

MODIFICATION OF ENCROACHMENT AGREEMENT

State of Oklahoma

County of Tulsa

1. This document is dated _____.

2. Legal description of affected land:

The NW/4 of the NW/4 of Section 2, T18N, R14E, Broken Arrow, Tulsa County, Oklahoma.

3. **GRANTOR**, Explorer Pipeline Company, a Delaware Corporation (“EPL”), granted an Encroachment Agreement, (“AGREEMENT”), to **GRANTEE**, the City of Broken Arrow, by instrument dated 3 August 2005, filed 5 October 2005, recorded as Doc# 2005119050 Tulsa County Clerk, Tulsa County, Oklahoma.

4. Per ¶12 of AGREEMENT, GRANTEE is restricted from constructing any structures within EPL’s easement (“EASEMENT”). GRANTEE now wishes to construct a traffic light above EPL’s easement, and EPL consents, subject to restrictions herein.

5. To accommodate GRANTEE’s construction, if EPL needs to perform any maintenance, security or repair tasks, GRANTEE will pay EPL in advance for such items of work. EPL will identify such items and their costs as soon as they are reasonably able.

6. In consideration of the premises and subject to the same conditions found in AGREEMENT, EPL hereby grants GRANTEE permission to construct a traffic light within EASEMENT as shown on the attached drawings insofar as EPL has the right title and interest to grant such permission,.

6.1. Any protective slabs, pavements, driveways, sidewalks, fences, landscaping, or anything else located in EASEMENT that have to be removed for access to pipeline for emergency or maintenance purposes, will be removed and replaced at GRANTEE’S expense.

6.2. The minimum vertical clearance between EPL’s pipe and proposed underground encroachments through EPL’s right-of-way (utility lines, other pipes, whatever) is 24”. Unless required for proper operation (e.g. drainage), such encroachments will be of uniform depth for the full width of EASEMENT. Such encroachments shall cross under EPL’s pipe whenever possible.

6.3. As much clearance as possible should be maintained between EPL’s pipe and any underground electrical conductors. Conductors shall be encased in steel conduit and covered with a 6” minimum layer of red concrete. Should it be impractical to install the conductor under EPL’s pipeline, it may be installed above EPL’s pipeline provided the 24” minimum clearance is obtained to the bottom of a 12” minimum layer of red concrete containing the centralized steel conduit. All conductors including the bare copper neutral shall be insulated for maximum circuit voltage in the vicinity of the pipeline.

6.4. After GRANTEE completes installation of all construction, GRANTEE will provide EPL with three copies of as-built plans showing all underground and above-ground encroachments.

7. All other rights described in AGREEMENT remain unchanged.

8. This agreement shall be binding upon the heirs, executors, administrators, successors and assigns of the parties hereto; and the rights and easements herein granted may be leased or assigned, together or separately and in whole or in part.

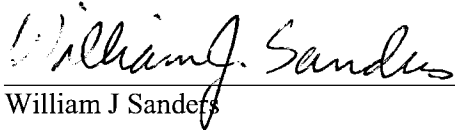
TO HAVE AND TO HOLD said rights and right-of-way, easements, estates, and privileges unto the said GRANTEE, its successors and assigns, so long as said right-of-way and easements are used for the purposes granted herein.

IN WITNESS WHEREOF,
EPL has executed this instrument this _____ day of December, 2017.

WITNESS:

Ray Matlock, Explorer Pipeline Company

Explorer Pipeline Co.
Approved as to form



William J Sandefur

State of Oklahoma |
County of Tulsa |

BEFORE ME, the undersigned authority, on this day personally appeared **Ray Matlock**, known to me to be the persons whose name is subscribed to the foregoing instrument, and acknowledged to me that he executed the same on behalf of Explorer Pipeline Company for the purposes and consideration therein expressed.

GIVEN under my hand and seal of office, this _____ day of December, 2017.

Notary Public in and for Tulsa County, Oklahoma
My commission expires: _____

WITNESS:

Date

City of Broken Arrow

State of Oklahoma

County of Tulsa

BEFORE ME, the undersigned authority, on this day personally appeared _____

_____,
known to me to be the person(s) and officer(s) whose name(s) is/are subscribed to the foregoing instrument,
and acknowledged to me that he/she/they executed the same on behalf of the City of Broken Arrow, OK,
for the purposes and consideration therein expressed, and in the capacity therein stated.

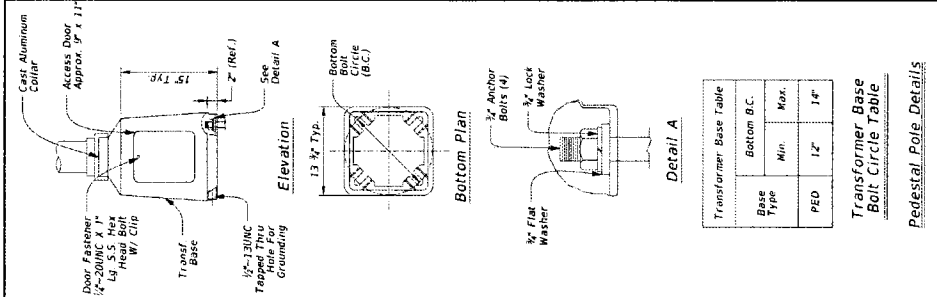
GIVEN under my hand and seal of office, this _____ day of December, 2017.

Notary Public in and for Tulsa County, Oklahoma

My commission expires: _____

General Notes:

1. Footings shall be provided to fix the length of the anchor bolts and conductors that project out of the concrete footings.
2. Anchor bolt templates shall be ASTM A36 with a minimum thickness of 1/2" and shall top and bottom need not be galvanized.
3. Footing shall be constructed with at least two source epoxy conduits, some of which may be galvanized.
4. Electrical conduit or conductive sleeves shall be in accordance with Section 002, "Electrical Conduit".
5. If a breakaway device is to be installed, the footing shall be cast to ground level as possible to assure the proper action of the breakaway device and to prevent damage to one footing or another of an impacting vehicle.
6. If specifying, the footing may be recessed either below grade or below grade, see the plans for location and length. Also the vertical and spiral bar length along with conduit lengths may be adjusted accordingly.
7. Provide 3 inches of clearance from outside edges, 3 inches of clearance from bottom, and 3 inches clearance from top of footing for all reinforcing steel.
8. If anchor bolt data is not specified in the plans, the bolt size and placement for new plans shall be in accordance with the approved shop drawings. Anchor bolts shall be installed to fit the plate assembly base plate.
9. If the footing is constrained by a contractor when the signal transformer is installed, the contractor shall be responsible for the following:
 - (A) An anchor bolt sleeve plate shall be installed.
 - (B) The conduit sleeves for the 3/4" x 8" anchor bolts shall be 2" high above the edge of the footing and be capped on both ends, unless the conduit sleeves shall be sized to accommodate the CID specified in the plans, as shown in the plans and detailed herein.
 - (C) The size of the anchor bolt and the bolt circle dimension shall be as shown in the plans and detailed herein.
10. If the Contractor elects to install cable-in-bore (CID) trencher conduit prior to constructing the footing, the CID conduit may be placed in the concrete footing. The contractor shall be responsible for the following:
 - (A) The footing shall be constructed to accommodate the CID specified in the plans. Example: 2 inch CID requires a 3 inch diameter sleeve.
 - (B) The anchor bolts, conduit sleeves, templates, ground rod, ground wire, clamp and sleeve shall be included in the unit price bid for the footing materials. The electrical conduit shall be prepared for placement and paid for at the unit price bid for the electrical conduit.
 - (C) The footing shall be constructed to accommodate the CID specified in the plans. Example: 2 inch CID requires a 3 inch diameter sleeve.
11. The anchor bolts, conduit sleeves, templates, ground rod, ground wire, clamp and sleeve shall be included in the unit price bid for the footing materials. The electrical conduit shall be prepared for placement and paid for at the unit price bid for the electrical conduit.
12. Install a conduit tapping, adapter, or compression coupling if necessary to connect conduits of dissimilar materials.
13. The anchor bolt projection shall be either:
 - (A) 3/4" for shoe base.
 - (B) 3/4" minimum to 6" maximum for transformer base.
 - (C) As required for double nut leveling.
14. The Contractor shall construct the top of the signal pole footings level to avoid the use of shims when installing the light poles on the footings.
15. Electrical conductors shall be in accordance with Section 834, "Electrical Conductors For Traffic Signals".
16. All concrete shall be Class "A" and reinforcing steel shall be in accordance with ASTM A615 Grade 60 or ASTM A615 Grade 60.
17. If rock is encountered, the footing shall extend a minimum of one footing diameter into solid rock.
18. Base anchor bolt to rear edge with a #4 #6 bare stranded copper conductor in a 1/2" diameter metal 105 fiber mechanical conductor rated for embedding in concrete.
19. All breakaway bases shall meet the breakaway requirements of the 2012 Edition of the ASHTO Standard Specifications For Structural Supports For Highway Signs, Luminaires and Traffic Signals, and shall be tested to resist 150% of the design moment. The footing shall have been structurally tested to resist 150% of the design moment.
20. Ground rod may be located in adjacent signal pull box.

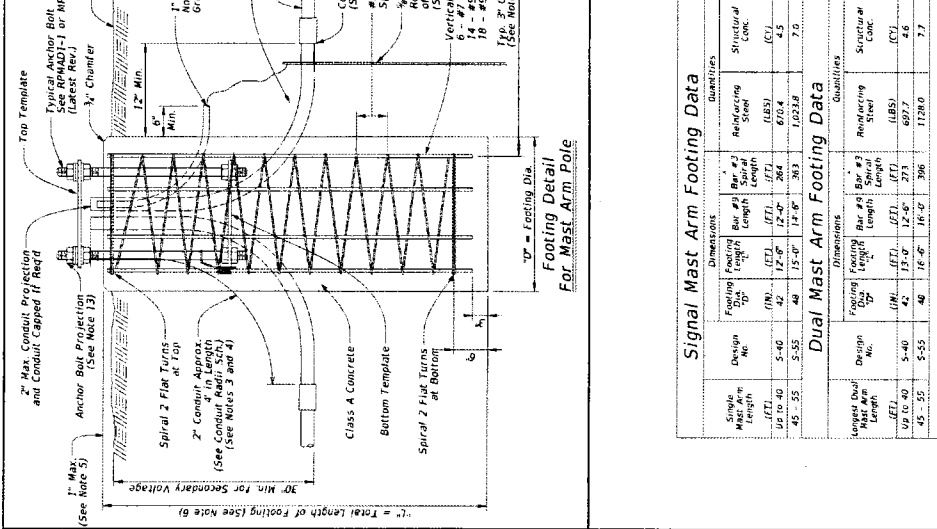


Transformer Base Bolt Circle Table

Base Type	Min.	Max.
PED	12"	14"

Transformer Base Bolt Circle Table

Pedestal Pole Details



Signal Mast Arm Footing Data

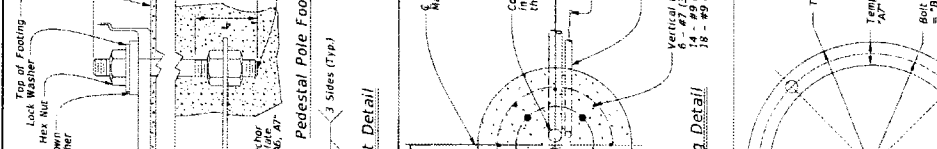
Design No.	Design Length	Design Width	Design Height	Design Area	Design Volume	Design Weight	Design Moment	Design Shear	Design Torsion	Design Temperature	Design Wind	Design Snow	Design Seismic	Design Other
101	10'	10'	10'	10'	10'	10'	10'	10'	10'	10'	10'	10'	10'	10'

Dual Mast Arm Footing Data

Design No.	Design Length	Design Width	Design Height	Design Area	Design Volume	Design Weight	Design Moment	Design Shear	Design Torsion	Design Temperature	Design Wind	Design Snow	Design Seismic	Design Other
102	10'	10'	10'	10'	10'	10'	10'	10'	10'	10'	10'	10'	10'	10'

Pedestal Pole Footing Data

Design No.	Design Length	Design Width	Design Height	Design Area	Design Volume	Design Weight	Design Moment	Design Shear	Design Torsion	Design Temperature	Design Wind	Design Snow	Design Seismic	Design Other
103	10'	10'	10'	10'	10'	10'	10'	10'	10'	10'	10'	10'	10'	10'



Anchor Bolt Fabrication Tolerances Table

Dimension	Tolerance
Length	± 1/8"
Threaded Length	± 1/8"
Sanitized Length (if Required)	± 1/8"

Anchor Bolt Tolerances

Basis of Payment

Item No.	Item	Unit
804(A)	Structural Concrete	CY
804(B)	Reinforcing Steel	LB

Approved By: *[Signature]* Date: 3-24-16
 Approved By: *[Signature]* Date: 3/24/16
 Traffic Signal Mast Arm Pole and Pedestal Pole Footing Details

Conduit Radii Schedule

Conduit Schedule	Minimum Radius (inches)	Minimum Conduit or Sleeve Diameter (inches)
1/2"	12	1 1/4
3/4"	18	1 3/4
1"	24	2
1 1/4"	30	2 1/2
1 3/4"	36	3
2"	48	4

Conduit Radii Schedule

2009 Specifications
 CFDT-2
 00
 T-207

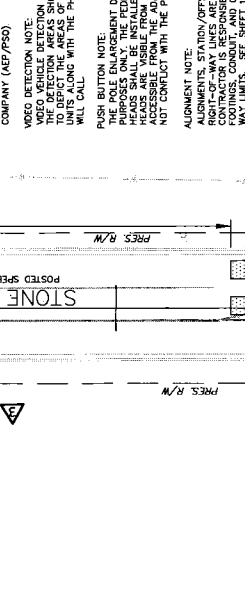
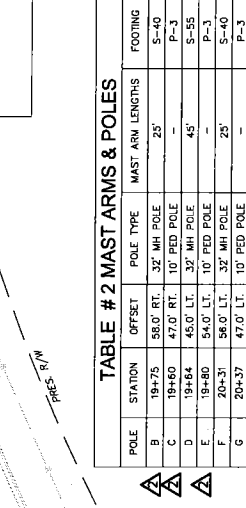
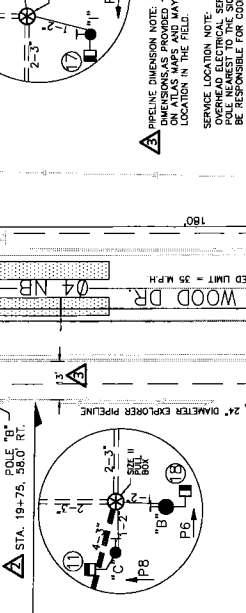
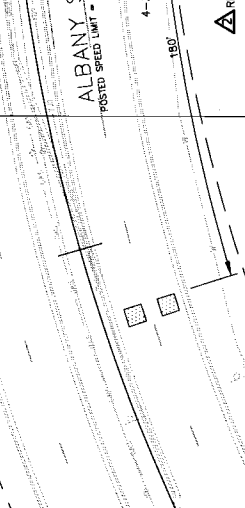
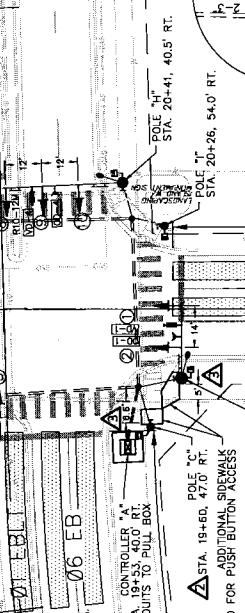
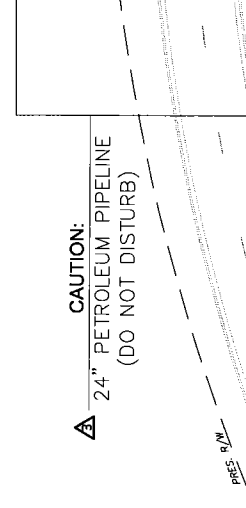
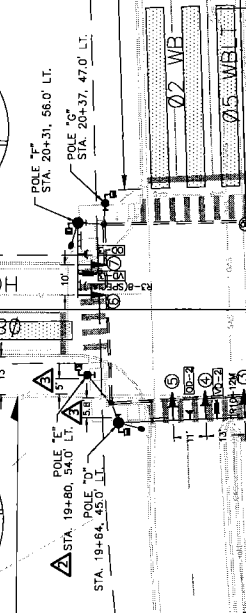
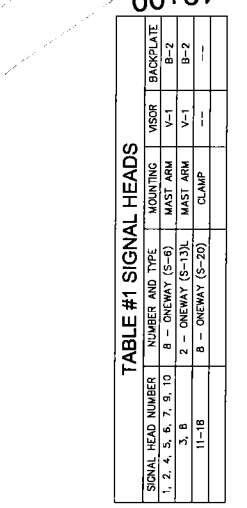
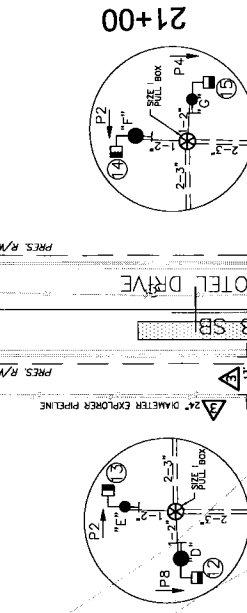
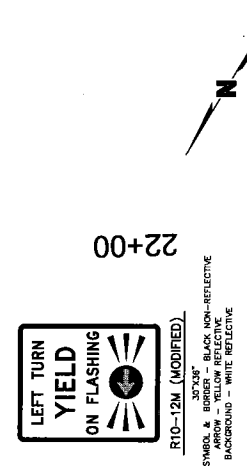
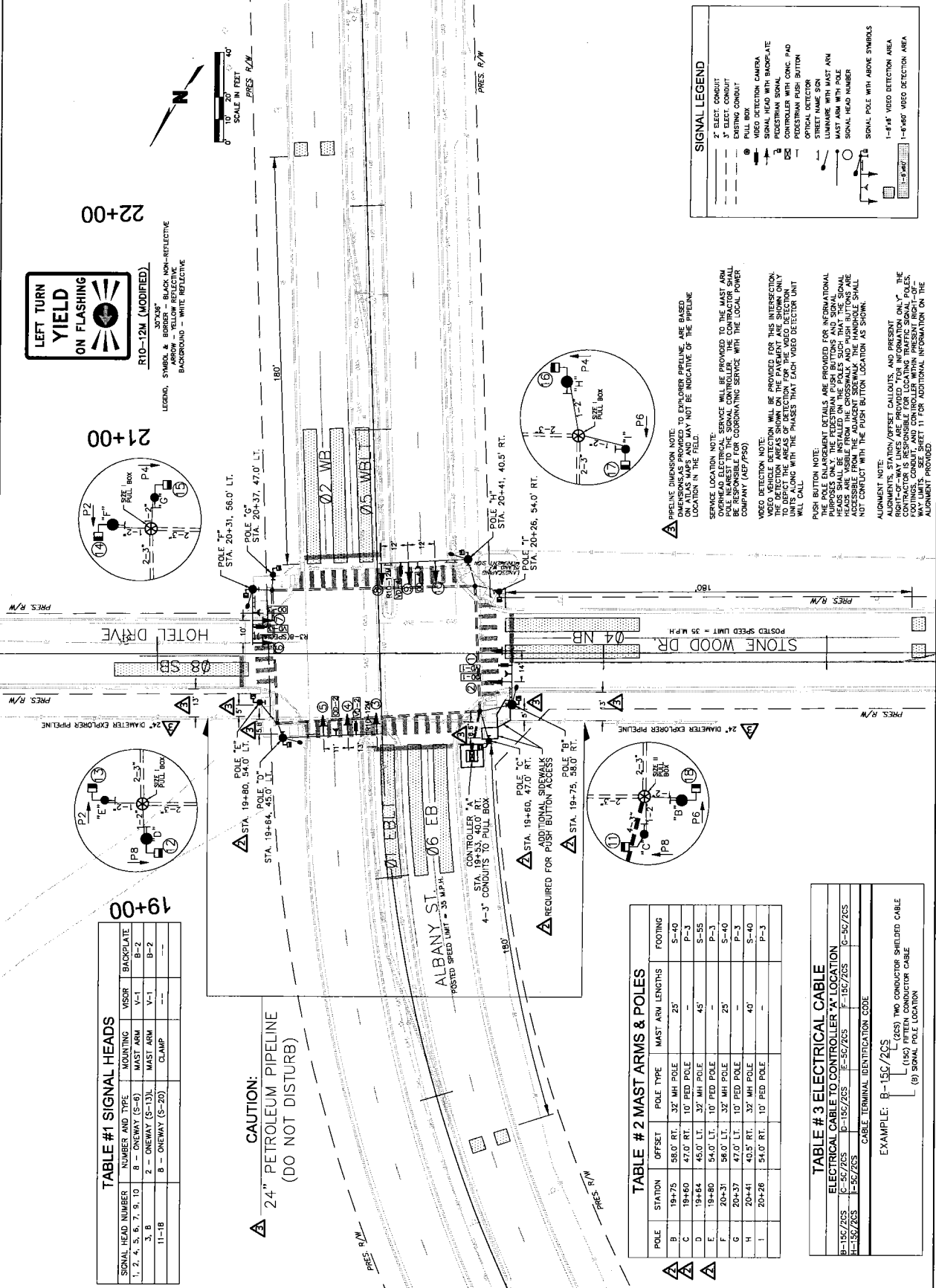


TABLE #1 SIGNAL HEADS

SIGNAL HEAD NUMBER	NUMBER AND TYPE	MOUNTING	VISOR	BACKGLATE
1, 2, 4, 5, 6, 7, 9, 10	8 - ONEWAY (S-6)	MAST ARM	V-1	B-2
3, 8	2 - ONEWAY (S-13)	MAST ARM	V-1	B-2
11-18	8 - ONEWAY (S-20)	CLAMP	--	--

TABLE #2 MAST ARMS & POLES

POLE	STATION	OFFSET	POLE TYPE	MAST ARM LENGTHS	FOOTING
B	19+75	58.0 RT.	32' MH POLE	25'	S-40
C	19+60	47.0 RT.	10' PED POLE	--	P-3
D	19+84	45.0 LT.	37' MH POLE	45'	S-55
E	19+80	54.0 LT.	10' PED POLE	--	P-3
F	20+31	58.0 LT.	32' MH POLE	25'	S-40
G	20+37	47.0 LT.	10' PED POLE	--	P-3
H	20+41	40.5 RT.	32' MH POLE	40'	S-40
I	20+26	54.0 RT.	10' PED POLE	--	P-3

TABLE #3 ELECTRICAL CABLE

ELECTRICAL CABLE TO CONTROLLER 'A' LOCATION	CABLE TERMINAL IDENTIFICATION CODE
B-15C/2C5	B-15C/2C5
C-15C/2C5	B-15C/2C5
D-15C/2C5	B-15C/2C5

EXAMPLE: B-15C/2C5 (25) TWO CONDUCTOR SHIELDED CABLE (18) FIFTEEN CONDUCTOR CABLE (6) SIGNAL POLE LOCATION

SIGNAL LEGEND

- 2" ELECT CONDUIT
- 3" ELECT CONDUIT
- PULL BOX
- VIDEO DETECTION CAMERA
- SIGNAL HEAD WITH BACKLATE
- PEDESTRIAN SIGNAL
- CONTROLLER WITH CONC. PAD
- CONTROLLER WITH CONC. PAD
- STREET NAME SIGN
- LUMINAIRE WITH MAST ARM
- MAST ARM WITH POLE
- SIGNAL HEAD NUMBER
- SIGNAL POLE WITH ABOVE SYMBOLS
- 1-0.45 VIDEO DETECTION AREA
- 1-0.45 VIDEO DETECTION AREA

PIPELINE DIMENSION NOTE: TO EXPLORER PIPELINE, ARE DIMENSIONS AS PROVIDED. TO SIGNAL CONTROLLER, THE CONTRACTOR SHALL VERIFY DIMENSIONS AND NOT BE INDICATIVE OF THE PIPELINE LOCATION IN THE FIELD.

SERVICE LOCATION NOTE: OVERHEAD ELECTRICAL SERVICE WILL BE PROVIDED TO THE MAST ARM POLE NEAREST TO THE SIGNAL CONTROLLER. THE CONTRACTOR SHALL VERIFY SERVICE LOCATION IN COORDINATION WITH THE LOCAL POWER COMPANY (AEP/PS&D).

VIDEO DETECTION NOTE: VIDEO DETECTION WILL BE PROVIDED FOR THIS INTERSECTION. THE DETECTION AREAS SHOWN ON THE PAVEMENT ARE SHOWN ONLY FOR INFORMATIONAL PURPOSES. THE CONTRACTOR SHALL VERIFY DETECTION UNIT ALIGNMENT WITH THE PHASES THAT EACH VIDEO DETECTION UNIT WILL CALL.

PUSH BUTTON NOTE: THE POLE ENLARGEMENT DETAILS ARE PROVIDED FOR INFORMATIONAL PURPOSES ONLY. THE CONTRACTOR SHALL VERIFY THE SIGNAL HEADS SHALL BE INSTALLED ON THE PAVEMENT SUCH THAT THE SIGNAL HEADS ARE VISIBLE FROM THE CROSSWALK AND PUSH BUTTONS ARE VISIBLE FROM THE SIDEWALK. THE CONTRACTOR SHALL VERIFY THAT THE SIGNAL HEADS DO NOT INTERFERE WITH THE PHASES THAT EACH VIDEO DETECTION UNIT WILL CALL.

ALIGNMENT NOTE: ALIGNMENT, STATION/offset CALLOUTS, AND PRESET RIGHT-OF-WAY LINES ARE PROVIDED FOR INFORMATION ONLY. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING TRAFFIC SIGNAL POLES, SIGNAL HEADS, AND VIDEO DETECTION UNITS WITHIN THE RIGHT-OF-WAY LIMITS. SEE SHEET 11 FOR ADDITIONAL INFORMATION ON THE ALIGNMENT PROVIDED.

Deed Records of Tulsa County, Oklahoma filestamp

Please return a file-stamped copy to Explorer Pipeline Company, P.O. Box 2650, Tulsa, OK 74101-2650
File Ref: 326-108, C11/D5, Tulsa County, Oklahoma