

COLONIAL LIFE PH 1  
MORNINGHILL DR, FRONTAGE RD  
& COLONIAL LIFE WEST  
RICHLAND COUNTY SC

CONSTRUCTION NOTES

CUSTOMER CONTACT  
CUSTOMER NAME

SEGRA ENGINEER  
ENGINEER NAME  
Jim Keesaer  
803-726-4105  
803-363-7853  
jim.keesae@segra.com

DESIGN ENGINEER  
BRENT WHITLOCK  
BYERS ENGINEERING  
brent.whitlock@byers.com

SITE INDEX

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PERMITS REQUIRED  
YES

SCOPE OF WORK

Proposed scope of utility work: directional bore/place (3) 1.25-in HDPE conduits, approximately 6,546-LF and pulling 2,482-LF of 96 CT FOC from an existing hand hole along Morninghill Dr./Frontage Rd. at Station 9000+68 LT to a new hand hole along Lawand Dr./Morninghill Dr. at Station 9022+01 LT, with (2) 1.25-in HDPE conduits remaining empty; place (3) 1.25-in HDPE conduits, approximately 60-LF and pulling (2) existing 144 CT FOC loops and (1) existing 96 CT FOC loop, shifting an existing hand hole at Colonial Life Blvd./West Colonial Life Blvd. near Station 41+00 RT out to the edge of NEW R/W limits, tying to an existing hand hole at Arrowwood Rd./West Colonial Life Blvd., with (2) 1.25-in HDPE conduits remaining empty.

3				AS-BUILT
2				REVISION #
1				ORIGINAL
NO.	DATE	ENG DESIGN	DRAFTING	COMMENT
South Carolina Telecommunications Group Holdings, LLC d/b/a Segra				
PROJECT MANAGER: STEVEN BOWMAN				
ENGINEERING FIRM: Byers Engineering				
SO/EWO#, EBS#:				
PROJECT NAME: CAROLINA CROSSROADS PH 1				
PROJECT LOCATION: COLUMBIA SC				
DRAWING NAME: SEGRA TEMPLATE.DWG				



CONTACT LIST AND REQUIRED PERMITS

OUTSIDE PLANT ENGINEERING

MANAGER: STEPHEN BOWMAN (706) 313-3669  
PROJECT MANAGER: TERRY EDWARDS (704) 425-3526  
PROJECT ENGINEER: BRENT WHITLOCK (803) 577-5888  
INSPECTOR: TBD

OUTSIDE PLANT CONSTRUCTION CONTRACTOR:

PROJECT SUPERVISOR: TBD  
FIELD CONST. SUPERINTENDENT: TBD  
MANAGER: TBD  
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CITY GOVERNMENT: COLUMBIA, SC

CITY OF COLUMBIA - PLANNING & DEVELOPMENT SERVICES 803-545-3400  
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COUNTY GOVERNMENT

RICHLAND COUNTY ENGINEERING DIVISION 803-576-2420  
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STATE OF SOUTH CAROLINA GOVERNMENT

DISTRICT PERMIT MANAGER 803-737-6667  
  
PERMIT ENGINEER 803-737-0587  
DISTRICT MAINTENANCE ENGINEER 803-737-6660

SOUTH CAROLINA DEPARTMENT OF PUBLIC SAFETY

HIGHWAY PATROL TELECOMMUNICATIONS 803-896-9621  
ADDRESS: 10311 WILSON BLVD, BLYTHEWOOD, SC 29016  
  
SOUTH CAROLINA HIGHWAY PATROL 803-896-7920  
ADDRESS: 10311 WILSON BLVD, BLYTHEWOOD, SC 29016  
  
STATE TRANSPORT POLICE 803-896-5500  
ADDRESS: 10311 WILSON BLVD, BLYTHEWOOD, SC 29016  
  
BUREAU OF PROTECTICE SERVICES 803-896-5442  
ADDRESS: 10311 WILSON BLVD, BLYTHEWOOD, SC 29016

RAILROADS

CSX (904) 359-3100  
NORFOLK SOUTHERN (AECOM) (404) 962-5751 OR (864) 878-3581  
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SOUTH CAROLINA ONE CALL  
CALL BEFORE YOU DIG

811 OR  
1-888-721-7877

UTILITIES

ELECTRIC:  
SOUTH CAROLINA ELECTRIC & GAS COMPANY (SCE&G) (800) 251-7234  
CENTRAL ELECTRIC POWER COOPERATIVE 864-242-6350  
MID-CAROLINA ELECTRIC COOPERATIVE 803-749-5056  
TRI-COUNTY ELECTRIC COOPERATIVE 803-874-1215

GAS:  
SOUTH CAROLINA ELECTRIC & GAS COMPANY (SCE&G) (800) 251-7234  
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CABLE TV:  
  
803-252-2253  
AT&T U-VERSE (888) 757-6500  
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TELEPHONE:  
HUGHESNET (877) 286-2406  
BELL SOUTH (BUS) 864-780-2800  
SEGRA - JIM KEESAER 864-363-7853  
SEGRA KEVIN COMALANDER 803-726-9318  
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WATER/SEWER:  
  
RICHLAND COUNTY UTILITIES 803-401-0050  
CAROLINA WATER SERVICE, INC. (800) 272-1919

OTHER

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REQUIRED PERMITS:

SCDOT

3				AS-BUILT
2				REVISION / 1
1				ORIGINAL
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LEGEND

LINETYPES

	UG FIBER - EXISTING
	UG FIBER - PROPOSED
	AERIAL FIBER - EXISTING
	AERIAL FIBER - PROPOSED
	STRAND - EXISTING
	STRAND - PROPOSED
	CONDUIT - EXISTING
	CONDUIT - PROPOSED
	INNERDUCT - EXISTING
	INNERDUCT - PROPOSED
	GAS
	WATER
	TELEPHONE
	ELECTRIC
	SANITARY SEWER SEW
	STORM DRAIN
	FENCE
	CABLE TV
	STEAM
	OIL
	UNKNOWN UTILITY
	RIGHT OF WAY
	EDGE OF PAVEMENT

SYMBOL	DESCRIPTION
ASW	ASPHALT SIDEWALK
BIP	BLACK IRON PIPE
BSP	BLACK STEEL PIPE
CSW	CONCRETE SIDEWALK
EOP	EDGE OF PAVEMENT
EOTW	EDGE OF TRAVEL WAY
FOC	FACE OF CURB
HDPE	HIGH DENSITY POLYETHYLENE
HH	HANDHOLE
JB	JUNCTION BOX
MH	MANHOLE
MP	MILE POST
O/S	OFFSET
PVC	POLY VINYL CHLORIDE
RGS	RIGID GALVANIZED STEEL CONDUIT
ROW	RIGHT OF WAY
STA.	STATION

	RISER
	TELEPHONE
	POWER VAULT
	CATCH BASIN/INLET
	FIRE HYDRANT
	GROUND/BOND
	STREET LIGHT
	TREE
	CULVERT
	WING WALL
	BRIDGE
	MISC. UTILITY
	HANDHOLE - EXISTING
	HANDHOLE - PROPOSED
	MANHOLE - EXISTING
	MANHOLE - PROPOSED
	PULLBOX - EXISTING
	PULBOX - PROPOSED
	VAULT - EXISTING
	VAULT - PROPOSED

	AERIAL STORAGE - EXISTING
	AERIAL STORAGE - PROPOSED
	VAULT/BUILDING STORAGE - EXISTING
	VAULT/BUILDING STORAGE - PROPOSED
	POLE ANCHOR/DOWN GUY - EXISTING
	POLE ANCHOR/DOWN GUY - PROPOSED
	PROPOSED DOWN GUY ON EXISTING ANCHOR
	UTILITY POLE - EXISTING
	POLE - PROPOSED
	TERMINATION - EXISTING
	TERMINATION - PROPOSED
	BUILDING CALLOUT - PROPOSED
	MANUFACTURER NAME
	SPLICE POINT - EXISTING
	SPLICE POINT - PROPOSED

#F	IN: 0	OUT: 0	SEQUENTIAL CALLOUT
#F	IN: 0	TAIL: 0	SEQUENTIAL IN TAIL CALLOUT
#F	TAIL: 0	OUT: 0	SEQUENTIAL TAIL OUT CALLOUT

POLE NO	N/A
UTILITY1	0'-0"

POLE NO	N/A
UTILITY1	0'-0"

1 CABLE FIBERS: FIBERS  
CABLE OWNER: LEVEL3  
CABLE LENGTH: LENGTH  
NOTES:

1 CABLE FIBERS: FIBERS  
CABLE OWNER: LEVEL3  
CABLE LENGTH: LENGTH  
NOTES:

1 CONDUIT OWNER: LEVEL3  
CONDUIT LENGTH: LENGTH  
CONDUIT QTY: CONDUITS  
CONDUIT SIZE: SIZE  
CONDUIT TYPE: TYPE  
INNER DUCT QTY: INNERDUCTS  
INNER DUCT SIZE: SIZE  
INNER DUCT TYPE: TYPE  
NOTES:

1 CONDUIT OWNER: LEVEL3  
CONDUIT LENGTH: LENGTH  
CONDUIT QTY: CONDUITS  
CONDUIT SIZE: SIZE  
CONDUIT TYPE: TYPE  
INNER DUCT QTY: INNERDUCTS  
INNER DUCT SIZE: SIZE  
INNER DUCT TYPE: TYPE  
NOTES:

1 STRAND TYPE: TYPE  
STRAND LENGTH: LENGTH  
NOTES:

1 STRAND TYPE: TYPE  
STRAND LENGTH: LENGTH  
NOTES:

POLE ATTACHMENT CALLOUT - EXISTING  
USE DYNAMIC PULL DOWN TO SELECT  
FROM 1 TO 6 ATTACHMENTS

POLE ATTACHMENT CALLOUT - PROPOSED  
USE DYNAMIC PULL DOWN TO SELECT  
FROM 1 TO 6 ATTACHMENTS

CABLE SPAN CALLOUT - EXISTING  
FOR USE ON PAPER SPACE SHOWN AT 50X

CABLE SPAN CALLOUT - PROPOSED  
FOR USE ON PAPER SPACE SHOWN AT 50X

CONDUIT CALLOUT - EXISTING  
FOR USE ON PAPER SPACE SHOWN AT 50X  
WITH OR WITHOUT INNER DUCT INFO

CONDUIT CALLOUT - PROPOSED  
FOR USE ON PAPER SPACE SHOWN AT 50X  
WITH OR WITHOUT INNER DUCT INFO

STRAND CALLOUT - EXISTING  
FOR USE ON PAPER SPACE SHOWN AT 50X

STRAND CALLOUT - PROPOSED  
FOR USE ON PAPER SPACE SHOWN AT 50X

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SO/EWO#, EBS#:				
PROJECT NAME:				
PROJECT LOCATION:				
DRAWING NAME: CCR_PHASE_1-COLONIAL-LIFE-BLVD.DWG				
CONFIDENTIAL/PROPRIETARY				
SHEET: 03 OF ##				



GENERAL NOTES

CONTRACTOR MUST OBTAIN LOCATES PRIOR TO DISTURBING THE GROUND.

CONTRACTOR MUST HAVE A COPY OF THE APPROVED PERMIT FROM THE APPROPRIATE AGENCY ON THE JOBSITE AT ALL TIMES.

ALL CABLE WILL BE PLAYED AT STANDARD MINIMUM DEPTH. (SPIRIT TELECOM STANDARD IS 48" DEEP UNLESS OTHERWISE DIRECTED BY A SPIRIT TELECOM REPRESENTATIVE.)

ANY LANDSCAPING WILL BE REPLACED TO EQUAL OR BETTER THAN THAT WHICH EXISTED PRIOR TO WORK.

PROJECT SITE WILL BE PROPERLY SECURED PRIOR TO THE END OF EACH DAY.

ALL WORK IS TO BE IN ACCORDANCE WITH ALL AUTHORITIES HAVING JURISDICTION IN THE WORK ZONE.

CONTRACTOR IS RESPONSIBLE TO FIELD VERIFY ALL DIMENSIONS, QUANTITIES, AND EXISTING CONDITIONS PRIOR TO CONSTRUCTION, IF A SIGNIFICANT CHANGE TO THE RUNNING LINE IS NEEDED, PLEASE CONTACT YOUR SPIRIT TELECOM REPRESENTATIVE BEFORE PROCEEDING.

BEFORE CONSTRUCTION BEGINS, CONTRACTOR SHALL TAKE APPROPRIATE PRECAUTIONS TO AVOID ANY POTENTIAL OBSTRUCTIONS PRIOR TO PROCEEDING WITH WORK.

NO CONSTRUCTION ON PRIVATE PROPERTY WILL COMMENCE UNTIL APPROVAL IS GIVEN BY THE APPROPRIATE SPIRIT TELECOM EMPLOYEE.

CONTRACTOR SHALL NOT PROCEED WITH WORK UNTIL THEY HAVE RECEIVED A PURCHASE ORDER AND HAVE BEEN DIRECTED TO DO SO BY AN AUTHORIZED SPIRIT TELECOM REPRESENTATIVE.

CONTRACTOR SHALL NOT EXCEED THE PURCHASE ORDER VALUE WITHOUT AUTHORIZATION IN WRITING FROM THE APPROPRIATE SPIRIT TELECOM REPRESENTATIVE.

AS-BUILTS WILL BE REQUIRED FOR EACH PROJECT INCLUDING CABLE FOOTAGE SEQUENTIALS AT EVERY ACCESS POINT, SLACK LOOP, SPLICE LOCATION, POLE, AND TERMINATION POINT. CONTRACTOR SHOULD ALSO PROVIDE NOTES OF ALL CHANGED IN DEPTHS, RUNNING LINES, WH/HH LOCATIONS, AND ANY OTHER APPLICABLE NOTES TO DEPICT THE WORK THAT TOOK PLACE. NOTE: ALL MAJOR CHANGES NEED TO BE PRE-APPROVED BY AN AUTHORIZED SPIRIT TELECOM EMPLOYEE PRIOR TO STARTING THE WORK.

SITE CONDITIONS

THE ACTUAL LOCATION ON EXISTING CONDUIT AND CABLES MAY VARY FROM THE LOCATION SHOWN. REPAIR OF ANY DAMAGED CONDUIT CONTAINING CABLE SHALL BE MADE BY USE OF PVC SPLIT DUCT. THE CONTRACTOR SHALL ENCLOSE THE EXISTING CABLES IN PVC.

THE LOCATIONS OF EXISTING UTILITIES SHOWN IN THIS PLAN ARE APPROXIMATE. WHEN WORK IS TO BE CONDUCTED IN THE VICINITY OF KNOWN UTILITIES, THEIR ACTUAL LOCATION MUST BE FIELD VERIFIED TO AVOID CONFLICTS OR DAMAGE TO THOSE UTILITIES. VARIATION IN LOCATION BETWEEN "RECORDED POSITIONS" AND ACTUAL POSITIONS SHOULD BE ANTICIPATED.

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATION OF ALL UNDERGROUND UTILITIES. BURIED UTILITIES MAY EXIST IN THE AREA IN ADDITION TO THOSE SHOWN ON THE PLAN. THE CONTRACTOR SHALL CONTACT PROPERTY OWNERS WHEN WORKING WITHIN PRIVATE EASEMENTS FOR LOCATION OF UNDERGROUND TANKS, PIPELINES, DRAIN TILES, OR OTHER BURIED IMPROVEMENTS. THE CONTRACTOR SHALL ALSO NOTIFY THE UTILITY NOTIFICATION CENTER PRIOR TO COMMENCING ANY CONSTRUCTION ACTIVITIES.

THE CONTRACTOR MUST ASSUME ALL BURIED UTILITIES ENCOUNTERED ARE LIVE AND ACTIVE UNLESS SPECIFICALLY INSTRUCTED OTHERWISE BY OWNERS OR OPERATORS OF SAID UTILITIES.

DAMAGE TO SUB-SURFACE STRUCTURES IS THE SOLE RESPONSIBILITY OF THE PLACING CONTRACTOR.

THE CONTRACTOR SHALL PROTECT THE EXISTING TRAFFIC CONTROL LOOPS. IF EXISTING TRAFFIC CONTROL LOOPS ARE DAMAGED DURING CONSTRUCTION, THE ENTIRE LOOPWIRE FROM TERMINAL TO TERMINAL SHALL BE REPLACED IN ACCORDANCE WITH GOVERNING AGENCY STANDARDS AND REGULATIONS AT CONTRACTOR'S EXPENSE.

REMOVAL OF EXISTING ASPHALT PAVEMENT, CONCRETE CURBS, AND CONCRETE SIDEWALKS WILL BE "NEAT LINE" WITH SAW OR PAVEMENT CUTTER, PER REQUIREMENTS AND SPECIFICATIONS OF THE AGENCY OR DEPARTMENT RESPONSIBLE FOR EACH LOCATION. IF CONCRETE PAVEMENT IS ENCOUNTERED WHILE EXCAVATING CONDUIT TRENCHES, THE CONCRETE REMOVAL WILL BE "NEAT LINE" WITH A PAVEMENT SAW.

IN CONCRETE CURB RETURNS AND/OR SIDEWALKS ARE REPLACED DUE TO CONDUIT OR MANHOLE INSTALLATION, THE CONTRACTOR SHALL PLACE APPROVED HANDICAPPED SIDEWALK CURB ACCESS RAMPS IN CONFORMANCE WITH STATE OF JURISDICTION STATUTES.

ALL MATERIALS NECESSARY FOR THE REPAIR OF STREETS, CURBS, SIDEWALKS, SANITARY SEWERS, STORM SEWERS, AND PUBLIC SERVICE UTILITIES, AND THE INSTALLATION OF SUCH MATERIALS SHALL BE IN CONFORMANCE WITH THE REQUIREMENTS AND SPECIFICATIONS OF THE AGENCY OR DEPARTMENT RESPONSIBLE FOR THE OPERATION AND MAINTENANCE OF THE REPAIRED FACILITY.

ALL WORK SHALL CONFORM TO THE SPECIFICATIONS OF THE JURISDICTIONAL PERMIT AGENCY.

ALL OPEN TRENCH WILL BE CLEARLY MARKED WITH BARRICADES OR CONES. STEEL PLATES OR OTHER TYPES OF BRIDGING SHALL BE PROVIDED TO COVER OPEN TRENCH IN THE TRAVEL PORTION OF THE STREETS. THESE PLATES OR BRIDGING SHALL BE ADEQUATE TO SUPPORT THE NORMAL VEHICLE LOADS ANTICIPATED IN THIS AREA AND SHALL BE IN PLACE DURING ALL NON-WORKING AREAS.

ALL SURFACES TO BE RESTORED TO ORIGINAL CONDITION, AND BACKFILL TO BE COMPACTED AS SPECIFIED. TRENCH EXCAVATION IN SURFACES WHICH INCLUDE CONCRETE TREATED BASE SHALL FOLLOW LOCAL AREA SPECIFICATIONS.

HAZARDOUS MATERIALS

THE CONTRACTOR SHALL NOTIFY THE JURISDICTION PERMIT AGENCY IMMEDIATELY IF ANY MATERIALS ARE ENCOUNTERED THAT ARE CONSIDERED HAZARDOUS BY THE EPA, DEQ, OR OSHA. IF POTENTIALLY HAZARDOUS MATERIALS ARE ENCOUNTERED THE CONTRACTOR SHALL SECURE THE SIRE AND PREVENT THE ACCIDENTAL EXPOSURE BY THE PUBLIC OR THE CONTRACTOR'S PERSONNEL...

THE CONTRACTOR MAY EXCAVATE UP TO, BUT SHALL NOT DISTURB KNOWN HAZARDOUS MATERIALS SUCH AS ASBESTOS, OILS, ACID, ETC. THE REMOVAL OF ALL HAZARDOUS MATERIALS MUST BE DONE BY AN APPROVED OR CERTIFIED HAZARDOUS MATERIALS CONTRACTOR LICENSED BY THE STATE OF JURISDICTION.

A COPY OF ALL CORRESPONDENCES PERTINENT TO THE REMOVAL OF HAZARDOUS MATERIALS SHALL BE TRANSMITTED TO OWNER AND A COPY SHALL BE AVAILABLE AT THE PROJECT OFFICE AND THE JOB SITE.

AERIAL NOTES

- AERIAL CONSTRUCTION TO BE PERFROMED TO INDUSTRYSTANDARDS.
- ALL HEIGHTS OF CABLE PLACEMENT WILL BE RECORDED AT TIME OF CONSTRUCTION. DOCUMENT ALL POINTS OF ATTACHMENT.
- 6.6M STRAND WILL BE USED WITH STANDARD 5/8 HARDWARE.
- ALL EXTENSION ARMS TO BE PLACED WILL BE EPOXY ARMS UNLESS OTHERWISE NOTED OR APPROVED BY THE INSPECTOR.
- BOND STRAND TO POWER MGN WHERE APPLICABLE. ANCHORS TO BE USED WILL BE 3/4 SCREW IN TYPE.
- ALL STRAPS WILL BE PLACED 4" BEFORE AND AFTER EVERY SUPPORTING CLAMP AT A MINIMUM OF 21" APART.
- P.O A = POINT OF ATTACHMENT.
- ADD MISSING GROUNDS.
- REPAIR/REPLACE EXISTING LASHING WIRE IF DAMAGED.

CONSTRUCTION STAKING

IN AREAS WHERE THE CONDUIT ALIGNMENT IS NOT CLEARLY DEFINED BY CURB LINES, FENCE LINES, OR OTHER EVIDENCE OF THE RIGHT OF WAY, THE ENGINEER WILL PROVIDE CENTERLINE STAKES OR PAINT MARKS WHERE REQUIRED TO MAKE THE PROPOSED CONDUIT ALIGNMENT EVIDENT.

MANHOLE CENTERS WILL BE FIELD STAKED BY THE ENGINEER WHEN REQUESTED WITH OFFSET STALES AT RIGHT ANGLES (90°) TO THE CONDUIT ALIGNMENT.

CLOSURES IDENTIFIED IN THE PLANS SHALL BE LOCATED BY THE CONTRACTOR. DEVIATION FROM THE PLAN LAYOUT SHALL BE APPROVED BY THE ENGINEER PRIOR TO CONDUIT AND/OR CLOSURE INSTALLATION.

IF ADDITIONAL FIELD STAKING OR LOCATION OF CONDUITS, MANHOLES, PROPERTY LINES, ETC. BECOMES NECESSARY, THE CONTRACTOR IS TO NOTIFY THE INSPECTOR OR THE ENGINEER TWO WORKING DAYS PRIOR TO BEGINNING THE WORK.

PERMITS - FRANCHISES - EASEMENTS

PHYSICAL WORK SHALL NOT BE STARTED UNTIL THE GOVERNING AGENCY INSPECTOR AND THE CONTRACTOR ARE IN POSSESSION OF AND HAVE CAREFULLY REVIEWED AND FULLY UNDERSTAND ALL CONDITIONS AND SPECIFICATIONS SET FORTH IN THE REQUIRED PERMITS, FRANCHISES, AND/OR EASEMENTS.

PLACING FOREMAN TO HAVE A COPY OF THE PERMITS/EASEMENTS ON SITE AT ALL TIMES.

ANY CONFLICT BETWEEN WORK PRINT SPECIFICATION AND SPECIFICATIONS SET FORTH UNDER RELATED PERMITS, FRANCHISES, AND/OR EASEMENTS MUST BE CLEARED BY PROPER COMPANY AUTHORITY BEFORE PROGRESSING WITH WORK INVOLVED.

TRAFFIC CONTROL

THIS PROJECT WILL INVOLVE WORKING ALONG A MAJOR ARTERIAL ROAD AND HEAVY TRAFFIC VOLUME SHOULD BE ANTICIPATED.

UNIFORM TRAFFIC FLOW SHALL BE MAINTAINED AT ALL TIMES. ONLY EQUIPMENT AND MATERIALS NECESSARY FOR IMMEDIATELY SCHEDULED OR IN PROGRESS WORK WILL BE MAINTAINED IN THE WORK AREA. ALL OTHER EQUIPMENT AND MATERIALS WILL BE "STORED OR STOCKPILED" IN SUCH A MANNER AS TO ELIMINATE HAZARDOUS CONDITIONS FOR TRAFFIC OR PEDESTRIANS DURING NON-WORKING OR SHUT DOWN PERIODS.

TRAFFIC WARNING DEVICES AND SIGNS SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS (U.S. GOVERNMENT PRINTING OFFICE) AND TO THE STATE HIGHWAY DIVISION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION. HIGH LEVEL WARNING TYPE DEVICES ARE TO BE USED AT ALL TIMES AND SPECIAL WARNING DEVICES MAY BE STIPULATED BY THE JURISDICTIONAL PERMIT AGENCY AT ANY TIME THE USE WILL ADD TO THE SAFETY AND PROTECTION OF TRAFFIC OR PEDESTRIANS IN THE CONSTRUCTION AREA.

ALL CONDUIT TRENCHING IN PAVED AREAS SHALL BE BACKFILLED WITH CRUSHED GRAVEL OR COMPLETELY COVERED AT THE COMPLETION OF EACH WORKING DAY. ANY BACKFILLED TRENCH SHALL BE CAPPED WITH A MINIMUM LAYER OF ASPHALTIC CONCRETE COLD PATCH AT THE END OF EACH WORKING DAY.

THE CONTRACTOR SHALL MARK THE CONDUIT TRENCH AND DEFINE HIS CONSTRUCTION AREA CLEARLY WITH BARRICADES, CONES, AND/OR OTHER VISIBLE METHODS THAT ALERT THE PUBLIC OF THE CONSTRUCTION ACTIVITY.

A TRAFFIC CONTROL PLAN SHALL BE PREPARED BY THE CONTRACTOR AS REQUIRED AND SUBMITTED TO EACH PERMITTING AGENCY REQUESTING SUCH PLAN FOR REVIEW AND APPROVAL OR REVISION PRIOR TO COMMENCING ANY CONSTRUCTION ACTIVITY FOR THIS PROJECT. THE APPROVED PLAN SHALL BE SUBMITTED TO THE AGENCY AND A COPY OF THE PLAN SHALL BE KEPT AT THE CONSTRUCTION SITE AND MUST BE READILY AVAILABLE FOR REVIEW BY THE AGENCY REPRESENTATIVES.

SPECIAL UTILITY CLEARANCES

ALL WORK CONDUCTED ADJACENT TO WATER MAINS SHALL CONFORM TO THE FOLLOWING CONDITIONS:

- A. WHEREVER POSSIBLE CONDUIT SHALL MAINTAIN A HORIZONTAL SEPARATION OF 3.0 FEET, MEASURED SURFACE TO SURFACE (OUTSIDE EDGE TO OUTSIDE EDGE), FROM PARALLEL WATER MAINS.
- B. WHEREVER POSSIBLE, CONDUIT SHALL PASS UNDER EXISTING WATER MAINS AND MUST MAINTAIN 12" VERTICAL CLEAR SEPARATION. CONDUITS PASSING OVER WATER MAINS MUST ALSO MAINTAIN THE 12" VERTICAL SEPARATION.

C. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING AND MAINTAINING THIS REQUIRED VERTICAL SEPARATION BY EITHER EXPOSING THE WATER MAIN EVERY 100 FEET IN THOSE AREAS WHERE HORIZONTAL SEPARATION IS LESS THAN 3.0 FEET OR BY UTILIZING THE DEPTHS OF ADJACENT WATER VALVES. IF THE CONTRACTOR UTILIZES THE ADJACENT WATER TO DETERMINE WATER MAIN DEPTH, HE SHALL CONTACT THE AGENCY AT EACH SUCH LOCATION AND THE AGENCY WILL DETERMINE THE NECESSARY DEPTH OF THE TOP OF THE CONDUIT AT THAT POINT.

D. THE VERTICAL AND HORIZONTAL SEPARATION SHALL BE MAINTAINED AT ALL TIMES UNLESS SPECIFICALLY REVISED BY AGREEMENT BETWEEN THE JURISDICTIONAL PERMIT AGENCY AND THE AGENCY ANY SPECIFIC DEVIATION IN VERTICAL AND HORIZONTAL SEPARATION FROM THOSE DESCRIBED SHALL BE REPORTED TO THE OWNER BY THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING VERTICAL AND HORIZONTAL SEPARATION AT ALL TIMES AND SHALL BE RESPONSIBLE FOR ANY AND ALL ENCROACHMENTS.

E. CLEARANCES TO STORM SEWERS AND SANITARY SEWERS SHALL BE EXACTLY THE SAME AS THOSE TO WATER MAINS.

STRUCTURE PROTECTION

MANHOLES AND CONDUIT TO BE PLACED ADJACENT TO EXISTING STRUCTURES SUCH AS BRIDGE BRIDGE FOOTINGS/PIERS, BUILDING FOUNDATIONS, WALLS, POWER AND TELEPHONE POLES, AND OTHER UTILITIES SHALL MAINTAIN A MINIMUM CLEARANCE AS SHOWN. THE CONTRACTOR SHALL NOT UNDERMINE ANY ADJACENT STRUCTURE WITHOUT SPECIFIC WRITTEN PERMISSION FROM THE OWNER/OPERATOR OF SUCH STRUCTURE.

SHORING USED AS FOUNDATION SUPPORT SHALL BE DESIGNED SPECIFICALLY FOR BOTH THE LIVE AND DEAD LOADS OF THE STRUCTURE, OR IF ONLY THE DEAD LOAD IS USED FOR DESIGN, THE CONTRACTOR SHALL PROVIDE A DETAILED LAYOUT AND PLAN OF THE METHOD OF ESTABLISHING AND MAINTAINING THE DESIGN LOAD CONDITIONS (I.E., ROAD DETOURS, TIEBACKS, ETC.).

SEE UTILITY CLEARANCE SECTION NOTES FOR CLEARANCE CRITERIA TO PARALLEL OR CROSS UTILITIES.

EXISTING UTILITIES EXPOSED DURING EXCAVATION SHALL BE 100% SUPPORTED BY EITHER TRENCH BRIDGING AND SUSPENSION OR BY THE USE OF LONGITUDINAL TRAYS OR PLATFORMS VERTICALLY SUPPORTED BY ADJUSTABLE BUILDING JACKS.

EXISTING SPLICE CASES AND CABLES SHALL BE SUPPORTED BY SUSPENSION FROM A CROSSING BEAM. SUPPORTS SHALL BE PLACED AT A MAXIMUM SPACING OF 4.0 FEET AND SHALL CONSIST OF A CANVAS SLING WITH NYLON BELTING OR ROPE. ALL CABLE SUPPORTS SHALL BE PLACED IN A MANNER THAN PREVENTS KINKS OR OTHER DAMAGE TO THE CABLE SHEATH.

AN ACCEPTABLE ALTERNATIVE TO CABLE SLINGS WOULD BE THE UTILIZATION OF A WIDE FLANGE "I" BEAM OR CHANNEL AS A "CABLE TRAY" WITH THE CABLES/CASES BANDED IN PLACE.

SHORING

THE CONTRACTOR SHALL PROVIDE SHORING FOR CONDUIT TRENCH EXCAVATION 42" OR MORE IN DEPTH AS MEASURED FROM THE HIGH SIDE OF THE TRENCH AND FOR ALL MANHOLE EXCAVATION.

MANHOLE SHORING SHALL BE TIGHT-SHEETED.

ALL SHORING SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF LOCAL COUNTY AND THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA).

SHORING SHALL BE DESIGNED TO MEET H-20 HIGHWAY LOADING.

THE CONTRACTOR SHALL PROVIDE ALL SHORING AND DESIGN CALCULATIONS TO THE PERMIT ISSUING AGENCY PRIOR TO COMMENCING ANY CONSTRUCTION ACTIVITY.

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ENGINEERING FIRM:	
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PROJECT LOCATION:	COLUMBIA SC
DRAWING NAME:	SEGRA TEMPLATE.DWG



# CONSTRUCTION TYPICALS

## APPENDIX B: PIPELINES

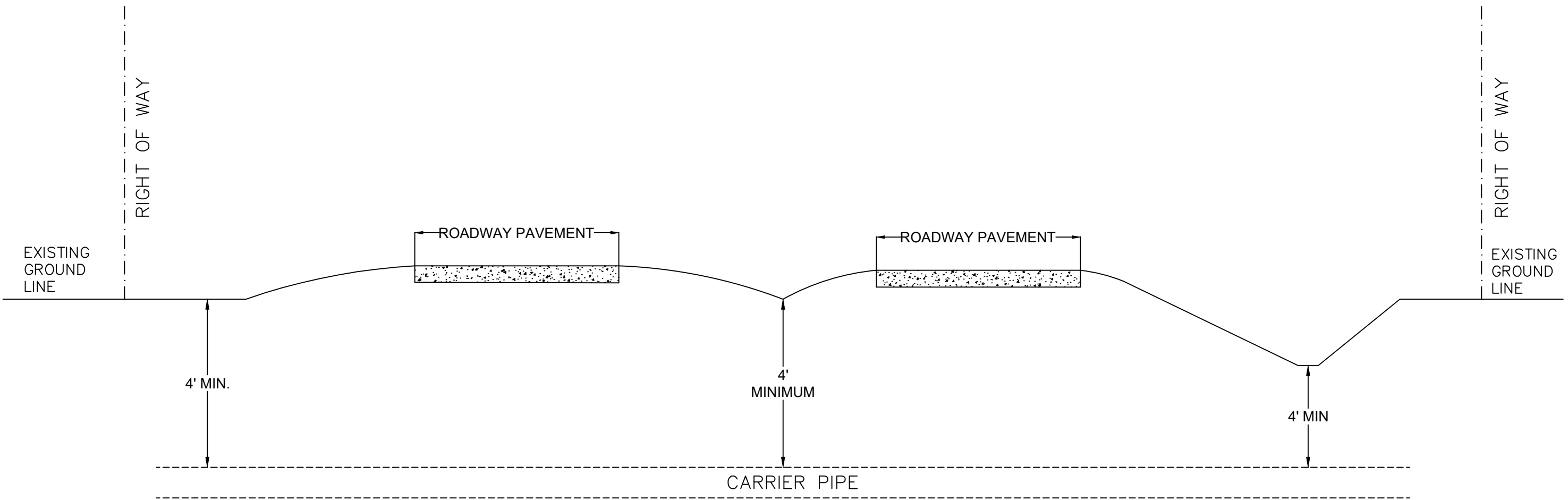
APP B-2

APPENDIX B PIPELINES

MARCH 2019

FIGURE 1A - EXAMPLES OF FEATURES FOR UNCASED PIPELINE CROSSINGS

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UNENCASED CROSSING

FIGURE 1A  
EXAMPLE OF FEATURES FOR PIPELINE CROSSINGS



3				AS-BUILT
2				REVISION # 1
1				ORIGINAL
NO.	DATE	ENG DESIGN	DRAFTING	COMMENT
South Carolina Telecommunications Group Holdings, LLC d/b/a Segra				
PROJECT MANAGER:				
ENGINEERING FIRM: Byers Engineering				
SO/EWO#, EBS#:				
PROJECT NAME:				
PROJECT LOCATION:				
DRAWING NAME: CCR_PHASE_1-COLONIAL-LIFE-BLVD.DWG				
CONFIDENTIAL/PROPRIETARY				
SHEET: 05 OF 16				

# CONSTRUCTION TYPICALS

## APPENDIX B: PIPELINES

APP B-7

APPENDIX B PIPELINES

MARCH 2019

FIGURE 6 - LONGITUDINAL INSTALLATION OF UTILITIES IN ROADWAY SHOULDERS

PAGE 254 OF 292

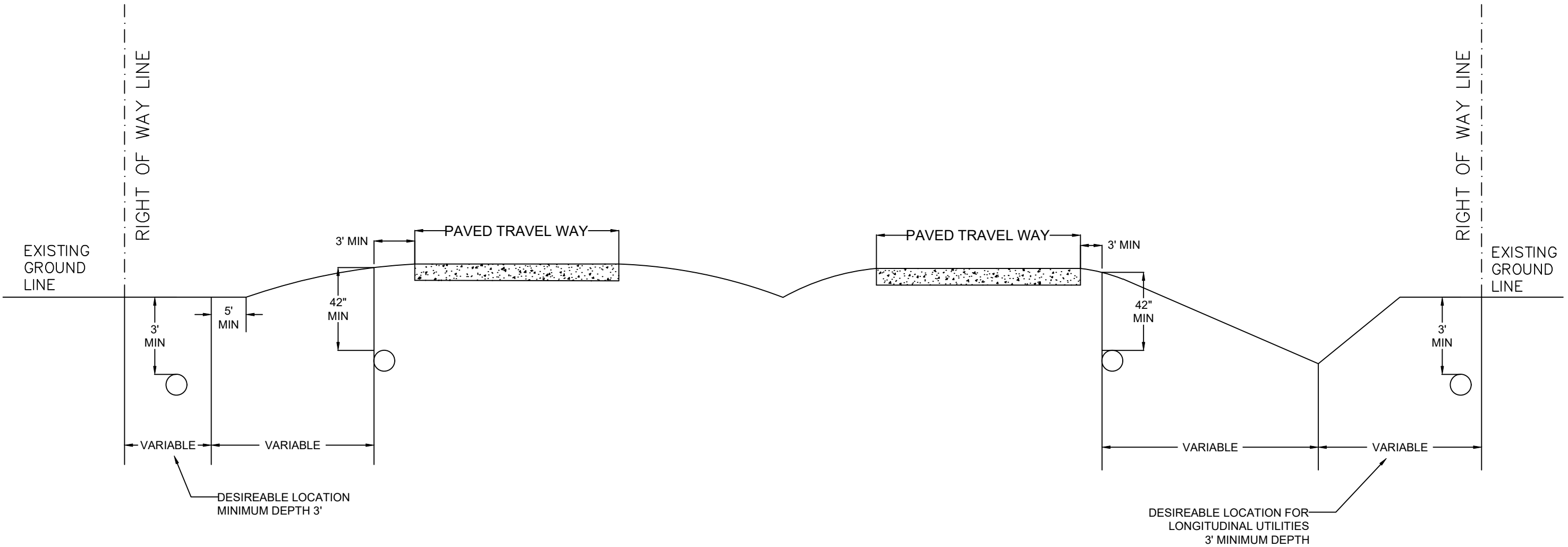


FIGURE 6  
CROSS SECTION SHOWING  
LONGITUDINAL INSTALLATION OF  
UTILITIES IN ROADWAY SHOULDERS

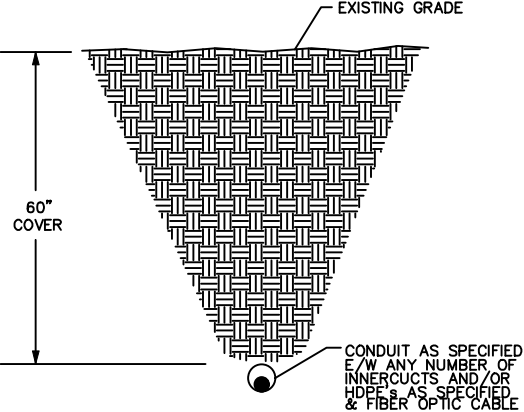


3				AS-BUILT	
2				REVISION # 1	
1				ORIGINAL	
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South Carolina Telecommunications Group Holdings, LLC d/b/a Segra					
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PROJECT NAME:					
PROJECT LOCATION:					
DRAWING NAME: CCR_PHASE_1-COLONIAL-LIFE-BLVD.DWG					
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SHEET: 06 of 16					

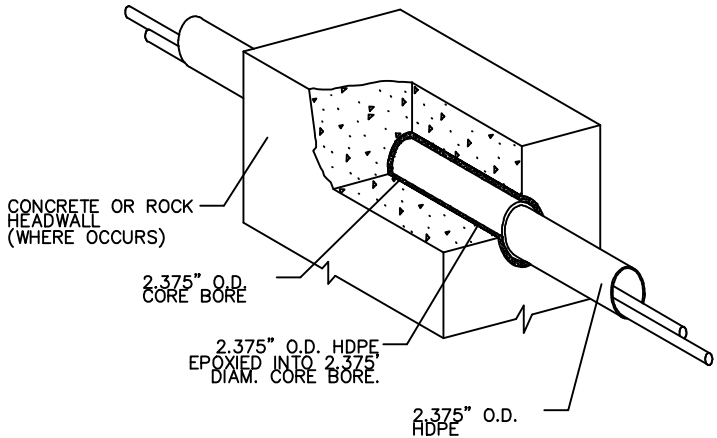


# BURIED CABLE CONSTRUCTION DETAILS (CONTINUED)

TYPICAL DETAIL "A"  
DIRECTIONAL BORE CROSS SECTION  
FOR CONDUIT

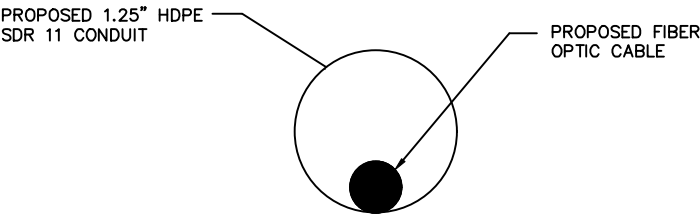


TYPICAL DETAIL "B"  
2" CORE BORE

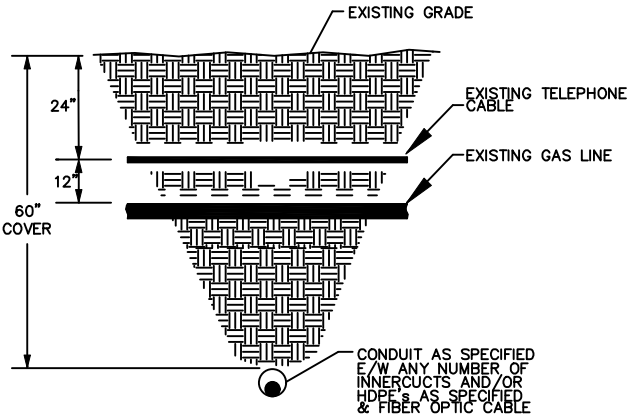


NOTE:  
EPOXY GROUT IS USED AT BOTH ENDS OF  
CORE BORE TO SEAL GAP BETWEEN  
4" CONDUIT AND PVC SHEEVE

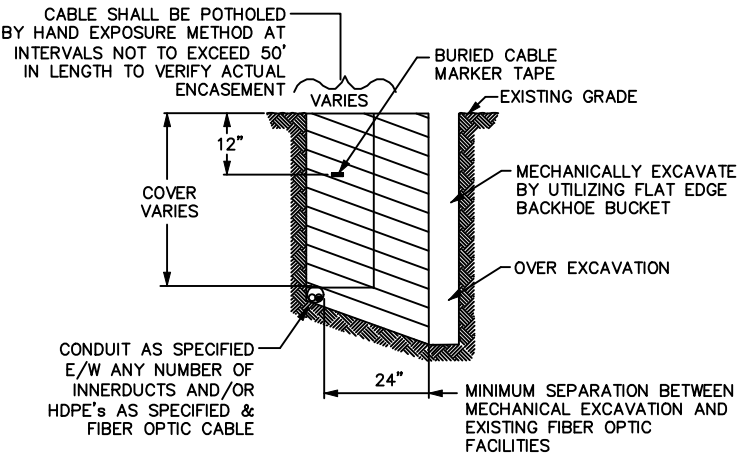
TYPICAL DETAIL "C"  
CROSS SECTION OF PROPOSED HDPE



TYPICAL DETAIL "F"  
DIRECTIONAL BORE CROSS SECTION  
FOR CONDUIT PLACED BENEATH / PERPENDICULAR  
TO EXISTING UTILITIES

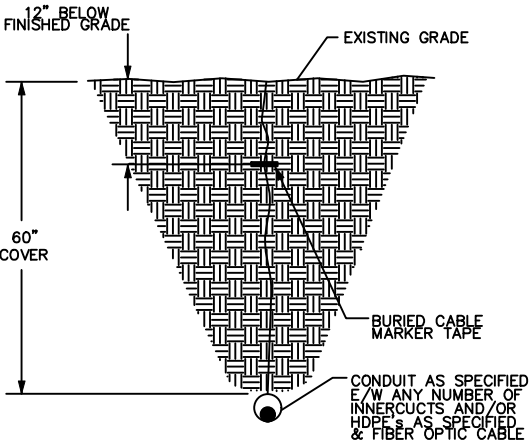


TYPICAL DETAIL "D"  
EXPOSE DIRECT BURIED CABLE BY  
POTHOLE/SIDE EXPOSURE METHOD



NOTE:  
DETAIL SHALL ONLY APPLY FOR  
THE EXPOSURE OF ALL BURIED CONDUIT,  
WHICH SHALL INCLUDE HDPE

TYPICAL DETAIL "E"  
PLACE HDPE



NOTE:  
ALL HDPE USED FOR MCI CABLE  
WILL BE TERRA-COTTA ORANGE  
IN COLOR AND MANUFACTURED  
IN ACCORDANCE WITH ASTM D-3035

3				AS-BUILT
2				REVISION # 1
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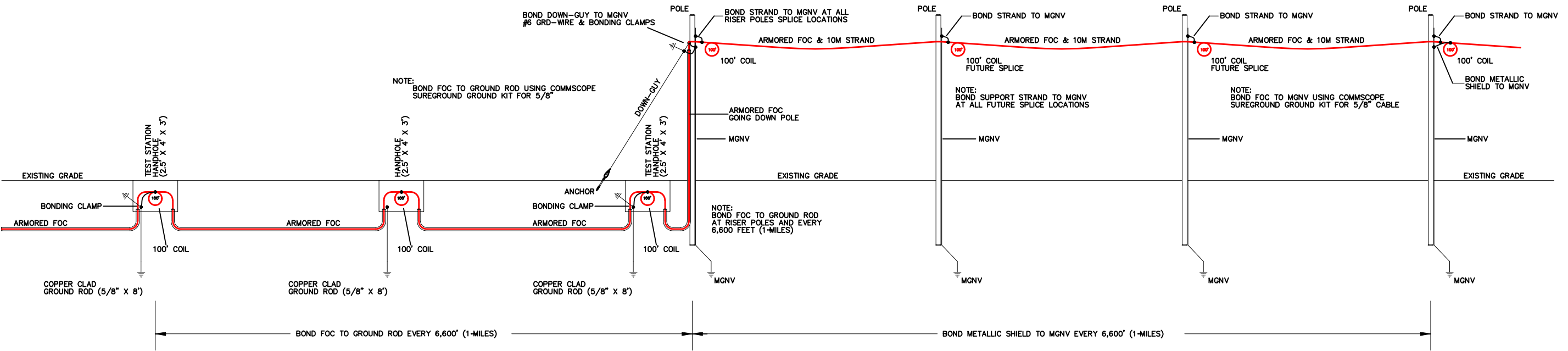


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# BURIED CABLE CONSTRUCTION DETAILS (CONTINUED)

LAYOUT DETAIL



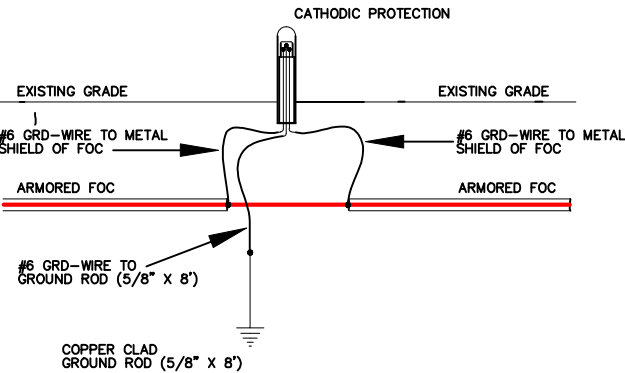
AERIAL NOTES:

1. Establish and maintain continuity of all metallic components (strength member, shield, moisture barrier, armor) across all aerial splices.
2. Bond metallic components to the support strand at all splice locations.
3. Bond support strand to pole MGNV at all riser poles, finer loop (2,000') locations for future splice and splice locations.
4. Place bonds between all metallic cable components and the support strand at least once every 1 1/4 miles (6,600 feet).

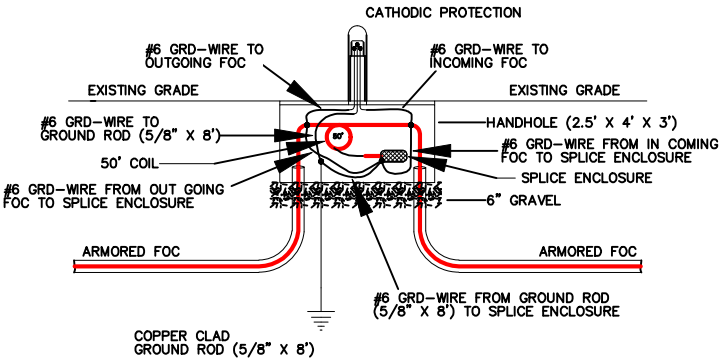
BURIED NOTES:

1. Establish and maintain continuity of all metallic sheath components and strength members in the cable and across all buried splices.
2. Bond metallic sheath components and strength members to 5/8" x 8" copper clad ground rod at all buried splices.
3. Place 5/8" x 8" copper clad ground rods at all handholes for future splicing and grounding.
4. Place binds between all metallic cable components and copper clad ground rods at least once every 1 1/4 miles (6,600 feet).
5. Place Cathodic Protection Test Station at all buried fiber cable splices and when bonding fiber metallic cable components to copper clad ground rods every 1 1/4 miles (6,600 feet)

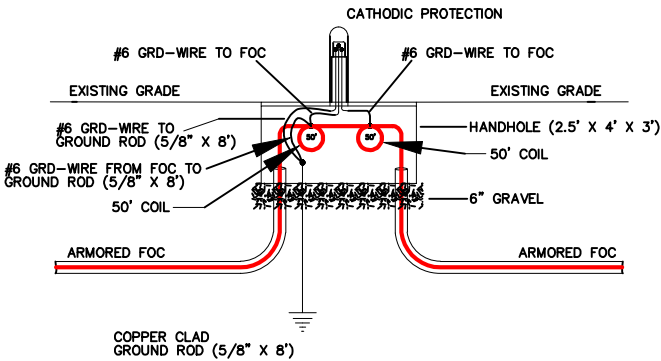
TEST STATION DETAIL SCHEMATIC



TEST STATION WITH FIELD SPLICE



TEST STATION WITH COIL FOR FUTURE SPLICE



3				AS-BUILT
2				REVISION # 1
1				ORIGINAL
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PROJECT LOCATION:				
DRAWING NAME: CCR_PHASE_1-COLONIAL-LIFE-BLVD.DWG				
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SHEET: 09 OF 16				

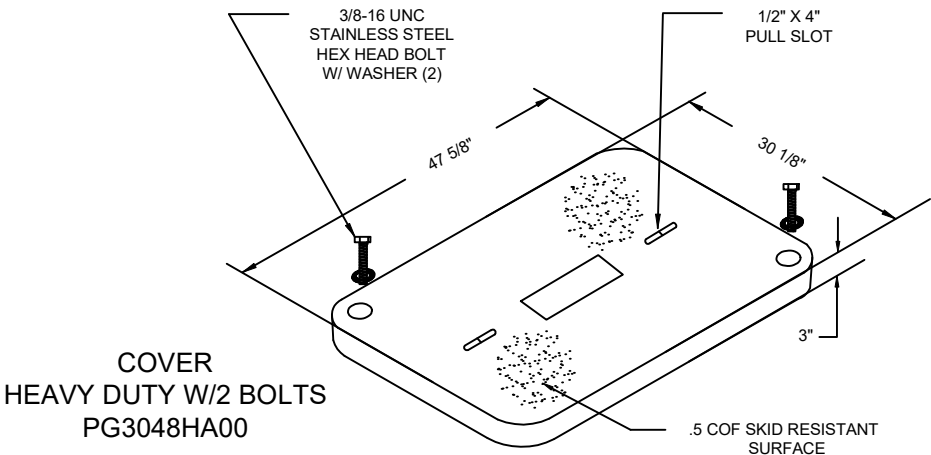
# BURIED CABLE CONSTRUCTION DETAILS

## HANDHOLE SIZE 30"X48"X36"

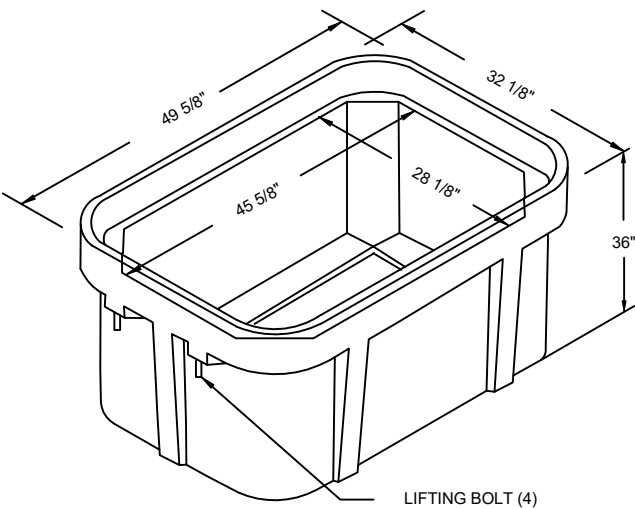
DETAIL "A"

EXPLODED ISOMETRIC DETAIL

QUAZITE PG3048BA36



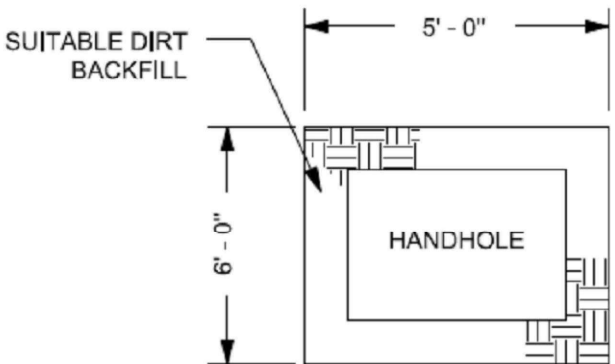
PG BOX  
OPEN BOTTOM  
PG3048BA36



DETAIL "B"

EXCAVATION PIT

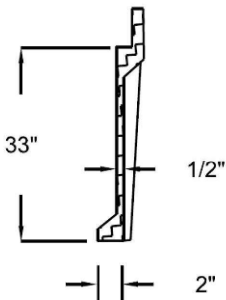
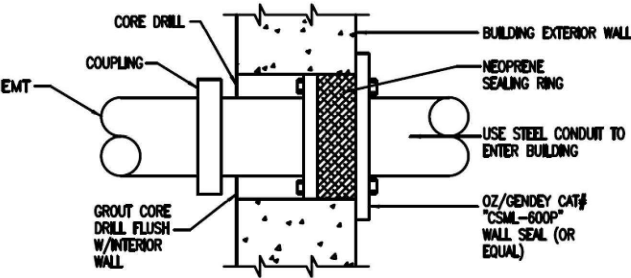
PLAN



\*ALL EXCAVATIONS OR TRENCHES (4) FOUR FEET OR GREATER IN DEPTH SHALL BE APPROPRIATELY BENCHED, SHORED, OR ACCORDING TO THE PROCEDURES AND REQUIREMENTS SET FORTH IN OSHA'S EXCAVATION STANDARD, 29 CFR 1926.650, 1926.651, AND 1926.652

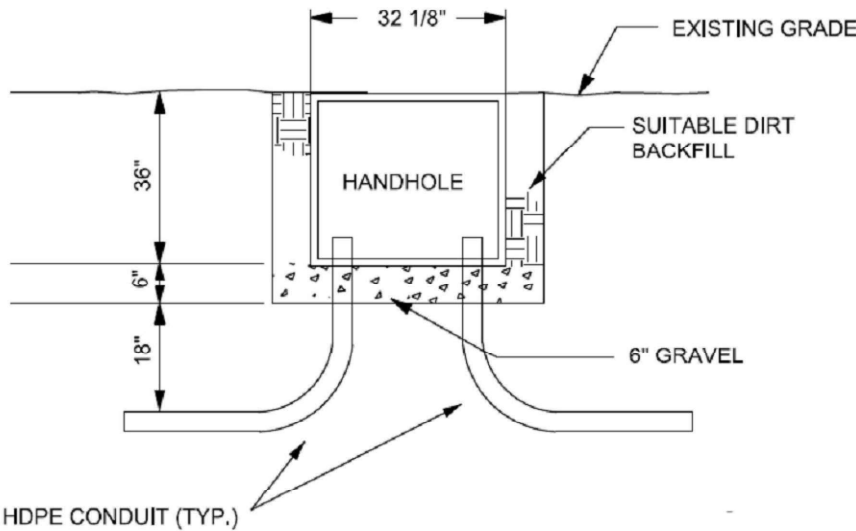
DETAIL "C"

CONDUIT SEAL



SIDE WALL  
DIMENSIONS

PROFILE



NOTES:

1. VOID IN EXCAVATED AREAS TO BE BACKFILLED WITH SELECT MATERIAL.
2. BOTTOM OF EXCAVATED PIT TO BE BACKFILLED WITH 6" OF GRAVEL (.75" GRADE).
3. SHORING WILL BE REQUIRED.
4. ALL HANDHOLES SHALL BE PLACED AT EXISTING GRADE
5. THIS HANDHOLE IS OF FIBERGLASS MATERIAL, APPROXIMATELY 343 POUNDS IN WEIGHT. THE LIDS ARE POLYMER CONCRETE MATERIAL, EACH APPROXIMATELY 206 POUNDS IN WEIGHT.

DESCRIPTION	PART NO.	WEIGHT	OVERALL DEPTH	INSIDE DEPTH	DESIGN/TEST LOAD#	ANSI TIER
OPEN BOTTOM	PG3048BA36	343	36"	33"	22,500 / 33,750	22

3				AS-BUILT	
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PROJECT MANAGER:					
ENGINEERING FIRM: Byers Engineering					
SO/EWO#, EBS#:					
PROJECT NAME:					
PROJECT LOCATION:					
DRAWING NAME: CCR_PHASE_1-COLONIAL-LIFE-BLVD.DWG					
CONFIDENTIAL/PROPRIETARY				SHEET: 10 OF 16	



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MATERIAL TOTALS

96CT FOC	2182'
96CT FOC HH LOOPS	300'
96CT FOC	TOTAL - 2482'
(3) 1 1/4" HDPE DUCT	6606'
30"X48"X36" HANDHOLE	3

3				AS-BUILT
2				REVISION / 1
1				ORIGINAL
NO.	DATE	ENG DESIGN	DRAFTING	COMMENT
South Carolina Telecommunications Group Holdings, LLC d/b/a Segra				
PROJECT MANAGER: STEVEN BOWMAN				
ENGINEERING FIRM:				
SO/EWO#, EBS#: Byers Engineering				
PROJECT NAME: CAROLINA CROSSROADS PH 1				
PROJECT LOCATION: COLUMBIA SC				
DRAWING NAME: SEGRA TEMPLATE.DWG				

PHASE 1 CAROLINA CROSSROAD\_COLONIAL LIFE BLVD

**COLONIAL PARKWAY BLVD MATERIAL LIST:**

EXISTING HH WITH MARKER POST – N34.0224/W81.0930

- REMOVE (1) EXISTING 30"X48"X36" HH AT COLONIAL LIFE BOULEVARD @ W COLONIAL LIFE BOULEVARD, STATION 41+00 RT
- PLACE (1) 30"X48"X36" HH OVERALL DEPTH 36" AT EDGE OF PROPOSED NEW ROW AT COLONIAL LIFE BOULEVARD @ W COLONIAL LIFE BOULEVARD, APPROX. STATION 41+00 RT
  - **E/W SCDOT LID RATING 20,000 LBS, PART#PG3048BA36 ANSI TIER 22**
- TRENCH (2) 20 FT 1-1/4" HDPE INNERDUCT CONDUIT – EXTEND EXISTING 144 CT FOC 20 FT LOOP FROM EXISTING HH TO NEWLY PLACED HH
- TRENCH (1) 20 FT 1-1/4" HDPE INNERDUCT CONDUIT – EXTEND EXISTING 96 CT FOC 20 FT LOOP FROM EXISTING HH TO NEWLY PLACED HH

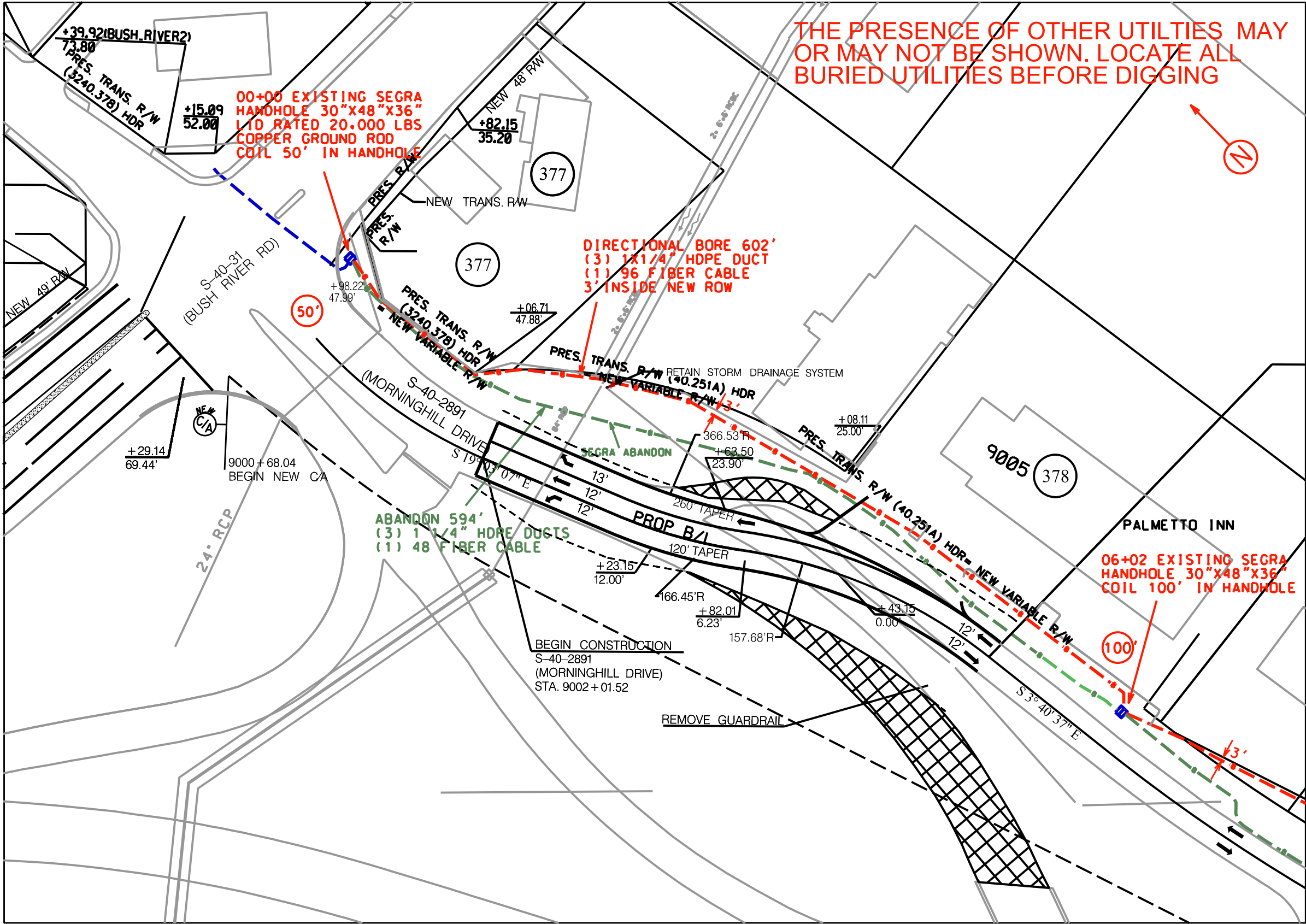
**MORNINGHILL DRIVE / FRONTAGE ROAD, LAWAND DR MATERIAL LIST:**

EXISTING HH WITH MARKER POST – N34.1'42"/W81.6'2"

- EXISTING 30"X48"X36" HH TO REMAIN (N34.1'42"/W81.6'2") AT MORNINGHILL DRIVE / FRONTAGE ROAD NEAR STATION 9000+68 LT
  - **E/W SCDOT LID RATING 20,000 LBS PART#PG3048BA36 ANSI TIER 22**
- ABANDON 2180' OF EXISTING 48CT FOC ALONG MORNINGHILL DRIVE / FRONTAGE ROAD BEGINNING AT EXISTING HH AT APPROX. STATION 9000+68 LT
- REMOVE 30"X48"X36" HH AT MORNINGHILL DRIVE / FRONTAGE ROAD AT APPROX. STATION 9015+09 LT (N34.1'39"/W81.6'20")
- DIRECTIONAL BORE (3) 2,182 FT 1-1/4" HDPE INNERDUCT CONDUIT (TOTAL 6,546 FT) FROM EXISTING HH AT APPROX. STATION 9000+68 LT TO NEW HH AT LAWAND DRIVE / FRONTAGE ROAD AT APPROX. STATION 9022+01 LT
- PLACE (1) 30"X48"X36" HH AT APPROX. STATION 9019+00 LT
- **E/W SCDOT LID RATING 20,000 LBS PART#PG3048BA36 ANSI TIER 22**
- REMOVE 30"X48"X36" HH AT LAWAND DRIVE / FRONTAGE ROAD, APPROX. STATION 9022+01 LT (N34.1'24"/W81.5'49")
- PLACE (1) 30"X48"X36" HH AT APPROX. STATION 9022+01 LT
  - **E/W SCDOT LID RATING 20,000 LBS PART#PG3048BA36 ANSI TIER 22**
- PULL 2,482 FT OF 96CT FOC INSIDE (1) NEW HDPE INNERDUCT CONDUIT, LEAVING (2) HDPE INNERDUCT CONDUITS EMPTY (HH LOOPS ARE INCLUDED IN FOOTAGE)
  - **096 FIBER SM G652D LOOSE TUBE SJ/ SA DRY PN PRY-FEDH1A1J-12-CE-096E3**
- INSTALL (1) 5/8" X 8" COPPER CLAD MARKER POST AT APPROX. STATION 9022+01 LT

**\* MATERIALS MEET ALL REQUIREMENTS OF SCDOT STANDARDS**

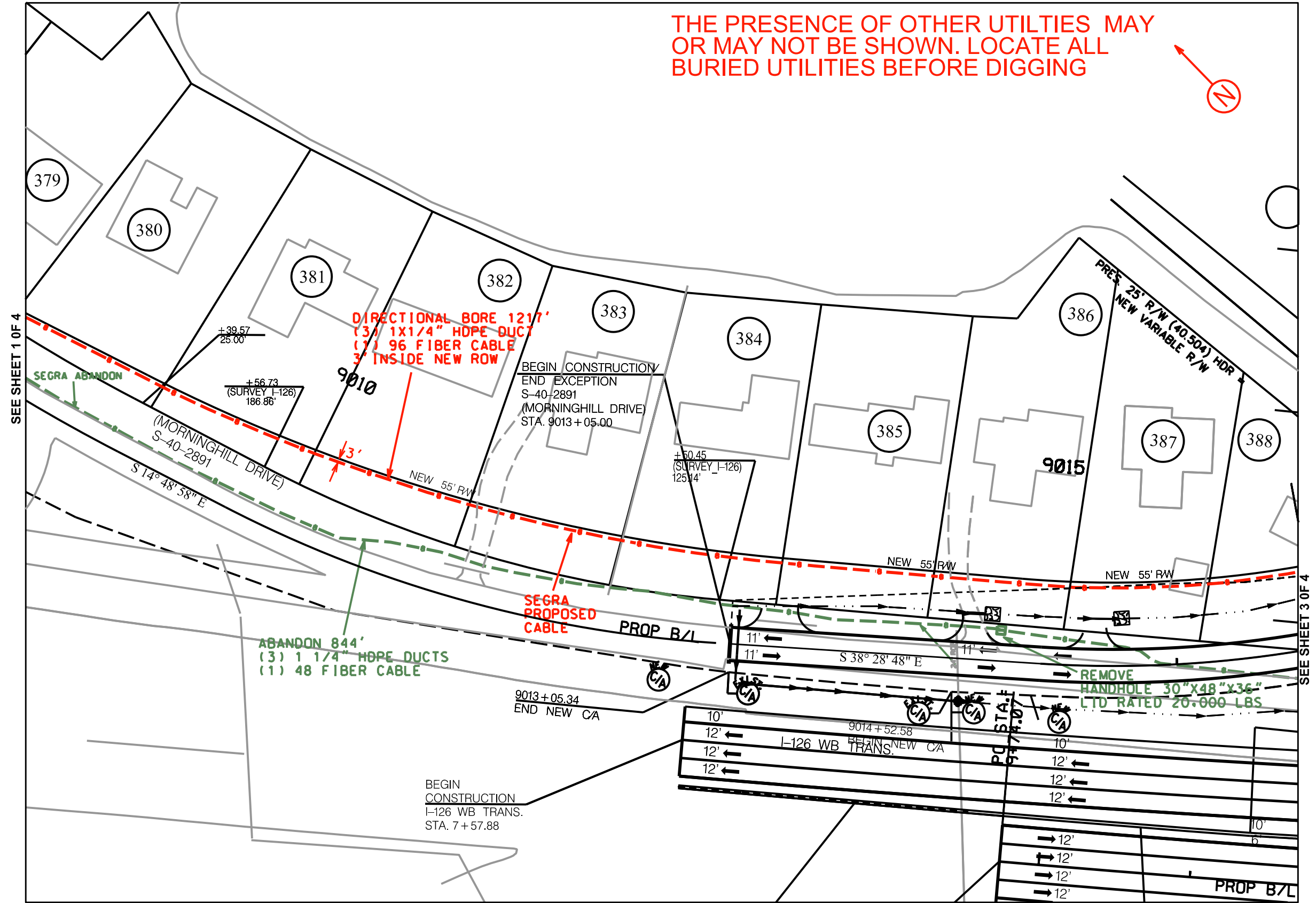
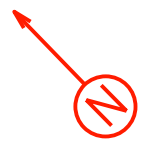




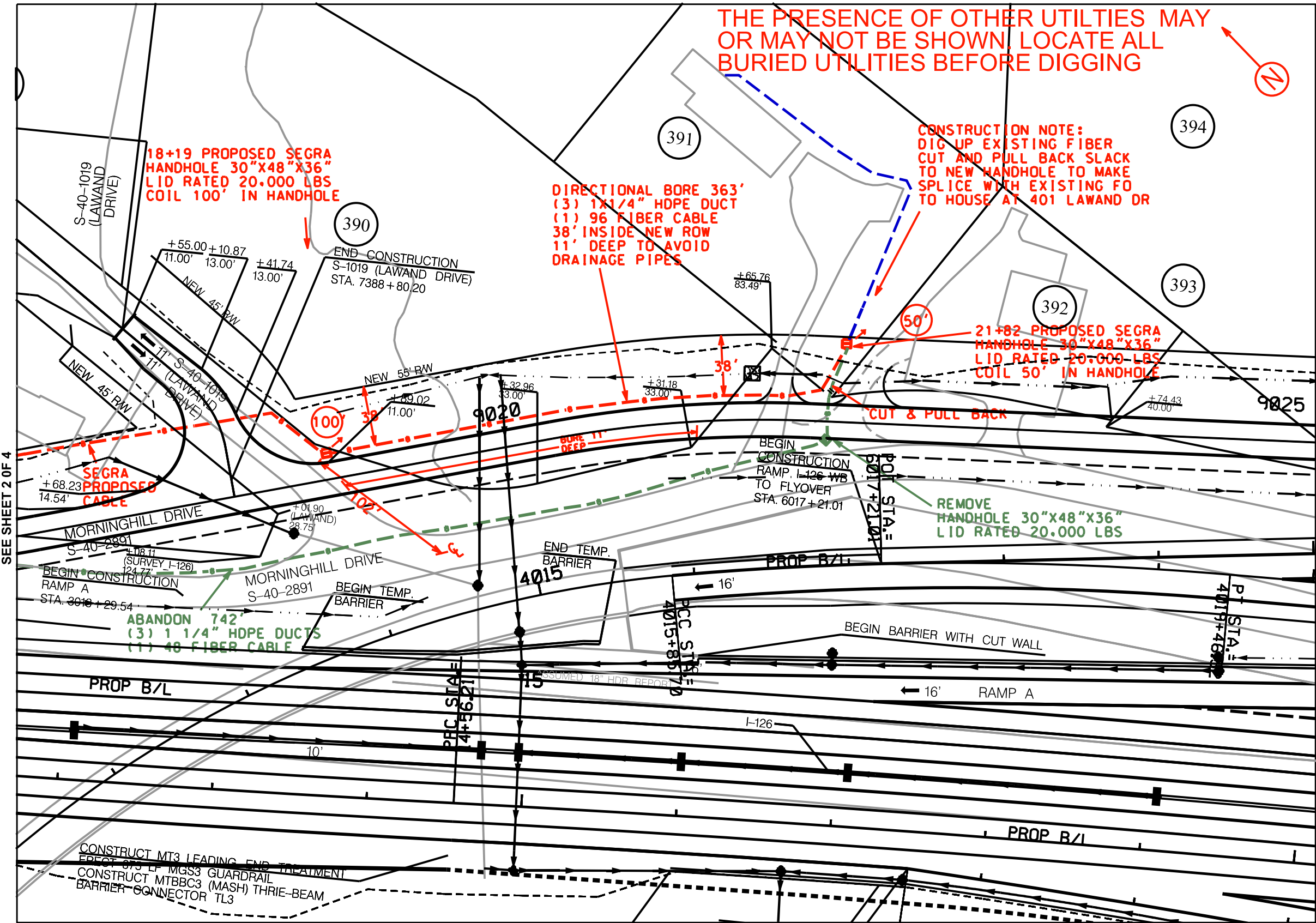
SEE SHEET 2 OF 4

3				AS-BUILT
2				REVISION / 1
1				ORIGINAL
NO.	DATE	ENG DESIGN	DRAFTING	COMMENT
South Carolina Telecommunications Group Holdings, LLC d/b/a Segra				
PROJECT MANAGER: STEVEN BOWMAN				
ENGINEERING FIRM:				
SO/EWO#, EBS#: Byers Engineering				
PROJECT NAME: CAROLINA CROSSROADS PH 1				
PROJECT LOCATION: COLUMBIA SC				
DRAWING NAME: SEGRA TEMPLATE.DWG				
				SHEET 13 OF 16

THE PRESENCE OF OTHER UTILITIES MAY  
OR MAY NOT BE SHOWN. LOCATE ALL  
BURIED UTILITIES BEFORE DIGGING



3				AS-BUILT
2				REVISION / 1
1				ORIGINAL
NO.	DATE	ENG DESIGN	DRAFTING	COMMENT
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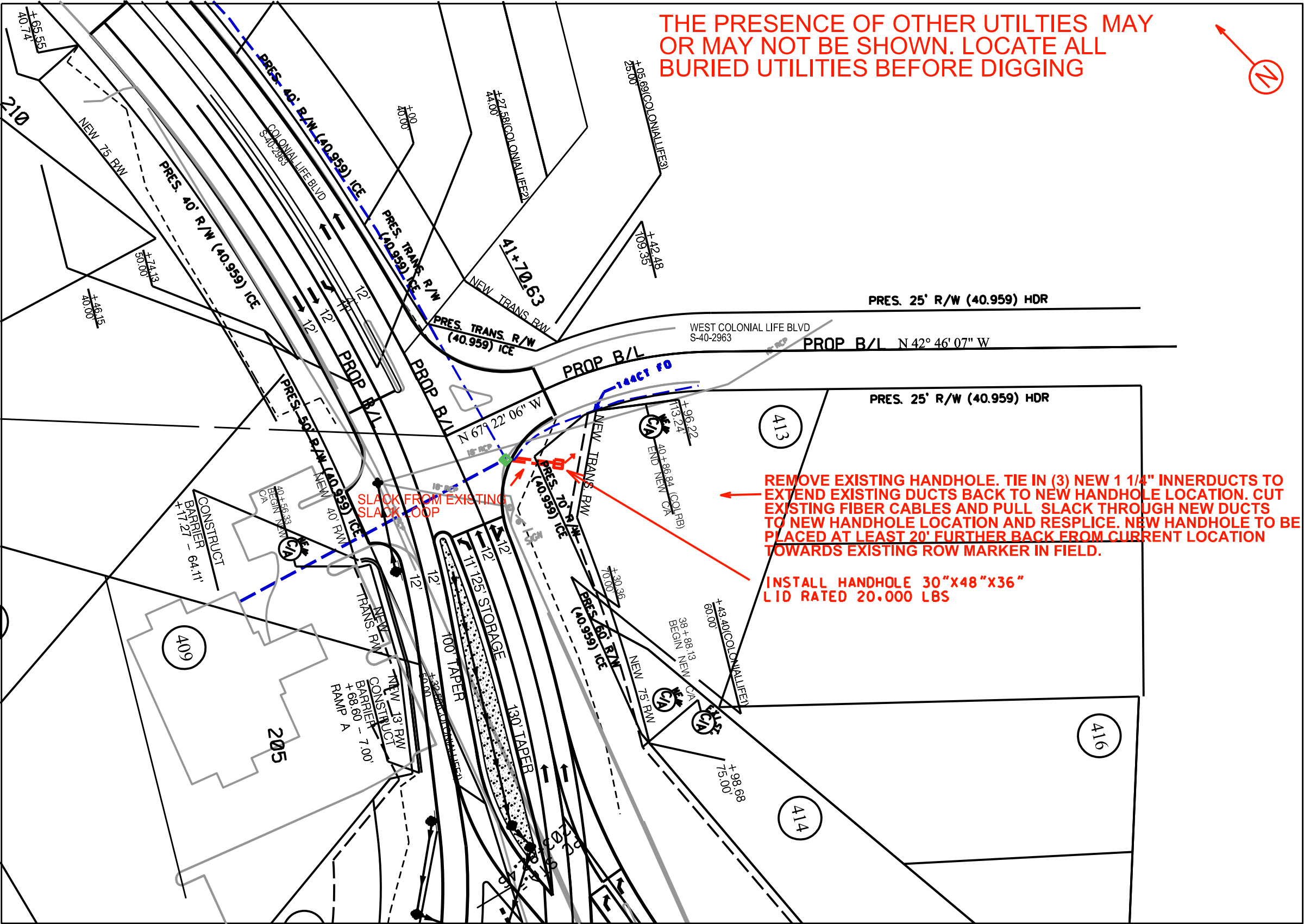


3				AS-BUILT
2				REVISION / 1
1				ORIGINAL
NO.	DATE	ENG. DESIGN	DRAFTING	COMMENT

South Carolina Telecommunications  
Group Holdings, LLC d/b/a Segra

PROJECT MANAGER: STEVEN BOWMAN  
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DRAWING NAME: SEGRA TEMPLATE.DWG





THE PRESENCE OF OTHER UTILITIES MAY  
OR MAY NOT BE SHOWN. LOCATE ALL  
BURIED UTILITIES BEFORE DIGGING



SLACK FROM EXISTING  
SLACK LOOP

REMOVE EXISTING HANDHOLE. TIE IN (3) NEW 1 1/4" INNERDUCTS TO  
EXTEND EXISTING DUCTS BACK TO NEW HANDHOLE LOCATION. CUT  
EXISTING FIBER CABLES AND PULL SLACK THROUGH NEW DUCTS  
TO NEW HANDHOLE LOCATION AND RESPLICE. NEW HANDHOLE TO BE  
PLACED AT LEAST 20' FURTHER BACK FROM CURRENT LOCATION  
TOWARDS EXISTING ROW MARKER IN FIELD.

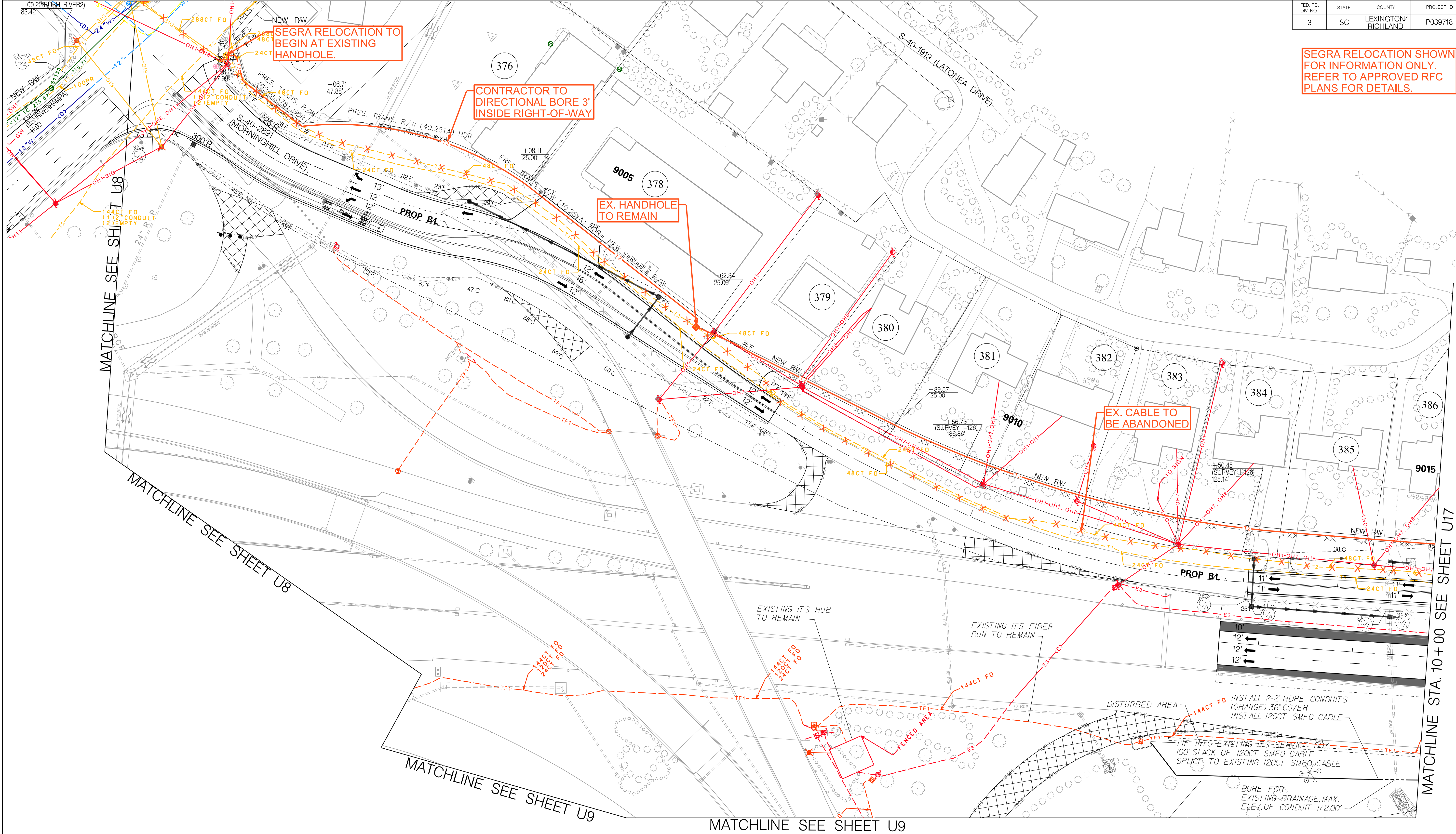
INSTALL HANDHOLE 30"x48"x36"  
LID RATED 20,000 LBS

3				AS-BUILT
2				REVISION / 1
1				ORIGINAL
NO.	DATE	ENG DESIGN	DRAFTING	COMMENT
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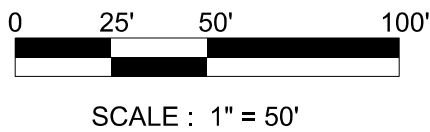


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2/22/2022

FED. RD. DIV. NO.	STATE	COUNTY	PROJECT ID	ROAD / ROUTE NO.	SHEET NO.
3	SC	LEXINGTON/RICHLAND	P039718	I-26	U16



ALIGNMENT CONTROL CAN BE FOUND ON REFERENCE DATA SHEET.  
RIGHT-OF-WAY SECURED UNDER PROJECT ID P027662.



**FINAL PLANS**  
**NOT FOR CONSTRUCTION**

SCALE: 1" = 50'

6				
5				
4				
3				
2				
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REV. NO.	BY	DATE	DESCRIPTION OF REVISION	

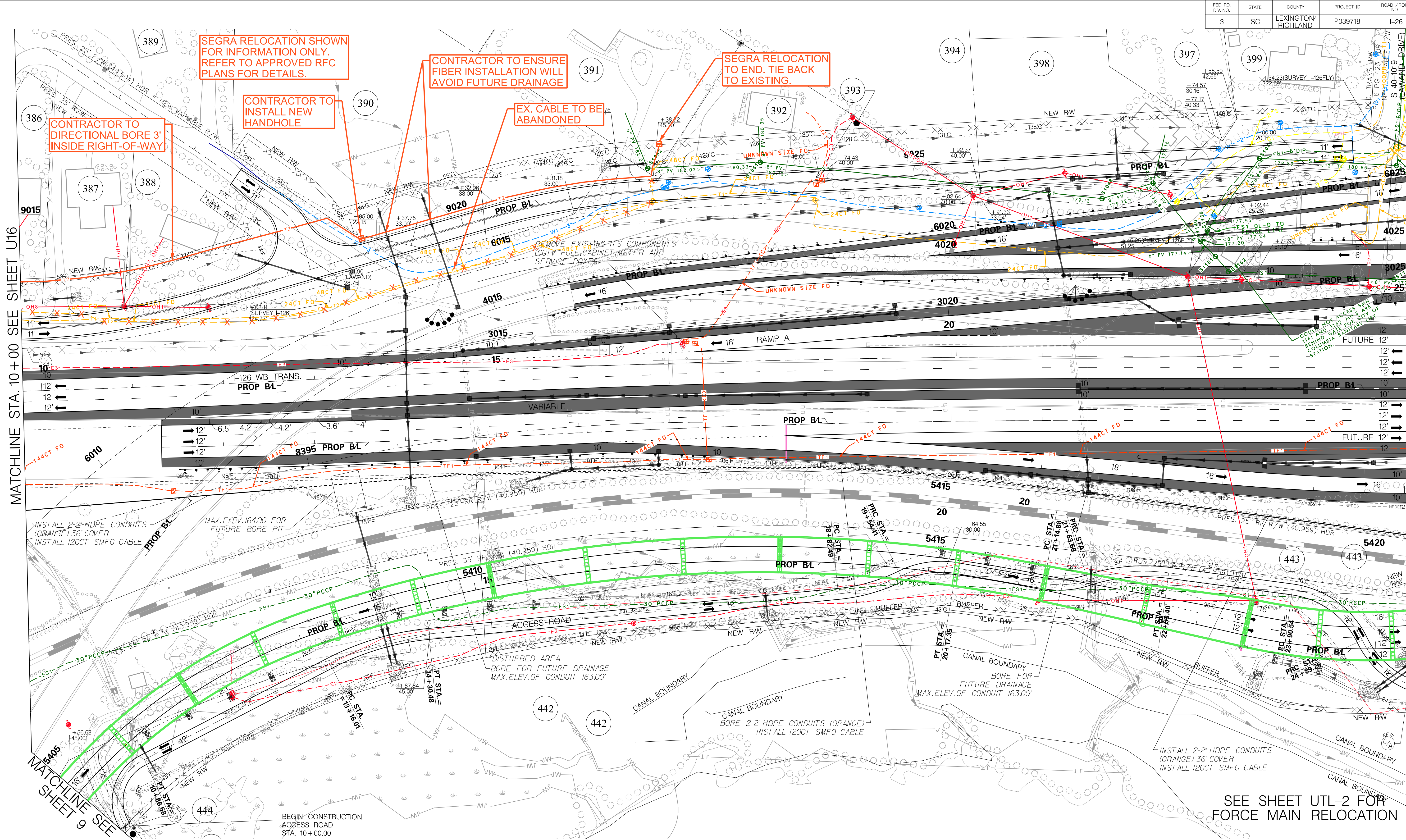
SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION

CAROLINA CROSSROADS PHASE 1

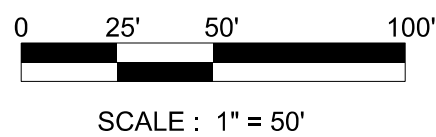
UTILITY PLAN SHEET



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2/22/2022



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PROJECT ID P027662.



**FINAL PLANS**  
**NOT FOR CONSTRUCTION**

SCALE: 1" = 50'

6				
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4				
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REV. NO.	BY	DATE	DESCRIPTION OF REVISION	

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CAROLINA CROSSROADS PHASE 1

UTILITY PLAN SHEET

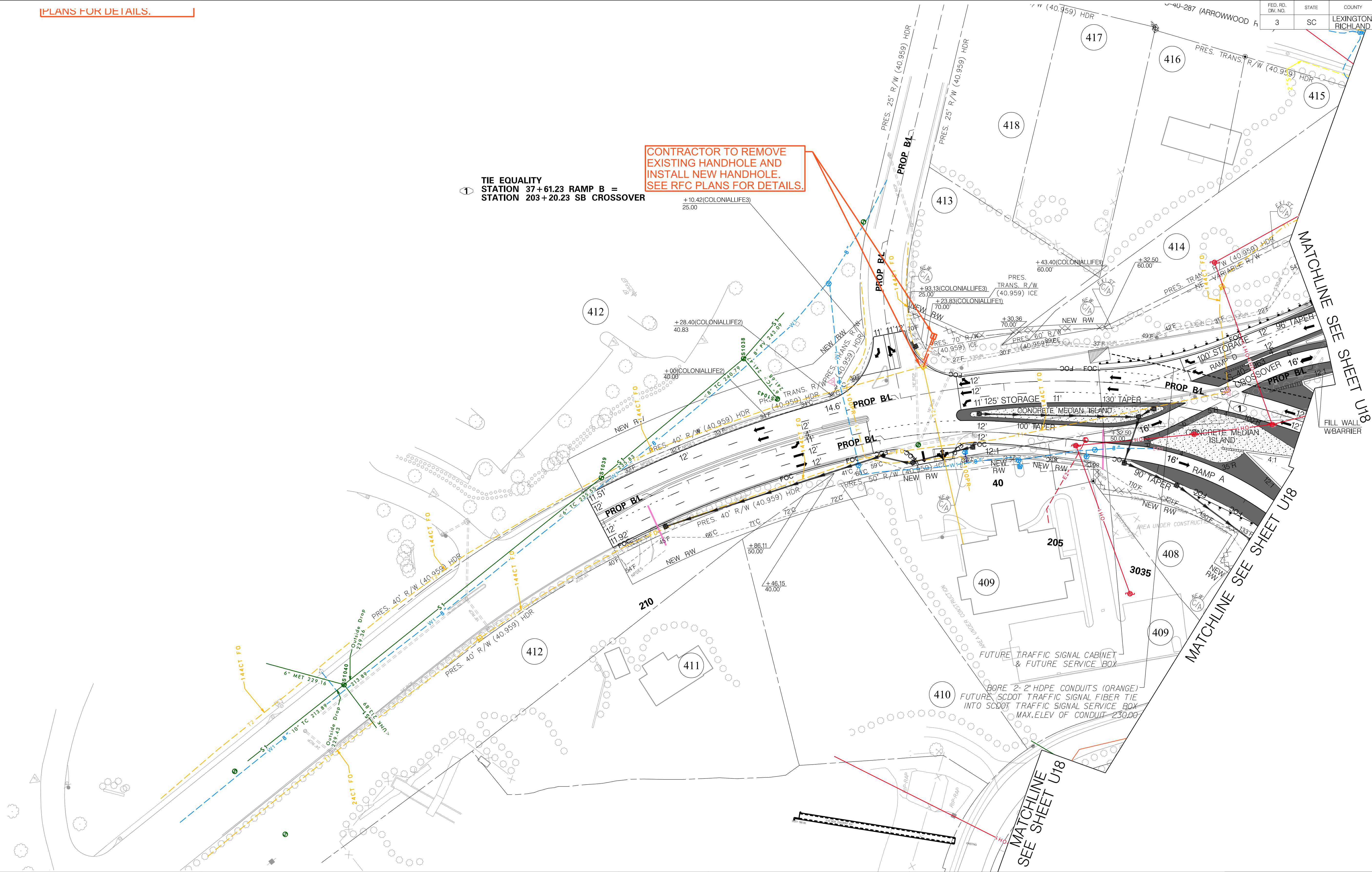


PLANS FOR DETAILS.

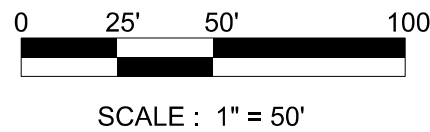
FED. RD. DIV. NO.	STATE	COUNTY	PROJECT ID	ROAD / ROUTE NO.	SHEET NO.
3	SC	LEXINGTON/RICHLAND	P039718	I-26	U22

CONTRACTOR TO REMOVE EXISTING HANDHOLE AND INSTALL NEW HANDHOLE. SEE RFC PLANS FOR DETAILS.

TIE EQUALITY  
STATION 37+61.23 RAMP B =  
STATION 203+20.23 SB CROSSOVER



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PROJECT ID P027662.



FINAL PLANS  
NOT FOR CONSTRUCTION

SCALE: 1" = 50'

6				
5				
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3				
2				
1				
0				
REV. NO.	BY	DATE	DESCRIPTION OF REVISION	

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CAROLINA CROSSROADS PHASE 1
UTILITY PLAN SHEET