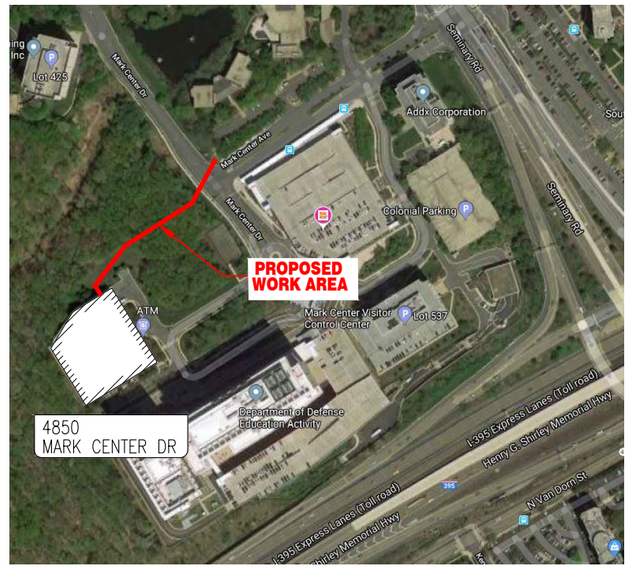
CROWN CASTLE | FIBER

S228115 - 4850 MARK CENTER DRIVE - OSP
PROPOSED FIBER ROUTE
ALEXANDRIA, VA
REVISION 01
JULY 19TH, 2021



VICINITY MAP
SCALE N.T.S

BUILDING PHOTO

CONTACT LIST

LIGHTOWER:

FRANK HUBER	(202) 438-4703
BRUCE GOFF	(703) 955-1669

4850 MARK CENTER DR

THOMAS P HURRELL LEAD NETWORK ENGINEER	(703) 845-2518

EXPRESS-TEK:

DAVID BROWN SR. ENGINEERING MANAGER	(540) 752-6691
CHRIS LEWIS SR. ENGINEERING MANAGER	(540) 752-6691
MARK MICHAEL ENGINEER	(540) 752-6691
AMY LEVESQUE ENGINEER	(540) 752-6691
AUSTIN CATLETT PERMITTING MANAGER	(202) 256-1961
SHERRY SMITH PERMITTING SPECIALIST	(540) 752-6691
VICKI DICKERSON CAD SUPERVISOR	(540) 752-6691

UTILITIES:

MISS UTILITY	24 HOUR NUMBER	811
WILLIAMS PIPE LINE (TRANSCONTINENTAL) EMERGENCY 24 HOUR NUMBER	WILLIAM POOLE	(703) 368-3255 X2223 (800) 257-7777
CONSTELLATION ENERGY EMERGENCY 24 HOUR NUMBER		(866) 804-5479

NATURAL GAS

WASHINGTON GAS EMERGENCY 24 HOUR NUMBER	DON JONES SUPERVISOR OF DAMAGE PREVENTION	(703) 750-5510 (703) 750-1000
COLONIAL PIPE LINE EMERGENCY 24 HOUR NUMBER	LARRY LOAR	(703) 504-5112 (800) 926-2728
COLUMBIA GAS EMERGENCY 24 HOUR NUMBER	STEVE STIMSON	(540) 270-0694 (800) 835-7191

WATER:

FAIRFAX WATER AUTHORITY – COUNTY EMERGENCY 24 HOUR NUMBER	STEPHEN WRIGHT	(703) 385-7920 (703) 385-7920
FAIRFAX WATER AUTHORITY – COUNTY EMERGENCY 24 HOUR NUMBER	MIKE FORRESTER	(703) 698-5600 (703) 289-6125

NOTE: THIS INFORMATION IS OR WILL BE BASED ON AREA OF WORK

PERMITTING AGENCIES:

CITY OF ALEXANDRIA	MITCH BERNSTEIN	(703) 838-4324
CITY OF ALEXANDRIA	LUCKY STOKES PROFESSIONAL ENGINEER	(703) 838-4324
CITY OF ALEXANDRIA	EMILY BAKER PROFESSIONAL ENGINEER	(703) 838-4327

VDOT

NOVA VDOT	JASON MULLINS	(703) 259-1213
LIMITED ACCESS VDOT	MUTAZ AKHADRA	(804) 786-0622

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1127 international parkway, suite 293, fredericksburg, va 22406

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

ISSUED FOR CONSTRUCTION

GENERAL NOTES

GENERAL NOTES:

1. ALL WORK WILL COMPLY WITH APPLICABLE LOCAL, STATE, AND FEDERAL REGULATORY AGENCIES, INCLUDING, BUT NOT LIMITED TO, OSHA, NESC, DOT, RPA, ETC. GENERAL NOTES WILL APPLY TO ALL DRAWINGS.
2. THE CONTRACTOR WILL NOTIFY (IF APPLICABLE) THE ADJACENT PROPERTY OWNERS A MINIMUM OF 24 HOURS IN ADVANCE OF CONSTRUCTION.
3. ALL TRAFFIC CONTROL DEVICES WILL BE IN PLACE PRIOR TO CONSTRUCTION. DEVICES NO LONGER NEEDED WILL BE REMOVED AS QUICKLY AS POSSIBLE.
4. PEDESTRIAN TRAFFIC AREAS MUST BE MAINTAINED AT ALL TIMES. PEDESTRIANS WILL NOT BE ROUTED ON TO PRIVATE PROPERTY.
5. NO MATERIALS OR EQUIPMENT WILL BE STORED OR ALLOWED TO STAND UNPROTECTED WHERE PEDESTRIAN OR VEHICULAR TRAFFIC IS PRESENT.
6. NO EQUIPMENT OR MATERIALS WILL BE STORED ON ROAD SURFACE DURING NON–WORK PERIODS.
7. NO EQUIPMENT OR MATERIALS MAY BE STORED ON THE SIDEWALK.
8. EXCAVATION MATERIAL WILL BE STORED AWAY FROM THE PAVED ROADWAY. ALL SPILLED MATERIAL WILL BE PICKED UP IMMEDIATELY.
9. MUNICIPAL ROAD SIGNS, DELINEATORS, GUARDRAILS, ETC. WILL NOT BE REMOVED WITHOUT PRIOR WRITTEN PERMISSION FROM THE APPROVING AUTHORITY.
10. ALL WORK WILL BE PERFORMED IN ACCORDANCE WITH THE CITY, COUNTY, AND STATE SPECIFICATIONS AND STANDARDS.

EROSION SEDIMENT CONTROL NARRATIVE:

DESCRIPTION:

THIS PROJECT CONSISTS OF THE PROPOSED CONSTRUCTION OF TRENCHING OR DIRECTIONAL BORING FOR THE PURPOSE OF INSTALLING FIBER OPTIC DUCT.

DATES OF CONSTRUCTION:

CONSTRUCTION ON THE RIGHT OF WAY IS PLANNED TO BE A YEAR ROUND ACTIVITY. SOILS DATA: FOR SOILS MAP AND SOILS INFORMATION PROVIDED.

EROSION SEDIMENTATION CONTROL PROGRAM:

EROSION AND SEDIMENTATION CONTROLS SHOWN ARE PROVIDED TO ACCOMMODATE ONSITE DRAINAGE AREAS DURING THE CONSTRUCTION PHASE. ADDITIONAL OR REVISED CONTROLS MAY BE INSTALLED AS DETERMINED NECESSARY. EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE CONSTRUCTED AND MAINTAINED ACCORDING TO THE STANDARDS AND SPECIFICATIONS IN THE CURRENT VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK.

PHASE OF LAND DISTURBING ACTIVITIES:

CONTROLS SHOWN SHALL BE INSTALLED AS THE FIRST ITEM OF CONSTRUCTION AND MAINTAINED FOR CONSTRUCTION ACTIVITIES LASTING MORE THAN A ONE DAY SCHEDULE. ALL AREAS NOT TO BE IMMEDIATELY BUILT UPON SHALL BE SEEDED FOR TEMPORARY VEGETATION. ALL CONTROLS ARE TO REMAIN IN PLACE FOR THE DURATION OF THE JOB. REMOVAL, REGRADING AND SEEDING OF THE TEMPORARY DIVERSION DIKES WILL BE THE FINAL ACT OF GRADING IF REQUIRED.

SEQUENCE OF CONSTRUCTION:

1. PLACEMENT OF EROSION AND SEDIMENTATION CONTROLS
2. TRENCHING AND/OR DIRECTIONAL BORING.
3. UTILITY INSTALLATION
4. FINAL GRADING AND VEGETATION
5. REMOVAL OF CONTROLS

MAINTENANCE PROGRAM:

1. ALL MEASURES ARE TO BE INSPECTED DAILY BY THE SITE SUPERINTENDENT OR HIS REPRESENTATIVE. ANY DAMAGE STRUCTURAL MEASURES SHALL BE REPAIRED IMMEDIATELY TO AVOID DAMAGE TO DOWN STREAM PROPERTIES.
2. AS AREAS ARE BROUGHT TO EITHER GRADE OR SUBGRADE THEY SHOULD BE STABILIZED BY EITHER PLACING GRAVEL SUBBASE OR BY SEEDING AS EARLY AS POSSIBLE.
3. ALL FILLS ARE TO BE LEFT WITH A LIP AT THE TOP OF THE SLOPE AT THE END OF EACH DAY OF OPERATION.
4. ALL CUT AND FILL SLOPES ARE TO BE SEEDED AND MULCHED WITH IN FIVE (5) DAYS OF COMPLETION OF GRADING.

GENERAL LAND CONSERVATION NOTES:

1. NO DISTURBED AREA WILL BE DENUDED FOR MORE THAN SEVEN (7) CALENDAR DAYS UNLESS AUTHORIZED BY THE COUNTY WHERE THE WORK IS TAKING PLACE.
2. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE PLACED AS THE FIRST STEP IN GRADING.
3. ELECTRIC POWER, TELEPHONE AND GAS SUPPLY TRENCHES SHALL BE COMPACTED, SEEDED AND MULCHED. WITHIN FIVE (5) DAYS OF BACKFILL.
4. ALL TEMPORARY EARTH BERMS, DIVERSION DIKES, SILT DAMS, AND SOIL STOCKPILES SHALL BE SEEDED AND MULCHED FOR TEMPORARY VEGETATIVE COVER IMMEDIATELY AFTER GRADING. STRAW OR HAY IS REQUIRED.
5. DURING CONSTRUCTION, ALL STORM SEWER INLETS SHALL BE PRO–TECTED BY SILT TRAPS MAINTAINED AND MODIFIED AS REQUIRED DURING CONSTRUCTION PROGRESS.
6. ANY DISTURBED AREA NOTE COVERED BY NOTE 1 ABOVE AND NOT PAVED, SODDED, OR BUILT UPON BY NOVEMBER 1, OR DISTURBED AFTER THAT DATE, SHALL BE MULCHED WITH HAY OR STRAW MULCH AT THE RATE OF TWO (2) TONS PER ACRE AND OVER–SEEDED BY MARCH 15.
7. AT THE COMPLETION OF THE CONSTRUCTION PROJECT AND PRIOR TO RELEASE OF THE BOND, ALL TEMPORARY SILTATION AND EROSION CONTROLS SHALL BE REMOVED UPON THE APPROVAL OF VIRGINIA AND ALL DENUDED AREAS SHALL BE STABALIZED WITH VEGETATION.
8. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL MEET THE STANDARDS AND SPECIFICATIONS OF THE CURRENT VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK.
9. NO MORE THAN 500 LINEAR FEET OF TRENCH MAY BE OPENED AT ONE TIME.
10. EXCAVATION MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF THE TRENCH.
11. EFFUENT FROM THE DEWATERING OPERATIONS SHALL BE FILTERED OR PASSED THROUGH AN APPROVED SEDIMENT TRAPPING DEVICE, OR BOTH, AND DISCHARGED IN A MANNER THAT DOES NOT ADVERSLY AFFECT FLOWING STREAMS OR OFF–SITE PROPERTY.
12. MATERIAL USED FOR BACKFILLING TRENCHES SHALL BE PROPERLY COMPACTED IN ORDER TO MINIMIZE EROSION AND PROMOTE STABILIZATION.
13. RESTABILIZATION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THESE REGULATIONS.
14. APPLICABLE SAFETY REGULATIONS SHALL BE COMPLIED WITH.
15. WHERE CONSTRUCTION VEHICLE ACCESS ROUTES INTERSECT PAVED OR PUBLIC ROADS, PROVISIONS SHALL BE MADE TO MINIMIZE THE TRANSPORT OF SEDIMENT BY VEHICULAR TRACKING ONTO THE PAVED SURFACE. WHERE SEDIMENT IS TRANSPORTED ONTO A PAVED OR PUBLIC ROAD SURFACE, THE ROAD SURFACE SHALL BE CLEANED THOROUGHLY AT THE END OF EACH DAY. SEDIMENT SHALL BE REMOVED FROM THE ROADS BY SHOVELING OR SWEEPING AND TRANSPORTED TO A SEDIMENT CONTROL DISPOSAL AREA. STREET WASHING SHALL BE ALLOWED ONLY AFTER SEDIMENT IS REMOVED IN THIS MANNER.

SEEDING SPECIFICATIONS:

NOTE: ALL EARTHEN CONTROLS SHALL BE SEEDED AND MULCHED IMMEDIATELY FOLLOWING INSTALLATION AND ANY SOIL STOCKPILES SHALL BE STABALIZED WITH TEMPORARY VEGETATION.

TEMPORARY SEEDING:

1. IN HIGHLY ACID SOILS (pH 5.5 AND LOWER) LIME SHALL BE ADDED TO THE SOIL AT A RATE OF TWO (2) TONS OF PULVERIZED LIMESTONE PER ACRE AND WORKED INTO THE TOP 2"–4" OF THE SOIL. FERTILIZER SHALL BE APPLIED AT A RATE OF 450 POUNDS PER ACRE OF 10–20–20 OR EQUIVALENT. IT SHALL BE WORKED INTO THE TOP 2"–4" OF THE SOIL.
2. SURFACE ROUGHENING WHERE SURFACE IS COMPACTED, CRUSTED OR HARDENED IS REQUIRED. THE SOIL SURFACE SHALL BE LOOSENED PER SURFACE ROUGHENING IN THE CURRENT VIRGINA EROSION AND SEDIMENT HANDBOOK.
3. SEEDING ACCOMPLISHED IN THE FALL OR WINTER, ON SLOPES IN EXCESS OF 4:1, ON ADVERSE SOIL CONDITIONS OR EXCESSIVELY HOT OR DRY WEATHER SHALL BE MULCHED IN ACCORDANCE WITH THE CURRENT VIRGINIA EROSION AND SEDIMENT HANDBOOK.
4. AREAS WHICH FAIL TO ESTABLISH VEGETATIVE COVER ADEQUATELY TO PREVENT RILL EROSION SHALL BE RESEEDED AS SOON AS SOON AS THEY ARE IDENTIFIED.
5. TEMPORARY SEED MIXTURES SHALL BE AS FOLLOWS:
   60 LBS/ACRE GERMAN MILLET (SUMMER MONTHS)
   60 LBS/ACRE ANNUAL RYEGRASS OR 100 LBS/ACRE CEREALE RYE (LATE FALL OR EARLY WINTER)

PERMANENT SEEDING:

1. THE EXISTING SOIL MUST MEET THE FOLLOWING CRITERIA:
   A. ENOUGH FINE GRADED MATERIAL TO MAINTAIN ADEQUATE MOISTURE AND NUTRIENT SUPPLY.
   B. SUFFICIENT PORE SPACE TO PERMIT ROOT PENETRATION. A BULK DENSITY OF 1.2 TO 1.5 INDICATES THAT SUFFICIENT PORE SPACE IS AVAILABLE.
   C. SUFFICIENT DEPTH OF SOIL TO PROVIDE ADEQUATE ROOT ZONE. THE DEPTH TO ROCK OR IMPERMEABLE SURFACES SHALL BE 12" OR MORE.
   D. A FAVORABLE pH RANGE OF 6.0–7.0 FOR PLANT GROWTH. IF SOIL IS TOO ACIDIC TO BE MODIFIED TO WITHIN THIS RANGE, IT IS CONSIDERED AN UNSUITABLE ENVIRONMENT FOR PLANT ROOTS.
   E. FREEDOM FROM TOXIC AMOUNTS OF MATERIALS HARMFUL TO PLANT GROWTH.
   F. FREEDOM FROM EXCESSIVE QUANTITIES OF ROOTS, BRANCHES, LARGE STONES, LARGE CLODS OF EARTH OR TRASH OF ANY KIND.

IF ANY OF THE CRITERIA CANNOT BE MET THEN TOPSOIL SHALL BE APPLIED IN ACCORDANCE WITH THE CURRENT VIRGINIA EROSION AND SEDIMENT HANDBOOK.

2. SURFACES SHALL BE ROUGHENED IN ACCORDANCE WITH THE CURRENT VIRGINIA EROSION AND SEDIMENT HANDBOOK.
3. SOIL CONDITIONERS MAY BE ADDED TO THE SOIL AS DESIRED BUT MUST BE DONE IN ACCORDANCE WITH THE CURRENT VIRGINIA EROSION AND SEDIMENT HANDBOOK.
4. LIME AND FERTILIZER NEEDS SHOULD BE DETERMINED BY SOIL SCIENTISTS FROM QUALIFIED COMMERCIAL LABRORATORY OR THE COOPERATIVE EXTENSION SERVICE SOIL TESTING LABORATORY AT VPI & SU. GENERAL RECOMMENDATIONS ARE TWO (2) TONS PER ACRE OF AGRICULTURAL LIMESTONE ON SANDY SOILS AND THREE (3) TONS PER ACRE ON CLAYEY SOILS WITH 1,200 POUNDS PER ACRE OF 10–10–10 FERTILIZER.
5. SEED MIXTURE SHALL BE 100–120 LBS/ACRE OF TALL FESCUE AND 12 LBS /ACRE ANNUAL RYEGRASS.
6. ALL PERMANENT SEEDING SHALL BE MULCHED IMMEDIATELY IN ACCORDANCE WITH THE CURRENT VIRGINIA EROSION AND SEDIMENT HANDBOOK.

CONSTRUCTION NOTES:

1. NUMBER 6 TRACER WIRE TO BE REQUIRED WITH ALL CABLE PLACEMENT.
2. FIBER OPTIC WARNING TAPE WILL BE PLACED 12" BELOW THE EXISTING GRADE IN ALL EXCAVATIONS.
3. VERIFICATION OF THE LOCATION OF EXISTING UTILITY CROSSINGS IS THE RESPONSIBILITY OF THE CONTRACTOR. HAND DIGGING WILL BE UTILIZED WHERE REQUIRED.
4. CALL THE LOCAL UTILITY ONE–CALL AT LEAST 72 HOURS IN ADVANCE OF ANY CONSTRUCTION 811
5. A 12" SEPARATION BETWEEN PROPOSED CONDUIT AND OTHER UTILITIES WILL BE MAINTAINED.
6. CONDUIT CAPS WILL BE PLACED ON THE ENDS OF ALL VACANT DUCTS DURING CONSTRUCTION, UPON COMPLETION, AND WHILE AWAITING FIBER INSTALLATION.
7. ALL INSTALL DUCTS WILL BE PROOFED USING A MANDRILL 1/4" SMALLER THAN THE PIPE ID PVC AS SHOWN ON DRAWING.
8. THE MINIMUM BENDING RADIUS FOR FIBER CABLE WILL BE 36".
9. MAXIMUM CABLE INSTALLATION TENSION WILL NOT EXCEED 600 POUNDS. A 600 POUND BREAKAWAY SWIVEL WILL BE USED DURING PULLING.
10. THE REMOVAL AND STORAGE OF ALL SHRUBBERY TO BE REPLACED IS THE RESPONSIBILITY OF THE CONTRACTOR.
11. THE CONTRACTOR WILL RESTORE ALL DISTURBED AREAS TO THEIR ORIGINAL OR BETTER CONDITION
12. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN CONSTRUCTION AS–BUILT DRAWINGS AND PRESENT A COMPLETE SET OF RED–LINED DRAWINGS TO CROWN CASTLE WITHIN 14 DAYS OF COMPLETION OF THE WORK.
13. CONDUITS WILL BE TERMINATED ABOVE THE MIDPOINT OF MANHOLE.
14. PLACE 100 FEET FIBER SLACK COIL IN EACH HANDHOLE/MANHOLE.
15. HAND DIG UNDER ANY BURIED UTILITY CABLES AS REQUIRED.
16. ALL CONDUITS WILL BE PLACED AT A MINIMUM OF 36" COVER.

CROWN CASTLE | FIBER

4850 MARK CENTER DR - OSP
PROPOSED FIBER ROUTE
ALEXANDRIA, VA

FILE: 17823	ENGINEER: MARK MICHAEL	DRAFTER: VICKI DICKERSON
REVISION: 01	DATE: 07/19/2021	SHEET: T01 OF T06

LEGEND

SYMBOL	DESCRIPTION
Ⓔ	ELECTRIC MANHOLE
⊠	ELECTRIC TRANSFORMER
△	PARKING METER
⬡—	STREET LIGHT
⊠	TRAFFIC CONTROL BOX
⬡	TRAFFIC POLE
◇	TRAFFIC SIGNAL
Ⓣ	TELEPHONE MANHOLE
▭	EXISTING TELEPHONE HH
Ⓥ	VERIZON MANHOLE
⋈	ANCHOR
⊠	TELEPHONE PEDESTAL
⊗	TELE/VZ/PROP POLE
Ⓥ	VZ/TELE/PROP POLE
⟸	FIBER MARKER TUBE
Ⓦ	WATERHOLE MANHOLE
⌀	WATER VALVE
□	WATER METER
⊹	FIRE HYDRANT
⊹	IRRIGATION VALVE
Ⓢ	SEWER MANHOLE
Ⓓ	STORMDRAIN MANHOLE
▥	GRATE INLET
▢	CATCH BASIN
Ⓖ	UTILITY MANHOLE
⊹	GAS VALVE
⊠	GAS TANK
Ⓤ	UTILITY MANHOLE
❀	TREE
⌂	MAILBOX
◒	TEST PIT
◉	PROPERTY PIN
◎	STEEL POST
⊤	SIGN

SYMBOL	DESCRIPTION
0+00 TEXT LINE 1	EXISTING STATIONING
0+00 TEXT LINE 1	PROPOSED STATIONING
A/E	AERIAL CABLE LINE
CATV	CABLE TV
E	ELECTRIC LINE
G	GAS LINE
S	SEWER LINE
SD	STORM DRAIN LINE
T	TELEPHONE LINE
TR	TRAFFIC LINE
W	WATER LINE
CSW	CONCRETE SIDE WALK
ASW	ASPHALT SIDE WALK
B/E	BUILDING EDGE
℄	CENTER LINE
EOG	EDGE OF GRAVEL
EOP	EDGE OF PAVEMENT
BOC	FACE OF CURB
PROP BOC	PROPOSED FACE OF CURB
ℙL	PROPERTY LINE
R/W	RIGHT OF WAY
PROP R/W	PROPOSED RIGHT OF WAY
LVL3	LEVEL – 3
ZAYO	ZAYO
XO	XO COMMUNICATIONS
LT	LIGHTOWER
SIG	SUMMIT IG
VZ	VERIZON
MCI	MCI – VERIZON
MFN	METRO FIBER NETWORKS
AT&T	TCG–AT&T
CTL	CENTURYLINK
QGS	QWEST
MFS	METROPOLITAN FIBER SYSTEMS

SYMBOL	DESCRIPTION
	PROP/EXISTING TELE HH
	PROPOSED ANCHOR
	AERIAL SLACK COIL
	SPLICE POINT
12'L- 6.6M / 1"	ANCHOR TEXT
100'	PROPOSED SLACK COIL
##### ADDRESS	ADDRESS LABEL
ROAD NAME ROAD MATERIAL	ROAD LABEL
	RR SIGNAL
	TRACK SWITCH
#--	CROSSING ARM
RR MP 0	MILE POST
1	POLE SEQUENCE CIRCLE
XXX'	AERIAL DISTANCE OVAL
	DETAIL CIRCLE
	WORK ZONE
	BUILDING EDGE

LINETYPES	DESCRIPTION
℄	CENTER LINE
X X X X X	FENCE LINE
	GUARDRAIL
ℙL	PROPERTY LINE
	RAILROAD
R/W	RIGHT–OF–WAY
	SLOPE – TOP
	SLOPE – BOTTOM
	WOODS
	PROPOSED UNDERGROUND PULL THRU
	PROPOSED FIBER
A/E	PROPOSED AERIAL FIBER
	PROPOSED INNERDUCT W/ FIBER
	PROPOSED CONDUIT W/ FIBER
	PROPOSED ISP PULL THRU
ELEC ELEC	PROPOSED ISP ELECTRICAL
	PROPOSED ISP GROUND WIRE
	EASEMENT LINE

SYMBOL	DESCRIPTION
HH	HANDHOLE
MH	MANHOLE
O/S	OFFSET
DB	DIRECTIONAL BORE
PVC	POLY VINYL CHLORIDE
HDPE	HIGH DENSITY POLYETHYLENE
INDT	INNERDUCT
EMT	ELECTRICAL METALLIC TUBING

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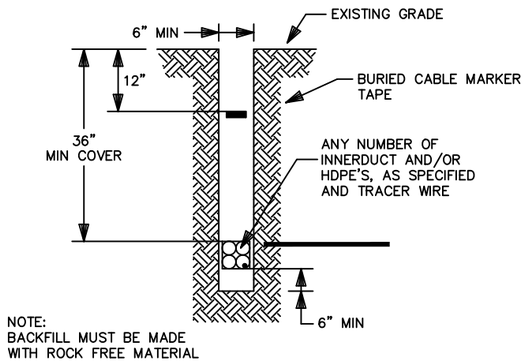
BURIED CONSTRUCTION TYPICALS - 1

PLACEMENT – TYPICALS

TYPICAL "A"

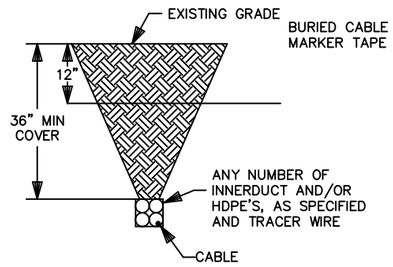
PLACE CONDUIT
CROSS SECTION



NOTE:
BACKFILL MUST BE MADE
WITH ROCK FREE MATERIAL

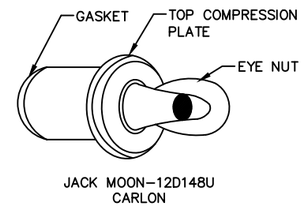
TYPICAL "B"

PLACE HDPE
CROSS SECTION



CONDUIT PLUG TYPICAL

(NOT TO SCALE)

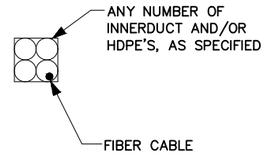


JACK MOON–12D148U
CARLON

HDPE CONDUIT CONFIGURATION

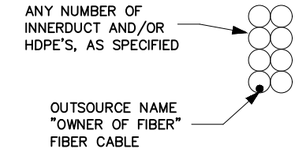
TYPICAL "C"

CABLE IN
CONDUIT



TYPICAL "D"

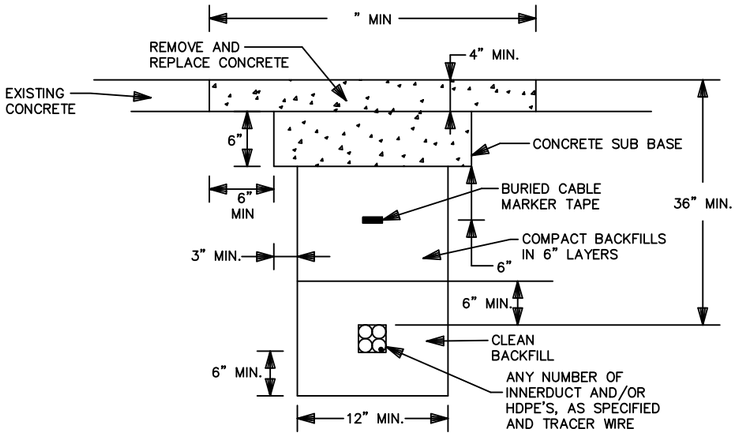
MULTIPLE CABLE IN
CONDUIT



OPEN CUT – TYPICALS
ROAD OR STREET

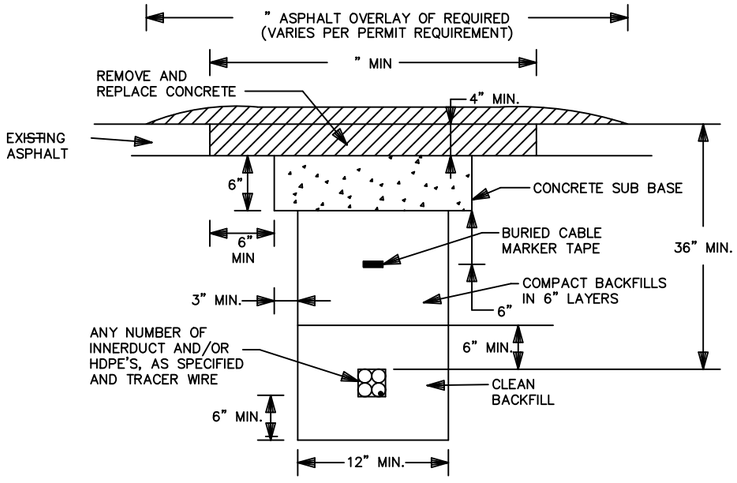
TYPICAL "C"

CONCRETE/PAVEMENT OPEN CUT
CROSS SECTION
(VARIES PER PERMIT REQUIREMENT)



TYPICAL "D"

ASPHALT/PAVEMENT OPEN CUT
CROSS SECTION



HDPE CONDUIT CONFIGURATION

1. THE BOTTOM OF THE TRENCH SHALL BE LEVEL, FLAT AND NOT HAVE ANY ROCK DEBRIS.
2. ALL BACKFILL MUST BE APPROVED BY ENGINEER, AND/OR PERMITTING AUTHORITY INSPECTOR.
3. EXCAVATED MATERIAL MAY BE DEEMED SUITABLE BACKFILL BY ENGINEER AND/OR PERMITTING AUTHORITY INSPECTOR.
4. MINIMUM SIX (6) INCHES OF CLEAN SAND SHALL BE PLACED OVER THE CONDUIT.
5. FLOWABLE FILL MIX DESIGN SHALL BE PER CITY AND/OR PERMITTING AUTHORITY.
6. ALL FLOWABLE FILL AND CONCRETE SHALL BE VIBRATED USING A 2" DIAMETER VIBRATOR.
7. CONCRETE AND ASPHALT THICKNESS SHALL MATCH EXISTING.
8. #4 DOWELS SHOULD BE DRILLED INTO ADJACENT UNDISTURBED CONCRETE TO PREVENT DIFFERENTIAL SETTLEMENT.

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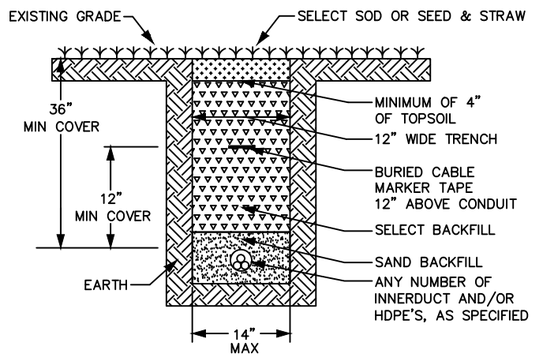
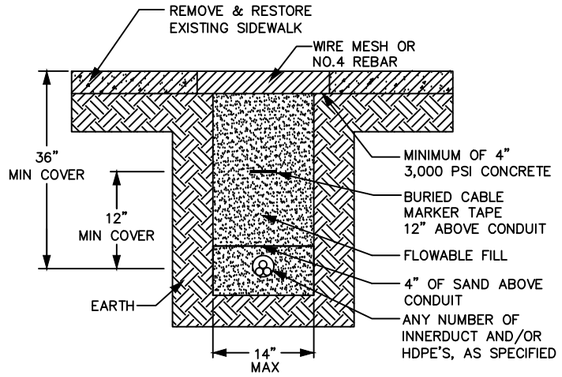
BURIED CONSTRUCTION TYPICALS - 2

SOD/UNIMPROVED AREA TRENCH RESTORATION TYPICAL



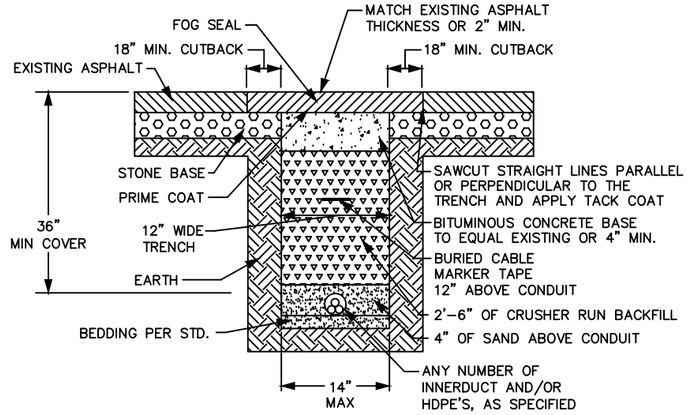
1. ALL BACKFILL MUST BE APPROVED BY ENGINEER OR PERMITTING AUTHORITY INSPECTOR.
2. EXCAVATED MATERIAL MAY BE DEEMED SUITABLE BACKFILL BY ENGINEER, AND/OR PERMITTING AUTHORITY.
3. A MAXIMUM OF EIGHT (8) INCH LIFTS OF BACKFILL MATERIAL WILL BE ALLOWED. FOUR (4) INCHES OF CLEAN SAND SHALL BE PLACED ABOVE THE CONDUIT.
4. THE BOTTOM OF THE TRENCH SHALL BE LEVEL, FLAT, AND NOT HAVE ANY ROCK DEBRIS.
5. ALL DISTURBED GRASS AREAS ARE TO BE SEEDED WITH KENTUCKY 31 FESCUE WITH NUTRIENTS APPLIED AND MAINTAINED TO ACHIEVE A SATISFACTORY GRASS COVER TO CONTROL EROSION.

SIDEWALK TRENCH RESTORATION TYPICAL



1. REMOVE ENTIRE SIDEWALK PANEL, JOINT TO JOINT.
2. EXPANSION BOARD SHALL BE PLACED ON ALL EXISTING CONCRETE EDGES.
3. FLOWABLE FILL MIX DESIGN SHALL BE PER PERMITTING AUTHORITY SPECIFICATIONS.
4. THE NEW CONCRETE SIDEWALK SHALL BE PLACED LEVEL AND FLAT TO MATCH EXISTING.
5. THE FINISH SHALL MATCH EXISTING SIDEWALK.
6. FOUR (4) INCHES OF CLEAN SAND SHALL BE PLACED OVER THE MULTICELL CONDUIT.
7. THE BOTTOM OF THE TRENCH SHALL BE LEVEL, FLAT, AND NOT HAVE ANY ROCK DEBRIS.
8. CONCRETE REINFORCEMENT SHALL CONSIST OF WIRE MESH 6"x6"x10 GAUGE WIRE OR NO.4 REBAR PLACED ON 12" CENTERS.
9. ALL FLOWABLE FILL AND CONCRETE SHALL BE VIBRATED USING A 2" DIAMETER VIBRATOR.
10. CONCRETE SIDEWALK THICKNESS SHALL MATCH EXISTING.

ASPHALT TRENCH RESTORATION TYPICAL



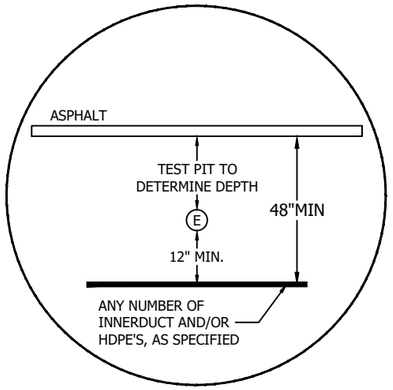
1. BITUMINOUS CONCRETE SURFACE SHALL BE PLACED TO A DEPTH EQUAL TO THE EXISTING SURFACE OR 2" MINIMUM. (COARSE SURFACE)
2. BITUMINOUS CONCRETE BASE SHALL BE PLACED TO A DEPTH EQUAL TO THE EXISTING PAVEMENT OR 4" MINIMUM. (BC)
3. THE TOP 2'-6" OF THE TRENCH BELOW PAVEMENT SHALL BE BACKFILLED WITH CRUSHER RUN.
4. ALL ROAD SURFACE EDGES SHALL BE SAWED IN A STRAIGHT LINE.
5. SS-1 TACK COAT WILL BE APPLIED AT THE RATE OR 0.1 GAL. PER SQ. YARD OVER THE CONCRETE BASE AND THE EDGES OF THE EXISTING ASPHALT.
6. THE ASPHALT PATCH SHALL BE SMOOTH, FLAT AND EVEN WITH EXISTING ASPHALT SURFACE. ALL JOINTS WILL BE SEALED AFTER PAVING.
7. FOUR (4) INCHES OF CLEAN SAND SHALL BE PLACED OVER THE CONDUIT.
8. BOTTOM OF THE TRENCH SHALL BE LEVEL, A 3" SAND BEDDING WILL BE PLACED AS REQUIRED.
9. TYPICAL TRENCH WIDTH IS 14".

CROWN CASTLE | FIBER

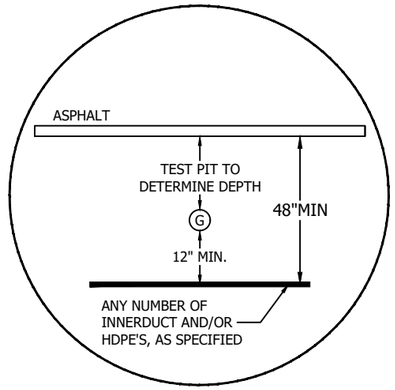
4850 MARK CENTER DR - OSP PROPOSED FIBER ROUTE ALEXANDRIA, VA		NOT FOR OUTSIDE DISCLOSURE WITHOUT EXPLICIT PERMISSION FROM CROWNCASTLE.
FILE: 17823	ENGINEER: MARK MICHAEL	DRAFTER: VICKI DICKERSON
REVISION: 01	DATE: 07/19/2021	SHEET: T04 OF T06

UTILITY CROSSING TYPICAL

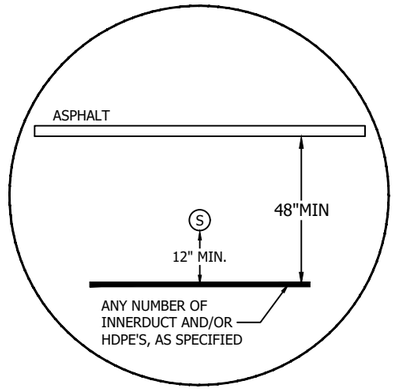
ELECTRIC CROSSING
SCALE: NTS



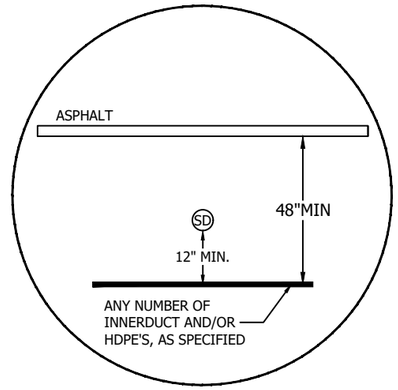
GAS CROSSING
SCALE: NTS



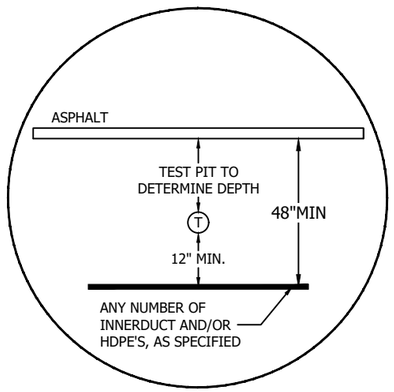
SEWER CROSSING
SCALE: NTS



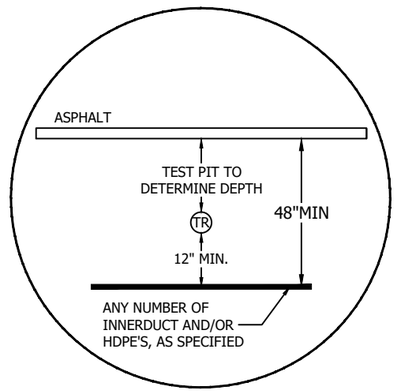
STORM DRAIN CROSSING (ASPHALT)
SCALE: NTS



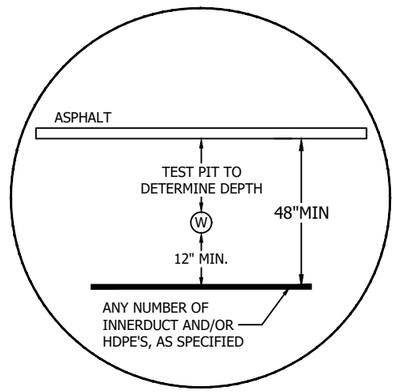
TELEPHONE CROSSING
SCALE: NTS



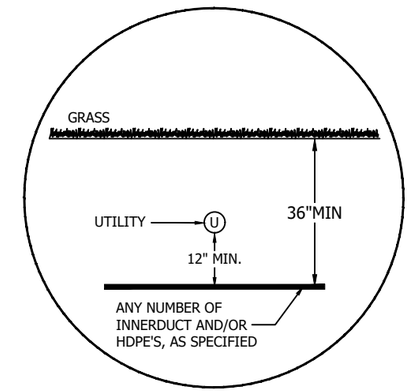
TRAFFIC CROSSING
SCALE: NTS



WATER CROSSING
SCALE: NTS



UTILITY CROSSING (GRASS)
SCALE: NTS



CROWN CASTLE | FIBER

4850 MARK CENTER DR - OSP
PROPOSED FIBER ROUTE
ALEXANDRIA, VA

FILE: 17823	ENGINEER: MARK MICHAEL	DRAFTER: VICKI DICKERSON
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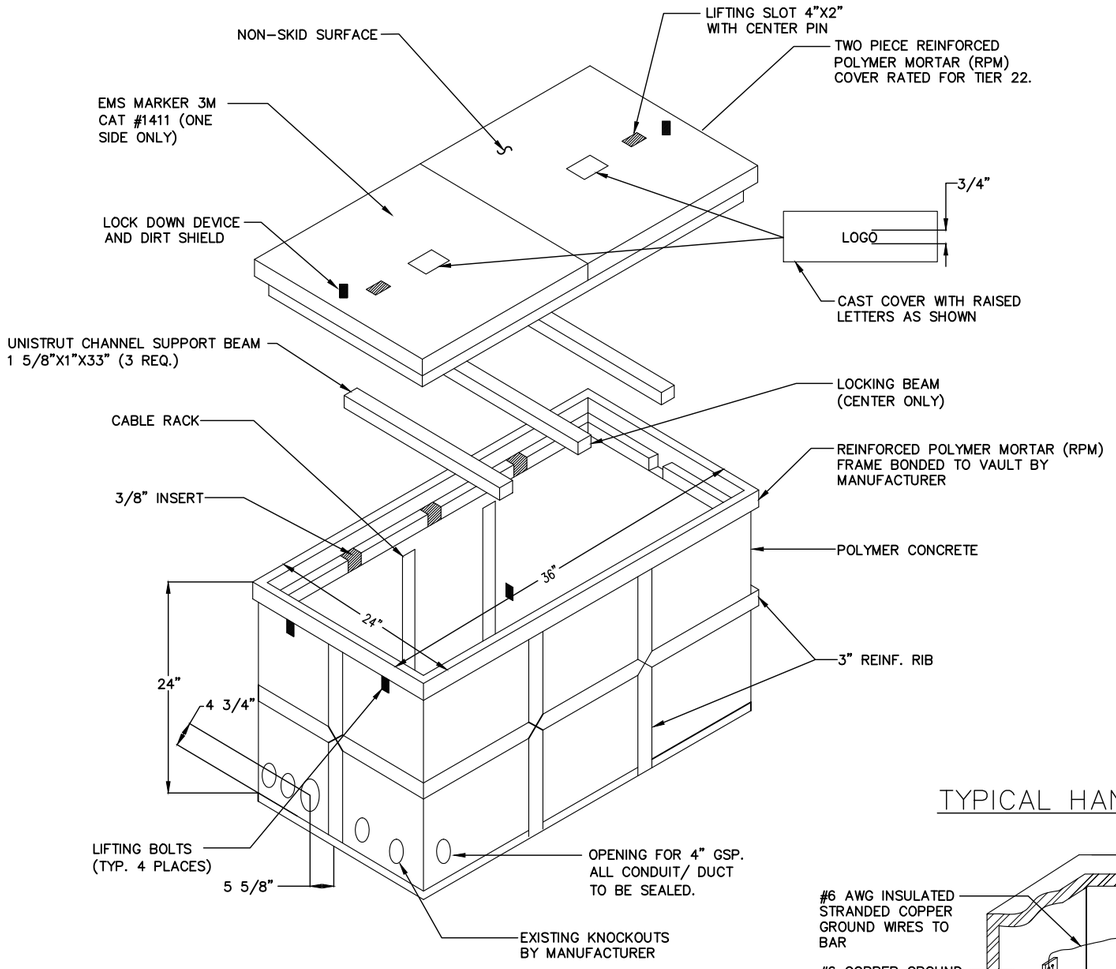
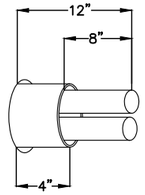
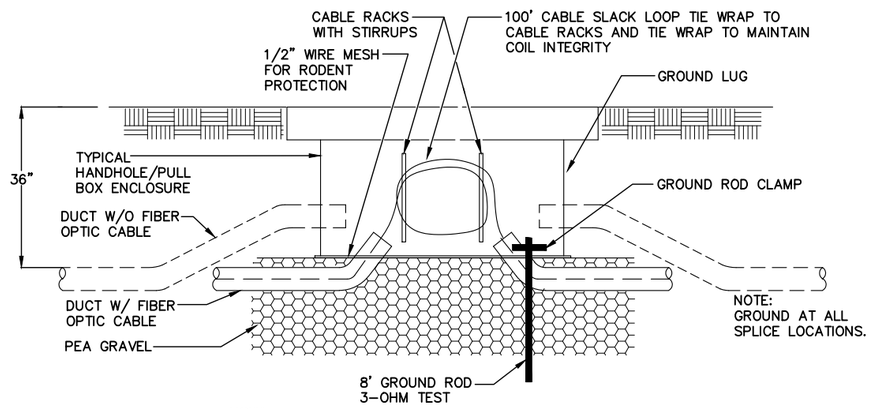
TYPICAL 2'x3'x2' HANDHOLE DETAIL



PVC CORE TYPICAL

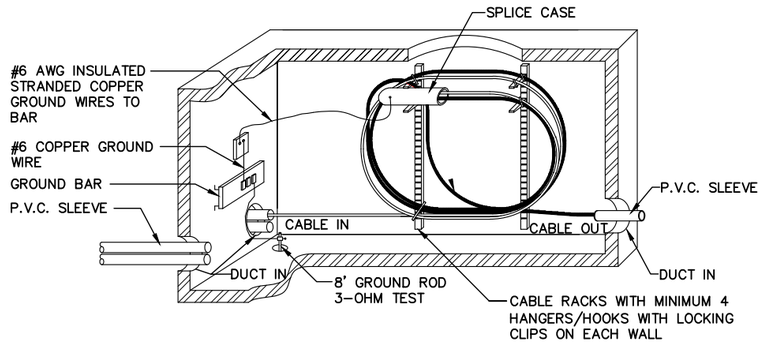


DETAIL–"A"

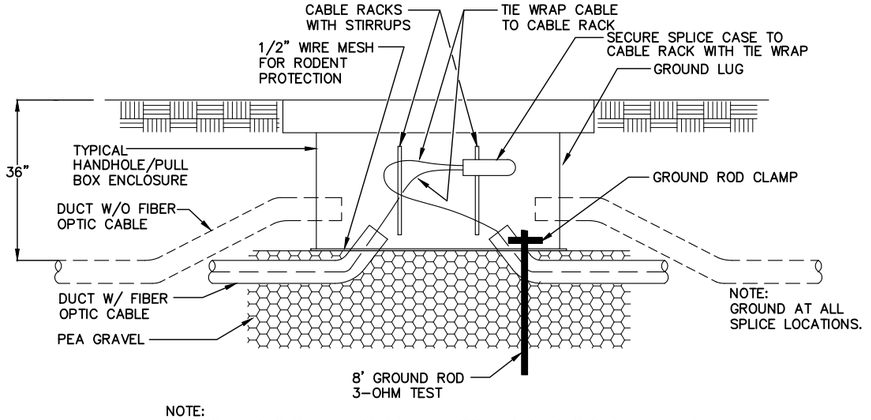


NOTE:
CAUTION – RING CUT INNERDUCT TO EXPOSE FIBER OPTIC CABLE TO ALLOW SLACK COIL TO BE PULLED INTO HANDHOLE FOR SPLICING

TYPICAL HANDHOLE WITH SPLICE COIL



DETAIL–"B"



NOTE:
CAUTION – RING CUT INNERDUCT TO EXPOSE FIBER OPTIC CABLE TO ALLOW SLACK COIL TO BE PULLED INTO HANDHOLE FOR SPLICING

NOTES:

THE HANDHOLE SHALL BE SET WITH THE TOP COVER LEVELED AND MATCHING THE EXISTING SURFACE.

THE FLOOR OF THE PIT SHALL BE COVERED WITH 10"–12" OF PEA GRAVEL, IN WATER PRONE AREAS 18" OF GRAVEL SHALL BE USED TO IMPROVE DRAINAGE. THE BASE OF THE HANDHOLE/PULL BOX SHALL BE OPEN, AND PLACED IN THE CENTER OF THE PIT.

AN 8' LG.X5/8" DIA. COPPER CLAD GROUND ROD SHALL BE DRIVEN INTO THE BOTTOM OF THE HANDHOLE/PULL BOX. A 3–OHM TEST IS REQUIRED. (SEE DETAIL A). A BARE 6" LG. #6 BCW COPPER GROUND WIRE SHALL BE CLAMPED TO THE ROD AND ATTACHED TO THE GROUND LUG ON THE SIDE WALL OF THE HANDHOLE.

THE DUCT PLACED INTO HANDHOLE WALLS WILL USE APPROVED DUCT TERMINATORS TO SEAL DUCT ENTRANCE.

THE ANNULAR SPACE BETWEEN THE DUCT WALL AND THE FIBER OPTIC CABLE SHALL BE SEALED USING A SPLIT PLUG. THE SPLIT PLUG SHALL BE SIZED ACCORDING TO THE OUTSIDE DIAMTER OF THE FIBER OPTIC CABLE AND THE INSIDE DIAMETER OF THE DUCT.

ALL VACANT DUCTS SHALL BE SEALED USING AN EXPANDABLE BLANK DUCT PLUG. THE DUCT PLUG SHALL BE SIZED ACCORDING TO THE INSIDE DIAMETER OF THE DUCT.

THIS ASSEMBLY IS RATED FOR A STATIC DESIGN LOAD OF 15,000 LBS. (66,720 N) OVER A 10 (254) X 10 (254) AREA AND MUST PASS A MIN STATIC TEST LOAD OF 22,500 LBS (100,085 N).

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RIGHT OF WAY DERIVED FROM ALEXANDRIA COUNTY
INSTRUMENT #010025286, #000011012, #060003768

ALEXANDRIA, VA
SITE PLAN-01

100' 144F IN: OUT:

5+48 PLACE 2'x3'x2' HANDHOLE
LEAVE 100' SLACK COIL
CONTINUE NEW BUILD

4+53 FIBER ENTERS CUSTOMER PROPERTY
END PROPOSED EASEMENT

WOODS

EXISTING 10' CENTURY LINK EASEMENT

GRASS

PROPOSED 10' CROWN CASTLE EASEMENT

TRENCH = 37'
PLACE (1) 1-1/2" HDPE
E/W (1) 144 OSP FIBER
E/W MULE TAPE
AND TRACER WIRE

36' 23' 40'

B/E BOC

4850
MARK CENTER DRIVE

5+85 FIBER EXITS GRADE
SEE DETAIL "A"
ON THIS SHEET

EXISTING 10' STORM DRAIN EASEMENT

SD

DIRECTIONAL BORE = 434'
PLACE (4) 1-1/2" HDPE
E/W (1) 144 OSP FIBER
E/W MULE TAPE
AND TRACER WIRE

WOODS

100' 144F IN: OUT:

1+19 FIBER LEAVES RIGHT OF WAY
ENTERS PRIVATE PROPERTY
BEGIN PROPOSED EASEMENT

1+14 PLACE 2'x3'x2' HANDHOLE
LEAVE 100' SLACK COIL
CONTINUE NEW BUILD

18'

WOODEN RETAINING WALL

TENNIS COURT

MARK CENTER DR
ASPHALT

FBL SD TR S 10' R/W

29' 27' 7' 37' 101'

15" SD 15" SD

100' 144F TAIL: OUT:

ASPHALT PARKING

0+00 EXISTING FIBERLIGHT HANDHOLE R8-S27-179
PERFORM SPLICE
BEGIN NEW BUILD
LEAVE 100' SLACK COIL

DIRECTIONAL BORE = 114'
PLACE (4) 1-1/2" HDPE
E/W (1) 144 OSP FIBER
E/W MULE TAPE
AND TRACER WIRE

10" S

4800
MARK CENTER DRIVE

EXISTING BUILDING

PB

5+90 EXISTING WALL MOUNT PULLBOX
PERFORM KNOCKOUT
FIBER ENTERS BUILDING
SEE ISP PACKAGE

PLACE = 5'
PLACE (1) 2' EMT
E/W (1) 144 OSP FIBER
ATTACH TO WALL

8' ± 5' GRADE 3' MIN

5+85 1-1/2" HDPE EXITS GROUND
TRANSITION TO 2" EMT
SEE SITE PLAN ON THIS SHEET

DETAIL "A"
SCALE: NTS

CONSTRUCTION NOTE:
CONTRACTOR WILL NEED TO SCHEDULE ACCESS WITH FIBERLIGHT AND VERIFY SLACK AVAILABLE FOR SPLICING

NOTE:
UNDERGROUND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE RECORDS AND FIELD OBSERVATIONS BUT ARE NOT NECESSARILY EXACT. THEREFORE, UTILITY LOCATIONS WILL BE VERIFIED AT LEAST 100' IN ADVANCE OF TRENCHING, PLOWING OR BORING, SO THAT CHANGES IN CABLE PLACEMENT CAN BE MADE IN THE EVENT OF CONFLICT.

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

LAYOUT SCALE
0' 10' 20' 30' 40' 50'
SCALE: 1"=50'

ISSUED FOR CONSTRUCTION

eXpress-tek EXPRESS TECHNOLOGIES, INC
1127 international parkway, suite 293, fredericksburg, va 22406

CROWN CASTLE | FIBER

4850 MARK CENTER DR - OSP
PROPOSED FIBER ROUTE
ALEXANDRIA, VA

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