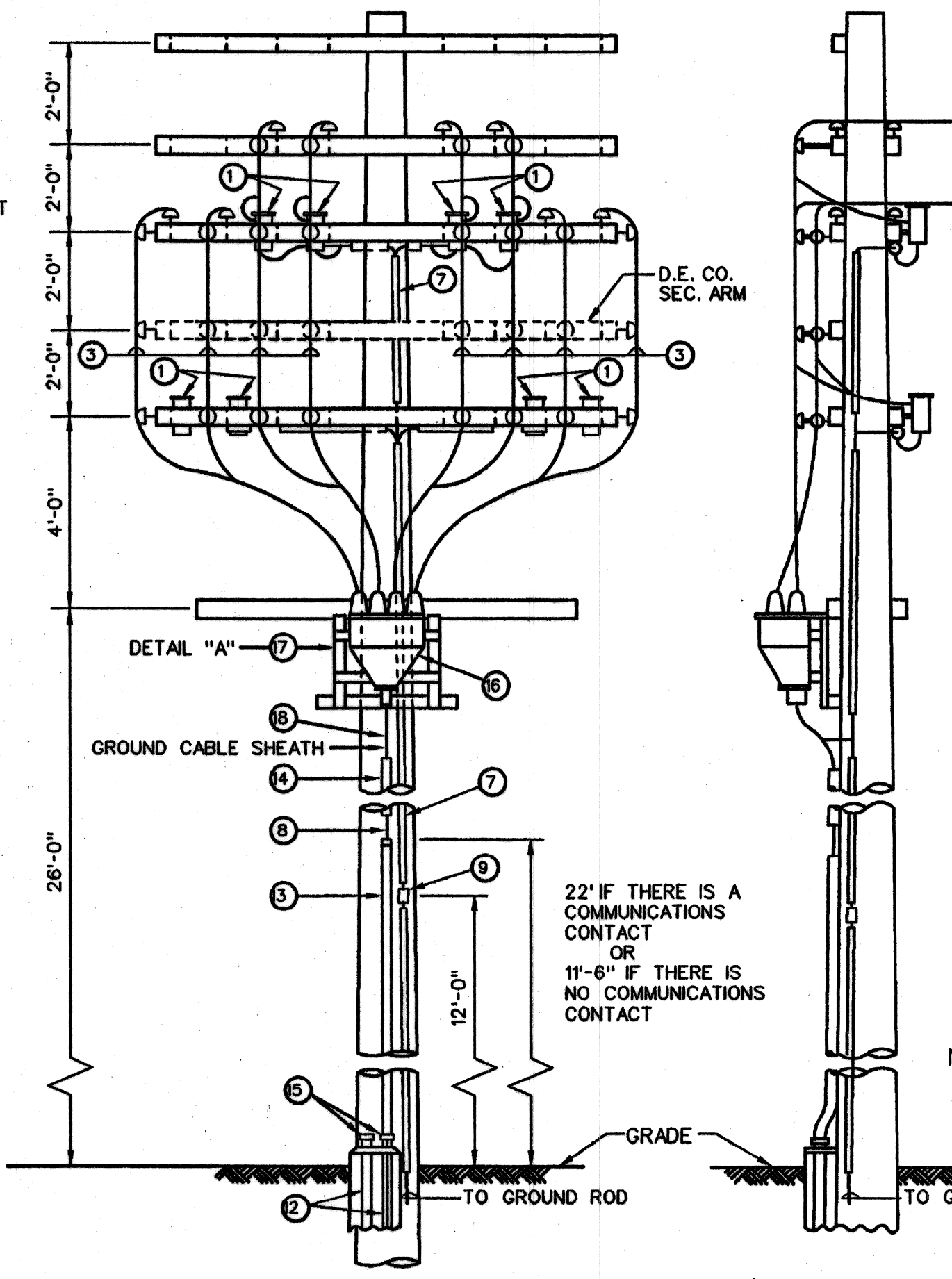
PUBLIC LIGHTING DEPARTMENT
CITY OF DETROIT

10-01-96 302

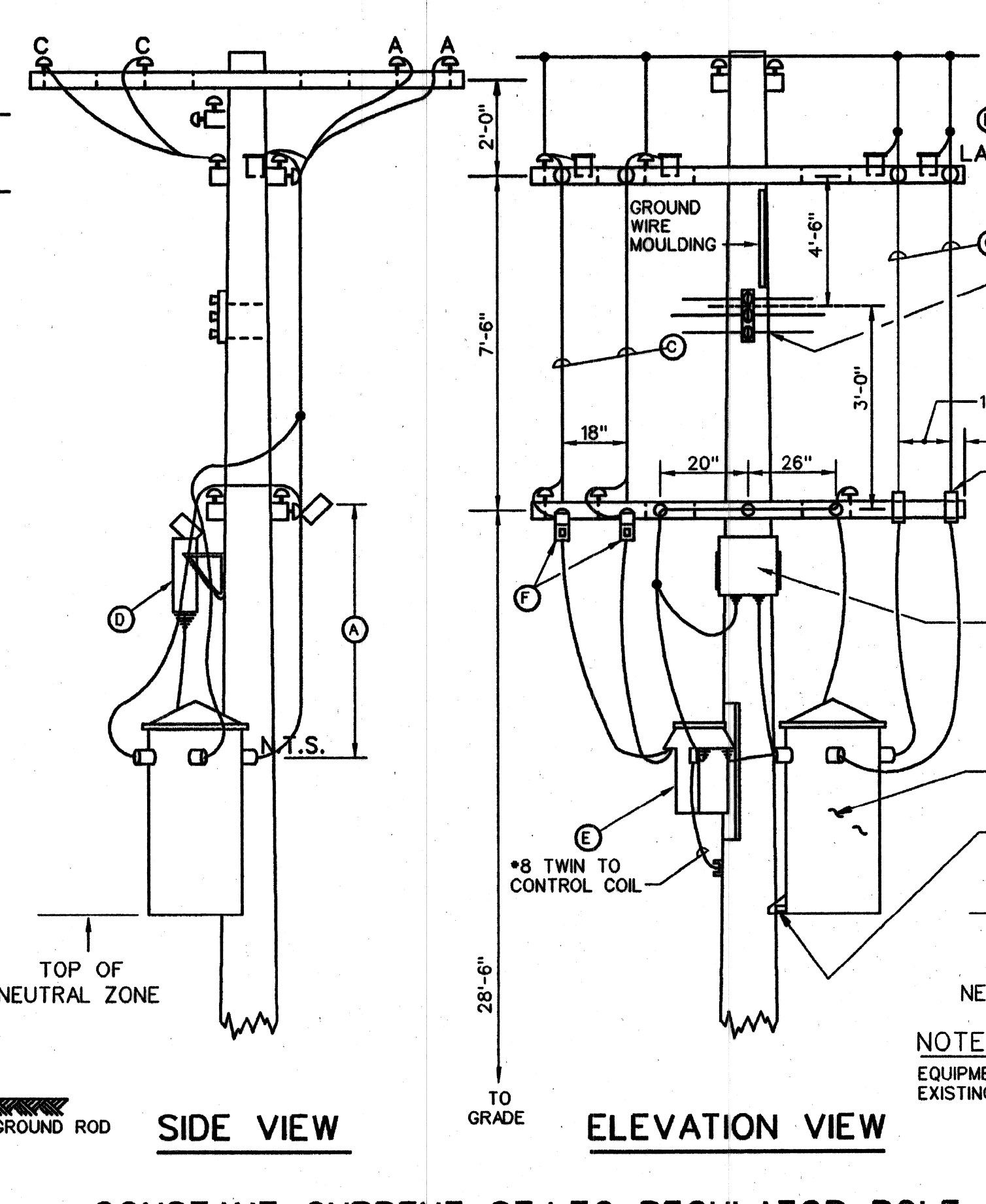
File No.
Sheet No. 46 of 48
Date



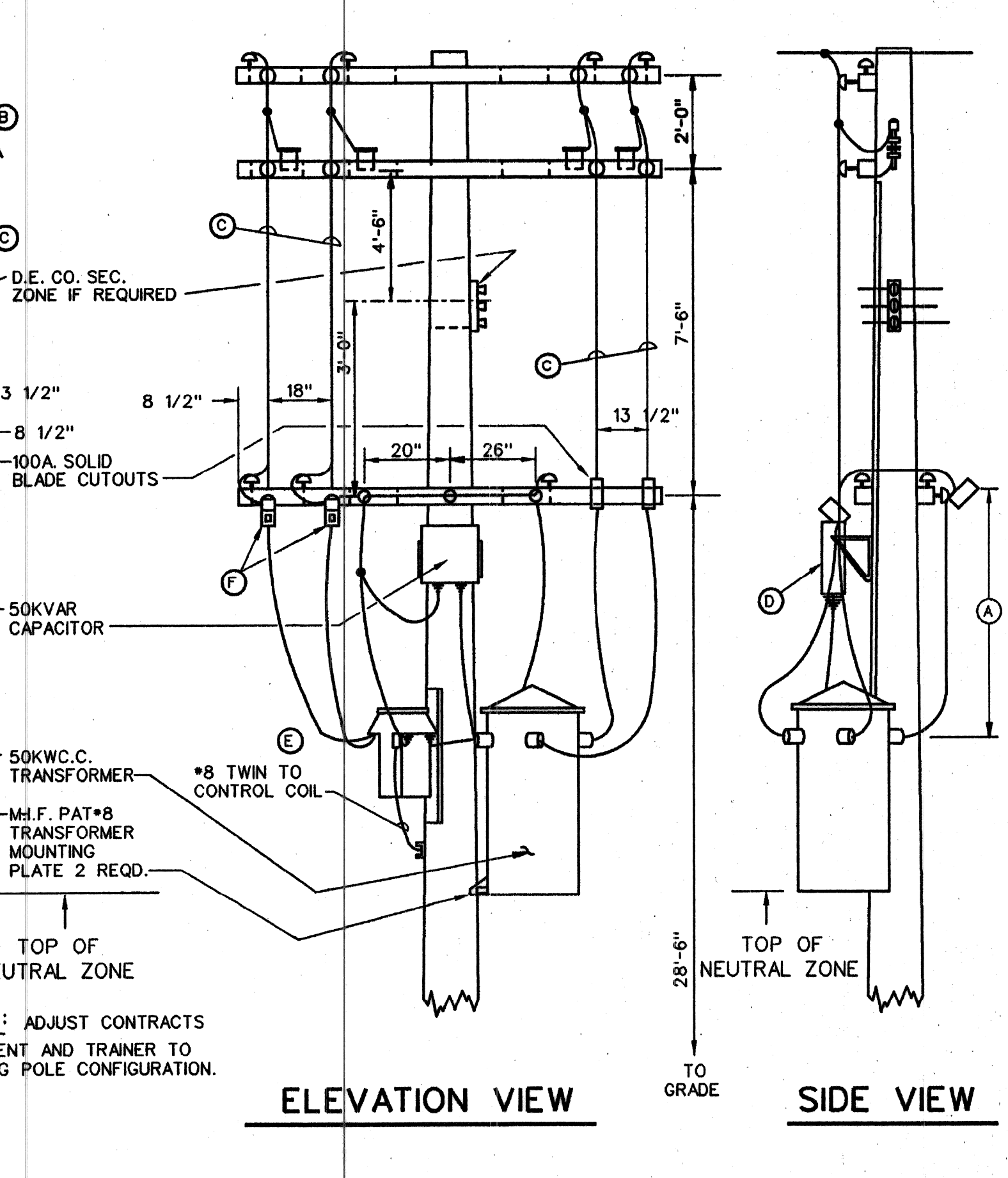
SIDE VIEW **ELEVATION VIEW**
SERIES STREET LIGHTING CABLE POLE
 N.T.S.



ELEVATION VIEW **SIDE VIEW**
TYPICAL 8/C STREET LIGHTING CABLE POLE
 N.T.S.



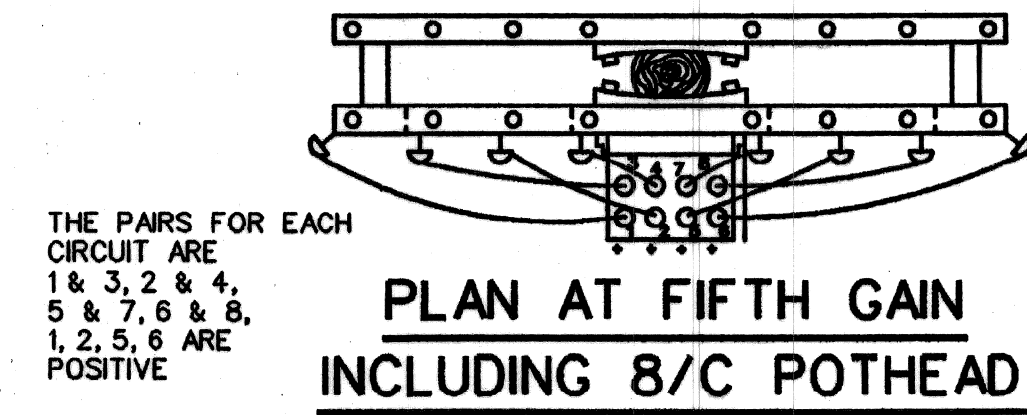
ELEVATION VIEW
CONSTANT CURRENT ST.LTG. REGULATOR POLE BUCK ARM INSTALLATION



ELEVATION VIEW **SIDE VIEW**
CONSTANT CURRENT ST.LTG. REGULATOR POLE LINE ARM INSTALLATION

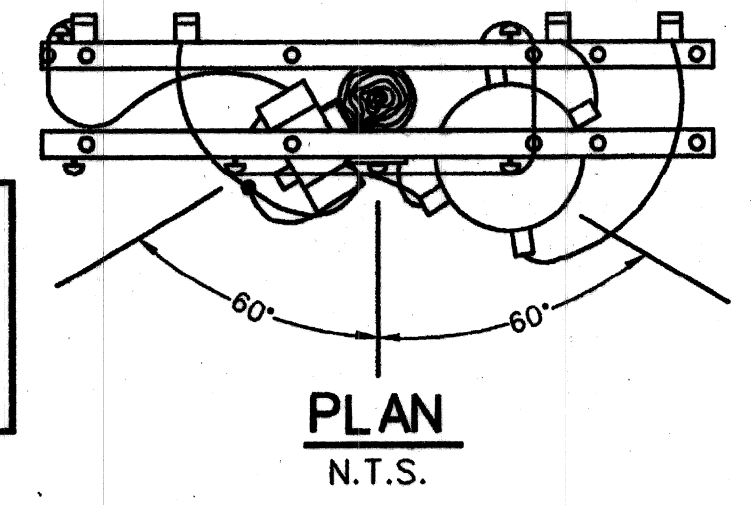
DETAIL ITEMS	
1	LIGHTNING ARRESTER
2	*6 OVERHEAD TRAINING WIRE (NEOPRENE COVERED WEATHERPROOF)
3	*8 OVERHEAD FLEXIBLE TRAINING WIRE
4	100A. SOLID BLADE CUTOUT
5	1/C* 8 L.C. CABLE
6	3" SPLIT-DUCT ABOVE GIP TO 8" BELOW CROSSARM
7	*2 GROUND WIRE UNDER MOULDING
8	LEAD WEATHERCAP & GALV. BUSHING
9	FOUR SCREW CONNECTOR
10	2 1/2" G.I.P. RISER
11	2 1/2" X 4" REDUCER ADAPTER
12	36" RADIUS PLASTIC BEND, NO. & SIZE OF CONDUIT AS SHOWN ON PLANS
13	3" G.I.P. RISER
14	4" SPLIT DUCT
15	3" X 4" REDUCER ADAPTER
16	8/C POTHEAD
17	*8/C POTHEAD MOUNTING BRACKET (SEE DETAIL "A")
18	8/C L.C. CABLE

- NOTES:**
- SEE P.L.D. DETAILS FOR GROUND ROD AND CONDUIT INSTALLATION.
 - INSTALL STEPS ON POLE FROM 8'-0" ABOVE GROUND TO 48" BELOW POTHEAD ARM.
 - INSTALL BRASS TAG ON EACH P.H. CAP & P.H. BODY. TAGS TO BE STAMPED WITH THE FOLLOWING INFORMATION: STREET LIGHTING CIRCUIT NUMBER & "PLUS" TO INDICATE POSITIVE LEAD.
 - THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER FOR APPROVAL A LIST OF ALL SPLICING MATERIALS HE PROPOSES TO USE WITH SUPPORTING DATA THAT THE MATERIAL IS SUITABLE FOR THE APPLICATION AS SHOWN ON THE DRAWINGS.

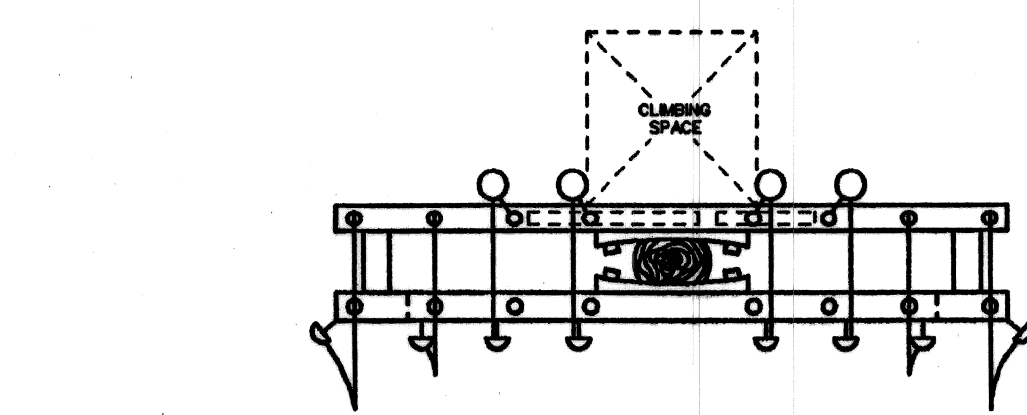


PLAN AT FIFTH GAIN INCLUDING 8/C POTHEAD
 N.T.S.

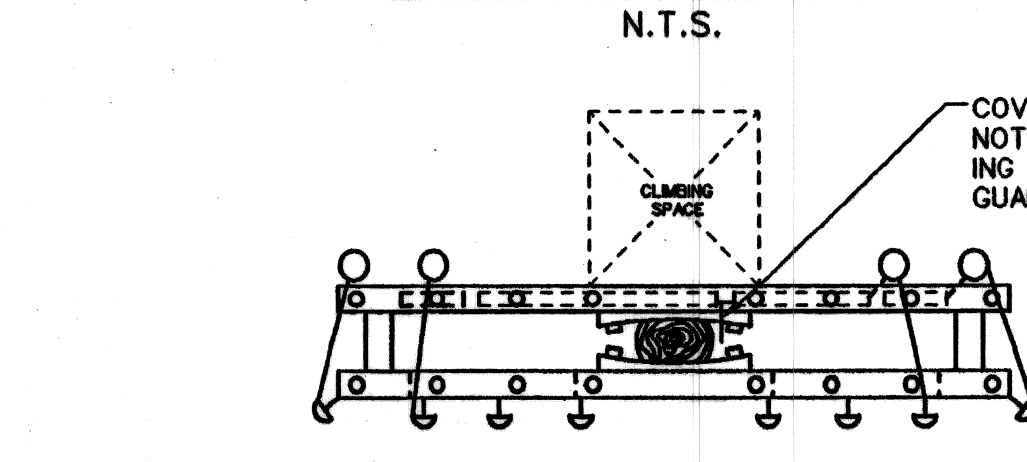
NOTE:
 ALL CROSSARMS SHALL BE 120"



PLAN AT THIRD GAIN
 N.T.S.

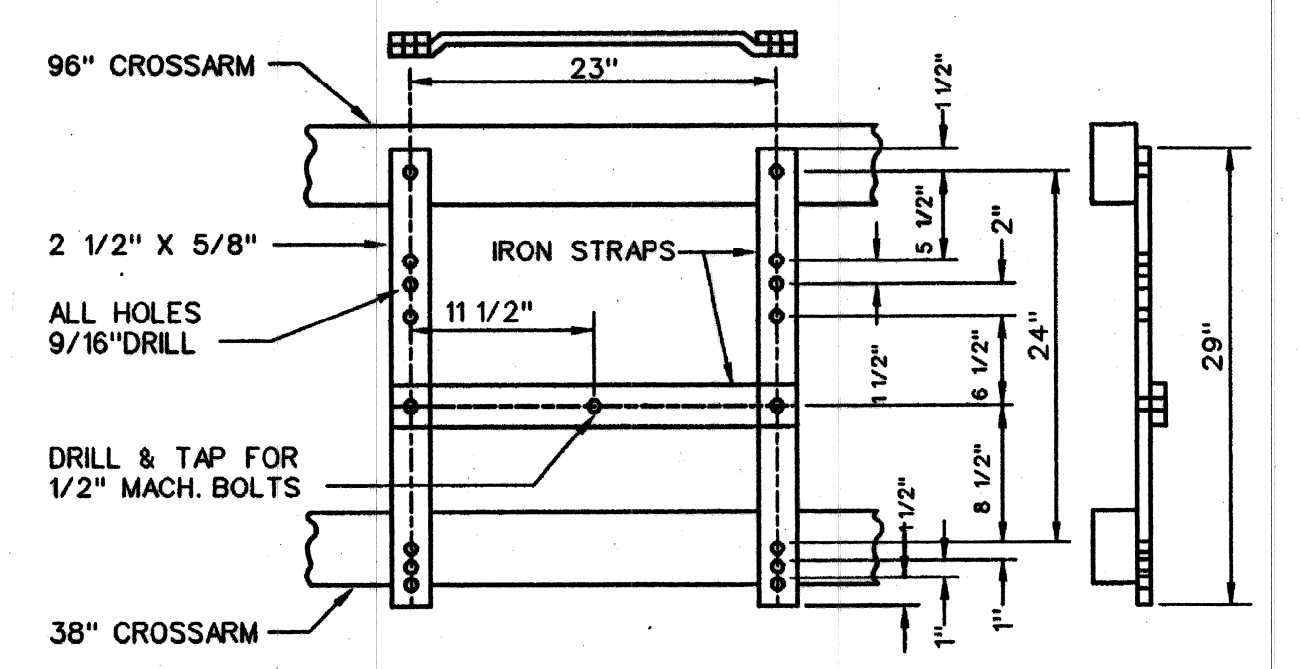


PLAN AT FIFTH GAIN
 N.T.S.

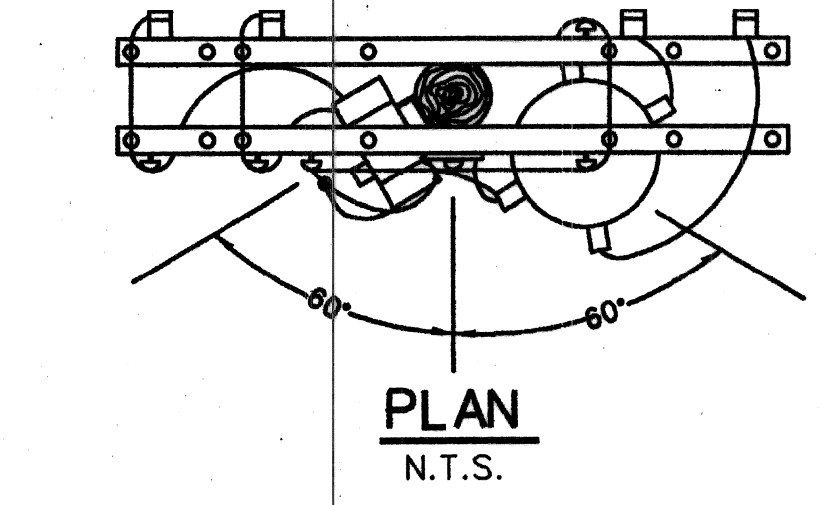


PLAN AT FIFTH GAIN
 N.T.S.

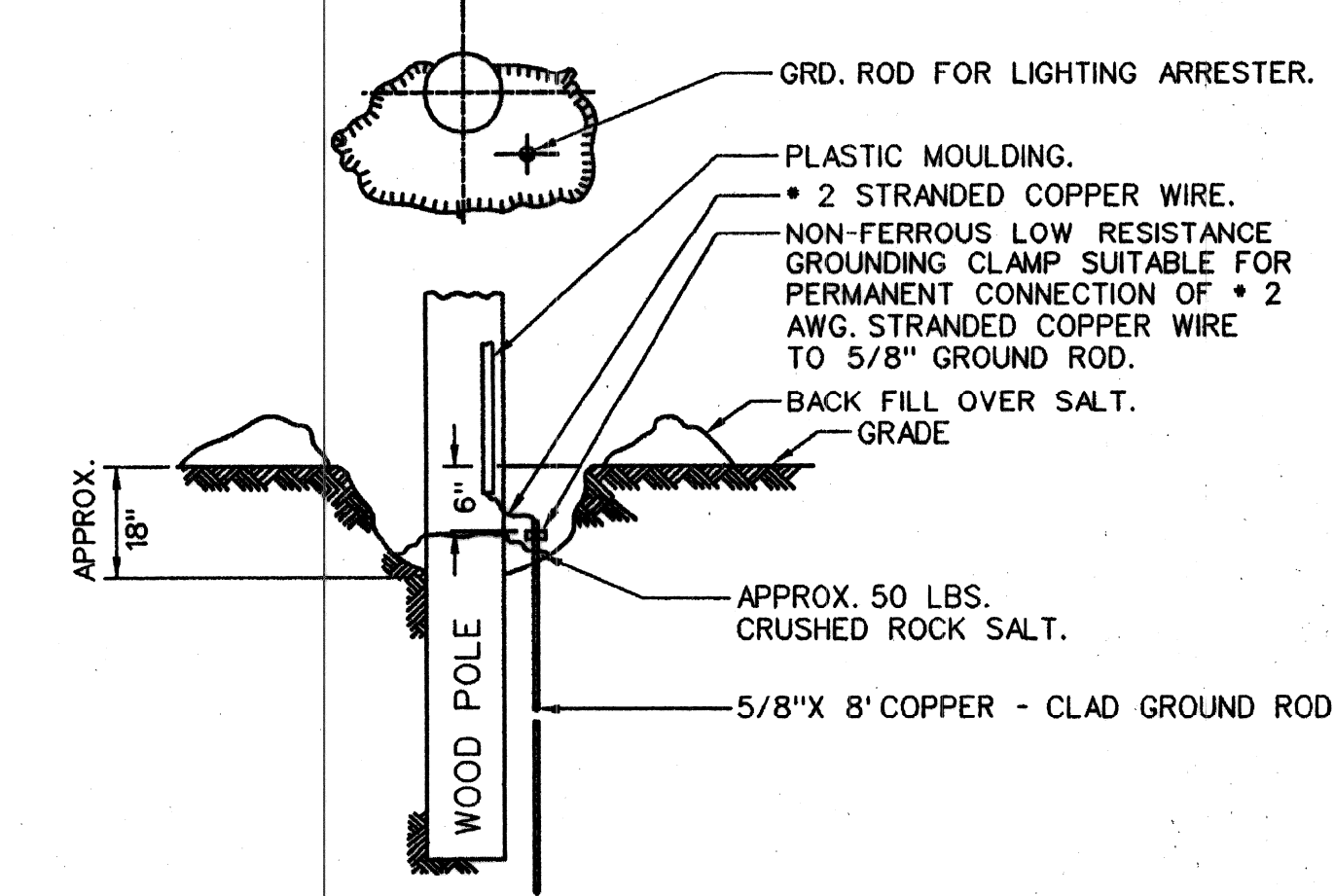
DETAIL ITEMS	
(A)	TOP THRU BOLT, 5'-0" TO ARM (5'-6" FOR TOP BUSHED TRANSFORMER)
(B)	*8 OVERHEAD TRAINING WIRE (NEOPRENE COVERED WEATHERPROOF)
(C)	ALL TRAINERS *6 W.P. EXCEPT AS NOTED
(D)	CAPACITOR CASE CONNECT TO PRI. L.A. GRD. WIRE
(E)	SOUTH BEND OIL SWITCH TO AMP. CONTROL
(F)	100 AMP. ENCLOSED CUTOUTS. FUSE AS SPECIFIED



BRACKET FOR 8/C POLE TYPE POTHEAD
 DETAIL "A" ①



PLAN
 N.T.S.



GROUND ROD INSTALLATION
 N.T.S.

Date	Description	Chkd. by

SERIES ST. LTG. CABLE POLE, 8/C ST. LTG. CABLE POLE; & CONSTANT CURRENT ST. LTG. REGULATOR POLE DETAILS

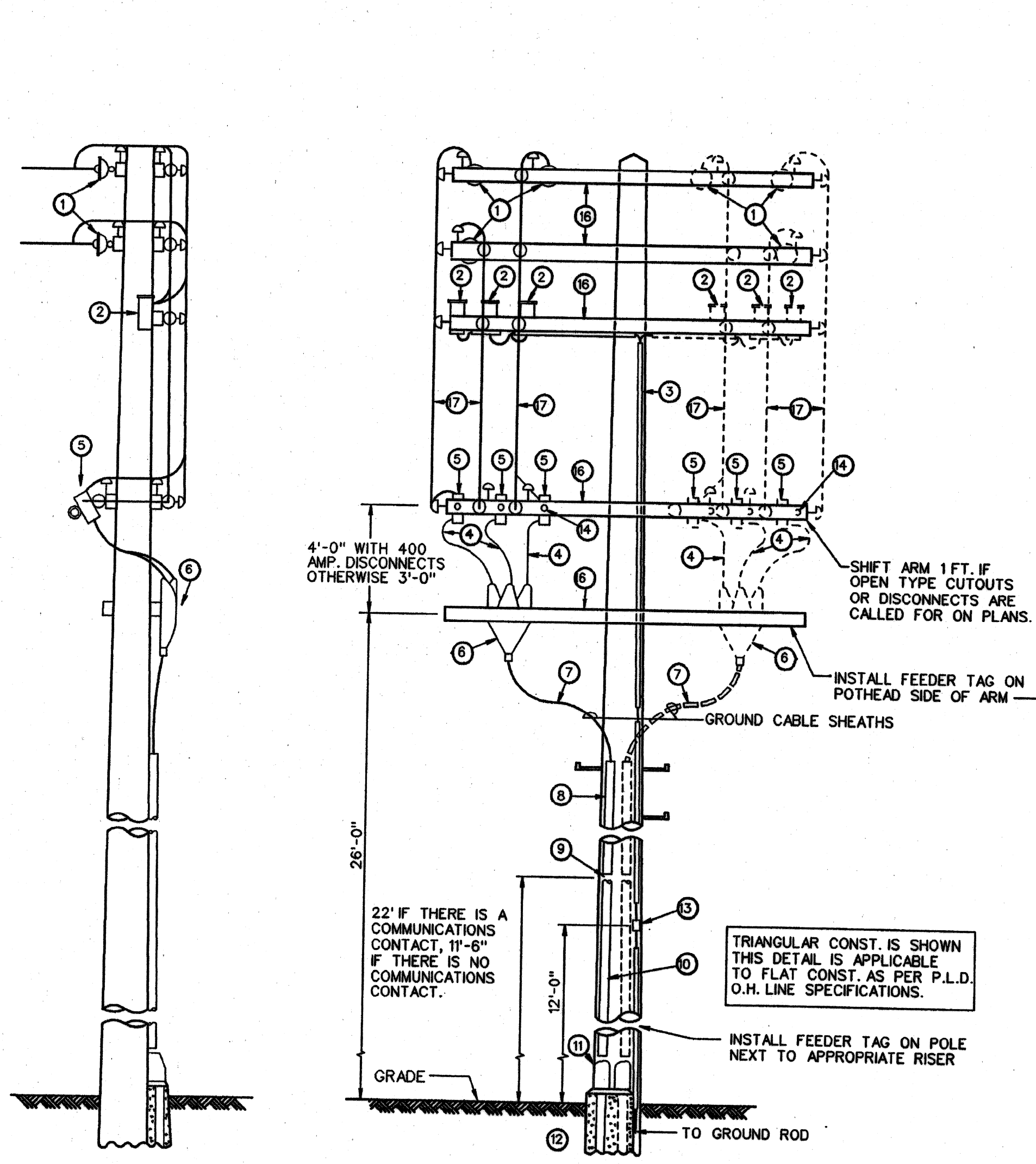
Drawn	CEA
Checked	
Approved	
Date	
Drwg. No.	
File No.	

10-01-96 **306**

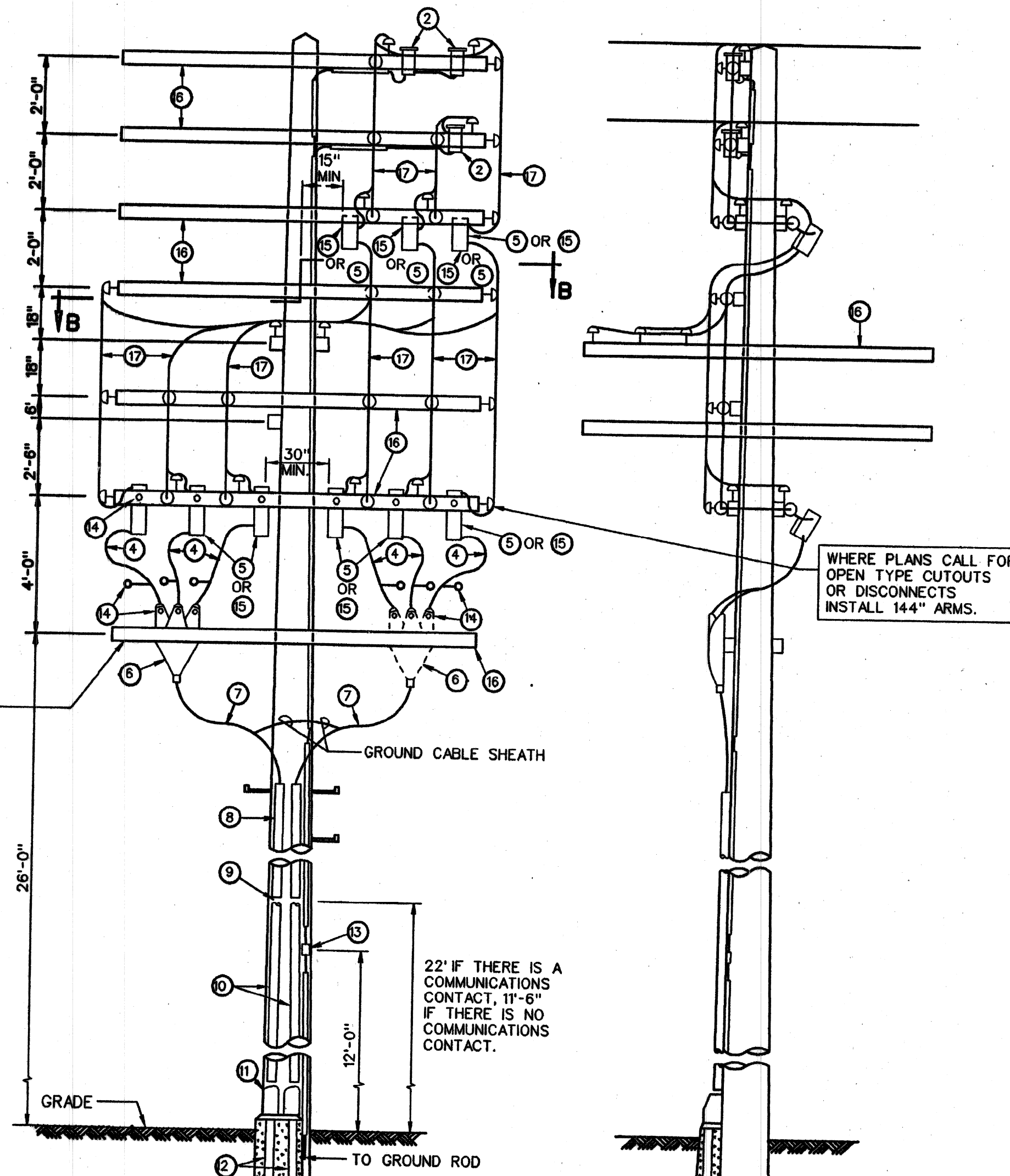
Consulting Engineers Inc.
 7550 WYOMING AVE. DETROIT MICHIGAN 48221
 TELEPHONE: (313) 341-5797 FAX: 341-0205

PUBLIC LIGHTING DEPARTMENT
 CITY OF DETROIT

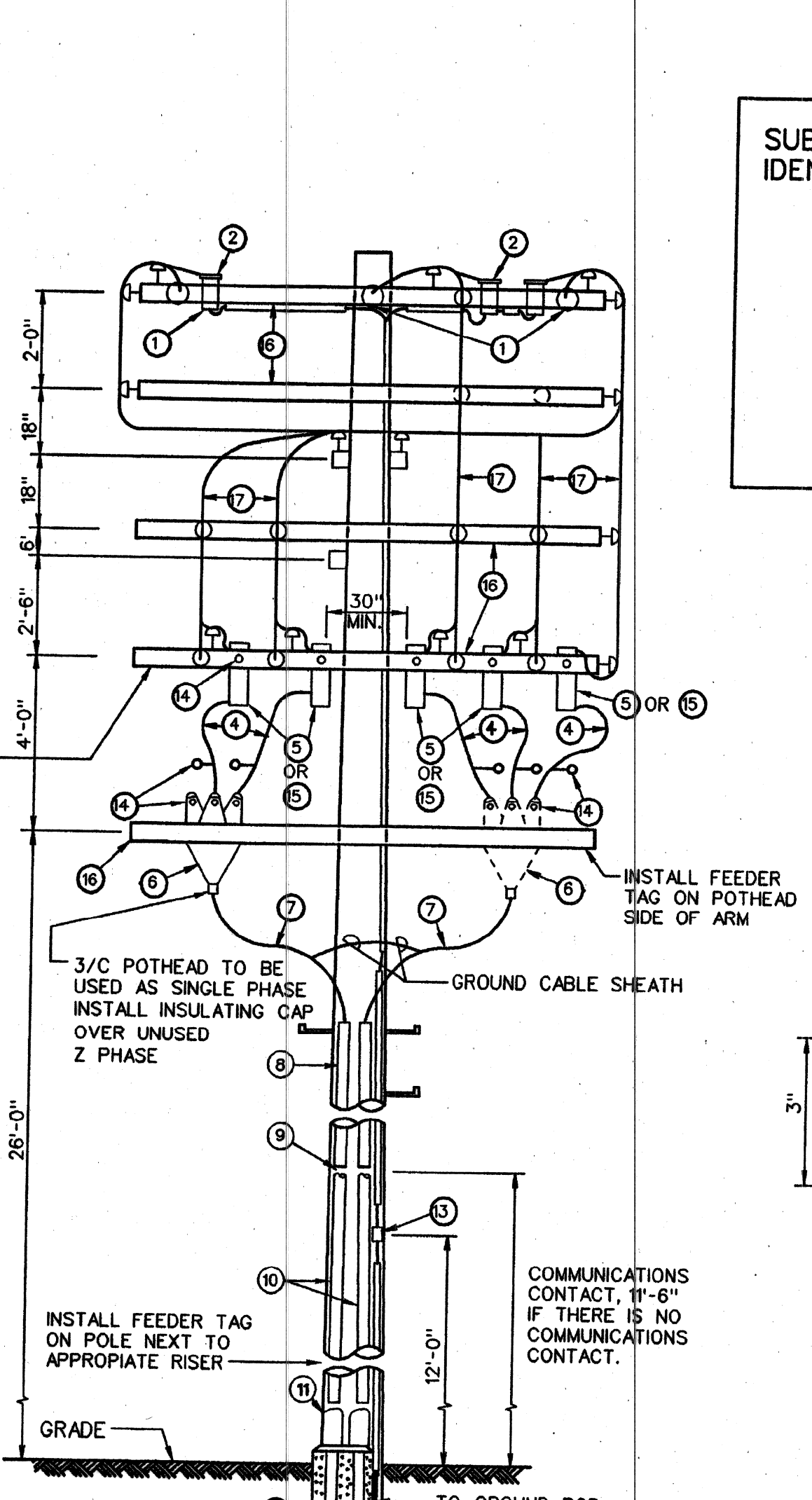
File No. **47 of 48**
 Sheet No. **47 of 48**
 Date



SIDE VIEW
ELEVATION VIEW
PRIMARY DISTRIBUTION CABLE POLE
N.T.S.



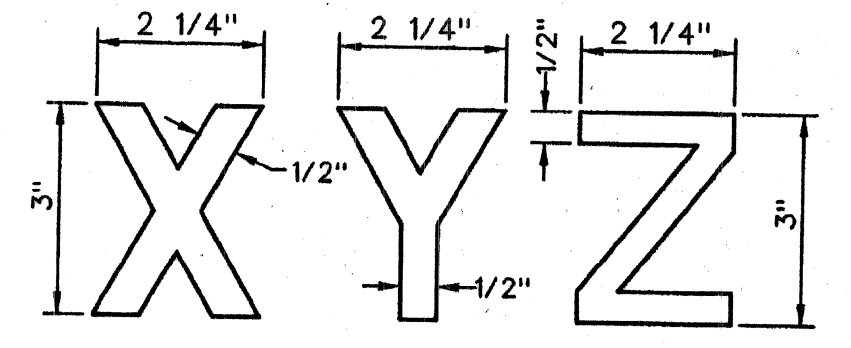
ELEVATION VIEW
SIDE VIEW
TYPICAL LOOP PRIMARY DISTRIBUTION CABLE POLE
N.T.S.



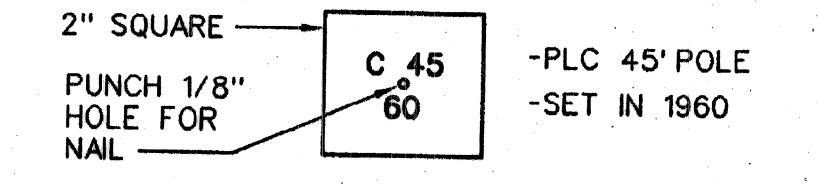
ELEVATION VIEW
DOUBLE PRIMARY DISTRIBUTION CABLE POLE
N.T.S.

SUBSTATION CIRCUIT ABBREVIATIONS ON IDENTIFICATION TAGS SHALL BE SPELLED AS FOLLOWS

BEL.	KSG.	POR.
BUT.	LAB.	STA.
CAN.	LEE.	STO.
COB.	LOT.	TOW.
CON.	LUD.	TR.
CUS.	MAP.	TUR.
GRF.	MCC.	WAL.
HUD.	MON.	WSU.
JSC.	PHI.	JEF.
JOY.		



O.H. LINE PHASE TAGS
N.T.S.



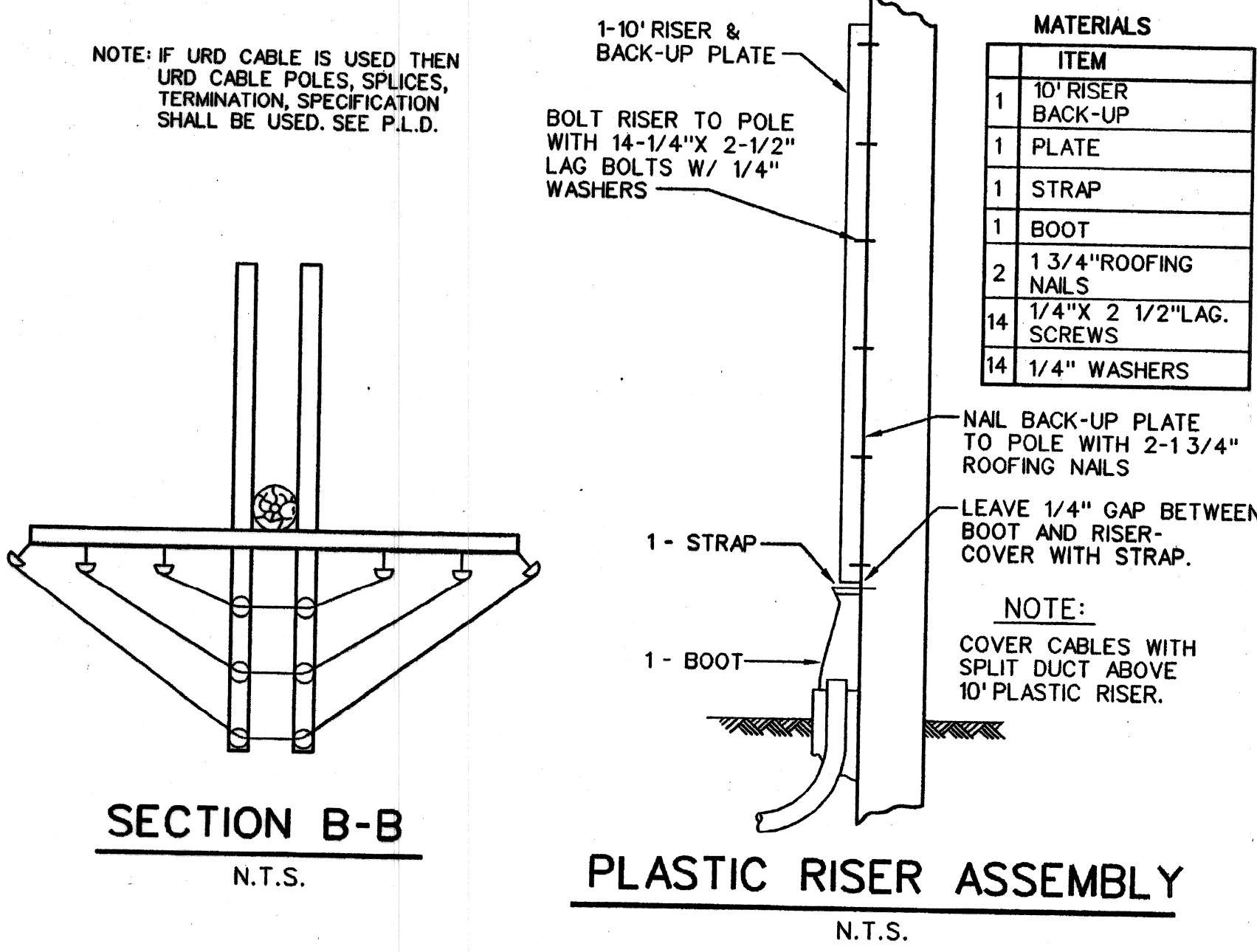
STOCK:0032" ALUMINUM MILL FINISH

USE 1/4" STEEL STAMP FOR LETTERING PIN SET MARKER 7'-0" ABOVE GRADE

DETAIL ITEMS

1	SUSPENSION INSULATOR
2	LIGHTNING ARRESTER-RATING AND TYPE AS REQUIRED
3	*2 GROUND WIRE UNDER MOULDING
4	HIGH VOLTAGE FLEXIBLE TRAINING WIRE 4/0 AWG. EXCEPT AS OTHERWISE NOTED
* 5	PRIMARY SOLID BLADE DISCONNECT
6	3/C POTHEAD, 500 AMP., FLAT DIVERGENT
7	L.C. CABLE
8	4" SPLIT DUCT ABOVE G.I.P.
9	WEATHER CAP
10	10' HASKON RISER
11	HASKON BOOT
12	36" RADIUS PLASTIC BEND, NO. & SIZE OF CONDUIT AS SHOWN ON PLANS
13	FOUR SCREW CONNECTOR
14	PHASING TAGS (ON CLIMBING SIDE OF PRIMARY LINE ARMS)
* 15	WESTINGHOUSE FUSED CUTOUT
16	120" 8 PINS STANDARD CROSSARM
17	*4/0 TRAINING WIRE, NEOPRENE COVERED, WEATHERPROOF

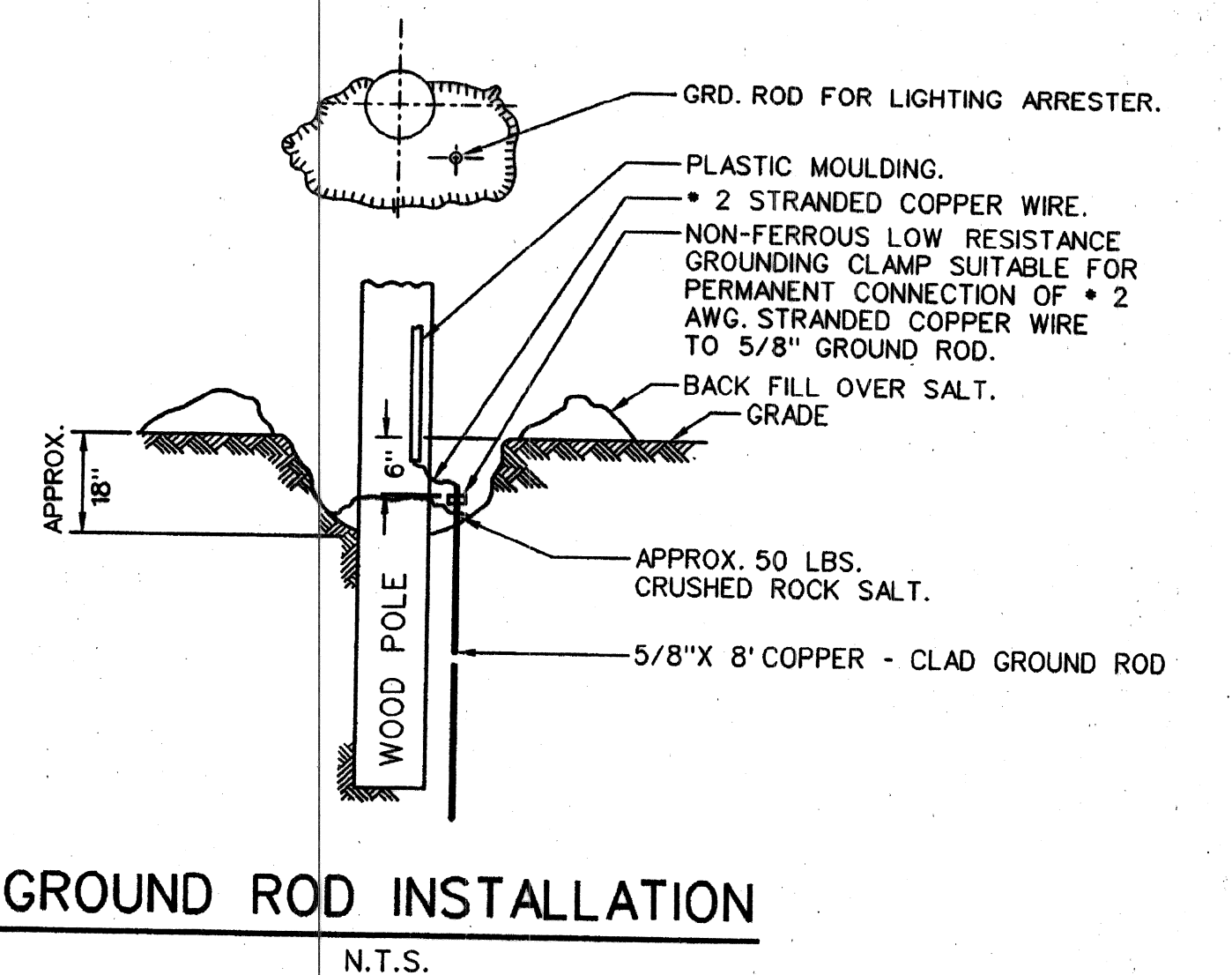
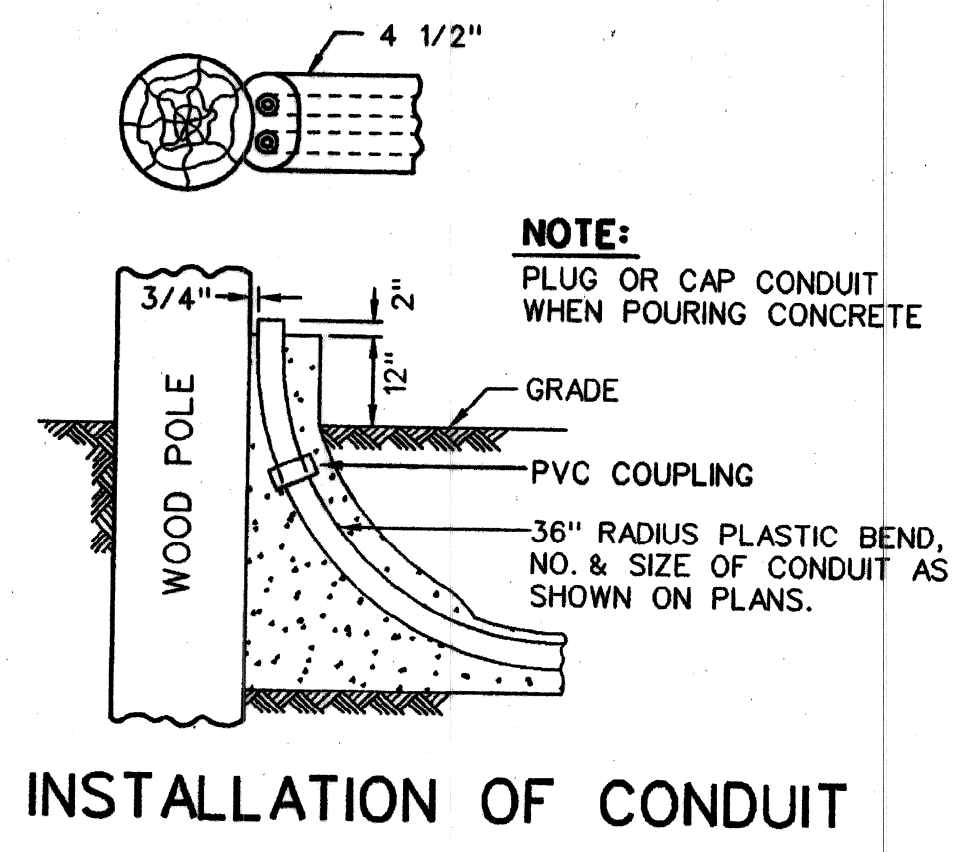
- * SEE WIRING DIAGRAM ON PLANS: FUSE SIZE & ORIENTATION OF FUSE OR SOLID BLADE DISCONNECTS.
- KEEP ALL ELECTRICAL EQUIPMENT OUTSIDE OF THE 30" CLIMBING ZONE.
 - GROUND TO 48" BELOW POTHEAD ARM. INSTALL STEPS ON POLE FROM 8'-0" ABOVE.
 - THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER FOR APPROVAL A LIST OF ALL SPLICING MATERIALS HE PROPOSES TO USE WITH SUPPORTING DATA THAT THE MATERIAL IS SUITABLE FOR THE APPLICATION AS SHOWN ON THE DRAWING.



MATERIALS

ITEM	ITEM
1	10' RISER BACK-UP
1	PLATE
1	STRAP
1	BOOT
2	1 3/4" ROOFING NAILS
14	1/4" X 2 1/2" LAG. SCREWS
14	1/4" WASHERS

NOTE: COVER CABLES WITH SPLIT DUCT ABOVE 10' PLASTIC RISER.



DISK FILE: PLD 307

REV.	Date	Description	Chkd. by

PRIMARY DISTRIBUTION CABLE POLES DETAILS

Drawn CEA
Checked
Approved
Date

Consulting Engineering Associates, Inc.
16580 WYOMING AVE. DETROIT MICHIGAN 48221
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File No.

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CITY OF DETROIT

10-01-96 307

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Sheet No. 48 of 48
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