



OUTSIDE PLANT CONSTRUCTION
FIBER OPTIC CABLE ROUTE

PROJECT/AFE #: 1708APXX.022

EAST WASHINGTON AVENUE AND BRUCE STREET CITY OF LAS VEGAS, NEVADA

HUB: LSV FOREMASTER - CELL SITE: LSV NEON 916116

CONSTRUCTION DRAWING 10/10/2018

ENTITY OWNER: MCIMETRO ACCESS TRANSMISSION SERVICES CORP.
D/B/A VERIZON ACCESS TRANSMISSION SERVICE ("VERIZON")

NOTE: ALL THE ABOVE GROUND UTILITY APPURTENANCES
SHALL CONFORM TO THE REQUIREMENTS OF CLV UNIFIED
DEVELOPMENT CODE TITLE 19.06 AND 19.08

APPROVED FOR CONSTRUCTION

THIS APPROVAL IS FOR WORK IN CLV R/W & EASEMENT ONLY.
OBTAINING PERMISSIONS OR EASEMENTS FOR WORK SHOWN ON
PRIVATE PROPERTY IS THE RESPONSIBILITY OF THE UTILITY.

APPROVAL BY: LS-01895 10/29/18
DATE

CLV NOTE: PROTECT IN PLACE EXISTING
STORM DRAIN SYSTEM AND PROPOSED
INLETS.

JOB #: LSV NEON 916116

NOTES CONTINUED/CONTACT SHEET

GROUNDING NOTES

11.4 HANDHOLE/MANHOLE GROUNDING

All splice handholes/manholes will be grounded to conform with the MCI typical engineering drawing shown in Appendix A.

MCI-furnished materials:

- One 5/8-inch x 8-foot copper-clad steel ground rod equipped with a 15-foot #6 AWG pigtail.
- One surge arrester handhole/One isolator/protector system with 30 foot harness for use on a straight splice, or
- One isolator/protector system with 30-foot harness system for use at splices with a spur cable.

11.5 AERIAL CABLE GROUNDING

Cable sheath to strand bonds and grounding as required by National Electrical Code and Power Company Codes are required at all riser locations of an aerial segment.

Bond cable sheath and suspension strand to multi-ground neutral (MGN) vertical grounding conductor if one exists; if not, use a driven ground rod or a non-insulated guy.

A guy may also require grounding. This is determined by establishing the exposure status (exposed or unexposed) of the guy.

All exposed guys must be either grounded or insulated. A guy is exposed if:

- It is attached to the same pole as open power conductors or spacer cable of any voltage.
- It crosses such power conductors.
- It is within ten feet horizontally (and any distance vertically) of such power conductors.

Grounding is the preferred treatment for exposed guys, except for the following cases in which they must be insulated:

- The MCI guy fastened to the pole in power company working space and a grounded guy would offer an additional hazard to power company linemen.
- Within 1/2-mile of a power station.
- Where electrolytic corrosion of anchors has occurred (unexposed guys, in this case must be separated from the cable strand at the pole, and electrical connection through hardware must be avoided).

Adequate grounding for MCI guys may be obtained through connection to any of the following:

- Vertical grounding conductor of power system multi-ground neutral (with permission of the power company).
- Suspension strand of grounded MCI cable.
- Common anchor rod with a power guy that is connected to the multi-grounded neutral.

Unexposed guys need not be grounded for protection reasons; however, connecting anchor guys to a grounded MCI strand is recommended, as it will lower the cable-to-ground impedance. This helps to reduce cable damage caused by lightning.

MCI metro Access Transmission Services Corp
d/b/a Verizon Access Transmission Service (Verizon)

OUTSIDE PLANT ENGINEERING:

PROJECT ENGINEER: CORY VANDENBOS
SUPERVISOR: N/A
MANAGER: N/A

OUTSIDE PLANT CONSTRUCTION:

PROJECT SUPERVISOR:
FIELD CONST. SUPERINTENDENT:
MANAGER: N/A

RIGHT-OF-WAY:

AGENT:
MANAGER:

CONTRACTS:

COORDINATOR: N/A
MANAGER: N/A

OTHERS:

PROGRAM MANAGER: N/A
LIGHTWAVE ENGINEER: N/A
CIVIL ENGINEER: N/A
TERMINAL CONST. REP: N/A
SPLICING MANAGER: N/A
TSD MANAGER: N/A

ENGINEERING CONTRACTOR

NAME OF FIRM: BPG DESIGNS 1-602-954-2223
PROJECT MANAGER: CORY VANDENBOS 1-602-739-8813
ENG. PROJECT SUPERVISOR:

CONSTRUCTION CONTRACTOR

NAME OF FIRM: TEAM FISHEL 1-702-644-4565
PROJECT COORDINATOR:

CITY GOVERNMENT

BUREAU OF ENGINEERING:

CITY ENGINEER:

UTILITIES

WORLD COM UTILITY LOCATE 1-800-624-9675
USA NORTH BLUESTAKE 811

PROJECT TOTALS SUMMARY

MATERIALS

2" HDPE CONDUIT(S): 1,667'
4" HDPE CONDUIT(S): -
2' x 3' x 2' HANDHOLE(S): -
2.5' x 5' x 2.5' HANDHOLE(S): 1
4' x 4' x 4' HANDHOLE(S): -
MANHOLES: -

WORK TYPE

AERIAL: -
VZW CONDUIT: -
3RD PARTY CONDUIT: -
TRENCH: 1,661
ASPHALT CUT: -
BORE: -

TOTAL NEW UG FOOTAGE: 1,661
TOTAL FOOTAGE: 1,661



PROJECT: 916116

CELL SITE: LSV NEON 916116

CITY OF LAS VEGAS, NEVADA

CLARIFICATION NO. QUANTITY

MCI COMMUNICATIONS SERVICES, INC.
OUTSIDE PLANT CONSTRUCTION
TITLE: CELL SITE: LSV NEON 916116
PROJECT TITLE

DATE: 10/10/2018

DRAWN BY: PVEGA

REVISIONS

DATE	INITIAL

EXCEPT AS MAY BE OTHERWISE PROVIDED BY CONTRACT, THESE DRAWINGS AND SPECIFICATIONS SHALL REMAIN THE PROPERTY OF MCI COMMUNICATIONS SERVICES, INC., BOTH BEING ISSUED IN STRICT CONFIDENCE AND SHALL NOT BE REPRODUCED, COPIED, OR USED FOR ANY PURPOSE WITHOUT SPECIFIC WRITTEN PERMISSION.

SCALE

HORIZONTAL: 1"=30'

VERTICAL: NA

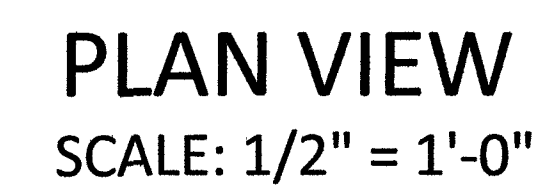
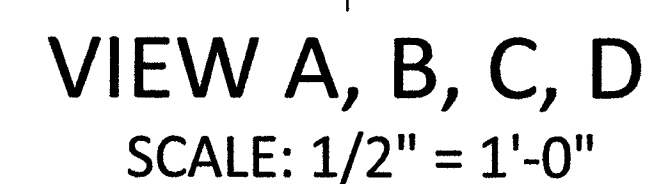
MP TO MP

SHEET 3 OF 11

FILE: LSV NEON 916116

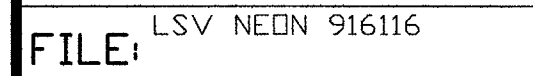
0 10 20 30 40 50
DRAWING SCALE IS IN FEET:
(1"=60' AT 11"x17" print)
(1"=30' AT 24"x36" print)

1. CONCRETE: 28 DAY COMPRESSIVE STRENGTH F'C = 5,000 PSI
2. STEEL REINFORCEMENT: ASTM A-615, GRADE 60
3. COVER TO STEEL - 1" MINIMUM
4. DESIGNED TO MEET ACI 318 FOR:
HS20 LIVE LOAD
45 PCF SOIL EFP
0'-0" SOIL COVER
WATER TABLE 3'-0" BELOW GRADE
5. JOINT SEALANT: CONSEAL BUTYL SEALANT ASTM C-990-91
6. WEIGHT:
TOP - 3,100 LBS
BOTTOM - 3,650 LBS



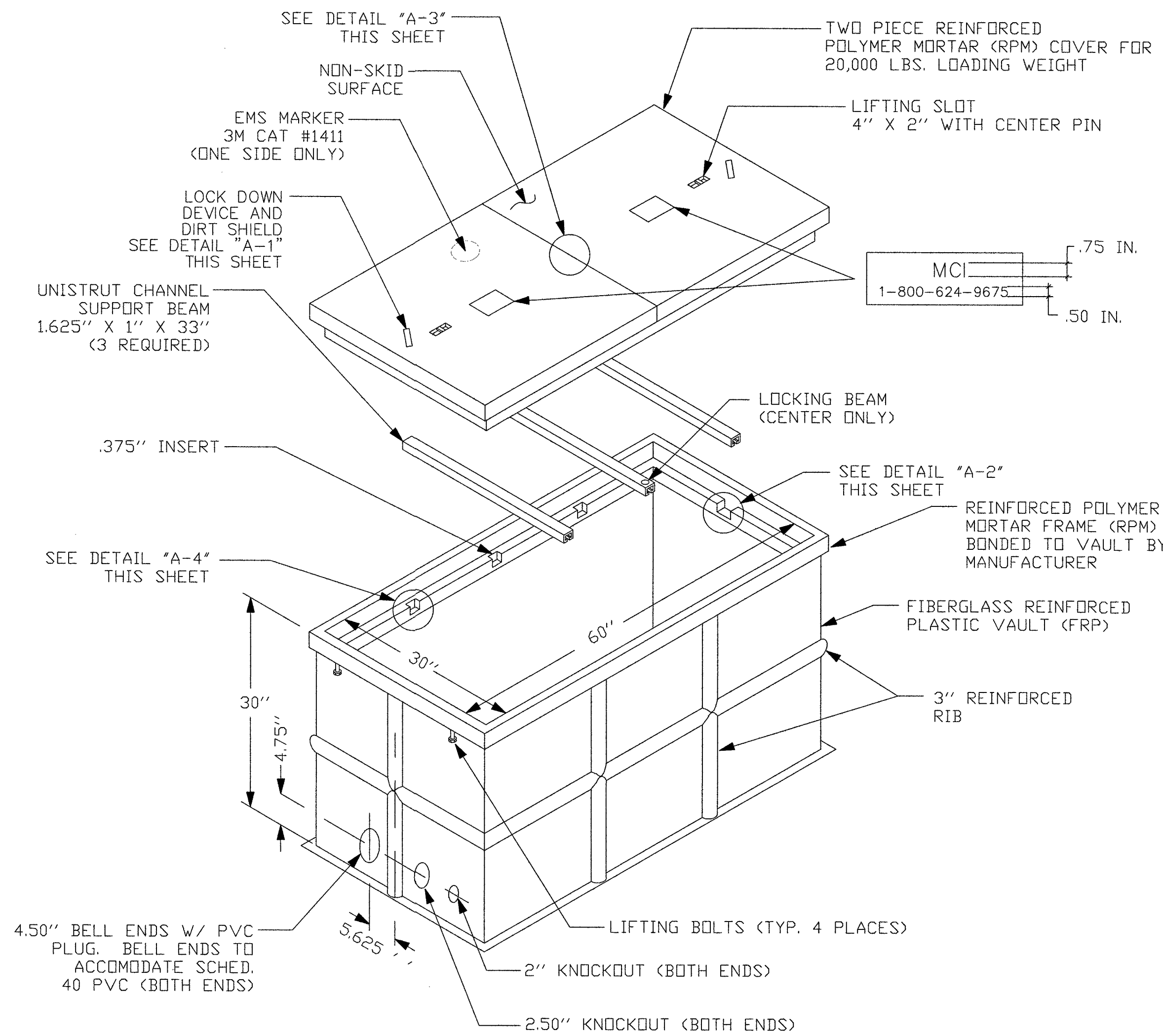
4'x4'x4' TYPE "S" KNOCKOUT

4'x4'x4' TYPE "S" KNOCKOUT

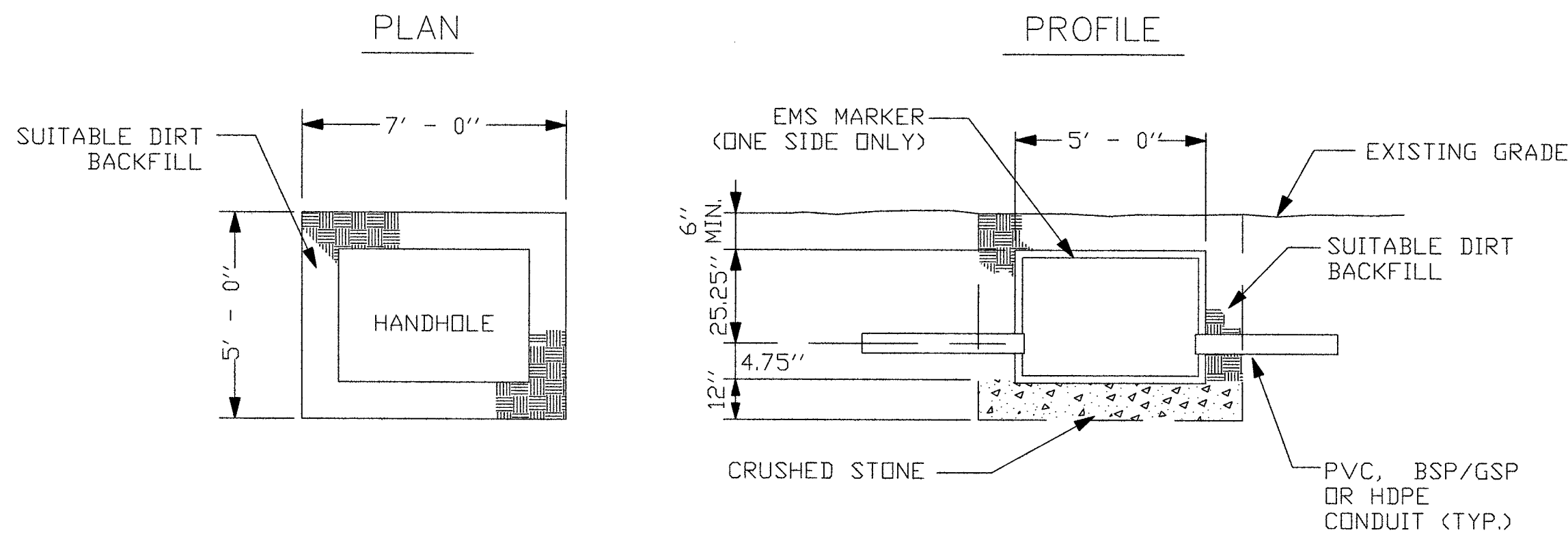


2.5' x 5' x 2.5' HANDHOLE DETAILS

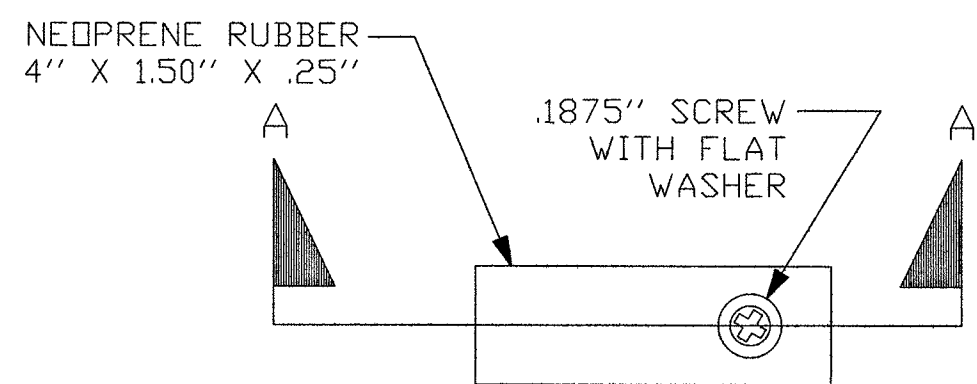
DETAIL "A"
EXPLODED ISOMETRIC DETAIL



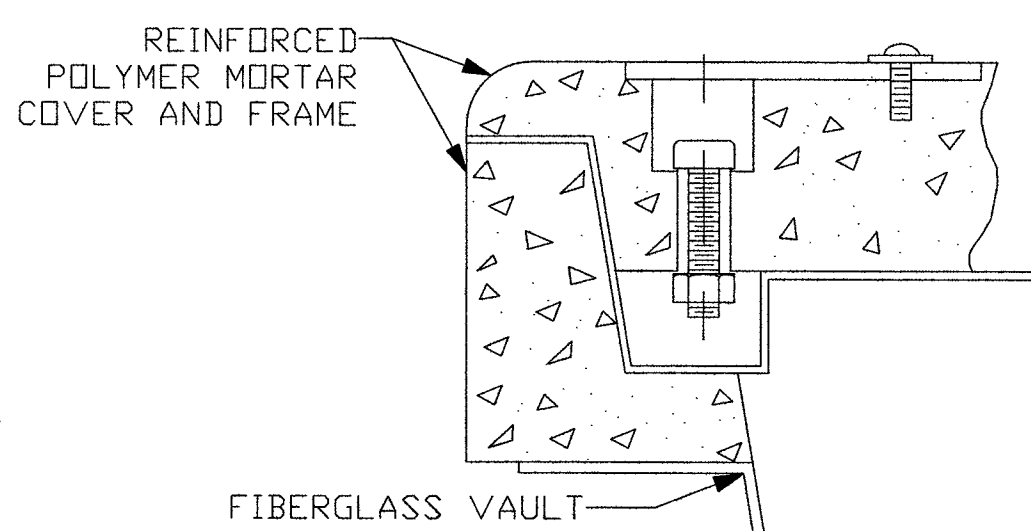
DETAIL "C"
EXCAVATION PIT



DETAIL "A-1"
LOCK DOWN DEVICE

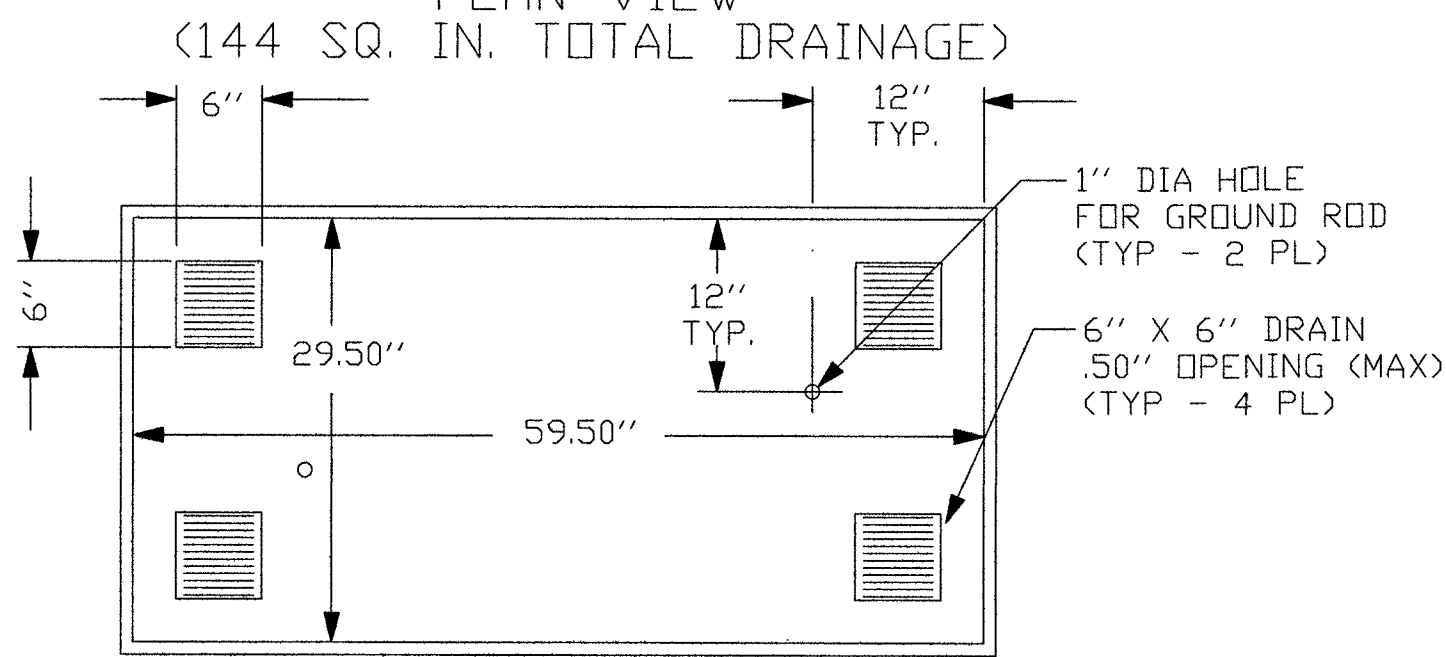


SECTION A-A
LOCKING DEVICE
CROSS SECTION



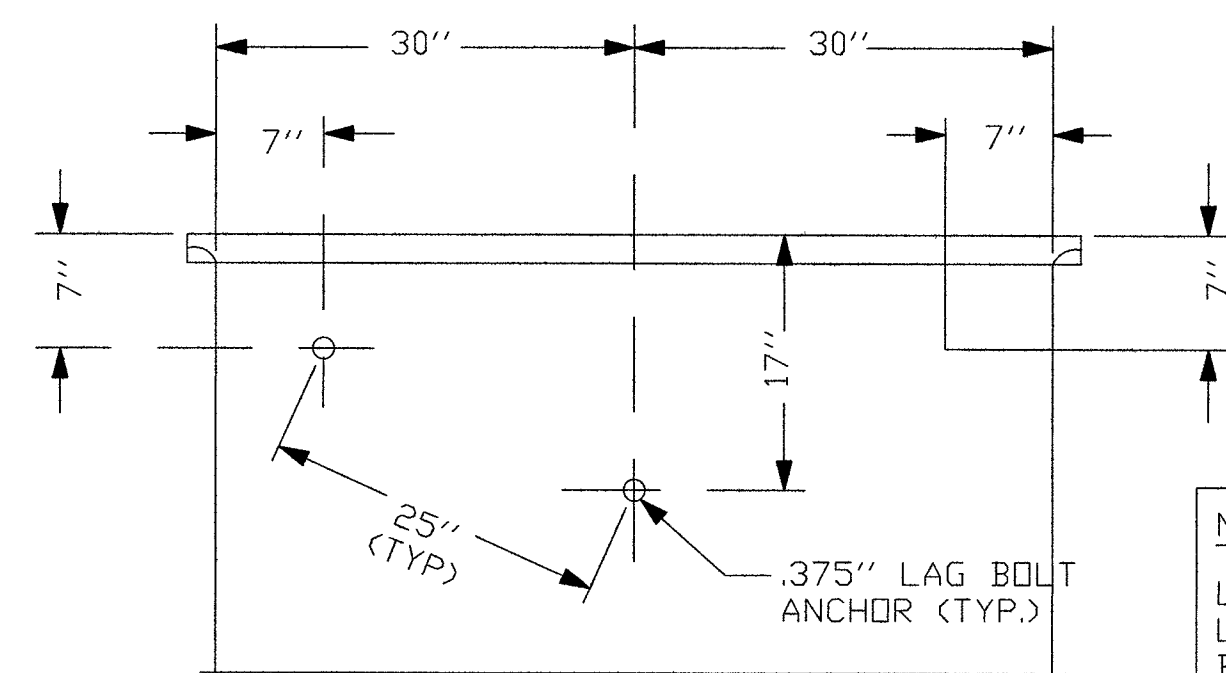
DETAIL "B"

VAULT BOTTOM
PLAN VIEW



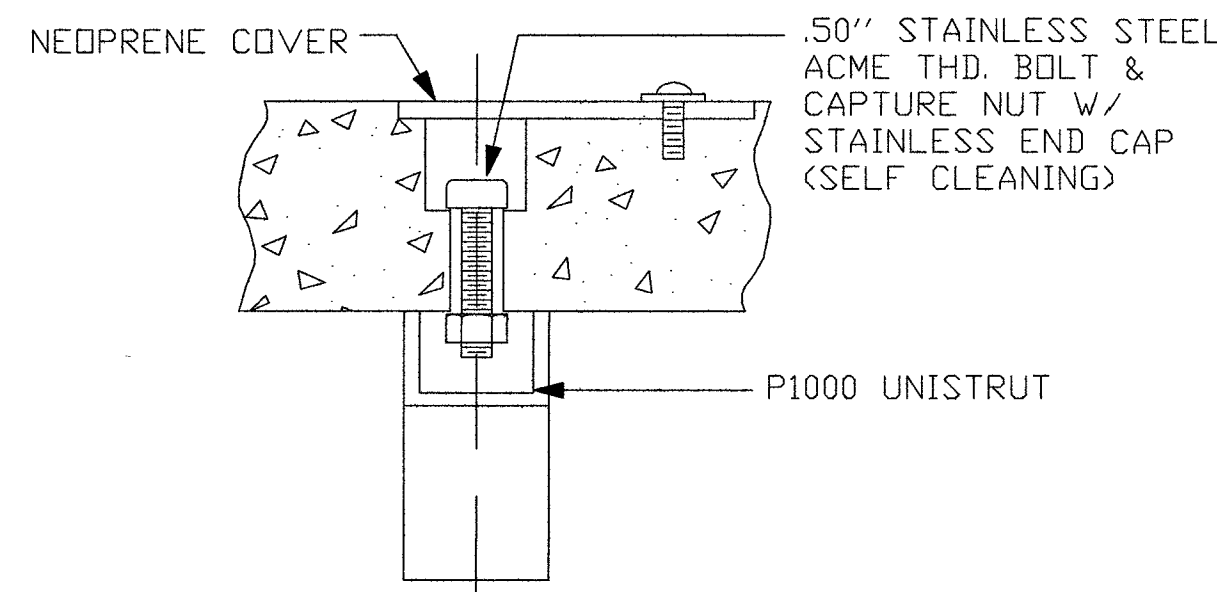
DETAIL "D"

SIDE WALL VIEW
INSIDE LOOKING OUT



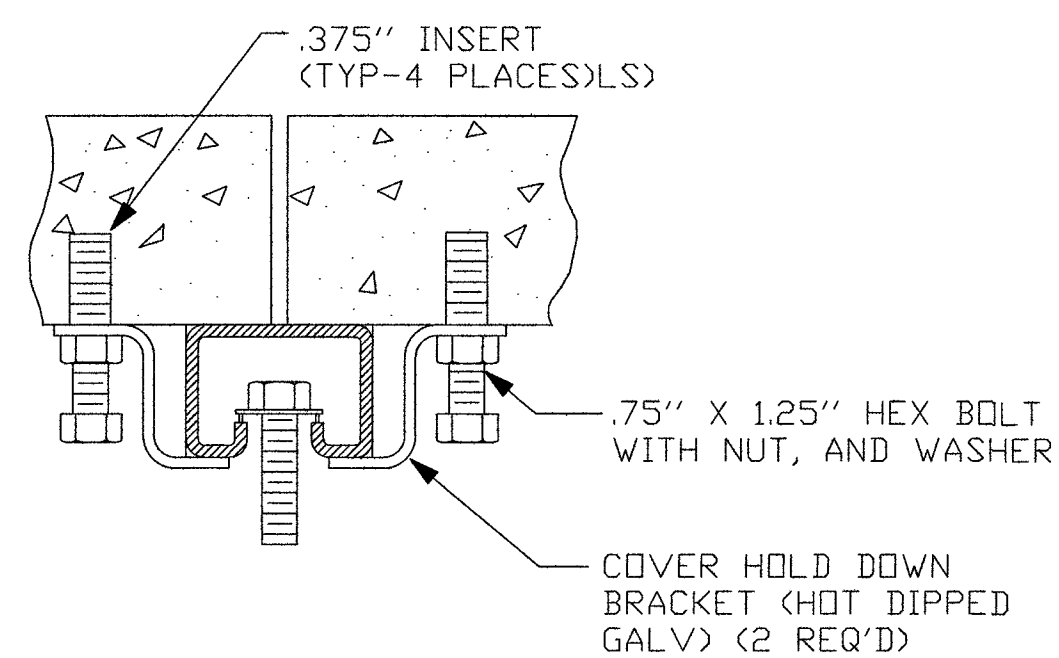
NOTE:
LINEAR DISTANCE BETWEEN LAG BOLT ANCHORS MUST BE 25".

DETAIL "A-2"
ENGAGED LOCK
DOWN DEVICE



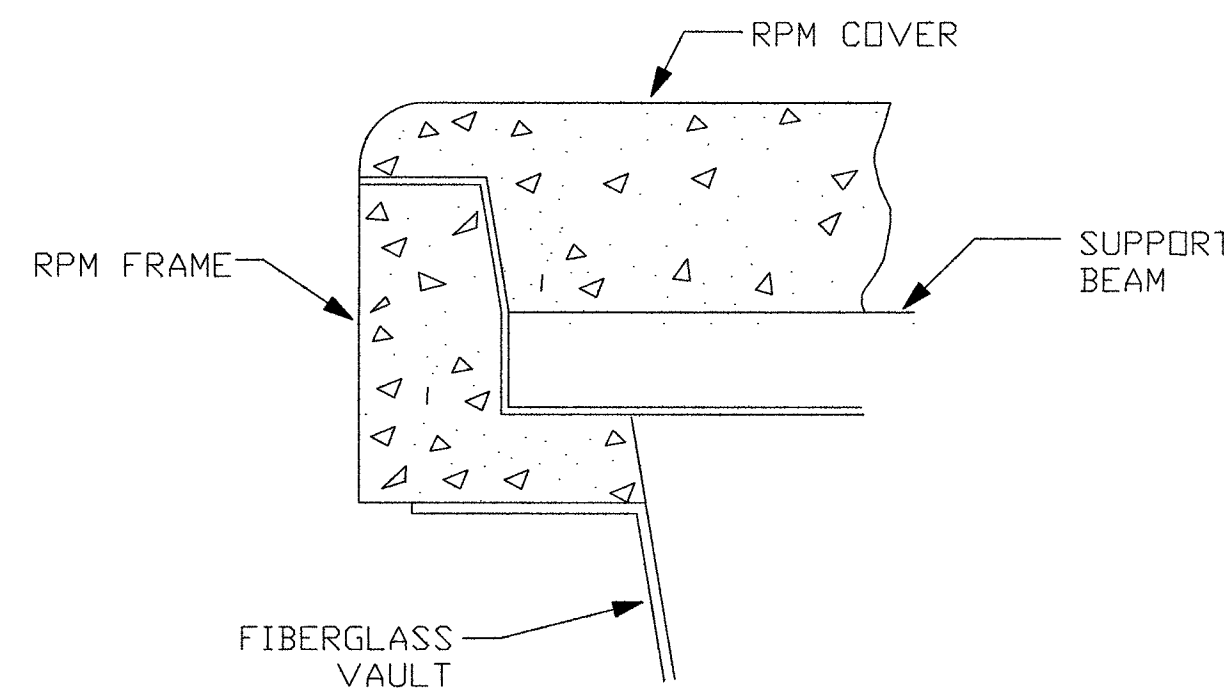
DETAIL "A-3"

COVER HOLD DOWN BRACKET
OF 2-PIECE RPM COVER



DETAIL "A-4"

SUPPORT BEAM
INSTALLATION
(TYP. AT 6 PLACES)



NOTES:

- VOID IN EXCAVATED AREAS TO BE BACKFILLED WITH SELECT MATERIAL.
- BOTTOM OF EXCAVATED PIT TO BE BACKFILLED WITH 12" OF CRUSHED STONE (.75" GRADE).
- SHORING WILL BE REQUIRED.
- ALL HANDHOLES SHALL BE PLACED BELOW EXISTING GRADE.
- THIS HANDHOLE IS OF FIBERGLASS MATERIAL, APPROXIMATELY POUNDS IN WEIGHT. THE LIDS ARE POLYMER CONCRETE MATERIAL, EACH APPROXIMATELY POUNDS.



PROJECT: 916116

CELL SITE: LSV NEON 916116

CITY OF LAS VEGAS, NEVADA

CLARIFICATION NO. QUANTITY

MCI
COMMUNICATIONS SERVICES, INC.

OUTSIDE PLANT CONSTRUCTION

TITLE: CELL SITE: LSV NEON 916116

PROJECT TITLE

DATE: 10/10/2018

DRAWN BY: PVEGA

REVISIONS

DATE INITIAL

SCALE

HORIZONTAL: 1"=30'

VERTICAL: NA

MP TO MP

SHEET 6 OF 11

FILE: LSV NEON 916116

FILE #
AG-1974TAPMC13

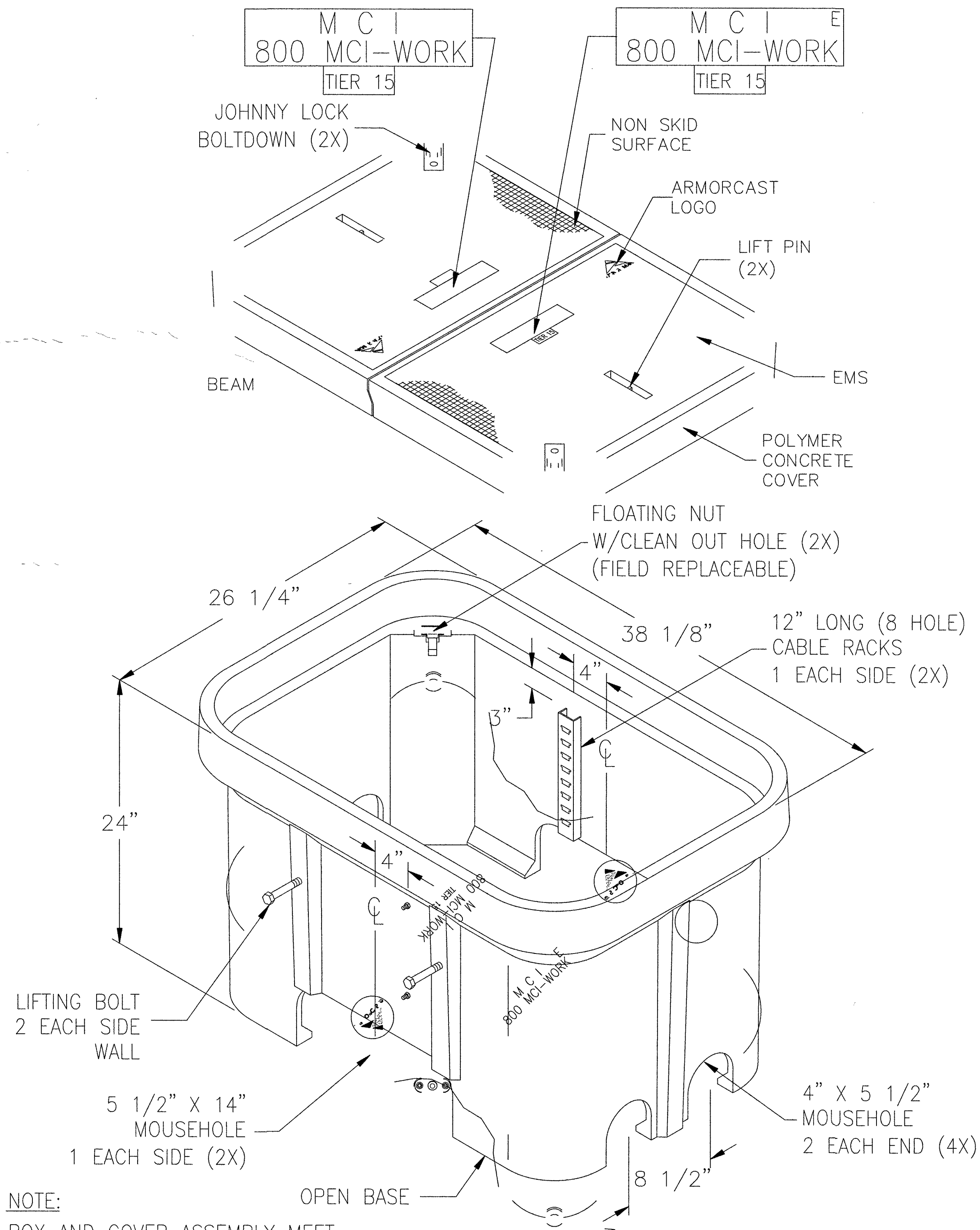
ARMORCAST® PRODUCTS COMPANY
13230 Satcoy Street,
North Hollywood, CA 91605
(818) 982-3600

"THE INFORMATION IN THIS DRAWING IS CONFIDENTIAL. THE DRAWING IS NOT TO BE REPRODUCED OR ITS CONTENTS DISCLOSED IN ANY WAY WHATSOEVER EXCEPT WITH THE PRIOR WRITTEN APPROVAL OF ARMORCAST PRODUCTS COMPANY. IT IS THE PROPERTY OF AND MUST BE RETURNED TO ARMORCAST PRODUCTS COMPANY, 13230 SATCOY STREET, NORTH HOLLYWOOD, CALIFORNIA 91605."

PART DESCRIPTION
24" X 36" X 24" POLYMER CONCRETE BOX ASSEMBLY

CUSTOMER
VERIZON

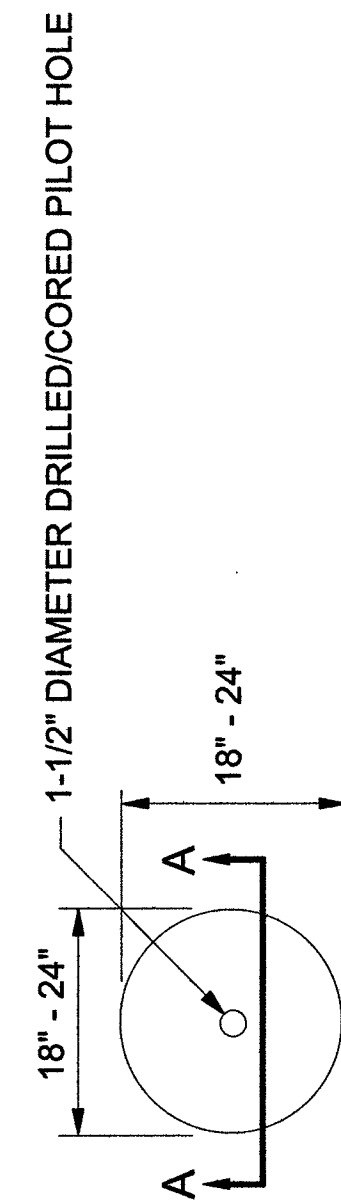
DRAWN GL	DATE 6/17	SCALE NONE	MAX. LOAD TIER 15
APPROV. WS	6/17	MATERIAL POLYMER CONCRETE	DRAWING NUMBER A6001974TAPMC13



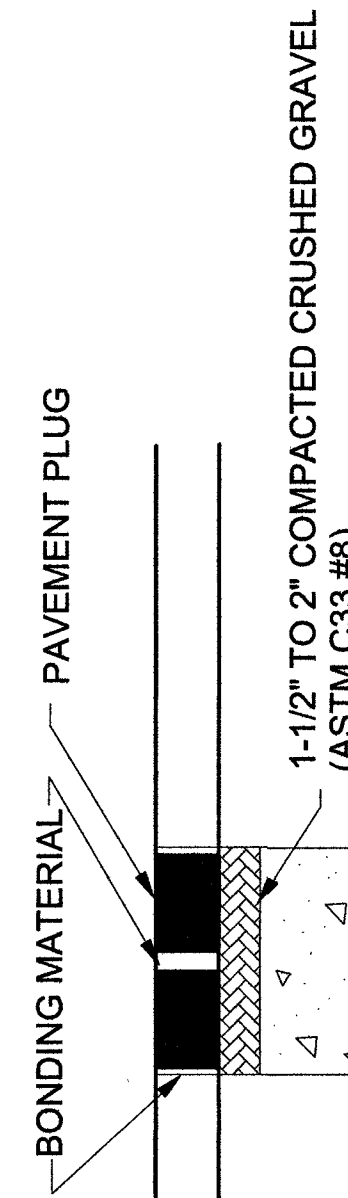
TYPE B - KEYHOLE REPAIR
REQUIRED FOR ROW WIDTH GREATER THAN 60'
OPTIONAL FOR ROW WIDTH 60' OR LESS

NOTES:

1. CUT AND REMOVE PAVEMENT PLUG WITH AN APPROVED KEYHOLE CORING DEVICE. PAVEMENT TO BE CORED SHALL CONTAIN NO CRACKS AND SHALL BE AT LEAST 4" THICK. IF PLUG IS DAMAGED OR IS LESS THAN 4" THICK, REPLACE PLUG WITH A "FARMED" ASPHALT PLUG FROM AN APPROVED SITE. FARMED PLUGS SHALL BE AT LEAST 4" THICK AND AT LEAST ONE INCH THICKER THAN EXISTING ASPHALT.
2. BONDING MATERIAL SHALL BE A SINGLE COMPONENT CEMENTITIOUS RAPID HARDENING, HIGH STRENGTH, WATERPROOF BONDING AGENT THAT ALLOWS THE CORE TO SUPPORT AT LEAST THREE TIMES ASHTO H-25 LOADING WITHIN 30 MINUTES OF APPLICATION. BOND AGENT MUST SHOW A MINIMUM 20 PSI BOND STRENGTH (ASTM C882) AND A MINIMUM 200 PSI COMPRESSIVE STRENGTH (ASTM C109) IN 30 MINUTES.
3. AGENCY-APPROVED BACKFILL BELOW REPAIR SHALL BE PER SECTION 215.
4. FILL KEYHOLE WITH BONDING MATERIAL DURING REPAIR.
5. PRIOR AGENCY APPROVAL IS REQUIRED FOR MULTIPLE KEYHOLE REPAIRS WITHIN A GIVEN ROADWAY SEGMENT.
6. A 5 YEAR WARRANTY IS REQUIRED ON ALL REPAIRS.

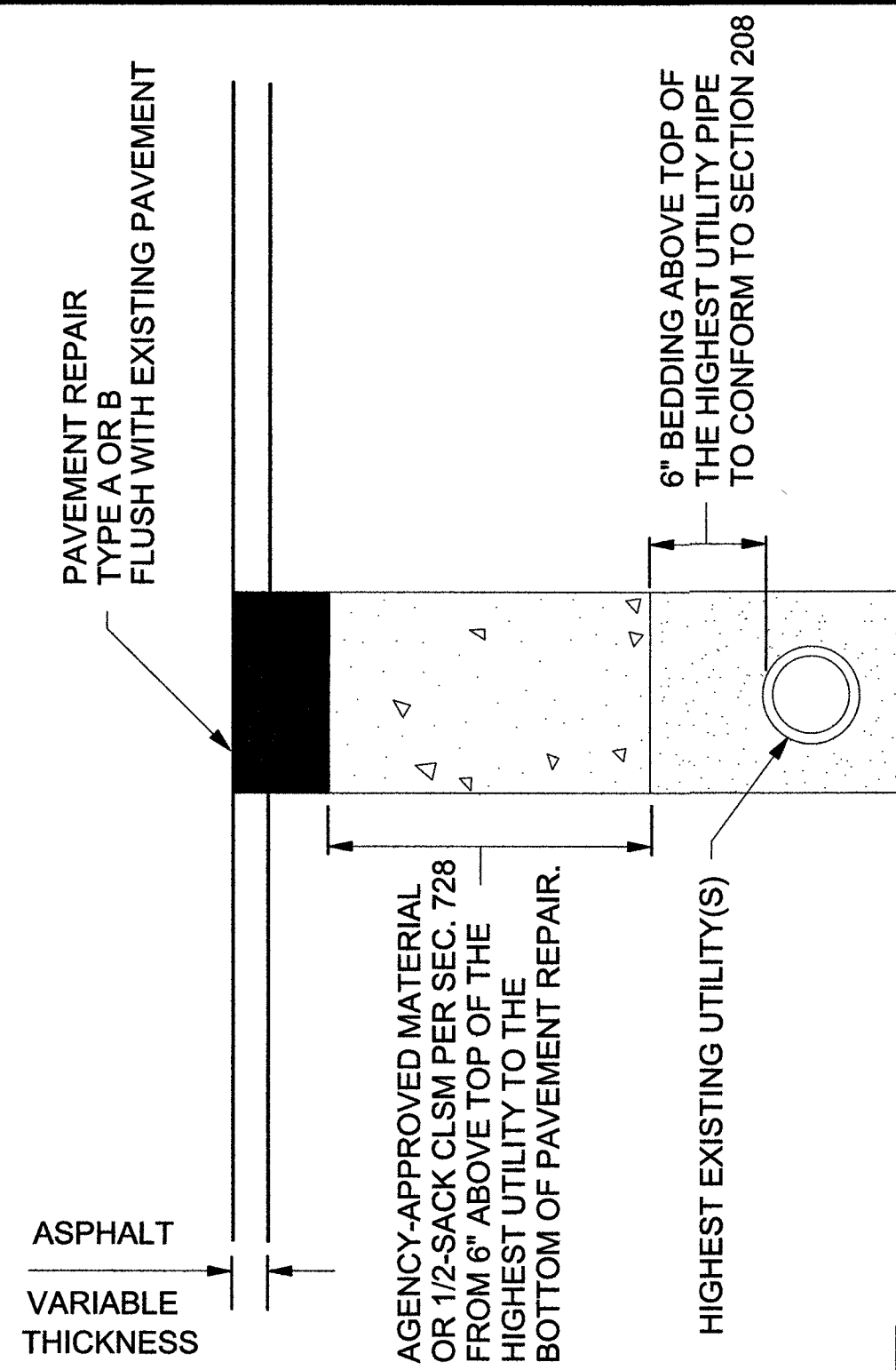


POT HOLE PLAN VIEW
(NOMINAL DIMENSIONS)



POT HOLE PROFILE

PAVEMENT REPAIR
TYPE A OR B
FLUSH WITH EXISTING PAVEMENT

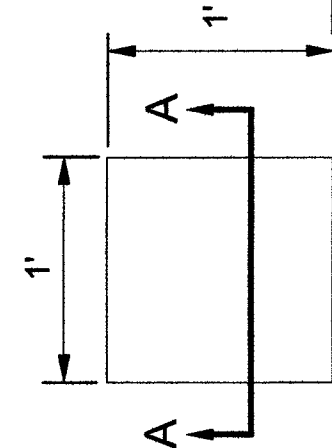


SECTION A-A

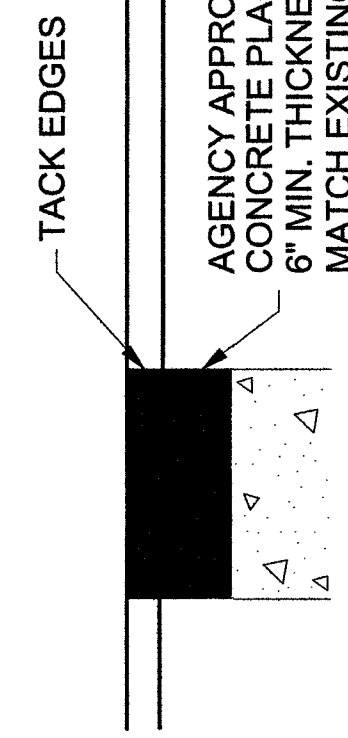
TYPE A - CUT & PATCH REPAIR
OPTIONAL FOR ROW WIDTH 60' OR LESS

NOTE: EDGES SHALL BE CUT TO A NEAT VERTICAL FACE.

POT HOLE PLAN VIEW
(NOMINAL DIMENSIONS)



POT HOLE PROFILE



SPECIFICATION REFERENCE		UNIFORM STANDARD DRAWINGS CLARK COUNTY AREA					
215	KEYHOLE POT HOLE EXCAVATION AND BACKFILL	UTILITY POT HOLE REPAIR					
		DATE	01-01-12	DWG. NO.	506		



PROJECT: 916116

CELL SITE: LSV NEON 916116

CITY OF LAS VEGAS, NEVADA

CLARIFICATION NO. QUANTITY

MCI
COMMUNICATIONS SERVICES, INC.

OUTSIDE PLANT CONSTRUCTION

TITLE: CELL SITE: LSV NEON 916116

PROJECT TITLE

DATE: 10/10/2018

DRAWN BY: PVEGA

REVISIONS

DATE	INITIAL
------	---------

EXCEPT AS MAY BE OTHERWISE PROVIDED BY CONTRACT, THESE DRAWINGS AND SPECIFICATIONS SHALL REMAIN THE PROPERTY OF MCI COMMUNICATIONS SERVICES, INC. BOTH BEING ISSUED IN STRICT CONFIDENCE AND SHALL NOT BE REPRODUCED, COPIED, OR USED FOR ANY PURPOSE WITHOUT SPECIFIC WRITTEN PERMISSION.

SCALE

HORIZONTAL: 1"=30'

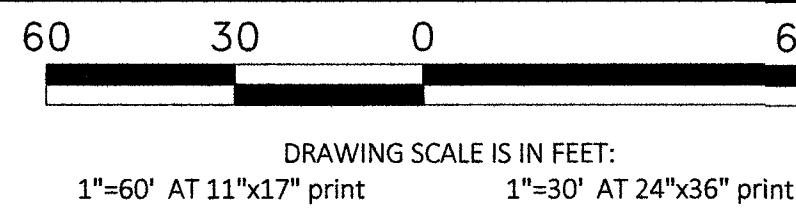
VERTICAL: NA

MP TO MP

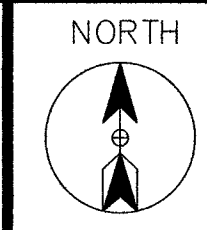
SHEET 7 OF 11

FILE: LSV NEON 916116

CONSTRUCTION DRAWING
CITY OF LAS VEGAS, NEVADA



Call at least two full working days
before you begin excavation.
811 Know what's below.
Call 811 before you dig.



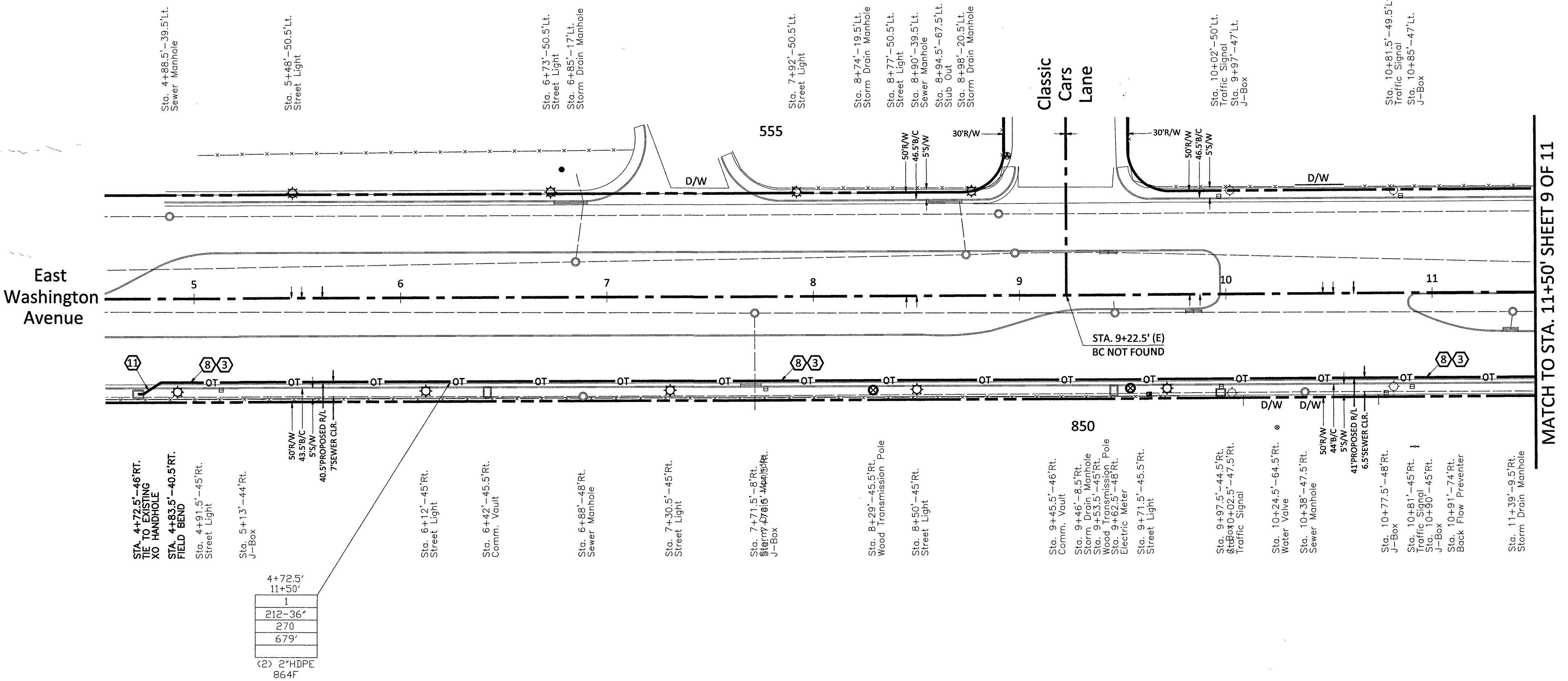
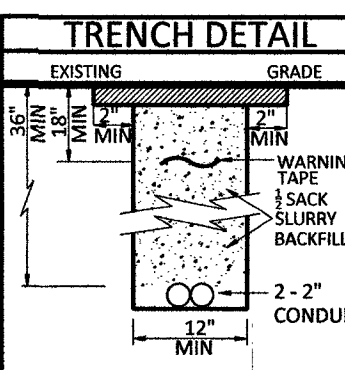
PROJECT:	916116
CELL SITE:	LSV NEON 916116
CITY OF LAS VEGAS, NEVADA	
CLARIFICATION NO.	QUANTITY
SHEET TOTAL	
2" HDPE CONDUIT:	1358'
4" HDPE CONDUIT:	-
2' x 3' x 2' HANDHOLE(S):	-
2.5' x 5' x 2.5' HANDHOLE(S):	-
4' x 5' x 4' HANDHOLE(S):	-
MANHOLE(S):	-
AERIAL:	-
VZW CONDUIT:	-
3RD PARTY CONDUIT:	-
TRENCH:	679'
TOTAL NEW UG FOOTAGE:	679'
TOTAL FOOTAGE:	679'

MCI
COMMUNICATIONS SERVICES, INC.
OUTSIDE PLANT CONSTRUCTION
TITLE: CELL SITE: LSV NEON 916116

DATE:	10/10/2018
DRAWN BY:	PVEGA
REVISIONS	
DATE	INITIAL

EXCEPT AS MAY BE OTHERWISE PROVIDED BY
CONTRACT, THESE DRAWINGS AND SPECIFICATIONS
SHALL REMAIN THE PROPERTY OF MCI
COMMUNICATIONS SERVICES, INC. BOTH BEING
ISSUED IN STRICT CONFIDENCE AND SHALL NOT BE
REPRODUCED, COPIED, OR USED FOR ANY PURPOSE
WITHOUT SPECIFIC WRITTEN PERMISSION.

SCALE	
HORIZONTAL:	1"=30'
VERTICAL:	NA
MP	TO MP
SHEET	8 OF 11
FILE:	LSV NEON 916116



RTC NOTES:	
BACKFILL AND RIGHT OF WAY RESTORATION SHALL CONFORM TO CLARK COUNTY UNIFORM STANDARD DRAWINGS	
(1)	500.1 0 TO 5 YEARS PAVEMENT RESTORATION LONGITUDINAL CUT
(2)	500.2 0 TO 5 YEARS PAVEMENT RESTORATION TRAVERSE CUT
(3)	500.3 OVER 5 YEARS PAVEMENT RESTORATION LONGITUDINAL CUT. GREATER THAN 60' R.O.W
(4)	500.4 OVER 5 YEARS PAVEMENT RESTORATION LONGITUDINAL CUT. 60' R.O.W OR LESS
(5)	500.5 OVER 5 YEARS PAVEMENT RESTORATION TRAVERSE ALL R.O.W WIDTHS
(6)	501 TYPICAL UNDERGROUND UTILITY LOCATIONS IN RESIDENTIAL STREETS 60' OR LESS R.O.W
(7)	501.1 TYPICAL UTILITY UNDERGROUND LOCATIONS IN STREETS WITH GREATER THAN 60' R.O.W
(8)	503 METHOD B FOR RIGID AND FLEXIBLE PIPE TRENCH BACKFILL - PAVED AREAS
(9)	503.1 METHOD A FOR FLEXIBLE PIPE TRENCH BACKFILL - PAVED AREAS
(10)	503.2 METHOD A FOR RIGID PIPE TRENCH BACKFILL - PAVED AREAS
(11)	234 SIDEWALK
(12)	BACKFILL IN UNPAVED AREA AS REQUIRED BY LOCAL CODE OR AS APPROVED BY AGENCY.

NOTE TO CONTRACTOR:
CONTRACTOR TO POTHOLE AND LOCATE ALL
UTILITIES PRIOR TO STARTING CONSTRUCTION.
CONTRACTOR TO PLACE LOCATE WIRE AND
MULE TAPE IN ALL CONDUIT PLACED
CONTRACTOR TO PLACE CONDUIT IN
APPROXIMATE LOCATION SHOWN ON PLAN
& PROVIDE AS-BUILTS WITH SPECIFIC TIE
LOCATION

- 210 PLACE CONDUIT
- 212 PLACE HIGH DENSITY POLYETHYLENE (HDPE)
- 240 PLACE HANDHOLE
- 250 PLACE MANHOLE
- 270 REMOVE AND RESTORE ASPHALT
- 280 REMOVE AND RESTORE CONCRETE
- 281 REMOVE AND RESTORE SIDEWALK
- 282 REMOVE AND RESTORE CURBING
- 410 PULL CABLE
- 411 PULL THROUGH DUCT (INNERDUCT)
- 520 PLACE AERIAL CABLE
- 630 DIRECTIONAL BORE



CITY OF LAS VEGAS, NEVADA

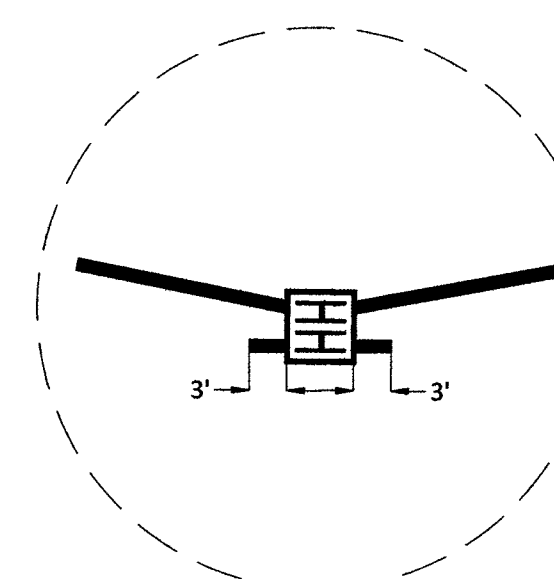
MCI
COMMUNICATIONS SERVICES, INC.
OUTSIDE PLANT CONSTRUCTION

REVISIONS

EXCEPT AS MAY BE OTHERWISE PROVIDED BY CONTRACT, THESE DRAWINGS AND SPECIFICATIONS SHALL REMAIN THE PROPERTY OF MCI COMMUNICATIONS SERVICES, INC., BOTH BEING ISSUED IN STRICT CONFIDENCE AND SHALL NOT BE REPRODUCED, COPIED, OR USED FOR ANY PURPOSE WITHOUT SPECIFIC WRITTEN PERMISSION.

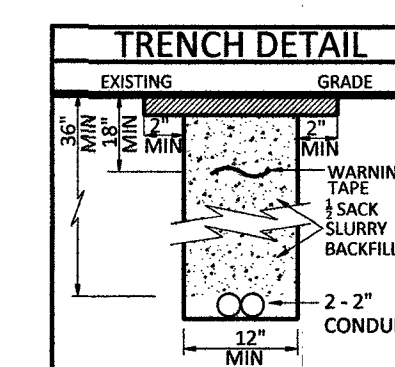
FILE: LSV NEON 916116

210 PLACE CONDUIT
212 PLACE HIGH DENSITY POLYETHYLENE (HDPE)
240 PLACE HANDHOLE
250 PLACE MANHOLE
270 REMOVE AND RESTORE ASPHALT
280 REMOVE AND RESTORE CONCRETE
281 REMOVE AND RESTORE SIDEWALK
282 REMOVE AND RESTORE CURBING
410 PULL CABLE
411 PULL THROUGH DUCT (INNERDUCT)
520 PLACE AERIAL CABLE
630 DIRECTIONAL BORE



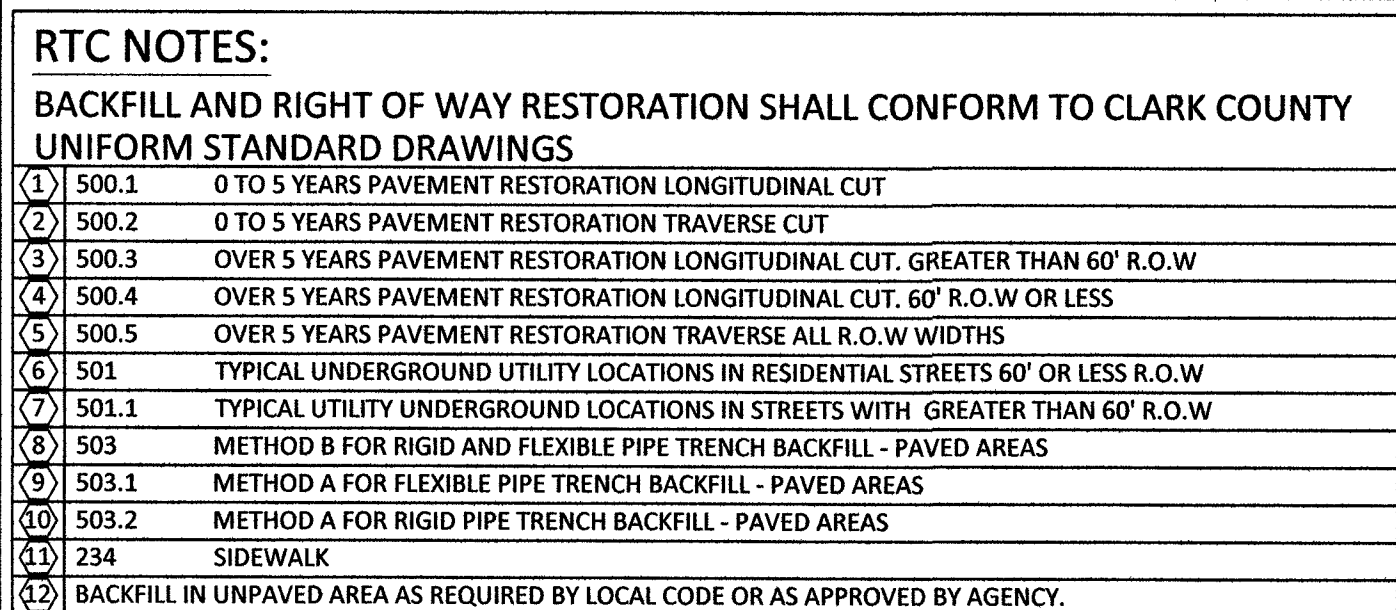
DETAIL "A"

N.T.S.

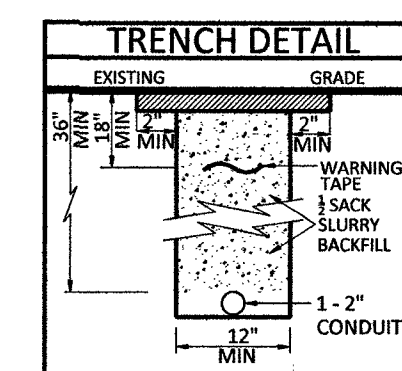




**Know what's below.
Call 811 before you dig**



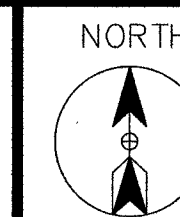
210 PLACE CONDUIT
212 PLACE HIGH DENSITY POLYETHYLENE (HDPE)
240 PLACE HANDHOLE
250 PLACE MANHOLE
270 REMOVE AND RESTORE ASPHALT
280 REMOVE AND RESTORE CONCRETE
281 REMOVE AND RESTORE SIDEWALK
282 REMOVE AND RESTORE CURBING
410 PULL CABLE
411 PULL THROUGH DUCT (INNERDUCT)
520 PLACE AERIAL CABLE
630 DIRECTIONAL BORE

[illegible]

SCALE	
HORIZONTAL:	1"=30'
VERTICAL:	NA
MP _____	TO MP _____
SHEET 10	OF 11
FILE: LSV NEON 916116	

Call at least two full working days
before you begin excavation.

811 Know what's below.
Call 811 before you dig.



PROJECT:	916116
----------	--------

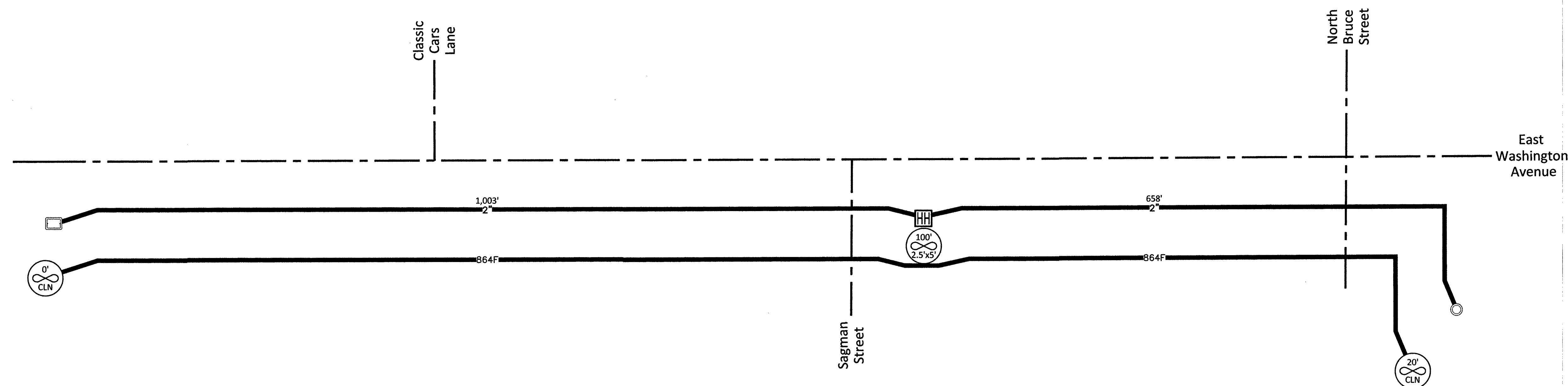
CELL SITE: LSV NEON 916116

CITY OF LAS VEGAS, NEVADA

CLARIFICATION NO.	QUANTITY
-------------------	----------

FIBER TOTALS

FIBER SIZE/LENGTH: 864/1,781'



MCI
COMMUNICATIONS SERVICES, INC.

OUTSIDE PLANT CONSTRUCTION

OUTSIDE PLANT CONSTRUCTION

TITLE: CELL SITE: LSV NEON 916116

PROJECT TITLE

DATE: 10/10/2018

DRAWN BY: PVEGA

REVISIONS

DATE	INITIAL
------	---------

EXCEPT AS MAY BE OTHERWISE PROVIDED BY CONTRACT, THESE DRAWINGS AND SPECIFICATIONS SHALL REMAIN THE PROPERTY OF MCI COMMUNICATIONS SERVICES, INC. BOTH BEING ISSUED IN STRICT CONFIDENCE AND SHALL NOT BE REPRODUCED, COPIED, OR USED FOR ANY PURPOSE WITHOUT SPECIFIC WRITTEN PERMISSION.

SCALE

HORIZONTAL: 1"=30'

VERTICAL: NA

MP TO MP

SHEET 11 OF 12

FILE: LSV NEON 916116

SITE-SPAN NAME: CELL SITE: LSV NEON 916116

SITE-SPAN ID: 1708APXX.022

FQND	SEGMENT	FIBER COUNT	TRENCH	BORE	DB/OT	3RD PARTY	VZ OWNED	AERIAL	TOTAL
FIB:BUR:: 56137638	916116	864F	1,661'	'	'	'	'	'	1,661'

M:\VERIZON ONEFIBER\LAS VEGAS\LSV FOREMASTER\LSV NEON 916116\CONSTRUCTION DRAWINGS