



M.E.P. CONSULTING ENGINEERS, INC.

MECHANICAL • ELECTRICAL • PLUMBING • TECHNOLOGY • FIRE PROTECTION ► ENGINEERING & INNOVATION

Basis of Design Report

Area of Work: IH 30 from Sylvan Avenue to North Beckley Avenue

The new highway design will call for the removal of majority of the existing light poles in the scope of work area in addition to the utilization of some existing light poles. The circuits that serve light fixtures which are to be demolished shall be removed back to the source breaker. The existing breaker shall be used to serve the new circuits to the new light fixtures. The existing light poles that are to remain in place indicated on the drawings shall utilize the existing circuits serving them but will require new pole, fixture and lamps. The new light poles shall be circuited to the existing lighting circuits if the existing lighting circuits have enough capacity and are able to compensate for the voltage drop across the entire circuit. In the instance that the existing circuit does not have enough capacity for the additional new lights, the existing contactor and lighting panel shall be verified for availability to serve new circuits. All lights shall be run through contactors that are connected to the city operated timeclocks. The light levels required for each lane shall be at a minimum the Illumination Engineering Society standards for roadway lighting.

Area of Work: North Beckley Avenue to Signature Bridge not including Bike and Hike Illumination

The look of the signature bridge light fixtures shall be extended from the west side of the bridge to North Beckley Avenue in order to create a continuous theme. The existing light poles on the east bound lanes shall be demolished with the existing circuits remaining and extended to the new light poles. The west bound lanes shall be circuited to the existing lighting circuits along the west bound lanes if the existing lighting circuits have enough capacity and are able to compensate for the voltage drop across the entire circuit. In the instance that the existing circuit does not have enough capacity for the additional new lights, the existing contactor and lighting panel shall be verified for availability to serve new circuits. All lights shall be run through contactors that are connected to the city operated timeclocks. The light levels required for each lane shall be at a minimum the Illumination Engineering Society standards for roadway lighting.

Signature Bridge Main Lanes

The signature bridge main lanes shall have a new style light fixture coordinated with the new signature bridge architect. The existing light fixtures shall be demolished back to the contactors that serve the circuits of the lights. New power drops from the medium voltage power lines that run along each side of the levees shall serve new power centers on each side of the levees. The power centers will provide distribution and controls to the main lane light poles and the other lights on the signature bridge. Coordination must be conducted with the City of Dallas and TxDOT in order to determine metering requirements. Current plans call for main lanes and frontage roads including hike and bike trails to have shared light fixtures.



Trespass Report

Area of Work: IH 30 from Sylvan Avenue to North Beckley Avenue

The area north of the west bound roads along Interstate Highway 30 does not contain any residential neighborhoods within 200' of the nearest light fixture. The light does not trespass further than the frontage roads towards any residential neighborhood.

The closest residential neighborhood south of Interstate Highway 30 is approximately 200' south of the interstate. The maximum light trespass from any light fixture along the east bound roads of Interstate Highway 30 is 25' behind the light fixture and does not intrude in any residential zones.

Area of Work: North Beckley Avenue to Signature Bridge not including Bike and Hike Illumination

The area north of the west bound roads along Interstate Highway 30 does not contain any residential neighborhoods within 200' of the nearest light fixture. The light does not trespass further than the 25' behind the light fixtures.

Signature Bridge Main Lanes

There are no residential zones on the south nor the north areas within 200' of any light fixture.

Hike and Bike Trails

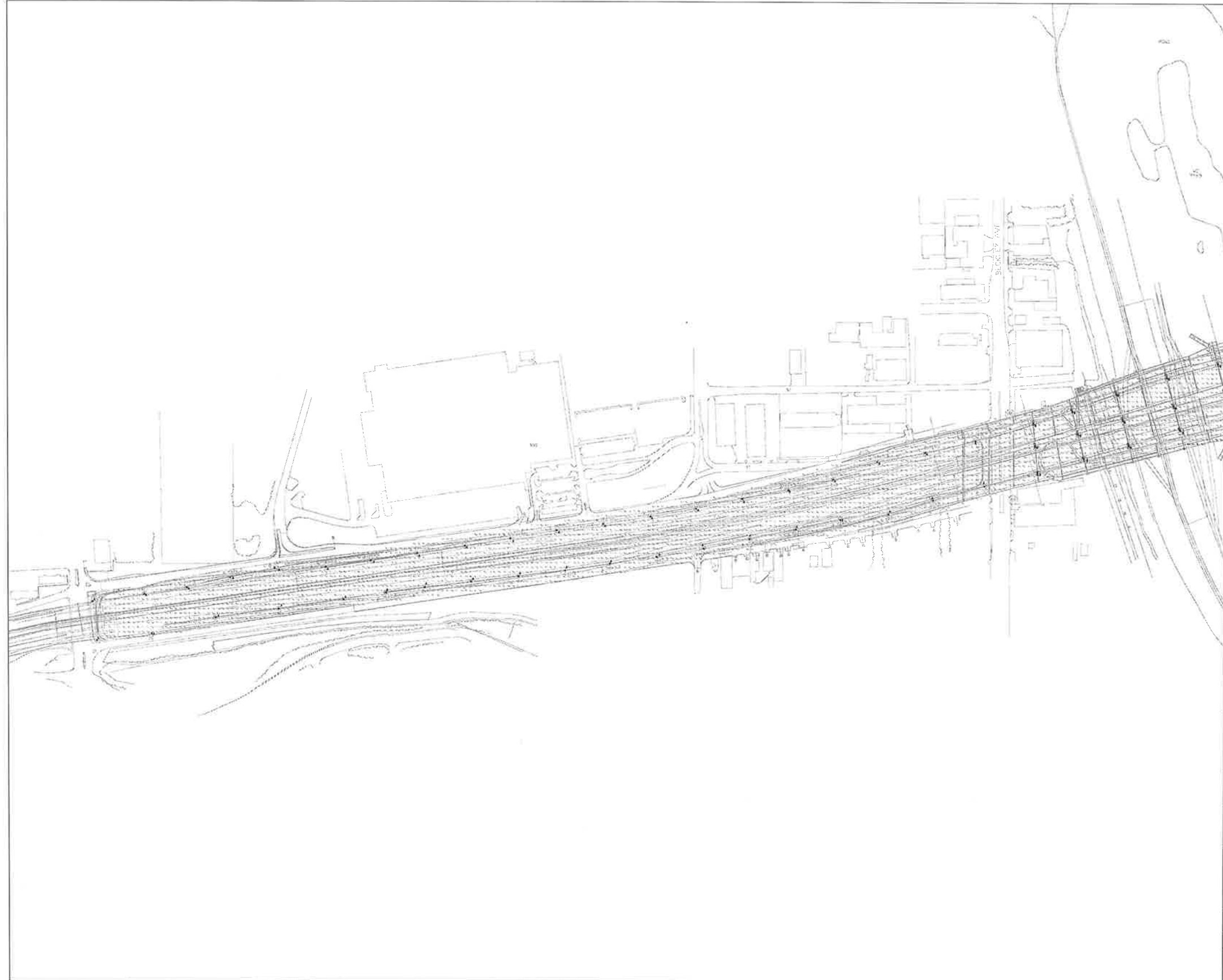
There are no residential zones on the south nor the north areas within 200' of any light fixture.

East Levee to IH 35E (End of Project Scope)

There are no residential zones on the south nor the north areas within 200' of any light fixture.

Reference

Refer to attachment 1 for footcandle levels and light levels at point locations. Any light that is 0.1 footcandles or less is considered not to have any illumination on the grade surface.



SYMBOL LEGEND

- PA NEW 400W HPS SINGLE-HEAD POLE LIGHT ON 50' POLE.
- PB NEW 400W HPS DOUBLE-HEAD POLE LIGHT ON 40' POLE.
- CE EXISTING HIGH MAST FIXTURE W/ (12) 1000W HPS LAMPS ON A 250' POLE.
- CR RELOCATED HIGH MAST FIXTURE W/ (12) 1000W HPS LAMPS ON A 250' POLE.
- PP EXISTING MEDIUM VOLTAGE POWER POLE.

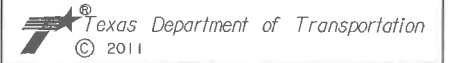
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 MEP CONSULTING ENGINEERS
 ENGINEER: MEHDI NEMATI
 TEXAS REGISTRATION NO: 96015



Parsons Brinckerhoff Americas Inc.
 2777 N. Stemmons Freeway
 Suite 1333
 Dallas, TX 75207 T&E ID 2263

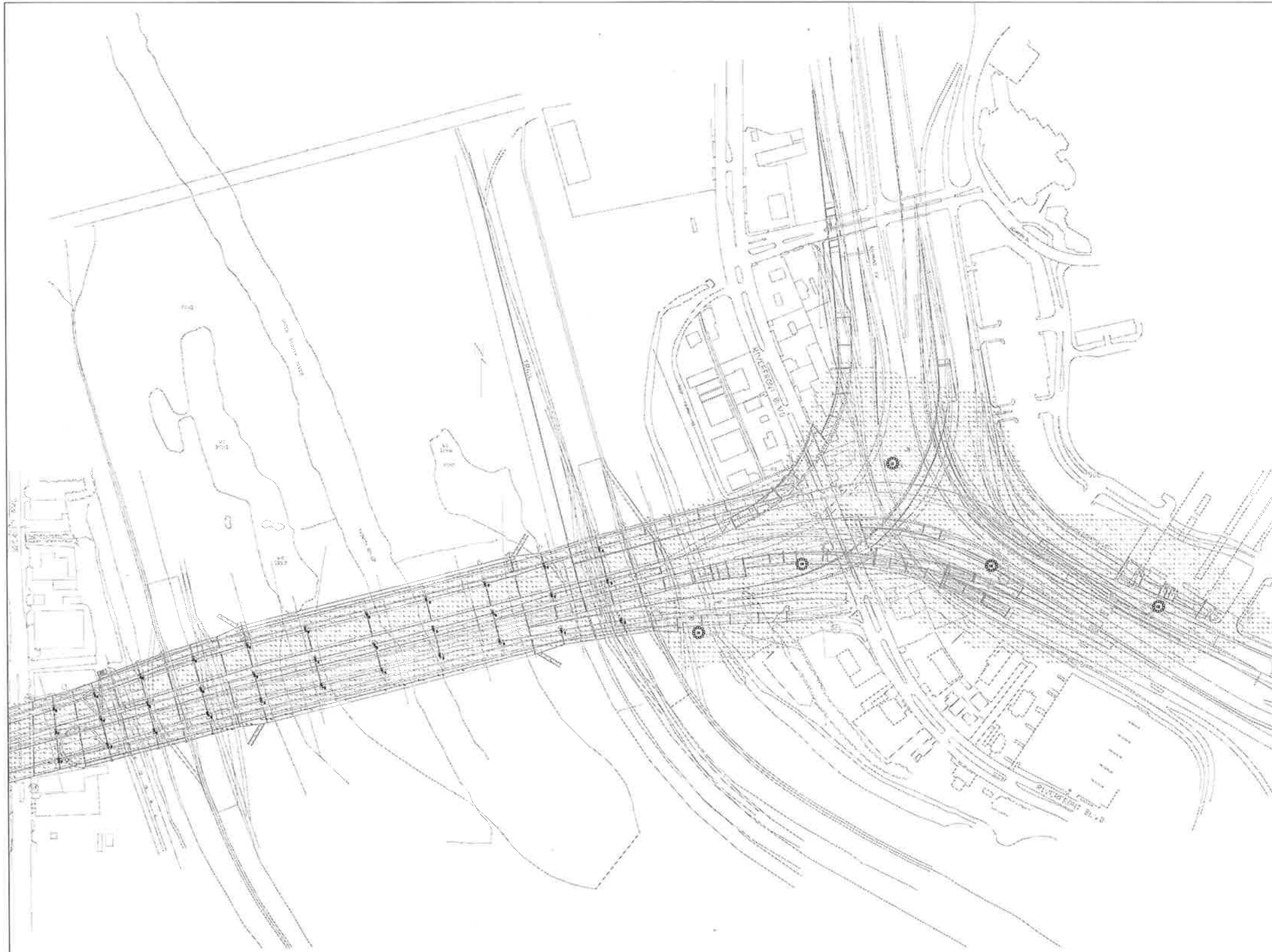


IH 30

Attachment #1 Sheet 1

SCALE: 1" = 400'

DESIGN	FED. NO. DIV. NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
GRAPHICS	6	6		
CHECK	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK	TEXAS	DAL	DALLAS	
CHECK	CONTROL	SECTION	JOB	
	106B	04		



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- PB NEW 400W MH DOUBLE-HEAD POLE LIGHT ON 40' POLE.
- CE EXISTING HIGH MAST FIXTURE W/ (12) 1000W HPS LAMPS ON A 250' POLE.
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PB Parsons Brinckerhoff Americas Inc.
 2777 N. Stemmons Freeway
 Suite 1535
 Dallas, TX 75207 TBPE ID 2263



IH 30

Attachment #1 Sheet 2

SCALE: 1" = 400'

DESIGN	FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
GRAPHICS	6	STATE	DISTRICT	COUNTY
CHECK	TEXAS	DAL	DALLAS	
CHECK	CONTROL	SECTION	JOB	
	1068	04		