STANDARD PLANS

PUBLIC UTILTIES

MT CLEMENS, MI 487043-2374

RIGHT OF WAY- METRO WEST

RIGHT OF WAY- METRO WEST 17651 MICHIGAN AVE., RM 301 DEARBORN, MI 48126 KEVIN LOGAN CELL FAX

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100 S MAIN ST, SUITE 314

AT&T METRO EAST

IOE SIKOKI

KI29152att.com MARK BRANAM

DEREK BULKLEY

Mark.branam@att.con BRADLEY HALL

CITY OF DETROIT PUBLIC LIGHTING AUTHORITY OF DETROIT

WEBSITE: www.pladetroit.or

SEWERAGE DEPARTMENT 6425 HUBER (CSF) A-219 DETROIT, MI 48211 DEBRA SINGLETON

dsingleton@dwsd.org EMERGENCY 24 HOUR SERVICE

DETROIT, MI 48226

CITY OF DETROIT

DETROIT WATER &

65 CADILLAC SOUARE, SUITE 3100

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

CITY OF DETROIT

1301 THIRD STREET

DETROIT, MI 48226

CHIEF OTIS B. HOLT

CITY OF DETROIT

DETROIT, MI 48207

AshPat@detroitmi.go JUBI CHACKUNKAL

Patelki@detroitmi.gov

DETROIT, MI 48238

12775 LYNDON

DETROIT, MI 48227

SIGN SHOP MANAGE

COMCAST CABLEVISION

ASHOK PATEL

SIGN SHOP 2425 FENKELL

TRAFFIC ENGINEERING, D.P.W.

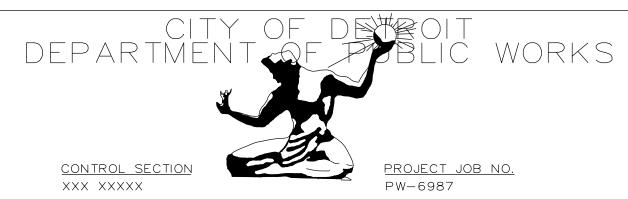
2633 MICHIGAN AVENUE

DETROIT FIRE DEPARTMENT

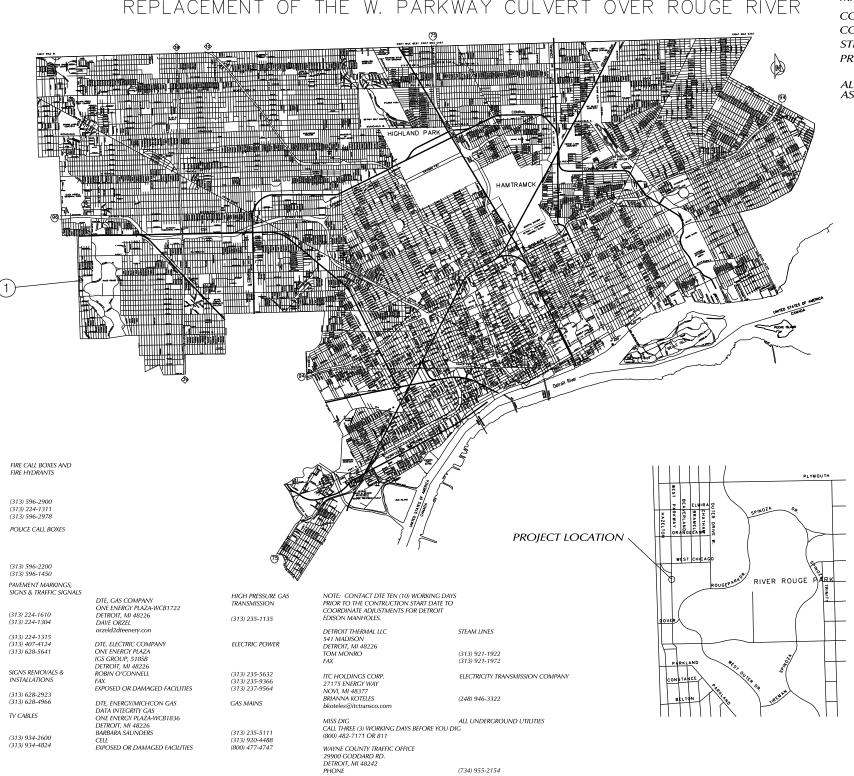
CITY OF DETROIT, DETROIT POLICE

DEL AKTIVIENT DETROIT PUBLIC SAFETY HEADQUARTERS 1301 THIRD STREET

FIRE MARSHAL'S DIVISION



CULVERT REPLACEMENT PROJECT REPLACEMENT OF THE W. PARKWAY CULVERT OVER ROUGE RIVER



(734) 955-2154

THE DESIGN OF THIS STRUCTURE IS BASED ON CURRENT AMERICAN ASSOCIATION OF THE STATE HIGHWAY AND TRANSPORTATION OFFICIALS, (AASHTO), FOR HIGHWAY BRIDGES HS 25 LOADING. LIVE LOAD PLUS IMPACT DEFLECTION DOES NOT EXCEED 1600 OF THE SPAN LENGTH. THE LOAD FACTOR METHOD OF DESIGN WAS USED FOR THIS STRUCTURE.

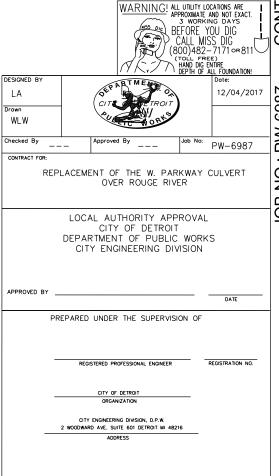
EXCEPT WHERE OTHERWISE INDICTED ON THESE PLANS, THE PROPOSAL AND SUPPLEMENTAL SPECIFICATIONS CONTAINED HEREIN, ALL MATERIALS AND WORKMANSHIP SHALL BE ACCORDANCE WITH THE MICHIGAN DEPARTMENT OF TRANSPORTATION STANDARDS SPECIFICATIONS FOR CONSTRUCTION 2003 EDITION.

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

THE DESIGN OF THE STRUCTRAL MEMBERS IS BASED ON MATERIALS OF THE FOLLOWING GRADES AND STRESSES.

CONCRETE: GRADE S2 f'c = 3,000 PSICONCRETE: GRADE D $f'c = 4,000 \, PSI$ STEEL REINFORCEMENT: $f_V = 60,000 \, PSI$ PRESTRESSED CONCRETE: f'c = 5,000 PSI

ALL DIMENSIONS ON THESE PLANS ARE IN INCHES EXCEPT

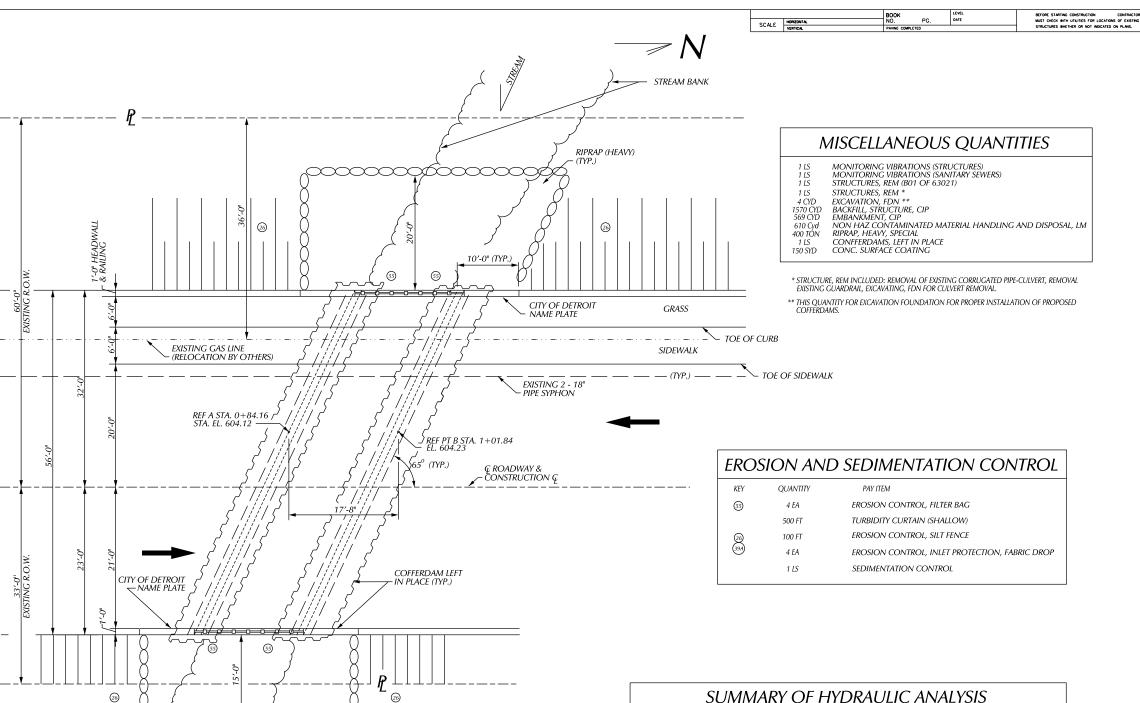


SECTION NO.: XXX XXXXX 7869- $\stackrel{\mathsf{M}}{\geq}$ 8 JOB

SHEET ___ OF ___

SCALE VERTICAL **REF PT COORDINATES BENCHMARKS** WITNESSES **NOTES:** THE WORK COVERED BY THESE PLANS INCLUDED REMOVAL OF THE EXISTING METAL CORRUCATED STEEL CULVERT, CONSTRUCTION OF THE PROPOSED CULVERT & RETAINING WALL AND PLACING RIPRAP TO THE LIMITS SHOWNS, ALL OTHER WORK IS INCLUDED IN THE ROAD PLANS THAT ARE PART OF THE WITNESSES TO CP#2 EAST - W. PARKWAY, NORTH HAZELTON X=5000.00WATER LEVEL IS SUBJECT TO CHANGE, THE CONTRACTOR IS RESPONSIBLE FOR PLANS REFER TO THE NAVD88 DATUM. CHISEL MARK 26.4 FEET RIGHT OF STA 4+81 MAKING A DETERMINATION OF WATER LEVELS THAT MAY EXIST DURING CONSTRUCTION. Y=5092.93 THE SURVEY INFORMATION ON THIS PROJECT WAS ACQUIRED BE THE CITY OF DETROIT DEPARTMENT OF PUBLIC WORKS, CITY ENGINEER DIVISION SURVEYOR. REF PT B X=5040.57Y=4555.99 CP#86 SW COR. W. PARKWAY & MEADOWPARK ELEV = 605.445' N. FIRE HYDRANT 7' W. CURB LINE 30' S. SOUTH CURB LINE OF MEADOWPARK MEASURES SHALL BE TAKEN TO PREVENT DEBRIS FROM FALLING FROM THE CHISEL MARK SW COR. STRUCTURES, IF DEBRIS FALLS INTO THE THE WATERWAY, IT SHALL BE REMOVED WITHIN 24 HOURS. SINCE DISTURBANCE OF THE WATERWAY BOTTOM MAY BE AS HARMFUL AS THE DEBRIS ITSELF, THE PREVENTIVE MEASURES MUST BE THE STATIONING SHOWN IS UNIQUE TO THIS PROJECT AND CANNOT BE RELATED TO ANY OTHER EXISTING STATIONING. W. PARKWAY & MEADOWPARK W. PARKWAY TRAFFIC IS TO BE DETOURED OVER OTHER EXISTING ROADS. 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. IMMEDIATELY AFTER THE CONSTRUCTION OF A CULVERT SLOPE IS COMPLETED, SLOPE PROTECTION AND SEEDING OR SODDING SHALL BE PLACED ON THE ADJACENT EMBANKMENT SLOPES. W. CHICAGO AVE. 86 FT. WD. MEADOW PARK 60 FT. V 7. 09 HAZELTON AVE. (EXISTING CULVERT (TO BE REMOVED) Ç ROADWAY & - CONSTRUCTION Ç EXISTING 2 - 18" PIPE SYPHON 73.82′ W. PARKWAY ST. 93 FT. WD. EXISTING GAS LINE (RELOCATION BY OTHERS) PROPOSED CULVERT SITUATION PLAN TOP OF PRECAST —ARCH EL. 593.43 100 12 13 PROPOSED PROFILE ALONG W. PARKWAY GRADE VERT. SCALE: 1"=10' HOR. SCALE: 1"=40' CHECKED BY APPROVED: CITY OF DETROIT WEST PARKWAY CULVERT OVER ROUGE RIVER CITY ENGINEERING DIVISION - D.P.W. CONTRACT GRADE ESTIMATE ASSIGNMENT FOR GENERAL PLAN OF SITE

TEST BORING NO. 58-01 LOCATION WEST PARRAYS STREET PARTICLA STREET, OF STREET OF THE WARRAY STREET PARTICLA STREET, OF STREET OF THE WARRAY STREET PARTICLA STREET, OF STREET OF THE WARRAY STREET PARTICLA STREET, OF S	11-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1
PRISCILL OFFSET: 12" EAST OF TOE OF THE WEST SEE SIDEMAX STATOR: - STATOR:	
SERVICE LEVATION BOSO SIRRACE LEVATION BOSO IT BORNE DATE 9/11/17 PP UCS MC 00 BOSO SIRRACE LEVATION BOSO IT BORNE DATE 9/11/17 PP US SAND SAND SAND SAND SAND SAND SAND SAN	
GROUND SURFACE LELEVATION: 605.0 FT BORRIG DATE: 9/11/17 95.00 1.5 NORIES OF PORTLAND CELEUT CONCRETE FILL - DELISE POORTY GRADED FINE TO COARSE SAND, WITH GRAVEL, 1800M, MOST (SP - SM) 1800.00 1.5 NORIES OF PORTLAND CELEUT CONCRETE FILL - DELISE POORTY GRADED FINE TO COARSE SAND, WITH GRAVEL, 1800M, MOST (SP - SM) 1800.00 1.5 NORIES OF PORTLAND CELEUT CONCRETE FILL - DELISE POORTY GRADED FINE TO COARSE SAND, WITH GRAVEL, 1800M, MOST (SP - SM) 1800M,	
500.00 7.5 INCHES OF PORTLAND CEMENT CONCRETE FILL - DISSE POORLY GAMED FINE TO COARSE SAND, WITH GRAVEL, TRACE SALT, BROWN, MOST (SP) 8 INCHES OF PORTLAND CEMENT CONCRETE FILL - SELTY FINE SAND, TRACE GRAVEL, DARK GRAY, MOST (SW) FILL - SELTY FINE SAND, TRACE GRAVEL, DARK GRAY, MOST (SW) FILL - SELTY FINE SAND, TRACE GRAVEL, DARK GRAY, MOST (SW) FILL - SELTY FINE SAND, TRACE GRAVEL, DARK GRAY, MOST (SW) FILL - SELTY FINE SAND, TRACE GRAVEL, DARK GRAY, MOST (SW) FILL - SELTY FINE SAND, TRACE GRAVEL, DRIVEN AND CORP. WATER TABLE AT E UPON COMPLETION ALITEMAND LIVES OF SHIP LEAN CLAY, TRACE SAND, TRACE GRAVEL, GRAY (CL) 595.00 VERY STIFF LEAN CLAY, TRACE SAND, TRACE GRAVEL, GRAY (CL) 596.00 VERY STIFF LEAN CLAY, TRACE SAND, TRACE GRAVEL, GRAY (CL) 596.00 VERY STIFF LEAN CLAY, TRACE SAND, TRACE GRAVEL, GRAY (CL) 596.00 VERY STIFF LEAN CLAY, TRACE SAND, TRACE GRAVEL, GRAY (CL) 596.00 VERY STIFF LEAN CLAY, TRACE SAND, TRACE GRAVEL, GRAY (CL) 596.00 VERY STIFF LEAN CLAY, TRACE SAND, TRACE GRAVEL, GRAY (CL) 596.00 VERY STIFF LEAN CLAY, TRACE SAND, TRACE GRAVEL, GRAY (CL) 597.00 VERY STIFF LEAN CLAY, TRACE SAND, TRACE GRAVEL, GRAY (CL) 597.00 VERY STIFF LEAN CLAY, TRACE SAND, TRACE GRAVEL, GRAY (CL) 597.00 VERY STIFF LEAN CLAY, TRACE SAND, TRACE GRAVEL, GRAY (CL) 597.00 VERY STIFF LEAN CLAY, TRACE SAND, TRACE GRAVEL, GRAY (CL) 597.00 VERY STIFF LEAN CLAY, TRACE SAND, TRACE GRAVEL, GRAY (CL) 597.00 VERY STIFF LEAN CLAY, TRACE SAND, TRACE GRAVEL, GRAY (CL) 597.00 VERY STIFF LEAN CLAY, TRACE SAND, TRACE GRAVEL, GRAY (CL) 597.00 VERY STIFF LEAN CLAY, TRACE SAND, TRACE GRAVEL, GRAY (CL) 597.00 VERY STIFF LEAN CLAY, TRACE SAND, TRACE GRAVEL, GRAY (CL) 597.00 VERY STIFF LEAN CLAY, TRACE SAND, TRACE GRAVEL, GRAY (CL) 597.00 VERY STIFF LEAN CLAY, TRACE SAND, TRACE GRAVEL, GRAY (CL) 597.00 VERY STIFF LEAN CLAY, TRACE SAND, TRACE GRAVEL, GRAY (CL) 597.00 VERY STIFF LEAN CLAY, TRACE SAND, TRACE GRAVEL, GRAY (CL) 597.00 VERY STIFF LEAN CLAY, TRACE SAND, TRACE GRAYEL, GRAY (CL) 597	
90.40 7.5 INCHES OF PORTLAND CEMENT CONCRETE FILL - DEISE POORLY GRADED FIRE TO COARSE SAND, WITH GRAVEL, 800.00 150	
602.00 FILL - DENSE POORLY GRADED FINE SAND, WITH SLIT, TRACE GRAVEL, BROWN AND DARK BROWN, MOIST (SPSM) FILL - DENSE POORLY GRADED FINE SAND, WITH SLIT, TRACE GRAVEL, BROWN AND DARK BROWN, MOIST (SM) FILL - DENSE POORLY GRADED FINE SAND, WITH SLIT, TRACE GRAVEL, BROWN AND DARK BROWN, MOIST (SM) FILL - DENSE POORLY GRADED FINE SAND, WITH SLIT, TRACE GRAVEL, BROWN AND DARK BROWN, MOIST (SM) FILL - DENSE POORLY GRADED FINE SAND, WITH SLIT, TRACE GRAVEL, BROWN AND DARK BROWN, MOIST (SM) FILL - DENSE POORLY GRADED FINE SAND, WITH SLIT, TRACE GRAVEL, BROWN AND DARK BROWN, MOIST (SM) FILL - DENSE POORLY GRADED FINE SAND, WITH SLIT, TRACE GRAVEL, BROWN, MOIST (SM) FILL - DENSE POORLY GRADED FINE SAND, WITH SLIT, TRACE GRAVEL, BROWN, MOIST (SM) FILL - DENSE POORLY GRADED FINE SAND, WORTH SLIT, TRACE GRAVEL, BROWN, MOIST (SM) FILL - DENSE POORLY GRADED FINE SAND, WORTH SLIT, TRACE GRAVEL, BROWN, MOIST (SM) FILL - DENSE POORLY GRADED FINE SAND, WORTH SLIT, TRACE GRAVEL, BROWN, MOIST (SM) FILL - DENSE POORLY GRADED FINE SAND, WORTH SLIT, TRACE GRAVEL, BROWN, MOIST (SM) FILL - DENSE POORLY GRADED FINE SAND, WORTH SLIT, TRACE GRAVEL, BROWN, MOIST (SM) FILL - DENSE POORLY GRADED FINE SAND, WORTH SLIT, TRACE GRAVEL, BROWN, MOIST (SM) FILL - DENSE POORLY GRADED FINE SAND, WORTH SLIT, BROWN, MOIST (SM) FILL - DENSE POORLY GRADED FINE SAND, WORTH SLIT, BROWN, MOIST (SM) FILL - DENSE POORLY GRADED FINE SAND, WORTH SLIT, BROWN, MOIST (SM) FILL - DENSE POORLY GRADED FINE SAND, WORTH SLIT, BROWN, MOIST (SM) FILL - DENSE POORLY GRADED FINE SAND, WORTH SLIT, BROWN, MOIST (SM) FILL - DENSE POORLY GRADED FINE SAND, WORTH SLIT, BROWN, MOIST (SM) FILL - DENSE POORLY GRADED FINE SAND, WORTH SLIT, BROWN, MOIST (SM) FILL - DENSE POORLY GRADED FINE SAND, WORTH SLIT, BROWN, MOIST (SM) FILL - DENSE POORLY GRADED FINE SAND, WORTH SLIT, BROWN, MOIST (SM) FILL - DENSE POORLY GRADED FINE SAND, WORTH SLIT, BROWN, MOIST (SM) FILL - DENSE POORLY GRADED FINE SAND, WORTH SLIT, BROWN, MOIST (SM) FILL - DENSE POORLY GRADED FINE	
FILL - SILTY FINE SAND, TRACE GRAVEL, DARK GRAY, MOIST (SM) 599.50 597.50 WATER TABLE AT 8" UPON COMPLETION MATER TABLE AT 8" UPON COMPLETION MOIST (SM) S99.50 FILL - SILTY FINE SAND, TRACE GRAVEL, DARK GRAY, MOIST (SM) FILL - SILTY FINE SAND, TRACE GRAVEL, DARK GRAY MOIST (SM) WATER TABLE AT 8" UPON COMPLETION MOIST (SM) WATER TABLE AT 8" UPON COMPLETION ALTERNATION LAWRENCE SAND, TRACE GRAVEL, BROWN, MOIST (SP-SM) FILL - MEDIUM DENSE SOURCE HOLD AND AND SELLY FINE TO COARSE SAND, WITH GRAVEL, S92.50 S92.50 S92.50 S92.50 S92.50 VERY STIFF LEAN CLAY, TRACE GRAVEL, GRAY (CL) S92.50 S92.50 S92.50 VERY STIFF LEAN CLAY, TRACE GRAVEL, GRAY MOIST (SITY FINE TO COARSE SAND, FREQUENTLY SILTY FINE SAND SEAMS, SB-02 VERY SOFT LEAN CLAY, TRACE SAND, FREQUENTLY SILTY FINE SAND SEAMS, SB-02	
S98.50 S98.50	124.
THE PRINCE SAND, STAND LAYERS OF SANDY SAND ACLAY FINE SAND, FEW GRAVEL, DARK GRAY, (CL) (SC) (SC) (COCASIONAL ORGANIC STANDA AND WOOD PECTS ABOVE 8 FEET) (FILL – MEDIUM DENSE POORLY GRADED FINE SAND, WITH SILT, TRACE GRAVEL, BROWN, MOIST (SP-SM) 595.00 594.00 VERY STIFF LEAN CLAY, TRACE SAND, TRACE GRAVEL, GRAY (CL) 592.50 592.50 592.00 VERY STIFF LEAN CLAY, TRACE SAND, TRACE GRAVEL, GRAY (CL) SPACE SAND, WET (SM) VERY STIFF LEAN CLAY, TRACE SAND, TRACE GRAVEL, GRAY (CL) SPACE SAND, WET (SM) VERY STIFF LEAN CLAY, TRACE SAND, TRACE GRAVEL, GRAY (CL) SPACE SAND, WET (SM) VERY STIFF LEAN CLAY, TRACE SAND, TRACE GRAVEL, GRAY (CL) SPACE SAND, WET (SM) VERY STIFF LEAN CLAY, TRACE SAND, TRACE GRAVEL, GRAY (CL) SPACE SAND, WET (SM) VERY STIFF LEAN CLAY, TRACE SAND, FREQUENTLY SILTY FINE TO COARSE SAND, WITH GRAVEL, BROWN, WET (SM) VERY STIFF LEAN CLAY, TRACE SAND, FREQUENTLY SILTY FINE SAND SEAMS, SB-02	31
S95.00 S94.00 VERY STIFF LEAN CLAY, TRACE SAND, TRACE GRAVEL, GRAY (CL) S92.50 S92	
S92.50 8 9 VERY STIFF LEAN CLAY, TRACE SAND, TRACE GRAVEL, GRAY (CL) 592.50 8 9 9 VERY STIFF LEAN CLAY, TRACE SAND, TRACE GRAVEL, GRAY (CL) 592.50 9 7 FILL — MEDIUM DENSE SILTY FINE TO COARSE SAND, WITH GRAVEL, BROWN, WET (SM) 592.50 9 7 FILL — MEDIUM DENSE SILTY FINE TO COARSE SAND, WITH GRAVEL, BROWN, WET (SM) 592.50 9 7 FILL — MEDIUM DENSE SILTY FINE TO COARSE SAND, WITH GRAVEL, BROWN, WET (SM) 592.50 9 7 FILL — MEDIUM DENSE SILTY FINE TO COARSE SAND, WITH GRAVEL, BROWN, WET (SM) 592.50 9 7 FILL — MEDIUM DENSE SILTY FINE TO COARSE SAND, WITH GRAVEL, BROWN, WET (SM) 592.50 9 7 FILL — MEDIUM DENSE SILTY FINE TO COARSE SAND, WITH GRAVEL, BROWN, WET (SM) 592.50 9 7 FILL — MEDIUM DENSE SILTY FINE TO COARSE SAND, WITH GRAVEL, BROWN, WET (SM)	
VERY LOSSE SANDY SHT. TRACE CRAVEL CRAY, HOIST (HL) VERY SOFT LEAN CLAY, TRACE SAND, FREQUENTLY SILTY FINE SAND SEAMS, SB-02	
$\begin{bmatrix} 590.00 \left(\frac{7}{2} \right) \end{bmatrix}$	
589.00	Vvd., Ste. 22 48202 33-2731
	W.Grand Blvd., Ste. Blord: M 48202 Tel: 31-3-693-2736 Fax: 313-963-2736
585.00 (5) STIFF LEAN CLAY, TRACE GRAVEL, GRAY (CL) 2690 25.3 103	3031
STIFF TO VERY STIFF SANDY LEAN CLAY, TRACE GRAVEL, OCCASIONAL SAND PARTINGS, GRAY (CL) 583.00	
STIFF SANDY LEAN CLAY, TRACE GRAVEL, OCCASIONAL SILTY FINE SAND SOIL BORING LOCATION PLAN	ORKS
580.00	C WC
578.00	TROI UBLI NG DI
8 HARD LEAN CLAY, TRACE SAND, TRACE GRAVEL, GRAY (CL)	CITY OF DETROIT DEPARTMENT OF PUBLIC WORKS CITY ENGINEERING DIVISION WEST PARKWAY CULVERT REPLACEMENT SOIL BORING LOG PLAN
575.00 (95) 11.5 (81) 11.5	ITY CALL
HARD LEAN CLAY, FEW SAND, TRACE GRAVEL, GRAY (CL) 573.00	ARTI ARTI
570.00 13 EXTREMELY DENSE SANDY SILT, FEW GRAVEL, TRACE CLAY, GRAY, WET (ML)	DEP C
NUMBERS IN CIRCLES DENOTE NUMBER OF BLOWS 1st 6 in REQUIRED TO DRIVE A 2" O.D. X 1.5" I.D. SPLIT 2nd 8 in Spoon Sampler 3 SUCCESSIVE 6" INCREMENTS	
567.00 EXTREMELY DENSE FINE GRAVEL, WITH SAND, TRACE SILT, GRAVEL, WITH SAND, TRACE SILT, TRACE GRAVEL, BROWN, WET (SP) EXTREMELY DENSE FINE GRAVEL, WITH SAND, TRACE SILT, GRAVEL, WITH SAND, TRACE SILT, TRACE GRAVEL, BROWN, WET (SP) S66.25 100/3 GRAY, WET (GP) POORLY GRADED FINE TO MEDIUM SAND, TRACE SILT, TRACE GRAVEL, BROWN, WET (SP) USING A 140 LB HAMMER FALLING 30".	
E.O.B. 38.75 FEET (EL. 566.25) BORING TERMINATED AT SAMPLER AND AUGER REFUSAL. POSSIBLE TOP OF BEDROCK E.O.B. 38.50 FEET (EL. 566.25) BORING TERMINATED AT SAMPLER AND AUGER REFUSAL. UCS = LAB DETERMINED UNCONFINED COMPRESSIVE STRENGTH - TONS/SQ.FT (TSF) POSSIBLE TOP OF BEDROCK MC = MOISTURE CONTENT - (%)	Coords
DD = DRY DENSITY - LBS/CU.FT (PCF)	ISSUED FOR:
	ISSUED FOR: DATE: BY:
	DATE:



	SUMMARY OF HYDRAULIC ANALYSIS											
		EXISTING			ŀ	PROPOSED						
FLOOD DATA	DISCHARGE (CFS)	WATER SURFACE ELEV. AT U/S FACE OF STRUCTURE	VELOCITY AT D/S FACE (FPS)	WATER SURFACE ELEV. AT U/S FACE OF STRUCTURE	VELOCITY AT D/S FACE (FPS)	WATERWAY AREA (SFT) AT D/S FACE	CHANGE IN WS EL 3 U/S OF PROPOSED STRUCTURE					
50 YEAR	1500	609.2	13.3	606	9.9	1321	3.2					
100 YEAR	1800	610.2	13.8	607.8	11.9	1842	1.9					
		MAXIMU	M BRIDGE AREA E	BELOW LOW CHORD	IS 151 SQUARE F	EET						

THE WATER SURFACE AND/OR ENENGY GRADE ELEVATIONS SHOWN ON THE ABOVE HYDRAULIC TABLE ARE TO BE USED FOR COMPARISON PURPOSES ONLY AND ARE NOT TO BE USED FOR ESTABLISHING A REGULATORY FLOORPLAIN. THE ELEVATIONS MAY NOT BE USED PROVIDED THEY ARE VERIFIED WITH THE LAND AND WATER MANAGEMENT DIVISION, MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY.

NOTES:

THE DESIGN OF THIS STRUCTURE IS BASED ON CURRENT AASHTO STANDARDS SPECIFICATIONS FOR HIGHWAY BRIDGES HS25 LOADING. THE LOAD FACTOR METHOD OF DESIGN WAS USED FOR THIS STRUCTURE.

THE REMOVAL OF THE EXISTING STRUCTURE, SLOPEWALLS AND GABIONS IS INCLUDED IN THE PAY ITEM, "STRUCTURE, REM". SEE "STRUCTURES REMOVAL SEQUENCE" ON SHEET .

REMOVAL OF THE EXISTING SUBSTRUCTURE UNITS SHALL BE ISOLATED FROM THE WATERWAY USING TEMPORARY STEEL SHEET PILING. TEMPORARY SHEETING FOR THE REMOVAL SHALL ADHERE TO THE SAME REQUIREMENTS FOR CONSTRUCTION AND DE-WATERING AS THE COFFERDAM. TEMPORARY SHEETING SHALL BE CUT OFF 1'-0" RELOW FINISH GRADE AND SHALL NOT INTERFERE WITH PROPOSED

DURING WORK ON THE EXISTING AND PROPOSED RETAINING WALLS CASE SHALL BE TAKEN TO PREVENT ANY MATERIAL FROM ENTERING THE WATERWAY. THE CONTRACTOR SHALL PROPOSED A SYSTEM FOR PROTECTION OF THE WATERWAY & SUBMIT IT TO THE ENGINEER FOR APPROVAL. PAID FOR AS "SEDIMENTATION CONTROL". SEE SPECIAL PROVISION.

PAYMENT FOR FALSE DECKING SHALL BE BASED ON THE AREA OF THE EXISTING ARCH BARREL OVER THE WATERWAY REGARDLESS OF THE SIZE OF THE BARCE OR PLATFORM USED. THE CONTRACTOR SHALL TAKE CARE NOT TO ALLOW THE EXISTING BARTH FILL TO FALL INTO THE WATERWAY.

GEOTEXTILE LINER SHALL BE PLACED ON ALL SLOPES PRIOR TO PLACING RIPRAP. PAYMENT FOR GEOTEXTILE LINER SHALL BE INCLUDED IN THE PAYMENT FOR 'RIPRAP, HEAVY, SPECIAL".

THE EXISTING STRUCTURE PROVIDES A WATERWAY AREA OF 91 SQUARE FEET. TO UNDERCLEARENCE ELEVATION 592.15.

WITHOUT THE PREVENTIVE MEASURES SHOWN ON THESE PLANS, THERE IS A POSSIBILITY THAT STREAM BED SCOUR MAY OCCUR. THE ESTIMATED TOTAL SCOUR DEPTH IS CALCULATED TO BE 12.6 AT ABUMENT A AND 12.6 AT ABUMENT B. THESE DEPTH'S ARE BASED ON A 100 YEAR RUNOFF EVENT.

THE DRAINAGE AREA CONTRIBUTORY TO THIS CROSSING IS ___ SQUARE MILES.

BROKEN CONCRETE SHALL NOT BE USED AS RIPRAP.

THE TREMIE SEAL DESIGN WAS BASED ON A WATER SURFACE AT EL. 589.95.

THE WIDTH OF THE TREMIF UNDER THE STRUCTURE MAY NOT BE INCREASED EXCEPT IN THE SOUTHWEST QUADRANT IN THE VICINITY OF THE EXISTING AND PROPOSED

THE USE OF VIBRATORY HAMMERS FOR INSTALLATION COFFERDAM SHALL NOT BE ALLOWED.

DEWATERING OF THE COFFERDAM IS TO BE MADE THRU FILTER BAGS UNTIL COMPLETION OF THE TREMIE SEAL. ALL COST ASSOCIATED WITH DEWATERING ARE THE REPONSIBILITY OF THE CONTRACTOR.

COFFERDAMS IN STREAM SHALL BE CUT OFF AT ELEVATION 585.2 OR A MINIMUM OF 1'-0" BELOW THE STREAM BOTTOM OR 1'-0" BELOW GRADE. WORK IS INCLUDED IN THE BID ITEM, "CONFFERDAMS, LEFT IN PLACE (C01 OF 63821).

CONCRETE SURFACE COATING IS TO BE APPLIED TO BOTH SIDES OF THE RAILING, THE HEADRAIL FACIA, THE CULVERT AND PEDESTAL WALL END FACES, THE TOP AND EXPOSED SIDE OF THE WINGWALL, RETURNWALLS AND THE RETAINING WALL. COATING SHALL EXTEND 6 INCHES MINIMUM BELOW FINISHED GRADE.

ALL EXCAVATION ON THE PROJECT SHALL BE CONSIDERED NONHAZARDOUS CONTAMINATED. STORAGE AREA FOR THE MATERIAL ON SITE MAY BE LIMITED.

PLAN

STREAM BANK

PIAN GRADE ESTIMATE

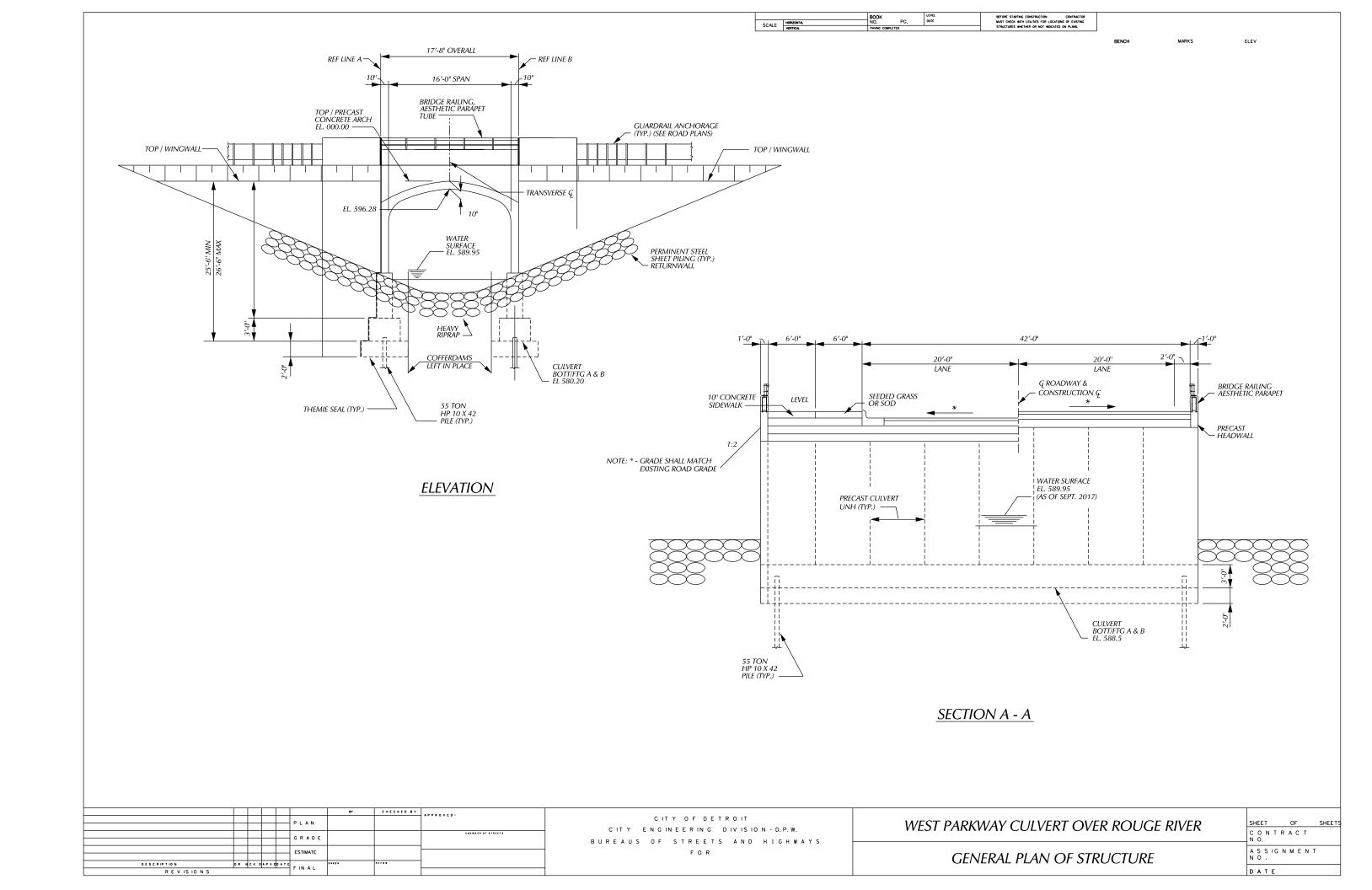
CITY OF DETROIT CITY ENGINEERING DIVISION - D.P.W. BUREAUS OF STREETS AND HIGHWAYS

F O R

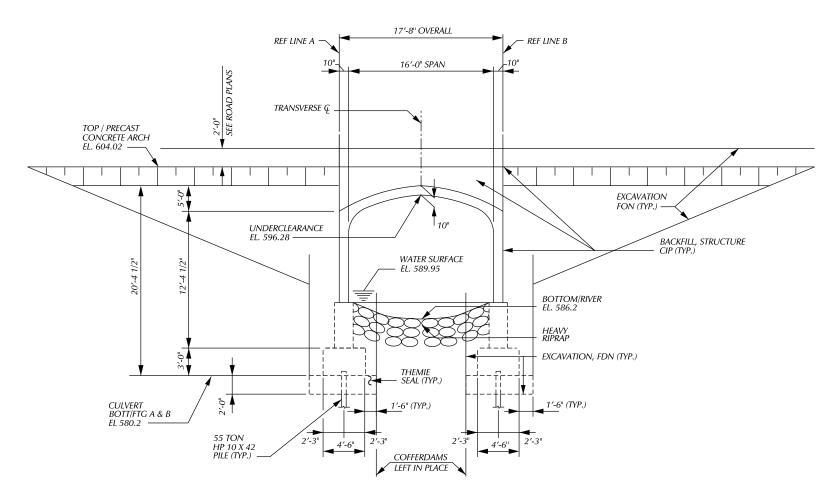
WEST PARKWAY CULVERT OVER ROUGE RIVER

OF CONTRACT

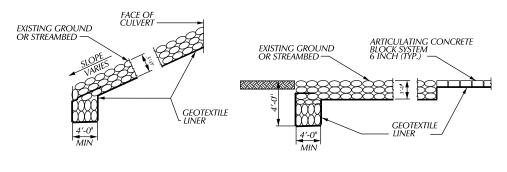
GENERAL PLAN OF STRUCTURE



SCALE HORIZONTAL VERTICAL ELEV



CULVERT SECTION



<u>TOE HEADER</u>

END HEADER

RIPRAP HEADER DETAILS RIPRAP SHALL BE BURIED BELOW TOP OF EXISTING SLOPE

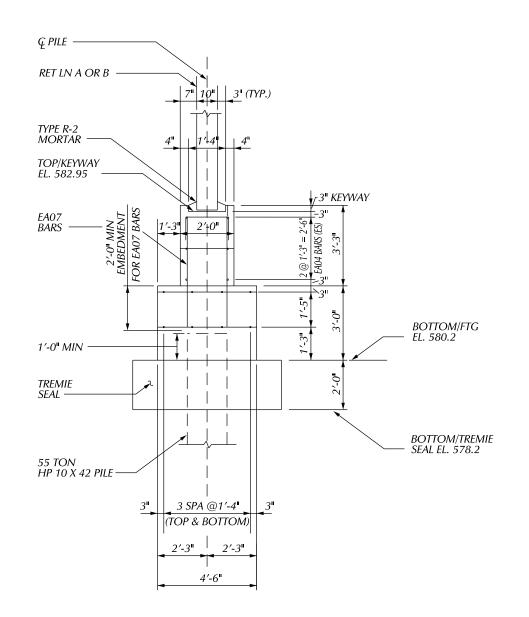
						BY	СНЕСКЕВ В У	APPROVED:
					PLAN			
					FLAN			
					GRADE			CNGMCC# 07 51#CC15
					GRADE			
					ESTIMATE			
DESCRIPTION	DR I	ско	APVO	DATE	FINAL		*****	
R E V IS IO N S					FINAL			

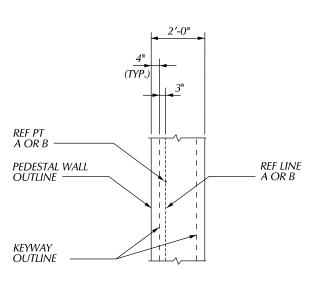
CITY OF DETROIT CITY ENGINEERING DIVISION - D.P.W. BUREAUS OF STREETS AND HIGHWAYS F O R

WEST PARKWAY CULVERT OVER ROUGE RIVER	SHEET OF S CONTRACT NO.
GENERAL PLAN OF STRUCTURE	ASSIGNMENT NO.

OF SHEETS

DATE

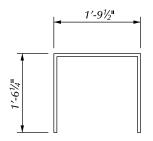




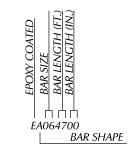
<u>DETAIL A</u>

EPOXY COATED STEEL REINFORCEMENT

BAR	NO. REQ'D	TOTAL WT FTG A	TOTAL WT FTG B



ED060410



BAR LEGEND



EA BAR

SECTION THRU PEDESTAL WALL

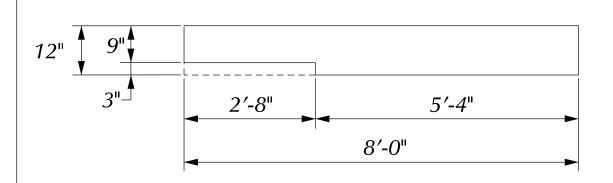
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CITY OF DETROIT CITY ENGINEERING DIVISION - D.P.W. BUREAUS OF STREETS AND HIGHWAYS FOR

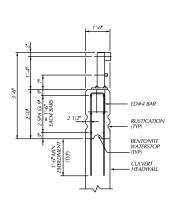
WEST PARKWAY CULVERT OVER ROUGE RIVER

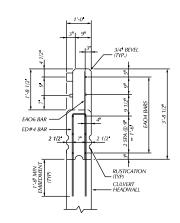
SHEET OF
CONTRACT
NO. ASSIGNMENT NO.

CULVERT SUBSTRUCTURE DETAILS

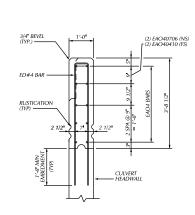


PLAN - CULVERT END WALL





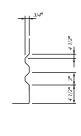
BEFORE STARTING CONSTRUCTION CONTRACTOR
MUST CHECK WITH UTLITES FOR LOCATIONS OF EXISTING
STRUCTURES WHETHER OR NOT INDICATED ON PLANS.



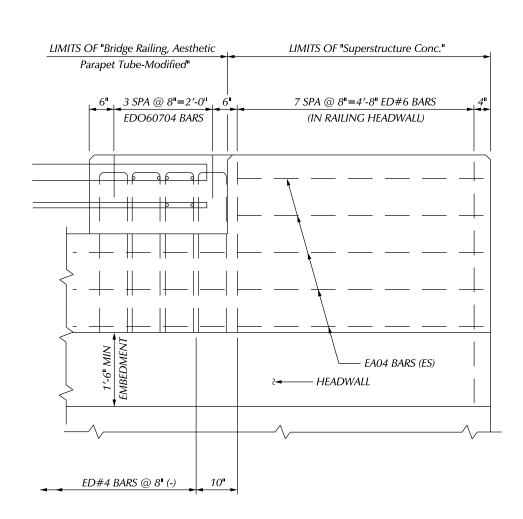
TYPICAL CULVERT RAILING SECTION

SECTION AT CULVERT END WALL

SECTION AT CULVERT END WALL



RUSTICATION DETAIL
(SHOWING RUSTICATION)



PLAN - CULVERT END WALL DETAIL

						BY	CHECKED BY	APPROVED:
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					PLAN			
								CNGMCC# OF STREETS
					GRADE			
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					ESTIMATE			
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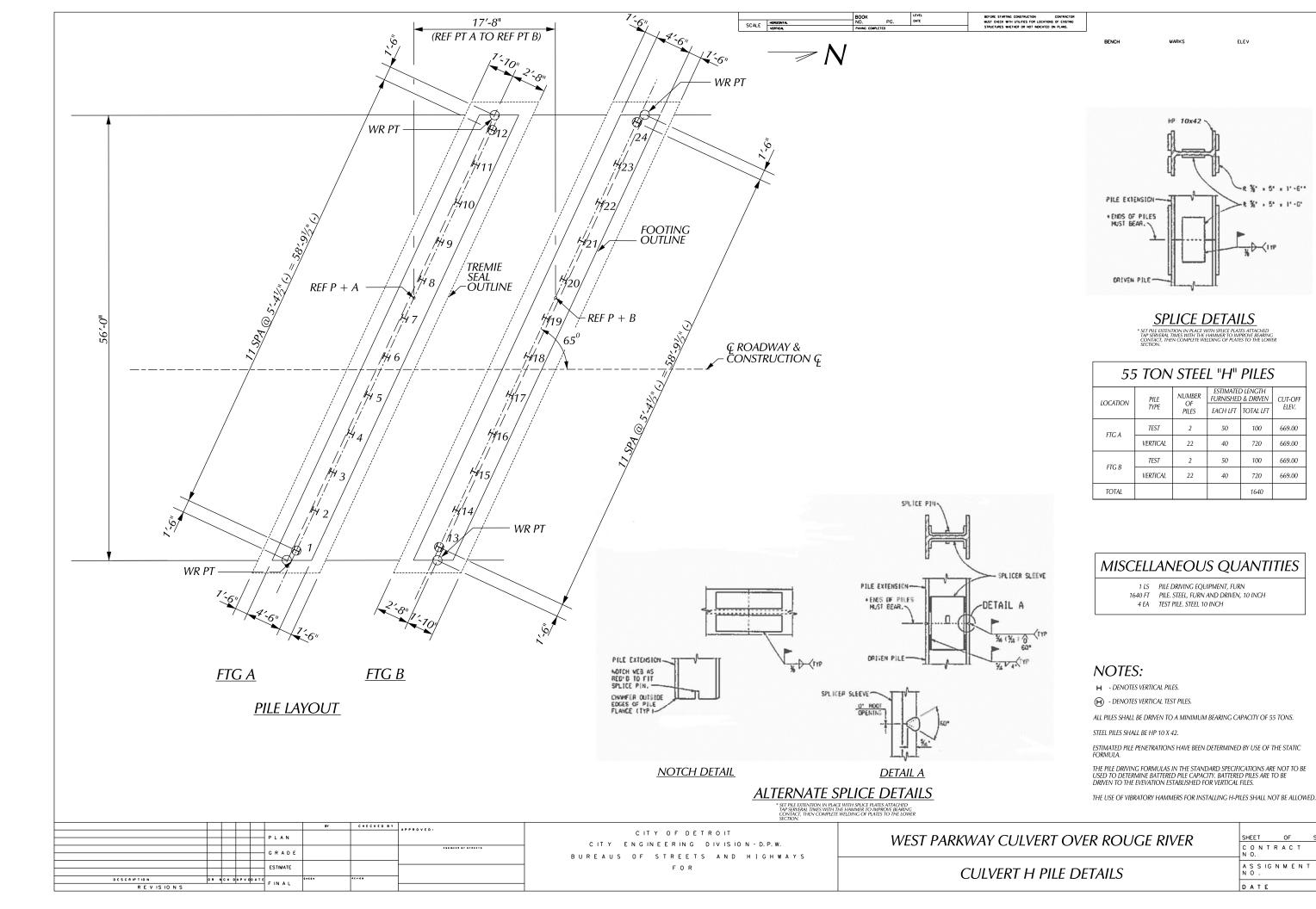
CITY OF DETROIT
CITY ENGINEERING DIVISION - D.P.W.
BUREAUS OF STREETS AND HIGHWAYS
FOR

WEST PARKWAY CULVERT OVER ROUGE RIVER

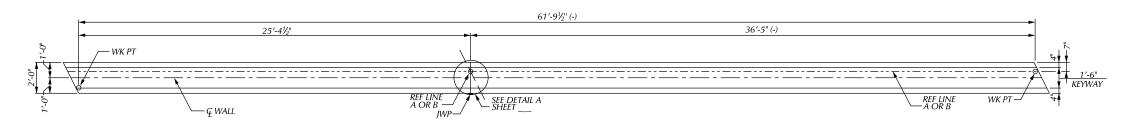
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CULVERT RAILING DETAILS

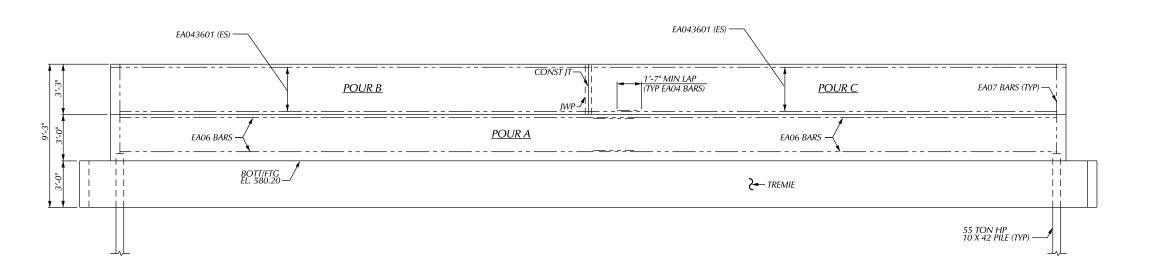


ELEV

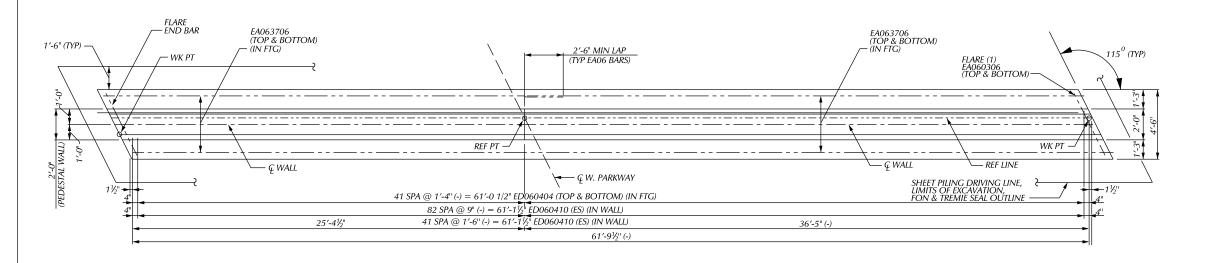


MISCELLANEOUS QUANTITIES WALL A WALL B TOTAL CONC. GRADE T SUBSTRUCTURE CONC. 171 CYD REINFORCEMENT STEEL. EXPOXY COATED 14610 I R 28 28 JOINT WATERPROOFING 56 SFT

PLAN OF PEDESTAL WALL



ELEVATION - PEDESTAL WALL



PLAN OF FOOTINGS

18 18

SUBSTRUCTURE CONCRETE **QUANTITIES** FTG A

32.2

18

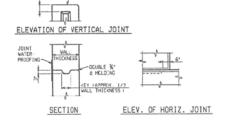
17.3

FTG B

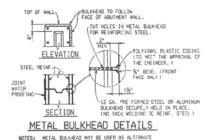
32.2

18

17.3



CONSTRUCTION JOINT DETAILS



NOTES: METAL BULKHEAD MAY BE USED AS ALTERNATE CONSTRUCTION JOINT AT CONTRACTOR'S EXPENSE. CARE IS TO BE USED IN CASTILOC CONFERTE AROUND BULKHEAD TO PREVENT DISLOCATION OR MISALICAMENT OF THE BLERGEAD.

NOTES:

THE SUBSTRUCTURE DESIGN IS BASED ON A FACTORED MAXIMUM VERTICAL LOAD OF 20 KIPS/FT AND A HORIZONTAL LOAD OF 8 KIPS/FT.

JWP DENOTES JOINT WATERPROOFING.

FOR PILE QUANTITIES, LAYOUT AND NOTES, SEE SHEET ____

LOW TEMPERATURE PROTECTION OF CONCRETE SHALL BE APPLIED ACCORDING TO SECTION 706.03J OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION.

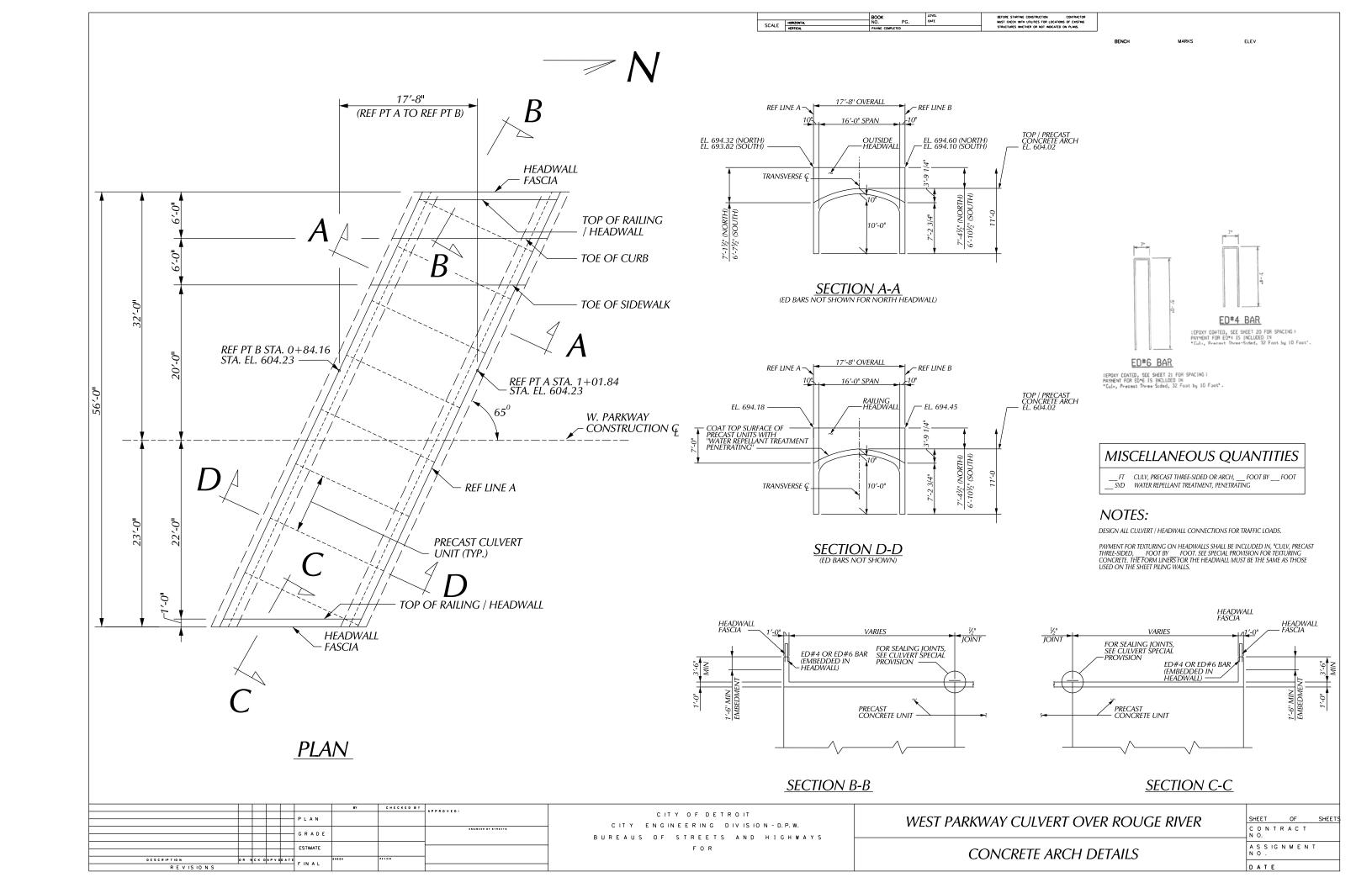
LOW TEMPERATURE PROTECTION OF CONCRETE WILL NOT PAID FOR SEPARATELY BUT WILL INCLUDED IN THE BID ITEM FOR "SUBSTRUCTURE CONC" AND "CONCRETE

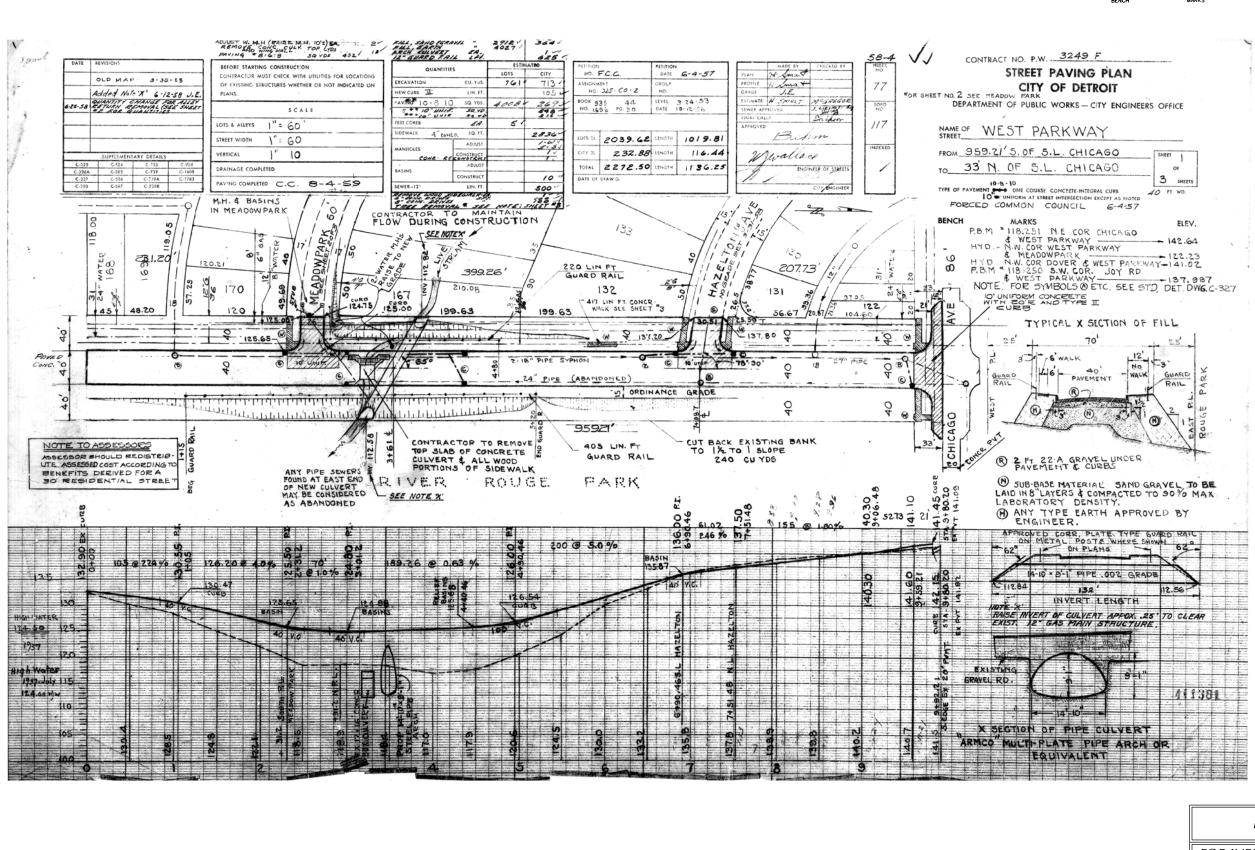
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CITY OF DETROIT CITY ENGINEERING DIVISION - D.P.W. BUREAUS OF STREETS AND HIGHWAYS FOR

WEST PARKWAY CULVERT OVER ROUGE RIVER

CONTRACT NO. ASSIGNMENT NO. **CULVERT SUBSTRUCTURE DETAILS**





EXISTING

ELEV

FOR INFORMATION ONLY

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

SHEET

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CITY OF DETROIT

CITY ENGINEERING DIVISION - D.P.W.

UREAUS OF STREETS AND HIGHWAY

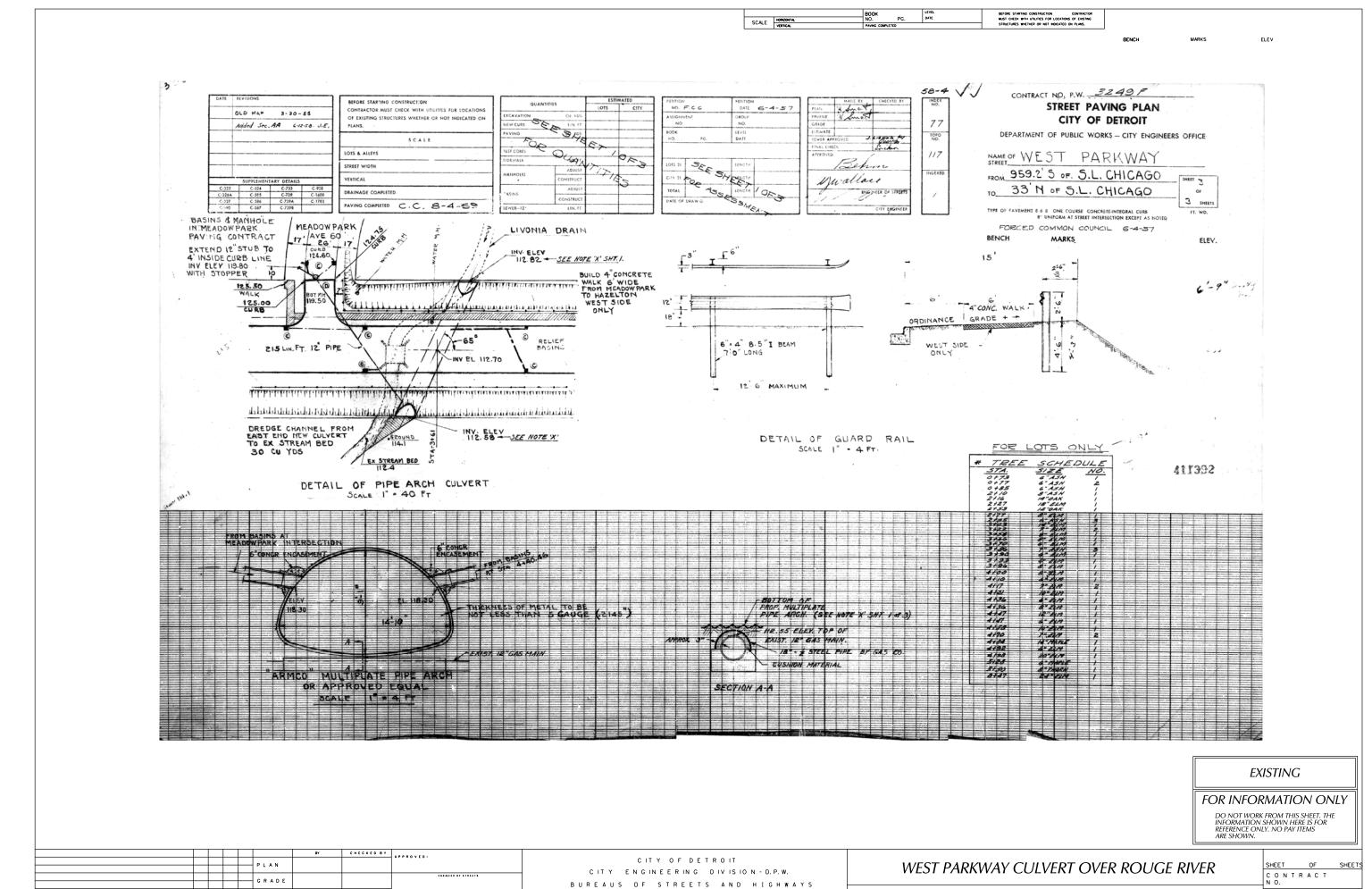
FOR

WEST PARKWAY CULVERT OVER ROUGE RIVER

EXISTING STREET PAVING PLAN

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OF



F O R

ESTIMATE

DR NCK DAPY COATE FINAL

DESCRIPTION

ASSIGNMENT NO.

EXISTING STREET PAVING PLAN