PLAN INDEX	
SH. NO.	DESCRIPTION
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13-15	EX ABUTMENT DETAILS (REMOVAL)
16	EX WINGWALL DETAILS (REMOVAL)
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39	SLAB & SCREED DETAILS
40-41	STEEL REINFORCEMENT DETAILS
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47-49	CITY OF DETROIT STANDARD PLANS
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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.

STANDARD CURB DETAILS	C-4380
SIDEWALK JOINTING STANDARD	C-4462

MDOT STANDARD PLANS

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

SIDEWALK RAMP DETAILS	R-28-F
INTEGRAL CURB AND INTEGRAL CURB & GUTTER	R-31-D
TRANSVERSE PAVEMENT JOINTS	R-39-H
LONGITUDINAL PAVEMENT JOINTS	R-41-E
CONVENTIONAL PAVEMENT REINFORCEMENT	R-45-F
TEMPORARY CONCRETE BARRIER	R-52-E
GRANULAR BLANKET, UNDERDRAINS, OUTLET ENDINGS FOR UNDERDRAINS, AND SEWER BULKHEADS	R-80-D
SOIL EROSION & SEDIMENTATION CONTROL MEASURES	R-96-D
BRIDGE RAILING, AESTHETIC PARAPET TUBE	B-25-F
FENCING FOR BRIDGE RAILING, AESTHETIC PARAPET TUBE	B-41-C
MOLDING, BEVEL, LIGHT STANDARD ANCHOR BOLT ASSEMBLY AND NAME PLATE DETAILS	B-103-E
DRIVEWAY OPENINGS & APPROACHES AND CONCRETE SIDEWALKS	R-29-F
LOCATION OF TRANSVERSE JOINTS IN CONCRETE PAVEMENT	R-43-G

*SEE WZD-125-E 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

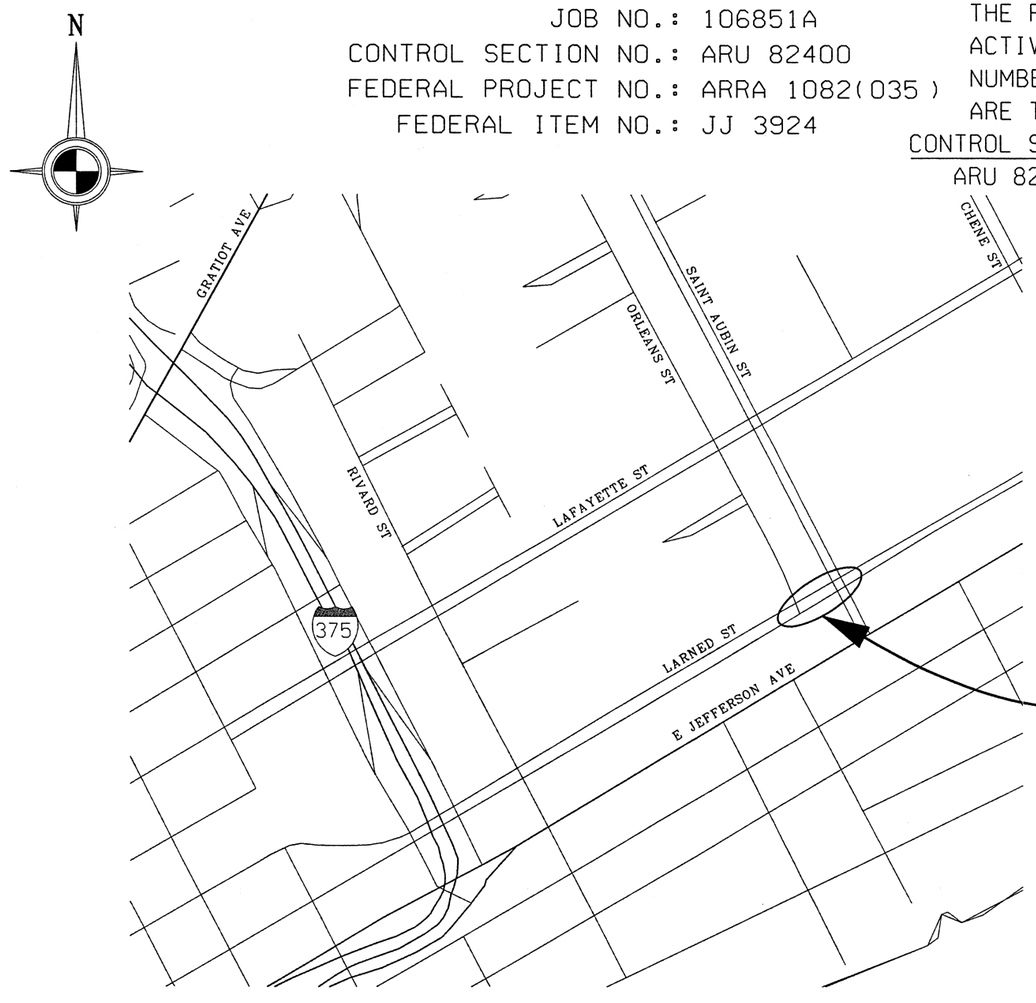
PLAN AND PROFILE OF PROPOSED
REHABILITATION OF THE

LARNED STREET BRIDGE

OVER THE

DEQUINDRE CUT GREENWAY

STATE BRIDGE NO.: S01 of 82-22-88
STRUCTURE NO.: 12380
JOB NO.: 106851A
CONTROL SECTION NO.: ARU 82400
FEDERAL PROJECT NO.: ARRA 1082(035)
FEDERAL ITEM NO.: JJ 3924



THE REGULATED WASTE ACTIVITY IDENTIFICATION NUMBERS FOR THIS PROJECT ARE THE FOLOWING:

CONTROL SECTON	NUMBER
ARU 82400	MIK 932431968

TRAFFIC DATA:

	YEAR 2009	YEAR 2029
ADT	15,014	27,117
DHV	1,396	2,522
COMM%	5%	5%
DESIGN SPEED		30 MPH
POSTED SPEED		25 MPH

THE REHABILITATION DESIGN 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 DESIGN. THE ORIGINAL STRUCTURE WAS DESIGNED FOR H20-S16-44 LOADING.

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.

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
STRUCTURAL STEEL	
AASHTO M270 GRADE 36	fy = 36,000 PSI
AASHTO M270 GRADE 50	fy = 50,000 PSI

ALL EXPOSED CONCRETE CORNERS SHOWN SQUARE ON THE PLANS SHALL BE BEVELED WITH ½" TRIANGULAR MOLDINGS EXCEPT AS OTHERWISE NOTED.

THE BRIDGE PAINT MAY CONTAIN LEAD.

UNLESS OTHERWISE SHOWN ON THE PLANS PROVIDE MINIMUM CONCRETE CLEAR COVER FOR REINFORCEMENT ACCORDING TO THE FOLLOWING:

CONCRETE CAST AGAINST EARTH:	3 IN.
PRESTRESSED BEAMS:	1 IN.
ALL OTHER UNLESS SHOWN ON PLANS:	2 IN.

THE BRIDGE DECK SURFACE HAS AN HMA OVERLAY, HMA CAP OR HMA PATCHES. REMOVAL OF HMA AS A RESULT OF REMOVAL OF OTHER SUPERSTRUCTURE ITEMS SHALL BE INCLUDED IN THE REMOVAL OF THOSE ITEMS.

CONTRACT FOR: SUPERSTRUCTURE REPLACEMENT OF LARNED STREET BRIDGE OVER THE DEQUINDRE CUT GREENWAY AND ASSOCIATED SUBSTRUCTURE AND ROAD WORK.

BRIDGE PLANS WERE PREPARED FOR THE CITY OF DETROIT BY

STATE OF MICHIGAN — RONALD G. WOOLFE ENGINEER NO. 23345 — LICENSED PROFESSIONAL ENGINEER

DLZ
1425 WEST CONGRESS, SUITE 328
DETROIT, MICHIGAN 48226
(313) 961-4040

Ronald G. Woolfe — 1/5/10
LICENSED PROFESSIONAL ENGINEER — DATE

TRAFFIC ENGINEERING DIVISION
DEPARTMENT OF PUBLIC WORKS
2633 MICHIGAN AVENUE
DETROIT, MI 48216
01/04/10

CHECKED BY: SK | APPROVED BY: Stella Jutapa | FILE NUMBER:

DEPARTMENT OF WATER AND SEWERAGE
1420 WASHINGTON BLVD.
DETROIT, MI 48226

CHECKED BY: | APPROVED BY: | FILE NUMBER:

PUBLIC LIGHTING DEPARTMENT
CITY OF DETROIT

PLD SP. PROV. APPLY
PUBLIC LIGHTING DEPARTMENT
9449 GRINNELL STREET
DETROIT, MI 48213
12-17-09 10:15AM

CHECKED BY: ML | APPROVED BY: Laskowski | FILE NUMBER: 27-1140

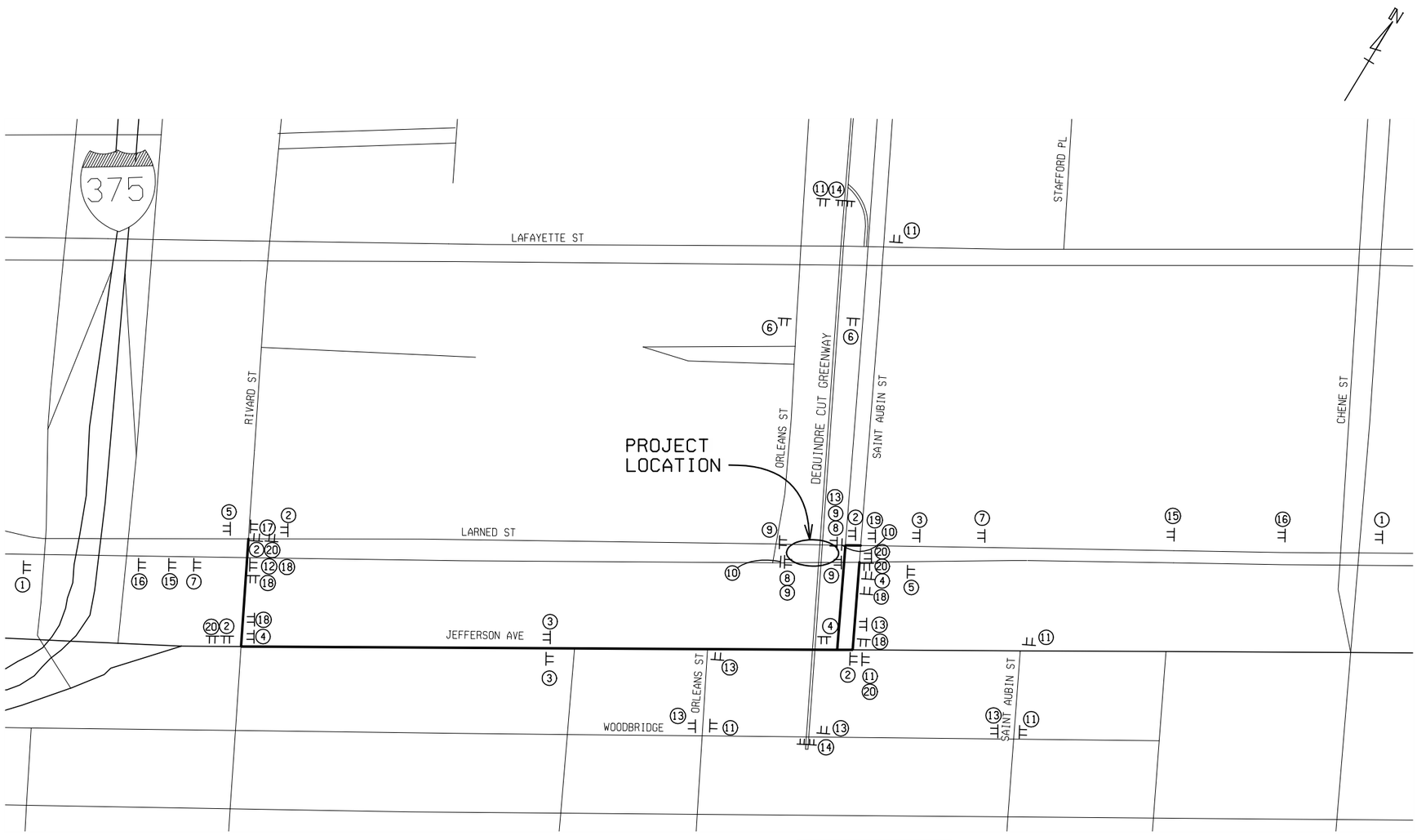
LOCAL AUTHORITY APPROVAL
CITY OF DETROIT
CITY ENGINEERING DIVISION
DEPARTMENT OF PUBLIC WORKS

LICENSED PROFESSIONAL ENGINEER — 1/6/10 — 38198 REGISTRATION NO.

MDOT
Michigan Department of Transportation

CONTROL SECTION	JOB NUMBER	FEDERAL NUMBERS PROJECT	FEDERAL NUMBERS ITEM	SHEET NO.
ARU 82400	106851A	ARRA 1082(035)	JJ 3924	1

CONTROL SECTION: ARU 82400-106851A
JOB NUMBER
DATE: 7-8-09 CORRECTED BY: DAF
DATE: 7-13-09
DATE: 9-3-08 CHECKED BY: TNB
DRAWN BY: DAF
FILE NAME: Larned Title.dgn



DETOUR ROUTE

SIGN QUANTITIES

(1)	2 EA	(11)	6 EA
(2)	5 EA	(12)	1 EA
(3)	3 EA	(13)	6 EA
(4)	3 EA	(14)	2 EA
(5)	2 EA	(15)	2 EA
(6)	2 EA	(16)	2 EA
(7)	2 EA	(17)	1 EA
(8)	2 EA	(18)	5 EA
(9)	4 EA	(19)	1 EA
(10)	2 EA	(20)	5 EA

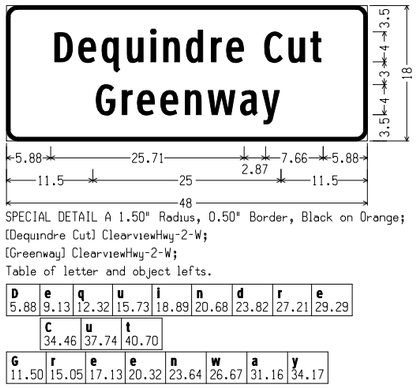
QUANTITIES

9	Ea	Barricade, Type III, High Intensity, Furn
9	Ea	Barricade, Type III, High Intensity, Oper
30	Ea	Plastic Drum, High Intensity, Furn
30	Ea	Plastic Drum, High Intensity, Oper
582	Sft	Sign, Type B, Temp, Prismatic, Furn
582	Sft	Sign, Type B, Temp, Prismatic, Oper
1	LS	Minor Traf Devices
130	Ft	Conc Barrier, Temp, Furn
130	Ft	Conc Barrier, Temp, Oper
1	LS	Flag Control
30	Sft	ARRA Sign Type A, Temp, Prismatic, Furn
30	Sft	ARRA Sign Type A, Temp, Prismatic, Oper
15	Sft	ARRA Sign Type B, Temp, Prismatic, Furn
15	Sft	ARRA Sign Type B, Temp, Prismatic, Oper
400	Ft	Fence, Temp

NOTES:

THE DEQUINDRE CUT SHALL BE OPEN FOR PEDESTRIAN TRAFFIC BY 7:00 AM ON SATURDAY MORNINGS AND SHALL REMAIN OPEN UNTIL 10:00 PM ON SUNDAY EVENINGS.

SEE THE NOTICE TO BIDDERS COORDINATION CLAUSE FOR SIGNING COORDINATION WITH THE LAFAYETTE STREET BRIDGE REHABILITATION PROJECT.



SPECIAL DETAIL A 1.50" Radius, 0.50" Border, Black on Orange;
[Dequindre Cut] ClearviewHwy-2-W;
[Greenway] ClearviewHwy-2-W;
Table of letter and object lefts.

D	e	q	u	i	n	d	r	e		
5.88	9.13	12.32	15.73	18.89	20.68	23.82	27.21	29.26		
		C	u	t						
		34.46	37.74	40.70						
G	r	e	e	n	w	a	y			
11.50	15.05	17.13	20.32	23.64	26.67	31.16	34.17			

(1) DETOUR AHEAD — W20-2 (48" X 48") 16 SFT TYPE IIB SIGN

(2) LARNED ST / DETOUR — D3-1 (30" X 8") 1.7 SFT TYPE IIIB SIGN; M4-9L (30" X 24") 5 SFT TYPE IIIB SIGN

(3) LARNED ST / DETOUR — D3-1 (30" X 8") 1.7 SFT TYPE IIIB SIGN; M4-9S (30" X 24") 5 SFT TYPE IIIB SIGN

(4) LARNED ST / DETOUR — D3-1 (30" X 8") 1.7 SFT TYPE IIIB SIGN; M4-9R (30" X 24") 5 SFT TYPE IIIB SIGN

(5) DETOUR ENDS — M4-8a (24" X 18") 3 SFT TYPE IIIB SIGN

(6) DETOUR AHEAD / LARNED ST — W20-2 (48" X 48") 16 SFT TYPE IIB SIGN; D3-1 (30" X 8") 1.7 SFT TYPE IIIB SIGN

(7) INJURE/KILL A WORKER / FINE - $ 7500 JAIL - 15 YRS — R5-18bLA (60" X 42") 17.5 SFT TYPE IIB SIGN

WORK ZONE BEGINS / TRAFFIC FINES DOUBLED — R5-18cLA (60" X 42") 17.5 SFT TYPE IIB SIGN (450' SPA FROM R5-18bLA)

(8) ROAD CLOSED — R11-2 (48" X 30") 10 SFT TYPE IIB SIGN MOUNT ON SEPARATE POSTS BEHIND BARRICADES

(2) TYPE III LIGHTED BARRICADES

(9) SIDEWALK CLOSED — R9-9 (30" X 18") 3.8 SFT TYPE IIIB SIGN

(10) PLACE TEMPORARY CONCRETE BARRIER ACROSS APPROACHES

(11) DETOUR / DEQUINDRE CUT GREENWAY — M4-9a (30" X 24") 5 SFT TYPE IIIB SIGN; SPECIAL DETAIL A (48" X 18") 6 SFT TYPE IIIB SIGN

ROAD CLOSED AHEAD / LOCAL TRAFFIC ONLY — R11-3 (60" X 30") 12.5 SFT TYPE IIB SIGN MOUNT ON SEPARATE POSTS ABOVE AND BEHIND BARRICADE

DETOUR — M4-10 (48" X 18") 6 SFT TYPE IIB SIGN MOUNT ON BARRICADE

(12) TYPE III LIGHTED BARRICADE

(13) DETOUR / DEQUINDRE CUT GREENWAY — M4-9a (30" X 24") 5 SFT TYPE IIIB SIGN; SPECIAL DETAIL A (48" X 18") 6 SFT TYPE IIIB SIGN

SIDEWALK CLOSED — R9-9 (30" X 18") 3.8 SFT TYPE IIIB SIGN MOUNT ON SEPARATE POSTS BEHIND BARRICADES

(14) (2) TYPE III LIGHTED BARRICADES

(15) PUTTING AMERICA TO WORK — ARRA (60" X 18") 7.5 SFT TYPE IIB SIGN

PROJECT FUNDED BY ARRA / TIGER — ARRA (60" X 36") 15 SFT TYPE IIA SIGN

(16) ROAD CLOSED AHEAD / LARNED ST — W20-3 (48") 16 SFT TYPE IIB SIGN; D3-1 (30" X 8") 1.7 SFT TYPE IIIB SIGN

(17) SIDEWALK CLOSED AHEAD / CROSS HERE — R9-11 (48" X 36") 12 SFT TYPE IIB SIGN

(18) DETOUR / LARNED ST — M4-9b (30" X 24") 5 SFT TYPE IIIB SIGN; D3-1 (30" X 8") 1.7 SFT TYPE IIIB SIGN

(19) SIDEWALK CLOSED AHEAD / CROSS HERE — R9-11 (48" X 36") 12 SFT TYPE IIB SIGN

(20) DETOUR / LARNED ST — M4-9b (30" X 24") 5 SFT TYPE IIIB SIGN; D3-1 (30" X 8") 1.7 SFT TYPE IIIB SIGN

DATE: 10-22-09
DATE: 6-30-09 CORRECTED BY: DAF
DATE: 9-4-08 CHECKED BY: TNB
DRAWN BY: DAF
FILE NAME: Larned detour.dgn

REVISIONS	DESCRIPTION	DATE	BY

DLZ

CITY OF DETROIT

LARNED STREET BRIDGE OVER DEQUINDRE CUT GREENWAY

MDOT JOB NO. .106851A | STRUCTURE NO. .S01 of 82-22-88

DETOUR ROUTE

DATE: 1/8/10

DLZ JOB NO. 0942-6313-00

SHEET NO. 2 OF 67

BENCH MARKS

BM 100A — EL 120.94
CHISELED "X" SE CORNER LIGHT POLE BASE
NORTH SIDE LARNED ST 450'± WEST OF
LARNED ST BRIDGE

NORTHING: 4970.39 EASTING: 9931.71
STA 17+17.34; OFF 48.27 FT LT

BM 101A — EL 119.10
DOCK SPIKE NORTH SIDE LARNED ST 163'± EAST
OF ST. AUBIN ST

NORTHING: 5146.87 EASTING: 10680.89
STA 24+80.74; OFF 52.41 FT RT

WITNESSES

WITNESSES TO CP3; 2" MAG NAIL IN SW QUAD
NORTHING: 5024.63 EASTING: 10337.25
STA 21+16.06; OFF 50.50 FT RT

S 33° E	EDGE OF RETAINING WALL	8.1 FT
S 30° W	CORNER OF BRIDGE	24.6 FT
N 33° W	BACK OF CURB	5.2 FT

WITNESSES TO CP4; 1" MAG NAIL IN NE QUAD OF LARNED ST
50'± WEST OF ST. AUBIN ST
NORTHING: 5150.06 EASTING: 10403.64
STA 22+22.31; OFF 50.56 FT LT

N 75° E	CENTER LIGHT POLE	39.1 FT
S 33° E	BACK OF CURB	5.1 FT
N 33° W	EDGE OF RETAINING WALL	6.6 FT

WITNESSES TO CP5; 1" MAG NAIL IN CONCRETE ISLAND
EAST SIDE OF INTERSECTION OF ST. AUBIN ST AND LARNED ST
NORTHING: 5158.22 EASTING: 10569.10
STA 23+80.07; OFF 0.04 FT LT

N 7° E	BACK OF CURB	3.7 FT
N 43° W	PED WALK LIGHT	12.2 FT
S 26° W	CENTER OF MH	6.2 FT

WITNESSES TO CP2; 2" MAG NAIL IN ISLAND ON WEST OF BRIDGE
154.88' SOUTH OF LARNED ST BRIDGE
NORTHING: 5013.02 EASTING: 10186.36
STA 19+70.72; OFF 1.35 FT RT

N 65° E	EDGE OF CONCRETE BEHIND BACK OF CURB	30.97 FT
S 24° E	EDGE OF CONCRETE BEHIND BACK OF CURB	8.30 FT
N 29° W	EDGE OF CONCRETE BEHIND BACK OF CURB	11.97 FT

EXISTING STRUCTURE

THE EXISTING STRUCTURE IS A THREE SPAN BRIDGE WITH A TOTAL LENGTH OF 82'-2¼". THE EXISTING BEAMS ARE ROLLED STEEL BEAMS THAT ARE NOT COMPOSITE WITH THE CONCRETE DECK. THE EXISTING BEAMS ARE CONTINOUS OVER PIER 2-4. THE ABUTMENTS ARE GRAVITY WALL ABUTMENTS AND CANTILEVER WALL ABUTMENTS ON TIMBER PILE SUPPORTED FOOTINGS. PIERS ARE CONCRETE COLUMN BENT PIERS ON TIMBER PILE SUPPORTED FOOTINGS. THE ORIGINAL BRIDGE WAS BUILT IN 1923 AND WIDENED TO ITS CURRENT WIDTH IN 1962.

EROSION AND SEDIMENTATION CONTROL MEASURES

			KEY NO.
15	Syd	Slope Restoration	(3)
200	Ft	Erosion Control, Silt Fence	(26)

UTILITIES

CITY OF DETROIT — ELECTRIC, LIGHTING
PUBLIC LIGHTING DEPT (PLD)
9449 GRINNELL
DETROIT, MI 48213
ATTN.: SATISH SADWAL
PHONE NO.: (313) 267-7232

CITY OF DETROIT — WATER, SEWER
DETROIT WATER & SEWERAGE DEPT (DWSD)
J MADISON BLDG
1420 WASHINGTON BLVD., SUITE 100
DETROIT, MI 48226
ATTN.: GANG SONG
PHONE NO.: (313) 967-1508

DTE ENERGY
MICHIGAN CONSOLIDATED GAS CO. (MCG) — GAS
17150 ALLEN ROAD
MELVIN DALE, MI 48122
ATTN: ROBERT BURNS
PHONE NO.: (313) 389-7244

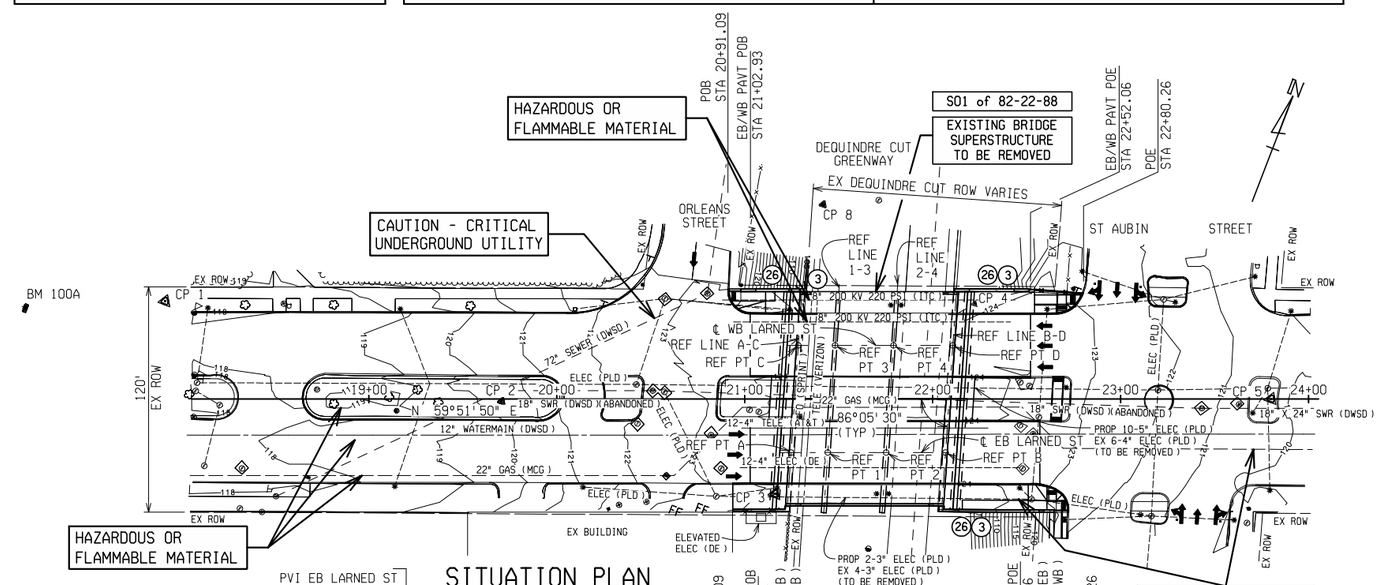
DTE ENERGY — ELECTRIC
DETROIT EDISION (DE)
ONE ENERGY PLAZA, RM 518 S.B.
DETROIT, MI 48226
ATT: ROBIN O'CONNELL
PHONE NO: (313) 235-5632

VERIZON — TELE
21500 MELROSE AVENUE
SOUTHFIELD, MI 48075
ATTN: DAVE PLENTZ
PHONE NO: (248) 936-3411
CELL NO.: (419) 283-6011

SPRINT — FIBER OPTIC
5600 NORTH RIVER ROAD
ROSEMONT, IL 60018
ATTN: GERRY CRAIN
PHONE NO: (847) 318-3010

INTERNATIONAL TRANSMISSION COMPANY (ITC) — ELECTRIC
27175 ENERGY WAY
NOVI, MI 48377
ATTN: DAVID BOGDEN
PHONE NO: (248) 946-3237
CELL NO: (248) 763-7833

AT&T
31100 PLYMOUTH ROAD, ROOM 301
LIVONIA, MI 48150
ATTN: GARY CLINTON
PHONE NO: (734) 523-6880



NOTES:

THE WORK COVERED BY THESE PLANS INCLUDES MAINTAINING TRAFFIC, REMOVAL AND REPLACEMENT OF THE SUPERSTRUCTURE AND APPROACHES, REPLACEMENT OF PORTIONS OF THE SUBSTRUCTURE, BEARING REPLACEMENT, CRACK SEALING, AND TEMPORARILY SUPPORTING UTILITIES TO THE LIMITS SHOWN.

THE UTILITIES SHOWN ARE APPROXIMATE LOCATIONS TO BE FIELD VERIFIED BY THE CONTRACTOR.

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.

FOR PROTECTION OF UNDERGROUND UTILITIES AND IN CONFORMANCE WITH PUBLIC ACT 53, 1974, THE CONTRACTOR SHALL DIAL 1-800-482-7171 A MINIMUM OF THREE FULL WORKING DAYS, EXCLUDING SATURDAYS, SUNDAYS, AND HOLIDAYS PRIOR TO BEGINNING EACH EXCAVATION IN AREAS WHERE PUBLIC UTILITIES HAVE NOT BEEN PREVIOUSLY LOCATED. MEMBERS WILL THUS BE ROUTINELY NOTIFIED. THIS DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF NOTIFYING UTILITY OWNERS WHO MAY NOT BE A PART OF THE "MISS DIG" ALERT SYSTEM.

LARNED STREET VEHICULAR TRAFFIC AND PEDESTRIAN TRAFFIC IS TO BE DETOURED OVER OTHER EXISTING ROADS.

PLAN ELEVATIONS REFER TO CITY OF DETROIT DATUM.

MEASURES SHALL BE TAKEN TO PREVENT DEBRIS FROM FALLING FROM THE STRUCTURE.

STRUCTURES, REM PORTIONS SHALL INCLUDE THE FOLLOWING:
REMOVING EXISTING SUPERSTRUCTURE SAW CUTTING AND REMOVING PORTIONS OF EXISTING SUBSTRUCTURE, AND REMOVING ABANDONED UTILITIES.

REVISIONS	DESCRIPTION	DATE	BY

DLZ

CITY OF DETROIT

LARNED STREET BRIDGE OVER DEQUINDRE CUT GREENWAY

MDOT JOB NO. 106851A | STRUCTURE NO. S01 of 82-22-88

GENERAL PLAN OF SITE

DATE: 1/8/10
DLZ JOB NO. 0942-6313-00
SHEET NO. 3 OF 67

DATE: 10-22-09
CORRECTED BY:DAF
DATE: 7-1-09
DRAWN BY: DLW
DATE: 5-13-09
CHECKED BY: TNB
FILE NAME: Larned-s1.dgn

PROJECT NO. 2009074A — DATE 7/8/2009 — LOG OF AUGER PROBE C-1

LOG OF SOIL PROFILE	ELEVATION (ft.)	DEPTH (ft.)	SAMPLE NO.	NO. OF BLOWS FOR 6-inch DRIVE of DCP	DRIVE NO.	SAMPLE TIP DEPTH (ft)	UNCONFINED COMP STRENGTH (psf)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	UNCONFINED COMP. STREN. psf (2000 4000 6000 8000)	DRY DENSITY pcf (30 60 90 120)	DCP PENETRATION RESISTANCE (20 40 60 80)	MOISTURE CONTENT % (10 20 30 40)
Ground Surface Elevation	EL 123.8±	0											
1 inch of Asphalt Cement Concrete													
11 inches of Portland Cement Concrete													
6 inches of Sand and Gravel, brown, moist		1		12	12	1.5							
End of Boring at 1.5 Ft Boring terminated at obstruction encountered at 18 inches below pavement		2											
	EXC LIMITS EL 119.2±	3											
		4											
		5											
		6											

BORING COORDINATES

GROUNDWATER READINGS
First Encountered: NA
Upon Completion: NA

Remarks:
DCP = Dynamic Cone Penetrometer

Engineer: A. Ogunlade
Auger Method: Hand Auger
Backfilled With: core and cold patch
Date Started: 07-08-09
Date Completed: 07-08-09
Checked By: CJS

Torvane
* Pocket Penetrometer
<> Disturbed Sample

Somat Engineering Inc.

Larned Street Bridge over Dequindre Cut
Detroit, Wayne County, Michigan

PROJECT NO. 2009074A **AUGER PROBE NO.** C-1 **PAGE 1 of 1**

8/12/09

LOG OF AUGER PROBE PAVEMENT CORE LOG.GPJ SOMAT.GDT 8/12/09

PROJECT NO. 2009074A — DATE 7/8/2009 — LOG OF AUGER PROBE C-3

LOG OF SOIL PROFILE	ELEVATION (ft.)	DEPTH (ft.)	SAMPLE NO.	NO. OF BLOWS FOR 6-inch DRIVE of DCP	DRIVE NO.	SAMPLE TIP DEPTH (ft)	UNCONFINED COMP STRENGTH (psf)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	UNCONFINED COMP. STREN. psf (2000 4000 6000 8000)	DRY DENSITY pcf (30 60 90 120)	DCP PENETRATION RESISTANCE (20 40 60 80)	MOISTURE CONTENT % (10 20 30 40)
Ground Surface Elevation	EL 123.5±	0											
2 inches Asphalt Cement Concrete													
10 inches of Portland Cement Concrete		1											
12 inches of Sand and Gravel, brown, moist		2											
End of Boring at 2 Ft Boring terminated at obstruction encountered at 23 inches below pavement		3											
	EXC LIMITS EL 119.2±	4											
		5											
		6											

BORING COORDINATES

GROUNDWATER READINGS
First Encountered: NA
Upon Completion: NA

Remarks:
DCP = Dynamic Cone Penetrometer

Engineer: A. Ogunlade
Auger Method: Hand Auger
Backfilled With: core and cold patch
Date Started: 07-08-09
Date Completed: 07-08-09
Checked By: CJS

Torvane
* Pocket Penetrometer
<> Disturbed Sample

Somat Engineering Inc.

Larned Street Bridge over Dequindre Cut
Detroit, Wayne County, Michigan

PROJECT NO. 2009074A **AUGER PROBE NO.** C-3 **PAGE 1 of 1**

8/12/09

LOG OF AUGER PROBE PAVEMENT CORE LOG.GPJ SOMAT.GDT 8/12/09

PROJECT NO. 2009074A — DATE 7/8/2009 — LOG OF AUGER PROBE C-4

LOG OF SOIL PROFILE	ELEVATION (ft.)	DEPTH (ft.)	SAMPLE NO.	NO. OF BLOWS FOR 6-inch DRIVE of DCP	DRIVE NO.	SAMPLE TIP DEPTH (ft)	UNCONFINED COMP STRENGTH (psf)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	UNCONFINED COMP. STREN. psf (2000 4000 6000 8000)	DRY DENSITY pcf (30 60 90 120)	DCP PENETRATION RESISTANCE (20 40 60 80)	MOISTURE CONTENT % (10 20 30 40)
Ground Surface Elevation	EL 123.9±	0											
2 inches of Asphalt Cement Concrete													
11 inches of Portland Cement Concrete		1											
4 inches of Sand and Gravel, brown, moist				50/1"	50/1"	1.4						>>▼	
End of Boring at 1.4 Ft Boring terminated at obstruction encountered at 17 inches below pavement		2											
	EXC LIMITS EL 119.3±	3											
		4											
		5											
		6											

BORING COORDINATES

GROUNDWATER READINGS
First Encountered: NA
Upon Completion: NA

Remarks:
DCP = Dynamic Cone Penetrometer

Engineer: A. Ogunlade
Auger Method: Hand Auger
Backfilled With: core and cold patch
Date Started: 07-08-09
Date Completed: 07-08-09
Checked By: CJS

Torvane
* Pocket Penetrometer
<> Disturbed Sample

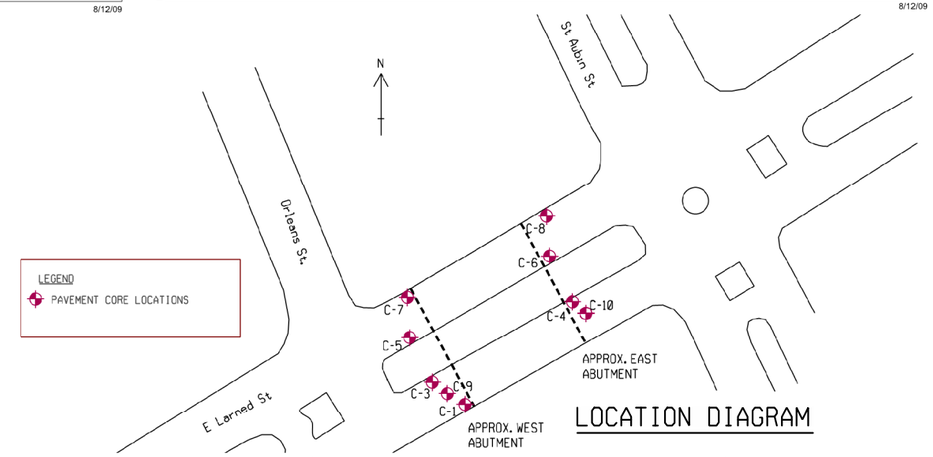
Somat Engineering Inc.

Larned Street Bridge over Dequindre Cut
Detroit, Wayne County, Michigan

PROJECT NO. 2009074A **AUGER PROBE NO.** C-4 **PAGE 1 of 1**

8/12/09

LOG OF AUGER PROBE PAVEMENT CORE LOG.GPJ SOMAT.GDT 8/12/09



LOCATION DIAGRAM

REVISIONS	DESCRIPTION	DATE	BY

DLZ

CITY OF DETROIT

LARNED STREET BRIDGE OVER DEQUINDRE CUT GREENWAY

MDOT JOB NO. .106851A | STRUCTURE NO. .S01 of 82-22-88

PAVEMENT·CORE LOG

DATE: 1/8/10
DLZ JOB NO. 0942-6313-00
SHEET NO. 4 OF 67

DATE: CORRECTED BY:
DATE: CHECKED BY:
DATE: 10-14-09 DRAWN BY: DAF
FILE NAME: Larned sb1.dgn

PROJECT NO. 2009074A **DATE** 7/8/2009 **LOG OF AUGER PROBE C-5**

ELEVATION (ft.)	LOG OF SOIL PROFILE	DEPTH (ft.)	SAMPLE NO.	NO. OF BLOWS FOR 3-inch DRIVE of DCP	DRIVE NO.	SAMPLE TIP DEPTH (ft)	UNCONFINED COMP STRENGTH (psf)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	UNCONFINED COMP. STREN. psf (2000 4000 6000 8000)	DRY DENSITY pcf (30 60 90 120)	DCP PENETRATION RESISTANCE (20 40 60 80)	MOISTURE CONTENT % (10 20 30 40)
EL 123.5±	Ground Surface Elevation	0											
	2 inches of Asphalt Cement Concrete												
	10 inches of Portland Cement Concrete												
	18 inches of SAND and GRAVEL, brown, moist (base material)	1		38	38	1.5							
				54/4"	54/4"	1.8						>>	
		2		51/5"	51/5"	2.2						>>	
	Fine to medium sand , brown, moist	3											
	End of Boring at 3 Ft												
EXC LIMITS EL 119.2±		4											
		5											
		6											

EL 123.8±

BORING COORDINATES

GROUNDWATER READINGS
First Encountered: NA
Upon Completion: NA

Remarks:
Boring was terminated 36 inches below pavement
DCP = Dynamic Cone Penetrometer

Engineer: A. Ogunlade
Auger Method: Hand Auger
Backfilled With: core and cold patch
Date Started: 07-08-09
Date Completed: 07-08-09
Checked By: CJS

\# Torvane
* Pocket Penetrometer
<> Disturbed Sample

Somat Engineering Inc.

Larned Street Bridge over Dequindre Cut
Detroit, Wayne County, Michigan

PROJECT NO. 2009074A **AUGER PROBE NO.** C-5 **PAGE 1 of 1**

8/12/09

LOG OF AUGER PROBE PAVEMENT CORE LOG.GPJ SOMAT.GDT 8/12/09

PROJECT NO. 2009074A **DATE** 7/8/2009 **LOG OF AUGER PROBE C-6**

ELEVATION (ft.)	LOG OF SOIL PROFILE	DEPTH (ft.)	SAMPLE NO.	NO. OF BLOWS FOR 3-inch DRIVE of DCP	DRIVE NO.	SAMPLE TIP DEPTH (ft)	UNCONFINED COMP STRENGTH (psf)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	UNCONFINED COMP. STREN. psf (2000 4000 6000 8000)	DRY DENSITY pcf (30 60 90 120)	DCP PENETRATION RESISTANCE (20 40 60 80)	MOISTURE CONTENT % (10 20 30 40)
	Ground Surface Elevation	0											
	2 inches of Asphalt Cement Concrete												
	9 inches of Portland Cement Concrete												
	12 inches of SAND and GRAVEL, brown, moist (base material)	1		13	13	1.4							
				19	19	1.9							
		2		30	30	2.4							
	Fine to medium sand, brown, moist	3											
	End of Boring at 3 Ft												
EXC LIMITS EL 119.2±		4											
		5											
		6											

EL 123.8±

BORING COORDINATES

GROUNDWATER READINGS
First Encountered: NA
Upon Completion: NA

Remarks:
Boring was terminated 36 inches below pavement
DCP = Dynamic Cone Penetrometer

Engineer: A. Ogunlade
Auger Method: Hand Auger
Backfilled With: core and cold patch
Date Started: 07-08-09
Date Completed: 07-08-09
Checked By: CJS

\# Torvane
* Pocket Penetrometer
<> Disturbed Sample

Somat Engineering Inc.

Larned Street Bridge over Dequindre Cut
Detroit, Wayne County, Michigan

PROJECT NO. 2009074A **AUGER PROBE NO.** C-6 **PAGE 1 of 1**

8/12/09

LOG OF AUGER PROBE PAVEMENT CORE LOG.GPJ SOMAT.GDT 8/12/09

PROJECT NO. 2009074A **DATE** 7/8/2009 **LOG OF AUGER PROBE C-7**

ELEVATION (ft.)	LOG OF SOIL PROFILE	DEPTH (ft.)	SAMPLE NO.	NO. OF BLOWS FOR 3-inch DRIVE of DCP	DRIVE NO.	SAMPLE TIP DEPTH (ft)	UNCONFINED COMP STRENGTH (psf)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	UNCONFINED COMP. STREN. psf (2000 4000 6000 8000)	DRY DENSITY pcf (30 60 90 120)	DCP PENETRATION RESISTANCE (20 40 60 80)	MOISTURE CONTENT % (10 20 30 40)
	Ground Surface Elevation	0											
	2 inches of Asphalt Cement Concrete												
	12 inches of Portland Cement Concrete												
		1		7/3"	7/3"	1.4						>>	
	Fine Sand, trace gravel, brown, moist (base material)												
		2		20	20	2.2							
				22	22	2.7							
		3		31	31	3.2							
	SAND and GRAVEL, brown, moist	4											
	End of Boring at 5 Ft	5											
EXC LIMITS EL 119.2±		6											

EL 123.8±

BORING COORDINATES

GROUNDWATER READINGS
First Encountered: NA
Upon Completion: NA

Remarks:
Boring was terminated 60 inches below pavement
DCP = Dynamic Cone Penetrometer

Engineer: A. Ogunlade
Auger Method: Hand Auger
Backfilled With: core and cold patch
Date Started: 07-08-09
Date Completed: 07-08-09
Checked By: CJS

\# Torvane
* Pocket Penetrometer
<> Disturbed Sample

Somat Engineering Inc.

Larned Street Bridge over Dequindre Cut
Detroit, Wayne County, Michigan

PROJECT NO. 2009074A **AUGER PROBE NO.** C-7 **PAGE 1 of 1**

8/12/09

LOG OF AUGER PROBE PAVEMENT CORE LOG.GPJ SOMAT.GDT 8/12/09

DATE:
CORRECTED BY:
DATE: 10-14-09 CHECKED BY:
DRAWN BY: DAF
FILE NAME: Larned sb2.dgn

REVISIONS	DESCRIPTION	DATE	BY

DLZ

CITY OF DETROIT

LARNED STREET BRIDGE OVER DEQUINDRE CUT GREENWAY

MDOT JOB NO. .106851A | STRUCTURE NO. .S01 of 82-22-88

PAVEMENT·CORE LOG

DATE: 1/8/10
DLZ JOB NO. 0942-6313-00
SHEET NO. 5 OF 67

PROJECT NO. 2009074A — DATE 7/8/2009 — LOG OF AUGER PROBE C-8

ELEVATION (ft.)	LOG OF SOIL PROFILE	DEPTH (ft.)	SAMPLE NO.	FIELD DATA: NO. OF BLOWS FOR 5-inch DRIVE of DCP	DRIVE NO.	LABORATORY DATA: SAMPLE TIP DEPTH (ft)	UNCONFINED COMP STRENGTH (psf)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)
EL 123.8±	Ground Surface Elevation	0							
	1.5 inches of Asphalt Cement Concrete								
	10.5 inches of Portland Cement Concrete								
	Medium to fine Sand, trace gravel, brown, moist (base material)	1		20	20	1.5			
		2		25	25	2.0			
				14	14	2.5			
		3		12	12	3.0			
EXC LIMITS EL 119.5±	SAND and GRAVEL, brown, moist	4							
	End of Boring at 5 Ft	5							
		6							

LABORATORY DATA: ■ UNCONFINED COMP. STREN. psf ■ (2000 4000 6000 8000); ▲ DRY DENSITY pcf ▲ (30 60 90 120); ▼ DCP PENETRATION RESISTANCE ▼ (20 40 60 80); ● MOISTURE CONTENT % ● (10 20 30 40)

BORING COORDINATES

GROUNDWATER READINGS
First Encountered: NA
Upon Completion: NA

Remarks:
Boring was terminated 60 inches below pavement
DCP = Dynamic Cone Penetrometer

Engineer: A. Ogunlade
Auger Method: Hand Auger
Backfilled With: core and cold patch
Date Started: 07-08-09
Date Completed: 07-08-09
Checked By: CJS

Torvane
* Pocket Penetrometer
<> Disturbed Sample

Somat Engineering Inc.

Larned Street Bridge over Dequindre Cut
Detroit, Wayne County, Michigan

PROJECT NO. 2009074A **AUGER PROBE NO.** C-8 **PAGE 1 of 1**

8/12/09

PROJECT NO. 2009074A — DATE 7/13/2009 — LOG OF AUGER PROBE C-9

ELEVATION (ft.)	LOG OF SOIL PROFILE	DEPTH (ft.)	SAMPLE NO.	FIELD DATA: NO. OF BLOWS FOR 5-inch DRIVE of DCP	DRIVE NO.	LABORATORY DATA: SAMPLE TIP DEPTH (ft)	UNCONFINED COMP STRENGTH (psf)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)
EL 123.6±	Ground Surface Elevation	0							
	1.9 inches of Asphalt Cement Concrete								
	10.5 inches of Portland Cement Concrete								
	3 inches of silty sand, trace gravel, brown	1							
	5 inches of Asphalt Cement Concrete								
	7 inches of Portland Cement Concrete	2							
	1 inch Wood piece								
EXC LIMITS EL 119.2±	25 inches of Portland Cement Concrete	3							
		4							
	3 inches of silty sand, trace gravel, brown	5							
	End of Boring at 5.3 Ft	6							

LABORATORY DATA: ■ UNCONFINED COMP. STREN. psf ■ (2000 4000 6000 8000); ▲ DRY DENSITY pcf ▲ (30 60 90 120); ▼ DCP PENETRATION RESISTANCE ▼ (20 40 60 80); ● MOISTURE CONTENT % ● (10 20 30 40)

BORING COORDINATES

GROUNDWATER READINGS
First Encountered: NA
Upon Completion: NA

Remarks:
Boring was terminated 63 inches below pavement
DCP = Dynamic Cone Penetrometer

Engineer: A. Ogunlade
Auger Method: Hand Auger
Backfilled With: core and cold patch
Date Started: 07-13-09
Date Completed: 07-13-09
Checked By: CJS

Torvane
* Pocket Penetrometer
<> Disturbed Sample

Somat Engineering Inc.

Larned Street Bridge over Dequindre Cut
Detroit, Wayne County, Michigan

PROJECT NO. 2009074A **AUGER PROBE NO.** C-9 **PAGE 1 of 1**

8/12/09

PROJECT NO. 2009074A — DATE 7/13/2009 — LOG OF AUGER PROBE C-10

ELEVATION (ft.)	LOG OF SOIL PROFILE	DEPTH (ft.)	SAMPLE NO.	FIELD DATA: NO. OF BLOWS FOR 5-inch DRIVE of DCP	DRIVE NO.	LABORATORY DATA: SAMPLE TIP DEPTH (ft)	UNCONFINED COMP STRENGTH (psf)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)
EL 123.8±	Ground Surface Elevation	0							
	2 inches of Asphalt Cement Concrete								
	8 inches of Portland Cement Concrete								
	5 inches silty sand , trace to some gravel, brown, moist	1							
	9 inches of Portland Cement Concrete								
	End of Boring at 2 Ft	2							
EXC LIMITS EL 119.4±		3							
		4							
		5							
		6							

LABORATORY DATA: ■ UNCONFINED COMP. STREN. psf ■ (2000 4000 6000 8000); ▲ DRY DENSITY pcf ▲ (30 60 90 120); ▼ DCP PENETRATION RESISTANCE ▼ (20 40 60 80); ● MOISTURE CONTENT % ● (10 20 30 40)

BORING COORDINATES

GROUNDWATER READINGS
First Encountered: NA
Upon Completion: NA

Remarks:
Boring was terminated 24 inches below pavement in PCC stratum
DCP = Dynamic Cone Penetrometer

Engineer: A. Ogunlade
Auger Method: Hand Auger
Backfilled With: core and cold patch
Date Started: 07-13-09
Date Completed: 07-13-09
Checked By: CJS

Torvane
* Pocket Penetrometer
<> Disturbed Sample

Somat Engineering Inc.

Larned Street Bridge over Dequindre Cut
Detroit, Wayne County, Michigan

PROJECT NO. 2009074A **AUGER PROBE NO.** C-10 **PAGE 1 of 1**

8/12/09

LOG OF AUGER PROBE PAVEMENT CORE LOG.GPJ SOMAT.GDT 8/12/09

DATE: CORRECTED BY: DATE: CHECKED BY: DATE: 10-14-09 DRAWN BY: DAF FILE NAME: Larned sb3.dgn

REVISIONS	DESCRIPTION	DATE	BY

DLZ

CITY OF DETROIT

LARNED STREET BRIDGE OVER DEQUINDRE CUT GREENWAY

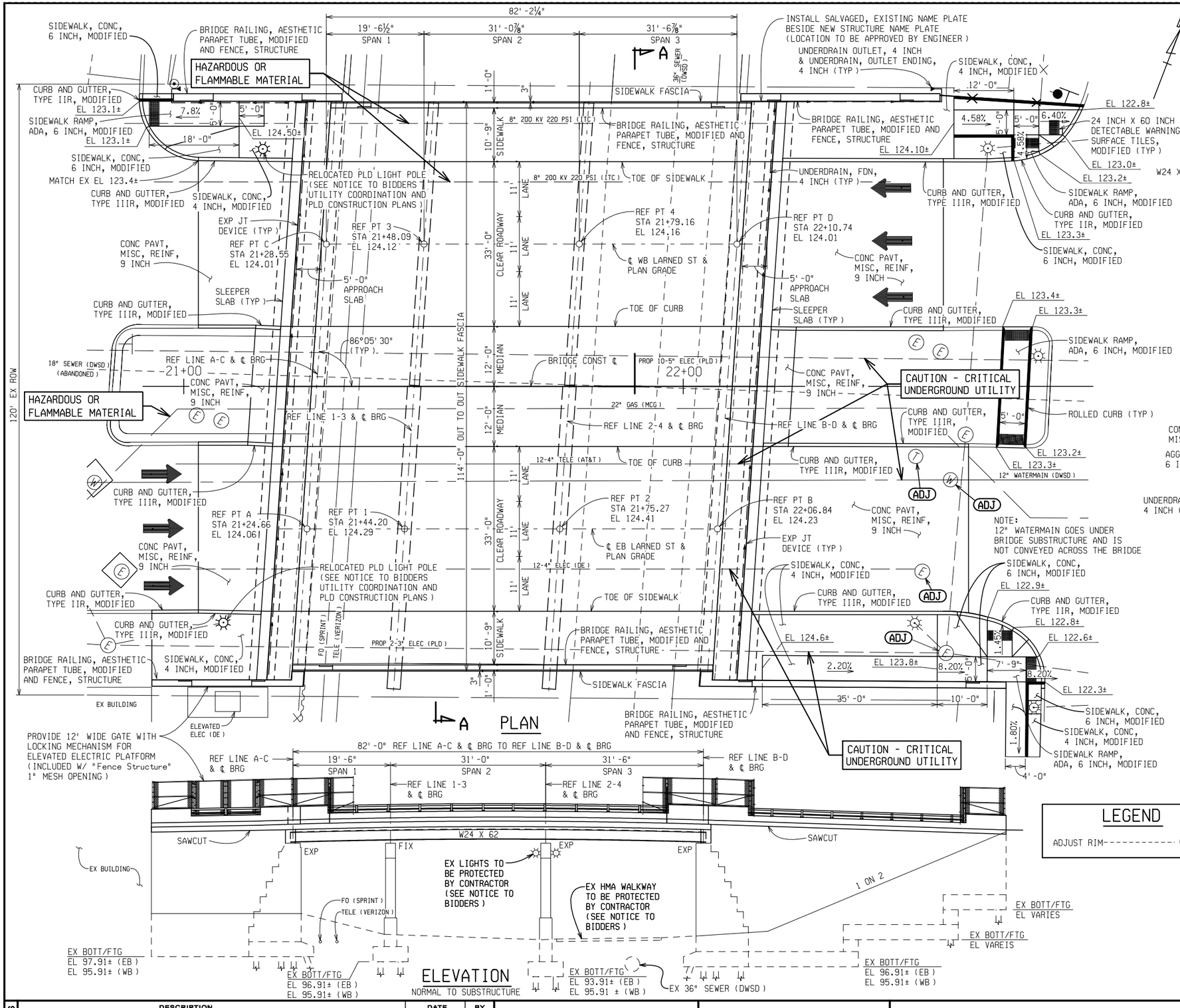
MDOT JOB NO. .106851A | STRUCTURE NO. .S01 of 82-22-88

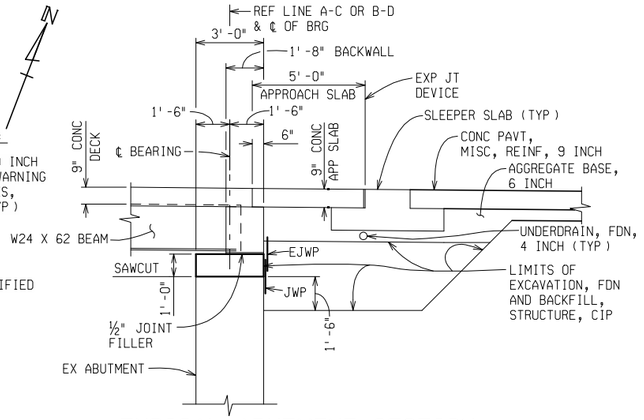
PAVEMENT·CORE LOG

DATE: 1/8/10

DLZ JOB NO. 0942-6313-00

SHEET NO. 6 OF 67





TYPICAL ABUTMENT SECTION
WB LARNED ST

TYPICAL ABUTMENT SECTION
EB LARNED ST

NOTES:

EJWP DENOTES EXPANSION JOINT WATERPROOFING.

THE REHABILITATION DESIGN 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 WAS USED FOR THIS DESIGN.

THE ALLOWABLE FATIGUE STRESS RANGE IS BASED ON A DESIGN LIFE OF 75 YEARS. FALSE DECKING SHALL INCLUDE THE AREA BOUNDED BY REFERENCE LINES B-D & 2-4 AND OUTSIDE FLANGE FASCIAS OF BEAMS A & V. THE ESTIMATED AREA IS 3497 SQUARE FEET DURING REMOVAL AND 3497 SQUARE FEET DURING PROPOSED CONSTRUCTION.

THE CONCRETE SURFACE COATING SHALL BE APPLIED TO THE ENTIRE EXPOSED SURFACE OF ABUT A-C AND ABUT B-D INCLUDING THE WINGWALLS (8858 SFT), PIER 1-2 (4124 SFT), PIER 3-4 (2988 SFT), THE DECK FASCIA (504 SFT), AND RAILING (850 SFT). THESE QUANTITIES ARE FOR INFORMATION ONLY.

THE CONTRACTOR SHALL VERIFY UTILITY LOCATIONS PRIOR TO STARTING WORK AND CONDUCT HIS OPERATIONS SO AS NOT TO DISTURB THOSE UTILITIES THAT ARE TO REMAIN IN PLACE.

FORMS FOR LARGE PATCHES SHALL BE INSTALLED IN 2' -0" TO 4' -0" HIGH SECTIONS WITH THE TOP OF FORM NO MORE THAN 4' -0" ABOVE THE LEVEL OF CONCRETE AS THE POUR PROGRESSES.

THE CONTRACTOR SHALL TAKE APPROPRIATE ACTION TO PREVENT ANY DAMAGE TO THE LIGHTS BENEATH THE BRIDGE AND THE HMA SURFACE ON THE DEQUINDRE CUT GREENWAY. IF ANY DAMAGE IS DONE IT SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

LEGEND

ADJUST RIM---------- (ADJ)

REVISIONS	DESCRIPTION	DATE	BY

DLZ

CITY OF DETROIT

LARNED STREET BRIDGE OVER DEQUINDRE CUT GREENWAY

MDOT JOB NO. .106851A | STRUCTURE NO. .S01 of 82-22-88

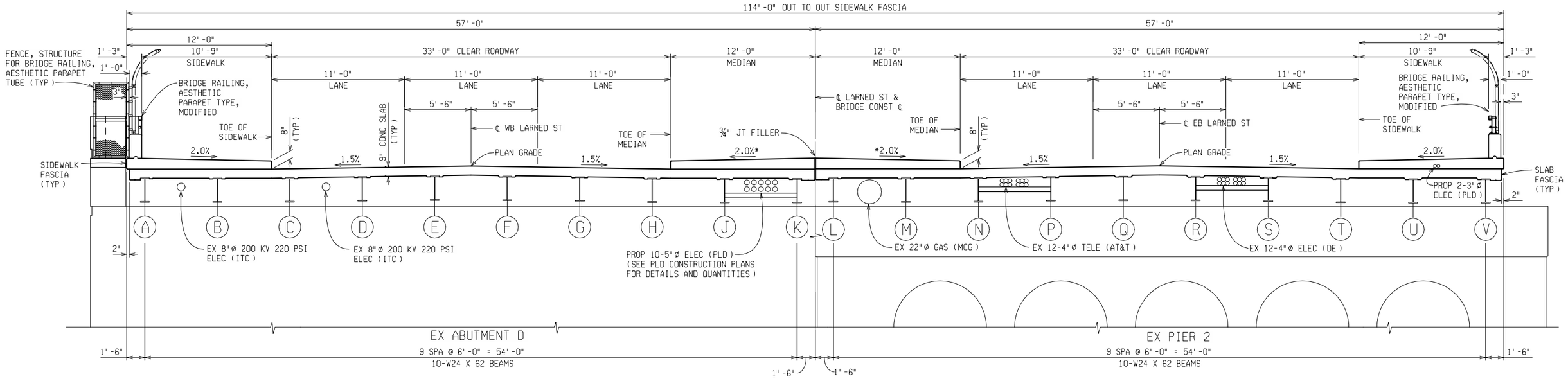
GENERAL PLAN OF STRUCTURE

DATE: 1/8/10

DLZ JOB NO. 0942-6313-00

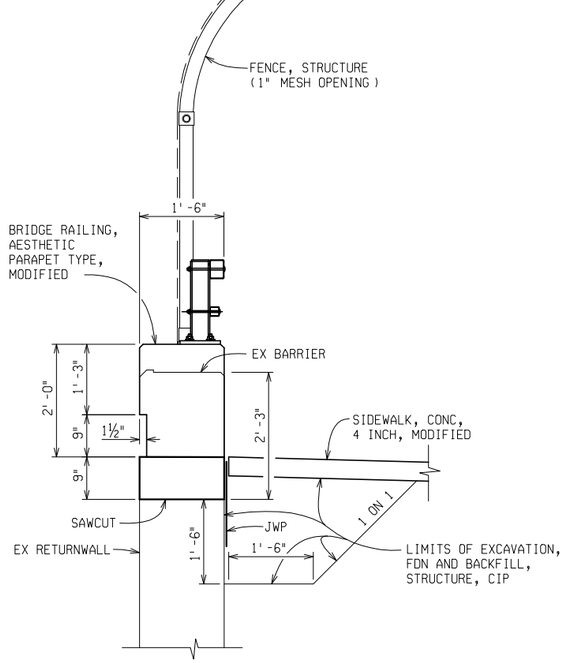
SHEET NO. 7 OF 67

DATE: 10-22-09 CORRECTED BY: DAF DATE: 10-5-09 DRAWN BY: DLW CHECKED BY: TNB/PI DATE: 5-4-08 FILE NAME: Larned-st1.dgn



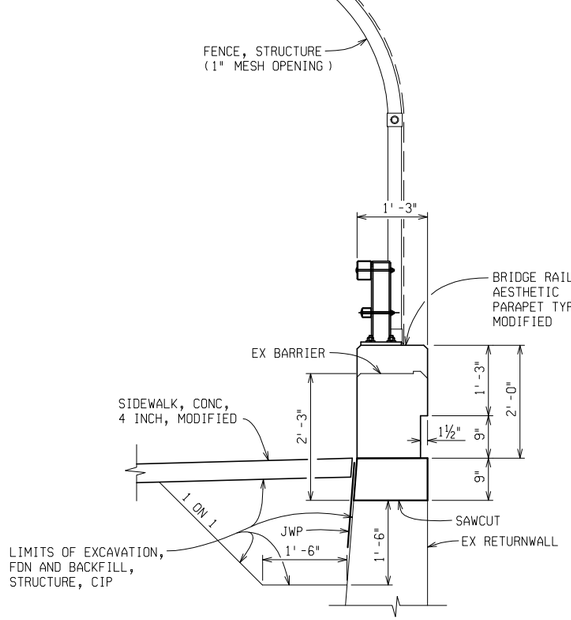
SECTION A-A

*2.0% MAX EB & WB TOP OF MEDIAN ELEVATIONS AT JOINT SHALL MATCH



TYPICAL WINGWALL

(WB LARNED ST)



TYPICAL WINGWALL

(EB LARNED ST)

QUANTITIES

	1	LS	Structures, Rem Portions
	230	Cyd	Backfill, Structure, CIP
	177	Cyd	Excavation, Fdn
	6994	Sft	False Decking
	297	Ft	Underdrain, Fdn, 4 inch
	10	Ft	Underdrain Outlet, 4 inch
	2	Ea	Underdrain, Outlet Ending, 4 inch
	1	LS	Conc Surface Coating
*	474	Cft	Hand Chipping Other Than Deck
*	948	Sft	Patch, Forming
*	18	Cyd	Patching Conc, C-L
	1	LS	Support, Temp, AT&T, and Utility Protection
	1	LS	Support, Temp, DE, and Utility Protection
	1	LS	Support, Temp, ITC, and Utility Protection
	1	LS	Support, Temp, MichCon, and Utility Protection
	2,531	Sft	Fence, Structure
	100	Cyd	Non Haz Contaminated Material Handling and Disposal, LM
	1	Dlr	Removal and Disposal of Asbestos Materials
	1	LS	Contractor Staking
	11	Hr	Staking Plan Errors and Extras, One Person
	4	Hr	Staking Plan Errors and Extras, Two Person
	6	Hr	Staking Plan Errors and Extras, Three Person

* SUBSTRUCTURE REPAIR AS DIRECTED BY THE ENGINEER. ESTIMATED VOLUMES OF REPAIR 40 CFT ABUT A, 100 CFT ABUT B, 185 CFT PIER 1, 70 CFT PIER 2, 60 CFT PIER 4, AND 19 CFT PIER 3

NOTES:

THE EXISTING UTILITIES SHALL BE PROTECTED DURING CONSTRUCTION TO ENSURE NO DAMAGE. ANY DAMAGE SHALL BE THE CONTRACTOR'S FINANCIAL RESPONSIBILITY.

THE EXISTING UTILITIES SHALL BE TEMPORARILY SUPPORTED FROM BELOW. THE CONTRACTIOR SHALL SUBMIT TEMPORARY SUPPORT PLANS TO THE ENGINEER FOR APPROVAL (SEE NOTICE TO BIDDERS UTILITY COORDINATION).

THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR TEMPORARY SUPPORTS AND SHALL MEET THE APPROVAL OF THE ENGINEER. SEE SPECIAL PROVISION FOR "Support, Temp, -- , and Utility Protection".

REVISIONS	DESCRIPTION	DATE	BY

DLZ

CITY OF DETROIT

LARNED STREET BRIDGE OVER DEQUINDRE CUT GREENWAY

MDOT JOB NO. 106851A | STRUCTURE NO. S01 of 82-22-88

GENERAL PLAN OF STRUCTURE

DATE: 1/8/10

DLZ JOB NO. 0942-6313-00

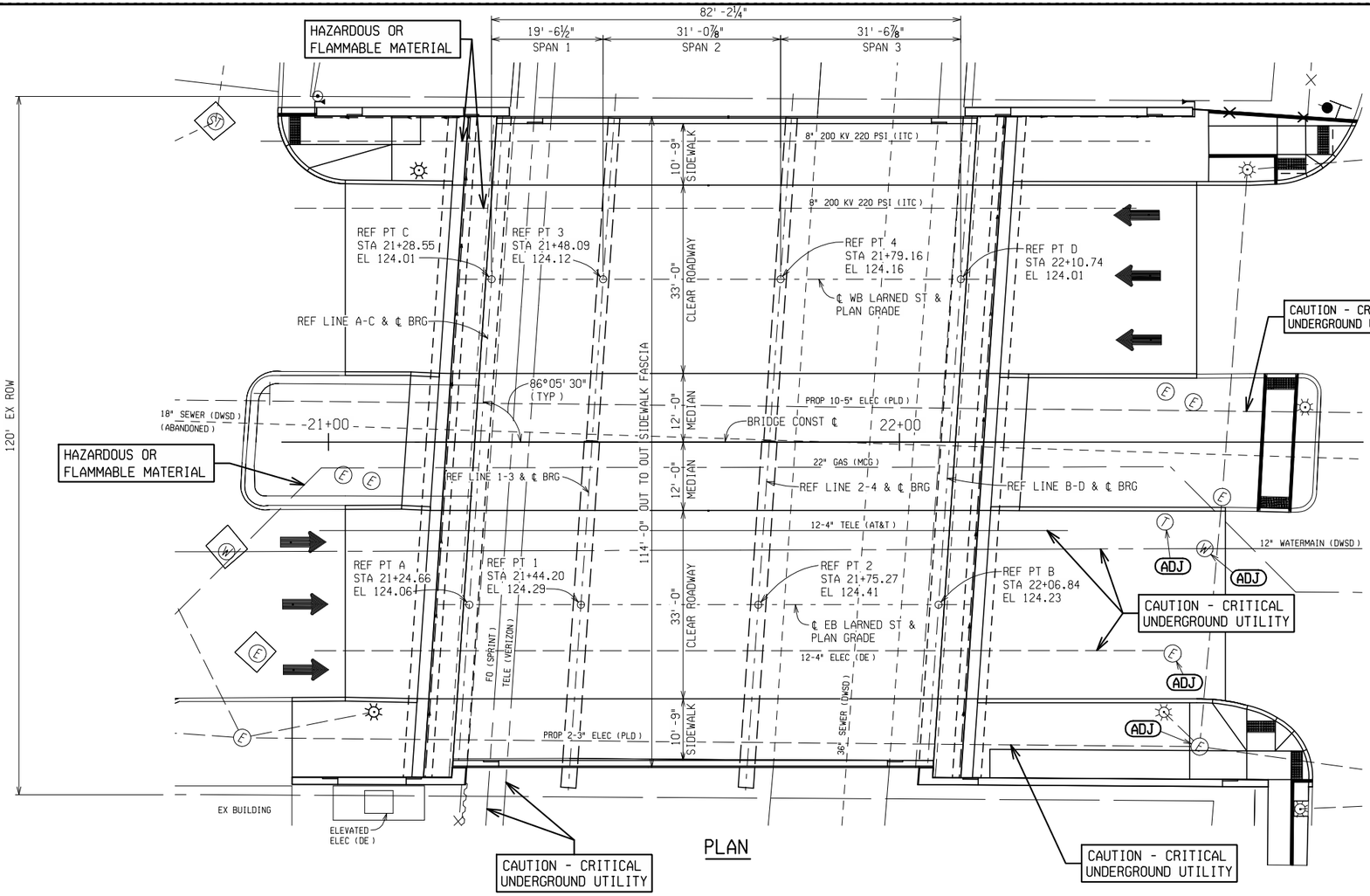
SHEET NO. 8 OF 67

DATE: 10-22-09 CORRECTED BY: DAF

DATE: 7-1-09 DRAWN BY: DLW

DATE: 5-25-09 CHECKED BY: TNB

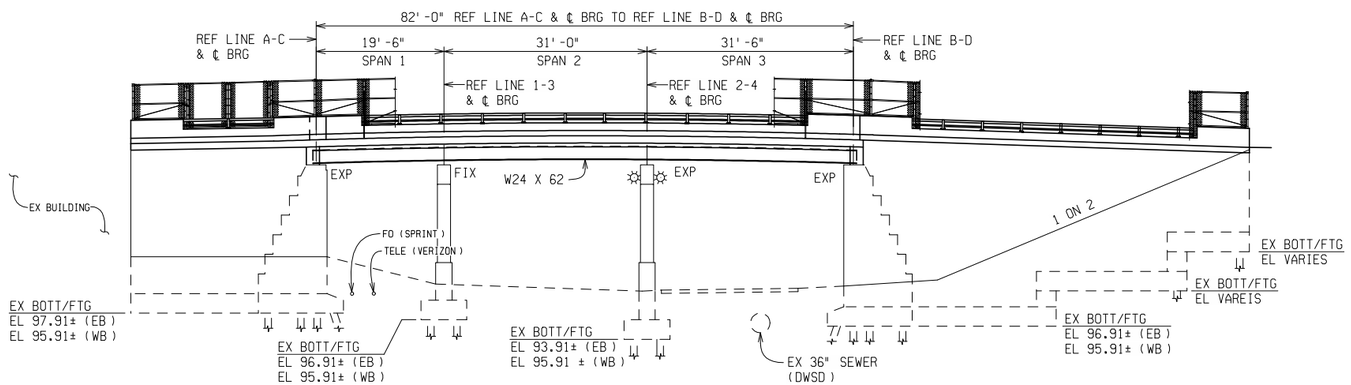
FILE NAME: Larned-st2.dgn



PLAN

NOTE:
12" WATERMAIN GOES UNDER BRIDGE SUBSTRUCTURE AND IS NOT CONVEYED ACROSS THE BRIDGE

NOTE:
THE CONTRACTOR SHALL NOT EXPOSE OR DISTURB THE SOIL AT OR PAST ANY OF THE 45 DEGREE ANGLES OF 22" GAS LINE (MCG)



ELEVATION

UTILITY LEGEND

AT&T - (AT&T)
DETROIT EDISON - (DE)
DETROIT WATER AND SEWERAGE DEPARTMENT - (DWSD)
INTERNATIONAL TRANSMISSION COMPANY - (ITC)
MICHIGAN CONSOLIDATED GAS COMPANY - (MCG)
PUBLIC LIGHTING DEPARTMENT - (PLD)

REVISIONS	DESCRIPTION	DATE	BY

DLZ

CITY OF DETROIT

LARNED STREET BRIDGE OVER DEQUINDRE CUT GREENWAY

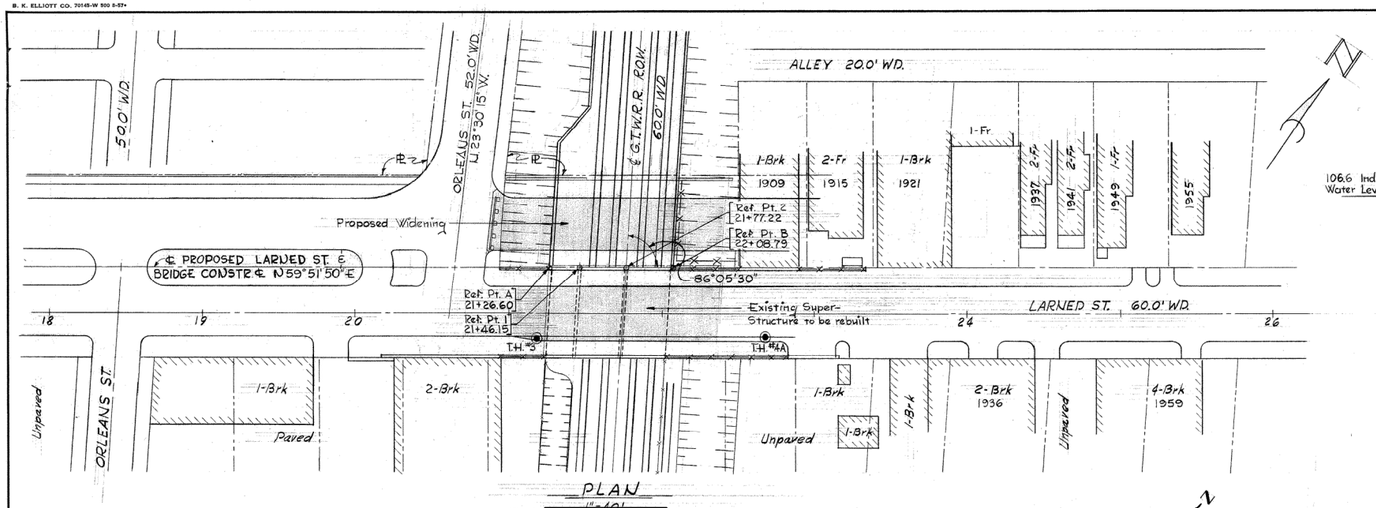
MDOT JOB NO. 106851A | STRUCTURE NO. S01 of 82-22-88

UTILITY LOCATION

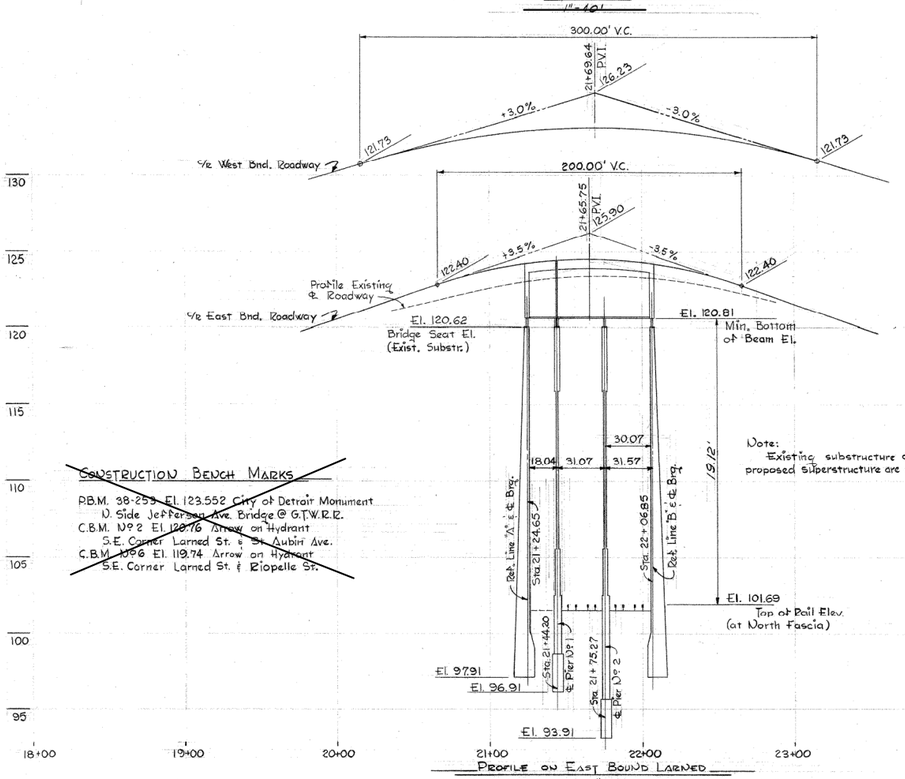
DATE: 1/8/10
DLZ JOB NO. 0942-6313-00
SHEET NO. 9 OF 67

DATE:
CORRECTED BY:
DATE: 11-10-09
CHECKED BY:
DRAWN BY: DAF
FILE NAME: Larned util.dgn

B. K. ELLIOTT CO. 70148-W 500 5-57



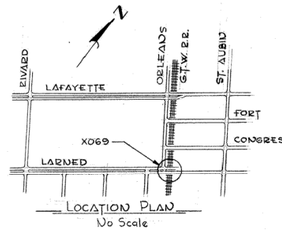
PLAN
1" = 10'



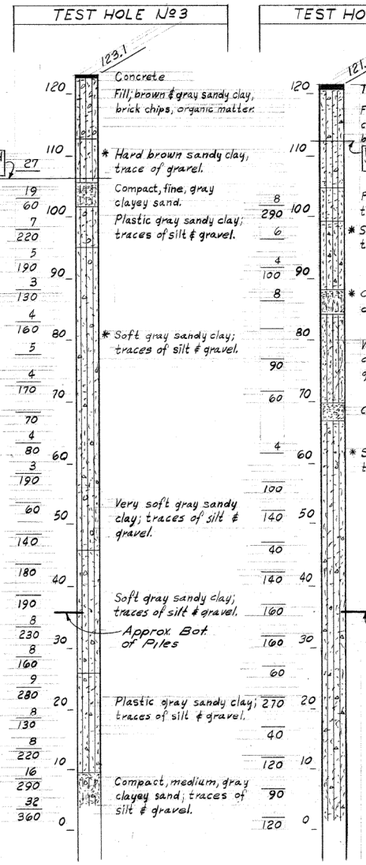
PROFILE ON EAST BOUND LARNED
Horiz. 1" = 40'
Vert. 1" = 4'

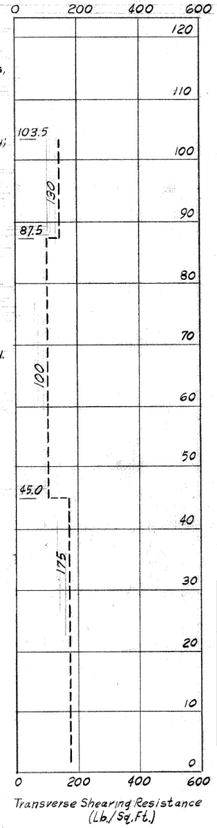
CONSTRUCTION BENCH MARKS

P.B.M. 38-253 El. 123.552 City of Detroit Monument N. Side Jefferson Ave. Bridge @ G.T.W.R.R.
C.B.M. N°2 El. 120.76 Arrow on Hydrant S.E. Corner Larned St. & St. Aubin Ave.
C.B.M. N°6 El. 119.74 Arrow on Hydrant S.E. Corner Larned St. & Riopelle St.

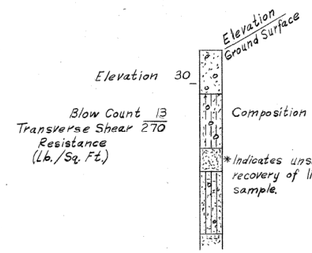


LOCATION PLAN
No Scale





SOIL BORING LOG



SOIL BORING LEGEND

Notes:

Blow Count indicates the number of blows required to drive the soil sampler one foot using a 140 lb. weight falling 30 In. Where Blow Count is not shown, sampler was either pushed or hand driven.

Transverse Shearing Resistance is determined from samples at the Consolidated Laboratory Bureau - Soil Mechanics Laboratory, Detroit, Michigan.

The topography shown represents conditions existing at the time the field survey was made. These conditions may have been altered by the operations of others prior to the start of this work.

This set of drawings covers the construction of the Larned Street Bridge over the G.T.W.R.R. and all incidental work from Sta. 20+87.61 to Sta. 23+20.00

Bench Marks are referenced to the City of Detroit Datum.

Successful Bidder may review a complete set of drawings of existing structure at Larned Bridge from the City Engineers Office upon request.

EXISTING

FOR INFORMATION ONLY
DO NOT WORK FROM THIS SHEET.
THE INFORMATION SHOWN HERE IS FOR REFERENCE ONLY. NO PAY ITEMS ARE SHOWN.

REVISIONS LOCATED BY COORDINATES ON SHEET

CODE	DESCRIPTION	BY	CK'D	AP'VD	DATE

REFERENCE DRAWINGS

DESIGNED BY	C.G.L. / R.R.H.
DRAWN BY	R.L.F.
TRACED BY	
CHECKED BY	Robert A. Freiberg

ENGINEER OF EXPRESSWAYS
ASSIST. CITY ENGINEER - HIGHWAYS & EXPRESSWAYS
CITY ENGINEER

CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERS OFFICE
BUREAU OF HIGHWAYS AND EXPRESSWAYS
RAILROAD GRADE SEPARATION

LARNED STREET BRIDGE X069
OVER
GRAND TRUNK WESTERN RAILROAD
GENERAL PLAN OF SITE

SHEET 2 OF 48 SHEETS
CONTRACT No. PW 3988
DRWG No. C 101
DATE FEB. 1962

REVISIONS	DESCRIPTION	DATE	BY

DLZ

CITY OF DETROIT

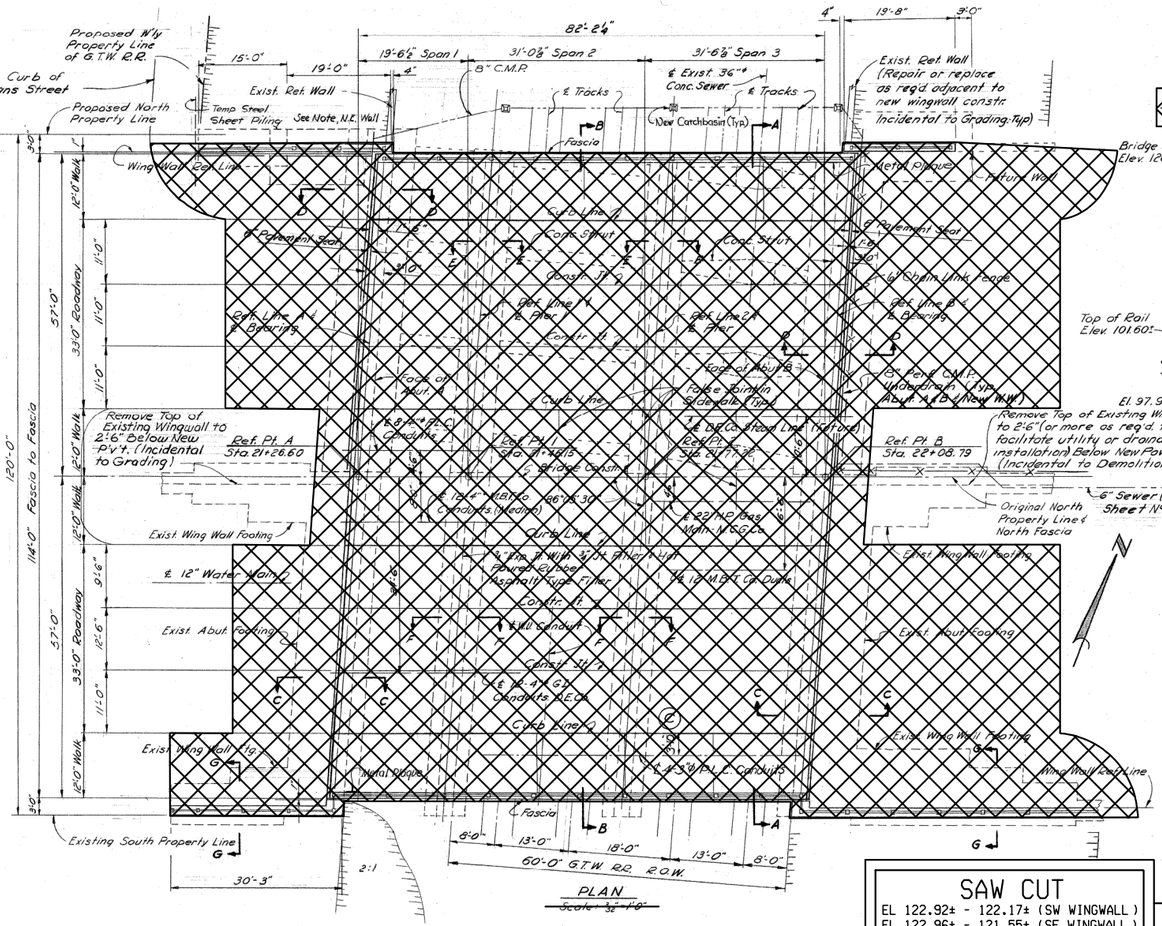
LARNED STREET BRIDGE OVER DEQUINDRE CUT GREENWAY
MDOT JOB NO. 106851A | STRUCTURE NO. S01 of 82-22-88

EX GENERAL PLAN OF SITE

DATE: 1/8/10
DLZ JOB NO. 0942-6313-00
SHEET NO. 10 OF 67

DATE: 7-13-09
DATE: 7-1-09 CORRECTED BY: DAF
DATE: 6-4-09 CHECKED BY: TNB
DRAWN BY: DLW
FILE NAME: Larned ex si.dgn

B. K. ELLIOTT CO. 70145-W 500 8-57+



MISCELLANEOUS QUANTITIES

Item	Amount	Unit
8" C.M.P.	125	Lin. Ft.
6' Chain Link Fence	100	Lin. Ft.
Catch Basin	3	Each
Demolition	—	L.S.
Grading	—	L.S.
Temp. Steel Sheet Piling	320	Sq. Ft.

NOTES:
All exposed concrete corners shown square on the plans shall be beveled with ¾" triangle moulding except as otherwise noted.
C.M.P. denotes Corrugated Metal Pipe.

REMOVAL SHEET

JOB NUMBER 106851A

THE ONLY ITEMS OF WORK TO BE DONE FROM THIS SHEET ARE IDENTIFIED BY THE LEGEND BOX BELOW, LABELED WITH THIS PROJECT'S JOB NUMBER.

PROPOSED WORK

DENOTES REMOVAL PORTIONS

JOB NUMBER 106851A

REMOVE DECK, SIDEWALKS, BRIDGE RAILINGS, BEAMS, BACKWALL, AND PORTIONS OF SUBSTRUCTURE AND APPROACHES. INCLUDED IN THE PAY ITEM "Structures, Rem Portions".

SAW CUT
EL 123.56± - 123.28± (NE WINGWALL)
EL 123.60± - 123.29± (NW WINGWALL)

JOB NUMBER 106851A

CARE SHALL BE EXERCISED BY THE CONTRACTOR WHEN REMOVING THE EXISTING SUBSTRUCTURE CONCRETE SO AS TO AVOID DAMAGE TO THE CONCRETE THAT WILL BE RETAINED. ANY DAMAGE TO THE PORTIONS OF SUBSTRUCTURE THAT WILL BE RETAINED THAT RESULTS FROM THE CONTRACTOR'S REMOVAL OPERATIONS WILL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

For Information Only. All Unclassified Excavation & Backfill reqd. Shall be included in the "Lump Sum" bid on the above items & will not be paid for separately.

REVISIONS	DESCRIPTION	DATE	BY
C	Relocate 4 PLC conduits	CR	

REVISIONS LOCATED BY COORDINATES ON SHEET

REFERENCE DRAWINGS

DESIGNED BY C.G.L. T.R.R.H.
DRAWN BY T. Baker
TRACED BY
CHECKED BY R. James A. Freiberg

ENGINEER OF EXPRESSWAYS
ASST. CITY ENGINEER - HIGHWAYS & EXPRESSWAYS
CITY ENGINEER

CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERS OFFICE
BUREAU OF HIGHWAYS AND EXPRESSWAYS
RAILROAD GRADE SEPARATION

LARNED STREET BRIDGE X069
OVER
GRAND TRUNK WESTERN RAILROAD
GENERAL PLAN OF STRUCTURE

SHEET 3 OF 46 SHEETS
CONTRACT No. PW-3988
DRWG No. C-102
DATE FEB. 1962

DLZ

CITY OF DETROIT

LARNED STREET BRIDGE OVER DEQUINDRE CUT GREENWAY

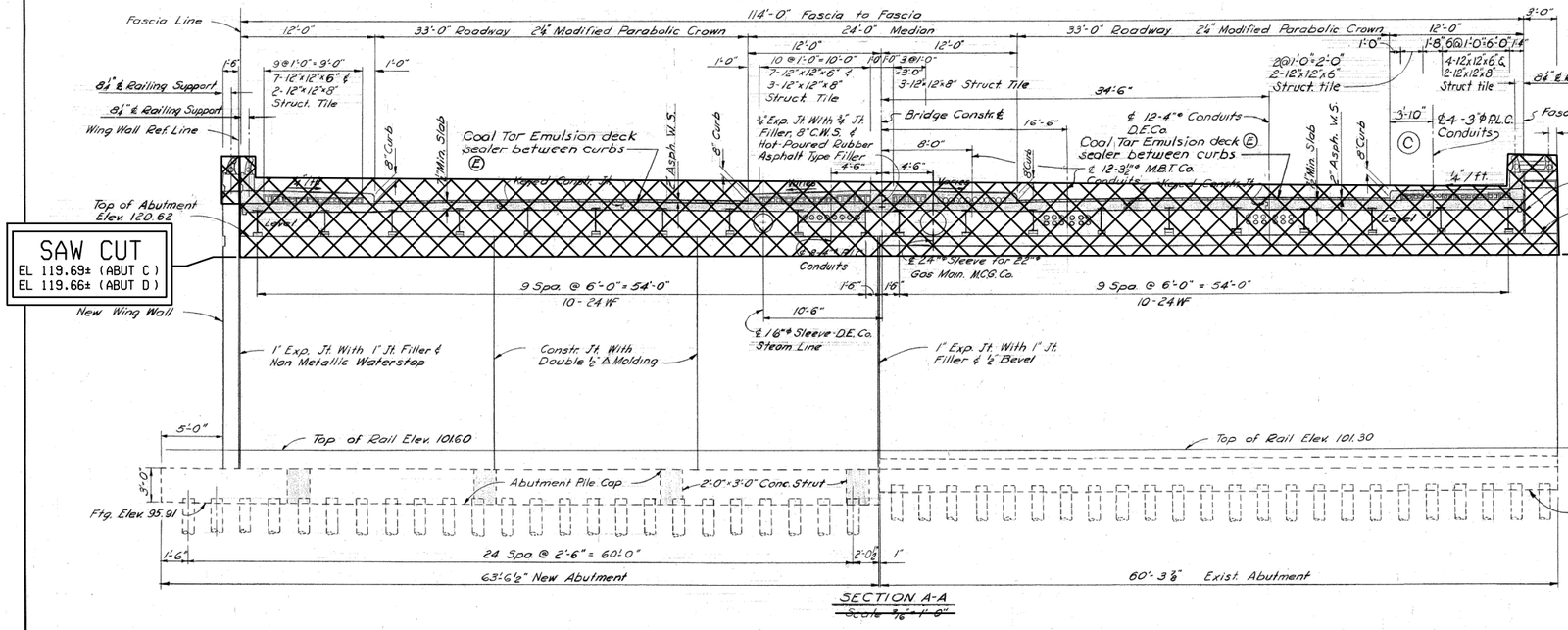
MDOT JOB NO. 106851A | STRUCTURE NO. S01 of 82-22-88

EX GENERAL PLAN OF STRUCTURE (REMOVAL)

DATE: 1/8/10
DLZ JOB NO. 0942-6313-00
SHEET NO. 11 OF 67

DATE: 10-19-09
CORRECTED BY: DAF
DATE: 7-1-09
CHECKED BY: TNB/PDI
DATE: 9-4-08
DRAWN BY: DAF
FILE NAME: Lafayette ex st1.dgn

B. K. ELLIOTT CO. 70145-W 500 6-57•



Note: Dimensions of Superstructure Shown in Sections A-A & B-B are Normal to Bridge Constr. ℄. Substructure Dimensions Shown in Sections A-A & B-B are Along the Pier or Abutment Reference Lines

REMOVAL SHEET

JOB NUMBER 106851A

REMOVE DECK, SIDEWALKS, BRIDGE RAILINGS, BEAMS, BACKWALL, AND PORTIONS OF SUBSTRUCTURE AND APPROACHES. INCLUDED IN THE PAY ITEM "Structures, Rem Portions".

JOB NUMBER 106851A

THE ONLY ITEMS OF WORK TO BE DONE FROM THIS SHEET ARE IDENTIFIED BY THE LEGEND BOX BELOW, LABELED WITH THIS PROJECT'S JOB NUMBER.

PROPOSED WORK

DENOTES REMOVAL PORTIONS

JOB NUMBER 106851A

CARE SHALL BE EXERCISED BY THE CONTRACTOR WHEN REMOVING THE EXISTING SUBSTRUCTURE CONCRETE SO AS TO AVOID DAMAGE TO THE CONCRETE THAT WILL BE RETAINED. ANY DAMAGE TO THE PORTIONS OF SUBSTRUCTURE THAT WILL BE RETAINED THAT RESULTS FROM THE CONTRACTOR'S REMOVAL OPERATIONS WILL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

REVISIONS	DESCRIPTION	DATE	BY
E	Coal Tar Emulsion note added C.R. 10-5	11-5-70	
C	Relocate 4 PLC Conduits C.R. 10-5	10-6-70	

REVISIONS LOCATED BY COORDINATES ON SHEET

DESIGNED BY C.E.L. T.R.R.H.
DRAWN BY T. Baker
TRACED BY
CHECKED BY R. James A. Freiberg

ENGINEER OF EXPRESSWAYS — Alfred Buonaguro
ASST. CITY ENGINEER - HIGHWAYS & EXPRESSWAYS
CITY ENGINEER — Wayne Lubow

CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERS OFFICE
BUREAU OF HIGHWAYS AND EXPRESSWAYS
RAILROAD GRADE SEPARATION

LARNED STREET BRIDGE X069
GRAND TRUNK WESTERN RAILROAD
GENERAL PLAN OF STRUCTURE

SHEET 4 OF 46 SHEETS
CONTRACT No. PW 3988
DRWG. No. C-103
DATE FEB 1962

DLZ

CITY OF DETROIT

LARNED STREET BRIDGE OVER DEQUINDRE CUT GREENWAY

MDOT JOB NO. 106851A | STRUCTURE NO. S01 of 82-22-88

EX GENERAL PLAN OF STRUCTURE (REMOVAL)

DATE: 1/8/10
DLZ JOB NO. 0942-6313-00
SHEET NO. 12 OF 67

DATE: 10-19-09 CORRECTED BY: DAF
DATE: 7-1-09 CHECKED BY: TNB/PDI
DATE: 9-4-08 DRAWN BY: DAF
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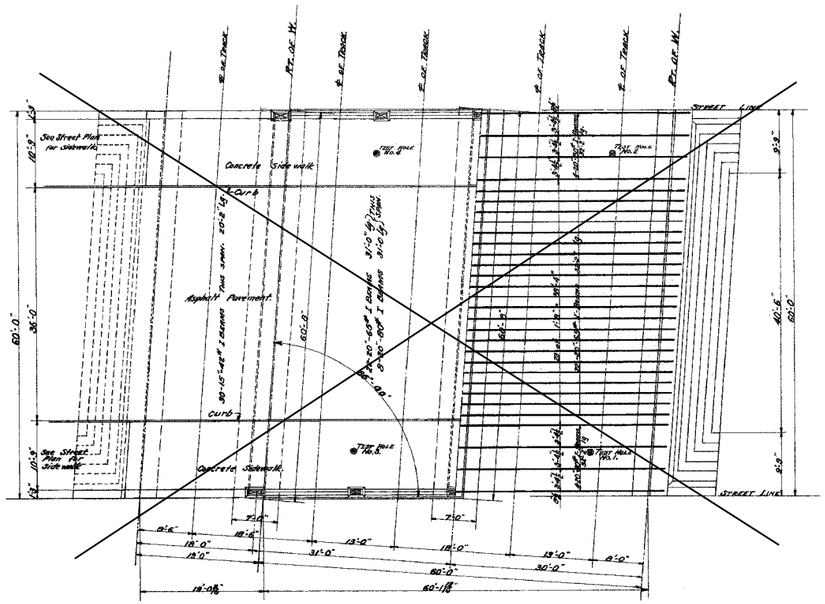
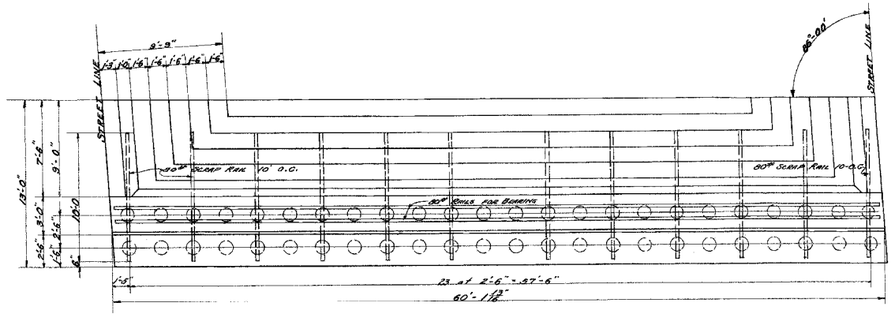
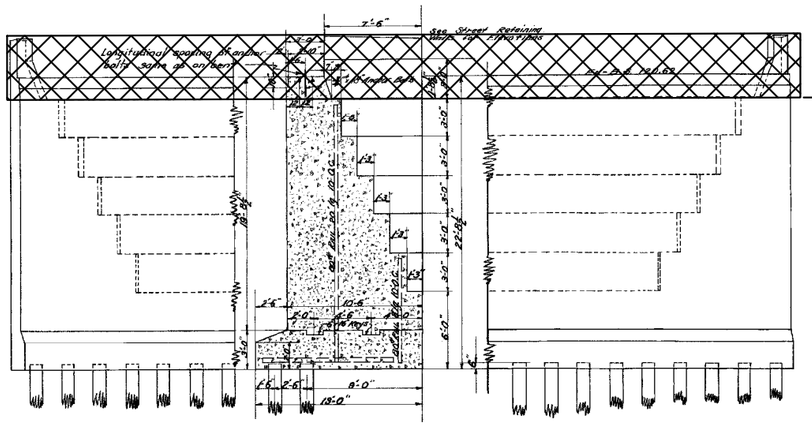
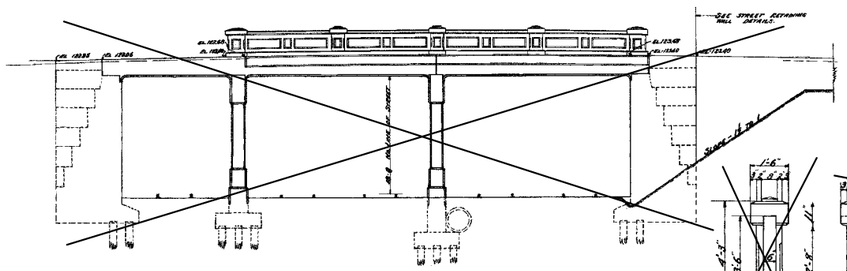
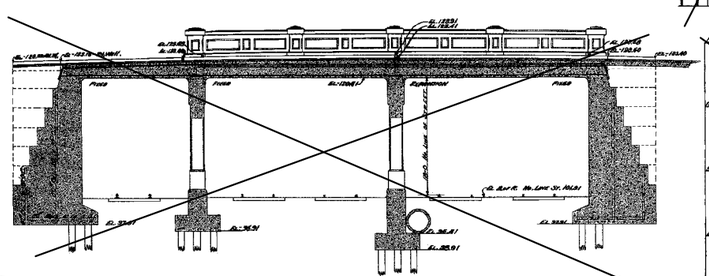
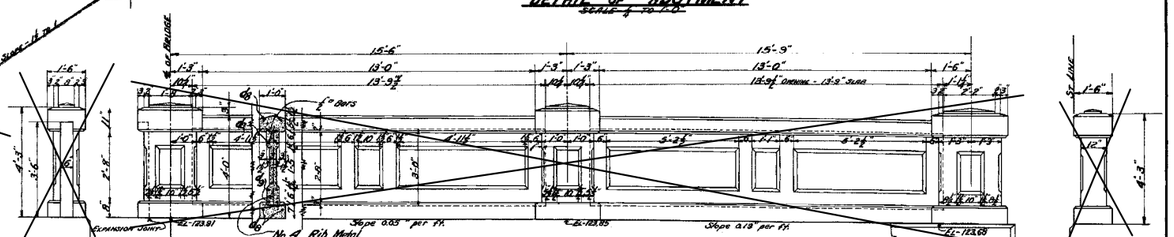












Approved:
Chief Engineer, D.G.R.& W.R.Ry

Approved:
City Engineer
Nov. 17, 1913

REVISED JUNE 19 1913.

GRAND TRUNK RAILWAY SYSTEM
WESTERN LINES
DEQUINDRE GRADE SEPARATION
DETROIT, MICHIGAN
BRIDGE — LARNED ST.
SCALE — AS SHOWN

DR. - R.A.W. TR. - J.K.W. CK. - A.M.L.	OFFICE OF CHIEF ENGINEER DETROIT, MICHIGAN MAY — 1913.	JOURNAL No. 3019 FILE:

Sheet 1 of 8

REMOVAL SHEET

JOB NUMBER 106851A

REMOVE TOP OF ABUTMENT, TOP OF WINGWALL, AND RAILING TO LIMITS SHOWN. INCLUDED IN THE PAY ITEM "Structures, Rem Portions".

SAW CUT
EL 118.84± (ABUT A)
EL 118.75± (ABUT B)

JOB NUMBER 106851A

THE ONLY ITEMS OF WORK TO BE DONE FROM THIS SHEET ARE IDENTIFIED BY THE LEGEND BOX BELOW, LABELED WITH THIS PROJECT'S JOB NUMBER.

PROPOSED WORK

DENOTES REMOVAL PORTIONS

DATE: 10-19-09
CHECKED BY: PDI
DATE: 10-19-09 CORRECTED BY: DAF
DRAWN BY: DAF
FILE NAME: Larned ex ab1.dgn

REVISIONS	DESCRIPTION	DATE	BY

DLZ

CITY OF DETROIT

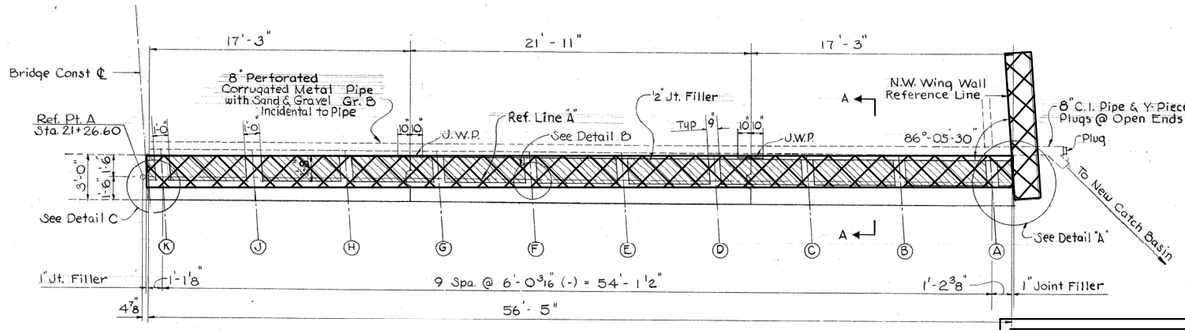
LARNED STREET BRIDGE OVER DEQUINDRE CUT GREENWAY

MDOT JOB NO. .106851A | STRUCTURE NO. S01 of 82-22-88

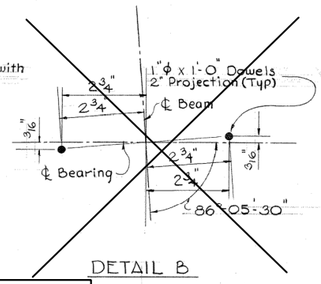
EX ABUTMENT DETAILS (REMOVAL)

DATE: 1/8/10
DLZ JOB NO. 0942-6313-00
SHEET NO. 13 OF 67

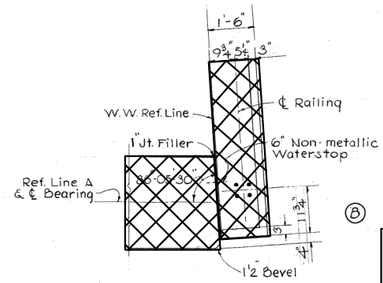
B. K. ELLIOTT CO. 70145-W 500 8-57



PLAN OF TOP - ABUTMENT A
Scale ¼" = 1'-0"



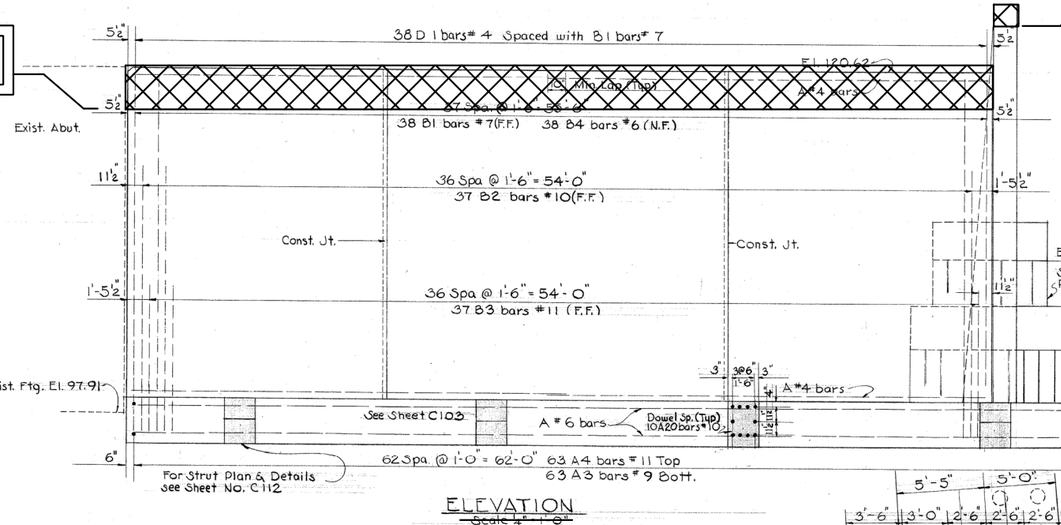
DETAIL B



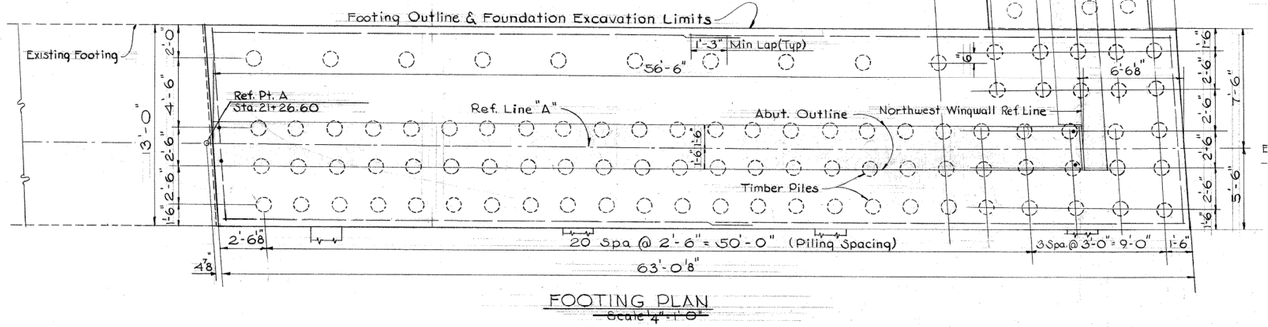
DETAIL A
Scale 1½" = 1'-0"

SAW CUT
EL 123.60± - 123.29± (NW WINGWALL)

SAW CUT
EL 119.69± (ABUT C)

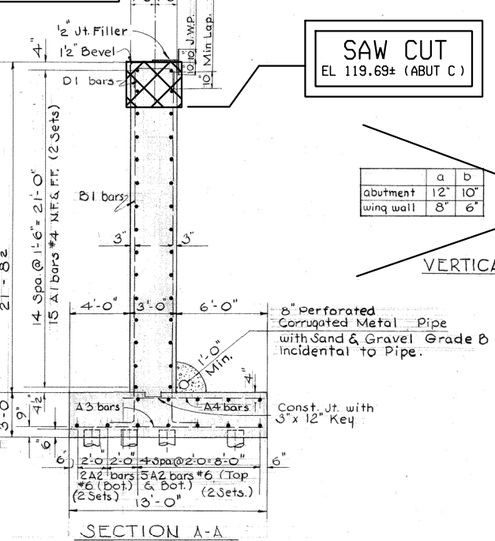


ELEVATION
Scale 4" = 1'-0"

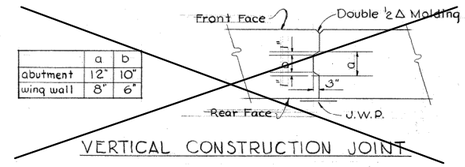


FOOTING PLAN
Scale 4" = 1'-0"

SAW CUT
EL 119.69± (ABUT C)

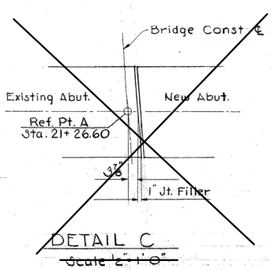


SECTION A-A
Scale 4" = 1'-0"



	a	b
abutment	12"	10"
wing wall	8"	6"

VERTICAL CONSTRUCTION JOINT



DETAIL C
Scale 2" = 1'-0"

MISCELLANEOUS QUANTITIES - ABUT. A & N.W.W.W.		
Item	Amount	Unit
6" Non-Metallic Waterstop	22.0	Lin. Ft.
Joint Waterproofing, 20" Wide	324.0	Lin. Ft.
½" Joint Filler	162.0	Sq. Ft.
1" Joint Filler	187.5	Sq. Ft.
Sand & Gravel - Grade "A"	628.0	Cu. Yds.
8" Corrugated Metal Pipe	92.0	Lin Ft.
Steel Sheet Piling (Left in Place)	270.0	Sq. Ft.
Dampproofing	1957.0	Sq. Ft.
Timber Piles, Cut Off	113.0	Each
Timber Piles, Furnished & Driven	6780.0	Lin. Ft.
Unclassified Excavation	475.0	Cu. Yds.
Concrete - Grade A (6AA)	316.0	Cu. Yds.
Aluminum Railing - 2 tube	35.0	Lin. Ft.

~~Work this sheet with sheets 108 & 109~~

REMOVAL SHEET

JOB NUMBER 106851A

THE ONLY ITEMS OF WORK TO BE DONE FROM THIS SHEET ARE IDENTIFIED BY THE LEGEND BOX BELOW, LABELED WITH THIS PROJECT'S JOB NUMBER.

PROPOSED WORK

DENOTES REMOVAL PORTIONS

JOB NUMBER 106851A

REMOVE TOP OF ABUTMENT, TOP OF WINGWALL, AND RAILING TO LIMITS SHOWN. INCLUDED IN THE PAY ITEM "Structures, Rem Portions".

JOB NUMBER 106851A

CARE SHALL BE EXERCISED BY THE CONTRACTOR WHEN REMOVING THE EXISTING SUBSTRUCTURE CONCRETE SO AS TO AVOID DAMAGE TO THE CONCRETE THAT WILL BE RETAINED. ANY DAMAGE TO THE PORTIONS OF SUBSTRUCTURE THAT WILL BE RETAINED THAT RESULTS FROM THE CONTRACTOR'S REMOVAL OPERATIONS WILL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

REVISIONS				
	DESCRIPTION	DATE	BY	
B	Changed Railing Dimension	CR 1561	5/1963	

REVISIONS LOCATED BY COORDINATES ON SHEET

REFERENCE DRAWINGS

DESIGNED BY C.C.L., T.R.R.H.
DRAWN BY C. Roberts
TRACED BY
CHECKED BY D. Romree, A. Freiberg

ENGINEER OF EXPRESSWAYS
ASST. CITY ENGINEER - HIGHWAYS & EXPRESSWAYS
CITY ENGINEER

CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERS OFFICE
BUREAU OF HIGHWAYS AND EXPRESSWAYS
RAILROAD GRADE SEPARATION

LARNED STREET BRIDGE X069
OVER
GRAND TRUNK WESTERN RAILROAD
ABUT. A DETAILS

SHEET 8 OF 46 SHEETS
CONTRACT No. PW 3988
DRWG No. C107
DATE MAR. 1962

DLZ

CITY OF DETROIT

LARNED STREET BRIDGE OVER DEQUINDRE CUT GREENWAY

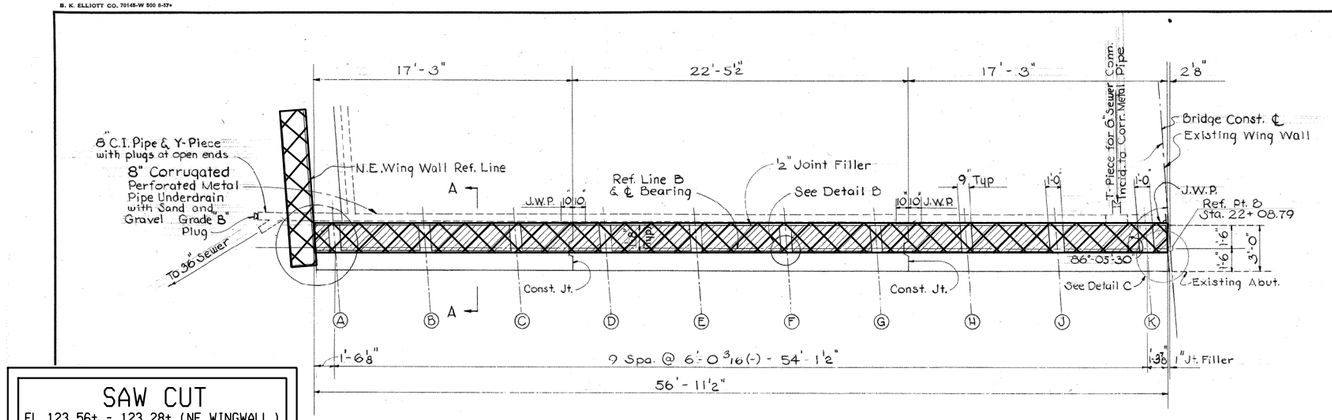
MDOT JOB NO. 106851A | STRUCTURE NO. S01 of 82-22-88

EX ABUTMENT A DETAILS (REMOVAL)

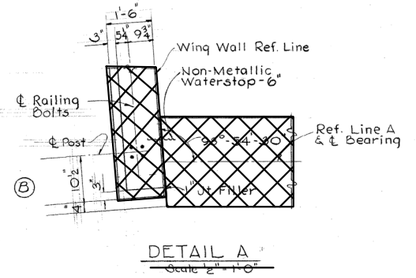
DATE: 1/8/10
DLZ JOB NO. 0942-6313-00
SHEET NO. 14 OF 67

DATE: 10-19-09
CORRECTED BY: DAF
DATE: 7-1-09
CHECKED BY: TNB/PDI
DRAWN BY: DLW
DATE: 6-4-09
FILE NAME: Larned ex ab2.dgn

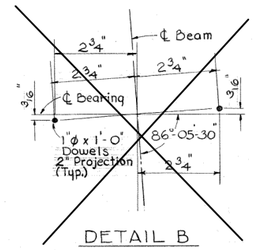
B. K. ELLIOTT CO. 70148-W 500 8-57



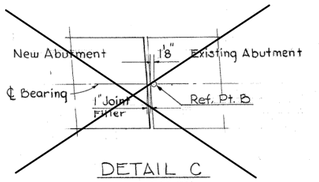
PLAN OF TOP-ABUTMENT B
Scale ¼"=1'-0"



DETAIL A
Scale 2"=1'-0"



DETAIL B

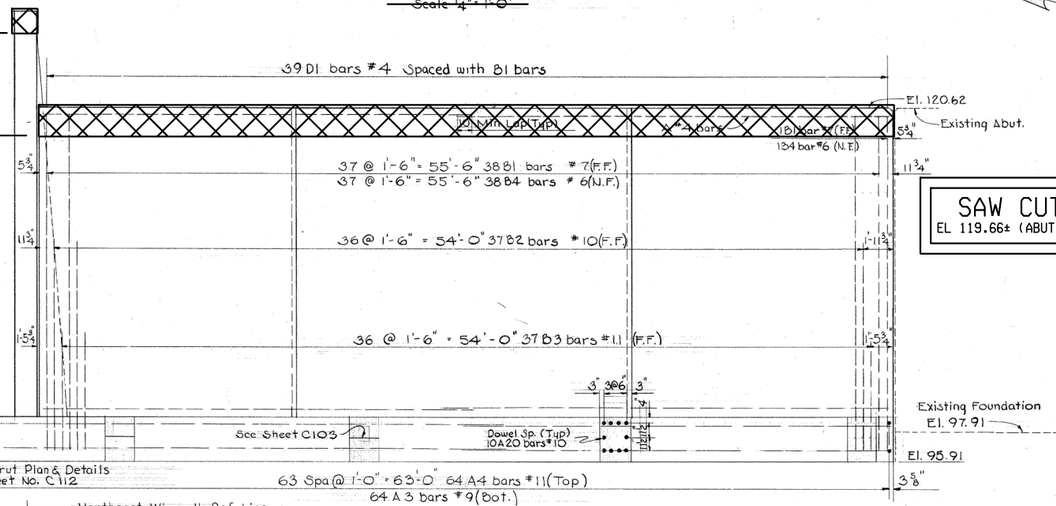


DETAIL C

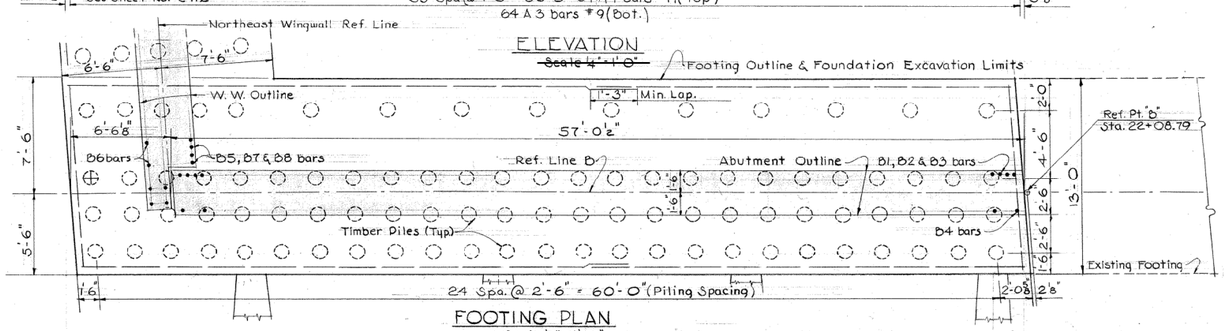
MISCELLANEOUS QUANTITIES ABUT. B & N.E. W.W.		
Item	Amount	Unit
6" Non-Metallic Waterstop	22.0	Lin. Ft.
Joint Waterproofing, 20" Wide	300.0	Lin. Ft.
½" Joint Filler	164.0	Sq. Ft.
1" Joint Filler	187.5	Sq. Ft.
Sand & Gravel Grade A	633.0	Cu. Yds.
6" Corrugated Metal Pipe	78.0	Lin. Ft.
Steel Sheet Piling (Left in Place)	-	-
Dampproofing	1858.0	Sq. Ft.
Timber Piles, Cut Off	108.0	Each.
Timber Piles, Furnished & Driven	6480.0	Lin. Ft.
Unclassified Excavation	507.0	Cu. Yds.
Concrete - Grade A (6AA)	293.0	Cu. Yds.
Aluminum Railing - 2 tube	20.0	Lin. Ft.

SAW CUT
EL 123.56± - 123.28± (NE WINGWALL)

SAW CUT
EL 119.66± (ABUT D)

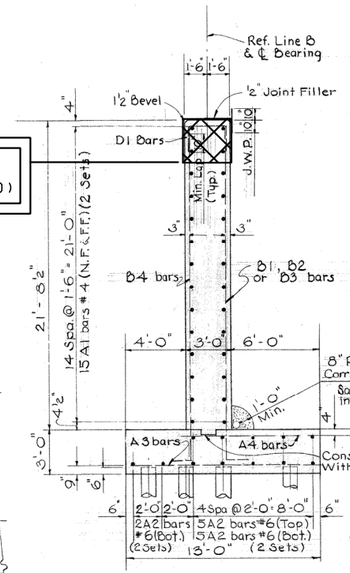


ELEVATION
Scale ¼"=1'-0"



FOOTING PLAN
Scale ¼"=1'-0"

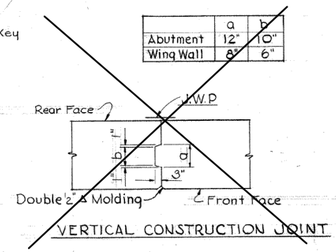
SAW CUT
EL 119.66± (ABUT D)



SECTION A-A
Scale ¼"=1'-0"

⊕ Test Pile

	a	b
Abutment	12"	10"
Wing Wall	8"	6"



VERTICAL CONSTRUCTION JOINT

~~Work this sheet with sheets 107 & 109~~

REMOVAL SHEET

JOB NUMBER 106851A

THE ONLY ITEMS OF WORK TO BE DONE FROM THIS SHEET ARE IDENTIFIED BY THE LEGEND BOX BELOW, LABELED WITH THIS PROJECT'S JOB NUMBER.

PROPOSED WORK

DENOTES REMOVAL PORTIONS

JOB NUMBER 106851A

REMOVE TOP OF ABUTMENT, TOP OF WINGWALL, AND RAILING TO LIMITS SHOWN. INCLUDED IN THE PAY ITEM "Structures, Rem Portions".

JOB NUMBER 106851A

CARE SHALL BE EXERCISED BY THE CONTRACTOR WHEN REMOVING THE EXISTING SUBSTRUCTURE CONCRETE SO AS TO AVOID DAMAGE TO THE CONCRETE THAT WILL BE RETAINED. ANY DAMAGE TO THE PORTIONS OF SUBSTRUCTURE THAT WILL BE RETAINED THAT RESULTS FROM THE CONTRACTOR'S REMOVAL OPERATIONS WILL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

REVISIONS	DESCRIPTION	DATE	BY
B	Changed Railing Dimension	5/13/60	

REVISIONS LOCATED BY COORDINATES ON SHEET

REFERENCE DRAWINGS

DESIGNED BY C.C.L. T.R.R.H.
DRAWN BY C. Roberts
TRACED BY
CHECKED BY D. Romness & Freiberg

CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERS OFFICE
BUREAU OF HIGHWAYS AND EXPRESSWAYS
RAILROAD GRADE SEPARATION

ENGINEER OF EXPRESSWAYS
ASST. CITY ENGINEER - HIGHWAYS & EXPRESSWAYS
CITY ENGINEER

LARNED STREET BRIDGE X069
OVER
GRAND TRUNK WESTERN RAILROAD
ABUT. B DETAILS

SHEET 9 OF 46 SHEETS
CONTRACT No. PW 3988
DRWG No. C108
DATE MAR 1962

DESCRIPTION | DATE | BY

DLZ

CITY OF DETROIT

LARNED STREET BRIDGE OVER DEQUINDRE CUT GREENWAY

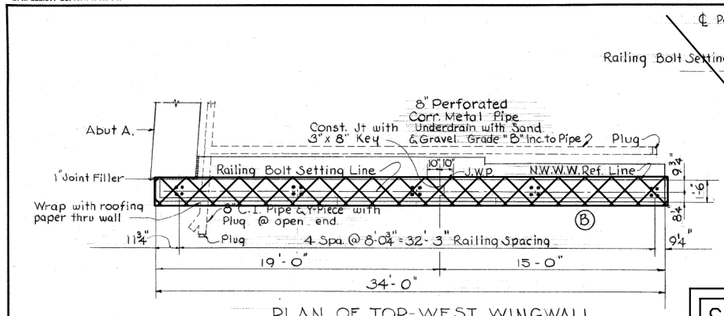
MDOT JOB NO. 106851A | STRUCTURE NO. S01 of 82-22-88

EX ABUTMENT B DETAILS (REMOVAL)

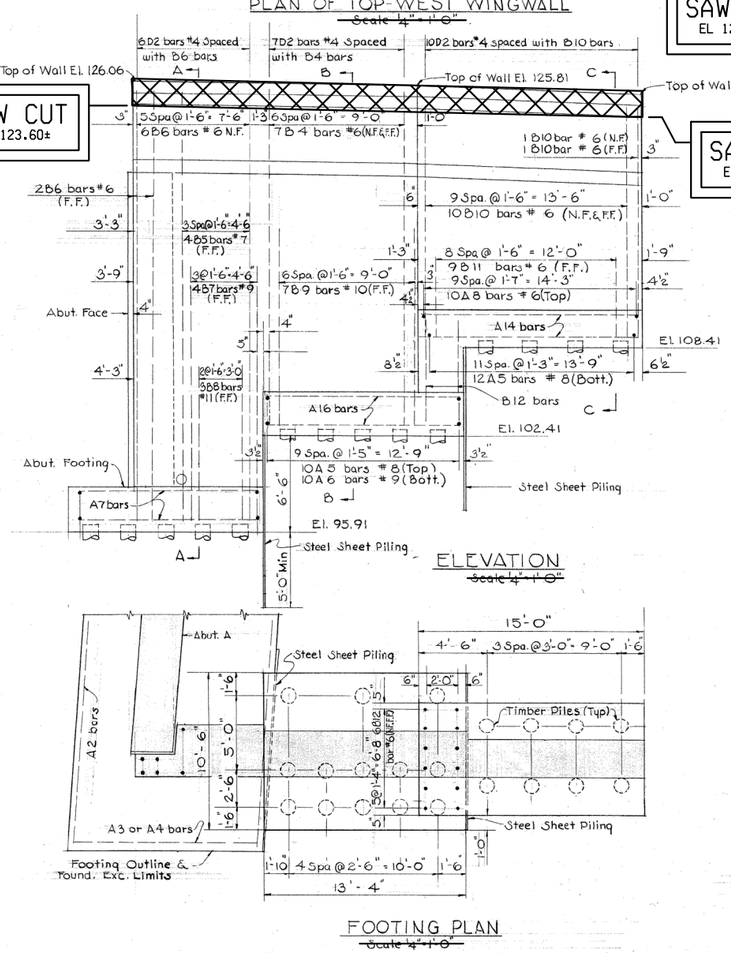
DATE: 1/8/10
DLZ JOB NO. 0942-6313-00
SHEET NO. 15 OF 67

DATE: 10-19-09
CORRECTED BY: DAF
DATE: 7-1-09
DRAWN BY: DLW
DATE: 6-4-09
CHECKED BY: TNB/PDI
FILE NAME: Larned ex ab3.dgn

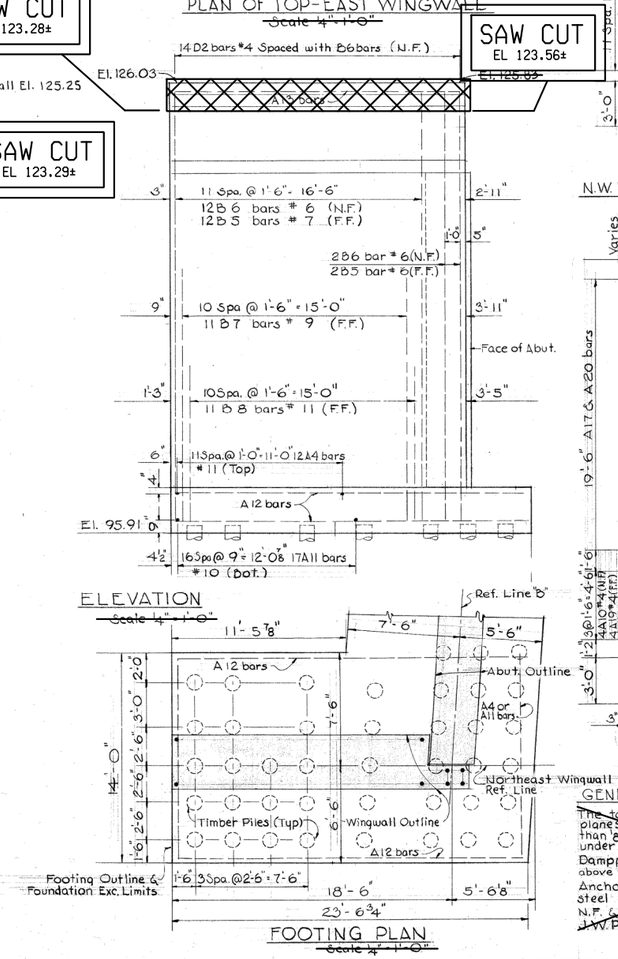
B. K. ELLIOTT CO. 70145-W 500 8-57*

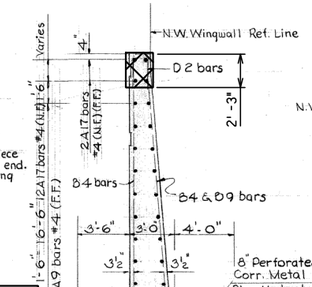


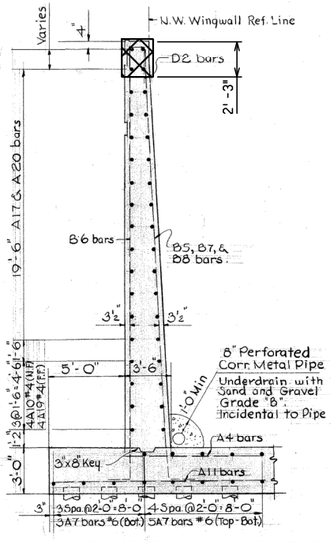
PLAN OF TOP-WEST WINGWALL
Scale 4" = 1'-0"

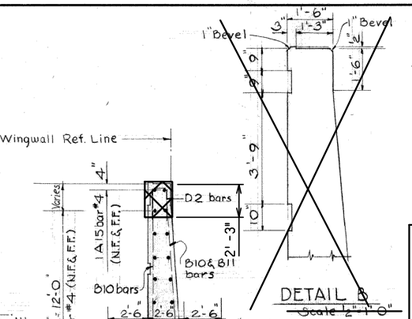


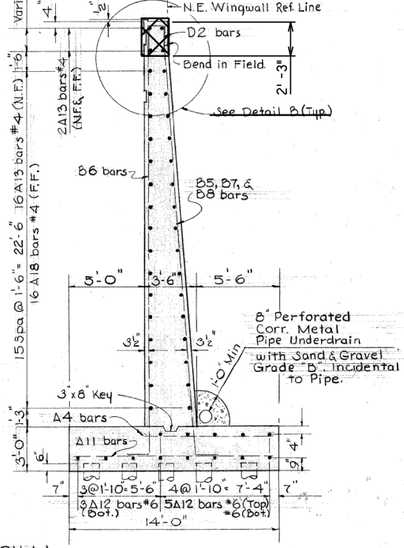
PLAN OF TOP-EAST WINGWALL
Scale 4" = 1'-0"











NOTE:
The designs of the abutment and wingwalls are based on a maximum pile load of 11 tons

Work this sheet with sheets 107 & 108

GENERAL NOTES

The top of the abutment shall be finished to true planes at the elevations shown and shall not vary more than ⅛" under a 10' straight edge nor more than ¼" under any bearing.

Dampproof the rear face of the abutment and wingwalls above the footing.

Anchor bolts are to be furnished with the structural steel and are to be set accurately to a template.

N.F. & F.F. denote near face and far face respectively.

J.W.P. denotes joint waterproofing, 20" wide.

REMOVAL SHEET

JOB NUMBER 106851A

THE ONLY ITEMS OF WORK TO BE DONE FROM THIS SHEET ARE IDENTIFIED BY THE LEGEND BOX BELOW, LABELED WITH THIS PROJECT'S JOB NUMBER.

PROPOSED WORK

DENOTES REMOVAL PORTIONS

JOB NUMBER 106851A

REMOVE RAILING AND TOP OF WINGWALL TO LIMITS SHOWN. INCLUDED IN THE PAY ITEM "Structures, Rem Portions".

JOB NUMBER 106851A

CARE SHALL BE EXERCISED BY THE CONTRACTOR WHEN REMOVING THE EXISTING SUBSTRUCTURE CONCRETE SO AS TO AVOID DAMAGE TO THE CONCRETE THAT WILL BE RETAINED. ANY DAMAGE TO THE PORTIONS OF SUBSTRUCTURE THAT WILL BE RETAINED THAT RESULTS FROM THE CONTRACTOR'S REMOVAL OPERATIONS WILL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

REVISIONS			
COORD	DESCRIPTION	DATE	BY
B	Changed Railing Dimensions	5/1/62	

REVISIONS LOCATED BY COORDINATES ON SHEET

REFERENCE DRAWINGS

DESIGNED BY C.C.L. / R.R.H.
DRAWN BY C. Roberts
TRACED BY
CHECKED BY D. Romes & Freiberg

ENGINEER OF EXPRESSWAYS
ASST. CITY ENGINEER-HIGHWAYS & EXPRESSWAYS
CITY ENGINEER

CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERS OFFICE
BUREAU OF HIGHWAYS AND EXPRESSWAYS
RAILROAD GRADE SEPARATION

LARNED STREET BRIDGE X069
OVER
GRAND TRUNK WESTERN RAILROAD
ABUT. A & ABUT. B DETAILS

SHEET 10 OF 43 SHEETS
CONTRACT No. PW 3883
DRWG. No. C109
DATE MAR. 1962

DLZ

CITY OF DETROIT

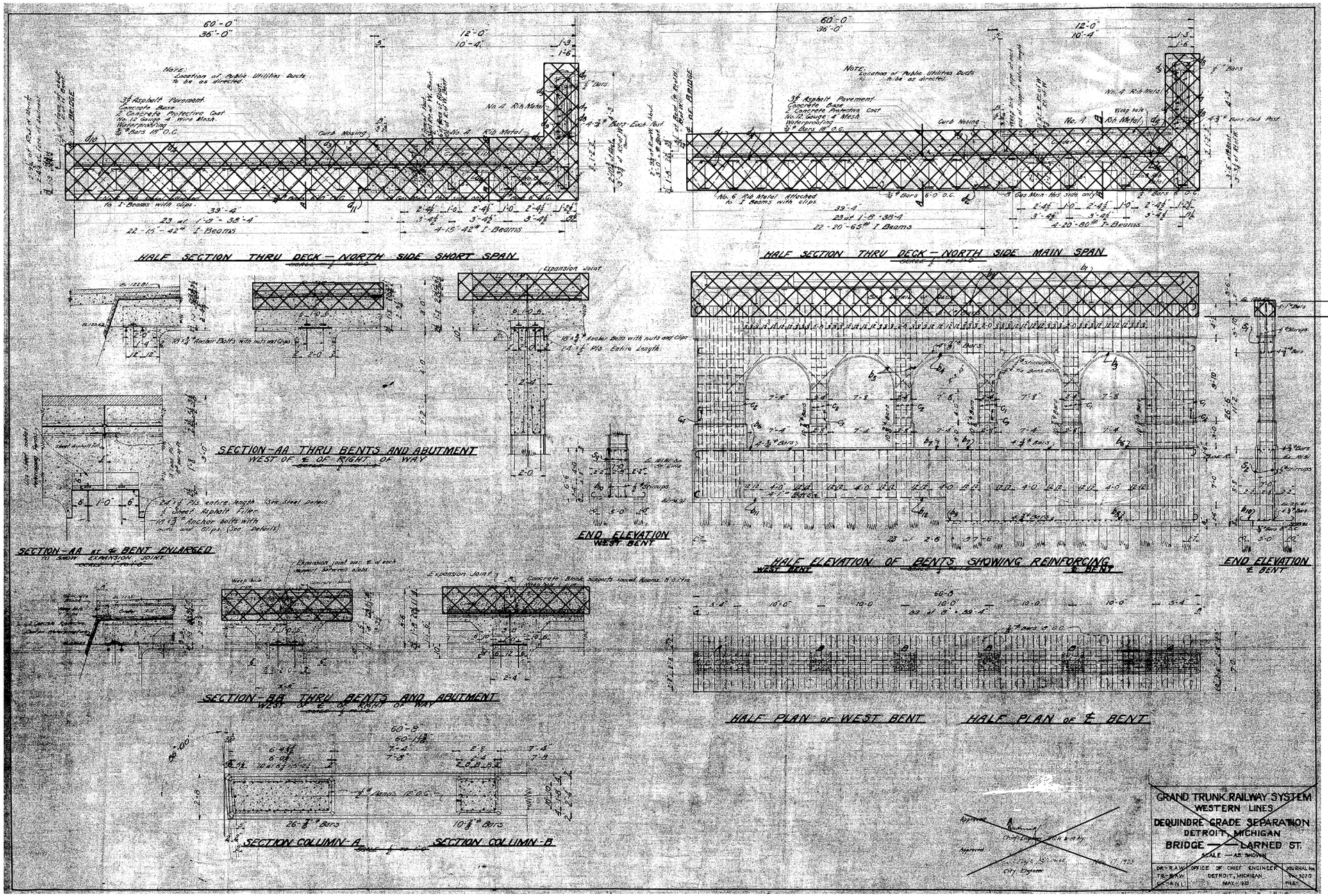
LARNED STREET BRIDGE OVER DEQUINDRE CUT GREENWAY

MDOT JOB NO. 106851A | STRUCTURE NO. S01 of 82-22-88

EX WINGWALL DETAILS (REMOVAL)

DATE: 1/8/10
DLZ JOB NO. 0942-6313-00
SHEET NO. 16 OF 67

DATE: 10-20-09
CORRECTED BY: DAF
DATE: 7-1-09
CHECKED BY: TNB
DATE: 6-4-09
DRAWN BY: DLW
FILE NAME: Larned ex wll.dgn



REMOVAL SHEET

JOB NUMBER 106851A

THE ONLY ITEMS OF WORK TO BE DONE FROM THIS SHEET ARE IDENTIFIED BY THE LEGEND BOX BELOW, LABELED WITH THIS PROJECT'S JOB NUMBER.

PROPOSED WORK

DENOTES REMOVAL PORTIONS

SAW CUT
EL 119.82± - 119.77± (PIER 1)
EL 119.76± - 119.69± (PIER 2)

1'-0"

JOB NUMBER 106851A

REMOVE TOP OF PIERS TO LIMITS SHOWN. INCLUDED IN THE PAY ITEM "Structures, Rem Portions".

JOB NUMBER 106851A

CARE SHALL BE EXERCISED BY THE CONTRACTOR WHEN REMOVING THE EXISTING SUBSTRUCTURE CONCRETE SO AS TO AVOID DAMAGE TO THE CONCRETE THAT WILL BE RETAINED. ANY DAMAGE TO THE PORTIONS OF SUBSTRUCTURE THAT WILL BE RETAINED THAT RESULTS FROM THE CONTRACTOR'S REMOVAL OPERATIONS WILL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

DATE: 10-20-09
DATE: 7-1-09 CORRECTED BY: DAF
CHECKED BY: TNB/PDI
DATE: 6-4-09
DRAWN BY: DLW
FILE NAME: Larned ex pi1.dgn

REVISIONS	DESCRIPTION	DATE	BY

DLZ

CITY OF DETROIT

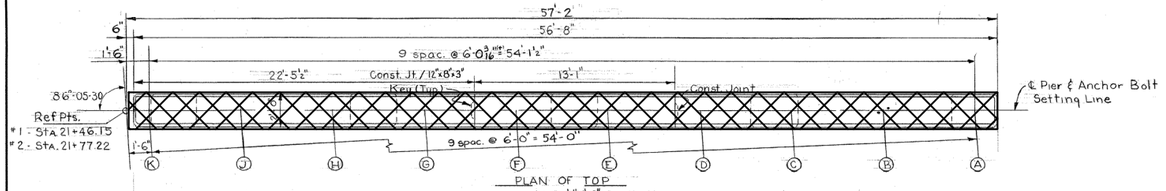
LARNED STREET BRIDGE OVER
DEQUINDRE CUT GREENWAY

MDOT JOB NO. .106851A | STRUCTURE NO. S01 of 82-22-88

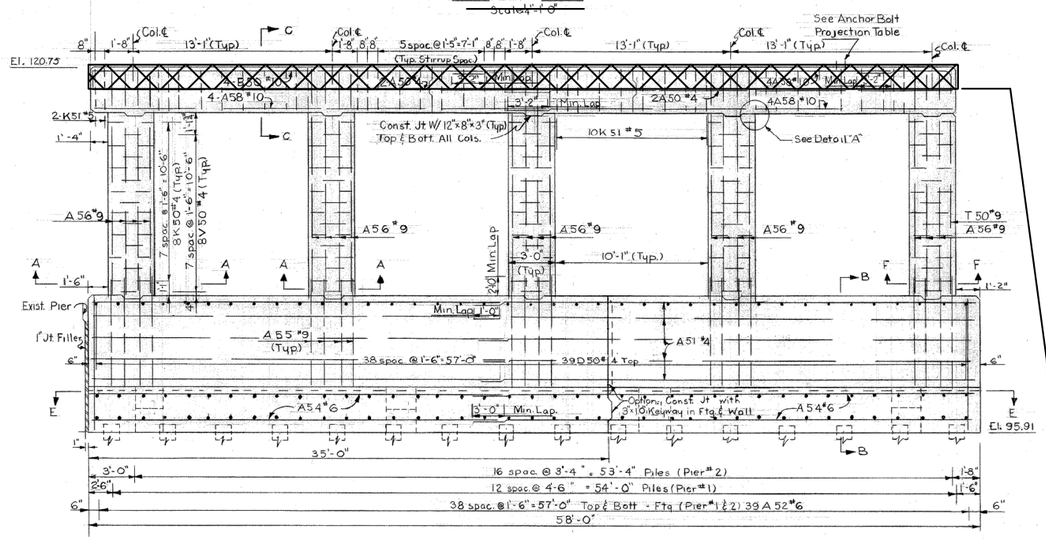
EX PIER DETAILS (REMOVAL)

DATE: 1/8/10
DLZ JOB NO. 0942-6313-00
SHEET NO. 17 OF 67

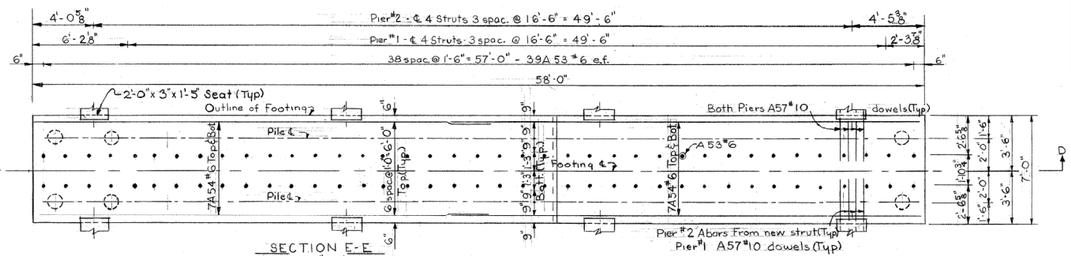
B. K. ELLIOTT CO. 70145-W 500 8-57



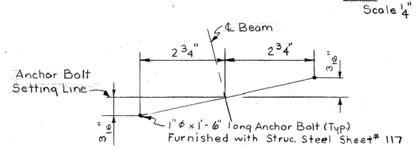
PLAN OF TOP
Scale 1/4" = 1'-0"



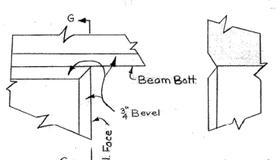
SECTION D-D
Scale 1/4" = 1'-0"



SECTION E-E
Scale 1/4" = 1'-0"



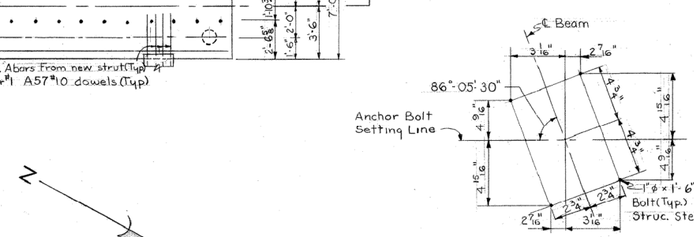
PIER *2 ANCHOR BOLT SETTING DETAIL
No Scale



Typ. all Interior Corners

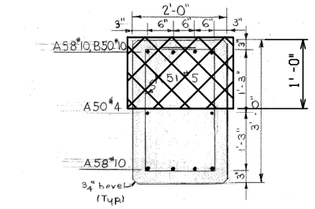
DETAIL "A"
No Scale

Section G-G

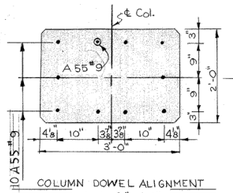


Pier *1 ANCHOR BOLT SETTING DETAIL
No Scale

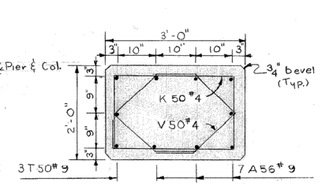
ANCHOR BOLT PROJECTION TABLE									
Beam	A	B	C	D	E	F	G	H	J	K
Pier *1	6	6	6	7	7½	7½	7	6	6	6
Pier *2	6	6	6½	7½	8	8	7½	6½	6	6



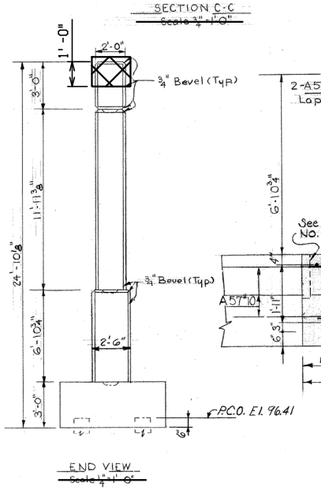
SECTION C-C
Scale 3/4" = 1'-0"



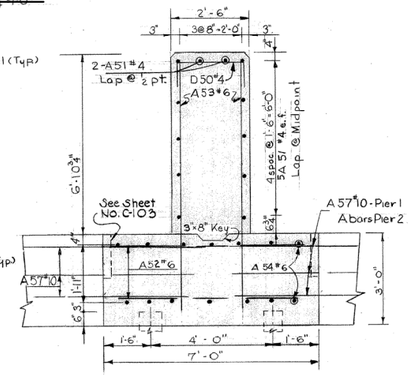
COLUMN DOWEL ALIGNMENT
Scale 3/4" = 1'-0"



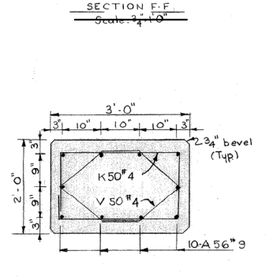
SECTION F-F
Scale 3/4" = 1'-0"



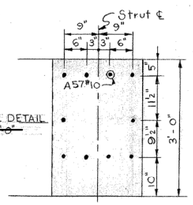
END VIEW
Scale 1/4" = 1'-0"



SECTION B-B
Scale 1/4" = 1'-0"



SECTION A-A
Scale 3/4" = 1'-0"



STRUT DOWEL DETAIL
Scale 3/4" = 1'-0"

QUANTITIES			
Item	Pier 1	Pier 2	Unit
Excavation	970	970	Cu. Yds.
1" Joint Filler	30	25	Sq. Ft.
Concrete Gr A(AA)	108	108	Cu. Yds.
Timber Pile Cut Off	26	34	Each
Timber Pile Furn. & Driv.	1560	2040	Lin. Ft.

GENERAL NOTES

Top of pier shall be finished to a true plane at the elevation shown and shall not vary more than ⅛ under a ten foot straight edge or more than ¼ under any bearing.

All exposed concrete corners shall have ¾" bevel.

For strut layout see sheet * 112

e.f. denotes each face.

Anchor bolts are to be furnished with the structural steel and are to be set accurately to a template.

The design of the piers is based on a maximum pile load of 17 tons.

Work this sheet with sheet * 112

SAW CUT
EL 119.83± (PIER 4)

REMOVE PIER CAP
PIER 3

REMOVAL SHEET

JOB NUMBER 106851A

CARE SHALL BE EXERCISED BY THE CONTRACTOR WHEN REMOVING THE EXISTING SUBSTRUCTURE CONCRETE SO AS TO AVOID DAMAGE TO THE CONCRETE AND STEEL REINFORCEMENT THAT WILL BE RETAINED. ANY DAMAGE TO THE PORTIONS OF SUBSTRUCTURE THAT WILL BE RETAINED THAT RESULTS FROM THE CONTRACTOR'S REMOVAL OPERATIONS WILL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

JOB NUMBER 106851A

REMOVE PIER CAP AT PIER 3 AND RETAIN EXISTING COLUMN REINFORCEMENT. INCLUDED IN THE PAY ITEM "Structures, Rem Portions".

JOB NUMBER 106851A

REMOVE TOP OF PIER 4 TO LIMITS SHOWN. INCLUDED IN THE PAY ITEM "Structures, Rem Portions".

JOB NUMBER 106851A

THE ONLY ITEMS OF WORK TO BE DONE FROM THIS SHEET ARE IDENTIFIED BY THE LEGEND BOX BELOW, LABELED WITH THIS PROJECT'S JOB NUMBER.

PROPOSED WORK

DENOTES REMOVAL PORTIONS

REVISIONS LOCATED BY COORDINATES ON SHEET

COORD	DESCRIPTION	DR'N	CK'D	APV'D	DATE

REFERENCE DRAWINGS

DESIGNED BY C.C.L. / R.R.H.
DRAWN BY Mosley
TRACED BY
CHECKED BY K. Jones A. Freiberg

ENGINEER OF EXPRESSWAYS
ASST. CITY ENGINEER - HIGHWAYS & EXPRESSWAYS
CITY ENGINEER

CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERS OFFICE
BUREAU OF HIGHWAYS AND EXPRESSWAYS
RAILROAD GRADE SEPARATION

LARNED STREET BRIDGE X069
OVER
GRAND TRUNK WESTERN RAILROAD
PIER DETAILS

SHEET 12 OF 46 SHEETS
CONTRACT No. PW 3988
DRWG No. C111
DATE MAR. 1962

DATE: 10-20-09
CORRECTED BY: DAF
DATE: 7-1-09
DRAWN BY: DLW
CHECKED BY: TNB/PDI
DATE: 6-4-09
FILE NAME: Larned ex p12.dgn

REVISIONS	DESCRIPTION	DATE	BY

DLZ

CITY OF DETROIT

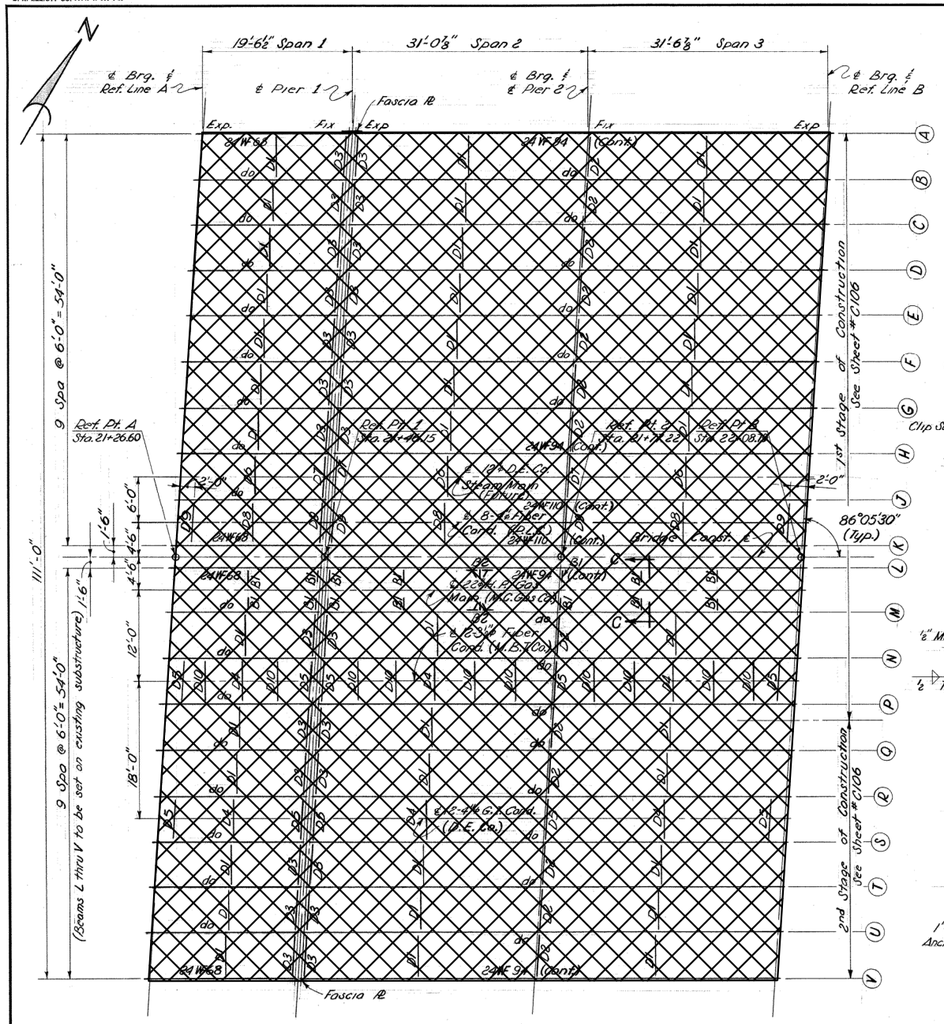
LARNED STREET BRIDGE OVER DEQUINDRE CUT GREENWAY

MDOT JOB NO. 106851A | STRUCTURE NO. S01 of 82-22-88

EX PIER DETAILS (REMOVAL)

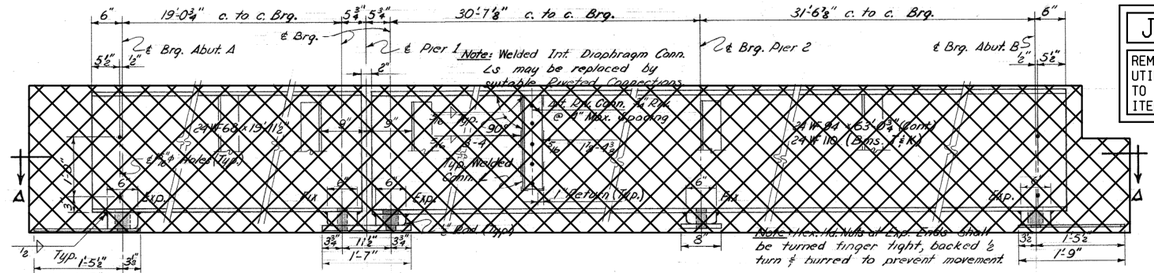
DATE: 1/8/10
DLZ JOB NO. 0942-6313-00
SHEET NO. 18 OF 67

B. K. ELLIOTT CO. 70148-W 500 8-57



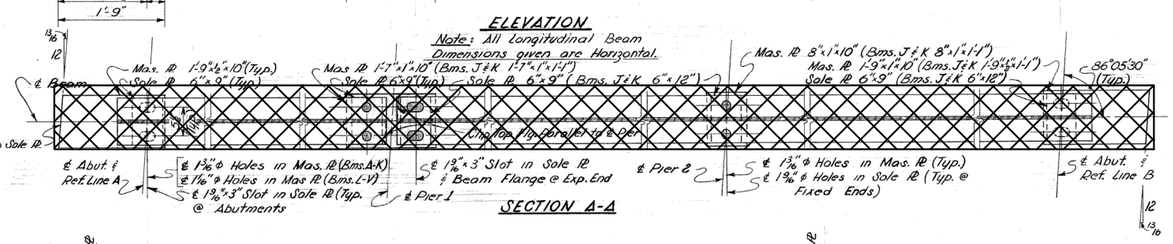
FRAMING PLAN
Scale: ½"=1'-0"

~~Span 1 No Camber Required.~~
~~Mill Camber Up~~

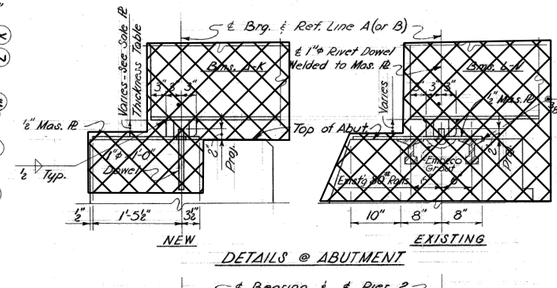


ELEVATION

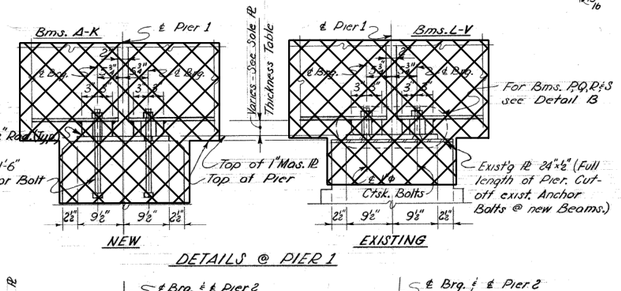
Note: All longitudinal Beam Dimensions given are Horizontal.



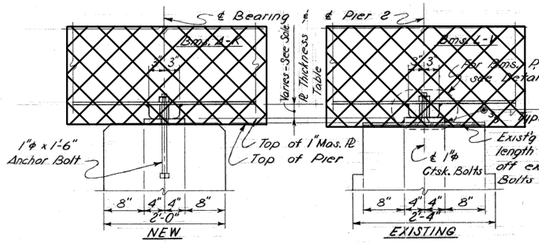
SECTION A-A



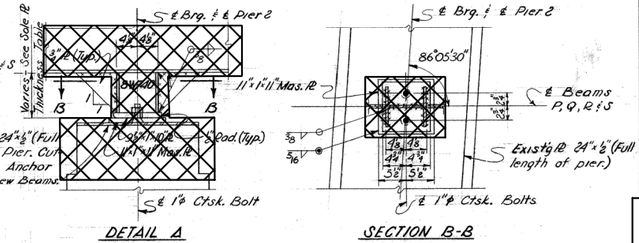
DETAILS @ ABUTMENT



DETAILS @ PIER 1

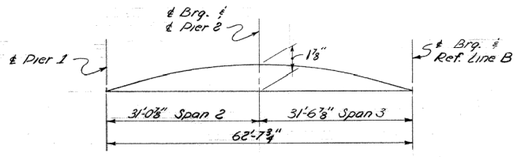


PIER 2 DETAILS

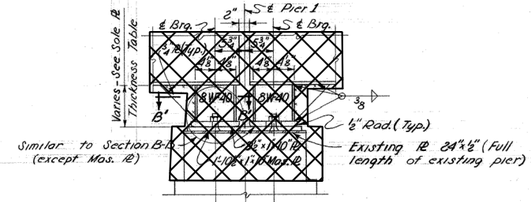


DETAIL A

SECTION B-B



CAMBER DIAGRAM
Beams A-V



DETAIL B

Work this Sheet with Sheets C106, C116

DESIGNED BY	C.G.L. / R.R.H.
DRAWN BY	R.R. GOLD
TRACED BY	
CHECKED BY	A. Freiberg

REVISIONS LOCATED BY COORDINATES ON SHEET

CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERS OFFICE
BUREAU OF HIGHWAYS AND EXPRESSWAYS
RAILROAD GRADE SEPARATION

LARNED STREET BRIDGE X069
OVER
GRAND TRUNK WESTERN RAILROAD
STRUCTURAL STEEL DETAILS

SHEET 18 OF 46 SHEETS
CONTRACT No. PW 3988
DRWG. No. C117
DATE MAR. 1962

JOB NUMBER 106851A

REMOVE STRUCTURAL STEEL, SELECT UTILITIES, AND PORTIONS OF SUBSTRUCTURE TO LIMITS SHOWN. INCLUDED IN THE PAY ITEM "Structures, Rem Portions".

REMOVAL SHEET

JOB NUMBER 106851A

THE ONLY ITEMS OF WORK TO BE DONE FROM THIS SHEET ARE IDENTIFIED BY THE LEGEND BOX BELOW, LABELED WITH THIS PROJECT'S JOB NUMBER.

PROPOSED WORK

DENOTES REMOVAL PORTIONS

REVISIONS	DESCRIPTION	DATE	BY

DLZ

CITY OF DETROIT

LARNED STREET BRIDGE OVER DEQUINDRE CUT GREENWAY

MDOT JOB NO. 106851A | STRUCTURE NO. S01 of 82-22-88

EX STRUCTURAL STEEL DETAILS (REMOVAL)

DATE: 1/8/10
DLZ JOB NO. 0942-6313-00
SHEET NO. 19 OF 67

DATE: 10-20-09
CORRECTED BY: DAF
DATE: 7-1-09
CHECKED BY: TNB
DATE: 6-4-09
DRAWN BY: DLW
FILE NAME: Larned ex sts1.dgn

B. K. ELLIOTT CO. 70148-W 500 8-57*

SOLE PLATE THICKNESS TABLE (INCHES)

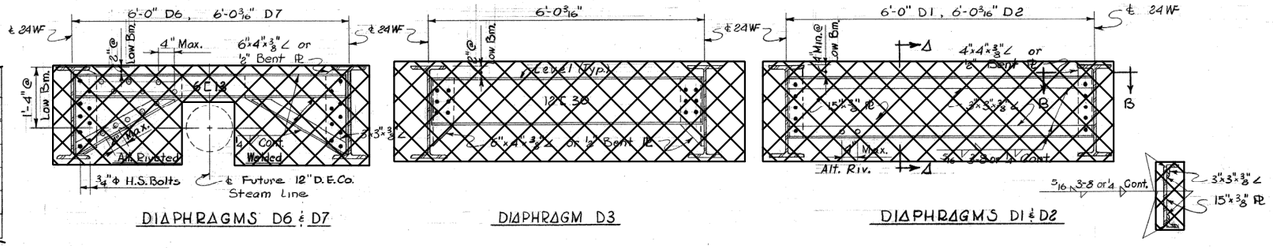
Beam		A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	U	V
Abutment A		2¼	2¼	2⅝	3⅜	4⅛	4⅜	3⅝	2⅝	2¼	2½	2⅝	2⅝	3⅛	4⅛	4⅞	4⅞	4⅛	3⅛	2⅞	2⅝
Pier 1	Span 1	1¼	1¼	2	3⅛	3¾	3¾	3⅛	2	1¼	1¾	4⅞	4⅞	5¼	6¼	7	7	6¼	5¼	4⅜	4⅜
	Span 2	1¼	1¼	1⅛	2⅝	3¼	3¼	2⅝	1½	1⅜	1⅜	4⅛	4⅛	4¾	5¾	6½	6⅛	5¾	4¾	4⅛	4⅛
Pier 2		1⅝	1⅝	2	3	3¾	3¾	3	2	1¾	1¾	5⅛	5⅛	5½	6½	7¼	7¼	6½	5½	5⅛	5⅛
Abutment B		1¾	1¾	2⅛	3⅛	3⅞	3⅜	3⅛	2⅛	1¾	1¾	2⅜	2⅜	2⅝	3⅝	4⅜	4⅜	3⅝	2⅝	2⅜	2⅜

Note: Sole Plate thicknesses are measured @ ℄ Bearing.

Detailer Note: Extend intermediate Diaphragm Connection angle 6"x4"x⅜" ∠ or ½" Bent Pl to bottom of upper flange and weld. Not required for Diaphragms over piers.

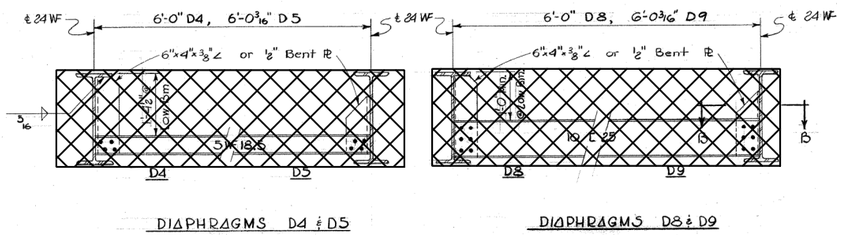
ELEVATION TOP OF STEEL @ ℄ BEARING

Beam		A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	U	V
Abutment A		122.83	122.83	122.86	122.95	123.01	123.01	122.95	122.86	122.83	122.83	122.88	122.88	122.90	122.99	123.05	123.05	122.99	122.90	122.88	122.88
Pier 1	Span 1	123.92	122.96	122.98	123.07	123.13	123.13	123.07	122.98	122.96	122.96	123.09	123.09	123.12	123.20	123.26	123.26	123.20	123.12	123.09	123.05
	Span 2	122.96																			123.09
Pier 2		122.99	122.99	123.02	123.10	123.17	123.17	123.10	123.02	122.99	122.99	123.16	123.16	123.18	123.27	123.33	123.33	123.27	123.18	123.16	123.16
Abutment B		122.83	122.83	122.86	122.95	123.01	123.01	122.95	122.86	122.83	122.83	122.88	122.88	122.90	122.99	123.05	123.05	122.99	122.90	122.88	122.88

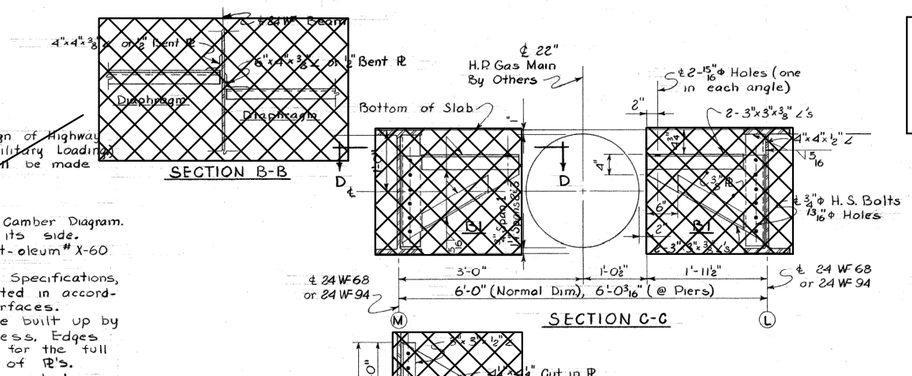


DIAPHRAGMS D6 & D7 — DIAPHRAGM D3 — DIAPHRAGMS D1 & D2

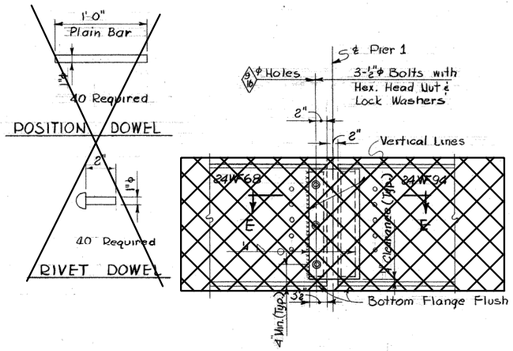
SECTION A-A



DIAPHRAGMS D4 & D5 — DIAPHRAGMS D8 & D9



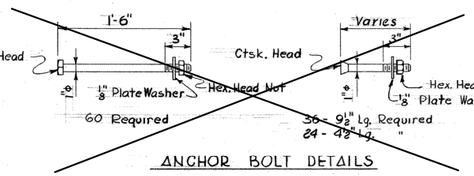
BRACKETS FOR 22"Φ GAS MAIN SUPPORT
Scale 1"=1'-0"

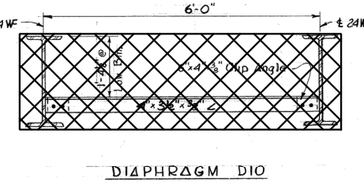


STUCTURAL STEEL NOTES

Design: Michigan State Highway Department Specifications for the Design of Highway Bridges - 1958 edition (H20-S16-44 Loading and alternate Military Loading).
Field Connections: Field connections, unless otherwise noted, shall be made with high-strength bolts.
High-Strength Bolts: ¾" Φ.
Open Hole: 13/16" Φ unless otherwise noted.
Camber: The beams shall be given a camber as shown on Camber Diagram. Camber shall be measured with the beam lying on its side.
Field Paint: Field paint shall consist of one coat each of Rust-oleum # X-60 Red Primer and # 470 Ready Mixed Aluminum - LO Paint.
Shop Paint: In addition to the Shop Paint provisions of the Specifications, the top surfaces of masonry plates shall be coated in accordance with the requirements for machine-finished surfaces.
Sole Plates: Sole Pl's 3" or more in thickness may be built up by welding together Pl's not less than 1½" in thickness. Edges must be beveled ¼" and welded with continuous weld for the full perimeter. Welds shall be ground flush with faces of Pl's.
Shop Connections: Shop connections shall be welded or riveted as shown on the plans.
Note: Use the existing ¾"Φ anchor bolts to refasten the existing ½" Pl's to the top of pier.

Structural Steel - Fabrication & Erection ---------- 182,700 Lbs.
Field Painting ---------- Lump Sum.





REMOVAL SHEET

JOB NUMBER 106851A

THE ONLY ITEMS OF WORK TO BE DONE FROM THIS SHEET ARE IDENTIFIED BY THE LEGEND BOX BELOW, LABELED WITH THIS PROJECT'S JOB NUMBER.

PROPOSED WORK

DENOTES REMOVAL PORTIONS

JOB NUMBER 106851A

REMOVE BEAMS AND DIAPHRAGMS TO LIMITS SHOWN. INCLUDED IN THE PAY ITEM "Structures, Rem Portions".

REFERENCE DRAWINGS	DESIGNED BY	C.C.L. J.R.R.H.
	DRAWN BY	B. B. GOLD
	TRACED BY	
	CHECKED BY	H. Freiberg

ENGINEER OF EXPRESSWAYS
ASSIT. CITY ENGINEER-HIGHWAYS & EXPRESSWAYS
CITY ENGINEER

CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERS OFFICE
BUREAU OF HIGHWAYS AND EXPRESSWAYS
RAILROAD GRADE SEPARATION

LARNED STREET BRIDGE X069
OVER
GRAND TRUNK WESTERN RAILROAD
STRUCTURAL STEEL DETAILS

SHEET 19 OF 46 SHEETS
CONTRACT No. PW 3988
DRWG No. C118
DATE MAR. 1962

REVISIONS LOCATED BY COORDINATES ON SHEET

REVISIONS	DESCRIPTION	DATE	BY

DLZ

CITY OF DETROIT

LARNED STREET BRIDGE OVER DEQUINDRE CUT GREENWAY

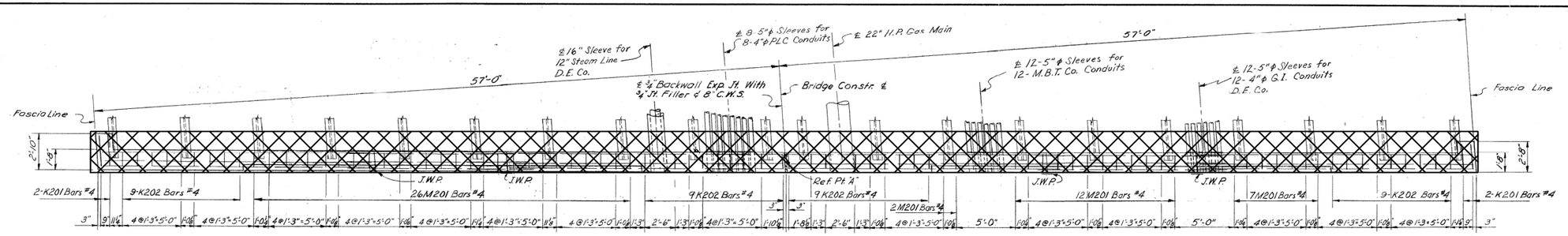
MDOT JOB NO. .106851A | STRUCTURE NO. .S01 of 82-22-88

EX STRUCTURAL STEEL DETAILS (REMOVAL)

DATE: 1/8/10
DLZ JOB NO. 0942-6313-00
SHEET NO. 20 OF 67

DATE: 10-20-09 CORRECTED BY: DAF
DATE: 7-1-09 CHECKED BY: TNB
DATE: 6-4-09 DRAWN BY: DLW
FILE NAME: Larned ex sts2.dgn

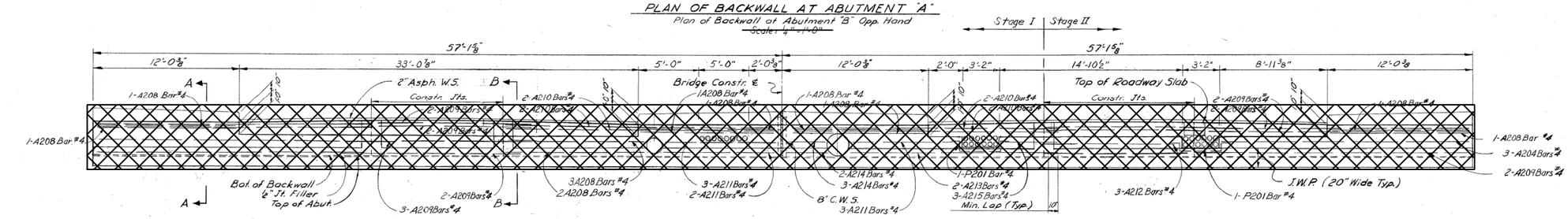
B. K. ELLIOTT CO. 70145-W 500 8-57



PLAN OF BACKWALL AT ABUTMENT "A"

Plan of Backwall at Abutment "B" Opp. Hand

Scale: ¼" = 1'-0"

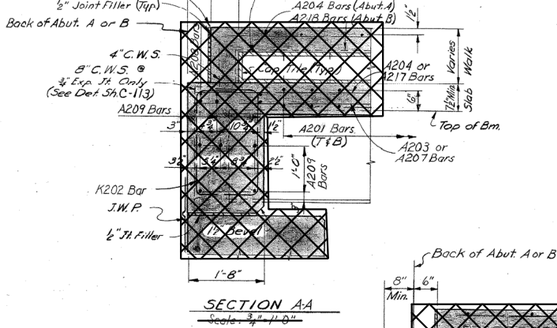


ELEVATION OF BACKWALL AT ABUTMENT "A"

Elevation of Backwall at Abutment "B" Opposite Hand

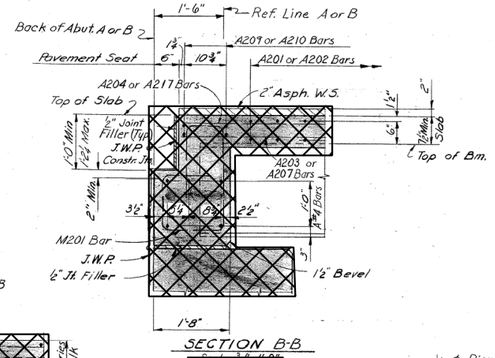
Scale: ¼" = 1'-0"

QUANTITIES CHARGEABLE TO D.E. Co.		
Item	Amount	Unit
5"ϕ G.I. Pipe Sleeves (Placed)	48	Each
16"ϕ Steel Pipe Sleeves (Placed)	2	Each



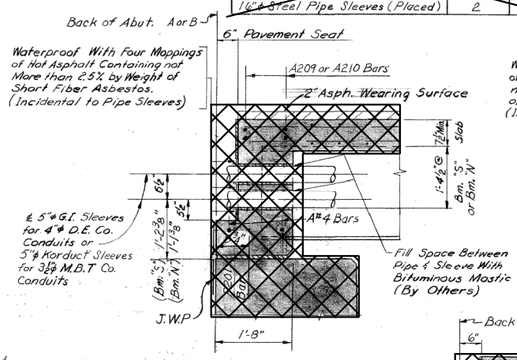
SECTION A-A

Scale: ¾" = 1'-0"



SECTION B-B

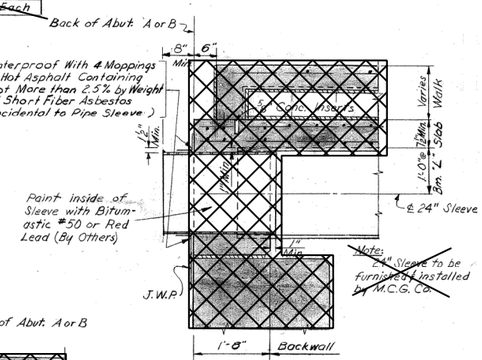
Scale: ¾" = 1'-0"



D.E. Co. CONDUIT DETAIL

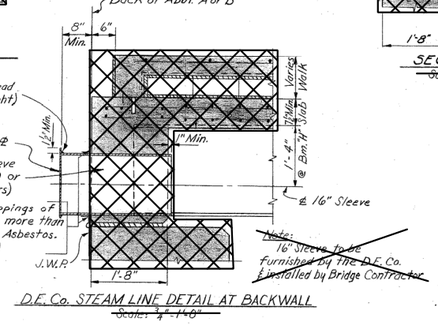
OR M.B.T. Co. CONDUIT DETAIL AT BACKWALL

Scale: ¾" = 1'-0"



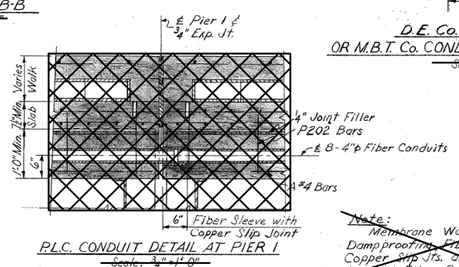
M.C.G. Co. GAS LINE DETAIL AT BACKWALL

Scale: ¾" = 1'-0"



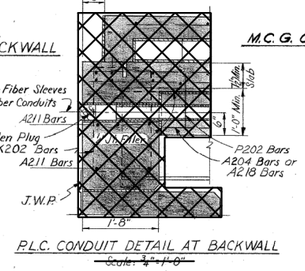
D.E. Co. STEAM LINE DETAIL AT BACKWALL

Scale: ¾" = 1'-0"



P.L.C. CONDUIT DETAIL AT PIER 1

Scale: ¾" = 1'-0"



P.L.C. CONDUIT DETAIL AT BACKWALL

Scale: ¾" = 1'-0"

QUANTITIES CHARGEABLE TO M.B.T. Co.		
Item	Amount	Unit
Ⓐ		
Ⓑ		
Structural Steel	1080	lbs

Work this sheet with sheets C-113 & C-114.

REFERENCE DRAWINGS	DESIGNED BY	C.C.L. / R.R.H.	ENGINEERS OF EXPRESSWAYS
	DRAWN BY	T. Baker	
	TRACED BY	D. Romes	ASST. CITY ENGINEER-HIGHWAYS & EXPRESSWAYS
	CHECKED BY	K.K.Sud / P.Freiberg	CITY ENGINEER

B MBT Conduit by MBT DR 10/4 59363

DESCRIPTION | BKN | CKD | APVD | DATE

REVISIONS LOCATED BY COORDINATES ON SHEET

CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERS OFFICE
BUREAU OF HIGHWAYS AND EXPRESSWAYS
RAILROAD GRADE SEPARATION

LARNED STREET BRIDGE X069
OVER
GRAND TRUNK WESTERN RAILROAD
SUPERSTRUCTURE DETAILS

SHEET 16 OF 46 SHEETS
CONTRACT No. PW-3988
DRWG. No. C-116
DATE MAR. 1962

REMOVAL SHEET

JOB NUMBER 106851A

THE ONLY ITEMS OF WORK TO BE DONE FROM THIS SHEET ARE IDENTIFIED BY THE LEGEND BOX BELOW, LABELED WITH THIS PROJECT'S JOB NUMBER.

PROPOSED WORK

DENOTES REMOVAL PORTIONS

JOB NUMBER 106851A

REMOVE BACKWALL AND TOP OF ABUTMENT TO LIMITS SHOWN. INCLUDED IN THE PAY ITEM "Structures, Rem Portions".

DATE: 10-20-09 CORRECTED BY: DAF
DATE: 7-1-09 CHECKED BY: TNB/PDI
DATE: 6-4-09 DRAWN BY: DLW
FILE NAME: Larned ex dk1.dgn

REVISIONS	DESCRIPTION	DATE	BY

DLZ

CITY OF DETROIT

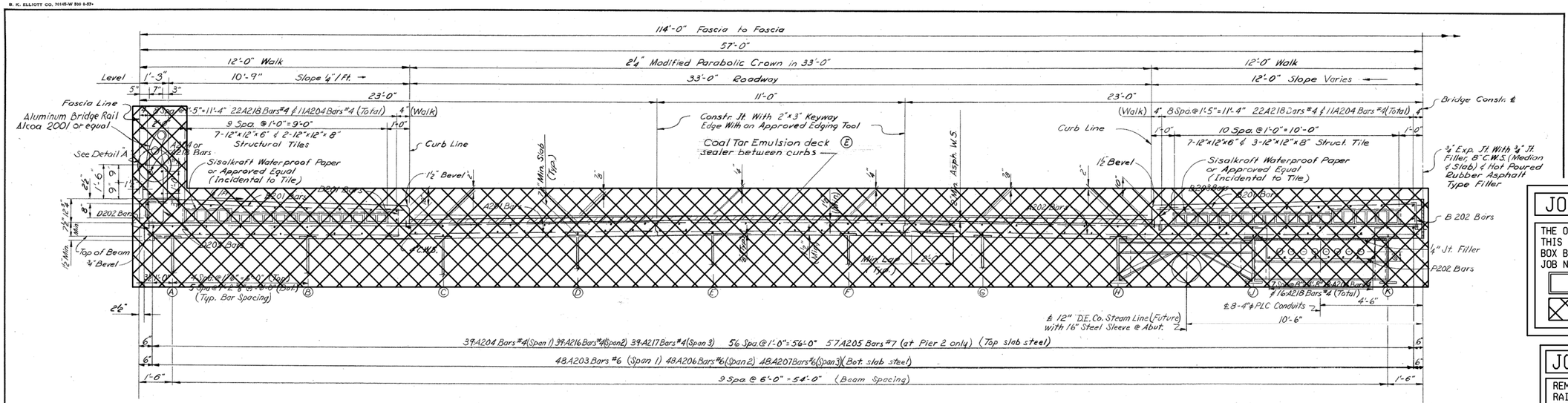
LARNED STREET BRIDGE OVER DEQUINDRE CUT GREENWAY

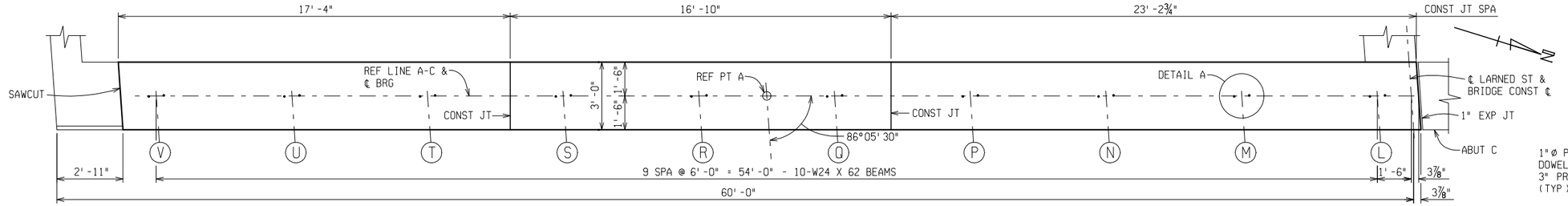
MDOT JOB NO. 106851A | STRUCTURE NO. S01 of 82-22-88

EX SUPERSTRUCTURE DETAILS (REMOVAL)

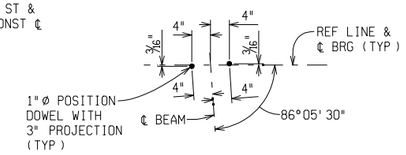
DATE: 1/8/10
DLZ JOB NO. 0942-6313-00
SHEET NO. 21 OF 67

B. K. ELLIOTT CO. 70148-W R06 8-87•

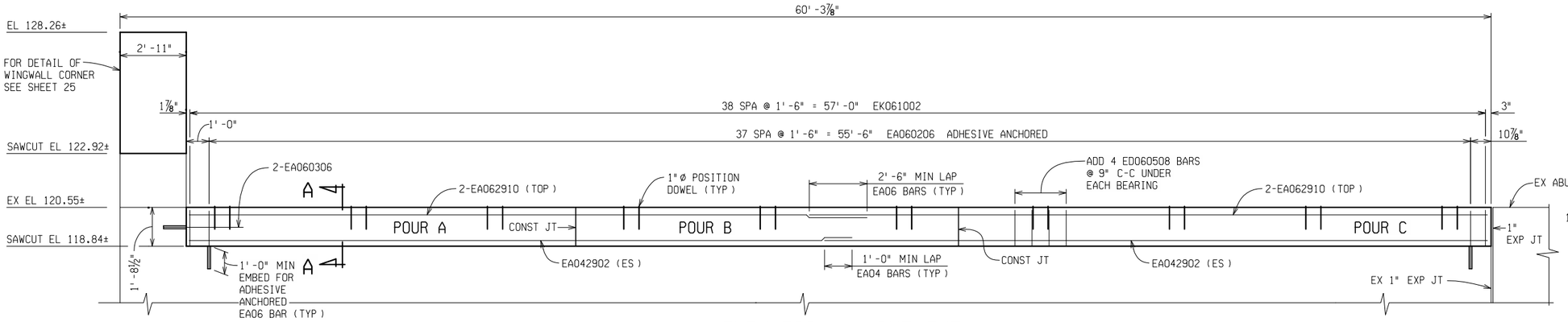




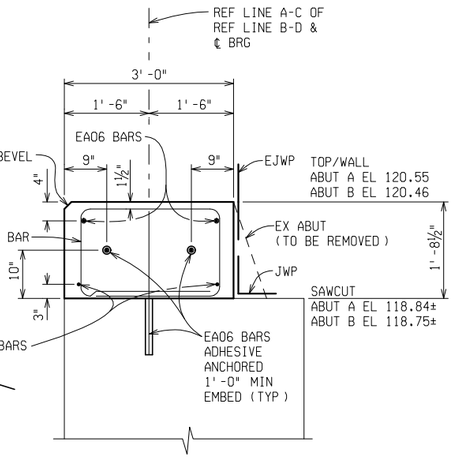
PLAN OF TOP - ABUTMENT A



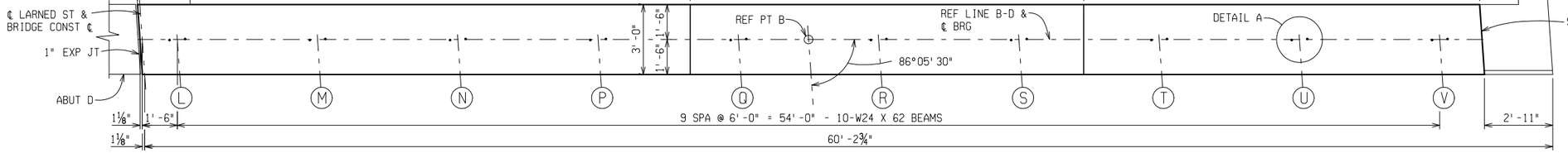
DETAIL A



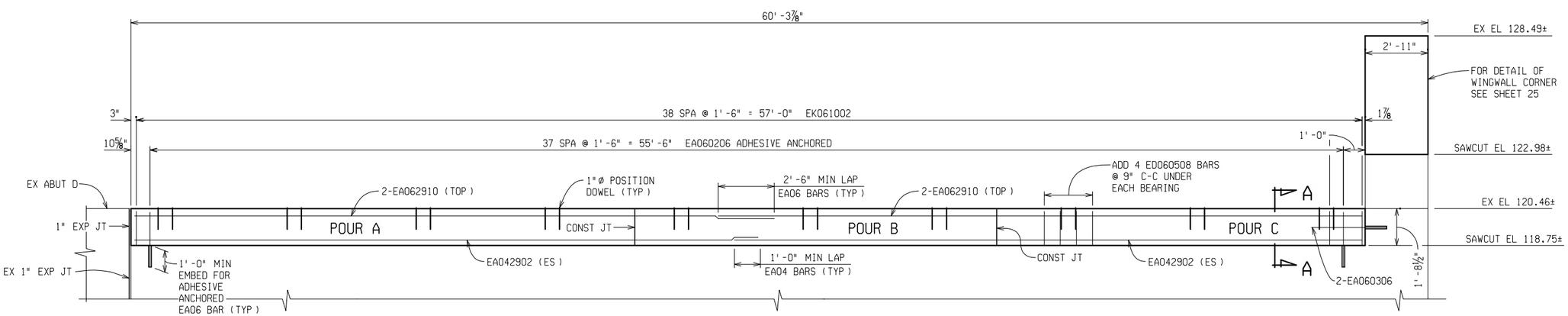
ELEVATION - ABUTMENT A



SECTION A-A



PLAN OF TOP - ABUTMENT B



ELEVATION - ABUTMENT B

REVISIONS	DESCRIPTION	DATE	BY

DLZ

CITY OF DETROIT

LARNED STREET BRIDGE OVER DEQUINDRE CUT GREENWAY

MDOT JOB NO. 106851A | STRUCTURE NO. S01 of 82-22-88

ABUTMENT DETAILS

DATE: 1/8/10

DLZ JOB NO. 0942-6313-00

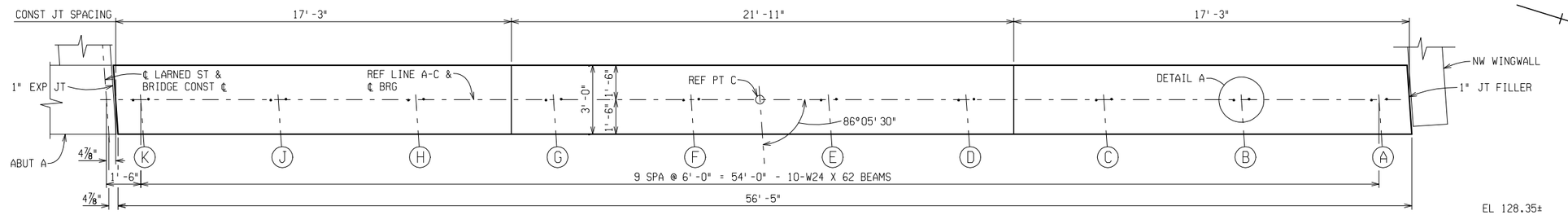
SHEET NO. 23 OF 67

DATE: 10-20-09 CORRECTED BY:DAF

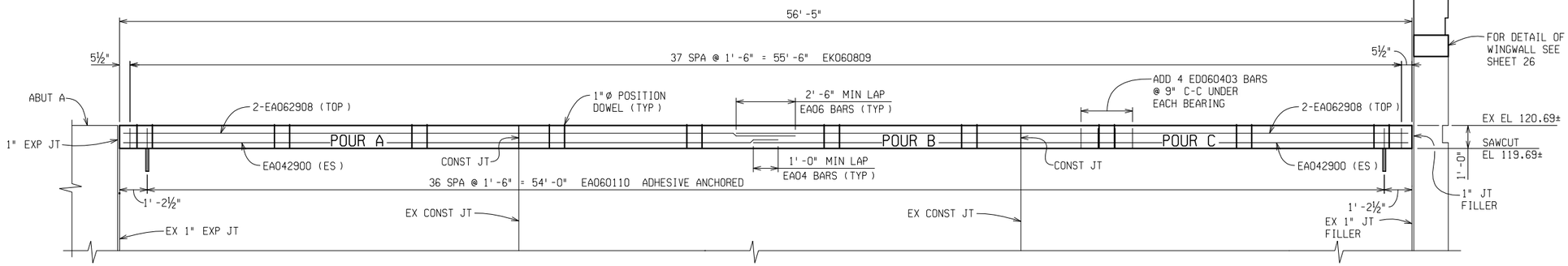
DATE: 10-16-09 CHECKED BY: PI

DATE: 10-15-09 DRAWN BY: DAF

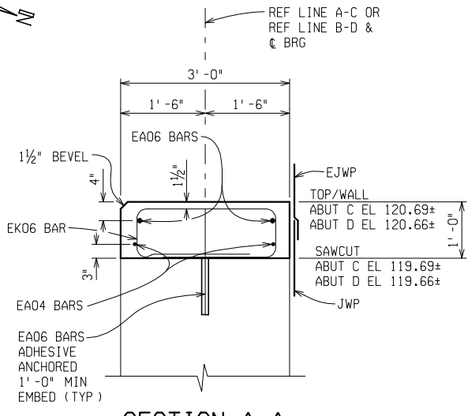
FILE NAME: Larned abl.dgn



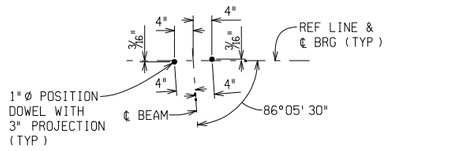
PLAN OF TOP - ABUTMENT C



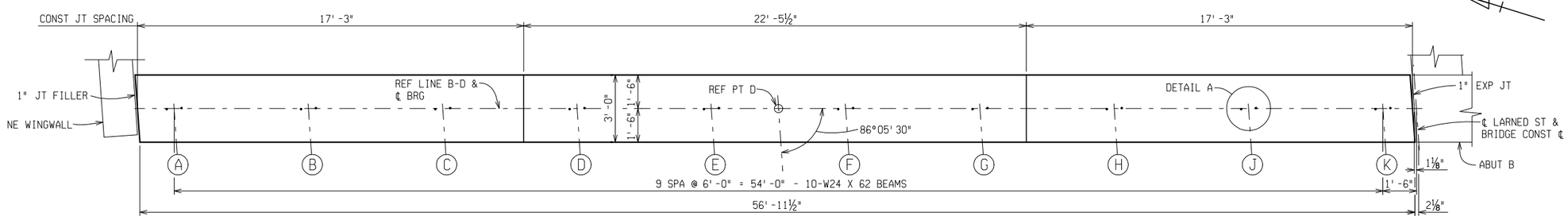
ELEVATION - ABUTMENT C



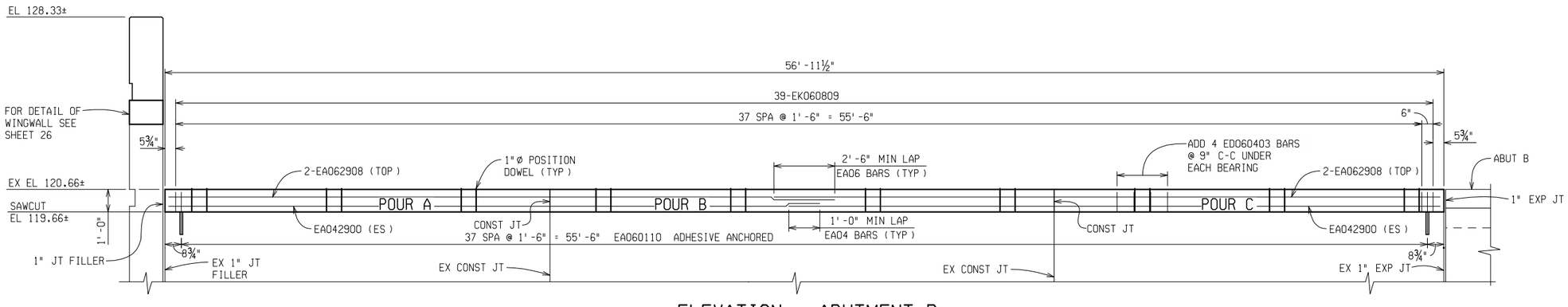
SECTION A-S



DETAIL A



PLAN OF TOP - ABUTMENT D



ELEVATION - ABUTMENT D

Substructure Conc QUANTITIES

POUR	ABUT A	ABUT B	ABUT C	ABUT D
A	3.3	4.5	2.0	2.0
B	3.2	3.2	2.5	2.5
C	4.5	3.2	2.0	2.0
TOTAL				34.9 CYD

REVISIONS	DESCRIPTION	DATE	BY

DLZ

CITY OF DETROIT

LARNED STREET BRIDGE OVER DEQUINDRE CUT GREENWAY

MDOT JOB NO. 106851A | STRUCTURE NO. S01 of 82-22-88

ABUTMENT DETAILS

DATE: 1/8/10

DLZ JOB NO. 0942-6313-00

SHEET NO. 24 OF 67

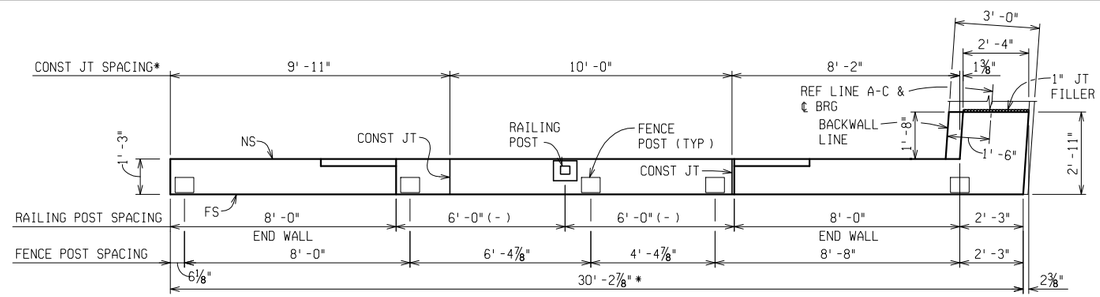
DATE: 10-20-0

DATE: 10-16-09 CORRECTED BY: DAF

DATE: 10-16-09 CHECKED BY: PI

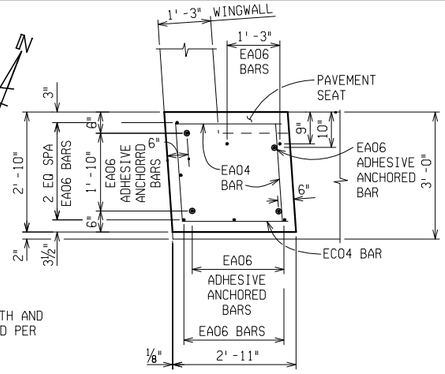
DRAWN BY: DAF

FILE NAME: Larned ab2.dgn

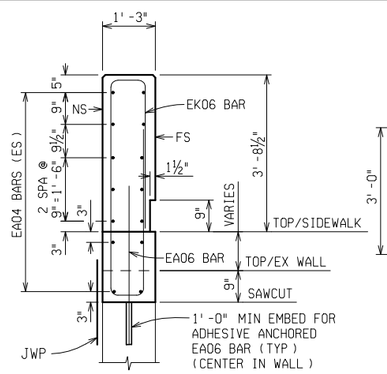


PLAN OF SOUTHWEST WINGWALL

* FIELD VERIFY LENGTH AND ADJUST AS DIRECTED PER THE ENGINEER

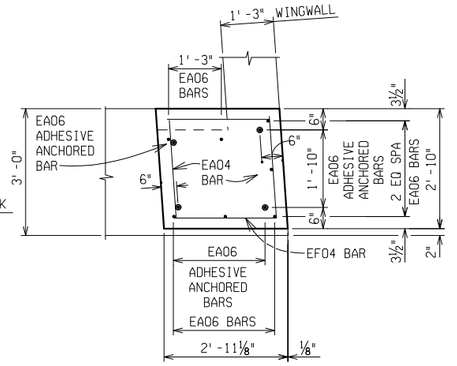


SECTION A-A



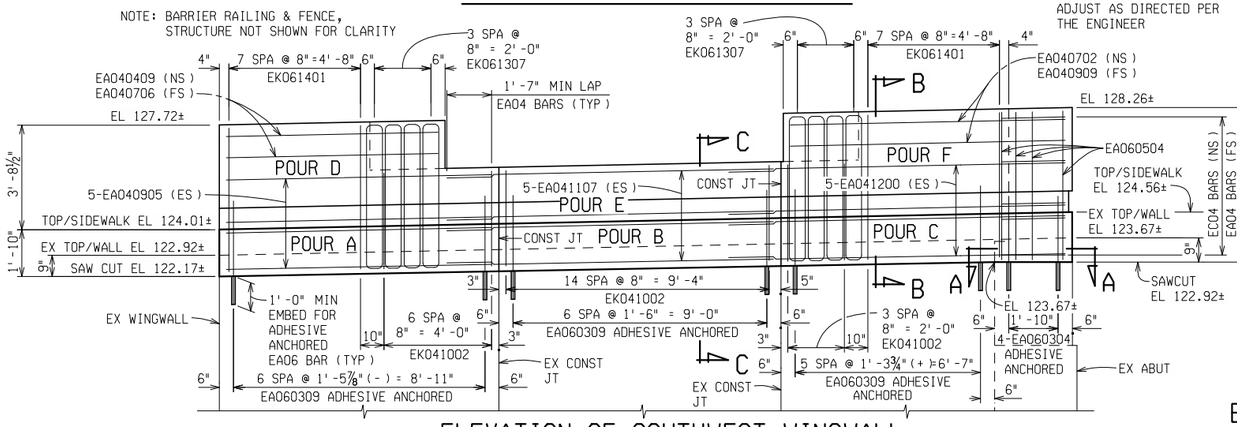
SECTION B-B

FENCE, STRUCTURE NOT SHOWN FOR CLARITY



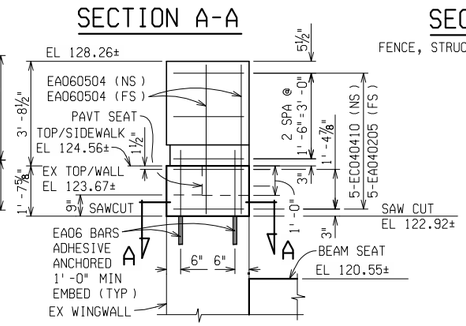
SECTION D-D

NOTE: BARRIER RAILING & FENCE, STRUCTURE NOT SHOWN FOR CLARITY

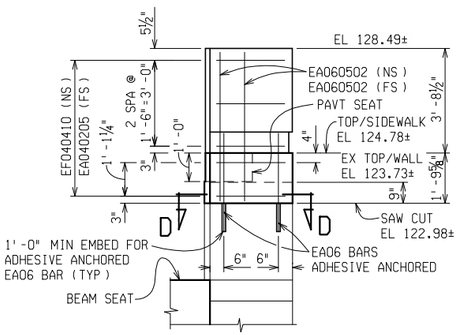


ELEVATION OF SOUTHWEST WINGWALL

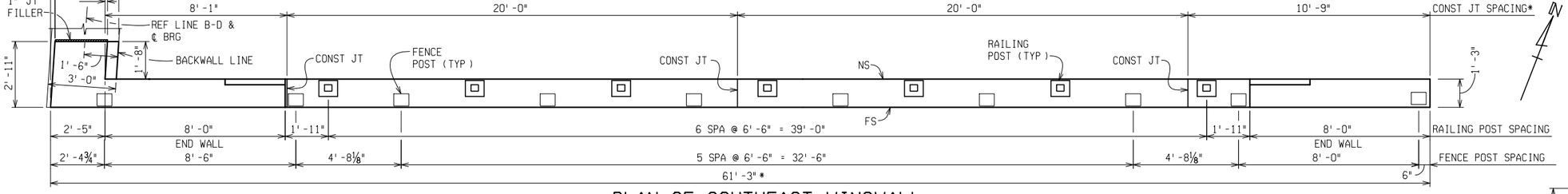
ELEVATIONS TO BE FIELD VERIFIED



ELEVATION OF SOUTHWEST WINGWALL ABUTMENT A CORNER

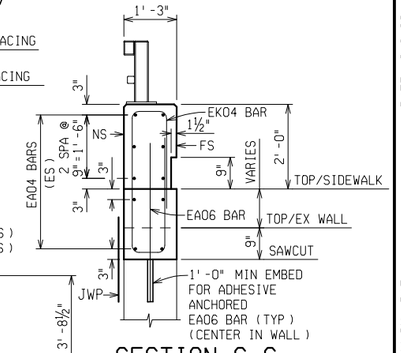


ELEVATION OF SOUTHEAST WINGWALL ABUTMENT B CORNER



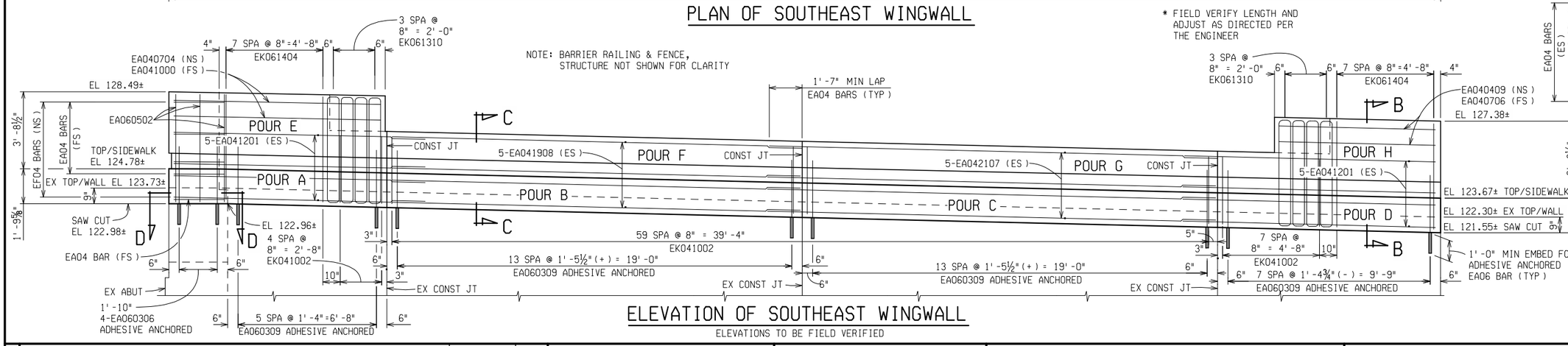
PLAN OF SOUTHEAST WINGWALL

* FIELD VERIFY LENGTH AND ADJUST AS DIRECTED PER THE ENGINEER



SECTION C-C

FENCE, STRUCTURE NOT SHOWN FOR CLARITY



ELEVATION OF SOUTHEAST WINGWALL

ELEVATIONS TO BE FIELD VERIFIED

REVISIONS	DESCRIPTION	DATE	BY

DLZ

CITY OF DETROIT

LARNED STREET BRIDGE OVER DEQUINDRE CUT GREENWAY

MDOT JOB NO. .106851A | STRUCTURE NO. .S01 of 82-22-88

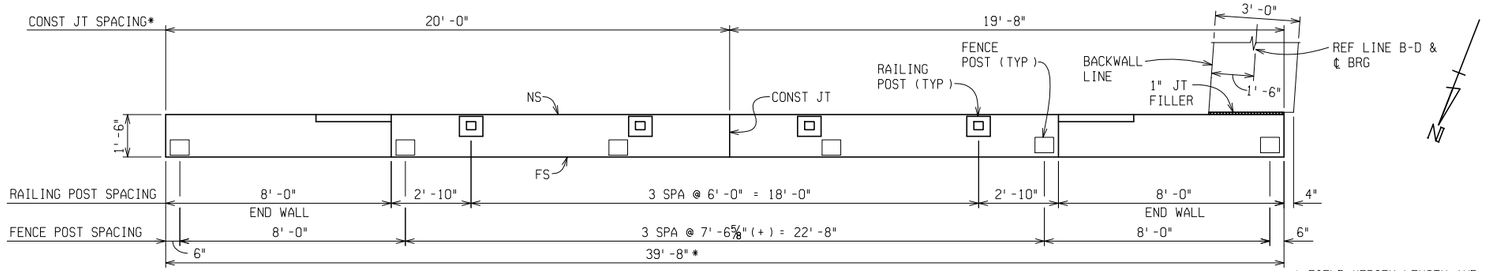
WINGWALL DETAILS

DATE: 1/8/10

DLZ JOB NO. 0942-6313-00

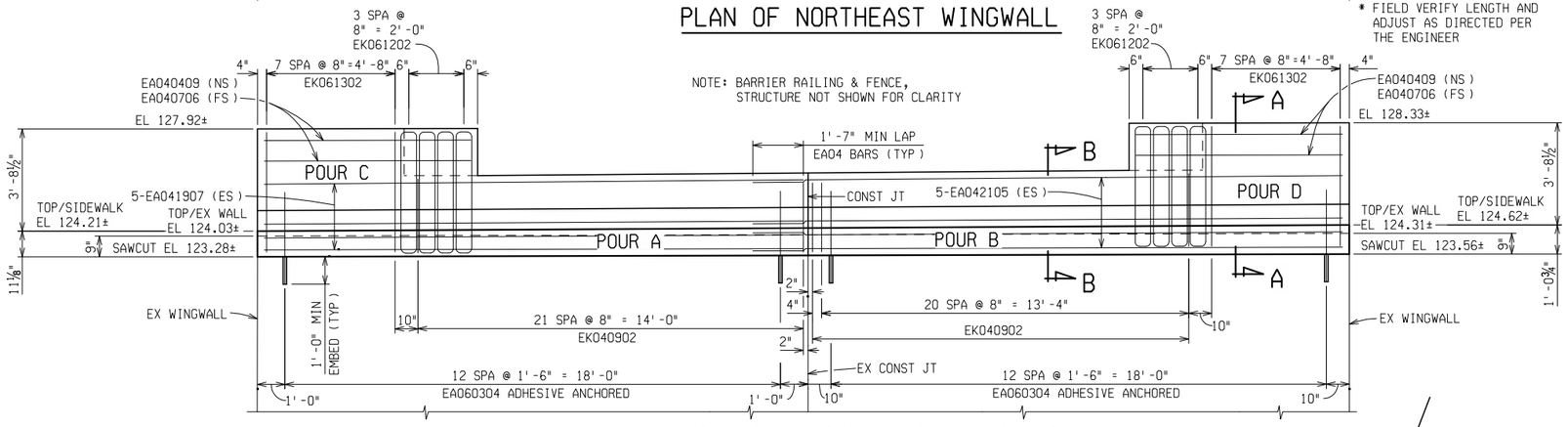
SHEET NO. 25 OF 67

DATE: 10-20-09
CORRECTED BY: DAF
DATE: 9-10-09
CHECKED BY: TNB
DATE: 9-2-09
DRAWN BY: DAF
FILE NAME: Larned-wll.dgn



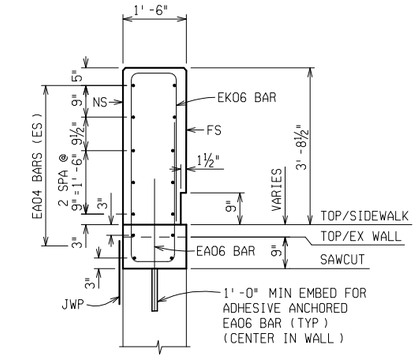
PLAN OF NORTHEAST WINGWALL

* FIELD VERIFY LENGTH AND ADJUST AS DIRECTED PER THE ENGINEER



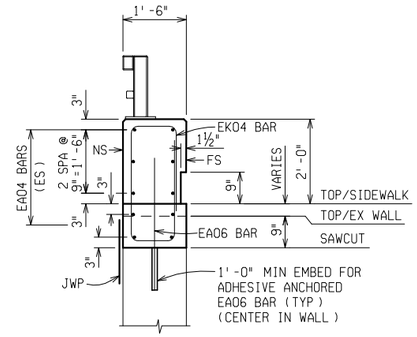
ELEVATION OF NORTHEAST WINGWALL

ELEVATIONS TO BE FIELD VERIFIED



SECTION A-A

FENCE, STRUCTURE NOT SHOWN FOR CLARITY

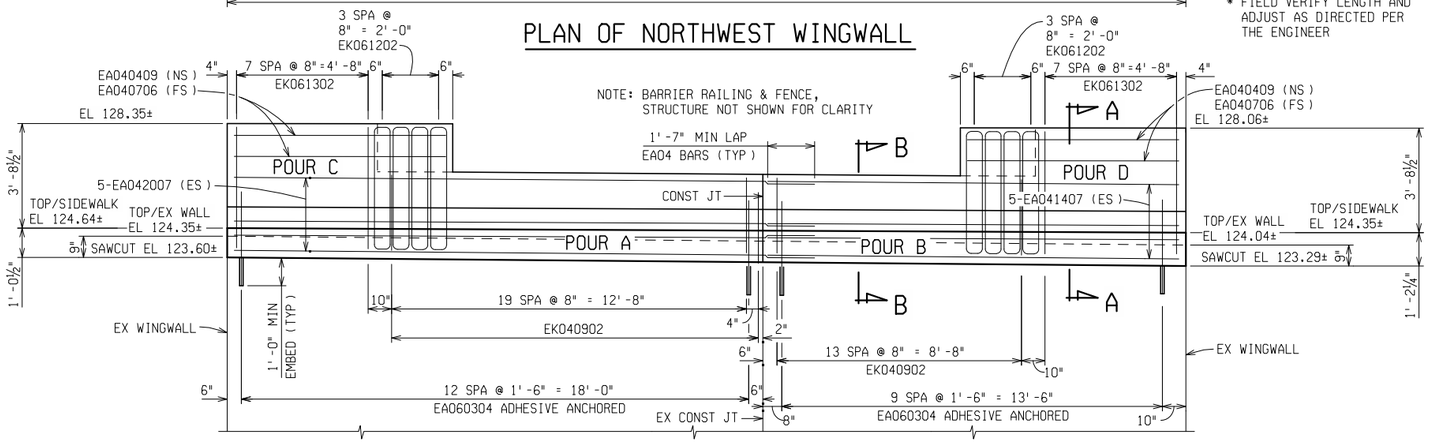


SECTION B-B

FENCE, STRUCTURE NOT SHOWN FOR CLARITY

Substructure Conc Quantities				
POUR	NE	NW	SW	SE
A	0.9	1.0	0.9	1.3
B	0.9	0.8	0.9	2.0
C			1.2	2.0
D				1.1
TOTAL				13.0 CYD

Conc, Grade D Quantities				
POUR	NE	NW	SE	SW
C	3.0	3.0		
D	3.0	2.5		1.5
E			2.5	1.0
F			2.0	2.0
G			2.0	
H			1.5	
TOTAL				24 CYD



ELEVATION OF NORTHWEST WINGWALL

ELEVATIONS TO BE FIELD VERIFIED

QUANTITIES

270	Ea	Adhesive Anchoring of Vertical Bar, ¾ inch
4	Ea	Adhesive Anchoring of Horizontal Bar, ¾ inch
645	Sft	Joint Waterproofing
445	Sft	Joint Waterproofing, Expansion

NOTES:

NS DENOTES NEAR SIDE.

FS DENOTES FAR SIDE.

ES DENOTES EACH SIDE.

WINGWALL CONCRETE REPAIRS SHALL BE PAID FOR AS "Substructure Conc" OR "Conc, Grade D".

REVISIONS	DESCRIPTION	DATE	BY

DLZ

CITY OF DETROIT

LARNED STREET BRIDGE OVER DEQUINDRE CUT GREENWAY

MDOT JOB NO. .106851A | STRUCTURE NO. .S01 of 82-22-88

WINGWALL DETAILS

DATE: 1/8/10

DLZ JOB NO. 0942-6313-00

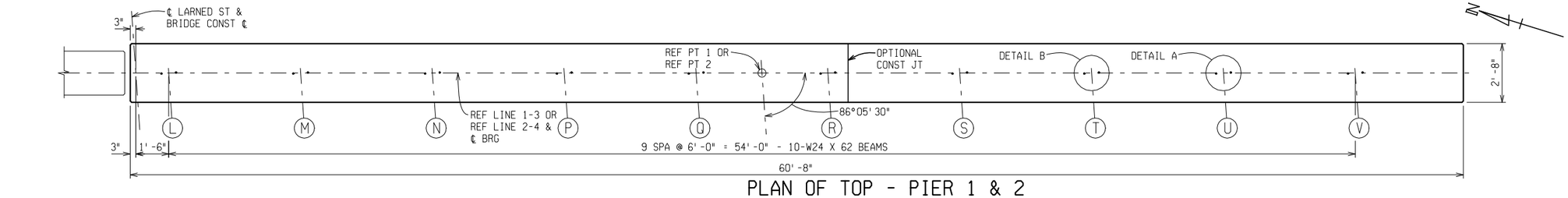
SHEET NO. 26 OF 67

DATE: 10-22-09 CORRECTED BY: DAF

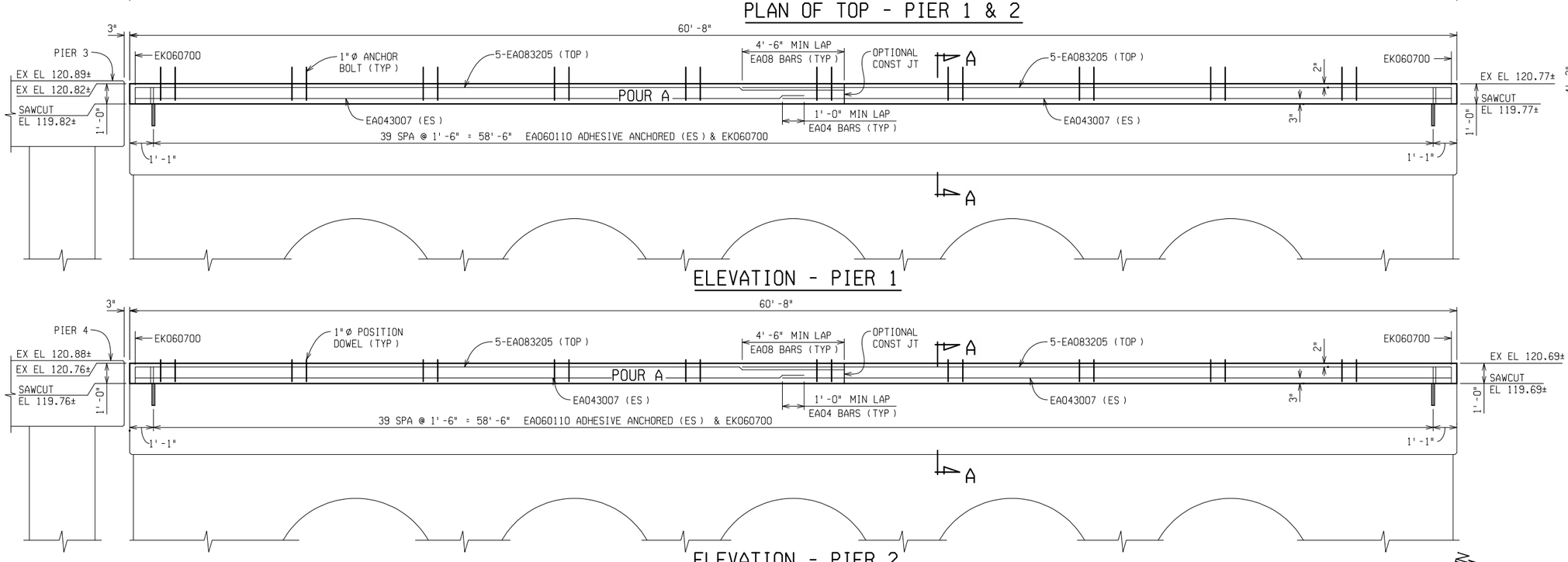
DATE: 10-5-09 DRAWN BY: DAF

DATE: 9-3-09 CHECKED BY: TNB/PI

FILE NAME: Larned-w12.dgn

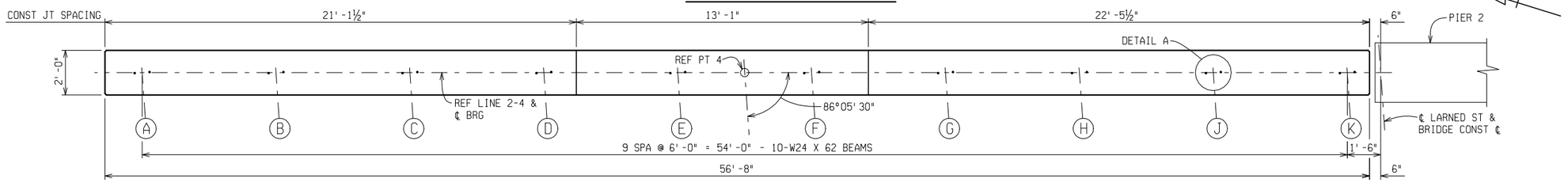


PLAN OF TOP - PIER 1 & 2

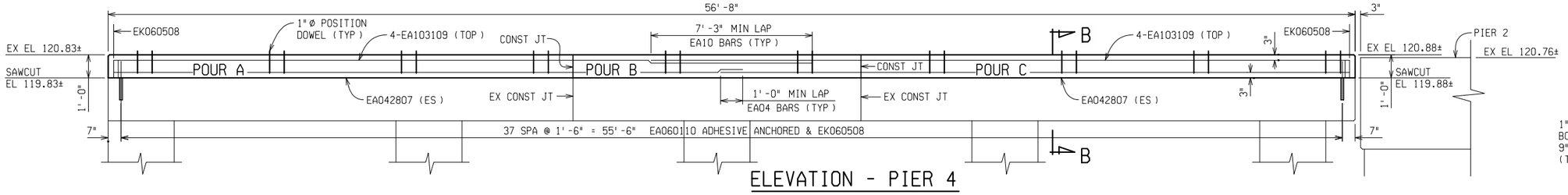


ELEVATION - PIER 1

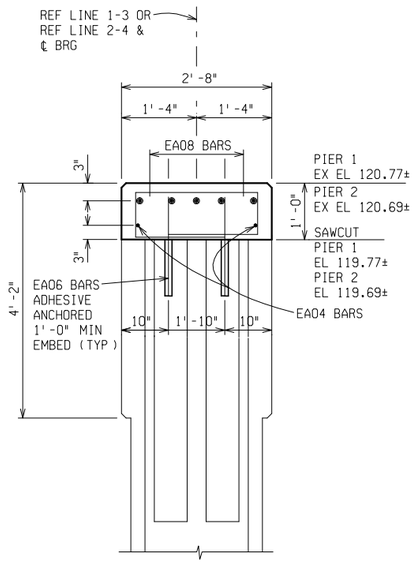
ELEVATION - PIER 2



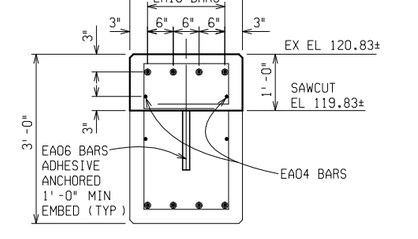
PLAN OF TOP - PIER 4



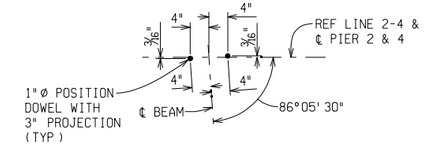
ELEVATION - PIER 4



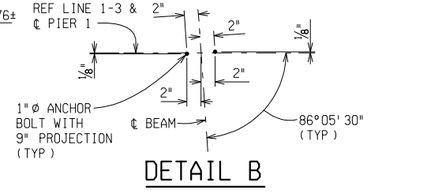
SECTION A-A



SECTION B-B



DETAIL A



DETAIL B

DATE: 10-20-09
DATE: 10-16-09 CORRECTED BY:DAF
CHECKED BY: PI
DRAWN BY: DAF
FILE NAME: Larned pr1.dgn

REVISIONS	DESCRIPTION	DATE	BY

DLZ

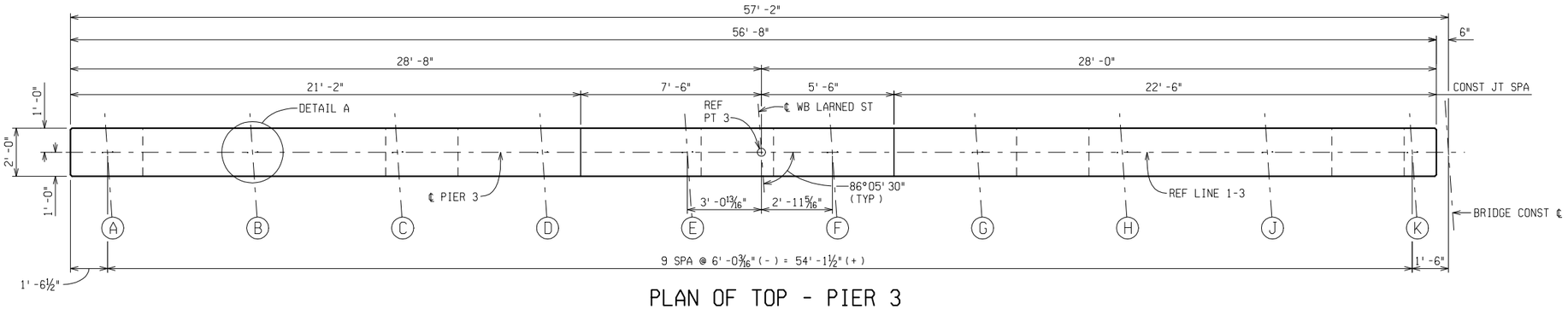
CITY OF DETROIT

LARNED STREET BRIDGE OVER
DEQUINDRE CUT GREENWAY

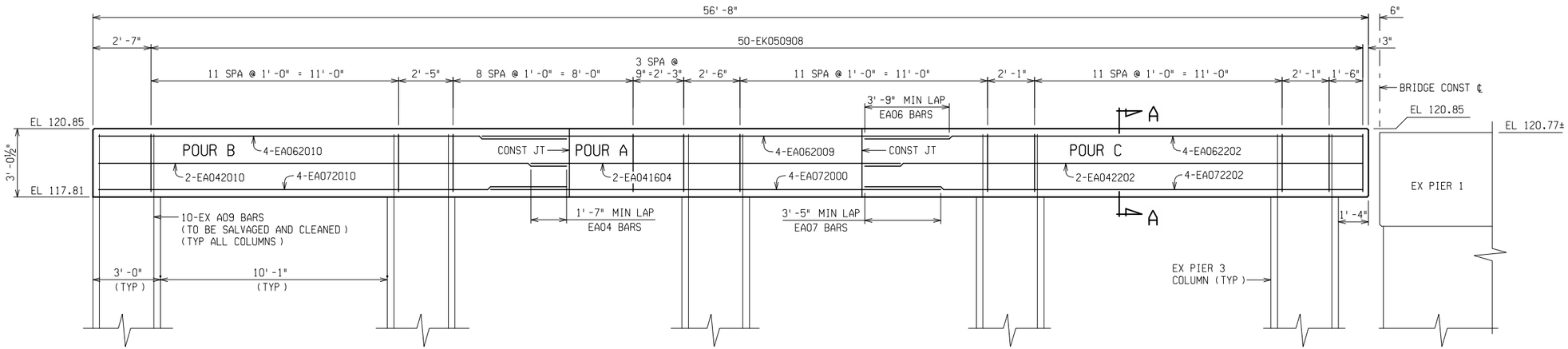
MDOT JOB NO. .106851A | STRUCTURE NO. .S01 of 82-22-88

PIER DETAILS

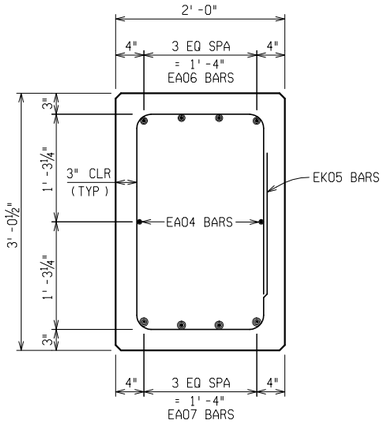
DATE: 1/8/10
DLZ JOB NO. 0942-6313-00
SHEET NO. 27 OF 67



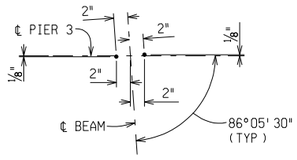
PLAN OF TOP - PIER 3



ELEVATION - PIER 3



SECTION A-A



DETAIL A

Substructure Conc QUANTITIES				
POUR	PIER 1	PIER 2	PIER 3	PIER 4
A	6.0	6.0	2.9	1.6
B			4.8	1.0
C			5.1	1.7
TOTAL				29.1 CYD

QUANTITIES		
10	Ea	Embedded Galvanic Anodes
150	Ft	Structural Crack, Repr
198	Ea	Adhesive Anchoring of Vertical Bar, ¾ inch

NOTES:

FOR BEVEL AND MOLDING DETAILS, SEE STANDARD PLAN B-103 SERIES.

THE CONTRACTOR MAY ADHESIVE ANCHOR BOLTS IN HOLES DRILLED IN THE CONCRETE AT PIER 3.

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

DLZ

CITY OF DETROIT

LARNED STREET BRIDGE OVER DEQUINDRE CUT GREENWAY

MDOT JOB NO. 106851A | STRUCTURE NO. S01 of 82-22-88

PIER DETAILS

DATE: 1/8/10

DLZ JOB NO. 0942-6313-00

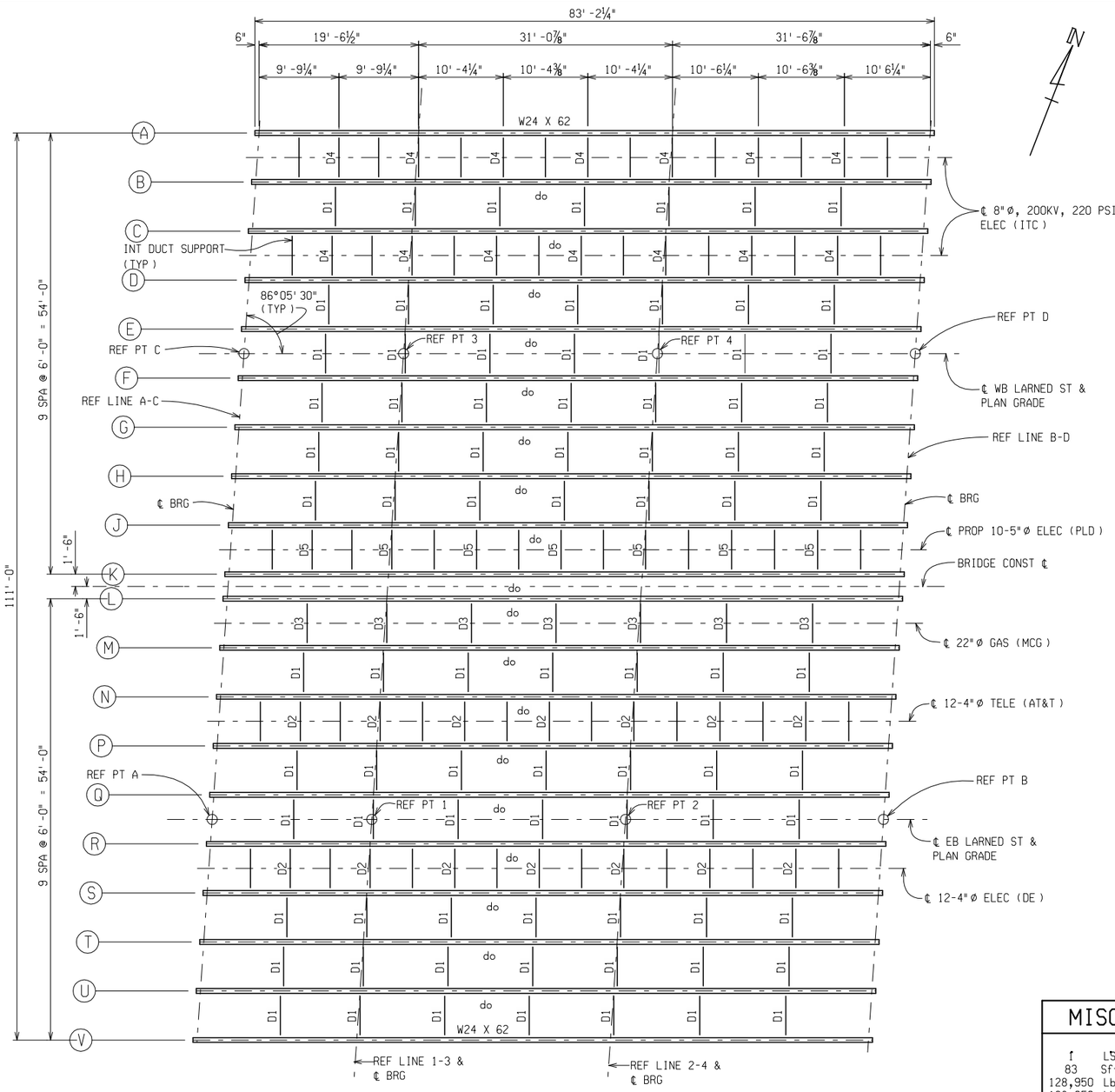
SHEET NO. 28 OF 67

DATE: 7-21-09 CORRECTED BY: DAF

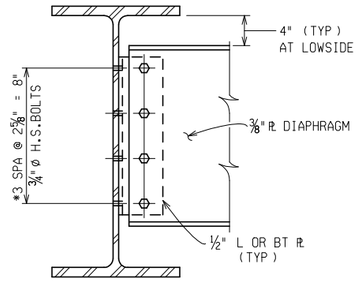
DATE: 7-20-09 DRAWN BY: DLW /DAF

DATE: 7-16-09 CHECKED BY: TNB

FILE NAME: Larned pr2.dgn

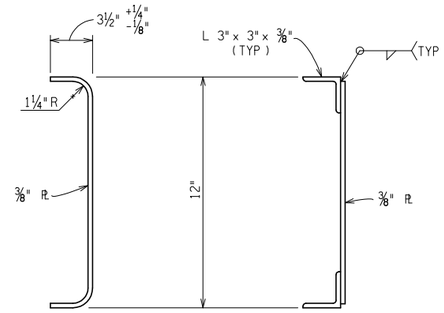


ERECTION DIAGRAM



BOLTED CONNECTION DETAIL

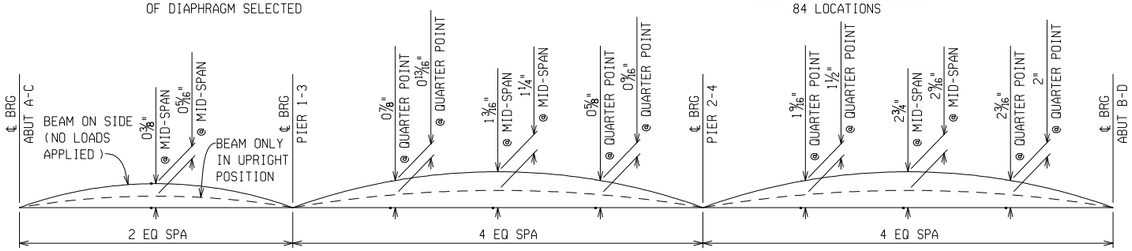
* SPA MAY REQUIRE ADJUSTMENT BASED ON TYPE OF DIAPHRAGM SELECTED



ALTERNATE

DIAPHRAGM D1

84 LOCATIONS



CAMBER DIAGRAM

MISCELLANEOUS QUANTITIES

1	LS	Shear Developers
83	Sft	Bearing, Elastomeric, 2¼ inch
128,950	Lb	Structural Steel, Rolled Shape, Furn and Fab
128,950	Lb	Structural Steel, Rolled Shape, Erect
1	LS	Field Repr of Damaged Coating

NOTES:

FIELD CONNECTIONS SHALL BE BOLTED WITH ¾" HIGH-STRENGTH BOLTS.

THE BEAMS IN SPANS 1, 2 & 3 SHALL HAVE A PARABOLIC CAMBER WITH ORDINATES AS SHOWN ON THE CAMBER DIAGRAM. HEATING IS TO BE USED, IF NECESSARY, TO PROVIDE THE CAMBER WITHIN A TOLERANCE OF +¼" AT THE CENTER. THE CAMBER SHOWN IS TO BE MEASURED WITH THE BEAM LYING ON ITS SIDE.

THE QUANTITY STRUCTURAL STEEL INCLUDES:

STEEL	133,933 LBS
BRONZE	0 LBS
TOTAL	0 LBS

ANCHOR BOLT LENGTHS SHOWN ARE MINIMUM. BOLTS LONGER THAN THOSE SHOWN MAY BE FURNISHED AT NO ADDITIONAL COST.

ALL STRUCTURAL STEEL SHALL BE COATED ACCORDING TO SUBSECTION 716 OF THE STANDARD SPECIFICATIONS. THE COLOR OF THE URETHANE PROTECTIVE COAT SHALL BE LIGHT GRAY. FEDERAL STANDARD 595B COLOR NUMBER 16440.

STRUCTURAL STEEL SHALL CONFORM TO AASHTO M270, GRADE 50, OR AASHTO M270, GRADE 50W. AASHTO M270, GRADE 36, STEEL MAY BE USED IN LIEU OF THESE STEELS FOR BEARINGS, DIAPHRAGMS, AND CROSS FRAMES.

SHEAR DEVELOPERS SHALL BE ¾" DIAMETER STUDS.

REVISIONS	DESCRIPTION	DATE	BY

DLZ

CITY OF DETROIT

LARNED STREET BRIDGE OVER DEQUINDRE CUT GREENWAY

MDOT JOB NO. .106851A | STRUCTURE NO. .S01 of 82-22-88

STRUCTURAL STEEL DETAILS

DATE: 1/8/10

DLZ JOB NO. 0942-6313-00

SHEET NO. 29 OF 67

DATE: 10-22-09

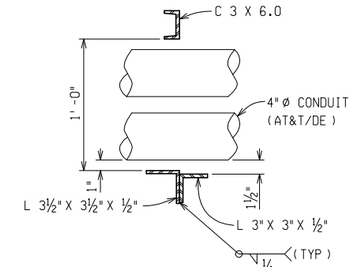
CORRECTED BY: DAF

DATE: 7-9-09

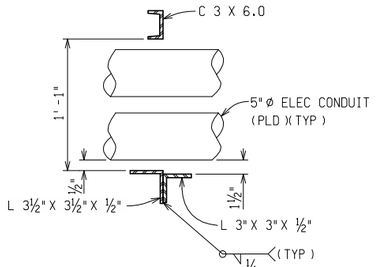
CHECKED BY: TNB

DRAWN BY: PDI/DAF

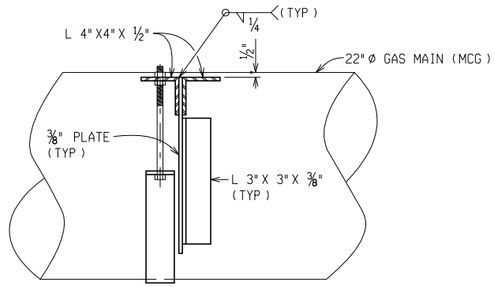
FILE NAME: Larned stsl.dgn



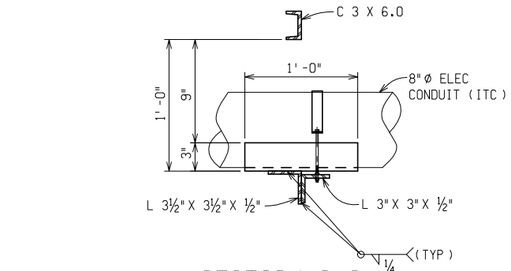
SECTION A-A



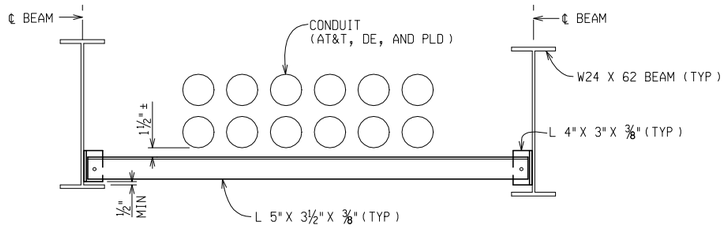
SECTION D-D



SECTION B-B

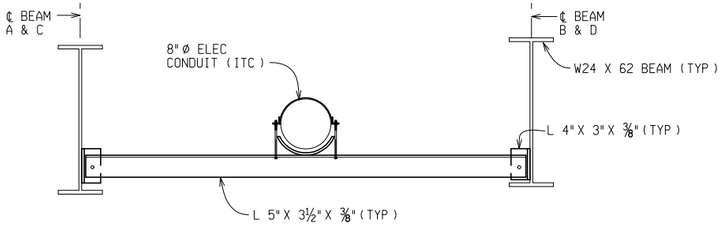


SECTION C-C



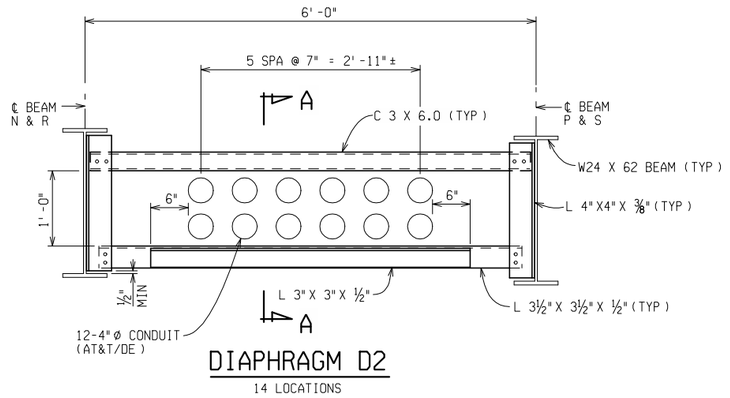
INTERMEDIATE DUCT SUPPORT

24 LOCATIONS



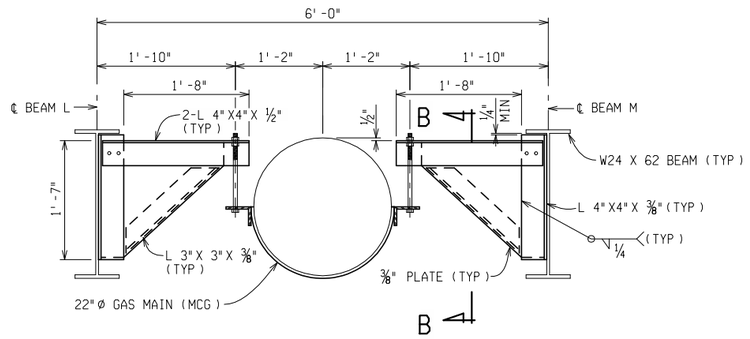
INTERMEDIATE DUCT SUPPORT

16 LOCATIONS



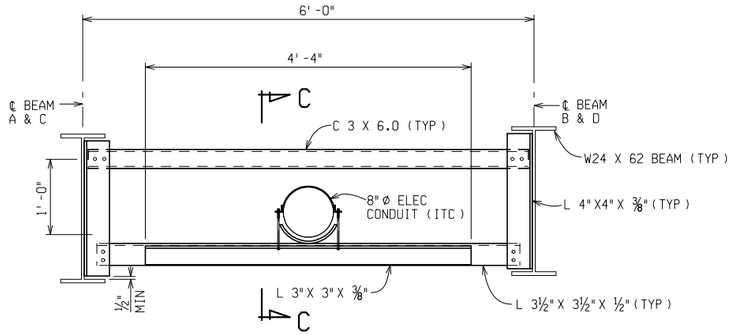
DIAPHRAGM D2

14 LOCATIONS



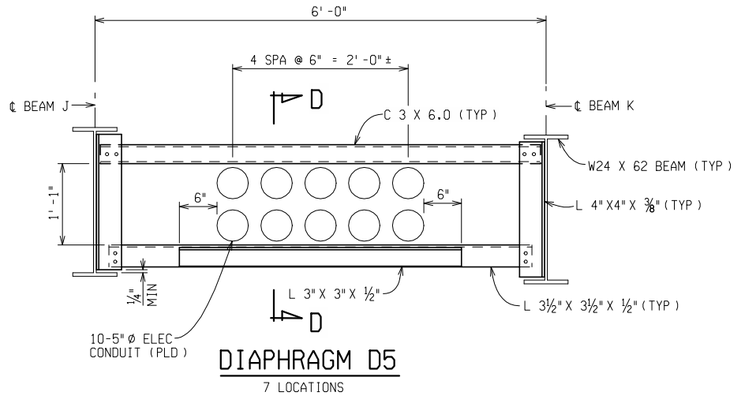
DIAPHRAGM D3

7 LOCATIONS



DIAPHRAGM D4

14 LOCATIONS



DIAPHRAGM D5

7 LOCATIONS

NOTES:

DIAPHRAGM 3 & 4 PIPE SUPPORT, HANGER BOLTS & CLIP ANGLES WILL BE FURNISHED BY THE UTILITY AND INSTALLED BY THE CONTRACTOR.

SEE NOTICE TO BIDDERS UTILITY COORDINATION FOR UTILITY INFORMATION.

REVISIONS	DESCRIPTION	DATE	BY

DLZ

CITY OF DETROIT

LARNED STREET BRIDGE OVER DEQUINDRE CUT GREENWAY

MDOT JOB NO. .106851A | STRUCTURE NO. .S01 of 82-22-88

STRUCTURAL STEEL DETAILS

DATE: 1/8/10

DLZ JOB NO. 0942-6313-00

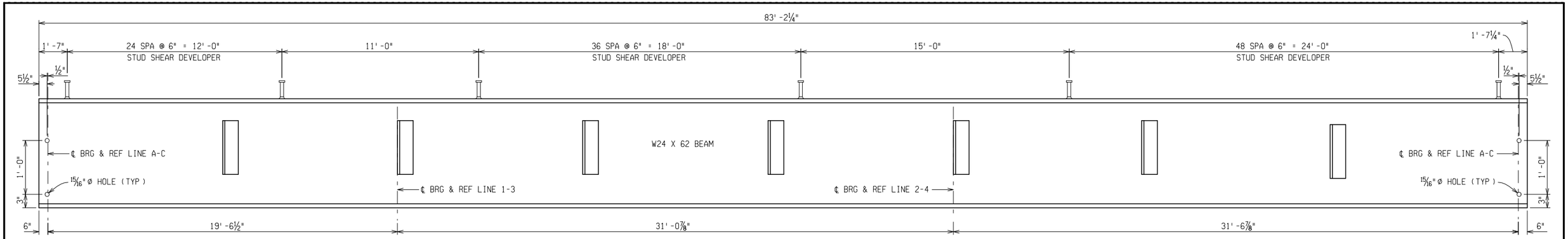
SHEET NO. 30 OF 67

DATE: 10-20-09 CORRECTED BY: DAF

DATE: 7-9-09 DRAWN BY: DAF

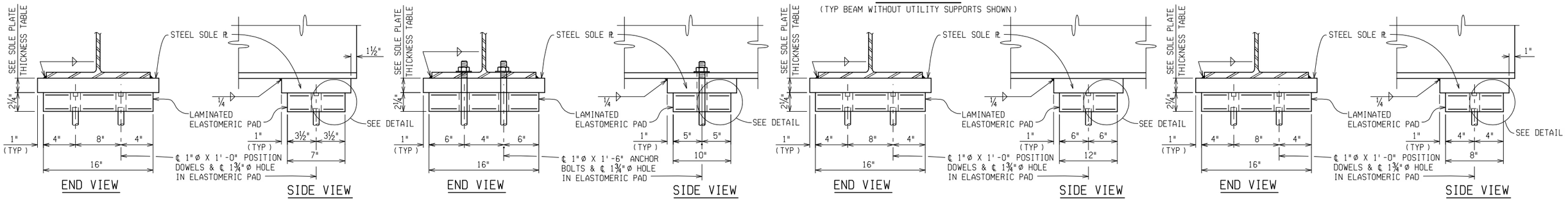
DATE: 6-3-09 CHECKED BY: TNB

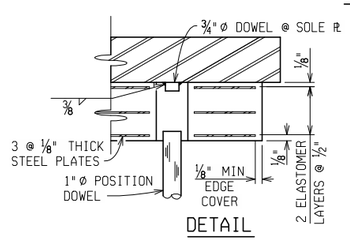
FILE NAME: Larned sts2.dgn



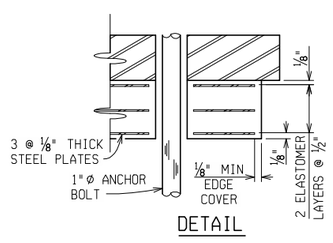
ELEVATION

(TYP BEAM WITHOUT UTILITY SUPPORTS SHOWN)

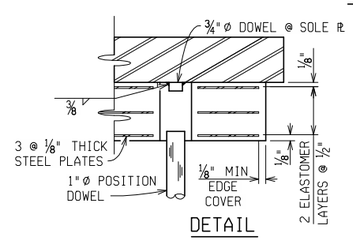




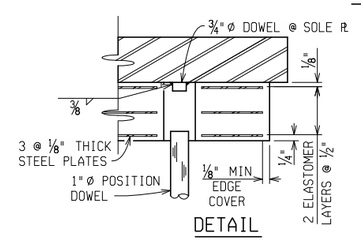
ABUTMENT A & C EXPANSION BEARING DETAILS



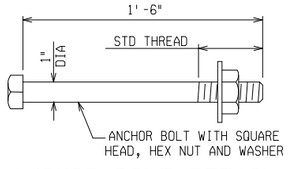
PIER 1 & 3 FIXED BEARING DETAILS



PIER 2 & 4 EXPANSION BEARING DETAILS

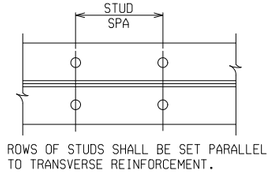


ABUTMENT B & D EXPANSION BEARING DETAILS

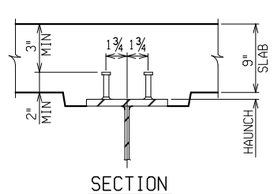


ANCHOR BOLT DETAIL

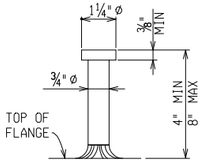
40 REQUIRED



PLAN

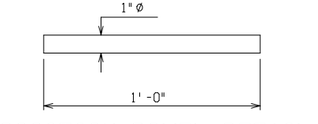


SECTION



STUD DETAIL

STUD SHEAR DEVELOPER DETAILS



POSITION DOWEL DETAIL

120 REQUIRED

SOLE PL THICKNESS				
BEAM	ABUT C	PIER 3	PIER 4	ABUT D
A	1¾"	1"	1"	1"
B	1¾"	1"	1"	1"
C	2"	1¼"	1¼"	1½"
D	3"	2¼"	2¼"	2½"
E	3"	3"	3"	3"
F	3"	3"	3"	3"
G	3"	2¼"	2¼"	2½"
H	1¾"	1¼"	1¼"	1½"
J	1½"	1"	1"	1¼"
K	1½"	1"	1"	1½"

SOLE PL THICKNESS				
BEAM	ABUT A	PIER 1	PIER 2	ABUT B
L	1½"	1¼"	1"	1"
M	1½"	1¼"	1"	1"
N	1¾"	1½"	1¼"	1¼"
P	2¾"	2½"	2¼"	2½"
Q	3"	3"	3"	3"
R	3"	3"	3"	3"
S	2½"	2½"	2¼"	2½"
T	1¼"	1¼"	1¼"	1½"
U	1"	1"	1"	1¼"
V	1"	1"	1"	1½"

SOLE PLATE THICKNESS TABLE

REVISIONS	DESCRIPTION	DATE	BY

DLZ

CITY OF DETROIT

LARNED STREET BRIDGE OVER DEQUINDRE CUT GREENWAY

MDOT JOB NO. .106851A | STRUCTURE NO. .S01 of 82-22-88

STRUCTURAL STEEL DETAILS

DATE: 1/8/10

DLZ JOB NO. 0942-6313-00

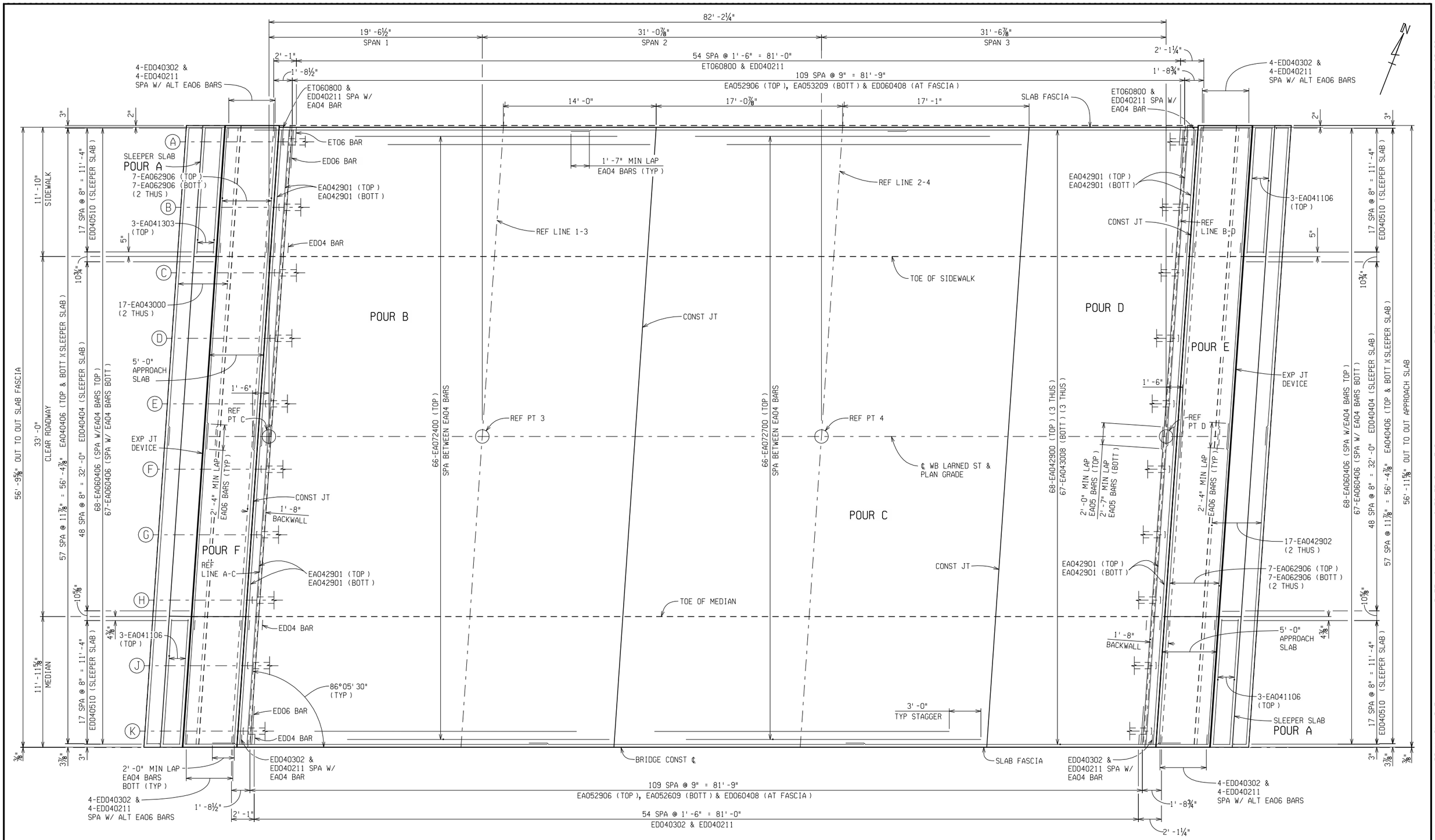
SHEET NO. 31 OF 67

DATE: 10-22-09 CORRECTED BY: DAF

DATE: 6-30-09 DRAWN BY: PDI/DAF

DATE: 2-12-09 CHECKED BY: TNB

FILE NAME: Larned sts3.dgn



PLAN OF SLAB (WB LARNED)

REVISIONS	DESCRIPTION	DATE	BY

DLZ

CITY OF DETROIT

LARNED STREET BRIDGE OVER DEQUINDRE CUT GREENWAY

MDOT JOB NO. .106851A | STRUCTURE NO. .S01 of 82-22-88

SUPERSTRUCTURE DETAILS

DATE: 1/8/10

DLZ JOB NO. 0942-6313-00

SHEET NO. 32 OF 67

DATE: 9-30-09

CORRECTED BY: DAF

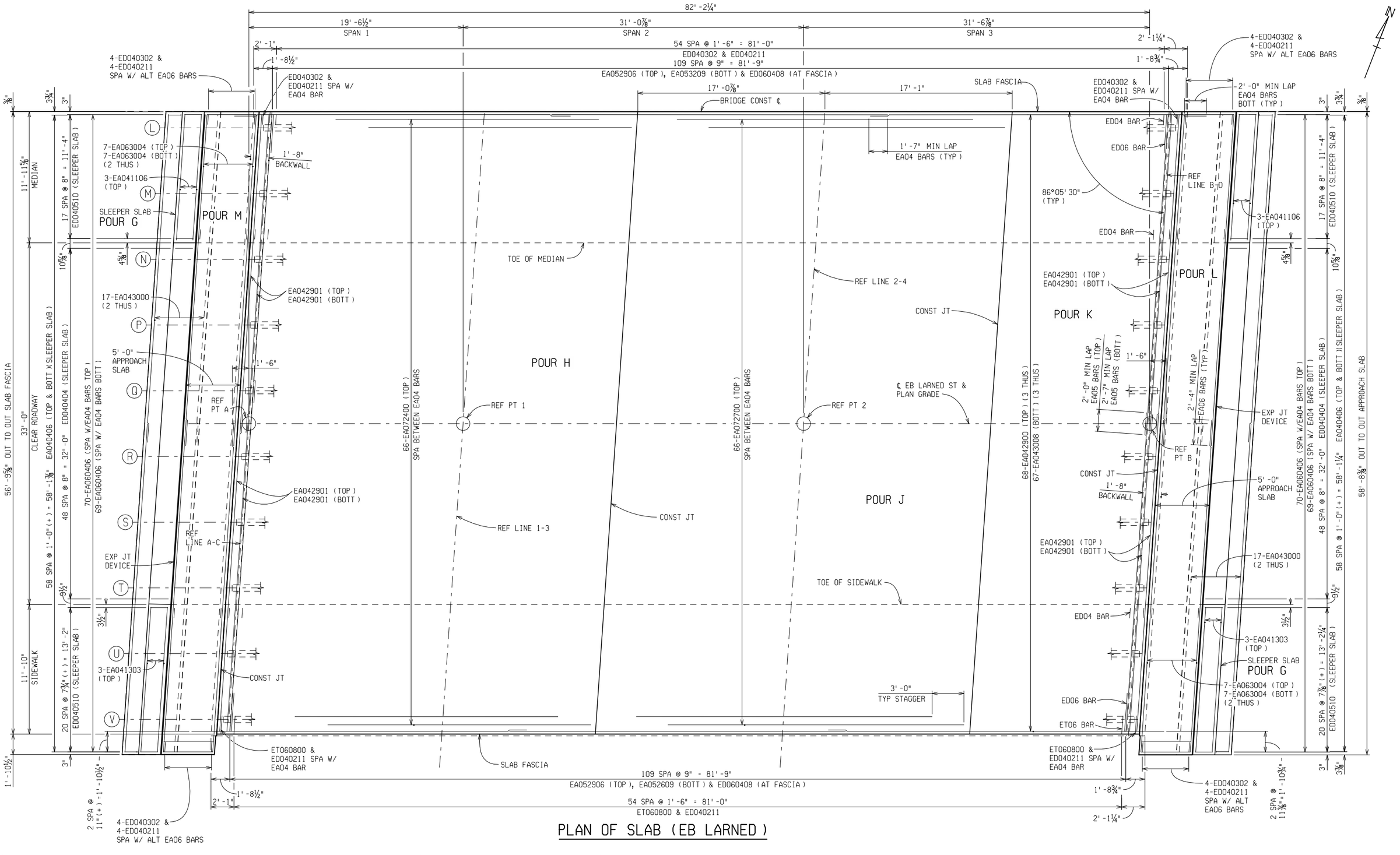
DATE: 9-8-09

DRAWN BY: DAF

DATE: 8-18-09

CHECKED BY: TNB

FILE NAME: Larned dk1.dgn



PLAN OF SLAB (EB LARNED)

REVISIONS	DESCRIPTION	DATE	BY

DLZ

CITY OF DETROIT

LARNED STREET BRIDGE OVER DEQUINDRE CUT GREENWAY

MDOT JOB NO. .106851A | STRUCTURE NO. .S01 of 82-22-88

SUPERSTRUCTURE DETAILS

DATE: 1/8/10

DLZ JOB NO. 0942-6313-00

SHEET NO. 33 OF 67

DATE: 9-30-09

CORRECTED BY: DAF

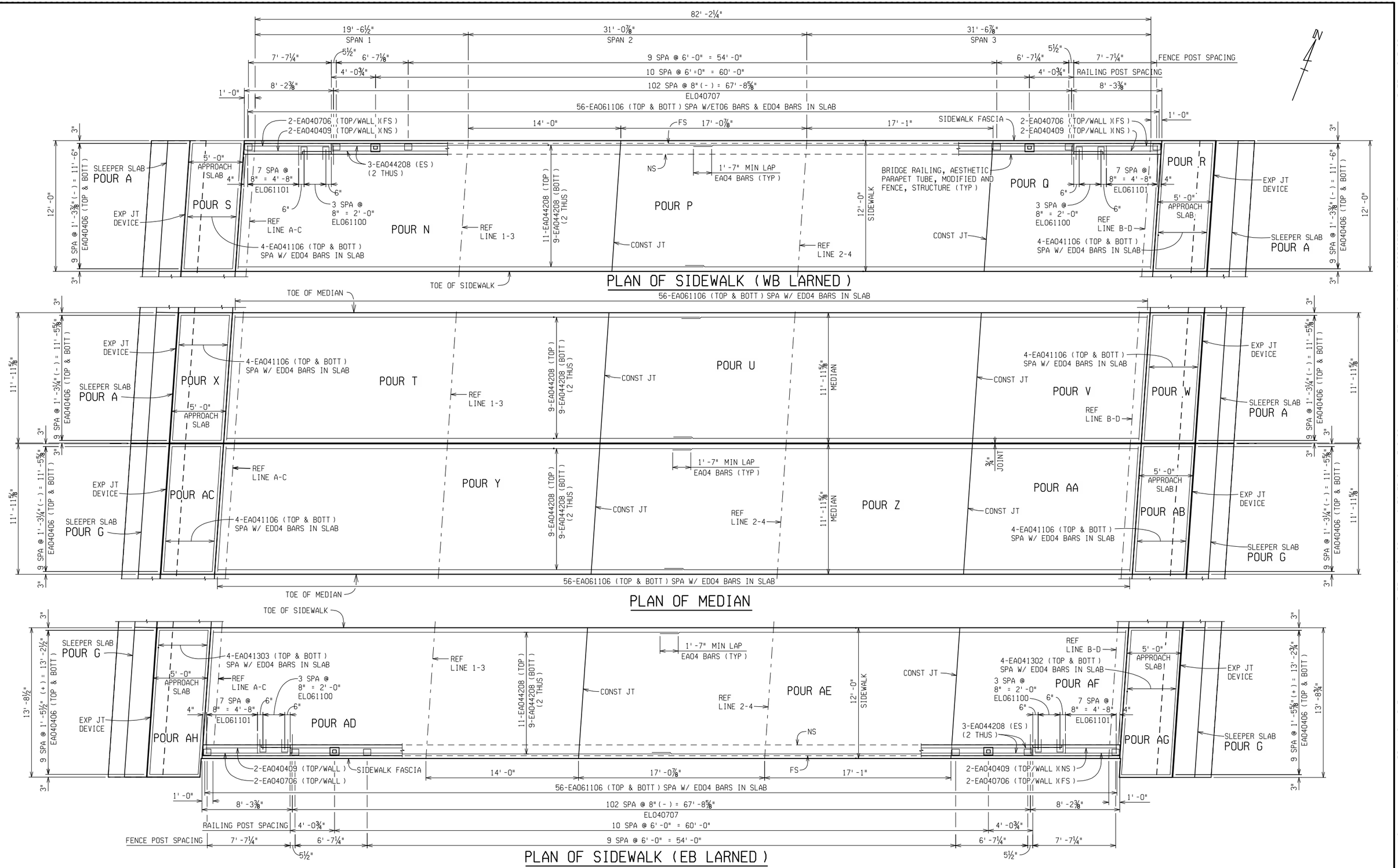
DATE: 9-8-09

CHECKED BY: TNB

DATE: 8-19-09

DRAWN BY: DAF

FILE NAME: Larned dk2.dgn



REVISIONS	DESCRIPTION	DATE	BY

DLZ

CITY OF DETROIT

LARNED STREET BRIDGE OVER DEQUINDRE CUT GREENWAY

MDOT JOB NO. .106851A | STRUCTURE NO. .S01 of 82-22-88

SUPERSTRUCTURE DETAILS

DATE: 1/8/10

DLZ JOB NO. 0942-6313-00

SHEET NO. 34 OF 67

DATE: 10-5-09 CORRECTED BY: DAF

DATE: 8-24-09 CHECKED BY: TNB/PI

DRAWN BY: DAF

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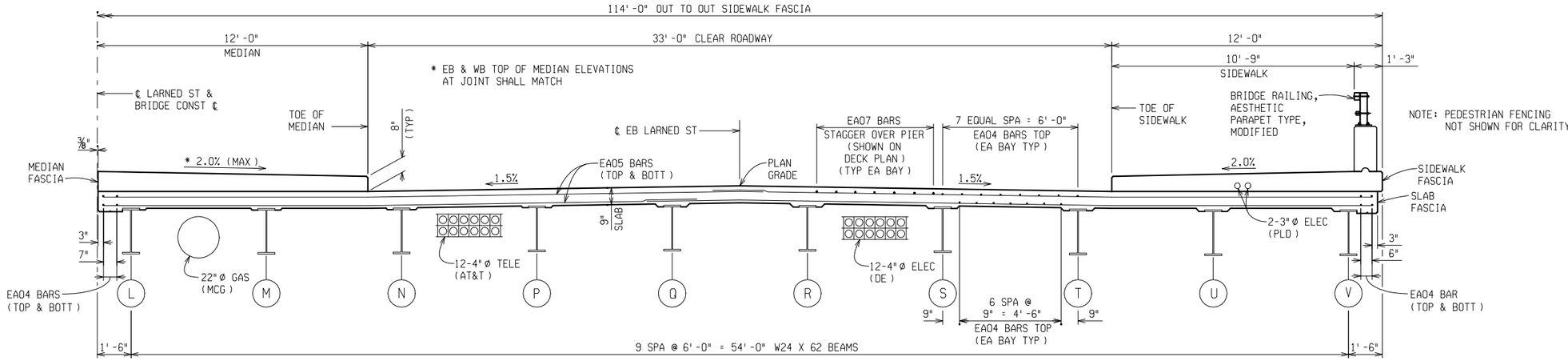
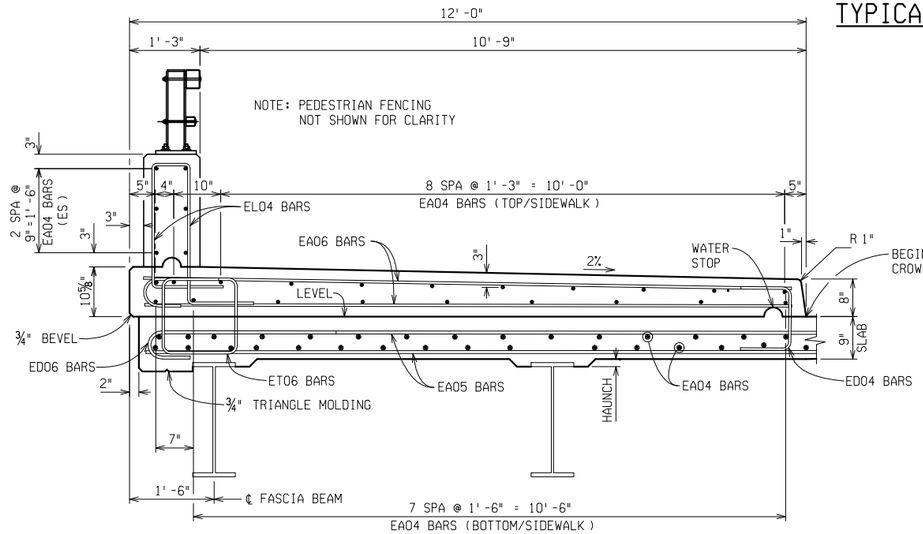
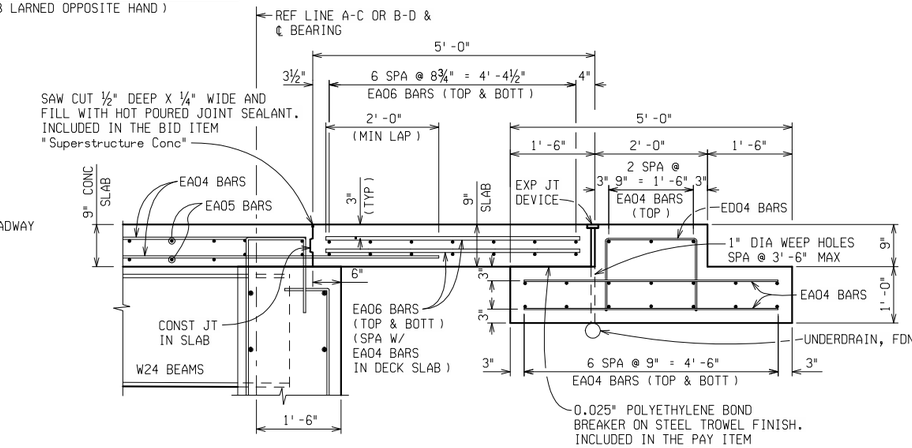


TYPICAL DECK (EB LARNED)

(WB LARNED OPPOSITE HAND)



TYPICAL SIDEWALK SECTION

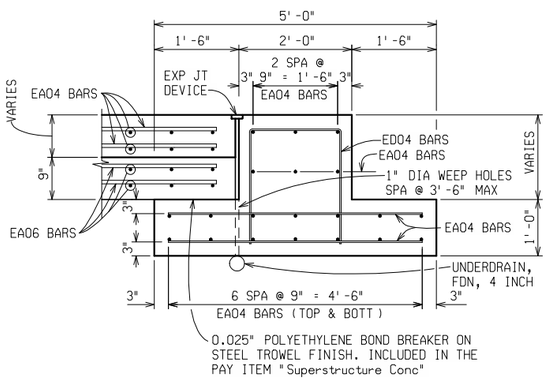


TYPICAL APPROACH & SLEEPER SLAB SECTION

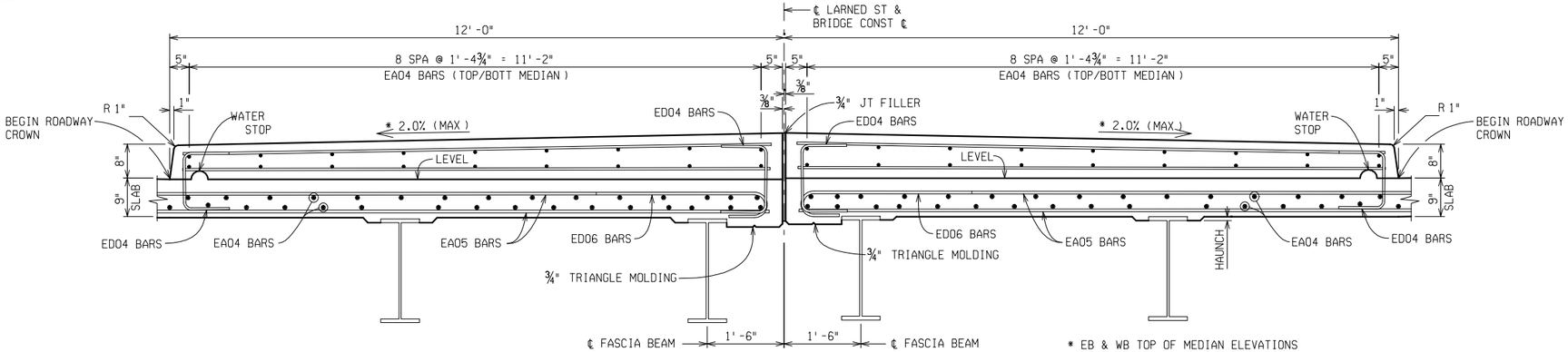
Superstructure Conc Quantities	
POUR	CYD
A	32.5
B	56.1
C	55.5
D	25.2
E	8.0
F	8.0
G	33.6
H	56.1
J	55.5
K	25.2
L	8.2
M	8.2
N	12.0
P	12.0
Q	5.4
R	1.8
S	1.8
T	12.0
U	11.8
V	5.4
W	1.7
X	1.7
Y	11.8
Z	11.7
AA	5.3
AB	1.7
AC	1.7
AD	12.0
AE	11.9
AF	5.4
AG	2.0
AH	2.0
TOTAL	503.2

QUANTITIES

1	LS	Superstructure Conc, Form, Finish and Cure
329	Ft	Bridge Railing, Aesthetic Parapet Tube, Modified
197	Ft	Conduit, Schedule 80 PVC, 3 inch, Structure



TYPICAL SIDEWALK & MEDIAN SLEEPER SLAB SECTION



TYPICAL MEDIAN SECTION

REVISIONS	DESCRIPTION	DATE	BY

DLZ

CITY OF DETROIT

LARNED STREET BRIDGE OVER DEQUINDRE CUT GREENWAY

MDOT JOB NO. .106851A | STRUCTURE NO. .S01 of 82-22-88

SUPERSTRUCTURE DETAIL

DATE: 1/8/10

DLZ JOB NO. 0942-6313-00

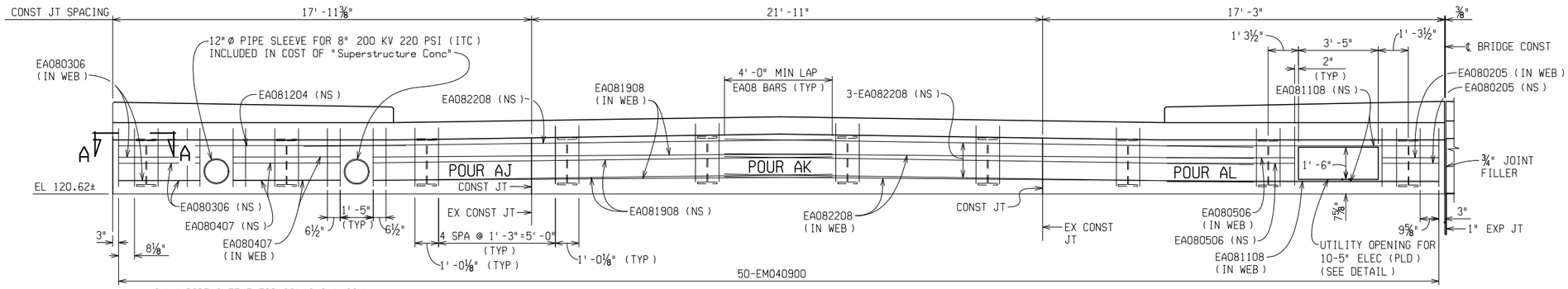
SHEET NO. 35 OF 67

DATE: 10-22-09 CORRECTED BY:DAF

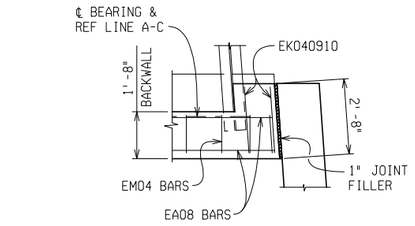
DATE: 9-8-09 DRAWN BY: DAF

DATE: 8-24-09 CHECKED BY: TNB

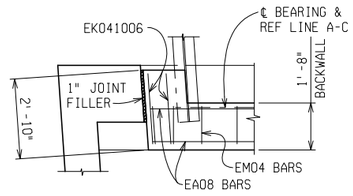
FILE NAME: Larned dk4.dgn



BACKWALL ELEVATION - ABUTMENT C

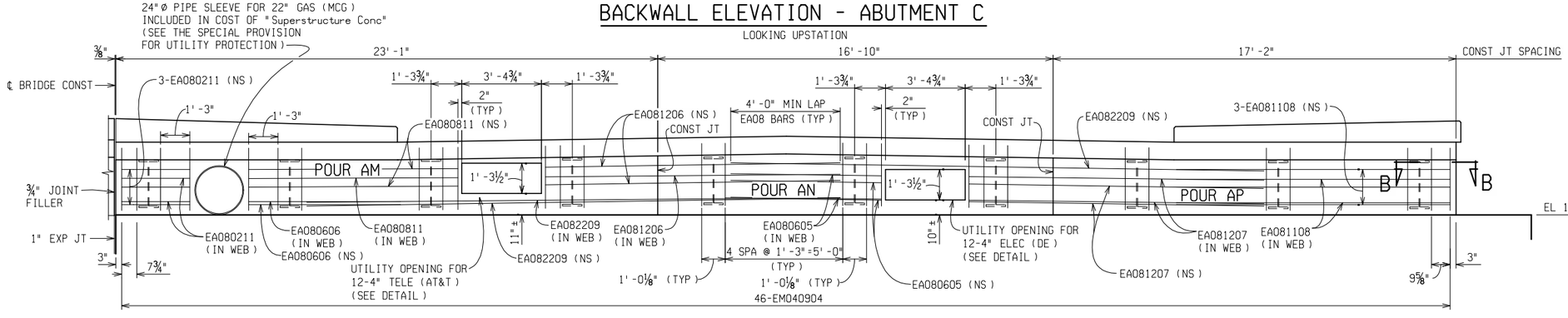


SECTION A-A



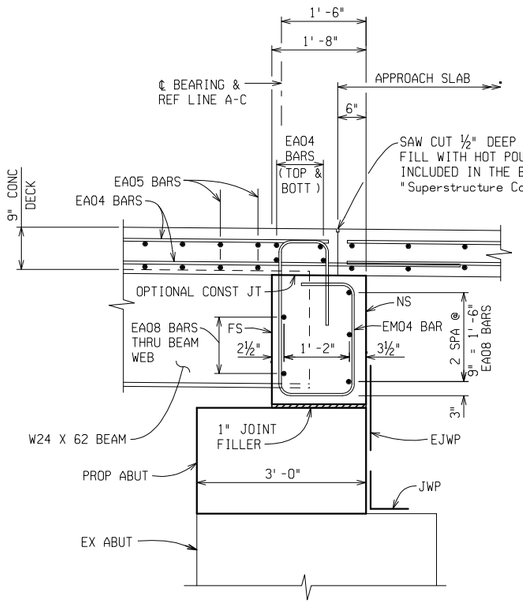
SECTION B-B

LOOKING UPSTATION

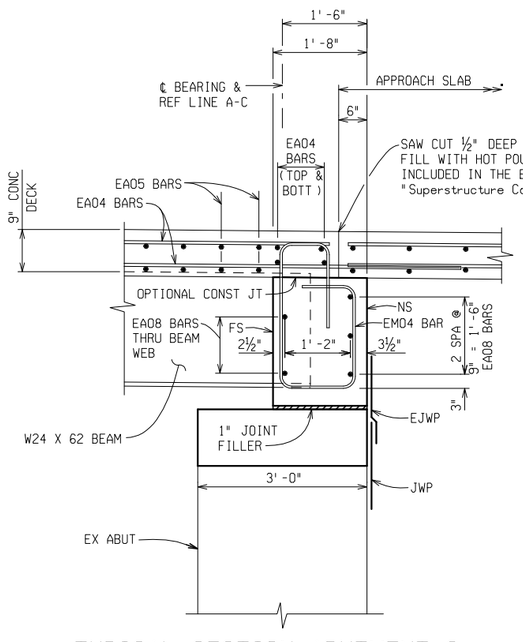


BACKWALL ELEVATION - ABUTMENT A

LOOKING UPSTATION

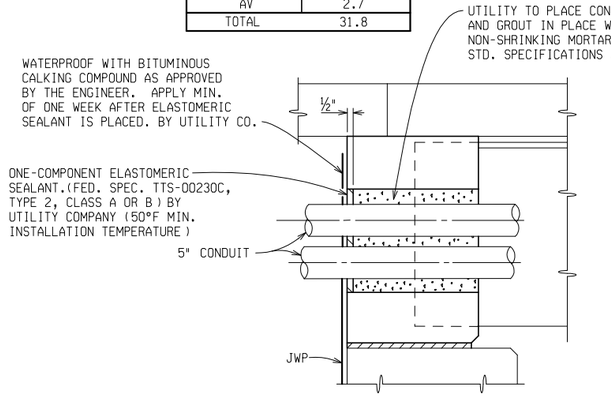


TYPICAL SECTION ABUTMENT A



TYPICAL SECTION ABUTMENT C

Superstructure Conc Quantities	
POUR	CYD
AJ	2.5
AK	3.4
AL	2.2
AM	3.0
AN	2.4
AP	2.5
AQ	2.2
AR	3.4
AS	2.4
AT	2.5
AU	2.6
AV	2.7
TOTAL	31.8



BACKWALL CONDUIT INSTALLATION

NOTES:

JWP DENOTES JOINT WATERPROOFING.

EJWP DENOTES EXPANSION JOINT WATERPROOFING.

NS DENOTES NEAR SIDE.

FS DENOTES FAR SIDE.

ES DENOTES EACH SIDE.

A RUBBED SURFACE FINISH ON THE VERTICAL AND TOP CONCRETE SURFACES OF THE PARAPET RAILING IS REQUIRED ON THIS STRUCTURE.

FOR DETAILS OF NAME PLATES, MOLDING, AND BEVELS, SEE STANDARD PLAN B-103-SERIES.

"EDGE" OR "GROOVE" DENOTES EDGING OR GROOVING WITH AN APPROVED TOOL.

FOR NAME PLATE LOCATION, SEE GENERAL PLAN OF STRUCTURE SHEET 4.

DECK POURS ARE TO BE MADE IN THE FOLLOWING SEQUENCE; WB BACKWALL POURS, WB BRIDGE POUR B & D, C, A, AND E & F, THEN POURS N - X IN ANY ORDER; EB BACKWALL POURS, EB BRIDGE POUR H & K, J, G, AND L & M, THEN POURS Y - AH IN ANY ORDER. WHENEVER A DECK POUR IS MADE, AT LEAST 15 HOURS SHALL HAVE ELAPSED SINCE THE ADJACENT SECTION WAS PLACED. THIS INCLUDES SECTIONS SEPARATED BY LONGITUDINAL AS WELL AS TRANSVERSE JOINTS.

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 "Superstructure Conc".

THE CONTRACTOR MAY USE METAL STAY IN PLACE FORMS. IF USED, THE CONTRACTOR MAY OMIT THE POLYSTYRENE FROM THE CORRUGATIONS AND FILL THE FORMS FULL DEPTH. THE EXTRA CONCRETE REQUIRED TO FILL THE CORRUGATIONS WILL NOT BE PAID FOR.

THE CONTRACTOR IS TO PROVIDE A SAWED JOINT ½" DEEP BY ⅛" WIDE (MINIMUM) IN THE TOP OF SLAB AT TRANSVERSE CONSTRUCTION JOINTS. THE JOINT IS TO BE SAWED WITHIN 4 HOURS OF REMOVING THE CURING AND IS TO BE FILLED WITH HOT-POURED JOINT SEALANT OR COLD-APPLIED JOINT SEALANT, SINGLE COMPONENT TYPE. INCLUDED IN THE BID ITEM "Superstructure, Conc, Form, Finish and Cure".

FILL PERPENDICULAR RAILING JOINTS WITH 1" JOINT FILLER TO ½" FROM THE BEVELS OF RAILING AND SEAL REMAINING ½" WITH A SILICONE RUBBER SEALANT. INCLUDED IN THE BID ITEM "Bridge Railing, Aesthetic Parapet Tube, Modified".

DATE: 10-22-09
DATE: 10-5-09 CORRECTED BY: DAF
DATE: 8-27-09 CHECKED BY: TNB/PI
DRAWN BY: DAF
FILE NAME: Larned dk5.dgn

REVISIONS	DESCRIPTION	DATE	BY

DLZ

CITY OF DETROIT

LARNED STREET BRIDGE OVER DEQUINDRE CUT GREENWAY

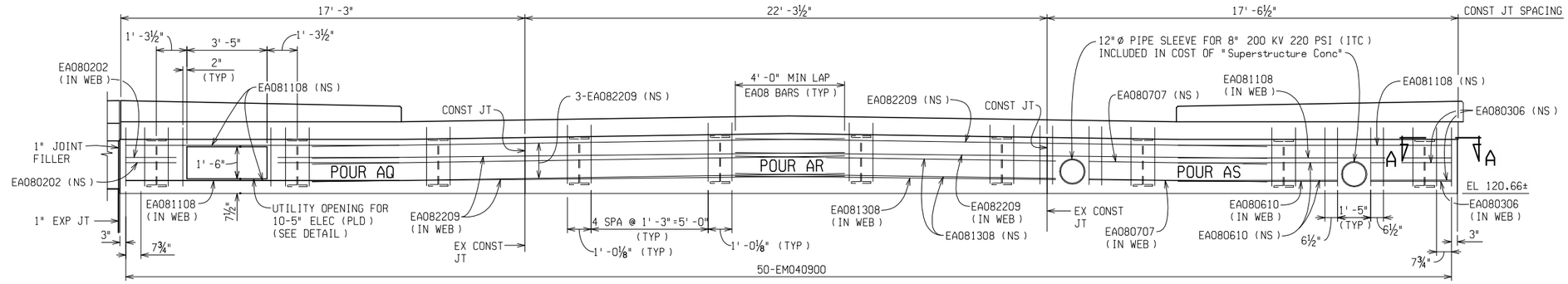
MDOT JOB NO. 106851A | STRUCTURE NO. S01 of 82-22-88

SUPERSTRUCTURE DETAILS

DATE: 1/8/10

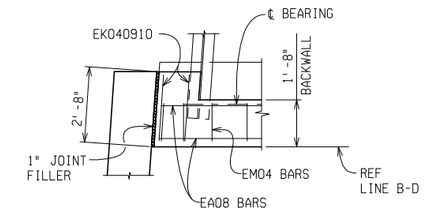
DLZ JOB NO. 0942-6313-00

SHEET NO. 36 OF 67

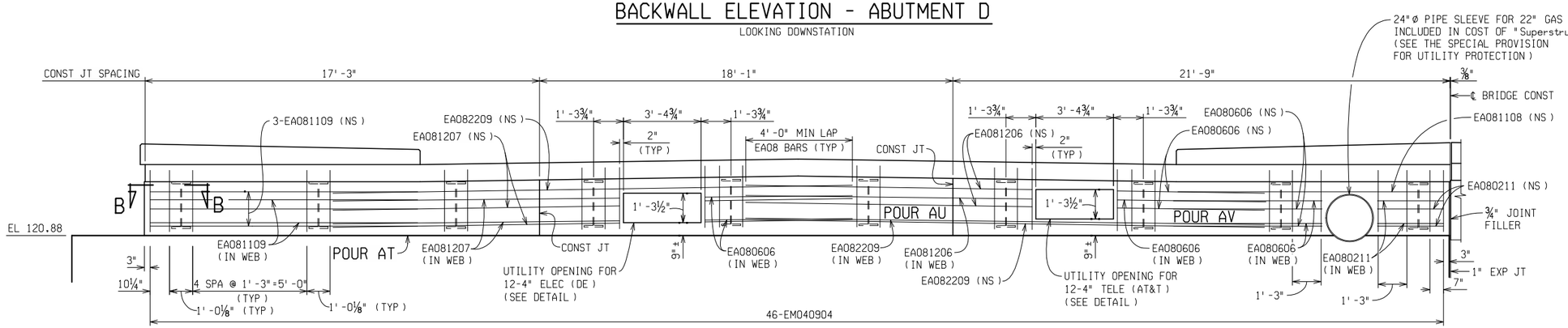


BACKWALL ELEVATION - ABUTMENT D

LOOKING DOWNSTATION

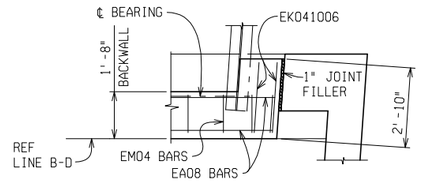


SECTION A-A

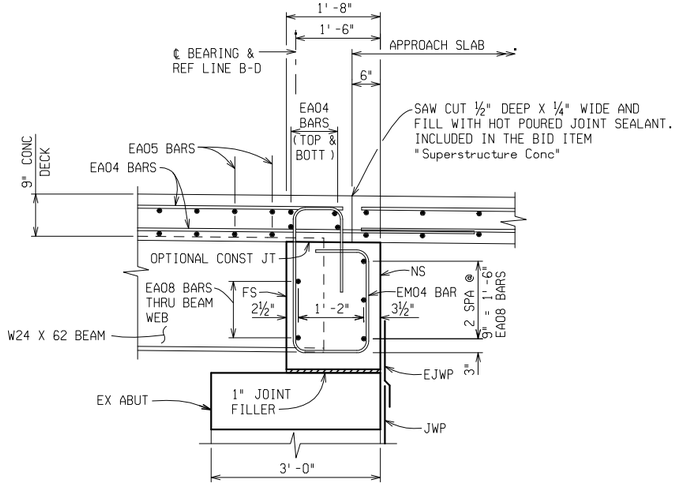


BACKWALL ELEVATION - ABUTMENT B

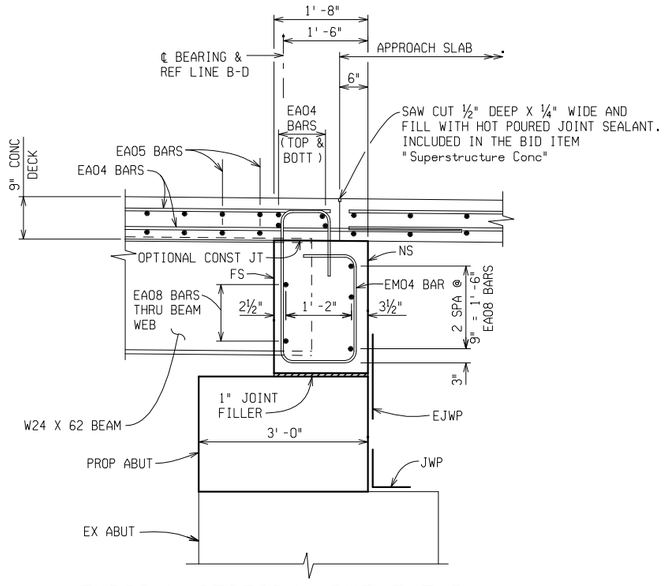
LOOKING DOWNSTATION



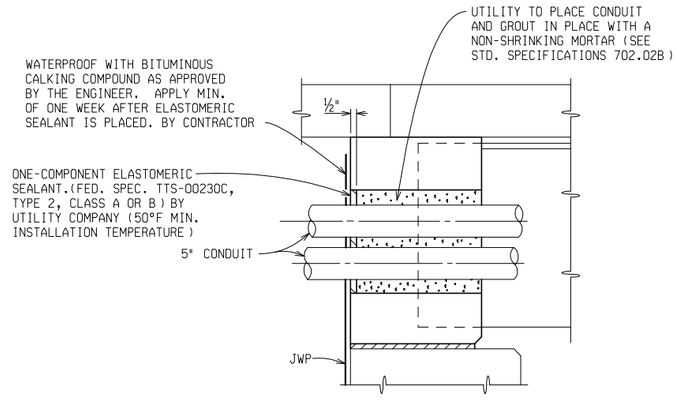
SECTION B-B



TYPICAL SECTION ABUTMENT D



TYPICAL SECTION ABUTMENT B



BACKWALL CONDUIT INSTALLATION

REVISIONS	DESCRIPTION	DATE	BY

DLZ

CITY OF DETROIT

LARNED STREET BRIDGE OVER DEQUINDRE CUT GREENWAY

MDOT JOB NO. .106851A | STRUCTURE NO. .S01 of 82-22-88

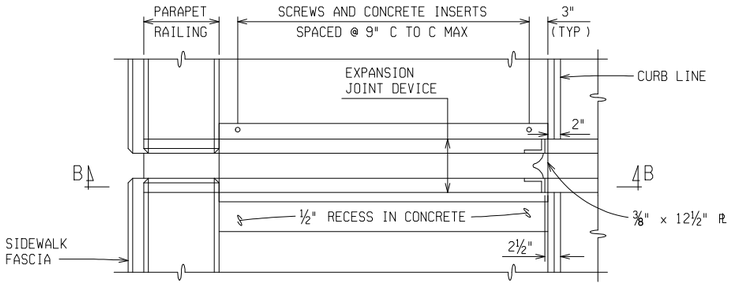
SUPERSTRUCTURE DETAILS

DATE: 1/8/10

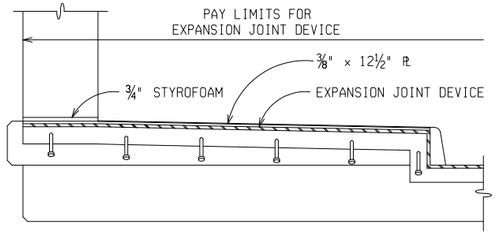
DLZ JOB NO. 0942-6313-00

SHEET NO. 37 OF 67

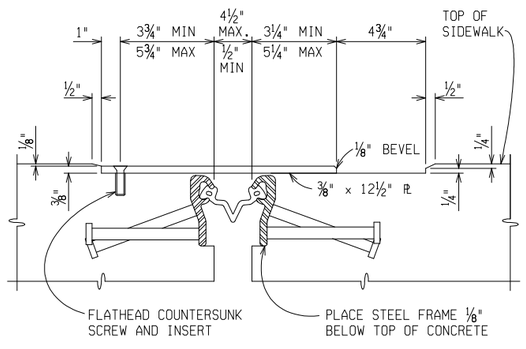
DATE: 10-22-09 CORRECTED BY: DAF DATE: 9-9-09 CHECKED BY: TNB DATE: 8-31-09 DRAWN BY: DAF FILE NAME: Larned dk6.dgn



PLAN AT PARAPET RAILING WITH SIDEWALK



SECTION B - B



SECTION THROUGH EXPANSION JOINT AND COVER PLATE

SIDEWALK SECTIONS

ALL STEEL FOR EXPANSION JOINT AND COVER PLATE SHALL BE AASHTO M270, GRADE 36, AND GALVANIZED (ASTM A123) WITH A STATIC COEFFICIENT OF FRICTION OF 0.6 OR GREATER.

USE ASTM F 593 (TYPE 304) STAINLESS STEEL ¾" DIAMETER FLATHEAD COUNTERSUNK SCREWS WITH ¾" DIAMETER INSERTS.

CAST CURBS AND SIDEWALKS WITH ⅜" SLIDING PLATES IN PLACE TO INSURE THAT INSERTS AND SCREWS ARE ALIGNED PROPERLY. APPLY BOND BREAKER TO SLIDING PLATES PRIOR TO INSTALLATION.

FORM CONCRETE RECESS AREA IN SIDEWALK AND GRIND TO PROVIDE SMOOTH SURFACE. TOOL OR GRIND CONCRETE EDGES TO ¼" RADIUS. APPLY ONE COAT OF EPOXY RESIN ADHESIVE TO ALLOW BENT SLIDING PLATE TO MOVE FREELY WITHOUT FRICTION. CARE SHALL BE TAKEN SO THAT NO ADHESIVE COMES IN CONTACT WITH ANY PART OF THE EXPANSION JOINT DEVISE OR GLAND. REMOVE ANY FOREIGN PARTICLES FROM THE SURFACE PRIOR TO INSTALLING PLATES.

INSTALL PLATES SO THAT THE SCREWS AND INSERTS ARE SET ON THE HIGH SIDE OF LONGITUDINAL SIDEWALK GRADE.

THE COST OF ALL MATERIALS AND LABOR REQUIRED FOR PROPER INSTALLATION OF THE COVER PLATE IS INCLUDED IN THE PAYMENT FOR THE EXPANSION JOINT DEVICE COVER PLATE.

NOTES:

JOINT TYPES

THE EXPANSION JOINT DEVICE SHALL BE OF A TYPE THAT INCLUDES A CONTINUOUS NEOPRENE (OR EQUIVALENT) SEAL ACROSS THE DECK. UNLESS OTHERWISE NOTED ON THE PLANS, THE CONTRACTOR HAS THE OPTION OF USING ANY OF THE DEVICES LISTED BELOW:

DEVICE	MANUFACTURER
WABO STRIP SEAL - TYPE M	WATSON-BOWMAN & ACME, INC.
WABO STRIP SEAL - TYPE A	WATSON-BOWMAN & ACME, INC.
STEELFLEX-SSA2	D.S. BROWN
STEELFLEX-SSCM	D.S. BROWN
ONFLEX 40 SS	STRUCTURAL RUBBER PRODUCTS CO.

THE MODEL OF THE JOINT TYPE SELECTED SHALL BE SUITABLE TO ACCOMMODATE THE TOTAL MOVEMENT NOTED ON THE PLANS.

COMPLETE WORKING DRAWINGS OF ALL DETAILS OF FABRICATION OF THE EXPANSION JOINT DEVICE SHALL BE SUBMITTED FOR REVIEW IN ACCORDANCE WITH STANDARD SPECIFICATION 104.02. THIS REQUIREMENT IS WAIVED FOR EXPANSION JOINT DEVICES FOR WHICH A SET OF STANDARD INSTALLATION DETAILS HAS BEEN APPROVED. STANDARD INSTALLATION DETAILS CAN BE OBTAINED FROM THE DESIGN SUPPORT AREA.

FABRICATION AND INSTALLATION

THE EXPANSION JOINT SHALL BE SHOP FABRICATED TO CONFORM TO THE CONTOUR OF THE BRIDGE DECK, BARRIERS, ETC. IT SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS SUBJECT TO NOTES HEREIN AND THE APPROVAL OF THE ENGINEER.

THE TOP OF THE EXPANSION JOINT DEVICE SHALL BE SET ⅛" - ¼" BELOW THE CONCRETE SLAB (PAVEMENT) WITH A TOLERANCE OF ± ⅛".

THE STEEL ANCHORAGE FOR STRIP SEAL GLANDS SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH SUBSECTION 707.03C.16 OF THE STANDARD SPECIFICATIONS.

THE AREA OF THE STEEL ANCHORAGE AND SEALING GLAND WHICH WILL BE IN CONTACT WITH A SEALANT, OR LUBRICANT-ADHESIVE SHALL BE CLEANED WITH TOLUENE OR OTHER APPROVED SOLVENT.

WHERE THE SEALING GLAND IS LOCKED INTO A STEEL ANCHORAGE, A LUBRICANT-ADHESIVE CONFORMING TO STANDARD SPECIFICATION 914.04D SHALL BE REQUIRED BETWEEN THE SEAL AND STEEL ANCHORAGE.

IN THE EVENT THAT SPLICING IS REQUIRED OF THE SEALING GLAND, IT SHALL BE SPLICED BY AN APPROVED METHOD (SUCH AS COLD VULCANIZATION) BY A TRAINED REPRESENTATIVE OF THE MANUFACTURER.

DETAILS AT CURBS OR BARRIERS

THE DETAILS ON THIS SHEET SHOW AN APPROVED MEANS OF TERMINATING THE EXPANSION JOINT DEVICE AT CURBS OR BARRIERS. VARIATIONS OR ALTERNATIVE SCHEMES WILL BE CONSIDERED AND MAY BE USED IF APPROVED BY THE ENGINEER.

MATERIALS

THE COST OF ALL MATERIALS AND LABOR REQUIRED FOR PROPER INSTALLATION OF THE EXPANSION JOINT AND THE TERMINAL ASSEMBLIES AT THE CURBS, SIDEWALKS, OR BARRIERS IS INCLUDED IN THE PAYMENT FOR THE EXPANSION JOINT DEVICE.

STRUCTURE NUMBER	ANGLE OF CROSSING TO NEAREST 10°	LOCATION OF JOINT	MIN. TOT. TRAVEL ALONG CENTERLINE OF BRIDGE	REQUIRED LENGTH OF EXPANSION JOINT DEVICE
S01	86°	ABUT A	⅝"	58'-4"
S01	86°	ABUT B	⅝"	58'-4"
S01	86°	ABUT C	⅝"	58'-4"
S01	86°	ABUT D	⅝"	58'-4"

QUANTITY		
ITEM	UNIT	AMOUNT
Expansion Joint Device	Ft	232
Expansion Joint Device, Cover Plate	Ft	96

DATE: 6-26-09
DATE: 6/26/09 CORRECTED BY: DLW
DRAWN BY: DLW
DATE: 6/1/09 CHECKED BY: TNB
FILE NAME: Larned ej.dgn

REVISIONS	DESCRIPTION	DATE	BY

DLZ

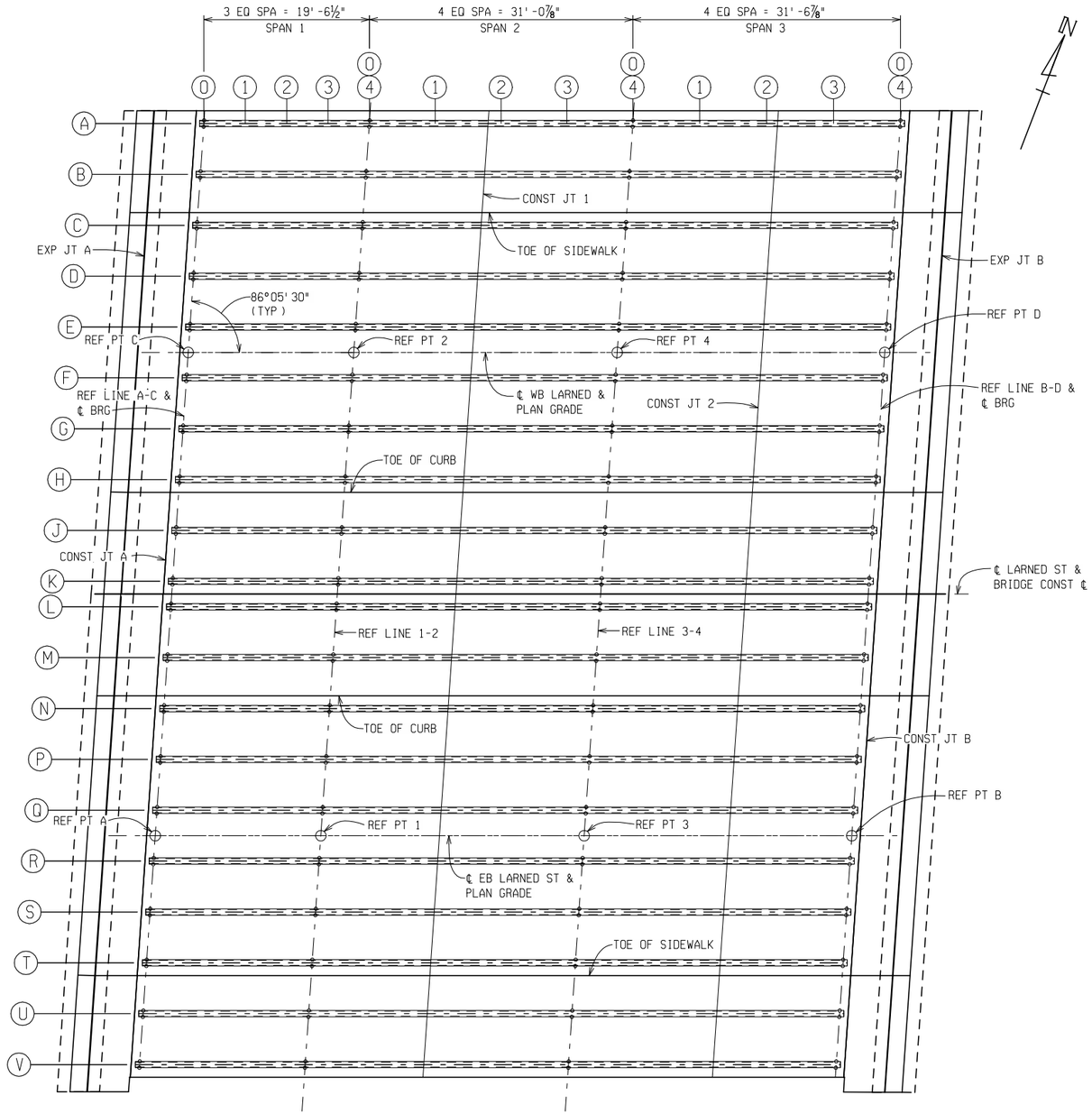
CITY OF DETROIT

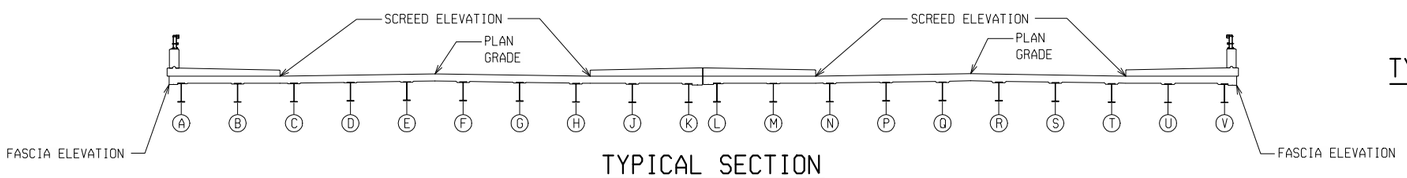
LARNED STREET BRIDGE OVER DEQUINDRE CUT GREENWAY

MDOT JOB NO. 106851A | STRUCTURE NO. S01 of 82-22-88

EXPANSION JOINT DETAILS
EJ3Y (03/14/2007)

DATE: 1/8/10
DLZ JOB NO. 0942-6313-00
SHEET NO. 38 OF 67





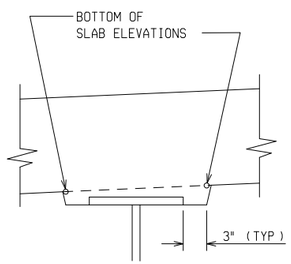
TYPICAL SECTION

SCREED ELEVATIONS

	0	1	2	3	04	1	2	3	04	1	2	3	04
WESTBOUND SIDEWALK	123.77	123.81	123.84	123.86	123.88	123.91	123.92	123.92	123.91	123.90	123.87	123.82	123.76
WB PLAN GRADE	124.01	124.05	124.08	124.10	124.12	124.15	124.17	124.17	124.16	124.15	124.12	124.08	124.01
WESTBOUND CURB	123.76	123.79	123.82	123.85	123.87	123.90	123.92	123.92	123.91	123.90	123.88	123.84	123.77
EASTBOUND CURB	123.83	123.90	123.96	124.01	124.05	124.11	124.14	124.16	124.16	124.15	124.11	124.06	123.97
EB PLAN GRADE	124.06	124.13	124.19	124.24	124.29	124.35	124.39	124.40	124.41	124.40	124.37	124.31	124.23
EASTBOUND SIDEWALK	123.80	123.87	123.93	123.98	124.03	124.09	124.13	124.16	124.16	124.15	124.13	124.07	123.99

BOTTOM OF SLAB ELEVATIONS

	0	1	2	3	04	1	2	3	04	1	2	3	04	
A	FASCIA	122.89	122.93	122.96	122.98	123.00	123.02	123.04	123.04	123.02	123.01	122.98	122.93	122.87	FASCIA	A
	LEFT	123.03	123.06	123.09	123.11	123.13	123.16	123.17	123.17	123.16	123.14	123.12	123.07	123.00	LEFT	
B	LEFT	123.03	123.06	123.09	123.11	123.13	123.16	123.17	123.17	123.16	123.15	123.12	123.07	123.00	LEFT	B
	RIGHT	123.03	123.06	123.09	123.11	123.13	123.16	123.17	123.17	123.16	123.15	123.12	123.07	123.01	RIGHT	
C	LEFT	123.04	123.07	123.10	123.13	123.15	123.17	123.19	123.19	123.17	123.16	123.14	123.09	123.02	LEFT	C
	RIGHT	123.05	123.09	123.12	123.14	123.16	123.19	123.20	123.20	123.19	123.18	123.15	123.11	123.04	RIGHT	
D	LEFT	123.12	123.16	123.19	123.21	123.23	123.26	123.28	123.28	123.26	123.25	123.23	123.18	123.11	LEFT	D
	RIGHT	123.14	123.18	123.21	123.23	123.25	123.28	123.29	123.29	123.28	123.27	123.24	123.20	123.13	RIGHT	
E	LEFT	123.21	123.25	123.28	123.30	123.32	123.35	123.37	123.37	123.36	123.34	123.32	123.27	123.21	LEFT	E
	RIGHT	123.23	123.26	123.29	123.32	123.34	123.37	123.38	123.38	123.37	123.36	123.34	123.29	123.22	RIGHT	
F	LEFT	123.22	123.26	123.29	123.32	123.34	123.37	123.38	123.38	123.37	123.36	123.34	123.29	123.23	LEFT	F
	RIGHT	123.21	123.24	123.28	123.30	123.32	123.35	123.37	123.37	123.36	123.35	123.32	123.28	123.21	RIGHT	
G	LEFT	123.13	123.17	123.20	123.22	123.25	123.28	123.29	123.29	123.28	123.27	123.25	123.21	123.14	LEFT	G
	RIGHT	123.11	123.15	123.18	123.21	123.23	123.26	123.28	123.28	123.27	123.26	123.23	123.19	123.12	RIGHT	
H	LEFT	123.04	123.07	123.11	123.13	123.15	123.18	123.20	123.20	123.19	123.18	123.16	123.12	123.05	LEFT	H
	RIGHT	123.02	123.06	123.09	123.12	123.14	123.17	123.18	123.19	123.18	123.17	123.15	123.10	123.04	RIGHT	
J	LEFT	123.00	123.04	123.07	123.10	123.12	123.15	123.17	123.17	123.16	123.15	123.13	123.09	123.03	LEFT	J
	RIGHT	123.00	123.04	123.07	123.10	123.12	123.15	123.17	123.17	123.16	123.15	123.13	123.09	123.03	RIGHT	
K	RIGHT	123.00	123.04	123.07	123.10	123.12	123.15	123.17	123.17	123.16	123.16	123.13	123.09	123.03	RIGHT	K
	FASCIA	122.87	122.90	122.93	122.96	122.98	123.02	123.03	123.04	123.03	123.02	123.00	122.96	122.89	FASCIA	
L	FASCIA	122.96	123.02	123.08	123.13	123.17	123.23	123.26	123.27	123.27	123.26	123.23	123.16	123.08	FASCIA	L
	LEFT	123.09	123.16	123.21	123.26	123.30	123.36	123.40	123.41	123.41	123.39	123.36	123.30	123.21	LEFT	
M	LEFT	123.09	123.15	123.21	123.26	123.30	123.36	123.40	123.41	123.41	123.39	123.36	123.30	123.22	LEFT	M
	RIGHT	123.09	123.15	123.21	123.26	123.30	123.36	123.39	123.41	123.41	123.40	123.37	123.31	123.22	RIGHT	
N	LEFT	123.10	123.16	123.22	123.27	123.31	123.37	123.41	123.42	123.42	123.41	123.38	123.32	123.24	LEFT	N
	RIGHT	123.11	123.18	123.24	123.29	123.33	123.39	123.42	123.44	123.44	123.43	123.40	123.34	123.25	RIGHT	
O	LEFT	123.18	123.25	123.31	123.36	123.40	123.46	123.50	123.51	123.51	123.50	123.47	123.41	123.33	LEFT	O
	RIGHT	123.20	123.26	123.32	123.37	123.42	123.47	123.51	123.53	123.53	123.52	123.49	123.43	123.35	RIGHT	
P	LEFT	123.26	123.33	123.39	123.44	123.49	123.55	123.59	123.60	123.60	123.59	123.57	123.51	123.42	LEFT	P
	RIGHT	123.28	123.35	123.41	123.46	123.50	123.56	123.60	123.62	123.62	123.61	123.58	123.52	123.44	RIGHT	
R	LEFT	123.27	123.34	123.40	123.45	123.50	123.56	123.60	123.62	123.62	123.61	123.58	123.53	123.44	LEFT	R
	RIGHT	123.26	123.33	123.39	123.44	123.48	123.54	123.58	123.60	123.60	123.59	123.57	123.51	123.43	RIGHT	
S	LEFT	123.18	123.25	123.31	123.36	123.41	123.47	123.51	123.53	123.53	123.52	123.50	123.44	123.36	LEFT	S
	RIGHT	123.16	123.23	123.29	123.34	123.39	123.45	123.49	123.51	123.51	123.51	123.48	123.42	123.34	RIGHT	
T	LEFT	123.08	123.15	123.21	123.27	123.31	123.37	123.42	123.44	123.44	123.43	123.41	123.35	123.27	LEFT	T
	RIGHT	123.07	123.14	123.20	123.25	123.30	123.36	123.40	123.42	123.42	123.42	123.39	123.34	123.26	RIGHT	
U	LEFT	123.05	123.12	123.18	123.23	123.28	123.34	123.38	123.40	123.41	123.40	123.38	123.33	123.25	LEFT	U
	RIGHT	123.05	123.12	123.18	123.23	123.28	123.34	123.38	123.40	123.41	123.40	123.38	123.33	123.25	RIGHT	
V	RIGHT	123.04	123.11	123.17	123.23	123.27	123.34	123.38	123.40	123.41	123.41	123.38	123.33	123.25	RIGHT	V
	FASCIA	122.90	122.97	123.04	123.09	123.14	123.20	123.25	123.27	123.27	123.27	123.25	123.19	123.11	FASCIA	



TYPICAL SECTION @ BEAM

NOTES:

BOTTOM OF SLAB ELEVATIONS ARE AT RIGHT ANGLES TO THE BEAM CENTERLINE AND ARE BASED ON THE CONDITION THAT THE BEAMS AND DIAPHRAGMS ARE COMPLETELY ERECTED WITH NO OTHER LOADS APPLIED. THESE ELEVATIONS INCLUDE ALLOWANCE FOR VERTICAL CURVE AND DEFLECTION DUE TO FORMS, STEEL REINFORCEMENT, CONCRETE SLAB, SIDEWALKS, AND BARRIERS.

SCREED ELEVATIONS ARE BASED ON THE CONDITION THAT NO SLAB CONCRETE HAS BEEN CAST AND THAT FORMWORK, AND STEEL REINFORCEMENT ARE IN PLACE.

SCREEDS AFFECTED BY LOADS IN OTHER SPANS ARE TO BE SET TO THE ELEVATIONS SHOWN BEFORE CASTING ANY CONCRETE. CONCRETE IN THE SUSPENDED SPANS IS TO BE CAST BEFORE CONCRETE ANCHOR SPANS.

TRANSVERSE FINISHING SHALL BE PARALLEL TO REFERENCE LINES.

SCREED RAILS FOR FINISHING OF STRUCTURAL CONCRETE SHALL BE LOCATED OVER THE FASCIA BEAMS.

REVISIONS	DESCRIPTION	DATE	BY

DLZ

CITY OF DETROIT

LARNED STREET BRIDGE OVER DEQUINDRE CUT GREENWAY

MDOT JOB NO. .106851A | STRUCTURE NO. S01 of 82-22-88

SLAB & SCREED DETAILS

DATE: 1/8/10

DLZ JOB NO. 0942-6313-00

SHEET NO. 39 OF 67

DATE: 10-1-09 CHECKED BY:
DATE: 9-10-09 CORRECTED BY:DAF
DATE: 2-12-09 DRAWN BY: PDI/DAF
FILE NAME: Larned ss.dgn

ABUTMENT A

BAR	DIMENSIONS a	b	c	d	e	f	g	h	NO. REQ'D	TOTAL WT.
EA04D205	2'-5"	·	·	·	·	·	·	·	5	9
EA040409	4'-9"								2	7
EA040702	7'-2"								2	10
EA040706	7'-6"								2	11
EA040905	9'-5"								10	63
EA040909	9'-9"								2	14
EA041107	11'-7"								10	78
EA041200	12'-0"								10	81
EA042902	29'-2"								4	78
EA060206	2'-6"								38	143
EA060304	3'-4"								4	21
EA060306	3'-6"								2	11
EA060309	3'-9"								20	113
EA060504	5'-4"								8	65
EA062910	29'-10"								4	180
EC040410	0'-1⅞"	2'-6"	0'-0"	0'-0"	0'-0"	2'-3⅞"	2'-4"		5	17
ED060508	1'-7"	2'-5½"	1'-7"						40	338
EK041002	0'-10"	2'-1"	3'-0"	3'-5"					26	177
EK061002	1'-7"	2'-3"	2'-3"	2'-5½"					39	594
EK061307	0'-6¾"	3'-3"	4'-2"	5'-0"					8	163
EK061401	0'-10"	3'-3"	4'-2"	5'-0"					16	339

ABUTMENT B

BAR	DIMENSIONS a	b	c	d	e	f	g	h	NO. REQ'D	TOTAL WT.
EA04D205	2'-5"	·	·	·	·	·	·	·	5	9
EA040409	4'-9"								2	7
EA040704	7'-4"								2	10
EA040706	7'-6"								2	11
EA041000	10'-0"								2	14
EA041201	12'-1"								20	162
EA041908	19'-8"								10	132
EA042107	21'-07"								10	145
EA042902	29'-2"								4	78
EA060206	2'-6"								38	143
EA060306	3'-6"								6	32
EA060309	3'-9"								42	237
EA060502	5'-2"								7	55
EA062910	29'-10"								4	180
ED060508	1'-7"	2'-5½"	1'-7"						40	338
EF040410	2'-5"	0'-0"	2'-5"	0'-0"	2'-4⅞"	0'-2"			5	17
EK041002	0'-10"	2'-1"	3'-0"	3'-5"					73	496
EK061002	1'-7"	2'-3"	2'-3"	2'-5½"					39	594
EK061310	0'-6¾"	3'-7"	3'-11"	5'-2"					8	166
EK061404	0'-10"	3'-7"	3'-11"	5'-2"					16	345

ABUTMENT C

BAR	DIMENSIONS a	b	c	d	e	f	g	h	NO. REQ'D	TOTAL WT.
EA04D409	4'-9"	·	·	·	·	·	·	·	4	13
EA040706	7'-6"								4	21
EA041407	14'-7"								10	98
EA042007	20'-7"								10	138
EA042900	29'-0"								4	78
EA060110	1'-10"								37	102
EA060304	3'-4"								23	116
EA062908	29'-8"								4	179
ED060403	0'-10½"	2'-5½"	0'-10½"						40	253
EK040902	1'-1"	2'-2"	2'-2"	2'-8"					34	209
EK060809	0'-11"	2'-3"	2'-3"	2'-5"					39	513
EK061202	0'-6¾"	3'-4"	3'-4"	4'-4"					8	146
EK061302	1'-1"	3'-4"	3'-4"	4'-4"					16	317

ABUTMENT D

BAR	DIMENSIONS a	b	c	d	e	f	g	h	j	NO. REQ'D	TOTAL WT.
EA04D409	4'-9"	·	·	·	·	·	·	·	·	4	13
EA040706	7'-6"									4	21
EA041907	19'-7"									10	131
EA042105	21'-5"									10	144
EA042900	29'-0"									4	78
EA060110	1'-10"									38	105
EA060304	3'-4"									26	131
EA062908	29'-8"									4	179
ED060403	0'-10½"	2'-5½"	0'-10½"							40	253
EK040902	1'-1"	2'-2"	2'-2"	2'-8"						43	264
EK060809	0'-11"	2'-3"	2'-3"	2'-5"						39	513
EK061202	0'-6¾"	3'-4"	3'-4"	4'-4"						8	146
EK061302	1'-1"	3'-4"	3'-4"	4'-4"						16	317

PIER 1

BAR	DIMENSIONS a	b	c	d	e	f	g	h	j	NO. REQ'D	TOTAL WT.
EA043007	30'-7"	·	·	·	·	·	·	·	·	4	82
EA060110	1'-10"									80	221
EA083205	32'-5"									10	866
EK060700	0'-10"	1'-7"	1'-7"	2'-2"						42	442

PIER 2

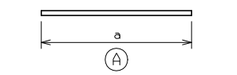
BAR	DIMENSIONS a	b	c	d	e	f	g	h	j	NO. REQ'D	TOTAL WT.
EA043007	30'-7"									4	82
EA060110	1'-10"									80	221
EA083205	32'-5"									10	866
EK060700	0'-10"	1'-7"	1'-7"	2'-2"						42	442

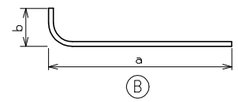
PIER 3

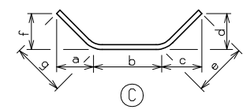
BAR	DIMENSIONS a	b	c	d	e	f	g	h	j	NO. REQ'D	TOTAL WT.
EA041604	16'-4"									2	22
EA042010	20'-10"									2	28
EA042202	22'-2"									2	67
EA062009	20'-9"									4	125
EA062010	20'-10"									4	126
EA062202	22'-2"									4	182
EA072000	20'-0"									4	164
EA072010	20'-10"									4	171
EA072202	22'-2"									4	93
EK050908	1'-6"	2'-1"	2'-1"	2'-6"						50	505

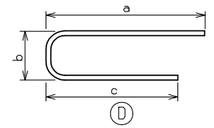
PIER 4

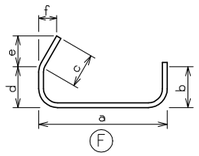
BAR	DIMENSIONS a	b	c	d	e	f	g	h	j	NO. REQ'D	TOTAL WT.
EA042807	28'-7"									4	77
EA060110	1'-10"									38	105
EA103109	31'-9"									8	1093
EK060508	0'-10"	1'-3"	1'-3"	1'-6"						40	341

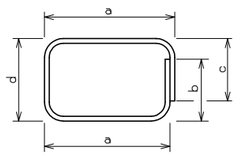


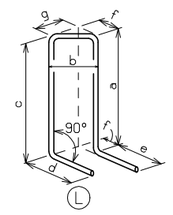


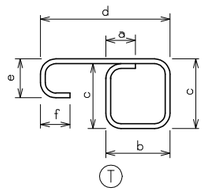


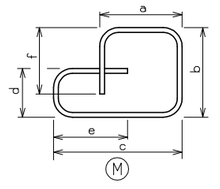












QUANTITIES

113,778	Lb	Reinforcement, Steel, Epoxy Coated

EPOXY COATED
BAR SIZE
BAR LENGTH (FT)
BAR LENGTH (IN)
EA064700
BAR SHAPE

BAR LEGEND

NOTE:

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

REVISIONS	DESCRIPTION	DATE	BY

DLZ

CITY OF DETROIT

LARNED STREET BRIDGE OVER DEQUINDRE CUT GREENWAY

MDOT JOB NO. .106851A | STRUCTURE NO. .S01 of 82-22-88

STEEL REINFORCEMENT DETAILS

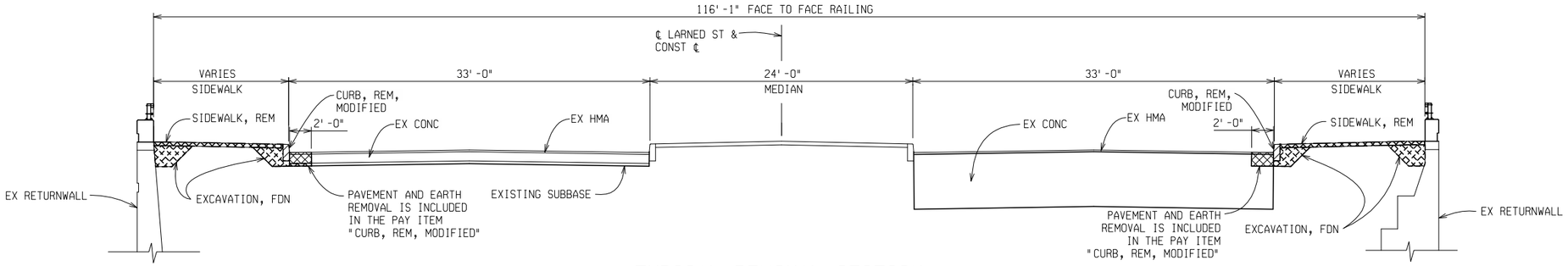
DATE: 1/8/10
DLZ JOB NO. 0942-6313-00
SHEET NO. 40 OF 67

DATE: 12-14-09
DATE: 10-23-09 CORRECTED BY: DAF
CHECKED BY: PDI
DRAWN BY: DAF
FILE NAME: Larned rsi.dgn

SUPERSTRUCTURE

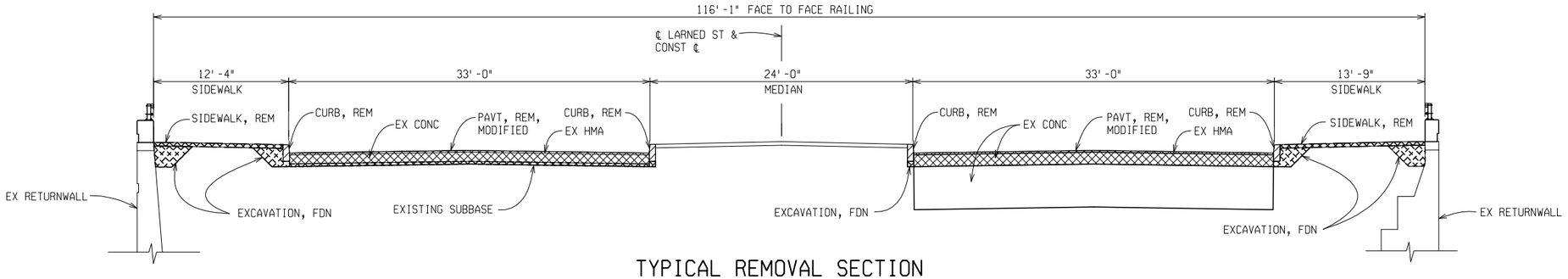
BAR	DIMENSIONS								NO. REQ'D	TOTAL WT.
	a	b	c	d	e	f	g	h		
EA040406	4' -6"								628	1888
EA040409	4' -9"								8	26
EA040706	7' -6"								8	41
EA041106	11' -6"								63	484
EA041302	13' -2"								8	71
EA041303	13' -3"								17	151
EA042900	29' -0"								408	7904
EA042901	29' -1"								32	622
EA042902	29' -2"								34	663
EA043000	30' -0"								102	2045
EA043008	30' -8"								402	8236
EA044208	42' -8"								176	5017
EA052609	26' -9"								220	6139
EA052906	29' -6"								440	13539
EA053209	32' -9"								220	7515
EA060406	4' -6"								548	3704
EA061106	11' -6"								448	7739
EA062906	29' -6"								56	2482
EA063004	30' -4"								56	2552
EA072400	24' -0"								132	6476
EA072700	27' -0"								132	7285
EA080202	2' -2"								2	12
EA080205	2' -5"								2	13
EA080211	2' -11"								9	71
EA080306	3' -6"								7	66
EA080407	4' -7"								4	49
EA080506	5' -6"								2	30
EA080605	6' -5"								4	69
EA080606	6' -6"								11	191
EA080610	6' -10"								3	55
EA080707	7' -7"								2	41
EA080811	8' -11"								3	72
EA081108	11' -8"								14	437
EA081109	11' -9"								5	157
EA081204	12' -4"								1	33
EA081206	12' -6"								6	201
EA081207	12' -7"								8	269
EA081308	13' -8"								3	110
EA081908	19' -8"								4	211
EA082208	22' -8"								6	364
EA082209	22' -9"								13	790
ED040211	0' -10 3/4"	1' -1 1/2"	0' -10 3/4"						260	507
ED040302	0' -10 3/4"	1' -4 1/2"	0' -10 3/4"						146	309
ED040404	1' -4"	1' -7 1/2"	1' -4"						196	562
ED040510	2' -1"	1' -7 1/2"	2' -1"						150	581
ED060408	0' -6"	0' -6"	3' -8"						440	3085
EK040910	1' -9"	2' -0"	2' -0"	2' -4"					4	27
EK041006	1' -11"	2' -1"	2' -1"	2' -6"					4	29
EL040707	2' -6"	0' -7"	2' -2"	1' -2"	1' -2"	0' -7"	0' -0"		206	1044
EL061100	3' -10 1/2"	0' -6 3/4"	4' -2 1/2"	1' -2 1/8"	1' -2 1/8"	0' -0"	0' -6 3/4"		16	265
EL061101	4' -2 1/2"	0' -7 1/4"	3' -10 1/2"	1' -2 3/8"	1' -2 3/8"	0' -7 1/4"	0' -0"		32	533
EM040900	1' -9"	1' -4"	2' -6"	0' -10 1/2"	1' -6"	1' -0"			100	599
EM040904	1' -11"	1' -4"	2' -8"	0' -10 1/2"	1' -6"	1' -0"			92	572
ET060800	1' -0"	1' -4"	1' -4"	1' -8"	0' -7 1/2"	0' -8"			114	1363

BAR	DIMENSIONS									NO. REQ'D	TOTAL WT.
	a	b	c	d	e	f	g	h	j		



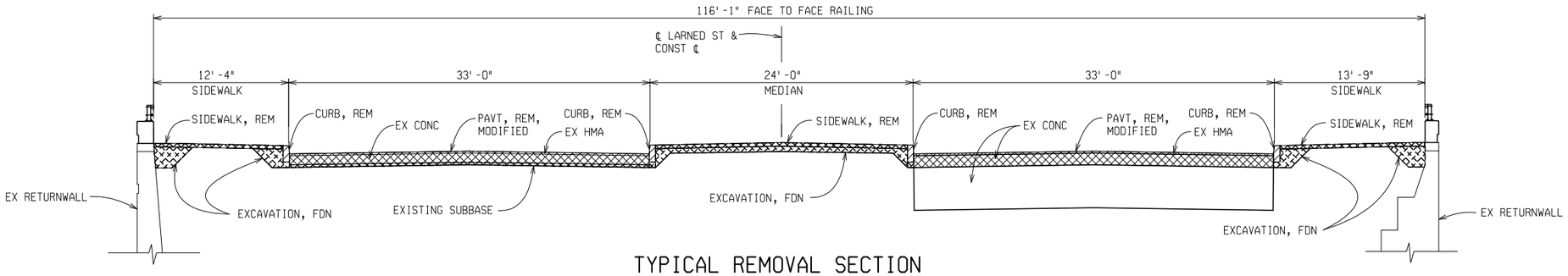
TYPICAL REMOVAL SECTION

STA 20+91.09 TO STA 21+02.93 & STA 22+52.06 TO STA 22+80.26 (WB LARNED STREET)
STA 20+93.60 TO STA 21+02.93 & STA 22+57.10 TO STA 22+72.37 (EB LARNED STREET)



TYPICAL REMOVAL SECTION

STA 21+02.93 TO STA 21+14.63 & STA 22+22.62 TO STA 22+52.06 (WB LARNED STREET)
STA 21+02.93 TO STA 21+12.93 & STA 22+20.99 TO STA 22+57.10 (EB LARNED STREET)



TYPICAL REMOVAL SECTION

STA 21+14.63 TO STA 21+27.05 & STA 22+12.24 TO STA 22+22.62 (WB LARNED STREET)
STA 21+12.93 TO STA 21+23.15 & STA 22+08.34 TO STA 22+20.99 (EB LARNED STREET)

REMOVAL LEGEND

- REMOVING SIDEWALK & MEDIAN
- REMOVING CURB
- REMOVING PAVEMENT
- REMOVING EARTH

NOTES:

SAWCUTTING IS INCLUDED IN THE PAY ITEM "Pavt, Rem, Modified" AND "Curb, Rem" AND "Curb, Rem, Modified" AND "Sidewalk, Rem" AND "Excavation, Fdn".

SEE PAVEMENT CORE LOG SHEETS TO CLARIFY THE HMA AND REINFORCED CONCRETE THICKNESSES.

FOR THE TYPICAL BRIDGE REMOVAL FROM STA 21+23.16 TO STA 22+08.34 (EB LARNED STREET) AND STA 21+27.05 TO STA 22+12.24 (WB LARNED STREET), SEE SHEET 22.

DATE: 12-14-09
DATE: 12-14-09 CORRECTED BY:PDI
CHECKED BY: TNB
DATE: 12-10-09
DRAWN BY: PDI
FILE NAME: Larned Rem2.dgn

REVISIONS	DESCRIPTION	DATE	BY

DLZ

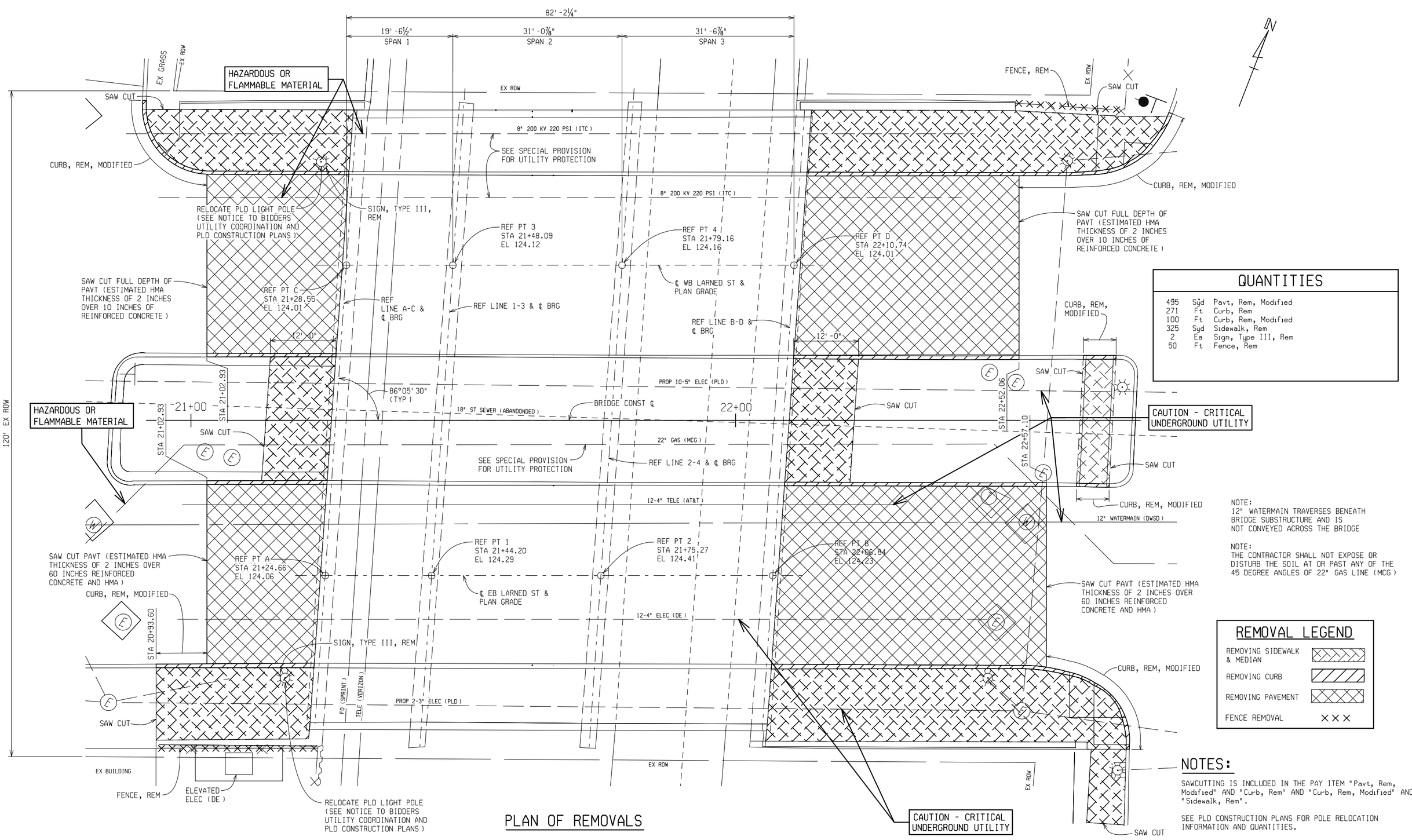
CITY OF DETROIT

LARNED STREET BRIDGE OVER DEQUINDRE CUT GREENWAY

MDOT JOB NO. 106851A | STRUCTURE NO. S01 of 82-22-88

APPROACH REMOVAL DETAILS

DATE: 1/8/10
DLZ JOB NO. 0942-6313-00
SHEET NO. 42 OF 67



PLAN OF REMOVALS

QUANTITIES

495	Syd	Pavt, Rem, Modified
271	Ft	Curb, Rem
100	Ft	Curb, Rem, Modified
325	Syd	Sidewalk, Rem
2	Ea	Sign, Type III, Rem
50	Ft	Fence, Rem

NOTE:
12" WATERMAIN TRAVERSES BENEATH BRIDGE SUBSTRUCTURE AND IS NOT CONVEYED ACROSS THE BRIDGE

NOTE:
THE CONTRACTOR SHALL NOT EXPOSE OR DISTURB THE SOIL AT OR PAST ANY OF THE 45 DEGREE ANGLES OF 22" GAS LINE (MCG)

REMOVAL LEGEND

- REMOVING SIDEWALK & MEDIAN
- REMOVING CURB
- REMOVING PAVEMENT
- FENCE REMOVAL ×××

NOTES:

SAWCUTTING IS INCLUDED IN THE PAY ITEM "Pavt, Rem, Modified" AND "Curb, Rem" AND "Curb, Rem, Modified" AND "Sidewalk, Rem".

SEE PLD CONSTRUCTION PLANS FOR POLE RELOCATION INFORMATION AND QUANTITIES.

SEE PAVEMENT CORE LOG SHEETS TO CLARIFY THE HMA AND REINFORCED CONCRETE THICKNESSES.

REVISIONS	DESCRIPTION	DATE	BY

DLZ

CITY OF DETROIT

LARNED STREET BRIDGE OVER DEQUINDRE CUT GREENWAY

MDOT JOB NO. 106851A | STRUCTURE NO. S01 of 82-22-88

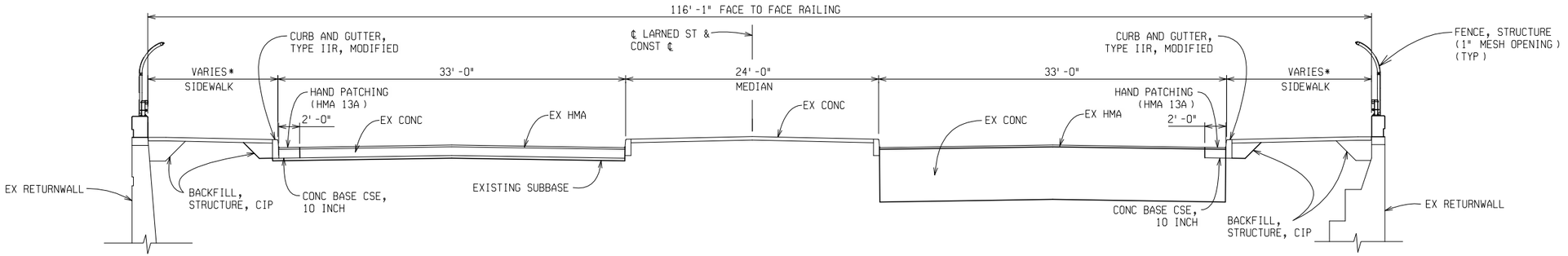
APPROACH REMOVAL DETAILS

DATE: 1/8/10

DLZ JOB NO. 0942-6313-00

SHEET NO. 43 OF 67

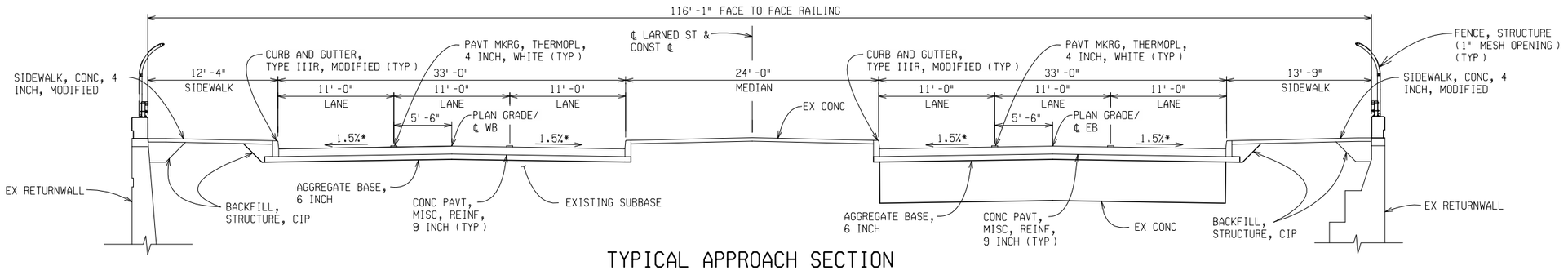
DATE: 10-23-09 DATE: 10-21-09 CORRECTED BY:DAF DATE: 9-4-09 CHECKED BY: PDI DRAWN BY: DAF FILE NAME: Larned Rem.dgn



TYPICAL APPROACH SECTION

STA 20+91.09 TO STA 21+02.93 & STA 22+52.06 TO STA 22+80.26 (WB LARNED STREET)
STA 20+93.60 TO STA 21+02.93 & STA 22+57.10 TO STA 22+72.37 (EB LARNED STREET)

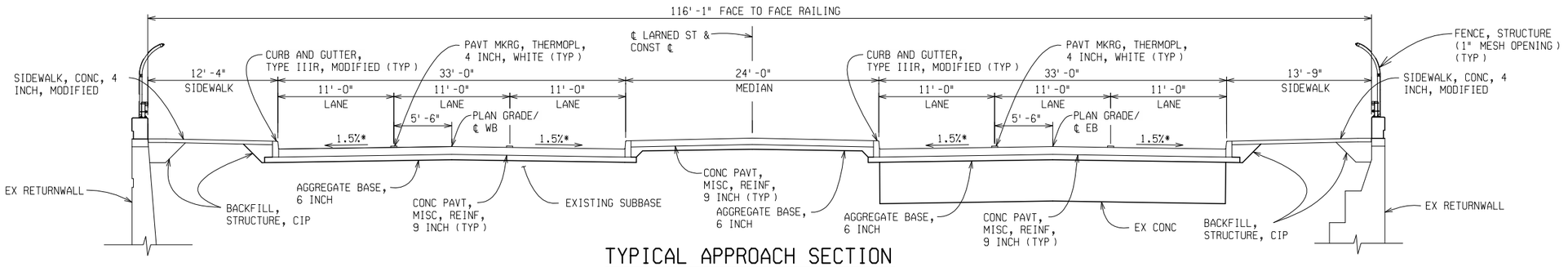
*FOR SIDEWALK DESCRIPTION, SEE SHEET 45 & 46



TYPICAL APPROACH SECTION

STA 21+02.93 TO STA 21+14.63 & STA 22+22.62 TO STA 22+52.06 (WB LARNED STREET)
STA 21+02.93 TO STA 21+12.93 & STA 22+20.99 TO STA 22+57.10 (EB LARNED STREET)

*TRANSITION FROM 1.5% CROSS SLOPE TO MATCH EXISTING ROADWAY



TYPICAL APPROACH SECTION

STA 21+14.63 TO STA 21+27.05 & STA 22+12.24 TO STA 22+22.62 (WB LARNED STREET)
STA 21+12.93 TO STA 21+23.15 & STA 22+08.34 TO STA 22+20.99 (EB LARNED STREET)

*TRANSITION FROM 1.5% CROSS SLOPE TO MATCH EXISTING ROADWAY

NOTES:

SEE PAVEMENT CORE LOG SHEETS TO CLARIFY THE HMA AND REINFORCED CONCRETE THICKNESSES.

FOR THE TYPICAL BRIDGE SECTION FROM STA 21+23.16 TO STA 22+08.34 (EB LARNED STREET) AND STA 21+27.05 TO STA 22+12.24 (WB LARNED STREET), SEE SHEET 8.

REVISIONS	DESCRIPTION	DATE	BY

DLZ

CITY OF DETROIT

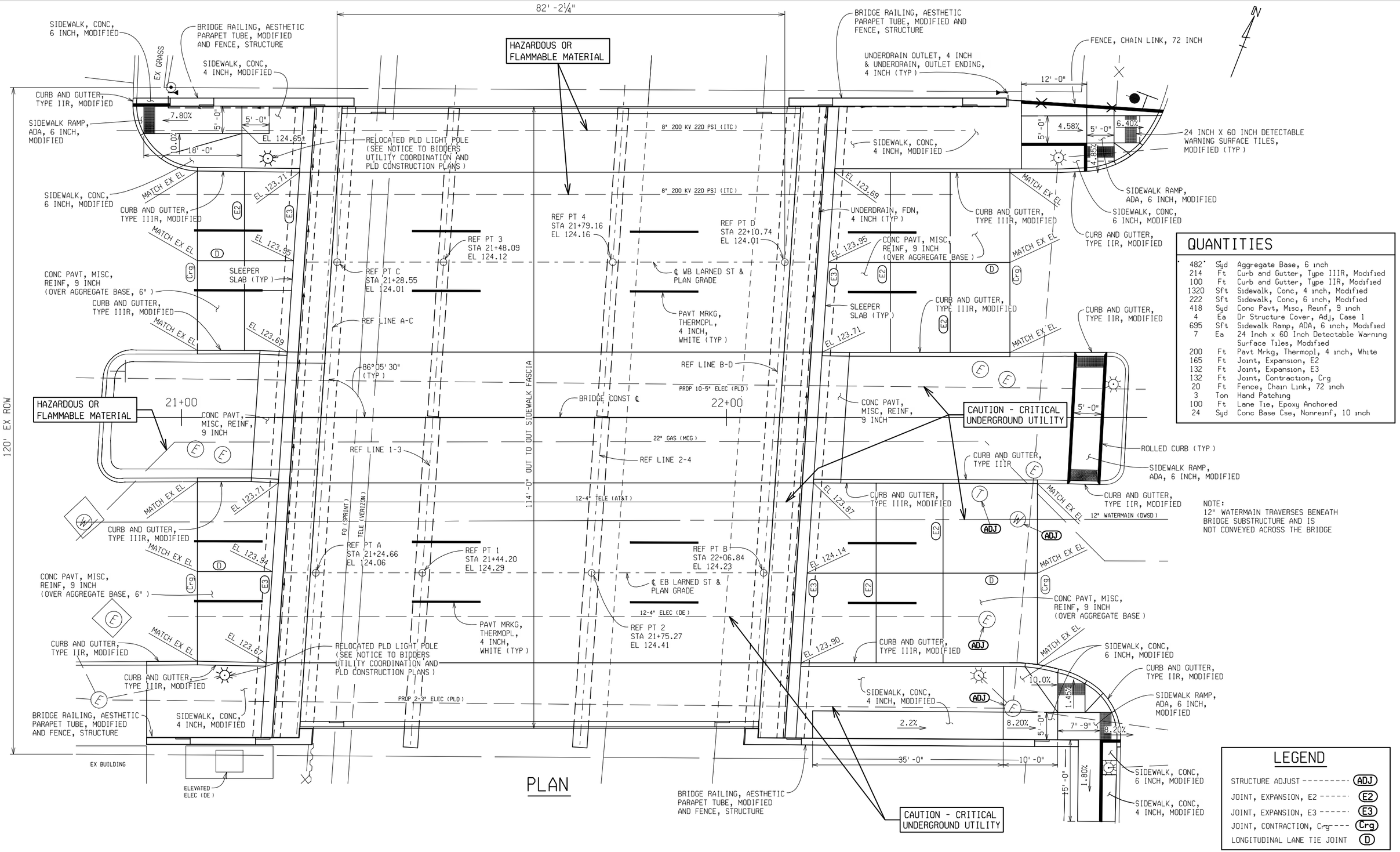
LARNED STREET BRIDGE OVER DEQUINDRE CUT GREENWAY

MDOT JOB NO. 106851A | STRUCTURE NO. S01 of 82-22-88

APPROACH DETAILS

DATE: 1/8/10
DLZ JOB NO. 0942-6313-00
SHEET NO. 44 OF 67

DATE: 12-14-09
DATE: 12-14-09 CORRECTED BY:PDI
CHECKED BY: TNB
DRAWN BY: PDI
FILE NAME: Larned Rem2.dgn



PLAN

QUANTITIES

482	Syd	Aggregate Base, 6 inch
214	Ft	Curb and Gutter, Type IIIR, Modified
100	Ft	Curb and Gutter, Type IIR, Modified
1320	Sft	Sidewalk, Conc, 4 inch, Modified
222	Sft	Sidewalk, Conc, 6 inch, Modified
418	Syd	Conc Pavt, Misc, Reinf, 9 inch
4	Ea	Dr Structure Cover, Adj, Case 1
695	Sft	Sidewalk Ramp, ADA, 6 inch, Modified
7	Ea	24 Inch x 60 Inch Detectable Warning Surface Tiles, Modified
200	Ft	Pavt Mrkg, Thermopl, 4 inch, White
165	Ft	Joint, Expansion, E2
132	Ft	Joint, Expansion, E3
132	Ft	Joint, Contraction, Crg
20	Ft	Fence, Chain Link, 72 inch
3	Ton	Hand Patching
100	Ft	Lane Tie, Epoxy Anchored
24	Syd	Conc Base Cse, Nonreinf, 10 inch

LEGEND

STRUCTURE ADJUST	ADJ
JOINT, EXPANSION, E2	E2
JOINT, EXPANSION, E3	E3
JOINT, CONTRACTION, Crg	Crg
LONGITUDINAL LANE TIE JOINT	D

DATE: 10-22-09
DATE: 10-21-09 CORRECTED BY: DAF
DATE: 9-14-09 CHECKED BY: PDI
DRAWN BY: DAF
FILE NAME: Larned app.dgn

REVISIONS	DESCRIPTION	DATE	BY

DLZ

CITY OF DETROIT

LARNED STREET BRIDGE OVER DEQUINDRE CUT GREENWAY

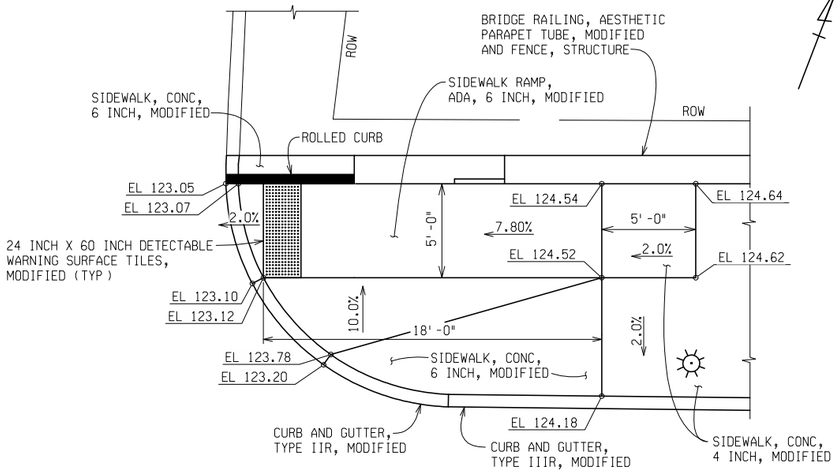
MDOT JOB NO. .106851A | STRUCTURE NO. .S01 of 82-22-88

APPROACH DETAILS

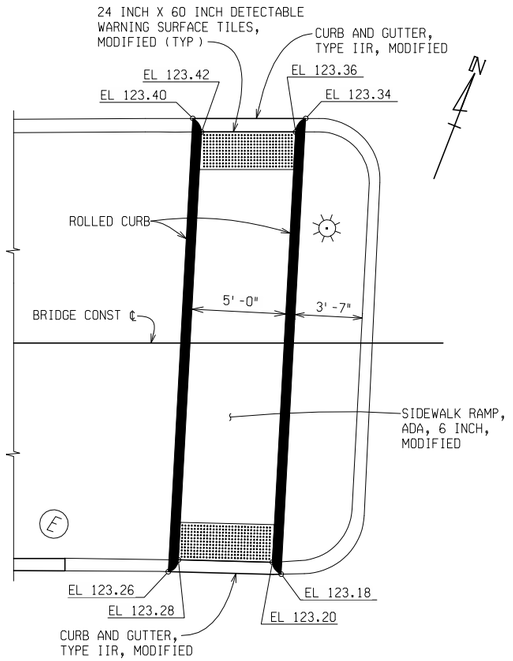
DATE: 1/8/10

DLZ JOB NO. 0942-6313-00

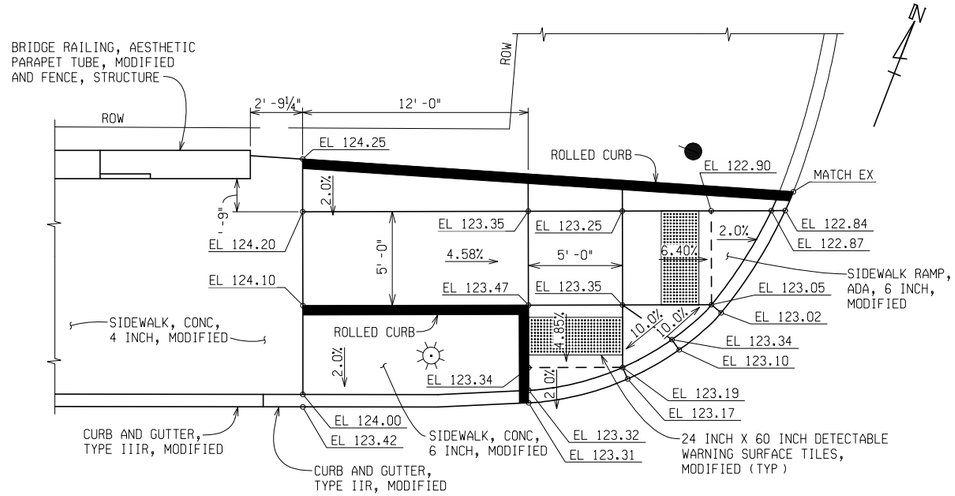
SHEET NO. 45 OF 67



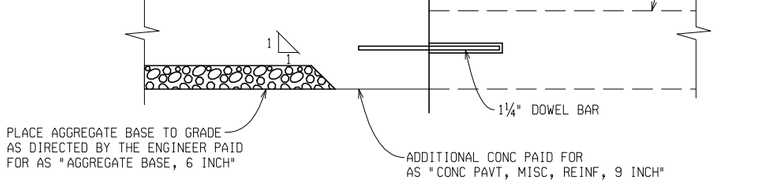
DETAIL GRADES - NORTHWEST RAMP



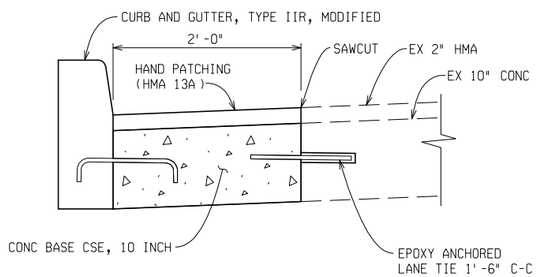
DETAIL GRADES - MEDIAN RAMPS



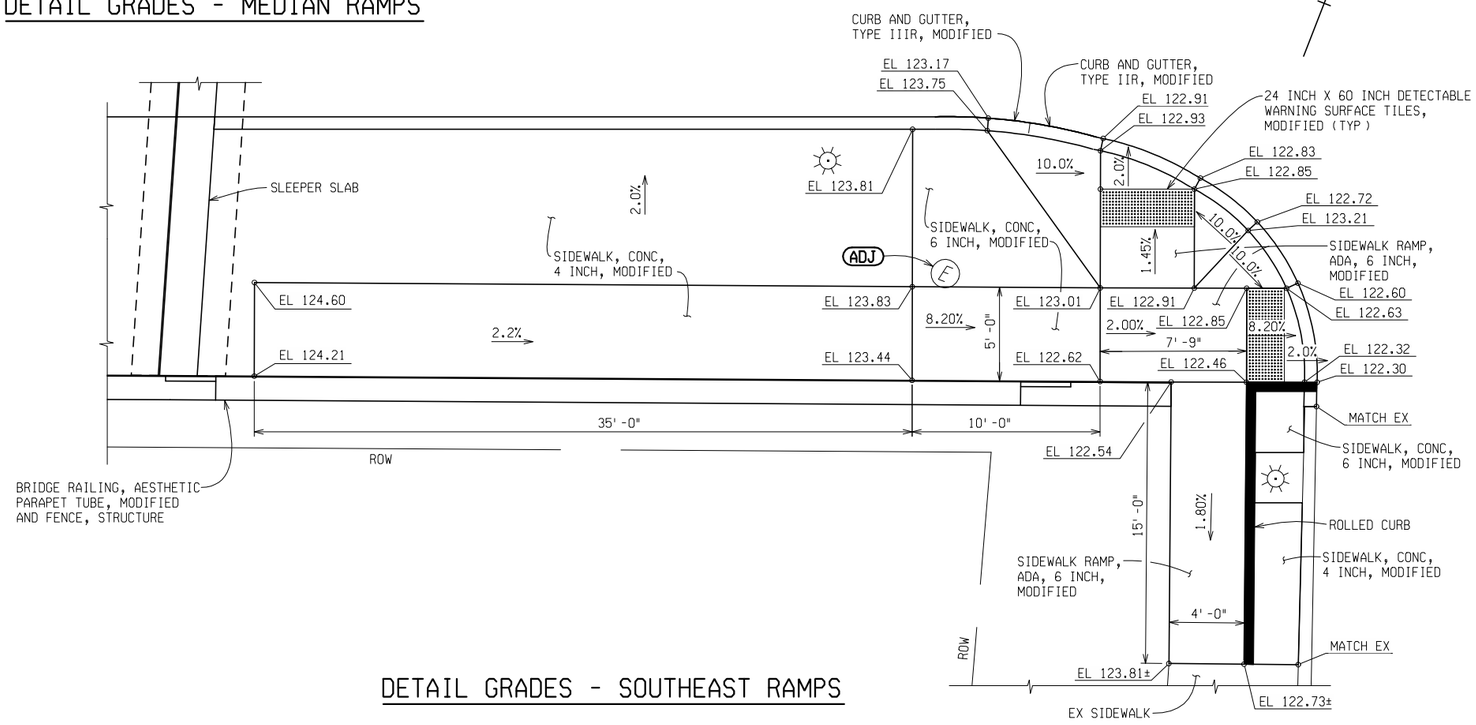
DETAIL GRADES - NORTHEAST RAMPS



TYPICAL CRG JOINT DETAIL



CURB, REM, MODIFIED DETAIL



DETAIL GRADES - SOUTHEAST RAMPS

REVISIONS	DESCRIPTION	DATE	BY

DLZ

CITY OF DETROIT

LARNED STREET BRIDGE OVER DEQUINDRE CUT GREENWAY

MDOT JOB NO. .106851A | STRUCTURE NO. .S01 of 82-22-88

APPROACH DETAILS

DATE: 1/8/10

DLZ JOB NO. 0942-6313-00

SHEET NO. 46 OF 67

DATE:

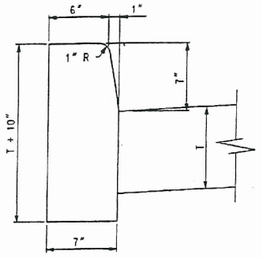
CORRECTED BY:

DATE: 11-23-09

CHECKED BY:

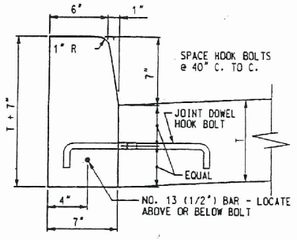
DRAWN BY: DAF

FILE NAME: Larned app2.dgn



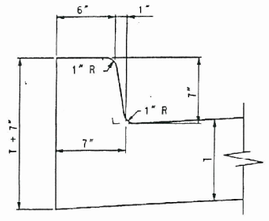
SEPARATE CURB

TYPE III



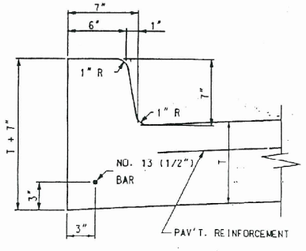
SEPARATE CURB - REINFORCED

TYPE III R



INTEGRAL CURB

TYPE III



INTEGRAL CURB - REINFORCED

TYPE III R

REVISED DATE(METRIC TO ENGLISH UNIT SYSTEM):DEC.2002

PREPARED BY BUREAU OF STREETS AND HIGHWAYS

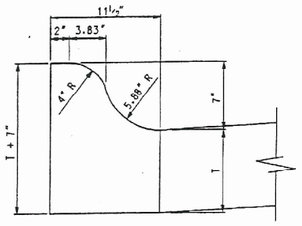
C.S.M.S.
DRAWN BY:

M.E.S.
CHECKED BY:

APPROVED
ENGINEER OF STREETS
ASST. ENGINEER
CITY ENGINEER

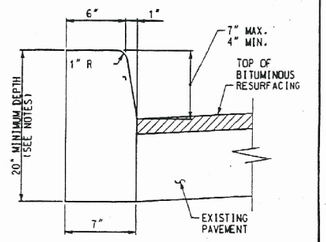
CITY OF DETROIT
CITY ENGINEERING DIVISION, D.P.W.
STANDARD PLAN FOR
STANDARD CURB DETAILS

03/07/98 PLAN DATE	DRAWING NO.	DETAIL STANDARD NO.	SHEET
	3	C-4380	3 OF 4



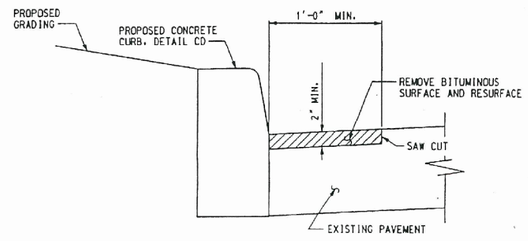
INTEGRAL ROLL CURB

TYPE IV



NOTES:
1. DEPTH OF CURB SHALL BE 20" UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
2. USE WHEN REPLACING CURBS ON EXISTING BITUMINOUS PAVEMENTS TO BE RESURFACED.

CONCRETE CURB, DETAIL CD



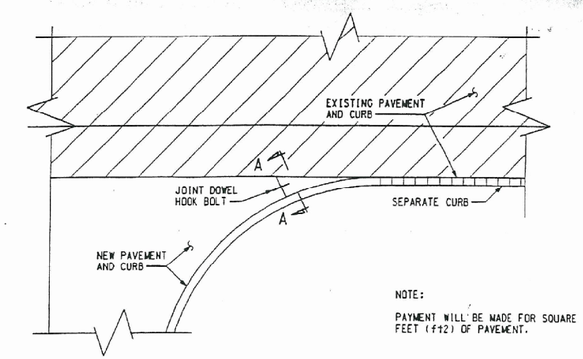
THIS DETAIL SHALL BE USED AT LOCATIONS WHERE PROPOSED CURB IS CONSTRUCTED ADJACENT TO EXISTING BITUMINOUS PAVEMENT NOT TO BE RESURFACED.

BITUMINOUS PATCHING AT PROPOSED CURB EDGE

REVISED DATE(METRIC TO ENGLISH UNIT SYSTEM):DEC.2002

CITY OF DETROIT
CITY ENGINEERING DIVISION, D.P.W.
STANDARD PLAN FOR
STANDARD CURB DETAILS

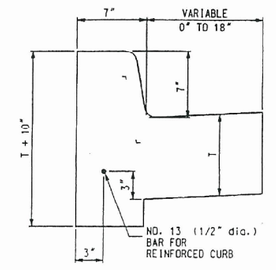
03/07/98 PLAN DATE	DRAWING NO.	DETAIL STANDARD NO.	SHEET
	3	C-4380	2 OF 4



NOTE:

PAYMENT WILL BE MADE FOR SQUARE FEET (ft2) OF PAVEMENT.

PLAN



SECTION A-A

DETAIL SHOWING TREATMENT AT CURB RETURNS

REVISED DATE(METRIC TO ENGLISH UNIT SYSTEM):DEC.2002

CITY OF DETROIT
CITY ENGINEERING DIVISION, D.P.W.
STANDARD PLAN FOR
STANDARD CURB DETAILS

03/07/98 PLAN DATE	DRAWING NO.	DETAIL STANDARD NO.	SHEET
	3	C-4380	4 OF 4

REVISIONS	DESCRIPTION	DATE	BY

DLZ

CITY OF DETROIT

LARNED STREET BRIDGE OVER DEQUINDRE CUT GREENWAY

MDOT JOB NO. 106851A | STRUCTURE NO. S01 of 82-22-88

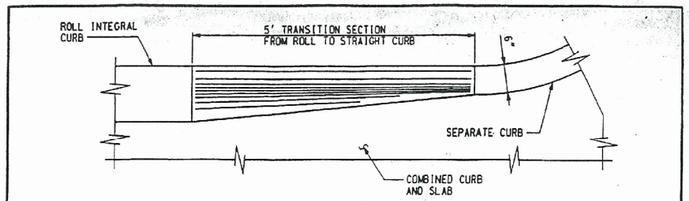
CITY OF DETROIT STANDARD PLANS

DATE: 1/8/10

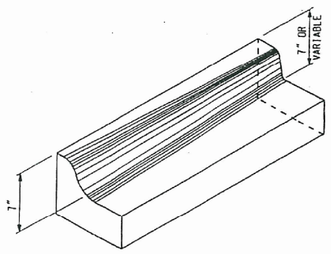
DLZ JOB NO. 0942-6313-00

SHEET NO. 47 OF 67

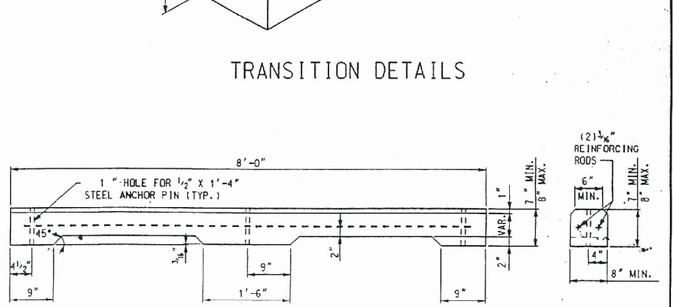
DATE:
CORRECTED BY:
DATE:
CHECKED BY: TNB
DATE: 7-13-09
DRAWN BY: DAF
FILE NAME: Larned std plan 1.dgn



PLAN



TRANSITION DETAILS



SIDE VIEW

END VIEW

CONCRETE BUMPER CURB

NOTE:
ALL DIMENSIONS ARE IN INCHES(") UNLESS OTHERWISE NOTED.

CITY OF DETROIT
CITY ENGINEERING DIVISION. D.P.W.
STANDARD PLAN FOR
____STANDARD_CURB_DETAILS___

03/01/98 PLAN DATE	DRAWING NO.	DETAIL STANDARD NO.	SHEET
	3	C-4380	4 OF 4

REVISED DATE(METRIC TO ENGLISH UNIT SYSTEM):DEC.2002

REVISIONS	DESCRIPTION	DATE	BY

DLZ

CITY OF DETROIT

LARNED STREET BRIDGE OVER DEQUINDRE CUT GREENWAY

MDOT JOB NO. .106851A | STRUCTURE NO. .S01 of 82-22-88

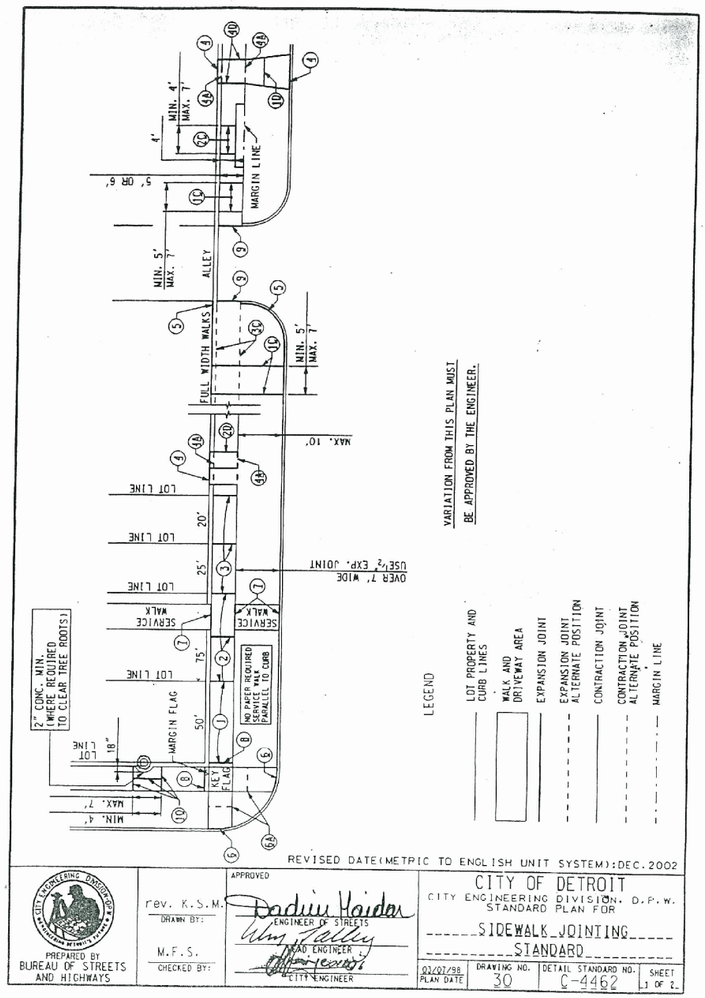
CITY OF DETROIT STANDARD PLANS

DATE: 1/8/10

DLZ JOB NO. 0942-6313-00

SHEET NO. 48 OF 67

DATE:
CORRECTED BY:
DATE: 7-13-09
CHECKED BY: TNB
DRAWN BY: DAF
FILE NAME: Larned std plan 2.dgn



VARIATION FROM THIS PLAN MUST BE APPROVED BY THE ENGINEER.

REVISED DATE(METRIC TO ENGLISH UNIT SYSTEM):DEC. 2002

PREPARED BY BUREAU OF STREETS AND HIGHWAYS

rev. K.S.M. — DRAWN BY:

M.F.S. — CHECKED BY:

APPROVED

Dadiw Haidar — ENGINEER OF STREETS

Wm Talley — HEAD ENGINEER

CITY ENGINEER

CITY OF DETROIT
CITY ENGINEERING DIVISION. D.P.W.
STANDARD PLAN FOR
SIDEWALK JOINTING
STANDARD

01/01/98 PLAN DATE	DRAWING NO.	DETAIL STANDARD NO.	SHEET
	30	C-4462	1 OF 2

EXPANSION JOINTS

ALL EXPANSION JOINT PAPER SHALL EXTEND 1" BELOW THE BOTTOM OF THE THINNER OF ADJOINING PAVEMENT SECTIONS.

(1) PLACE 1/2" PAPER EXPANSION JOINTS AT LOT LINES WHEN LOT LINES ARE BETWEEN 25' AND 50' APART.

(2) PLACE ADDITIONAL 1/2" PAPER EXPANSION JOINTS SO THAT THE DISTANCE BETWEEN JOINTS DOES NOT EXCEED 50' WHEN LOT LINES ARE OVER 50' APART.

(3) PLACE 1/2" PAPER EXPANSION JOINTS AT EVERY SECOND LOT LINE AND CONTRACTION JOINT AT INTERVENING LOT LINE WHEN LOT LINES ARE LESS THAN 25' APART.

(4) PLACE 1" PAPER EXPANSION JOINTS AT CURB AND BUILDING OR PROPERTY LINE OR AT ALTERNATE POSITION (4A) AS SHOWN FOR DRIVEWAY.

(5) PLACE 1" PAPER EXPANSION JOINTS AT CURB AND BUILDING OR PROPERTY LINE FOR FULL WIDTH SIDEWALK EXCEEDING 7' IN WIDTH.

(6) PLACE 1" PAPER EXPANSION JOINTS AT CURB CIRCLES OR AT ALTERNATE POSITION (6A) AS SHOWN.

(7) PLACE 1" PAPER EXPANSION JOINTS AT INTERSECTIONS OF SERVICE WALKS AND SIDEWALKS AND SERVICE WALKS AND CURBS.

(8) PLACE 1" PAPER EXPANSION JOINTS AT MARGIN FLAGS AT CROSSWALKS.

(9) PLACE 1" PAPER EXPANSION JOINTS AT ALLEY APRONS.

(10) PLACE 1/2" PAPER EXPANSION JOINT BOTH SIDES OF SIDEWALK FLAG ABUTTING TREE AND ON CENTERLINE JOINT.

CONTRACTION JOINTS

(1C) PLACE CONTRACTION JOINTS AT INTERVALS OF NOT LESS THAN 5' NOR MORE THAN 7' ON WALKS 5' WIDE OR WIDER, INCLUDING FULL WIDTH WALKS.

(2C) PLACE CONTRACTION JOINTS AT INTERVALS OF NOT LESS THAN 4' NOR MORE THAN 7' ON WALKS 4' WIDE.

(3C) PLACE CONTRACTION JOINTS AT THE MARGIN LINE ON FULL WIDTH WALKS (OPTIONAL).

DRIVEWAYS

(1D) PLACE CONTRACTION JOINTS IN DRIVEWAYS SO THAT NO SLAB WILL EXCEED THE DIMENSIONS OF 15' BY 15'

(2D) PLACE 1" PAPER EXPANSION JOINTS ON ALL SIDES OF COMMERCIAL DRIVES.

(3D) PLACE CONSTRUCTION OR CONTRACTION JOINT ON CENTERLINE WHEN WIDTH OF DRIVEWAY EXCEEDS 15'

(4D) PLACE 1/2" PAPER EXPANSION JOINTS ON BOTH SIDES OF RESIDENTIAL DRIVEWAYS. IF DRIVEWAY EDGE IS WITHIN 2 FEET OF LOT LINE, PLACE THIS EXPANSION PAPER AT PROPERTY LINE.

REVISED DATE(METRIC TO ENGLISH ~~UNIT~~ SYSTEM):DEC. 2002

CITY OF DETROIT
CITY ENGINEERING DIVISION. D.P.W.
STANDARD PLAN FOR
SIDEWALK JOINTING
STANDARD

01/01/98 PLAN DATE	DRAWING NO.	DETAIL STANDARD NO.	SHEET
	30	C-4462	2 OF 2

REVISIONS	DESCRIPTION	DATE	BY

DLZ

CITY OF DETROIT

LARNED STREET BRIDGE OVER DEQUINDRE CUT GREENWAY

MDOT JOB NO. 106851A | STRUCTURE NO. S01 of 82-22-88

CITY OF DETROIT STANDARD PLANS

DATE: 1/8/10

DLZ JOB NO. 0942-6313-00

SHEET NO. 49 OF 67

DATE:

CORRECTED BY:

DATE:

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DATE: 7-13-09

DRAWN BY: DAF

FILE NAME: Larned std plan 3.dgn

LEGEND SHEET

UNDERGROUND

- FIRE HYDRANT
- EXISTING MANHOLE
- EXISTING HANDHOLE
- EXISTING DUCT RUN
- ABANDON EXISTING DUCT RUN
- EXISTING DIRECT BURIAL OR PARKWAY CABLE
- ABANDON DIRECT BURIAL OR PARKWAY CABLE
- INSTALL DIRECT BURIAL CABLE (NO. AND SIZE WILL BE SHOWN)
- 5" E.C. — BUILD ENCASED CONDUIT (E.C.) (NO. AND SIZE WILL BE SHOWN)
- 2-3" D.B. — INSTALL DIRECT BURIAL CONDUIT (D.B.) (NO. AND SIZE WILL BE SHOWN)
- 2-4" J.B. — JACKED-BORED CONDUIT (J.B.) (NO. AND SIZE WILL BE SHOWN)
- BUILD NEW MANHOLE (2-WAY)
- BUILD NEW MANHOLE (3-WAY)
- BUILD NEW MANHOLE (4-WAY)
- BUILD NEW MANHOLE (CORNER)
- BUILD NEW HANDHOLE (ROUND OR SQUARE AS INDICATED ON PLANS).
- BUILD POLYMER CONCRETE HANDHOLE
- BUILD TYPE "S" HANDHOLE
- BUILD TYPE "D" HANDHOLE
- EXISTING UNDERGROUND-FED ST.LTG. UNIT AND FOUNDATION
- REMOVE UNDERGROUND-FED ST.LTG. UNIT AND FOUNDATION (EXCEPT AS OTHERWISE NOTED)
- INSTALL CODE 009-00 ST. LTG. STD. WITH 6FT. CLAMP-ON BRACKET ARM (3'-0"RISE). ON NEW FDN INSTALL 250W. SODIUM VAPOR LUMINAIRE.
- SALVAGED UNDERGROUND-FED ST. LTG. UNIT ON NEW FOUNDATION.

DIAGRAMS

(U.G.-FED. ST. LTG. STD. SYMBOLS ARE THE SAME AS THE UNDERGROUND LEGEND ON THIS SHEET).

- M.H.1234 — PROPOSED MANHOLE
- M.H.5678 — EXISTING MANHOLE
- H.H. — PROPOSED HANDHOLE
- H.H. — EXISTING HANDHOLE
- M.H.9012 — PROPOSED MANHOLE IN SAME LOCATION AS EXISTING HOLE.
- EXISTING CABLE OR OVERHEAD LINE
- PROPOSED OVERHEAD LINE
- PROPOSED CABLE
- CABLE TO BE ABANDONED
- CABLE TO BE REMOVED
- DISCONNECT, INSULATE AND CAP CABLE END.
- SPLICE STRAIGHT THRU
- SPLICE
- POR. 301 A1-1 / POR. 24-26 — INDICATES NEW ST. LTG. STANDARD NUMBER / INDICATES OLD ST. LTG. STANDARD NUMBER
- (1) SECTION OF PROP. CONDUIT WITH PROP. CABLE
- (X) SECTION OF EXIST. CONDUIT WITH EXIST. CABLE
- (X/) SECTION OF EXIST. CONDUIT WITH EXIST. & PROP. CABLE
- 2-4" CONDUIT BROKEN OUT IN HANDHOLE
- 4-4" CONDUIT BY-PASSING HANDHOLE

6-4"

MULT. ST. LTG. CABLE — 1 3
COMMUNICATION CABLE — 2 4
SERIES ST. LTG. CABLE — 7 9 5
24KV. CABLE — 8 A 6
MULT. ST. LTG. FEEDER CABLE

- T.S. FEEDER CABLE
- T.S. INTERCONNECT CABLE
- T.S. CABLE
- PRI. DISTRIBUTION CABLE
- FUTURE CABLE

12-4"

WARNING! ALL UTILITY LOCATIONS ARE APPROXIMATE AND NOT EXACT. 3 WORKING DAYS BEFORE YOU DIG CALL MISS DIG 1-800-482-7171 (TOLL FREE) MISS DIG ENTIRE DEPTH OF ALL EXCAVATIONS

DIAGRAMS

- 1-#6 — INDICATES 2000V., 1-1/C #6 ST. LTG. CABLE
- 1/1 — INDICATES 2000V., 1-1/C #6 ST. LTG. CABLE & 1-#6 NEUTRAL.
- 2/1 — INDICATES 2000V., 2-1/C #6 ST. LTG. CABLES & 1-#6 NEUTRAL (ALL UNLABELED CABLE GROUPS ON WIRING DIAGRAM ARE SUCH.) 480/960V.
- 1-#2 — INDICATES 2000V., 1-1/C #2 ST. LTG. CABLE
- 1/1 — INDICATES 2000V., 1-1/C #2 ST. LTG. CABLE & 1-#2 NEUTRAL.
- 2/1 — INDICATES 2000V., 2-1/C #2 ST. LTG. CABLES & 1-#2 NEUTRAL (ALL UNLABELED CABLE GROUPS ON WIRING DIAGRAM ARE SUCH.) 240/480V.
- 3/1 — INDICATES 2000V., 3-1/C #2 ST. LTG. CABLES & 1-#2 NEUTRAL.
- RM. — INDICATES REMOVE CABLES IN CONDUIT (REGARDLESS OF SIZE OR NUMBER OF CABLES IN THE CONDUIT.)
- 1-#8 — INSTALL 7500V., 1-1/C #8 L.C. ST. LTG. CABLE
- 2-#8 — INSTALL 7500V., 2-1/C #8 L.C. ST. LTG. CABLES

OVERHEAD

- C — INSTALL OVERHEAD ALLEY LTG. UNIT. WITH 2FT. BRACKET ARM.
- C 16' I — INSTALL OVERHEAD RESIDENTIAL LTG. (16FT. ARM WITH TYPE I 4-WAY LUMINAIRE SHOWN)
- C 10' II — INSTALL OVERHEAD RESIDENTIAL LTG. UNIT (10FT. ARM WITH TYPE II 2-WAY LUMINAIRE SHOWN)
- O_T — EXISTING WOOD POLE or REMOVE IF NOTED (AMERITECH POLE SHOWN)
- $\bullet_C$ — REMOVE WOOD POLE (P.L.D. POLE SHOWN)
- $\circledcirc_C$ — REPLACE WOOD POLE (HEIGHT & CLASS AS INDICATED)
- X — INSTALL WOOD POLE (HEIGHT & CLASS AS INDICATED) (USE SALVAGED POLE WHERE INDICATED)
- E — EXISTING OVERHEAD ST. LTG. UNIT
- E — REMOVE OVERHEAD ST. LTG. UNIT (D.E. CO. POLE SHOWN)
- E — INSTALL OVERHEAD ST. LTG. UNIT WITH 8FT. MAIN ST. LTG. BRACKET ARM.
- EXISTING OVERHEAD LINE
- REMOVE OVERHEAD LINE
- INSTALL OVERHEAD LINE
- INSTALL AND LATER REMOVE OVERHEAD LINE
- 3/8" Anchor Guy — INSTALL GUY AND ANCHOR (3/8" GUY UNLESS OTHERWISE NOTED)
- REMOVE GUY AND ANCHOR ROD
- 3/8" Pole Guy — INSTALL POLE GUY (3/8" GUY UNLESS OTHERWISE NOTED)
- 1/4" Arm — INSTALL ARM GUY (1/4" GUY UNLESS OTHERWISE NOTED)
- P OR A — REMOVE GUY (POLE OR ARM GUY WILL BE INDICATED)
- RM. — MATERIALS TO BE REMOVED
- IN. — MATERIALS TO BE INSTALLED
- C.P. — CABLE POLE
- EX. — EXISTING MATERIALS
- M.S.S. — MAKE WOOD POLE SELF-SUPPORTING IN CRUSHED STONE
- XYZ — PHASES OF P.L.D. DISTRIBUTION WIRES OR EQUIPMENT
- E — D.E. CO. DISTRIBUTION WIRE
- e.s. — D.E. SECONDARY WIRE
- ctv — CABLE TELEVISION
- Ⓒ — INSTALL SUSPENSION INSULATOR
- EXISTING → C / PROPOSED → C — P.L.D. DISTRIBUTION WIRE
- EXISTING → CS / PROPOSED → CS — P.L.D. SECONDARY WIRE
- EXISTING → A / PROPOSED → A — P.L.D. SERIES ST. LTG. WIRE
- EXISTING → M / PROPOSED → M — P.L.D. MULT. ST. LTG. WIRE

GENERAL

- BUILDING (STRUCTURE)
- GUARD RAIL (CONCRETE)
- GUARD RAIL (STEEL)
- CENTER LINE (CL)
- PROPERTY LINE (PL) OR RIGHT OF WAY (ROW)
- PAVEMENT JOINTLINE AND CURB
- CURB LINE
- EXISTING ROUND CATCH BASIN
- EXISTING RECTANGLE CATCH BASIN
- S — S — EXISTING SEWER LINE, MANHOLE AND CATCH BASIN
- E — E — EXISTING DETROIT EDISON UNDERGROUND LINE AND MANHOLE
- T — T — EXISTING AMERITECH TELEPHONE UNDERGROUND LINE AND MANHOLE
- G — G — EXISTING GAS LINE AND MANHOLE
- W — W — EXISTING WATER LINE AND HANDHOLE
- P — EXISTING DETROIT PUBLIC LIGHTING UNDERGROUND LINE AND HANDHOLE.
- STM — STM — EXISTING DETROIT EDISON UNDERGROUND STEAM LINE
- CTV — CTV — EXISTING CABLE TELEVISION
- EXISTING R.R. TRACKS
- EXISTING STREETCAR TRACKS
- EXISTING FENCE
- EXISTING PUBLIC TELEPHONE
- EXISTING TELEPHONE CONTROL BOX
- EXISTING TRANSFORMER OR NOTED AS REMOVE
- NEW TRANSFORMER
- EXISTING R.R. CROSSING GATE AND FLASHERS
- EXISTING R.R. FLASHERS
- EXISTING R.R. CROSSING MAST ARM AND FLASHERS
- EXISTING DOUBLE POST SIGN (TYPE SHOWN ON PLANS)
- INSTALL DOUBLE POST SIGN (TYPE SHOWN ON PLANS)
- EXISTING SINGLE POST SIGN (TYPE SHOWN ON PLANS)
- INSTALL SINGLE POST SIGN (TYPE SHOWN ON PLANS)
- EXISTING MAST ARM ROAD SIGN (TYPE SHOWN ON PLANS)

TRAFFIC SIGNAL

- POCH — POLE CONTACT HEIGHT OF TRAFFIC SIGNAL SPAN WIRE
- L.C.H. — LOWEST CONTACT HEIGHT OF TRAFFIC SIGNAL TO SPAN WIRE.
- REMOVE HOOD AND INSTALL LAMPS (INCIDENTAL TO INSTALLATION OF TRAFFIC SIGNAL ON THIS CONTRACT)
- BACK-OUT LAMPS AND HOOD (SIGNALS INCLUDED IN THE INSTALLATION OF TRAFFIC SIGNAL ON THIS CONTRACT).
- EXISTING STOP BAR
- STOP BAR TO BE INSTALLED
- INSTALL 3-SECTION TRAFFIC SIGNAL (1-WAY SHOWN)
- INSTALL 3-SECTION TRAFFIC SIGNAL WITH SALVAGED HEADS (2-WAY SHOWN)
- REMOVE 3-SECTION TRAFFIC SIGNAL (3-WAY SHOWN)
- EXISTING 3-SECTION TRAFFIC SIGNAL (4-WAY SHOWN)
- INSTALL 3-SECTION 12" TRAFFIC SIGNAL (2-WAY SHOWN)
- EXISTING 1 OR 2-SECTION 12" TRAFFIC SIGNAL FLASHERS
- INSTALL 1 OR 2-SECTION 12" TRAFFIC SIGNAL FLASHERS
- INSTALL TWO-WAY ILLUMINATED CASE SIGN
- INSTALL TWO-WAY ILLUMINATED CASE SIGN (SALVAGED)
- REMOVE TWO-WAY ILLUMINATED CASE SIGN
- EXISTING TWO-WAY ILLUMINATED CASE SIGN
- INSTALL FOUR-WAY ILLUMINATED CASE SIGN
- INSTALL FOUR-WAY ILLUMINATED CASE SIGN (SALVAGED)
- REMOVE FOUR-WAY ILLUMINATED CASE SIGN
- EXISTING FOUR-WAY ILLUMINATED CASE SIGN
- INSTALL 2-SECTION, 12" PEDESTRIAN (WALK-DON'T WALK) TRAFFIC SIGNAL (2-WAY SHOWN)
- INSTALL 2-SECTION, 12" PEDESTRIAN (WALK-DON'T WALK) TRAFFIC SIGNAL WITH SALVAGED HEAD (2-WAY SHOWN)
- REMOVE 2-SECTION, PEDESTRIAN (WALK-DON'T WALK) TRAFFIC SIGNAL (1-WAY SHOWN)
- EXISTING 2-SECTION, 12" PEDESTRIAN (WALK-DON'T WALK) TRAFFIC SIGNAL (1-WAY SHOWN)
- INSTALL TRAFFIC SIGNAL CONTROLLER (NEW OR SALVAGED AS SHOWN) (EXCEPT AS OTHERWISE NOTED).
- INSTALL MAST ARM STD. & MAST ARM ON NEW FOUNDATION (EXCEPT AS OTHERWISE NOTED).
- INSTALL TRAFFIC SIGNAL PEDESTAL ON NEW FOUNDATION (EXCEPT AS OTHERWISE NOTED).
- INSTALL 30' ANCHOR BASE STEEL STRAIN POLE ON NEW FOUNDATION (EXCEPT AS OTHERWISE NOTED).(USE 16" BOLT CIRCLE FOR ALL NEW STRAIN POLES).
- EXISTING TRAFFIC SIGNAL CONTROLLER
- EXISTING MAST ARM STANDARD
- EXISTING PEDESTAL
- EXISTING STEEL STRAIN POLE
- INSTALL OVERHEAD PLASTIC JACKETED CABLE (P.J.)
- EXISTING OVERHEAD PLASTIC JACKETED CABLE (P.J.)
- REMOVE OVERHEAD PLASTIC JACKETED CABLE (P.J.)
- INSTALL JUNCTION BOX (J.B.)
- INSTALL SALVAGED JUNCTION BOX (J.B.)
- REMOVE JUNCTION BOX (J.B.)
- EXISTING JUNCTION BOX (J.B.)
- EXISTING LOOP DETECTOR
- INSTALL LOOP DETECTOR

CONTRACTOR TO FURNISH AND INSTALL ALL MATERIALS. P.L.D. SHALL APPROVE ALL SHOP DRAWINGS.

P.L.D. SPECIFICATIONS AND DETAILS SHALL BE USED FOR ALL MATERIALS AND INSTALLATION.

ALL LUMINAIRES WITH BALLASTS SHALL HAVE REGULATED BALLASTS ±10%V.

CAUTION!-CABLE FIREPROOFING MAY CONTAIN ASBESTOS

	PLAN INDEX
DRWG.NO.	SUB-TITLE
1	LEGEND
2	GENERAL INFORMATION
3	GENERAL PLANS
4 TO 17	DETAILS

REVISIONS	Date	Description	Chkd. by

P.L.D. CONSTRUCTION
LARNED STREET BRIDGE OVER
DEQUINDRE CUT GREENWAY
LEGEND

Designed by C.E.A. | Drawn by C.E.A. | Checked by C.E.A.

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

Disk File Name 1411-1 LG | Job File No. CEA 141100

Scale | Checked by | Approved by

PUBLIC LIGHTING DEPARTMENT
CITY OF DETROIT

File No. 27-1140 | Sheet No. 50 OF 67 | 11-19-09

DATE PLOTTED: $DATE$ TIME: $TIME$
Computer File: $File Name$

GENERAL INFORMATION

1. CALL MISS DIG (313) (647-7344) THREE WORKING DAYS PRIOR TO ANY EXCAVATION FOR THE LOCATIONS OF UNDERGROUND UTILITIES.
2. A MINIMUM CLEARANCE OF 0.915m(3.0') HORIZONTAL & 0.3048m(1.0') VERTICAL MUST BE MAINTAINED BETWEEN PROPOSED P.L.D. FACILITIES & EXISTING U.G. UTILITIES EXCEPT WATER WHICH REQUIRES A 1.07m(3.5') CLEARANCE.
3. CONTRACTOR TO NOTIFY MICHIGAN CONSOLIDATED GAS CO. AT (313) 491-6301 IF PROTECTIVE COATED GAS MAIN IS EXPOSED OR DAMAGED.
4. CONTRACTOR TO NOTIFY D.E. CO., AT 1-800-477-4747 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 (313) 961-1364 48 HOURS PRIOR TO BEGINNING WORK ON P.L.D. CIRCUITS & KEEP OPERATOR INFORMED ON A DAILY BASIS.
6. EXISTING OVERHEAD & TRAFFIC SIGNAL 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 3.048m(120") ARMS (EXCEPT WHERE OTHERWISE INDICATED).
15. INSTALLATION OF ARMS FOR EQUIPMENT, CUTOUTS, POTHEADS, TRANSFORMER, 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 CAPNUT TYPE.
17. WHERE A P.L.D. WOOD POLE WITH OTHER UTILITY CONTACTS IS TO BE REMOVED THE P.L.D. INSPECTOR WILL VERIFY 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 D.P.W. NOTIFY DAVE BRUTON AT (313) 224-1042
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. FOR ENTRANCE OF CONDUITS, WALLS MUST BE CORE DRILLED UNLESS AN ALTERNATE METHOD IS APPROVED IN WRITING BY A P.L.D. INSPECTOR.
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 8mm(5/16") EXTRA HIGH STRENGTH GRADE AS PER SPECIFICATIONS.
24. SIDEWALK RAMPS SHALL BE CONSTRUCTED OF THE TYPE & LOCATION AS SHOWN ON THE PLANS OR AS DIRECTED BY THE CITY ENGINEERING DEPARTMENT PAVING INSPECTORS.
25. SEAL-END OF CABLE WHERE COILING OF CABLE IS CALLED FOR ON PLANS. (CONTRACTOR SHALL RECEIVE PAYMENT FOR COILED-UP LENGTHS OF CABLE).
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 SERIES 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 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 & ANCHOR BOLTS FOR STREET LIGHTING STANDARDS SEE STRUCTURE PLANS AND P.L.D. DETAIL SPECIFICATIONS
34. PAVEMENT, SIDEWALK, CURB REMOVAL, REPLACEMENT AND EXCAVATION & BACKFILL SHALL BE DONE ACCORDING TO CITY OF DETROIT CITY ENGINEERING DIVISION STANDARD SPECIFICATIONS PAVING AND RELATED CONSTRUCTION.
35. UNDERGROUND CABLE QUANTITIES ARE ITEMIZED ON GENERAL PLANS. ALL PERTINENT 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 SALVAGED & CONVERTED STEEL STREET LIGHTING STANDARDS SHALL BE PAINTED.
37. ALL ST. LTG. UNITS INSTALLED ON THIS CONTRACT AND EXIST. STREET LIGHTING UNITS CONVERTED OR RE-CONNECTED TO OTHER CIRCUITS SHALL BE STENCILLED OR RE-STENCILLED AS SHOWN NO PLANS. (INCLUDED WITH STREET LIGHTING UNITS)
38. STENCILLING SHALL BE ON THE CURB SIDE OF THE POLE, LOCATED BETWEEN 1.219m(4') AND 1.524m (5') ABOVE GRADE. ALL LETTERS AND NUMBERS SHALL BE 50.8mm(2") IN HEIGHT. THE STENCILLING SHALL BE DONE WITH A WEATHER-RESISTANT ENAMEL: BLACK ENAMEL ON GRAY COLORED OR ALUMINUM POLES, AND YELLOW OR WHITE ENAMEL ON BLACK OR BRONZE COLORED POLES.
39. WHERE UNDERGROUND 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 7.925m(26') 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 (313) (224-1111).
42. ALL TREE TRIMMING REQUIRED TO CLEAR NEW OR SALVAGED STREET LIGHTING & 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 TOOLS ENTIRE DEPTH OF FOUNDATION. NO MECHANICAL EQUIPMENT SHALL BE USED.
44. CONTRACTOR SHALL NOTIFY THE P.L.D. SYSTEM OPERATOR AT (313) (961-1364) & THE TRAFFIC ENGINEERING DIVISION OF D.P.W. AT (313) 628-5603 AFTER COMPLETION OF WORK AT ANY TRAFFIC SIGNAL INTERSECTION.
45. ALL CABLES SHALL BE TRAINED & PROPERLY RACKED IN ALL EXISTING MANHOLES & HANDHOLE. RACKS ARE TO BE INSTALLED WHERE NECESSARY & ARE INCLUDED IN THE INSTALLATION OF UNDERGROUND CABLE.
46. ALL CONDUITS STUBED OUT OF STRUCTURES SUCH AS MANHOLES, HANDHOLES OR FOUNDATION SHALL EXTEND 0.914m(3') BEYOND PAVEMENT LIMIT (EXCEPT AS OTHERWISE INDICATED). ALL UNOCCUPIED CONDUITS SHALL BE PLUGGED WITH PLASTIC TAPERED PLUGS SIZED TO MATCH THE CONDUIT (CARLAN P258T OR EQUAL).
47. ALL NEW UNDERGROUND-FED STREET LIGHTING UNITS SHALL BE INSTALLED WITH CENTER 0.915m (3.0') BACK OF FACE OF CURB UNLESS OTHERWISE INDICATED ON PLANS. VERIFY WITH P.L.D.
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 ALREADY BE REMOVED.
49. THE "FINAL" CONDUIT MUST BE TRIMMED FLUSH WITH MANHOLE WALL AND HAVE END BELLS, SPACERS AND BE TUCK POINTED. DO NOT ENCASE FINAL CONDUIT WITHOUT INSPECTION BY THE P.L.D. UNDERGROUND INSPECTION DEPARTMENT.
50. INSTALL 5mm(3/16") DIAMETER YELLOW POLYPROPYLENE ROPE IN ALL "FINAL" CONDUIT. (INCLUDE IN PAY ITEM FOR "CONDUIT")
51. METRIC MEASUREMENTS: M-METERS, mm-MILLIMETERS AND MPa-MEGAPASCALS.
52. CONDUIT TRENCHES SHALL BE EXCAVATED FROM MANHOLE TO MANHOLE TO ASSURE A CLEAR PASSAGE WITH PROPER GRADING PRIOR TO BUILDING ENCASED CONDUIT RUN.

ITEM	
LIST OF MATERIAL	QUANTITIES
CONDUIT REPAIR-UNDER SIDEWALK OR DIRT	------ Ea
CONDUIT REPAIR-UNDER PAVEMENT	------ Ea
REMOVING STREETCAR RAIL AND FOUNDATION	------ Ft

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

HAND DIG ENTIRE DEPTH OF ALL STEEL STRAIN POLE & MAST ARM STANDARD FOUNDATIONS.

PROPERTY CONTROL CLAUSE

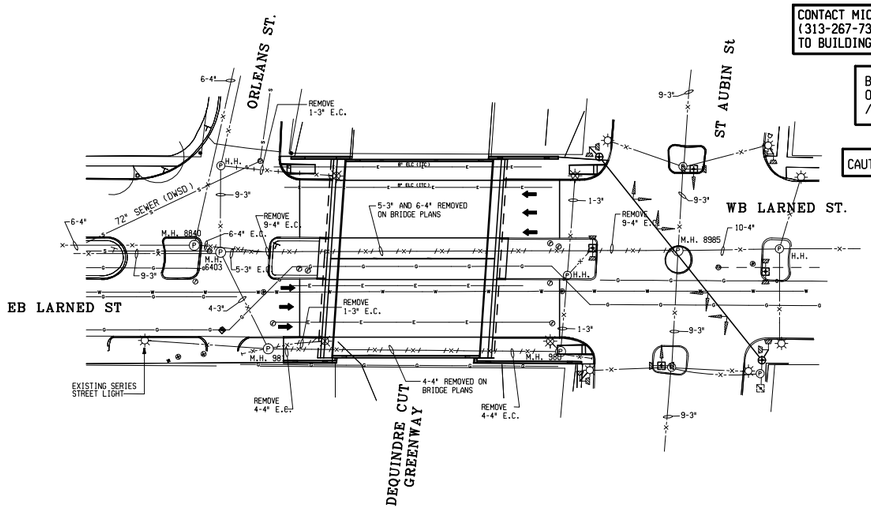
ALL REMOVED PUBLIC LIGHTING DEPARTMENT (P.L.D.) EQUIPMENT AND MATERIAL THAT IS NOT RE-USED ON PROJECT IS TO BE SALVAGED IN USEABLE CONDITION AND RETURNED TO THE P.L.D. CONTACT P.L.D. ENGINEERING IF THERE ARE SPECIFIC QUESTIONS. MATERIAL TO BE RETURNED TO THE P.L.D. SHALL INCLUDE, BUT NOT BE LIMITED TO, SUCH ITEMS AS MANHOLE AND HANDHOLE FRAMES AND COVERS, STREET LIGHTING POLES, (NOT INCLUDING WOOD, UNLESS SPECIFIED), MAST ARMS FOR LIGHTING AND TRAFFIC SIGNALS, LIGHTING FIXTURES, TRAFFIC SIGNALS, CABLE AND WIRE (POWER, LIGHTING, COMMUNICATION, TRAFFIC SIGNAL AND ALL OVERHEAD LINE WIRE CLASSES), TRANSFORMER BASES, BALLASTS AND "COILS", POTHEADS, DISTRIBUTION TRANSFORMERS, TRAFFIC SIGNAL CONTROLLERS, MULTIPLE STREET LIGHTING CONTROL CABINETS AND TRAFFIC PEDESTALS. THIS MATERIAL IS THE PROPERTY OF THE P.L.D. CALL MICHAEL LASKOWSKI AT (313) 267-7306 TO PICK UP SALVAGED MATERIAL.

REVISIONS	Date	Description	Chkd. by

P.L.D. CONSTRUCTION
LARNED STREET BRIDGE OVER
DEQUINDRE CUT GREENWAY
GENERAL NOTES

Designed by C.E.A.	Consulting Engineering Associates, Inc. 16580 WYOMING AVE. DETROIT MICHIGAN 48221 TELEPHONE: (313) 341-5797 FAX: 341-0205	Scale	PUBLIC LIGHTING DEPARTMENT CITY OF DETROIT
Drawn by C.E.A.		Checked by	
Checked by C.E.A.	Disk File Name 1411-2 GN / Job File No. CEA 141100	Approved by	File No. 27-1140 / Sheet No. 51 OF 67 / 11-19-09

TIME: $TIME$
DATE PLOTTED: $DATE$
Computer File: $File Name$



REMOVAL PLAN

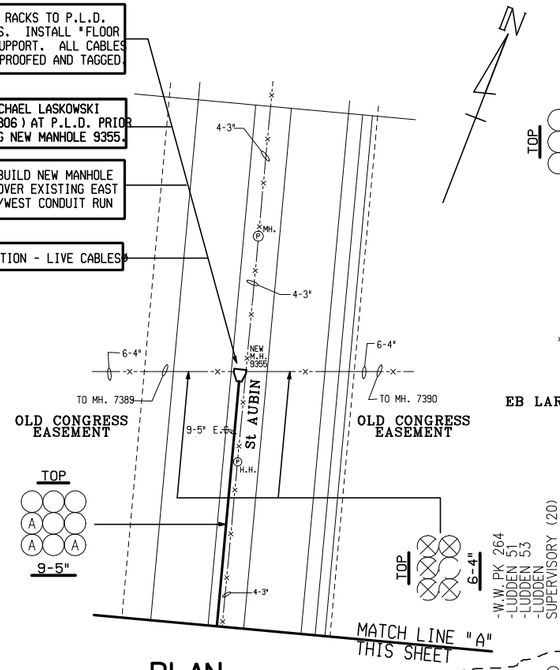
SCALE: 1"=40'

INSTALL CABLE RACKS TO P.L.D. SPECIFICATIONS. INSTALL "FLOOR TO CEILING" SUPPORT. ALL CABLES MUST BE FIRE PROOFED AND TAGGED.

CONTACT MICHAEL LASKOWSKI (313-267-7306) AT P.L.D. PRIOR TO BUILDING NEW MANHOLE 9355.

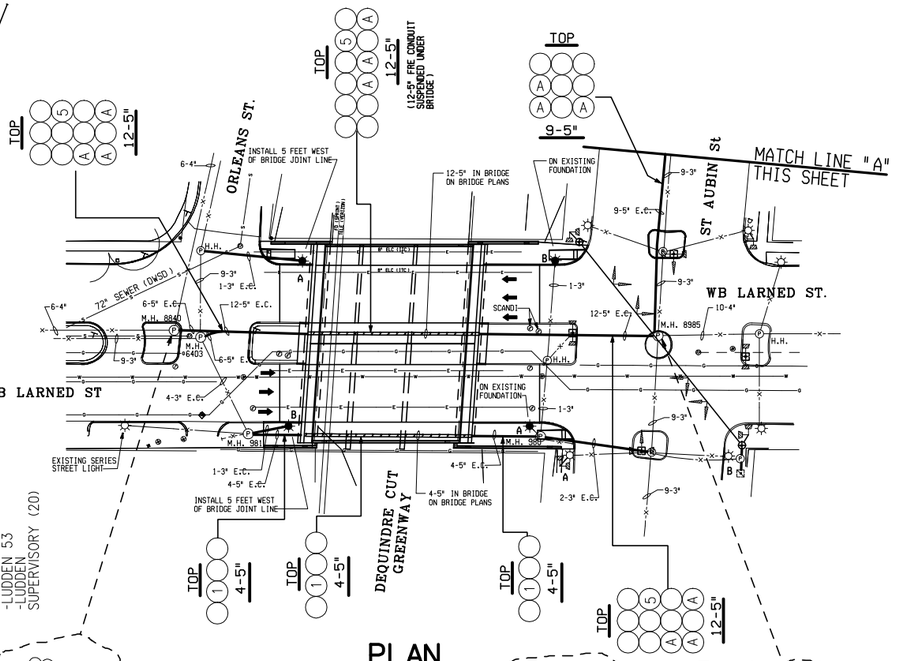
BUILD NEW MANHOLE OVER EXISTING EAST /WEST CONDUIT RUN

CAUTION - LIVE CABLES



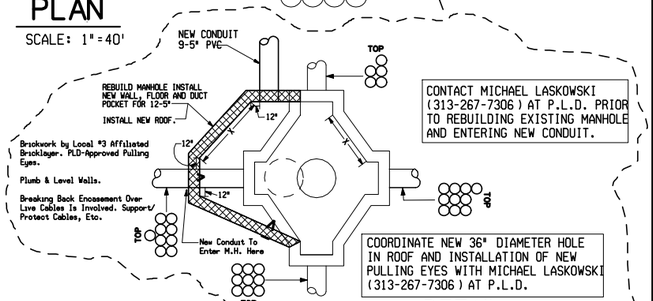
PLAN

SCALE: 1"=40'



PLAN

SCALE: 1"=40'



DETAIL

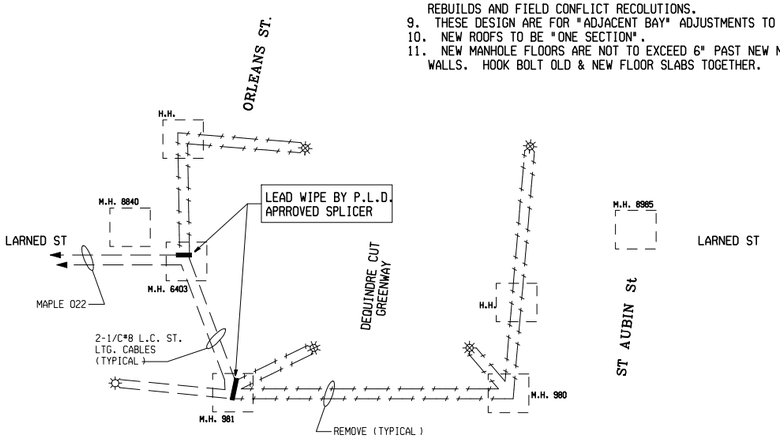
M.H. 8985
N.T.S.

LEGEND:

① NEW MULTIPLE CABLES
Ⓐ FUTURE CABLES

NOTES FOR REBUILDING MANHOLES:

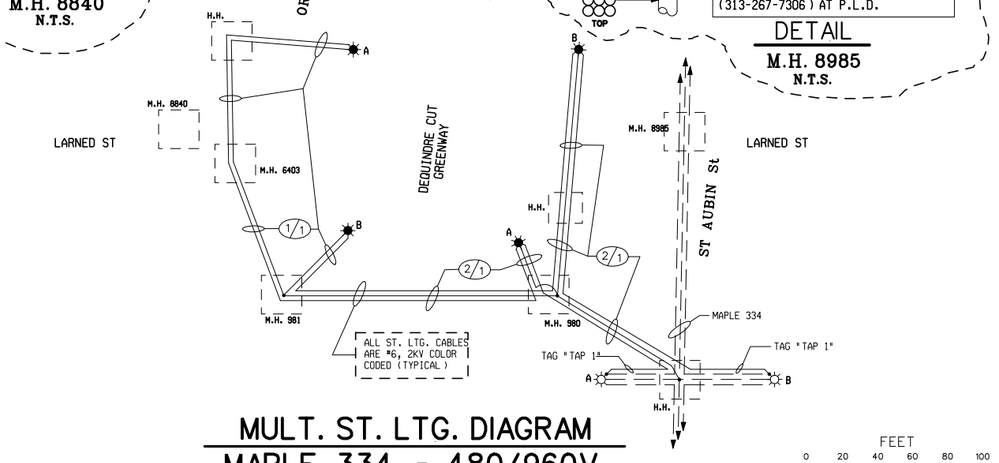
1. OLD DUCT POCKET NEATLY PATCHED WITH "EXTENDERS" & MORTAR
2. DOUBLE BRICK WALLS AT 10 FOOT OR DEEPER.
3. KEY-IN WALLS.
4. 34" DIAMETER OPENING
5. FOOTING REQUIRED UNDER DUCT POCKETS
6. LENTIL REQUIRED OVER DUCT WINDOW
7. GENERAL MH DESIGNS STILL APPLY.
8. P.L.D. ENGINEERING TO DETERMINE ACCEPTABLE REBUILDS AND FIELD CONFLICT RECOLUTIONS.
9. THESE DESIGN ARE FOR "ADJACENT BAY" ADJUSTMENTS TO MANHOLES.
10. NEW ROOFS TO BE "ONE SECTION".
11. NEW MANHOLE FLOORS ARE NOT TO EXCEED 6" PAST NEW MANHOLE WALLS. HOOK BOLT OLD & NEW FLOOR SLABS TOGETHER.



SERIES ST. LTG. DIAGRAM

MAPLE 022

LIST OF MATERIAL	
ITEM	QUANTITIES
Fdn, Rem	2 Ea
Hh, Rem	1 Ea
Underground Fed St Ltg Unit, Rem	4 Ea
Cable, Rem	750 Ft
Conduit, Rem	380 Ft
Mh, Rebuild PLD	2 Ea
Mh, 3 Way PLD	1 Ea
Light Std Fdn	2 Ea
Code 009-00 Anchor Base St Ltg Standard	4 Ea
Bracket Arm, Clamp on, 6 foot, 3 foot Rise	4 Ea
Luminaire, 250W Sodium Vapor PLD	4 Ea
Conduit, Encased, 1, 3 inch PLD	85 Ft
Conduit, Encased, 2, 3 inch PLD	65 Ft
Conduit, Encased, 4, 5 inch PLD	80 Ft
Conduit, Encased, 9, 5 inch PLD	245 Ft
Conduit, Encased, 12, 5 inch PLD	190 Ft
Cable, St Ltg, 2Kv, 1, 1/C#6	115 Ft
Cable, St Ltg, 2Kv, 1, 1/C#6 & 1, #6 Neutral	195 Ft
Cable, St Ltg, 2Kv, 2, 1/C#6 & 1, #6 Neutral	340 Ft



MULT. ST. LTG. DIAGRAM

MAPLE 334 - 480/960V.

WARNING! ALL UTILITY LOCATIONS ARE APPROXIMATE AND NOT EXACT. 3 WORKING DAYS BEFORE YOU DIG CALL MISS DIG 1-800-482-7171 (TOLL FREE) NOT RESPONSIBLE FOR ANY DEPTH OF ALL FOUNDATIONS

REVISIONS	Date	Description	Chkd. by

P.L.D. CONSTRUCTION
LARNED STREET BRIDGE OVER DEQUINDRE CUT GREENWAY
GENERAL PLAN

December 8, 2009

Designed by C.E.A.	Consulting Engineering Associates, Inc.	Scale 40	PUBLIC LIGHTING DEPARTMENT CITY OF DETROIT
Drawn by C.E.A.	16580 WYOMING AVE. DETROIT MICHIGAN 48221 TELEPHONE: (313) 341-5797 FAX: 341-0205	Checked by	File No. 27-1140
Checked by C.E.A.	Disk File Name 1411-3 / Job File No. CEA 141100	Approved by	Sheet No. 52 OF 67
			11-19-09

DATE PLOTTED: $DATE$ TIME: $TIME$
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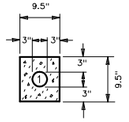
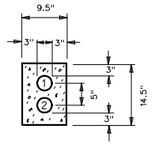
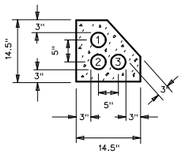


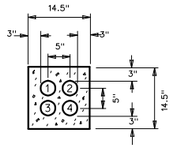
1 - 3" CONDUIT



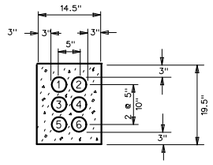
2 - 3" CONDUITS



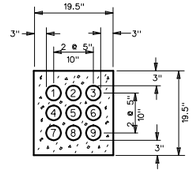
3 - 3" CONDUITS



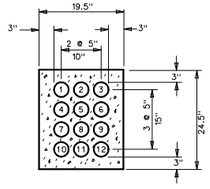
4 - 3" CONDUITS



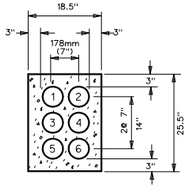
6 - 3" CONDUITS



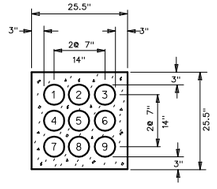
9 - 3" CONDUITS



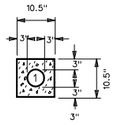
12 - 3" CONDUITS



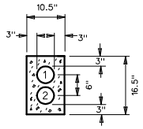
6 - 5" CONDUITS



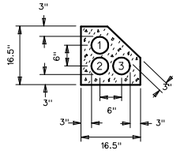
9 - 5" CONDUITS



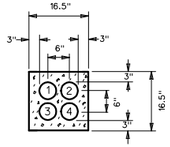
1 - 4" CONDUIT



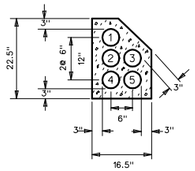
2 - 4" CONDUITS



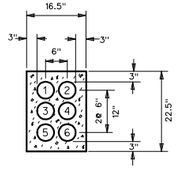
3 - 4" CONDUITS



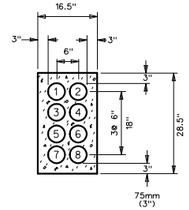
4 - 4" CONDUITS



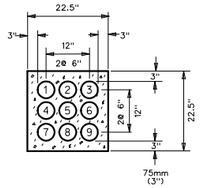
5 - 4" CONDUITS



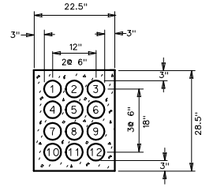
6 - 4" CONDUITS



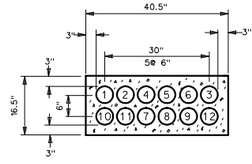
8 - 4" CONDUITS



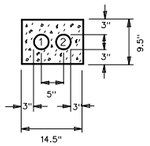
9 - 4" CONDUITS



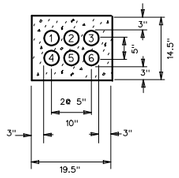
12 - 4" CONDUITS



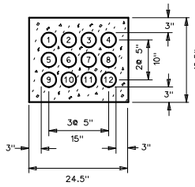
12 - 4" CONDUITS IN BRIDGE APPROACH



2-3" CONDUITS



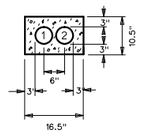
6-3" CONDUITS



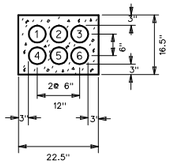
12-3" CONDUITS

ALTERNATE ARRANGEMENT OF 3" CONDUIT

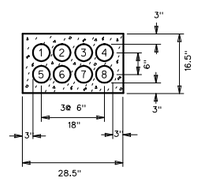
(TO SUIT FIELD CONDITIONS)
(TO BE APPROVED BY THE ENGINEER)



2-4" CONDUITS



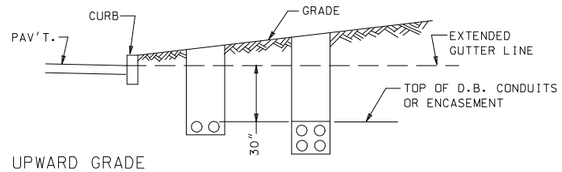
6-4" CONDUITS



8-4" CONDUITS

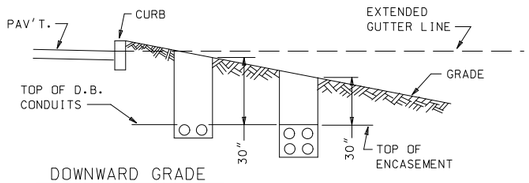
ALTERNATE ARRANGEMENT OF 100mm (4") CONDUIT

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



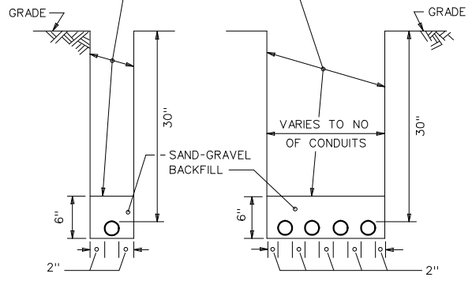
UPWARD GRADE

N.T.S.

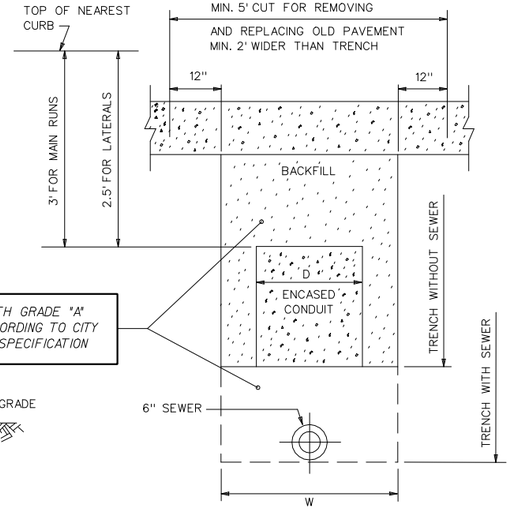


DOWNWARD GRADE

N.T.S.



DIRECT BURIAL CONDUIT(S)



ENCASED CONDUIT(S)

NOTE:

THE PREFERRED TRENCH WIDTH "W" IS THE WIDTH OF "D" OF CONDUIT ENCASEMENT.

SCALE: AS SHOWN

REVISIONS

Date	Description	Chkd. by

DETAILS

LARNED BRIDGE

MISCELLANEOUS CONDUIT SECTIONS

DEPARTMENT OF PUBLIC WORKS — CITY OF DETROIT — TRAFFIC ENGINEERING DIVISION

Checked by	Approved by	
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PUBLIC LIGHTING DEPARTMENT
CITY OF DETROIT

Checked by	Approved by	File No.
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Consulting Engineering Associates, Inc.
16580 WYOMING AVE. DETROIT MICHIGAN 48221
TELEPHONE (313) 341-5797 FAX 341-0205

Designed by	Checked by	Sheet No.
C.E.A.	------	53 of 67

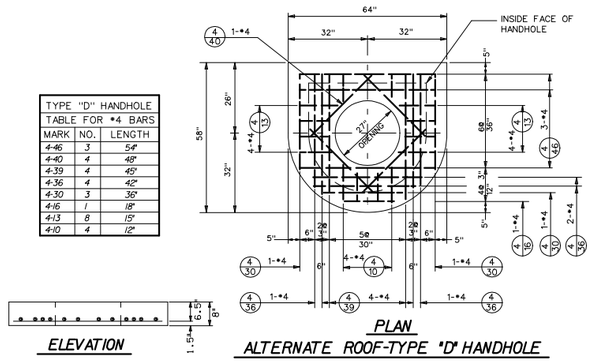
Disk File Name	Job File No.
101PLDE	CEA 141100

Date 11-19-09

101E

TIME: $TIME$
DATE PLOTTED: $DATE$
REVISION DATE: APRIL 1, 2001
Computer File: Pen Table File

TYPE "D" HANDHOLE TABLE FOR #4 BARS		
MARK	NO.	LENGTH
4-46	3	54"
4-40	4	48"
4-39	4	45"
4-36	4	42"
4-30	3	36"
4-16	1	18"
4-13	8	15"
4-10	4	12"

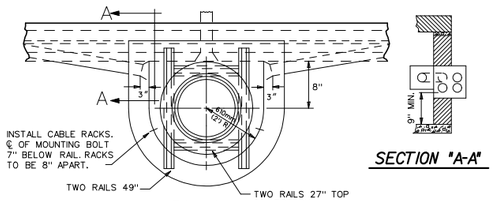


ELEVATION

PLAN

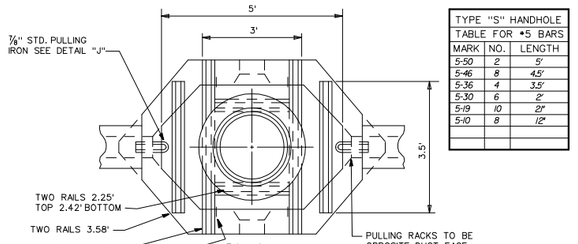
ALTERNATE ROOF-TYPE "D" HANDHOLE

N.T.S.



PLAN

SECTION "A-A"

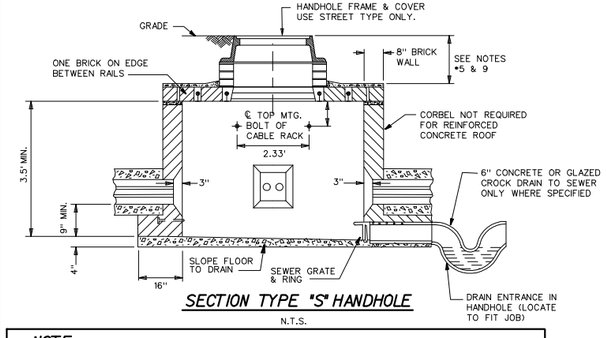


PLAN

TYPE "S" HANDHOLE

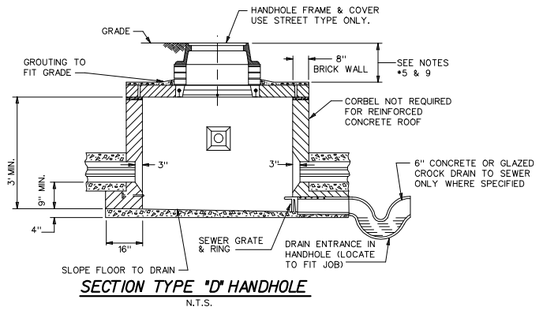
N.T.S.

TYPE "S" HANDHOLE TABLE FOR #5 BARS		
MARK	NO.	LENGTH
5-50	2	5'
5-46	8	4.5'
5-36	4	3.5'
5-30	6	2'
5-19	10	2'
5-10	8	12"



SECTION TYPE "S" HANDHOLE

N.T.S.



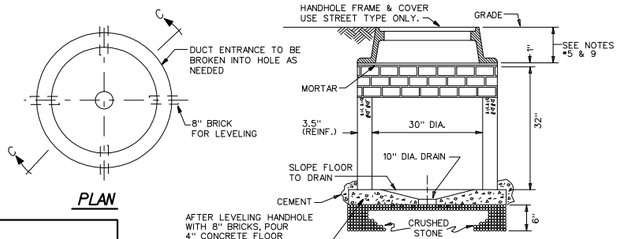
SECTION TYPE "D" HANDHOLE

N.T.S.

CONTACT MICHAEL LASKOWSKI (313-267-7306) AT P.L.D. FOR LATEST INFORMATION FOR CABLE RACKS.

NOTE:

1. DUCT ENTRANCE TO BE BUILT AS REQUIRED.
2. ALL RAILS TO BE 60#/YD. OR HEAVIER.
3. CABLE PULLING IRONS TO BE GALVANIZED
4. CABLE RACKS AND ARMS TO BE GALVANIZED.
5. IN PAVEMENT PROVIDE AT LEAST 3" BETWEEN ROOF AND BASE OF PAVEMENT. WHERE EXISTING GRADE IS HIGHER THAN PROP. FUTURE GRADE INSTALL BRICK RING OR GROUT (AS REQ'D.) UNDER FRAME TO ALLOW FOR FUTURE FRAME ADJUSTMENT.
6. BAR NUMBERS DENOTE THE SIZE OF BAR REQUIRED IN ACCORDANCE WITH CURRENT USAGE SPECIFIED BY THE CONCRETE REINFORCING STEEL INSTITUTE.
7. EXCAVATION LIMITS FOR PUBLIC LIGHTING DEPARTMENT HANDHOLES SHALL BE ON VERTICAL PLANES OF THE FOOTING OUTLINE.
8. INSTALL ANCHORS & CABLE-RACKS AS SHOWN.
9. WHERE HANDHOLES ARE LOCATED BACK OF CURBS ROOF MUST BE BUILT 18" BELOW CURB GRADE, (MIN.THREE LAYERS OF BRICKS) TO PROVIDE FOR FUTURE WIDENING.



PLAN

SECTION "C-C"

REINFORCED CONCRETE PIPE (CLASS III)

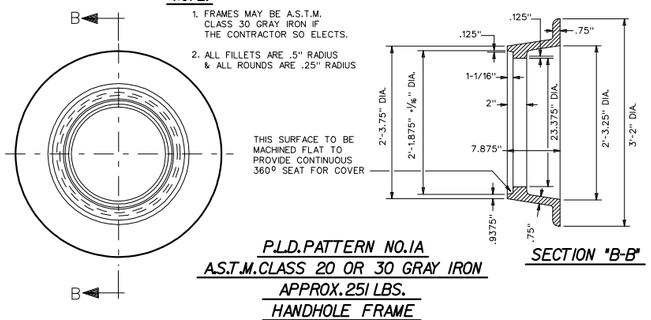
ROUND HANDHOLE

NOTE:

BELL ENDS ARE REQUIRED ON EACH CONDUIT BROKEN OUT IN HANDHOLE. TYPE AND SIZE SHALL BE IDENTICAL TO CONDUIT TYPE AND SIZE.

NOTE:

1. FRAMES MAY BE A.S.T.M. CLASS 30 GRAY IRON IF THE CONTRACTOR SO ELECTS.
2. ALL FILLETS ARE .5" RADIUS & ALL ROUNDS ARE .25" RADIUS



P.L.D. PATTERN NO. 1A

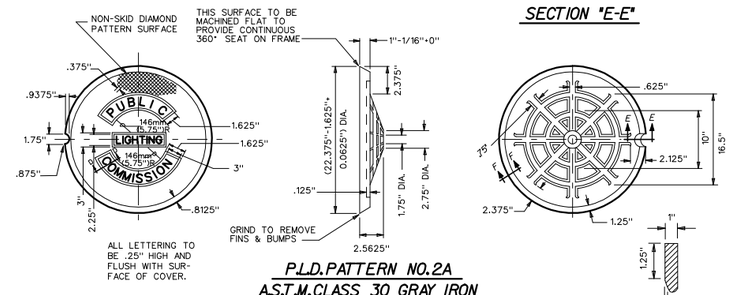
A.S.T.M. CLASS 20 OR 30 GRAY IRON

APPROX. 251 LBS.

HANDHOLE FRAME

SECTION "B-B"

SECTION "E-E"



SECTION "D-D"

P.L.D. PATTERN NO. 2A

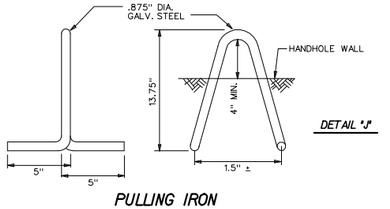
A.S.T.M. CLASS 30 GRAY IRON

APPROX. WT. 145 LBS.

STREET TYPE COVER

TO BE USED IN STREETS & DRIVES

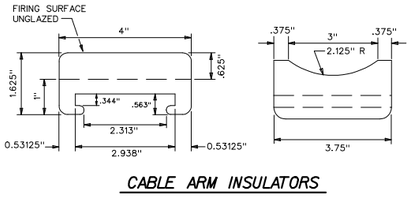
SECTION "F-F"



PULLING IRON

N.T.S.

DETAIL "J"



CABLE ARM INSULATORS

WHITE GLAZED PORCELAIN DRY PROCESS

N.T.S.

SCALE: AS SHOWN

REVISIONS

Date	Description	Chkd. by

DETAILS

LARNED BRIDGE

HANDHOLE

DEPARTMENT OF PUBLIC WORKS — CITY OF DETROIT TRAFFIC ENGINEERING DIVISION

Checked by	Approved by	
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PUBLIC LIGHTING DEPARTMENT

CITY OF DETROIT

Checked by	Approved by	File No.
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Consulting Engineering Associates, Inc.

16580 WYOMING AVE. DETROIT MICHIGAN 48221
TELEPHONE: (313) 341-5797 FAX: 341-0205

Designed by	Checked by	Sheet No.
C.E.A.		54 of 67

Disk File Name	Job File No.
103PLDM	CEA 141100

Date 11-19-09

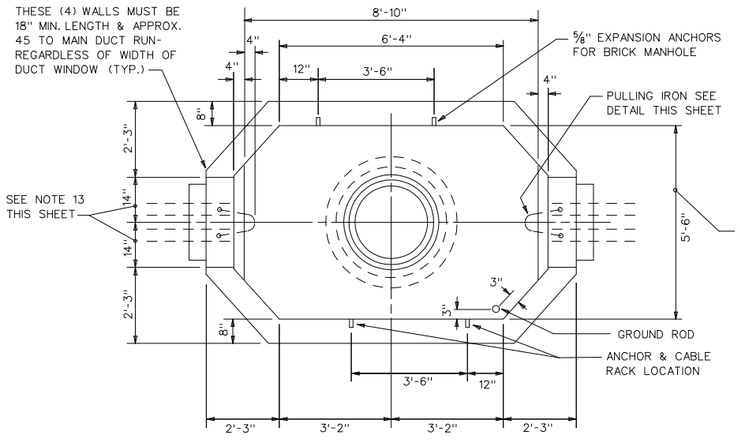
103

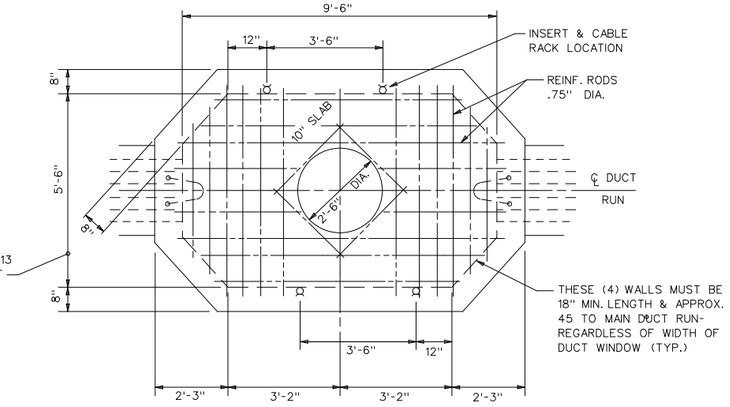
DATE PLOTTED: $DATE$

TIME: $TIME$

REVISION DATE: APRIL 1, 2001

Computer File: Pen Table File

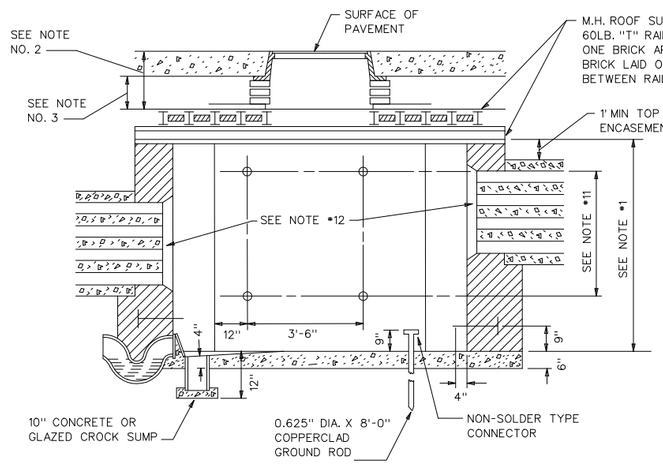




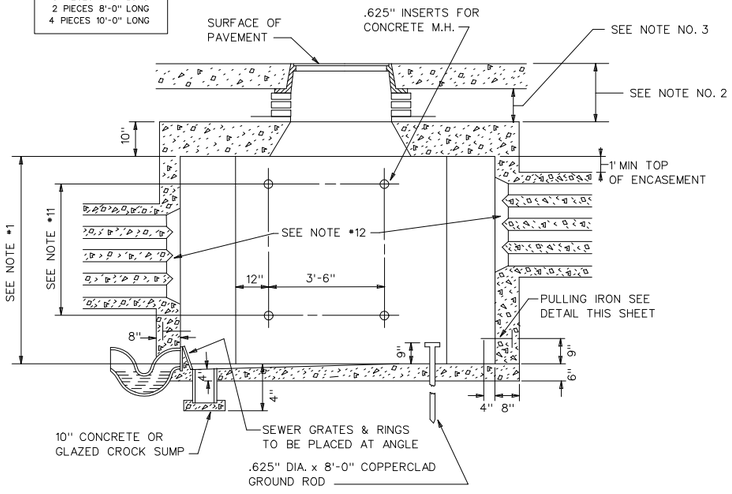
10 PIECES 3'-6" LONG
2 PIECES 5'-0" LONG
8 PIECES 6'-6" LONG
2 PIECES 8'-0" LONG
4 PIECES 10'-0" LONG

NOTE:

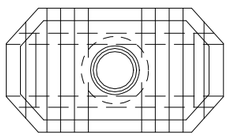
1. THIS DIMENSION NORMALLY 6'6" SEE SPECIFICATIONS FOR UNUSUAL CONDITIONS.
2. WHERE M.H.'S ARE LOCATED BACK OF CURBS, TOP OF M.H. ROOF MUST BE BUILT 26" BELOW CURB GRADE TO PROVIDE FOR FUTURE PAVEMENT.
3. IN EXISTING PAVEMENT, PROVIDE AT LEAST 8" BETWEEN TOP OF ROOF AND BASE OF PAVEMENT
4. BOLTS, RACKS & PULLING IRONS TO BE HOT-DIP GALV.
5. ℄ OF RAILS & UNDER M.H. FRAME FLANGE TO BE APPROX. 18" ROM C'S OF FRAMES.
6. M.H. NUMBER TO BE INSTALLED ON MANHOLE WALL IN CONSPICUOUS PLACE.
7. MOUNTING HEIGHT FOR LOWER BOLTS OF CABLE RACK SHALL BE THE AVERAGE HEIGHT OF THE BOTTOM OF THE LOWEST DUCTS IN MAIN CONDUITS. INSTALL MIN. (2) 48" LONG RACKS ON WALLS.
8. 8" THICK CHIMNEYS WHERE SPECIFIED SHALL BE INCIDENTAL TO APPLICABLE M.H. ITEM.
9. EXCAVATION LIMITS FOR PUBLIC LIGHTING DEPARTMENT MANHOLES SHALL BE ON VERTICAL PLANES ON THE FOOTING OUTLINE.
10. .5" PLASTER OUTSIDE WALLS OF BRICK MANHOLES.
11. SPACING OF INSERTS AS REQUIRED TO ACCOMMODATE CABLE RACK
12. BELL ENDS ARE REQUIRED ON EACH CONDUIT ENTERING MANHOLE. (TYPE AND SIZE SHALL BE IDENTICAL TO CONDUIT TYPE AND SIZE)
13. THIS IS A MINIMUM DIMENSION & IS EXPANDABLE TO ACCOMMODATE MAIN DUCT WINDOW.
14. FOUR HEAVY 48" CABLE RACKS, 8 -15" CABLE ARMS & 16-CABLE ARM INSULATORS REQUIRED PER MANHOLE, UNLESS SPECIFIED OTHERWISE.
15. CONTRACTOR IS TO INSTALL MANHOLE NO. TAG FURNISHED BY P.L.D. MANHOLE SHALL NOT BE CONSIDERED COMPLETE WITHOUT MANHOLE NO. TAG INSTALLED.



BRICK- TWO WAY MANHOLE
N.T.S.



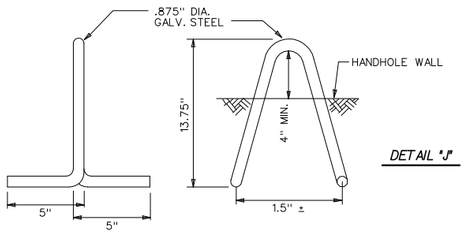
CONCRETE-TWO WAY MANHOLE
N.T.S.
.75" DIA. REINFORCING STEEL RODS REQ'D. FOR 2-WAY M.H.



27kg (60 LBJ) "T" RAILS

2 PIECES 4'-6" LONG
2 PIECES 6'-0" LONG
6 PIECES 6'-10" LONG
2 PIECES 9'-3" LONG
2 PIECES 10'-8" LONG
TOTAL WEIGHT 927Kg (2040 LB.)

MANHOLE NUMBER DETAIL (LEAD)
N.T.S.



DETAIL "J"

PULLING IRON
N.T.S.

NOTE:

CABLE RACKS SHALL BE GALV. AFTER FAB. IN ACCORDANCE WITH ASTM A-123.

CABLE ARMS SHALL BE GALV. AFTER FAB. IN ACCORDANCE WITH ASTM A-153 53.

ARMS MUST FIT ON INSIDE & OUTSIDE OF RACKS & MUST ALLOW INSULATOR TO FIT LOOSELY.

USE 0.5" GALV. SUPPORTING BOLTS AND EXPANSION ANCHORS.

CONTACT MICHAEL LASKOWSKI (313-267-7306) AT P.L.D. FOR LATEST INFORMATION FOR CABLE RACKS.

TIME: $TIME$
DATE PLOTTED: $DATE$
REVISION DATE: APRIL 1, 2001
Computer File: Pen Table File

SCALE: AS SHOWN

REVISIONS

Date	Description	Chkd. by

DETAILS

LARNED BRIDGE

TWO-WAY MANHOLE

DEPARTMENT OF PUBLIC WORKS — CITY OF DETROIT TRAFFIC ENGINEERING DIVISION

Checked by	Approved by	
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PUBLIC LIGHTING DEPARTMENT
CITY OF DETROIT

Checked by	Approved by	File No.
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Consulting Engineering Associates, Inc.
16580 WYOMING AVE. DETROIT MICHIGAN 48221
TELEPHONE) (313) 341-5797 FAX) 341-0205

Designed by	Checked by	Sheet No.
C.E.A.		55 of 67

Disk File Name	Job File No.
104PLDM	CEA 141100

Date 11-19-09

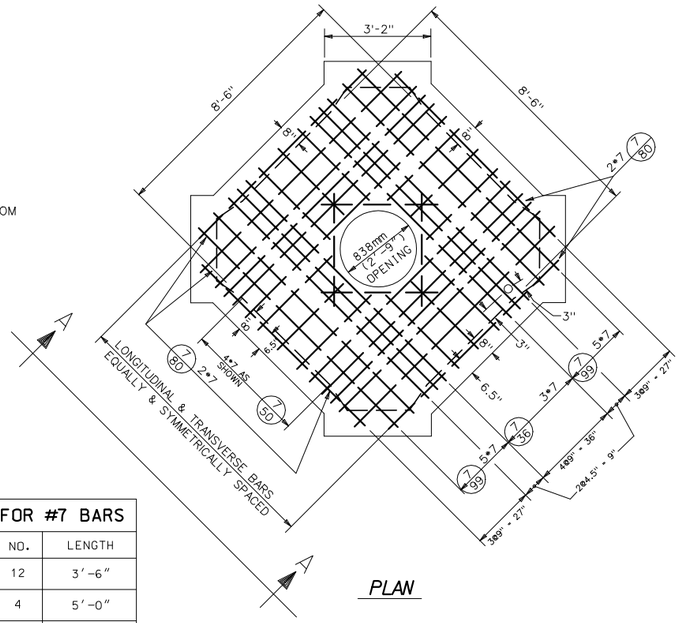
104

NOTE:

1. THIS DIMENSION NORMALLY 6.5' SEE SPECIFICATIONS FOR UNUSUAL CONDITIONS.
2. WHERE M.H.'S ARE LOCATED BACK OF CURBS, TOP OF M.H. ROOF MUST BE BUILT 26" BELOW CURB GRADE TO PROVIDE FOR FUTURE PAVEMENT.
3. IN EXISTING PAVEMENT, PROVIDE AT LEAST 8" BETWEEN TOP OF ROOF AND BASE OF PAVEMENT
4. BOLTS, RACKS & PULLING IRONS TO BE HOT-DIP GALV.
5. ℄ OF RAILS & UNDER M.H. FRAME FLANGE TO BE APPROX. 18" FROM C'S OF FRAMES.
6. M.H. NUMBER TO BE INSTALLED ON MANHOLE WALL IN CONSPICUOUS PLACE.
7. MOUNTING HEIGHT FOR LOWER BOLTS OF CABLE RACK SHALL BE THE AVERAGE HEIGHT OF THE BOTTOM OF THE LOWEST DUCTS IN MAIN CONDUITS. INSTALL MIN. (2) 8" LONG RACKS ON WALLS.
8. 8" THICK CHIMNEYS WHERE SPECIFIED SHALL BE INCIDENTAL TO APPLICABLE M.H. ITEM.
9. EXCAVATION LIMITS FOR PUBLIC LIGHTING DEPARTMENT MANHOLES SHALL BE ON VERTICAL PLANES ON THE FOOTING OUTLINE.
10. 0.5" PLASTER OUTSIDE WALLS OF BRICK MANHOLES.
11. SPACING OF INSERTS AS REQUIRED TO ACCOMMODATE CABLE RACK
12. BELL ENDS ARE REQUIRED ON EACH CONDUIT ENTERING MANHOLE. (TYPE AND SIZE SHALL BE IDENTICAL TO CONDUIT TYPE AND SIZE)
13. THIS IS A MINIMUM DIMENSION & IS EXPANDABLE TO ACCOMMODATE MAIN DUCT WINDOW.
14. EIGHT HEAVY 48" CABLE RACKS, (16) 15" CABLE ARMS & 32 CABLE ARMS INSULATORS REQUIRED PER MANHOLE, UNLESS SPECIFIED OTHERWISE.
15. CONTRACTOR IS TO INSTALL MANHOLE NO. TAG FURNISHED BY P.L.D. MANHOLE SHALL NOT BE CONSIDERED COMPLETE WITHOUT MANHOLE NO. TAG INSTALLED.

MANHOLE NUMBER DETAIL (LEAD)
N.T.S.

TABLE FOR #7 BARS		
MARK	NO.	LENGTH
(7/36)	12	3'-6"
(7/50)	4	5'-0"
(7/80)	4	8'-0"
(7/99)	20	9'-9"



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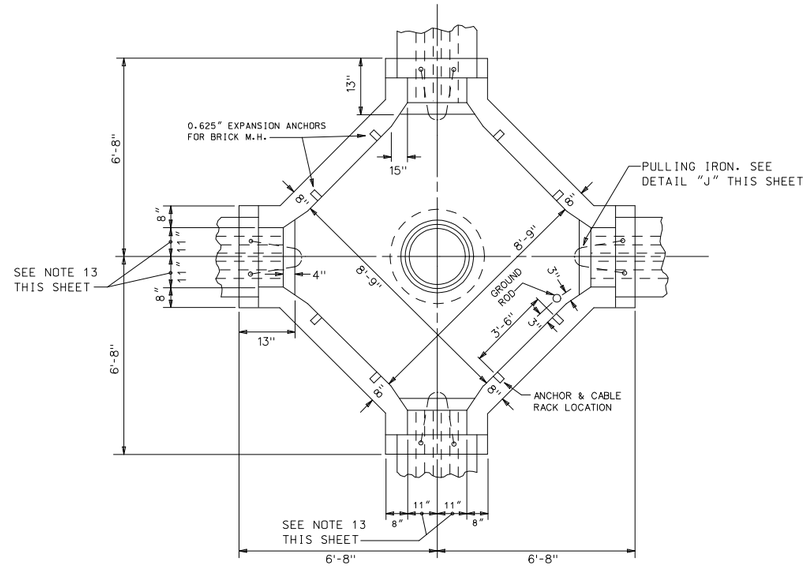

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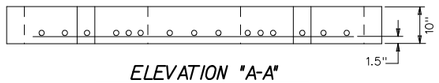
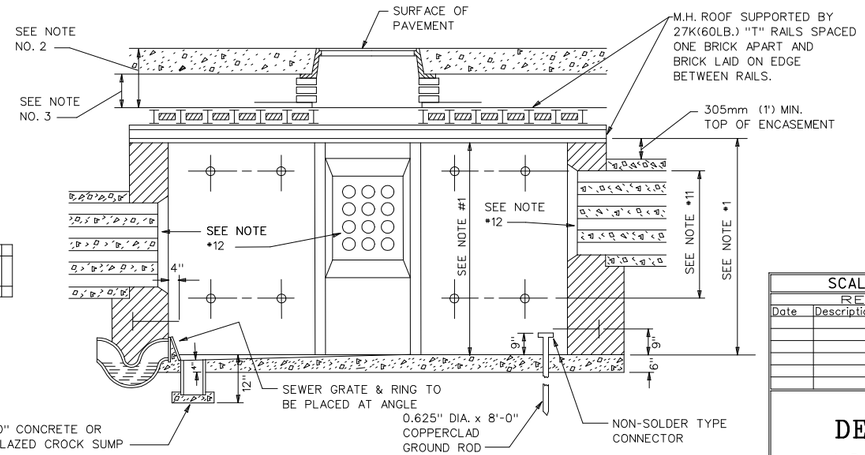
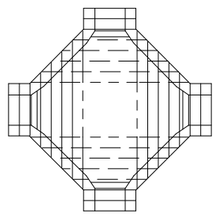


ELEVATION "A-A"
FOUR-WAY MANHOLE ROOF
ALTERNATE CONCRETE

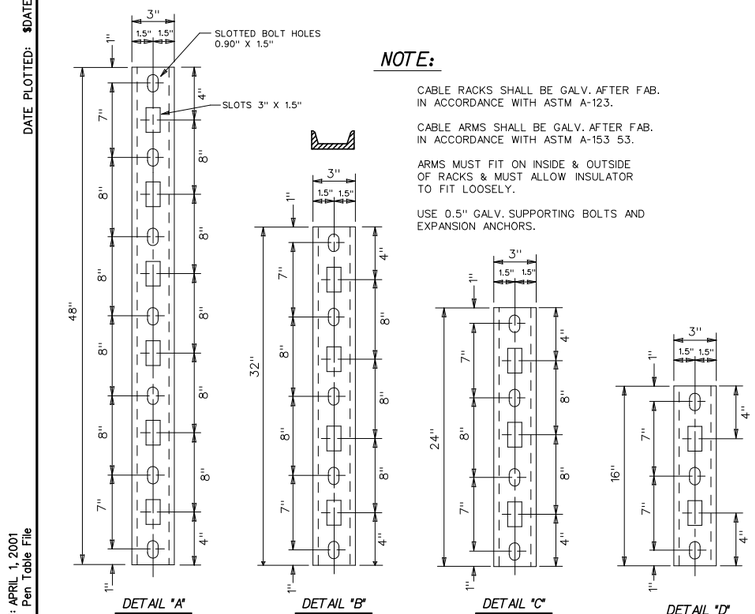


BRICK- FOUR WAY MANHOLE
N.T.S.

27Kg(60 LB.)"T" RAILS
4 PIECES 12.5' LONG
4 PIECES 9.5' LONG
4 PIECES 8' LONG
4 PIECES 6.5' LONG
4 PIECES 5' LONG
4 PIECES 3.5' LONG
4 PIECES 3' LONG



"T" RAIL SPECIFICATIONS
27Kg(60 LBS.) PER YD. OR HEAVIER
N.T.S.



NOTE:

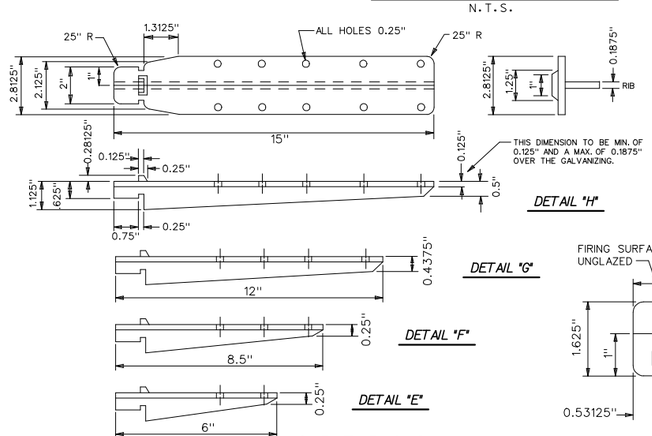
CABLE RACKS SHALL BE GALV. AFTER FAB. IN ACCORDANCE WITH ASTM A-123.

CABLE ARMS SHALL BE GALV. AFTER FAB. IN ACCORDANCE WITH ASTM A-153 53.

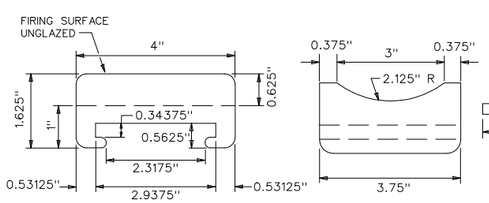
ARMS MUST FIT ON INSIDE & OUTSIDE OF RACKS & MUST ALLOW INSULATOR TO FIT LOOSELY.

USE 0.5" GALV. SUPPORTING BOLTS AND EXPANSION ANCHORS.

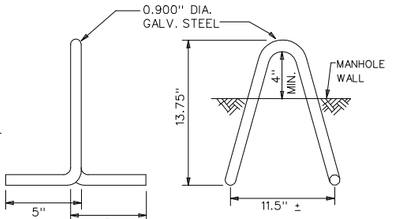
CABLE RACKS
76mm (3") STD. 4.1# CHANNEL
N.T.S.



CABLE RACKS
MALLEABLE CAST IRON
N.T.S.



CABLE ARM INSULATORS
WHITE GLAZED PORCELAIN DRY PROCESS
N.T.S.



DETAIL "J"
PULLING IRON
N.T.S.

SCALE: AS SHOWN		
REVISIONS		
Date	Description	Chkd. by

DETAILS
LARNED BRIDGE

FOUR-WAY MANHOLE

DEPARTMENT OF PUBLIC WORKS — CITY OF DETROIT TRAFFIC ENGINEERING DIVISION

Checked by	Approved by	
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PUBLIC LIGHTING DEPARTMENT
CITY OF DETROIT

Checked by	Approved by	File No.
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Consulting Engineering Associates, Inc.
16580 WYOMING AVE. DETROIT MICHIGAN 48221
TELEPHONE: (313) 341-5797 FAX: 341-0205

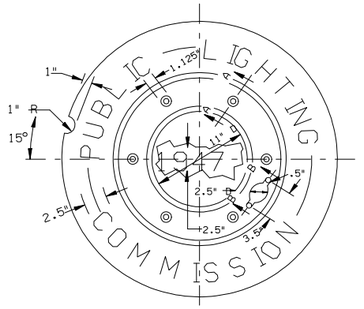
Designed by	Checked by	Sheet No.
C.E.A.		56 of 67

Disk File Name	Job File No.
106PLDM	CEA 141100

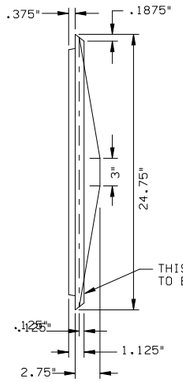
Date 11-19-09

106

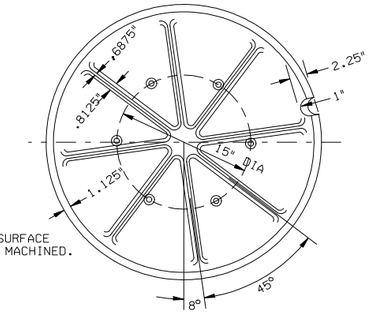
TIME: $TIME$
DATE PLOTTED: $DATE$
REVISION DATE: APRIL 1, 2001
Computer File: Pen Table File

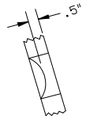


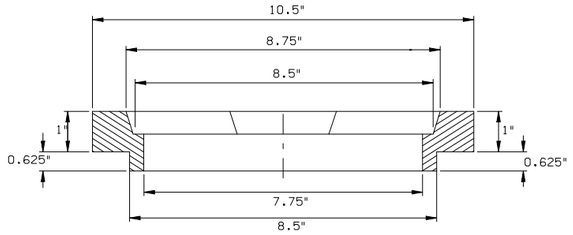
LETTERING & BEAD RAISED .375" ABOVE FACE.
YEAR ON COVER TO BE YEAR OF CASTING.
CONTRACTOR TO CHANGE PATTERN IF REQUIRED.



A.S.T.M. CLASS 30 GREY IRON
P.L.C. PATT. NO. 418 APROX.
WT. 111kg(245lb)

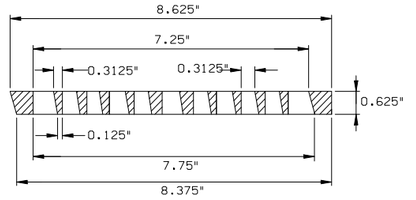






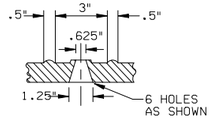
SECTION D-D

N.T.S.



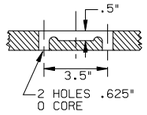
SECTION E-E

N.T.S.



SECTION A-A

N.T.S.

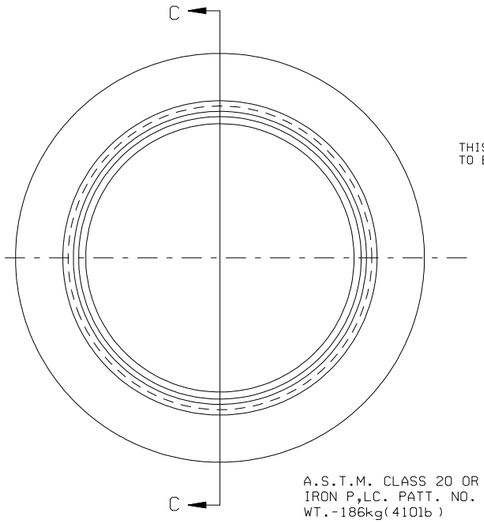


SECTION B-B

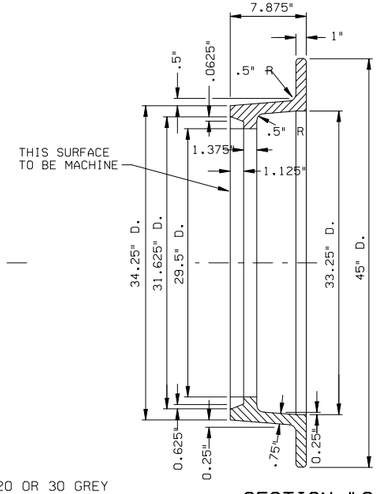
N.T.S.

MANHOLE COVER

N.T.S.



A.S.T.M. CLASS 20 OR 30 GREY
IRON P,LC. PATT. NO. 417 APPROX.
WT.-186kg(410lb)

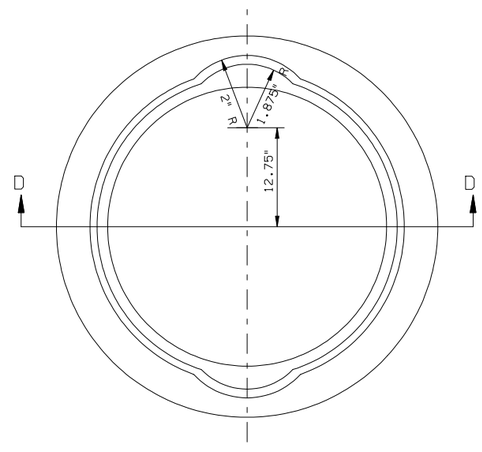


SECTION "C-C"

N.T.S.

MANHOLE FRAME

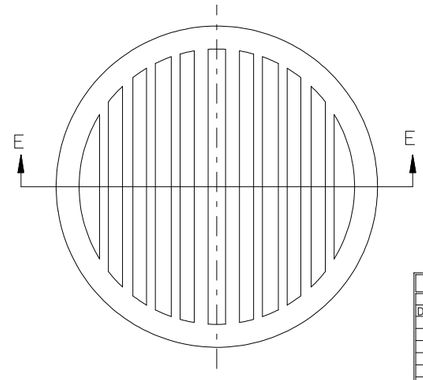
N.T.S.



A.S.T.M. CLASS 20 OR 30 GREY
IRON P.L.C. PATT. NO. 318-A
APPROX WT-4.08lb(9lb)

SEWER RING

N.T.S.



A.S.T.M. CLASS 20 OR 30 GREY
IRON P.L.C. PATT. NO. 318
APPROX WT-2.04lb(4.5lb)

SEWER GRATE

N.T.S.

SCALE: AS SHOWN		
REVISIONS		
Date	Description	Chkd. by

DETAILS

LARNED BRIDGE

MANHOLE FRAMES & COVERS
- SEWER GRATE & RING

DEPARTMENT OF PUBLIC WORKS
CITY OF DETROIT TRAFFIC ENGINEERING DIVISION

Checked by	Approved by	
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PUBLIC LIGHTING DEPARTMENT
CITY OF DETROIT

Checked by	Approved by	File No.
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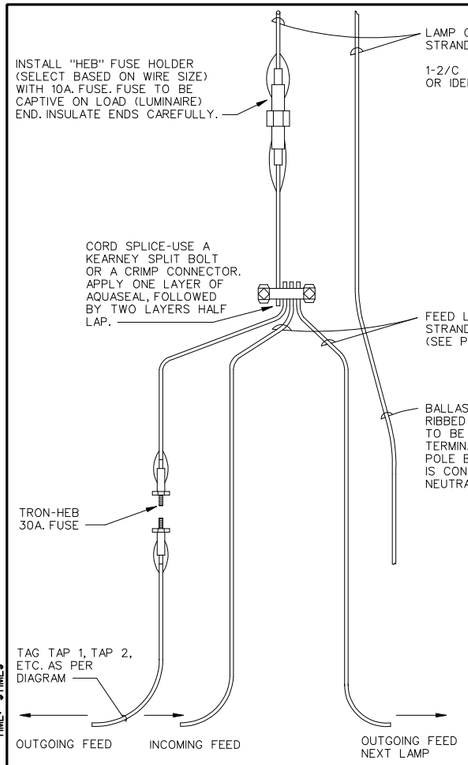
Consulting Engineering Associates, Inc.
16580 WYOMING AVE. DETROIT MICHIGAN 48221
TELEPHONE (313) 341-5797 FAX (313) 341-0205

Designed by	Checked by	Sheet No.
C.E.A.		57 of 67

Disk File Name	Job File No.
108PLDM	CEA 141100
Date 11-19-09	

108

TIME: $TIME$
DATE PLOTTED: $DATE$
REVISION DATE: APRIL 1, 2001
Computer File: Pen Table File

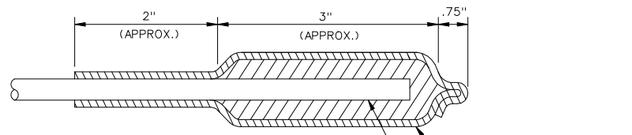


MULTIPLE STREET LIGHTING CONNECTION IN POLE BASE

N.T.S.

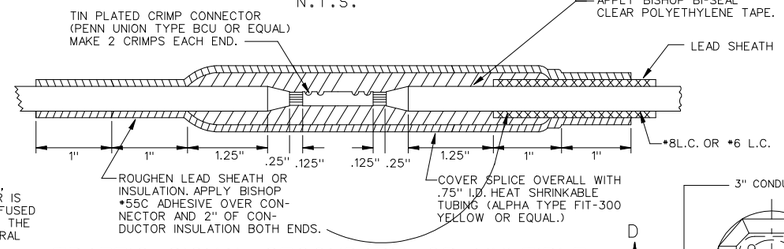
TYPE	POLE DIAMETER
A	3.6"-4.5"
B	6.1"-6.9"
C	7.5"-8.5"

CLAMP SIZE TABLE



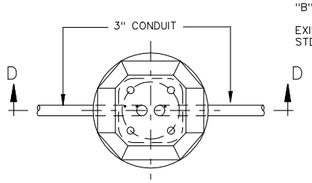
TRAFFIC SIGNAL SECONDARY OR MULTIPLE STREET LIGHTING CABLE DETAIL OF SEALING OF CABLE END

N.T.S.

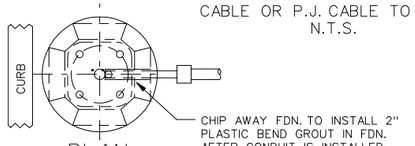


TRAFFIC SIGNAL SECONDARY OR MULTIPLE STREET LIGHTING SPLICE DETAIL "A"

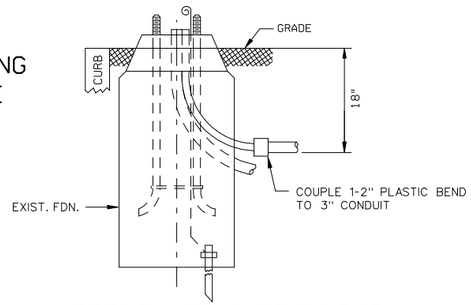
P.J. CABLE TO #8 OR #6 L.C.
CABLE OR P.J. CABLE TO P.J.CABLE
N.T.S.



PLAN



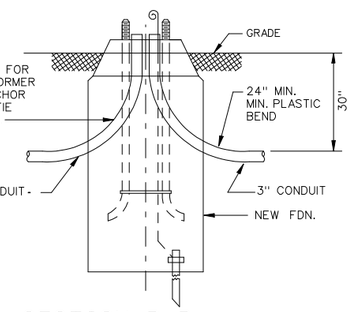
PLAN



DETAIL OF INSTALLING CONDUITS INTO EXISTING FDN.

N.T.S.

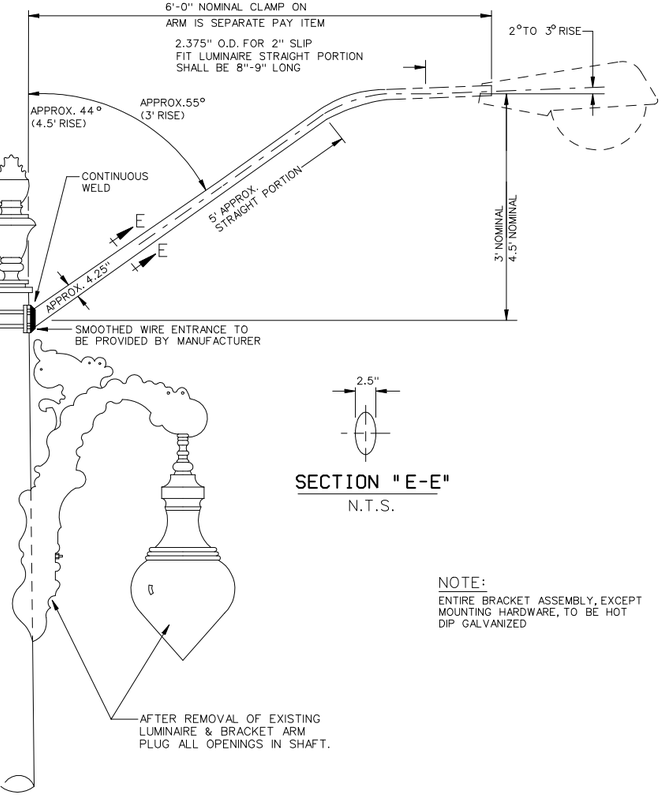
NOTE:
THIS DETAIL TYPICAL FOR USE WITH A TRANSFORMER BASE STD. WHEN ANCHOR BASE STD. IS USED, TIE CONDUITS TOGETHER.



SECTION D-D

DETAIL OF INSTALLING CONDUITS IN & OUT OF NEW FDN.

N.T.S.



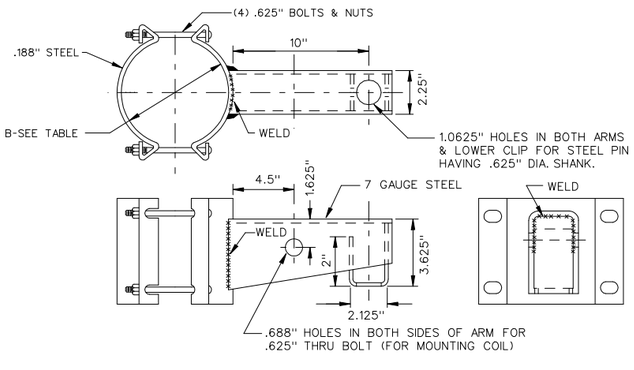
CLAMP ON BRACKET ARM ELEVATION

N.T.S.

SECTION "E-E"

N.T.S.

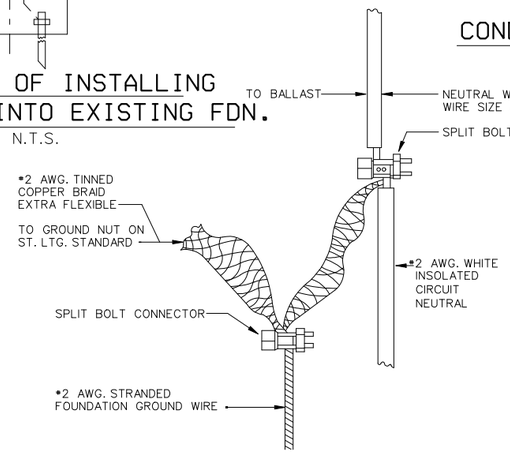
NOTE:
ENTIRE BRACKET ASSEMBLY, EXCEPT MOUNTING HARDWARE, TO BE HOT DIP GALVANIZED



x FINISH SHALL BE HOT DIP GALVANIZED AFTER FABRICATION

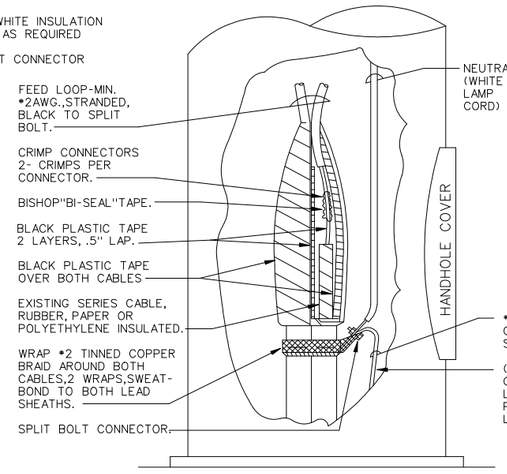
CLAMP FEEDER ARM

N.T.S.



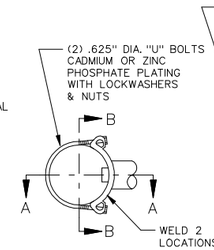
GROUND CONNECTION

N.T.S.



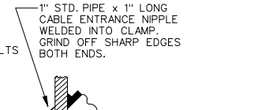
SERIES-TO-MULTIPLE LIGHTING CONVERSION POLE BASE CONNECTIONS

N.T.S.

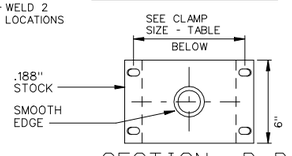


PLAN

N.T.S.



SECTION A-A



SECTION B-B

CLAMP SIZE TABLE

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

PIPE CLAMP DETAILS

N.T.S.

SCALE: AS SHOWN

REVISIONS

Date	Description	Chkd. by

DETAILS

LARNED BRIDGE

MULT.ST.LTG.CABLE CONNECTIONS, CLAMP-ON ARM & MISC.DETAILS

DEPARTMENT OF PUBLIC WORKS — CITY OF DETROIT TRAFFIC ENGINEERING DIVISION

Checked by	Approved by	
------	--------	------

PUBLIC LIGHTING DEPARTMENT — CITY OF DETROIT

Checked by	Approved by	File No.
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Consulting Engineering Associates, Inc.
16580 WYOMING AVE. DETROIT MICHIGAN 48221
TELEPHONE: (313) 341-5797 FAX: 341-0205

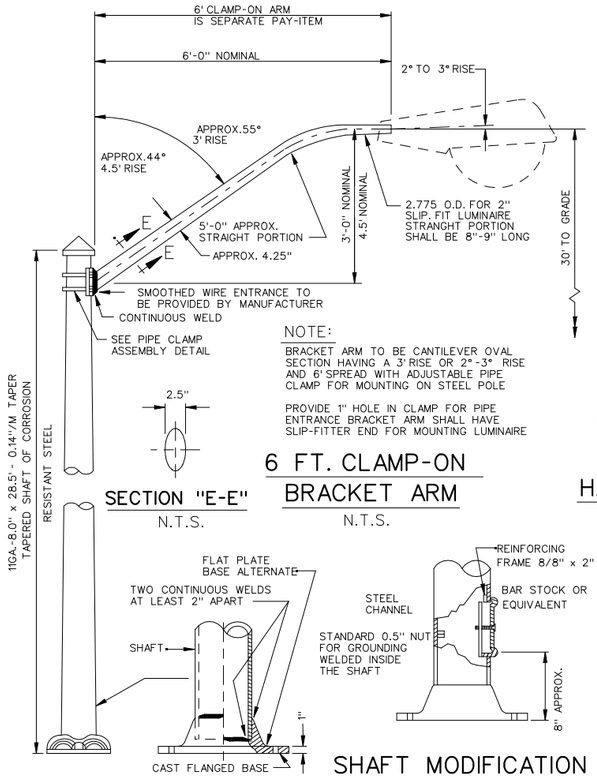
Designed by	Checked by	Sheet No.
C.E.A.		58 of 67

Disk File Name	Job File No.
114PLDM	CEA 141100

Date 11-19-09

114

DATE PLOTTED: $DATE$
TIME: $TIME$
REVISION DATE: APRIL 1, 2001
Computer File: Pen Table File



SECTION "E-E"
N.T.S.

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

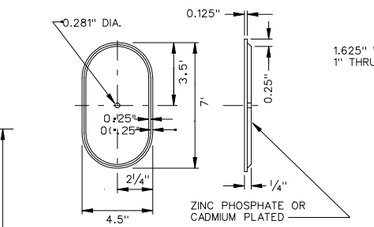
NOTE:

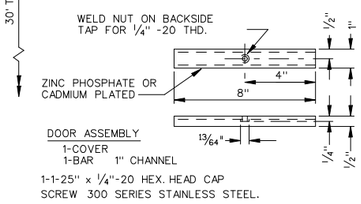
BRACKET ARM TO BE CANTILEVER OVAL SECTION HAVING A 3' RISE OR 2°-3° RISE AND 6' SPREAD WITH ADJUSTABLE PIPE CLAMP FOR MOUNTING ON STEEL POLE

PROVIDE 1" HOLE IN CLAMP FOR PIPE ENTRANCE BRACKET ARM SHALL HAVE SLIP-FITTER END FOR MOUNTING LUMINAIRE

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

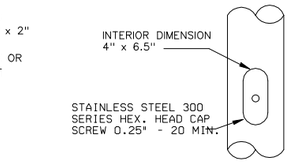
SHAFT MODIFICATION
N.T.S.

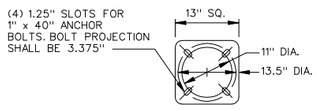




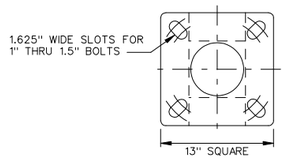
1-1-25" x ¼"-20 HEX. HEAD CAP SCREW 300 SERIES STAINLESS STEEL.

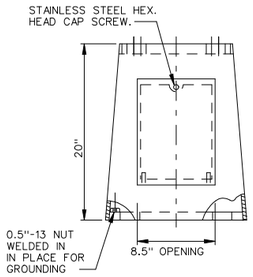
HANDHOLE COVER DETAIL
N.T.S.





BASE PLATE PLAN
N.T.S.





DETAIL "A"
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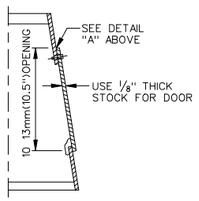

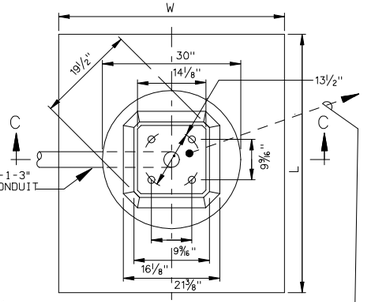

SPECIAL FDN. PLAN
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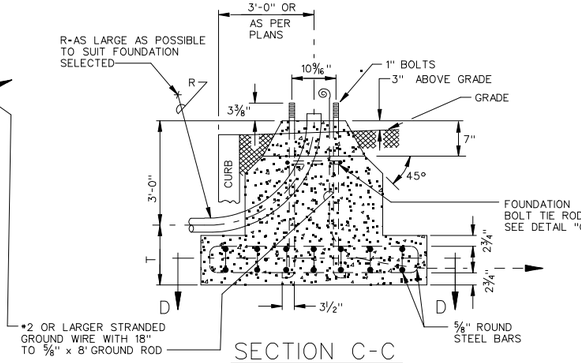


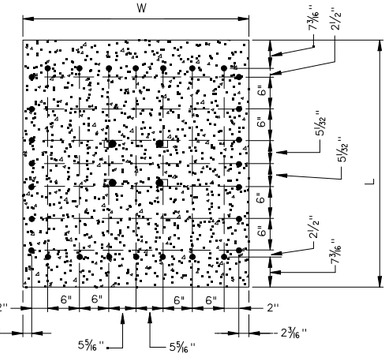
SECTION C-C
N.T.S.

SPECIAL FOUNDATION

THERE SHALL BE NO EXTRA PAYMENT FOR SPECIAL FDN.

(TO BE PAID FOR AS A NORMAL ST. LTG STD. FDN. INSTALLATION)

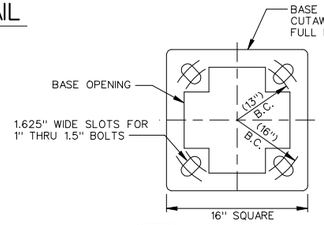
L	W	T
(5'-0")	(4'-3")	(1'-0")
(4'-6")	(3'-7")	(1'-6")



SECTION D-D
N.T.S.

NOTES:

MATERIALS
1. TOP, BOTTOM & SIDES TO BE GALVANIZED STEEL AS PER MANUFACTURER.
2. DOOR FASTENING SCREW TO BE ASTM SERIES 300 STAINLESS STEEL MIN. 0.25"-20 NC. HEX HEAD CAP SCREW ONLY.
3. THE DOOR FASTENING METHOD SHALL USE ONLY ONE HEX. HEAD CAP SCREW, SERIES 300 STAINLESS STEEL. MULTIPLE SCREWS WILL NO LONGER BE ALLOWED TO INSURE PROPER FIELD INSTALLATION AND OPERATION.



P.L.D. UNIVERSAL STEEL TRANSFORMER BASE
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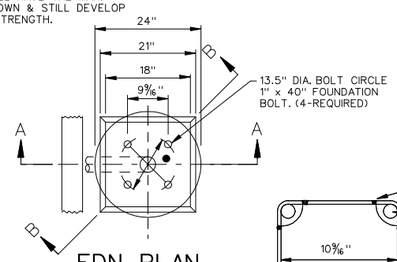
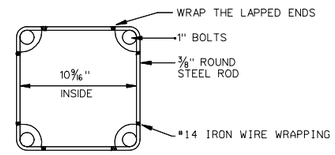


FDN. PLAN
N.T.S.



DETAIL "C"
FDN. BOLT TIE ROD
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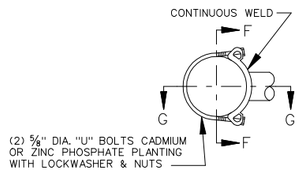
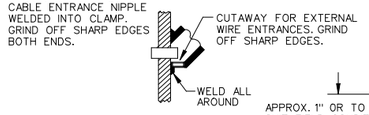
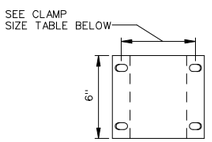




SECTION "G-G"

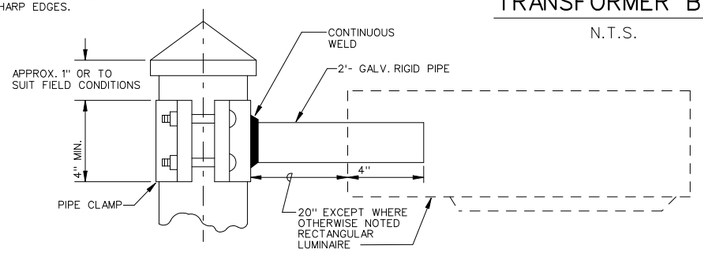


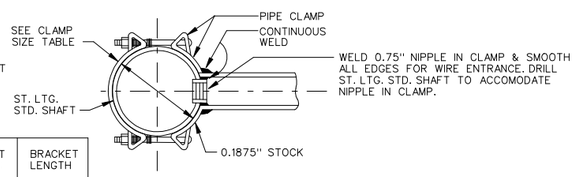
SECTION "F-F"

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

CLAMP SIZE TABLE

PIPE CLAMP DETAILS
N.T.S.





NOTE:

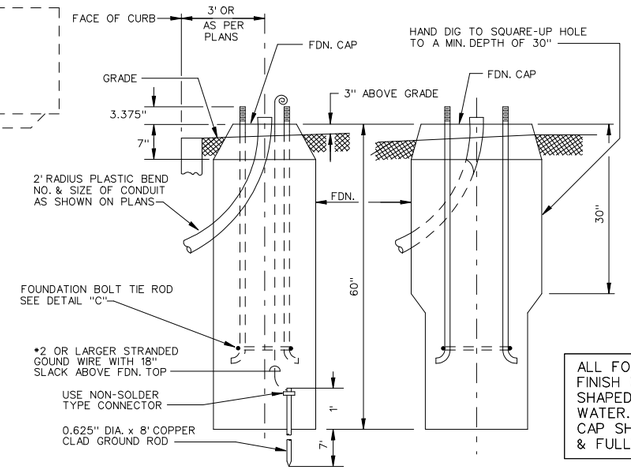
ENTIRE BRACKET ASSEMBLY, EXCEPT MOUNTING HARDWARE, TO BE HOT DIP GALVANIZED

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

STD. CODE NO.	SHAFT LENGTH	SHAFT DEFLECTION x	MINIMUM LOAD x x	ANCHOR BOLT CIRCLE Ø	ANCHOR BOLT Ø & O.A.	HANDHOLE	LUMINAIRE MOUNTING HEIGHT	BRACKET FITTERS REQ'D	BRACKET LENGTH
009-00	28.5'	2.9"	880#	13.5"	1" x 40"	4" x 6.5"	30'	—	6'

x SHAFT DEFLECTION: SHAFT DEFLECTION MEASURED IN INCHES AT TOP, SHALL NOT BE GREATER THAN THAT SHOWN, FOR A HORIZONTAL LOAD OF 100 LBS. APPLIED 18 INCHES BELOW TOP OF SHAFT.

x x SHAFT LOADING: SHAFTS SHALL WITHSTAND, AT THE GUARANTEED MINIMUM YIELD STRENGTH OF THE SHAFT MATERIAL, THE LOADS SHOWN IN THIS TABLE, THE LOAD SHALL BE APPLIED IN A SINGLE HORIZONTAL DIRECTION ANYWHERE AROUND THE CIRCUMFERENCE OF SHAFT 18 INCHES FROM THE TOP.



SECTION A-A
N.T.S.

SECTION B-B
N.T.S.

ANCHOR BASE STD. FOUNDATION

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.

DATE PLOTTED: $DATE$
TIME: $TIME$
REVISION DATE: APRIL 1, 2001
Computer File: Pen Table File

SCALE: AS SHOWN

REVISIONS

Date	Description	Chkd. by

DETAILS
LARNED BRIDGE

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

DEPARTMENT OF PUBLIC WORKS — CITY OF DETROIT TRAFFIC ENGINEERING DIVISION

Checked by	Approved by	

PUBLIC LIGHTING DEPARTMENT
CITY OF DETROIT

Checked by	Approved by	File No.

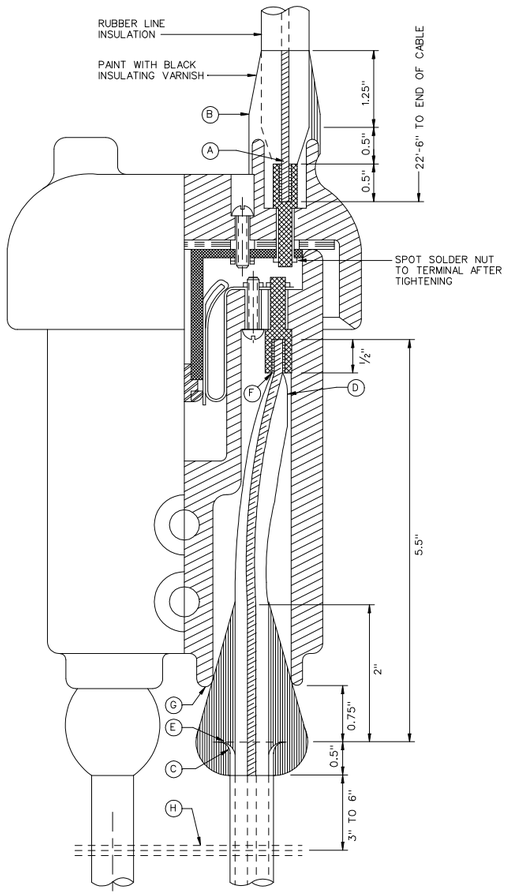
Consulting Engineering Associates, Inc.
16580 WYOMING AVE. DETROIT MICHIGAN 48221
TELEPHONE* (313) 341-5797 FAX* 341-0205

Designed by	Checked by	Sheet No.
C.E.A.		59 of 67

Disk File Name	Job File No.
115PLDM	CEA 141100

Date 11-19-09

115



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.

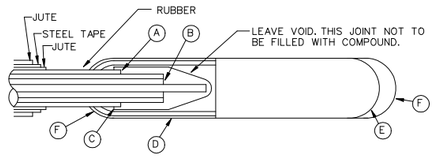
F - SWEAT CONDUCTOR INTO TERMINAL.

G - APPLY TAPE #1 OVER BELL AS SHOWN TO FORM A TIGHT FIT BETWEEN INSULATION AND PORCELAIN AT "G" WHEN NUT IS TIGHTENED. COVER TAPE #1 WITH 2 LAYERS OF TAPE #2 APPROX. 0.75" 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.

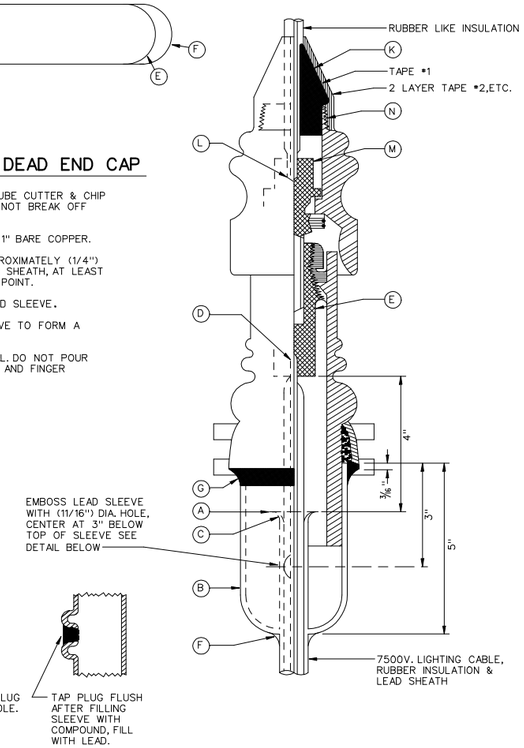
B - CUT INSULATION TO EXPOSE 1" BARE COPPER.

C - OVERLAP WITH TAPE #2 APPROXIMATELY (1/4") FROM END OF LEAD OF LEAD SHEATH, AT LEAST 2 LAYERS OF TAPE AT THIS POINT.

D - 1.25" 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.



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.

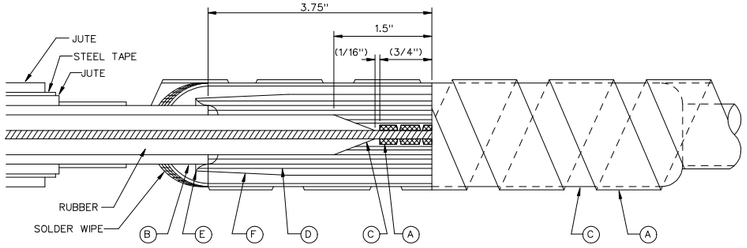
L - SWEAT CONDUCTOR INTO TERMINAL FIRMLY INTO POTHEAD CAP.

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.



#8 LIGHTING CABLE JOINT

N.T.S.

A - 1.5" #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.

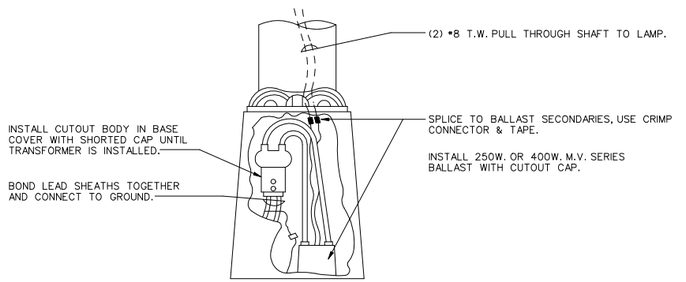
D - APPLY TAPE #1 APPROXIMATELY 1" DIAMETER OVERALL.

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 - 1.25" x 8" x (1/8") LEAD SLEEVE.

H - TWO LAYERS OF TAPE #2 HALF LAP, ON ARMORED PARKWAY CABLE ONLY.



INCANDESCENT TO MERCURY CONVERSION

N.T.S.

SCALE: AS SHOWN

REVISIONS

Date	Description	Chkd. by

DETAILS

LARNED BRIDGE

RUBBER INSULATED LEAD SHEATHED SPLICE & CONNECTIONS

DEPARTMENT OF PUBLIC WORKS — CITY OF DETROIT — TRAFFIC ENGINEERING DIVISION

Checked by	Approved by	
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PUBLIC LIGHTING DEPARTMENT
CITY OF DETROIT

Checked by	Approved by	File No.
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Consulting Engineering Associates, Inc.
16580 WYOMING AVE. DETROIT MICHIGAN 48221
TELEPHONE# (313) 341-5797 FAX# 341-0205

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C.E.A.		60 of 67

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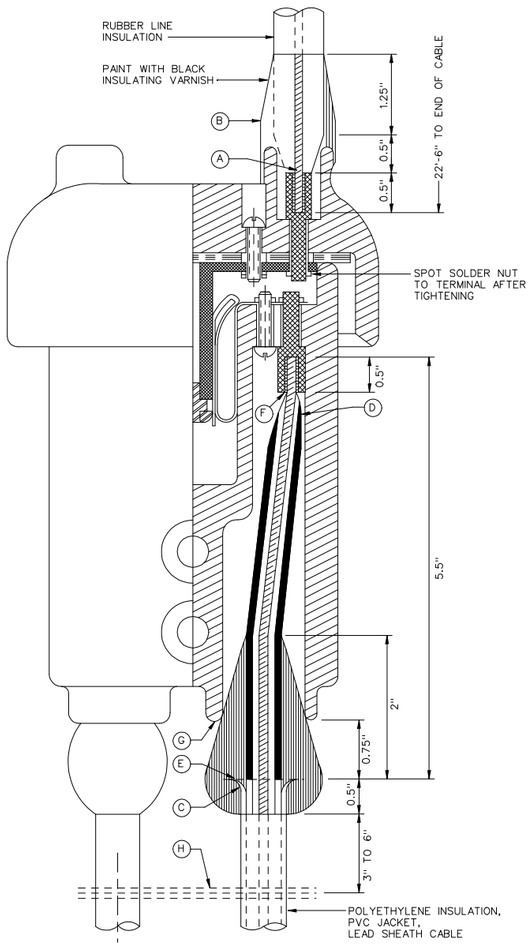
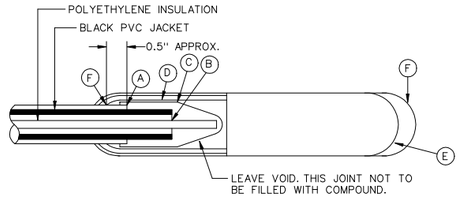


CONNECTION FOR SERIES CUTOUT

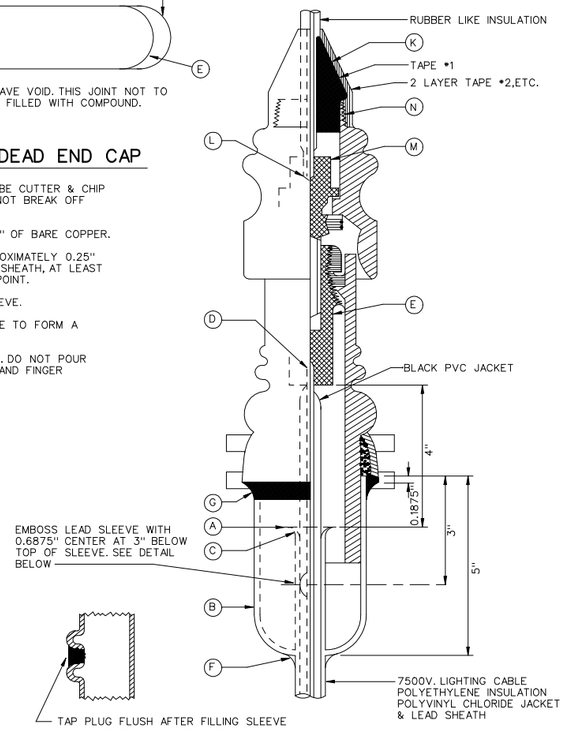
N.T.S.

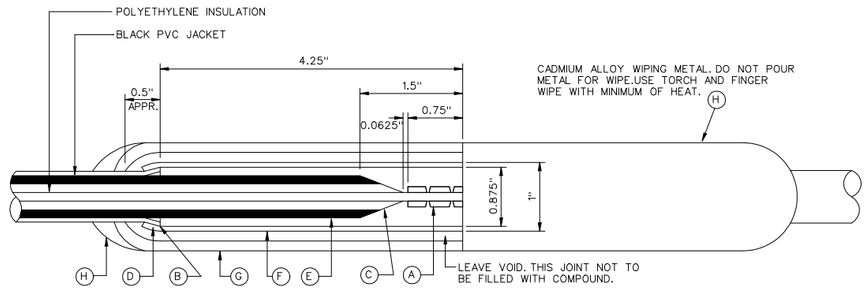
A - SWEAT TERMINAL & PENCIL INSULATION TO FIT SNUGLY IN PORCELAIN OPENING SO THAT AS NUT IS DRAWN UP TIGHT THE OPENING IS COMPLETELY AND TIGHTLY FILLED.
B - BUILD UP WITH #3 TAPE AS SHOWN, & COVER WITH 2 LAYERS, HALF LAP, WITH #2 TAPE AS NOTED.
C - USE TUBE CUTTER TO SCORE LEAD SHEATH & CHIP OFF WITH 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 0.75" 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 0.25" FROM END OF LEAD OF LEAD SHEATH, AT LEAST 2 LAYERS OF TAPE AT THIS POINT.
D - 1.25" x 8" x 0.125" 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.





#8 LIGHTING CABLE JOINT

N.T.S.

A - 1.5" #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. 0.25"
F - TWO LAYERS OF TAPE #2 APPLIED HALF LAP.
G - LEAD SLEEVE 10" LONG, 0.125" WALL, 1.25" INSIDE DIAMETER.
H - SPECIAL LOW TEMPERATURE CADMIUM ALLOY WIPING METAL.

CONNECTIONS FOR 1/C 7500V. POTHEAD

N.T.S.

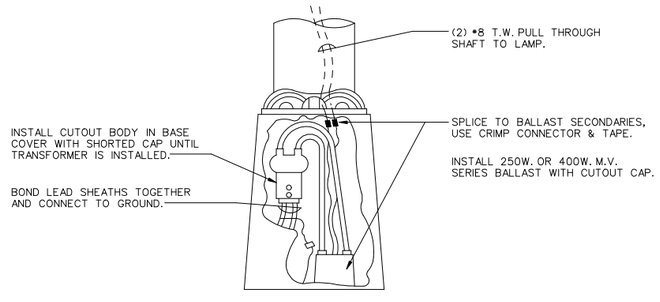
A - USE TUBE CUTTER TO SCORE LEAD SHEATH AND CHIP OFF WITH CHIPPING IRON. DO NOT BREAK OFF BY BENDING. 4" OF INSULATION TO REMAIN, NOT INCLUDING BARED CONDUCTOR.
B - FORM BOTTOM OF EMBOSSED SLEEVE & SLIP OVER CABLE, HOLE IN FRONT.
C - BELL LEAD SHEATH.
D - SWEAT CONDUCTOR INTO TERMINAL & PENCIL INSULATION SMOOTHLY FOR 0.75"
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 0.625" 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 0.75" WIDE
   TAPE #3: APPROVED A.S.T.M. RUBBER TAPE.
   FILLING COMPOUND: APPROVED COMPOUND.
   TAPE #2: BLACK PVC PLASTIC ELECTRICAL TAPE.
   ADHESIVE: APPROVED ADHESIVE.
   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.



INCANDESCENT TO MERCURY CONVERSION

N.T.S.

SCALE: AS SHOWN

REVISIONS

Date	Description	Chkd. by

DETAILS

LARNED BRIDGE

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

DEPARTMENT OF PUBLIC WORKS — CITY OF DETROIT TRAFFIC ENGINEERING DIVISION

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PUBLIC LIGHTING DEPARTMENT
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Consulting Engineering Associates, Inc.
16580 WYOMING AVE. DETROIT MICHIGAN 48221
TELEPHONE: (313) 341-5787 FAX: 341-0205

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202PLDM	CEA 141100

Date 11-19-09

202

DATE PLOTTED: $DATE$
TIME: $TIME$
REVISION DATE: APRIL 1, 2001
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FIG. 1. BUTT WRAP METHOD "A"

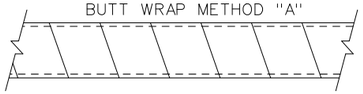


FIGURE 1.
FELTED ASBESTOS INITIAL WRAP BUTT WRAP.

FIG. 2.

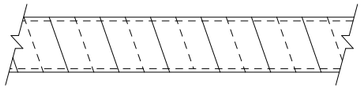


FIGURE 2.
SECOND WRAP FLAME RETARDANT ELASTOMER OFFSET BUTT WRAP.

FIG. 3.

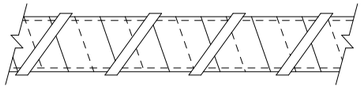


FIGURE 3.
RANDOM WRAP OUTER LAYER WITH A PRESSURE SENSITIVE FIBERGLASS ADHESIVE TAPE TO PREVENT UNRAVELLING.

FIG. 4. HALF LAP METHOD "B"

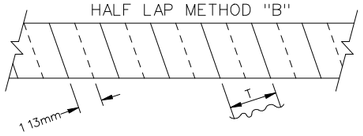


FIGURE 4.
ONE WRAP FLAME RETARDANT ELASTOMER 1/2 OVERLAPPED RANDOM WRAP WITH PRESSURE SENSITIVE FIBERGLASS ADHESIVE TAPE.

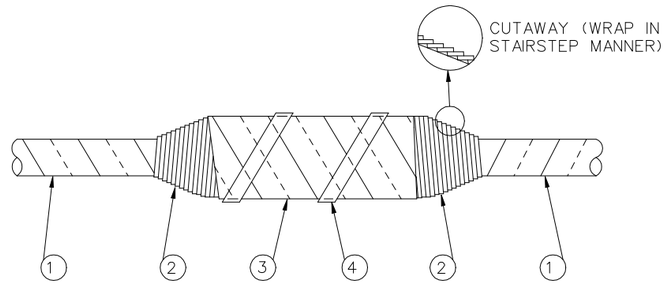
NOTE: ELASTOMER TAPE TO BE APPLIED WITH SMOOTH SIDE ON CABLE (ROUGH OR FABRIC SIDE OUT).

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

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



(1) WRAP CABLE WITH 3" WIDE TAPE METHOD "A" OR "B".

(2) WRAP WIPE WITH 1.25" 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.

SCALE: AS SHOWN

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DEPARTMENT OF PUBLIC WORKS — CITY OF DETROIT — TRAFFIC ENGINEERING DIVISION

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

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204

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DATE PLOTTED: $DATE$ TIME: $TIME$

USE	VOLT RATING	ITEM NO.	CONDUCTOR	SYNTHETIC RUBBER	IMPREG-NATED PAPER	POLYETH-YLENE	POLYVINYL-CHLORIDE	SHIELD OVER INSULATED CONDUCTOR	TAPE OVER INSULATED CONDUCTORS	IMPREG-NATED PAPER BELT	JACKET	LEAD SHEATH	COVERING OVER LEAD	STEEL TAPE ARMOR	COVERING OVER STEEL TAPE	COVERING OVER CONDUCTOR
OVERHEAD LINE WIRE	———	1	*2-*6 AWG. H.D.,UNCOATED SOLID COPPER A.S.T.M. B1													.047" BLACK NEOPRENE
	———	2	*4/0-*2/0AWG. M.H.D.,UNCOATED 7/STR. COPPER A.S.T.M. B1													.063" BLACK NEOPRENE
	———	3	*2- AWG.H.D., UNCOATED SOLID COPPER A.S.T.M. B1													.032" BLACK POLYETHYLENE
	———	4	*2-AWG.,H.D., UNCOATED SOLID COPPER A.S.T.M. B1													.047" BLACK POLYETHYLENE
	———	5	*4/0-*2/0AWG. M.H.D.,UNCOATED 7/STR. COPPER A.S.T.M. B8													.063" BLACK POLYETHYLENE
SPECIAL EVENT FEEDER,	2000v.	6		ALL MULTIPLE STREET LIGHTING, TRAFFIC SIGNAL SECONDARY AND SPECIAL EVENT CABLES INSTALLED IN CONDUIT SHALL BE AS PER THE FOLLOWING: CONDUCTORS: COATED, STRANDED COPPER CONDUCTOR PER ASTM B-8 AND B-189. INSULATION: MEETS OR EXCEEDS ALL REQUIREMENTS OF LATEST EDITION OF ICEA S-68-516, NEMA WC 8 FOR ETHYLENE-PROPYLENE RUBBER INSULATION AND ASTM D2802-78 AND UL STANDARD 44. JACKET: MEETS OR EXCEED ALL REQUIREMENTS OF LATEST EDITION OF ICEA S-68-516, NEMA WC8 FOR HEAVY DUTY CHLOROSULFONATED-POLYETHYLENE. LISTED BY UNDERWRITER'S LABORATORIES INC. AS TYPE RHH OR RHW. NOTE: PRIOR TO PLACING ORDER FOR PURCHASE OF THIS CABLE, A SAMPLE LENGTH OF CABLE MUST FIRST BE SUBMITTED TO P.L.D. FOR THEIR APPROVAL.												
MULT. ST. LTG.	2000v.	7														
TRAFFIC SIGNAL SECOND-ARY	2000v.	8														
RECEPTA-CLE BRACKET & LAMP POST WIRE	600v.	9	*8 AWG.1/C UNCOATED,SOFT 7/STR. COPPER A.S.T.M. B8				.062" 75°C,BLACK, (167°F) OR WHITE AS REQ'D PIGMENTED NOT PRINTED										
2/C AERIAL SERVICE	600v.	10	2/C*8 AWG UNCOATED,SOFT 7/STR. COPPER A.S.T.M. B8				.062" 75°C,BLACK, (167°F) FIGURE 8 CONSTRUCTION										
DISTRIBU-TION CABLES	5000v. BELTED	11	3/C 350 MCM SECTOR, SOFT UNCOATED COPPER AEIC		.085" PER CONDUCTOR OIL VISCOSITY 1,000 SUS AT 100°C (212°F)					.45" OVERALL OIL VISCOSITY 1,000 SUS AT 100° (212°F)		.095" COPPER BEARING LEAD	.090" HEAT & LIGHT STABILIZED BLACK HIGH MOLE-CULAR WEIGHT POLYETHYLENE OVER LEAD SHEATH			
	5000v. BELTED	12	3/C*2/0AWG. SECTOR, SOFT UNCOATED COPPER AEIC		.085" PER CONDUCTOR OIL VISCOSITY 1,000 SUS AT 100°C (212°F)					.45" OVERALL OIL VISCOSITY 1,000 SUS AT 100° (212°F)		.085" COPPER BEARING LEAD	.08" HEAT & LIGHT STABILIZED BLACK HIGH MOLE-CULAR WEIGHT POLYETHYLENE OVER LEAD SHEATH			
	5000v. BELTED	13	3/C*2AWG. ROUND, SOFT UNCOATED COPPER AEIC		.085" PER CONDUCTOR OIL VISCOSITY 1,000 SUS AT 100°C (212°F)					.45" OVERALL OIL VISCOSITY 1,000 SUS AT 100° (212°F)		.08" COPPER BEARING LEAD	.08" HEAT & LIGHT STABILIZED BLACK HIGH MOLE-CULAR WEIGHT POLYETHYLENE OVER LEAD SHEATH			
	7000v. BELTED	14	3/C 350 MCM SECTOR, SOFT UNCOATED COPPER AEIC		.10" PER CONDUCTOR OIL VISCOSITY 1,000 SUS AT 100°C (212°F)					.45" OVERALL OIL VISCOSITY 1,000 SUS AT 100° (212°F)		.095" COPPER BEARING LEAD	.090" HEAT & LIGHT STABILIZED BLACK HIGH MOLE-CULAR WEIGHT POLYETHYLENE OVER LEAD SHEATH			
	7000v. BELTED	15	3/C*2AWG. SECTOR, SOFT UNCOATED COPPER AEIC		.10" PER CONDUCTOR OIL VISCOSITY 1,000 SUS AT 100°C (212°F)					.45" OVERALL OIL VISCOSITY 1,000 SUS AT 100° (212°F)		.085" COPPER BEARING LEAD	.090" HEAT & LIGHT STABILIZED BLACK HIGH MOLE-CULAR WEIGHT POLYETHYLENE OVER LEAD SHEATH			
	7000v. BELTED	16	3/C 350 MCM ROUND, SOFT UNCOATED COPPER AEIC		.10" PER CONDUCTOR OIL VISCOSITY 1,000 SUS AT 100°C (212°F)					.45" OVERALL OIL VISCOSITY 1,000 SUS AT 100° (212°F)		.085" COPPER BEARING LEAD	.08" HEAT & LIGHT STABILIZED BLACK HIGH MOLE-CULAR WEIGHT POLYETHYLENE OVER LEAD SHEATH			
SERIES ST. LTG. CABLE, IN DUCT	7500v.	17	1/C*8 AWG. SOLID, SOFT UNCOATED COPPER ASTM B3			.188" HIGH MOLE-CULAR NAT-URAL OVER CONDUCTOR	.047" 60°C BLACK					.063" COMMERCIALLY PURE				
SERIES ST. LTG. CABLE, DIRECT BURIAL	7500v.	18	1/C*8 AWG. SOLID, SOFT UNCOATED COPPER ASTM B3			.188" HIGH MOLE-CULAR NAT-URAL OVER CONDUCTOR	.047" 60°C BLACK OVER INSULATED CONDUCTOR					.063" COMMERCIALLY PURE	.047" ASPHALTUM SATURATED JUTE OVER LEAD	TWO LAYER .02" GALV. STEEL TAPE	ASPHALTUM SATURATED JUTE OVER STEEL TAPE	
TRANS-MISSION CABLES	24000v. SHIELDED	19	3/C 350 MCM SECTOR, SOFT UNCOATED COPPER * AEIC		.230" PER CONDUCTOR OIL VISCOSITY 1,000 SUS AT 100°C (212°F)			COPPER TAPE INTERCALATED WITH SEMI-CONDUCTING OF OR METALIZED PAPER TAPE	* *			.11" COPPER BEARING LEAD	.11" HEAT LIGHT STABILIZED BLACK HIGH MOLECULAR WEIGHT POLYETHYLENE OVER LEAD SHEATH			
	24000v. SHIELDED	20	3/C 350 MCM SECTOR, SOFT UNCOATED COPPER * AEIC		.230" PER CONDUCTOR OIL VISCOSITY 1,000 SUS AT 100°C (212°F)			COPPER TAPE INTERCALATED WITH SEMI-CONDUCTING OF OR METALIZED PAPER TAPE	* *			.105" COPPER BEARING LEAD	.11" HEAT LIGHT STABILIZED BLACK HIGH MOLECULAR WEIGHT POLYETHYLENE OVER LEAD SHEATH			
	24000v. SHIELDED	21	3/C *2/0 AWG. SECTOR, SOFT UNCOATED COPPER * AEIC		.245" PER CONDUCTOR OIL VISCOSITY 1,000 SUS AT 100°C (212°F)			COPPER TAPE INTERCALATED WITH SEMI-CONDUCTING OF OR METALIZED PAPER TAPE	* *			.10" COPPER BEARING LEAD	.09" HEAT LIGHT STABILIZED BLACK HIGH MOLECULAR WEIGHT POLYETHYLENE OVER LEAD SHEATH			
MULTI-CONDUCTOR SIGNAL CABLE, IN DUCT	———	22	*14 AWG. SOLID, SOFT UNCOATED COPPER, NO. OF CONDUCTOR AS REQ'D. ASTM B3	ACCORDING TO SPECIFICATIONS												
MULTI-CONDUCTOR SIGNAL CABLE, AERIAL(I.M.)	———	23	*14 AWG. SOLID, SOFT UNCOATED COPPER, NO. OF CONDUCTOR AS REQ'D. ASTM B3													
8/C SERIES ST. LTG. IN DUCT	7500v.	24	8/C*8 AWG. SOLID, SOFT TINNED COPPER ASTM B33	SPECIAL INSTRUCTION .063" OF 30% HEAVEA RUBBER AND ONE LAYER OF LAPPED FILLED COTTON TAPE OVER EACH CONDUCTOR CENTRAL CONDUCTOR HAS ADDITIONAL .17" VARNISHED CAMBRIC TAPE REMAINING 7 CONDUCTORS EACH HAVE ADDITIONAL .094" VARNISHED CAMBRIC TAPE ONE OF 7 OUTSIDE CONDUCTORS WRAPPED WITH WHITE PAPER FOR IDENTIFICATION ALL CONDUCTORS CABLED WITH PARAFFINED JUTE (OUTSIDE FILLER). .094" BELT OF OIL SATURATED PAPER OVERALL 0.115 INCH COPPER BEARING LEAD BENEATH OVERALL.											
OVERHEAD FLEXIBLE TRAINER WIRE (SHIELDED)	———	25	1/C*2 AWG. & LARGER, SOFT CLASS G OR H STANDING TINNED COPPER ASTM B173	SEMI-CONDUCTING COTTON TAPE OVER CON-DUCTOR & 0.268 OZONE RESISTING BUTYL							.063" GENERAL PURPOSE OR HEAVY DUTY BLACK NEOPRENE					

COLOR CODED AS FOLLOWS:
RED - A CIRCUIT
BLACK - B CIRCUIT
WHITE - NEUTRAL

* CARBON BLACK PAPER TAPE OVER CONDUCTOR

* * BINDER TAPE OVER SHIELDED INSULATED CONDUCTOR AND FILLERS TO BE COPPER OR BRONZE TAPE INTERCALATED WITH PAPER TAPE OR (2) METALIZED PAPER TAPES

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Consulting Engineering Associates Inc.
16560 WYOMING AVE. DETROIT, MICHIGAN 48221
TELEPHONE (313) 341-7797 FAX 341-0205

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CITY OF DETROIT
PUBLIC LIGHTING DEPARTMENT

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DEPARTMENT OF PUBLIC WORKS
CITY OF DETROIT
RAYMOND J. HOROSKO, DIRECTOR

Checked by ——— Approved by ———

CABLE & WIRE SPECIFICATIONS DETAILS

DETAILS
LARNED BRIDGE

Date	Description	Chkd. by
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SCALE: AS SHOWN

Disk File Name 205PLDM
Date 11-19-09
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1. DISTRIBUTION AND TRANSMISSION CABLES

ALL TRANSMISSION CABLES, (24 KV., ITEMS 11-16 INCLUSIVE) ARE FOR CIRCUITS WITH GROUNDED NEUTRAL, AND SHALL CONFORM STRICTLY WITH THE LATEST REVISION OF THE A.E.I.C. "SPECIFICATION FOR IMPREGNATED PAPER INSULATED, LEAD COVERED SOLID TYPE CABLE", 9TH EDITION, DATED APRIL, 1954, AND CONSTRUCTION OPTIONS AS NOTED IN SHEET 1.

ALL DISTRIBUTION CABLES, (7 & 5 KV, ITEMS 19 & 21 INCLUSIVE) ARE FOR CIRCUITS WITH UNDERGROUND NEUTRAL AND SHALL ALSO CONFORM WITH THE ABOVE SPECIFICATION, WITH CONSTRUCTION OPTIONS AS NOTED IN TABLE 1.

2. OVERHEAD LINE WIRE

OVERHEAD LINE WIRE SHALL BE IN ACCORDANCE WITH LATEST REVISION OF ASA C8.34 (NEOPRENE COVERING) OR THE LATEST REVISION OF ASA C8.35 (POLYETHYLENE COVERING).

3. 8/C,#8AWG, STREET LIGHTING CABLE, 7500 V.

THIS IS A SPECIAL CONSTRUCTION AND SHALL BE MADE STRICTLY IN ACCORDANCE WITH THE DESCRIPTION IN TABLE 1. APPLICABLE REFERENCE SPECIFICATIONS SHOWN BELOW:

4. OTHER RUBBER OR THERMOPLASTIC INSULATED CABLES, LEADED & NON-LEADED

WIRE SIZE, INSULATION TYPE AND NORMAL THICKNESSES, OTHER CONSTRUCTION FEATURES SHALL BE AS SHOWN IN TABLE 1, AND APPLICABLE REFERENCE SPECIFICATIONS SHOWN BELOW:

INSULATIONS

THE MINIMUM INSULATION THICKNESS OF ANY OF THESE CABLES SHALL BE LESS THAN 90% OF THE NOMINAL THICKNESS SHOWN ON TABLE 1.

THE PHYSICAL AND AGING PROPERTIES OF THERMOPLASTIC AND RUBBER INSULATIONS SHALL BE AS FOLLOWS:

CONDUCTORS

ALL CONDUCTORS SHALL BE COPPER, COMPLYING WITH THE LATEST REVISIONS OF ASTM SPECIFICATIONS, AS FOLLOWS:

SOFT OR ANNEALED, BARE COPPER WIRE	ASTM B3
MEDIUM HARD DRAWN COPPER WIRE	ASTM B2
HARD DRAWN COPPER WIRE	ASTM B1
CONCENTRIC-LAY-STRANDED COPPER CONDUCTORS, HARD, MEDIUM HARD OR SOFT, COATED OR UNCOATED, AS REQUIRED.	ASTM B8
ROPE-LAY-STRANDED, SOFT, COPPER CONDUCTORS, COATED OR UNCOATED, AS REQUIRED.	ASTM B173
SOFT, SOLID COPPER CONDUCTORS, TINNED	ASTM B33
SOFT, SOLID COPPER CONDUCTORS, LEAD OR LEAD ALLOY COATED	ASTM B189

		POLYVINYL-CHLORIDE 60° C (140° F)	POLYVINYL-CHLORIDE 75° C (167° F)	HIGH MOLECULAR WEIGHT NATURAL POLYETHYLENE	SYNTHETIC RUBBER 75° C (167° F) HEAT & MOISTURE RESISTANT	OZONE RESISTING BUTYL RUBBER
ORIGINAL	TENSILE STRENGTH PSI	2300, MIN.	2300, MIN.	1400, MIN.	700, MIN.	600, MIN.
	ELONGATION AT RUPTURE, PERCENT	250, MIN.	250, MIN.	250, MIN.	300, MIN. & 13mm(.5") SET,MAX.	350, MIN. & 13mm(.5") SET,MAX.
AIR OVEN TEST, TIME & TEMP, AS NOTED	TENSILE STRENGTH % OF ORIGINAL	65, MIN. 168 HRS.,100± 1° C (212± 1.8 F)	120, MAX. 80, MIN. 168 HRS.,120± 1° C (248± 1.8 F)	75, MIN. 48 HRS.,100± 1° C (212± 1.8 F)	———	60, MIN. 168 HRS.,100± 1° C (212± 1.8 F)
	ELONGATION % OF ORIGINAL	* 65, MIN. 168 HRS.,100± 1° C (212± 1.8 F)	** 75, MIN. 168 HRS.,120± 1° C (248± 1.8 F)	75, MIN. 48 HRS.,100± 1° C (212± 1.8 F)	———	60, MIN. 168 HRS.,100± 1° C (212± 1.8 F)
OXYGEN PRESSURE TEST	TENSILE STRENGTH % OF ORIGINAL	———	———	———	50, MIN. 168 HRS., 80± 1° C (176± 1.8 F)	———
	ELONGATION % OF ORIGINAL	———	———	———	50, MIN. 168HRS., 80± 1° C (176± 1.8 F)	———
AIR PRESSURE HEAT TEST	TENSILE STRENGTH % OF ORIGINAL	———	———	———	50, MIN. 20 HRS., 127± 1° C (260± 1.8 F)	50, MIN. 40 HRS., 127± 1° C (260± 1.8 F)
	ELONGATION % OF ORIGINAL	———	———	———	50, MIN. 20 HRS., 127± 1° C (260± 1.8 F)	50, MIN. 40 HRS., 127± 1° C (260± 1.8 F)
HEAT DISTORTION 121± 1° C (250± 1.8 F)	% OF ORIGINAL	50, MAX.	25, MAX.	———	———	———
OIL IMMERSION 4 HRS.,70± 1° C (158± 1.8 F)	TENSILE STRENGTH % OF ORIGINAL	* 85, MIN.	** 85, MIN.	———	———	———
	ELONGATION % OF ORIGINAL	* 85, MIN.	** 85, MIN.	———	———	———
HEAT SHOCK 121± 1° C (250± 1.8 F)	———	NO CRACKS	NO CRACKS	———	———	———
COLD BEND	———	NO CRACKS -30 ± 1° C (-22± 1.8 F)	NO CRACKS -30 ± 1° C (-22± 1.8 F)	NO CRACKS -55 ± 1° C (-67± 1.8 F)	———	———
INSULATION RESISTANCE CONSTANT AT 15.6° C (60± 1.8 F)	———	1,000 MIN.	2,000 MIN.	50,000 MIN.	4,000 MIN.	20,000 MIN.
FLAME RESISTANCE PROPERTIES	———	SECT. 6.5 IPCEA S-61-402	SECT. 6.5 IPCEA S-61-402	———	———	———
ACCELERATED WATER ABSORPTION REQUIREMENT	ELECTRICAL METHOD — DIELECTRIC CONSTANT, 1 DAY	10, MAX.	10, MAX.	———	5, MAX.	———
	ELECTRICAL METHOD — % CAPACITANCE INCREASE	1-14 DAYS-10,MAX. 7-14 DAYS-5,MAX.	1-14 DAYS-4.0,MAX. 7-14 DAYS-2.0,MAX.	———	1-14 DAYS-10.0,MAX. 7-14 DAYS-4.0,MAX.	1-14 DAYS-5.0,MAX. 7-14 DAYS-3.0,MAX.
	ELECTRICAL METHOD — TEMP.	50 ± 1° C (122± 1.8° F)	75 ± 1° C (167± 1.8° F)	———	75 ± 1° C (167± 1.8° F)	75 ± 1° C (167± 1.8° F)
	OR — GRAVIMETRIC METHOD	20 MILLIGRAMS PER SQ. 1" MAX.	10 MILLIGRAMS PER SQ. 1" MAX.	———	20 MILLIGRAMS PER SQ. 1" MAX.	15 MILLIGRAMS PER SQ. 1' MAX.
TEST IN ACCORDANCE WITH LATEST REVISION OF:		IPCEA S-61-402 (EXCEPTIONS ARE NOTED ABOVE)		IPCEA S-61-402	IPCEA S-19-81 (EXCEPTIONS ARE NOTED ABOVE)	IPCEA S-19-81

FOR #6 AWG AND LARGER, USING BUFFED DIE-CUT SPECIMENS, THE FOLLOWING VALUES SHALL APPLY:

* ELONGATION AFTER AIR OVEN TEST 45% MIN.

** ELONGATION AFTER AIR OVEN TEST 50% MIN.

* OR ** TENSILE STRENGTH AFTER OIL IMMERSION 80% MIN.

* OR ** ELONGATION AFTER OIL IMMERSION 60% MIN.

JACKETS

THE MINIMUM JACKET THICKNESS SHALL NOT BE LESS THAN 80% OF THE NOMINAL THICKNESS SHOWN ON TABLE 1.

		NEOPRENE BLACK, HEAVY DUTY	NEOPRENE BLACK GENERAL PURPOSE	POLYVINYL-CHLORIDE, BLACK	HEAT & LIGHT STABILIZED BLACK POLYETHYLENE COVER'G OVER LEAD SHEATH
ORIGINAL	TENSILE STRENGTH PSI	1800, MIN.	1500, MIN.	1500, MIN.	1400, MIN.
	ELONGATION AT RUPTURE, %	300, MIN. & 10mm(.375") MAX.SET	250, MIN. & 10mm(.375") MAX.SET	100, MIN.	350, MIN.
AIR OVEN TEST, TIME & TEMP, AS NOTED	TENSILE STRENGTH % OF ORIGINAL	———	———	75 MIN. 120 HRS. 121± °1 C (250± 1.8 F)	75, MIN.
	ELONGATION % OF ORIGINAL	———	———	60 MIN. 120 HRS. 121± °1 C (250± 1.8 F)	75, MIN.
OXYGEN PRESSURE TEST 168 HRS. 80± 1° C (176± 1.8 F)	TENSILE STRENGTH % OF ORIGINAL	50, MIN.	50, MIN.	———	———
	ELONGATION % OF ORIGINAL	50, MIN.	50, MIN.	———	———
AIR PRESSURE HEAT TEST 20 HRS. 127± 1° C (260± 1.8 F)	TENSILE STRENGTH % OF ORIGINAL	50, MIN.	50, MIN.	———	———
	ELONGATION % OF ORIGINAL	50, MIN.	50, MIN.	———	———
OIL IMMERSION TEST, TIME & TEMP. AS NOTED	TENSILE STRENGTH % OF ORIGINAL	60 MIN. 18 HRS 121± °1 C (250± 1.8 F)	60 MIN. 18 HRS 121± °1 C (250± 1.8 F)	60 MIN. 4 HRS 70 ± 1° C (158± 1.8 F)	———
	ELONGATION % OF ORIGINAL	60 MIN. 18 HRS 121± °1 C (250± 1.8 F)	60 MIN. 18 HRS 121± °1 C (250± 1.8 F)	60 MIN. 4 HRS 70 ± 1° C (158± 1.8 F)	———
HEAT DISTORTION PERCENT OF UNAGED VALUE	———	———	———	50, MAX. 90 ± 1° C (194± 1.8 F)	25, MAX. 90 ± 1° C (194± 1.8 F)
HEAT SHOCK 121± °1 C (250± 1.8 F)	———	———	———	NO CRACKS	———
COLD BEND TEST-35 ± 1° C (-31± 1.8 F)	———	———	———	NO CRACKS	NO CRACKS
ENVIRONMENTAL CRACKING	———	———	———	———	NO CRACKS
LIGHT ABSORPTIVITY	———	———	———	———	24,000, MIN.
TEST IN ACCORDANCE WITH LATEST REVISION OF:		IPCEA S-19-82		IPCEA S-61-402	IPCEA INTERIM REVISION #1 PUB. S-54-401 SEPT. 1959

SCALE: AS SHOWN

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LARNED BRIDGE

CABLE & WIRE SPECIFICATIONS

DEPARTMENT OF PUBLIC WORKS — CITY OF DETROIT — TRAFFIC ENGINEERING DIVISION

Checked by	Approved by	
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PUBLIC LIGHTING DEPARTMENT

CITY OF DETROIT

Checked by	Approved by	File No.
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Consulting Engineering Associates, Inc.

16580 WYOMING AVE. DETROIT MICHIGAN 48221 TELEPHONE (313) 341-5797 FAX 341-0205

Designed by	Checked by	Sheet No.
C.E.A.		64 of 67

Disk File Name	Job File No.
206PLDM	CEA 141100

Date 11-19-09

206

TIME: $TIME$

DATE PLOTTED: $DATE$

REVISION DATE: APRIL 1, 2001
Computer File: Pen Table File

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 INCHE (6") SAMPLE OF THE COMPLETED 2 CONDUCTOR WIRE WITH CLEANLY CUT ENDS SHALL BE SUBJECTED TO A TEMPERATURE OF -18º 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 80 C (140 F) 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 15.6 C (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 (15.6 C) 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) MINITUES. 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 — ONE TEST PER ORDER OR
7. HIGH VOLTAGE-TIME TEST — THERE IS A QUANTITY LIMITATION OF
8. DIELECTRIC POWER TEST — 25' ON THESE TESTS PER AEIC
9. POWER FACTOR TEST
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 (140 F) 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 15.6 C (60 F).

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, TENSIL 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 (140 F) 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

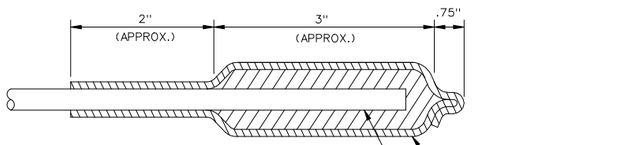
ITEM NO.	USE AND RATING	CONDUCTOR	INSULATION (b)	TAPE OVER INSULATION CONDUCTORS	INNER BELT	SHIELD OVER TAPE OR BELT	JACKET OR SHEATH	COVERING OVER SHEATH
27	(a) AERIAL 600V.	#6 OR #19 AWG, SOLID, UNCOATED COPPER (ASTM B3)-NUMBER OF PAIRS AS REQUIRED	.025(c) CLASS B POLYETHYLENE (ASTM D 1351)	12.5 PERCENT MINIMUM LAP, POLYETHYLENE TEREPHTHALATE		CORRUGATED, LONGITUDINAL, ANNEALED, (c) .004" COPPER	BLACK POLYETHYLENE (ASTM D 2308). THICKNESSES OVER CORE AND MESSENGER AND WEB DIMENSIONS IN ACCORDANCE WITH REA SPECIFICATION PE-38.	
28	IN DUCT 600V.				BLACK POLY-ETHYLENE (ASTM D 2308) .010" MIN. .030" MAX. THICKNESS		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.		.031(c) DIOCTYL PHTHALATE PLASTICIZED PVC (ASTM D 2219)				LEAD-ANTIMONY THICKNESS PER ITEM 26 EXCEPT .063" MIN. THICKNESS(c)	
30	DIRECT BURIAL 600V.	#6 OR #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:

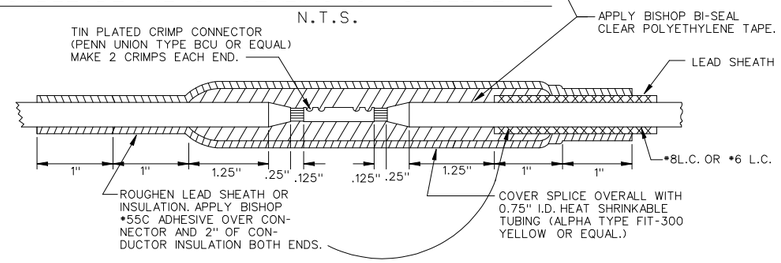
1. CONDUCTOR RESISTANCE OF EACH LENGTH OF EACH CONDUCTOR IN OHMS PER 1000'
2. CERTIFICATION OF MUTUAL CAPACITANCE OF ALL CABLES AND OF NON-INJURIOUS EFFECT OF FLOODING COMPOUND ON ITEM 27.

(a) "FIGURE 8" CONSTRUCTION. MESSENGER SHALL BE 7 STRAND EHS GALVANIZED, CLASS A, .25" NORMAL DIAM. (ASTM A 475) AND SHALL BE FULL FLOODED.
(b) COLOR CODED PER FEDERAL SPECIFICATION J-C-111.
(C) NOMINAL THICKNESS, mm (INCHES).



TRAFFIC SIGNAL SECONDARY OR MULTIPLE STREET LIGHTING CABLE DETAIL OF SEALING OF CABLE END

N.T.S.



TRAFFIC SIGNAL SECONDARY OR MULTIPLE STREET LIGHTING SPLICE DETAIL "A"

P.J. CABLE TO #8 OR #6 L.C. CABLE OR P.J. CABLE TO P.J.CABLE

N.T.S.

SCALE: AS SHOWN

REVISIONS

Date	Description	Chkd. by

DETAILS

LARNED BRIDGE

CABLE & WIRE SPECIFICATIONS

DEPARTMENT OF PUBLIC WORKS — CITY OF DETROIT TRAFFIC ENGINEERING DIVISION

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PUBLIC LIGHTING DEPARTMENT
CITY OF DETROIT

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

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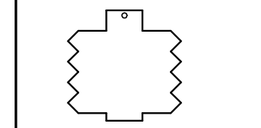
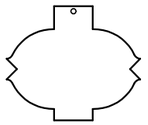
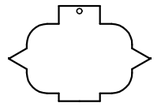


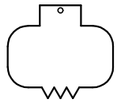
24,000 VOLT TRUNK LINE



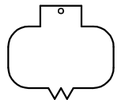
24,000 VOLT FEEDER



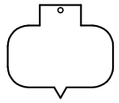
13200 VOLT FEEDER



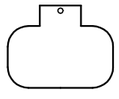
7200 VOLT FEEDER



4800 & 5500 VOLT FEEDER

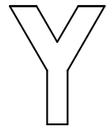


2400 VOLT FEEDER



MISCELLANEOUS

O.H. LINE PHASE TAG



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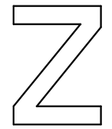

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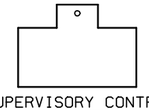
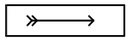


SUPERVISORY CONTROL



CIRCUIT DIRECTION

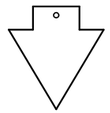
ST. LTG. COND. NO.(FROM 8/C CABLE)

ST. LTG. CIRC. NUMBER

O.H. LINE OR POTHEAD PHASE TAG

O.H. LINE OR POTHEAD PHASE TAG

O.H. LINE OR POTHEAD PHASE TAG



DEAD CABLE

8/C COND. CABLE

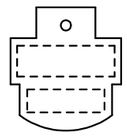
MULTIPLE LTG, CONTROL

IDENTIFICATION TAGS

MATERIAL: LEAD

(FOR REFERENCE ONLY)

LEAD IDENTIFICATION TAGS ARE FOR REFERENCE ONLY



MULTIPLE STREET LIGHTING ALL VOLTAGES

MULTIPLE INC. LTG.

TRAFFIC SIGNALS

SECONDARY POWER TO SAFETY ISLANDS & TRAFFIC SIGNALS

TRAFFIC SIGNAL CHRONOLIZER

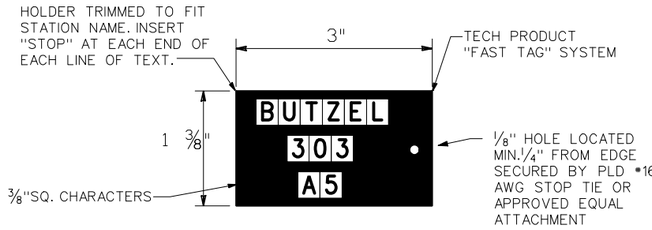
COMMUNICATION

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

BEL.	KSG.	POR.
BUT.	LAB.	RUS.
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:

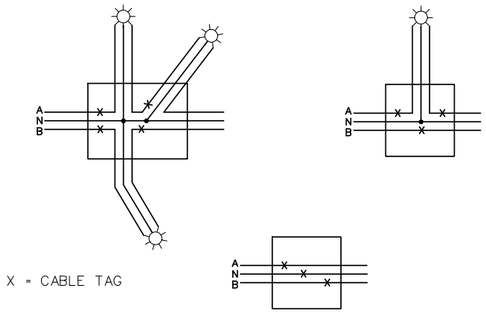
REQUIRED CABLE IDENTIFICATION TAGS WILL BE FURNISHED BY CONTRACTOR. CABLE TAG MARKINGS SUCH AS SUBSTATION OR CABLE MARKING WILL BE AS SHOWN ON PLANS OR WILL BE FURNISHED BY P.L.D.



MULT. STREET LIGHTING TAG

N.T.S.

(DO NOT WRITE ON TAGS)



X = CABLE TAG

CABLE TAG APPLICATION DETAIL

N.T.S.

NOTE:
TAG ALL PHASES OF CABINET FEED, OTHER TAG ARRAGEMENTS ARE POSSIBLE

CONTRACTOR SHALL FURNISH AND INSTALL CABLE TAGS AS PER P.L.D. SPECIFICATIONS.

SCALE: AS SHOWN

REVISIONS

Date	Description	Chkd. by

DETAILS

LARNED BRIDGE

CABLE TAGS DETAILS

DEPARTMENT OF PUBLIC WORKS — CITY OF DETROIT TRAFFIC ENGINEERING DIVISION

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PUBLIC LIGHTING DEPARTMENT

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Consulting Engineering Associates, Inc.

16580 WYOMING AVE, DETROIT MICHIGAN 48221
TELEPHONE: (313) 341-5797 FAX: 341-0205

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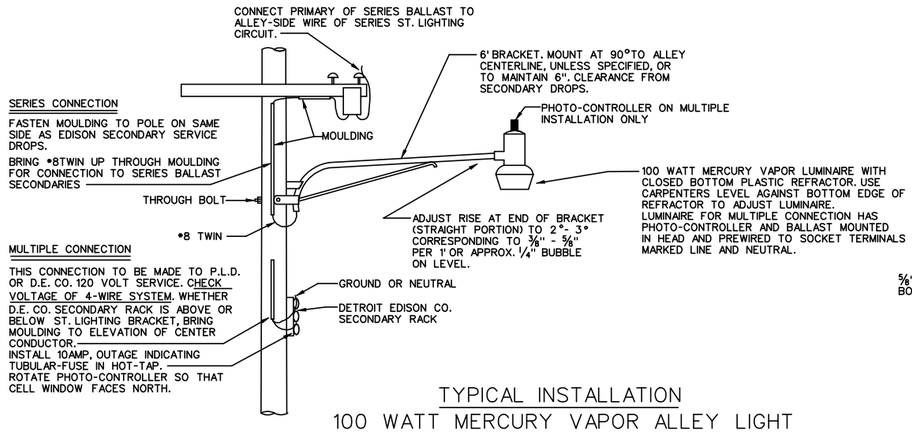
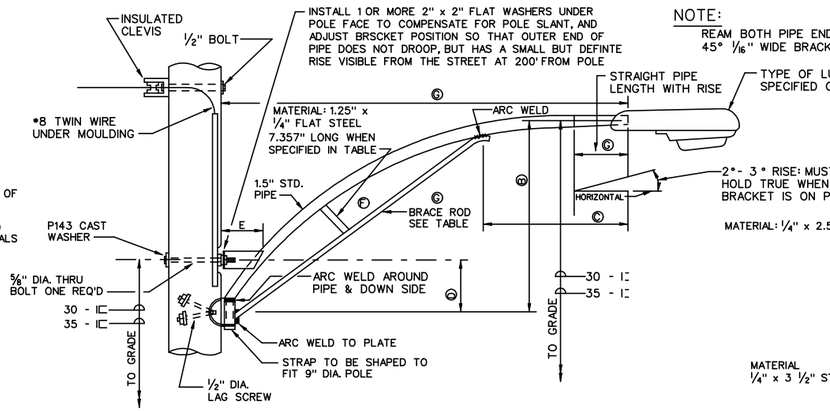


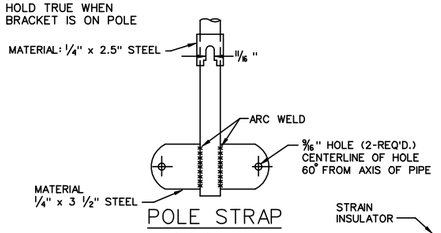
TYPICAL INSTALLATION
100 WATT MERCURY VAPOR ALLEY LIGHT



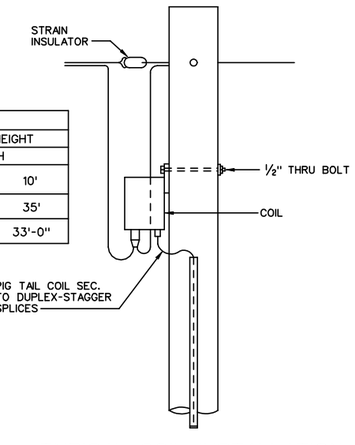
UPSWEEP STREET LIGHTING BRACKET ARM AND LUMINAIRE

ARM DIMENSION TABLE								
TYPE	A	B	C	D	E	F	G	H
6'	6'	32"	2.4'	8.75"	5.5"	NO	1" SOLID	14"
8'	92"	4'	3'	8.75"	4.5"	YES	1" SOLID	8"
10'	122"	33"	3.4"	8.875"	8"	NO	1" SOLID	2'

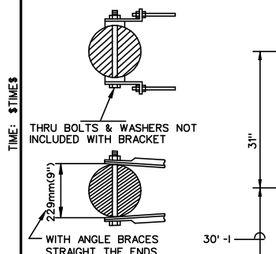
THIS DIMENSION IS APPROXIMATE

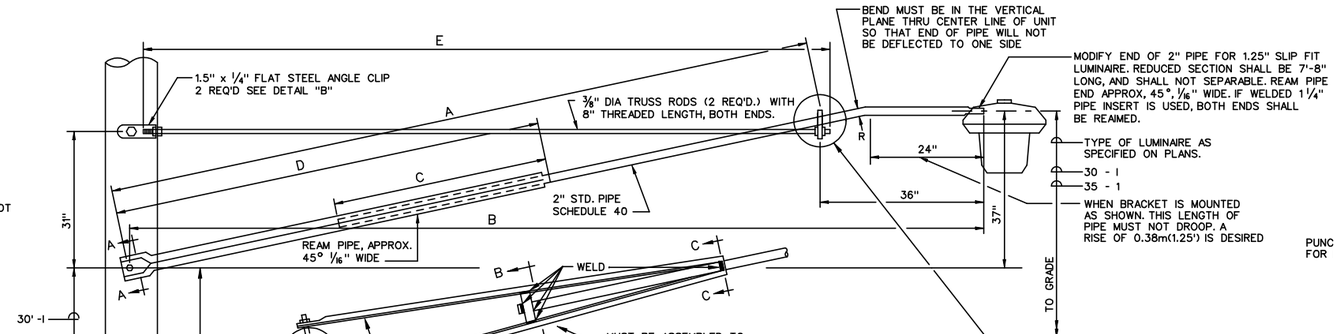


POLE STRAP DETAIL



TYPICAL COIL INSTALLATION

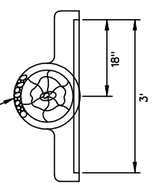




ELEVATION
N.T.S.

ARM DIMENSION TABLE				ROD LENGTH
A	B	C	D	E
13'-4"	16'	48"	96"	13'-3"
17'-3"	20'	6'	10'	17'-3"

MOUNTING DIMENSION TABLE		
30' LUM. MOUNTING HEIGHT		
	16' ARM	20' ARM
30 - I	30'	30'
30 - IC	26'-11"	26'-11"
35' LUM. MOUNTING HEIGHT		
35 - I	35'	35'
35 - IC	31'-11"	31'-11"

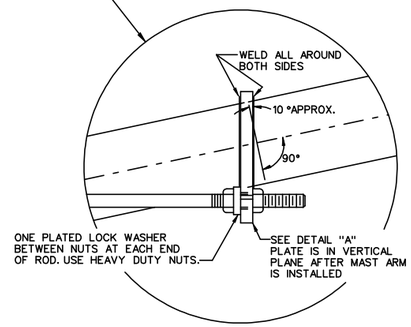


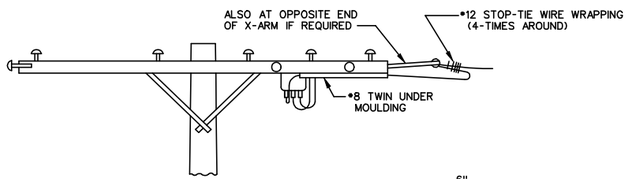
PLAN OF BUTT

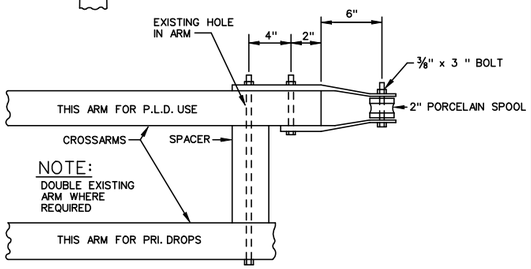
ARM MOUNTING DIMENSION TABLE							
30' LUM. MOUNTING HEIGHT				35' LUM. MOUNTING HEIGHT			
	ARM LENGTH				ARM LENGTH		
	6'	8'	10'		6'	8'	10'
30 - I	30'	30'	30'	35 - I	35'	35'	35'
30 - II	—	26'-3"	26'-3"	35 - II	—	31'-3"	33'-0"

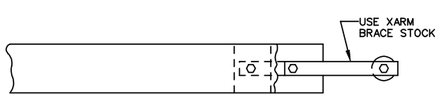
TYPICAL MARKING WOOD POLE TAGS

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

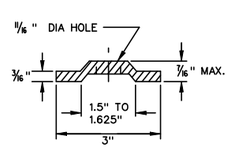




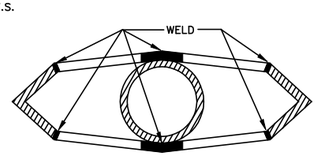




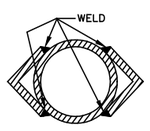
END OF ARM CONSTRUCTION FOR STREET LIGHTING



SECTION "A-A"
N.T.S.



SECTION "B-B"
N.T.S.



SECTION "C-C"
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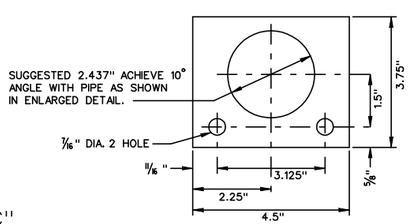
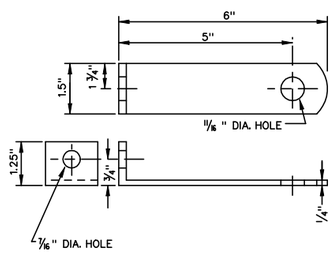


DETAIL "A"
STOCK 5/8" MILD STEEL



DETAIL "B"
2 REQ'D.

ST. LTG. BRACKET ARM & LUMINAIRE

SCALE: AS SHOWN		
REVISIONS		
Date	Description	Chkd. by

DETAILS
LARNED BRIDGE

MISCELLANEOUS OVERHEAD

DEPARTMENT OF PUBLIC WORKS — CITY OF DETROIT TRAFFIC ENGINEERING DIVISION

Checked by	Approved by	
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PUBLIC LIGHTING DEPARTMENT
CITY OF DETROIT

Checked by	Approved by	File No.
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Consulting Engineering Associates, Inc.
16580 WYOMING AVE. DETROIT MICHIGAN 48221
TELEPHONE: (313) 341-5797 FAX: 341-0205

Designed by	Checked by	Sheet No.
C.E.A.		67 of 67

Disk File Name	Job File No.
301PLDM	CEA 141100

Date 11-19-09

301

DATE PLOTTED: $DATE$
TIME: $TIME$
REVISION DATE: APRIL 1, 2001
Computer File: Pen Table File