

RICHLAND COUNTY  
COLUMBIA, SC



PROJECT: # 1905BZOP

SEG/SPAN: \_\_\_\_\_

MTSO

MAP FOOTAGE:  
SURVEY:  
RAILROAD:

[illegible]

PROJECT NUMBER  
1905BZOP  
PROJECT TITLE

MTSO H1003A

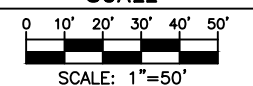
TITLE: FIBER OPTIC CABLE ROUTE  
FROM

TO

## REVISIONS

[illegible]

## SCALE



MP	TO	MP
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SHEET	COVER SHEET
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DWG. NAME
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CLM\_1905BZOP\_MTSO\_H1003A\_SCDOT\_68.dwg

SCDOT PLAT INFO  
PROJECT #: FAP 45-B  
SHEET: 6

SCDOT PLAT INFO  
PROJECT #: C-492  
SHEETS: 9,12

SCDOT PLAT INFO  
PROJECT #: 40.460  
SHEET: 41

SCDOT PLAT INFO  
PROJECT #: 40.455  
SHEET: 17

SCDOT PLAT INFO  
PROJECT #: A-908.1  
SHEET: 6

SCDOT PLAT INFO  
PROJECT #: 40.504  
SHEET: 21

SCDOT PLAT INFO  
PROJECT #: 40.387  
SHEET: 5

5G SITES PASSED:  
1710AISZ.43 (234')  
1710AISZ.45 (364')  
1710AISZ.46 (408')  
1710AIEE.55 (75')

SCDOT PLAT INFO  
PROJECT #: 40.330  
SHEET: 7

SCDOT PLAT INFO  
PROJECT #: I-126-2(126)  
SHEET: 17

SCDOT PLAT INFO  
PROJECT #: A-897  
SHEETS: 7-8

SCDOT PLAT INFO  
PROJECT #: A-798  
SHEET: 7

SCDOT PLAT INFO  
PROJECT #: A-694  
SHEET: 7

SCDOT PLAT INFO  
PROJECT #: A-722  
SHEET: 7

CLM\_1905BZOP\_MTSO\_H1003A\_SCDOT\_68

MCI METRO ACCESS  
TRANSMISSION SERVICES CORPORATION

COLUMBIA, SC 29210

SCDOT  
RICHLAND COUNTY

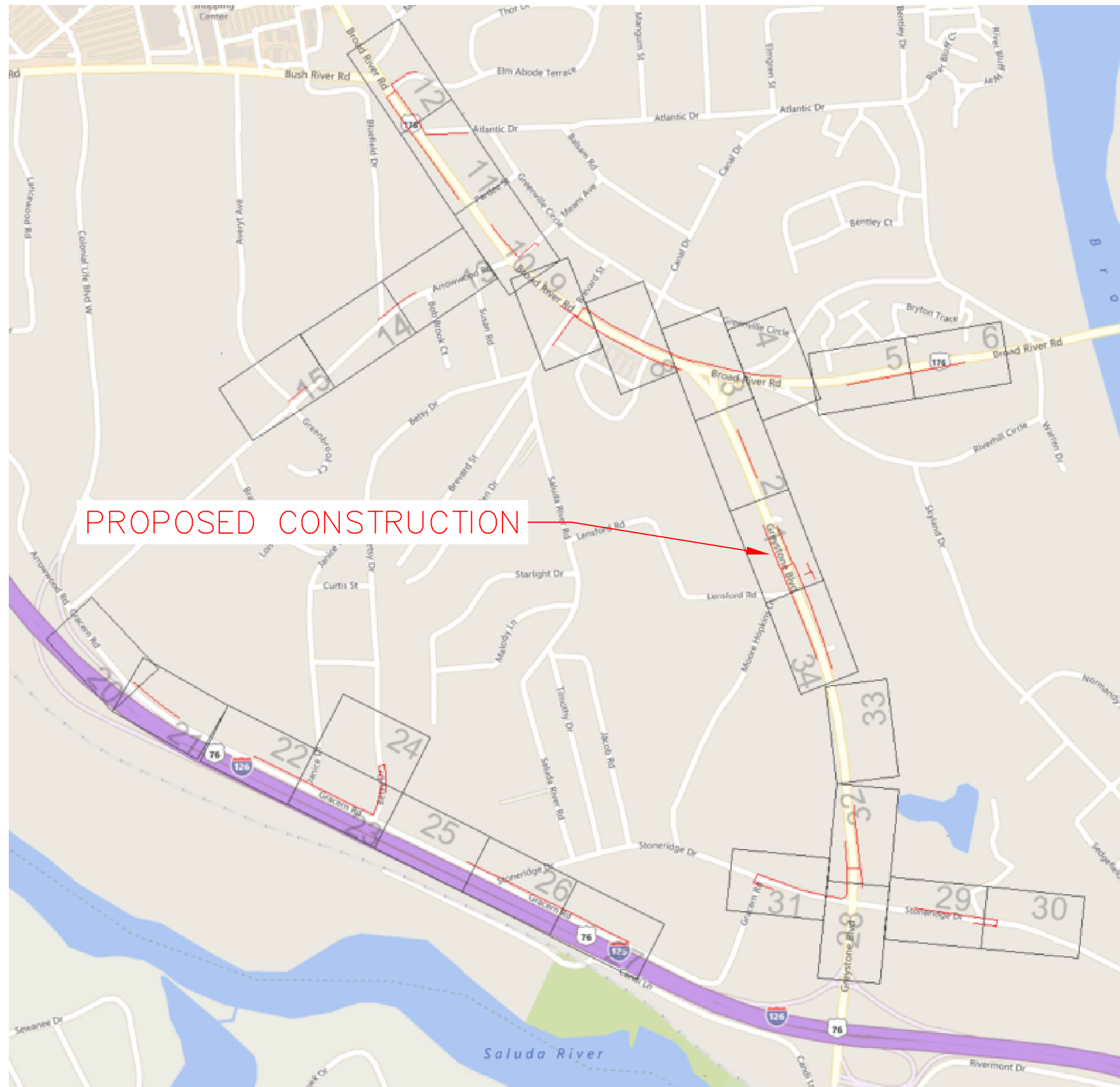
SCOPE: PLACE 14,760' OF 7 WAY  
CONDUIT ALONG BROAD RIVER RD  
PROJECT: CONSTRUCTION



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

CLM\_1905BZOP\_MTSO\_H1003A\_SCDOT\_68.dwg

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COLUMBIA, SC



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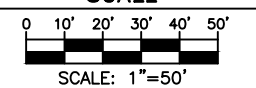
TITLE: FIBER OPTIC CABLE ROUTE  
FROM

TO

## REVISIONS

[illegible]

## SCALE



MP	TO	MP
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## SHEET LOCATION MAP

DWG. NAME
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CLM\_1905BZOP\_MTSO\_H1003A\_SCDOT\_68.dwg



Know what's below.  
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## CONTACT LIST AND REQUIRED PERMITS

BUREAU OF PROTECTICE SERVICES 803-896-5442  
ADDRESS: 10311 WILSON BLVD, BLYTHEWOOD, SC 29016

WATER/SEWER:	
RICHLAND COUNTY UTILITIES	803-401-0050
CAROLINA WATER SERVICE, INC	(800) 272-1919

FEDERAL GOVERNMENT:



Know what's below.  
Call before you dig



PROJECT: # 1905BZOP

SEG/SPAN: \_\_\_\_\_

MTSO

MAP FOOTAGE:  
SURVEY:  
RAILROAD:

[illegible]

PROJECT NUMBER  
1905BZOP  
PROJECT TITLE

MTSO H1003A

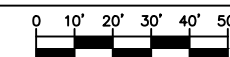
TITLE: FIBER OPTIC CABLE ROUTE  
FROM

TO

## REVISIONS

[illegible]

SCALE



SCALE: 1"=50'

MP	TO	MP
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SHEET GENERAL NOTES (1)

DWG. NAME
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CLM 1905BZOP MTSO H1003A SCDOT 68.dwg



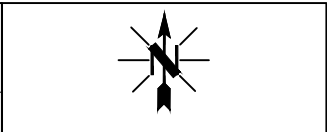
Know what's below.  
**Call** before you dig.

## GENERAL NOTES & ADDENDUMS

- |  |  |   |
|--|--|---|
| <p>1. THE CONTRACTOR IS REQUIRED TO HAVE ALL BELOW GROUND UTILITIES LOCATED BY LOCATE SERVICES AND/OR POT HOLED FOR DEPTH. 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 FEET IN ADVANCE OF TRENCHING OR PLOWING, SO THAT CHANGES IN CABLE PLACEMENT CAN BE MADE IN THE EVENT OF CONFLICT.</p> <p>2. THE CONTRACTOR SHALL COMPLY WITH ALL FEDERAL, STATE, AND LOCAL ENVIRONMENTAL REGULATIONS AND SHALL OBTAIN AND OBSERVE ALL NECESSARY FEDERAL, STATE, AND LOCAL ENVIRONMENTAL PERMITS, INCLUDING BUT NOT LIMITED TO, THOSE RELATED TO SEDIMENT CONTROL, STORMWATER, WETLAND, STREAMS, ENDANGERED SPECIES, AND HISTORICAL SITES.</p> <p>3. TRENCHING, BORE PITS, AND/OR OTHER EXCAVATIONS SHALL NOT BE LEFT OPEN OR UNSAFE OVERNIGHT. THE CONTRACTOR SHALL COMPLY WITH ALL OSHA REQUIREMENTS AND PROVIDE A COMPETENT PERSON ON SITE TO SUPERVISE EXCAVATION AT ALL TIMES.</p> <p>4. ALL FILL AREAS/BACKFILL SHALL BE COMPACTED TO 95% DENSITY IN ACCORDANCE WITH AASHTO T99 AS MODIFIED BY THE SCDOT. ALL MATERIAL TO A DEPTH OF 8 INCHES BELOW THE FINISHED SURFACE OF THE SUBGRADE SHALL BE COMPACTED TO DENSITY EQUAL TO AT LEAST 100% OF THAT OBTAINED BY COMPACTING A SAMPLE OF THE MATERIAL IN ACCORDANCE WITH AASHTO T99.</p> <p>5. VEGETATIVE COVER SHALL BE ESTABLISHED ON ALL DISTURBED AREAS IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE DIVISION ROADSIDE ENVIRONMENTAL ENGINEER.</p> <p>6. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE SCDOT STANDARDS AND SPECIFICATIONS MANUALS.</p> <p>7. ANY DRAINAGE STRUCTURE DISTURBED OR DAMAGED SHALL BE RESTORED TO ITS ORIGINAL CONDITION AS DIRECTED BY THE DISTRICT ENGINEER.</p> | <p>8. ALL DRIVEWAYS ALTERED DURING CONSTRUCTION SHALL BE RETURNED TO A STATE COMPARABLE WITH THE CONDITION OF THE DRIVEWAYS PRIOR TO CONSTRUCTION.</p> <p>9. RIGHT OF WAY MONUMENTS DISTURBED DURING CONSTRUCTION SHALL BE REFERENCED BY A REGISTERED LAND SURVEYOR AND RESET AFTER CONSTRUCTION AT THE EXPENSE OF THE CONSTRUCTION CONTRACTOR.</p> <p>10. PROPER TRAFFIC CONTROL DEVICES, SIGNS, ETC., SHALL BE INSTALLED TO ENSURE PUBLIC SAFETY IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND ANY SUPPLEMENTS THERETO AND SCDOT ROADWAY STANDARD DRAWINGS.</p> <p>11. ALL LANES OF TRAFFIC ARE TO BE OPEN DURING THE HOURS OF 6:00 A.M. TO 9:00 A.M. AND FROM 4:00 P.M. TO 7:00 P.M. MONDAY THRU FRIDAY. TWO WAY TRAFFIC WILL BE MAINTAINED AT ALL TIMES; UNLESS OTHERWISE NOTED BY TRAFFIC CONTROL DIAGRAMS.</p> <p>12. INGRESS AND EGRESS SHALL BE MAINTAINED TO ALL BUSINESSES AND DWELLINGS AFFECTED BY THE PROJECT.</p> <p>13. NO MATERIAL STORAGE SHALL BE ALLOWED ALONG THE SHOULDERS OF ANY ROADWAY. DURING NON-WORKING HOURS, EQUIPMENT SHALL BE REMOVED FROM THE RIGHT OF WAY.</p> <p>14. ALL ROADWAY SIGNS THAT ARE REMOVED DUE TO CONSTRUCTION SHALL BE REINSTALLED AS SOON AS POSSIBLE AND IN ACCORDANCE WITH STATE AND LOCAL GUIDELINES.</p> <p>15. EXCAVATED MATERIAL SHALL NOT BE PLACED ON THE PAVEMENT. DRAINAGE STRUCTURES SHALL NOT BE BLOCKED WITH EXCAVATED MATERIALS.</p> <p>16. ALL MANHOLES, HANDHOLES, AND OTHER APPURTENANCES WITHIN THE SCDOT RIGHT OF WAY SHALL NOT BE PLACED IN THE DITCH LINE, SIDE SLOPES OF THE DITCHES OR IN THE PAVEMENT.</p> | <p>17. ALL MANHOLES, SPLICE BOXES, AND/OR VAULTS WITHIN SCDOT RIGHT OF WAY SHALL BE OF A PRE-APPROVED DESIGN.</p> <p>18. PROPOSED TRAFFIC-BEARING MANHOLES AND VAULT COVERS SHALL BE FLUSH MOUNTED AND SHALL BE OF A SCDOT APPROVED DESIGN FOR HS-20 LOADING.</p> <p>19. ALL WORK TO BE PERFORMED IN STRICT ACCORDANCE WITH THE APPLICABLE CODES OR REQUIREMENTS OF ANY REGULATING GOVERNMENTAL AGENCY, MCI METRO ACCESS TRANSMISSION CORP., AND THE RIGHT-OF-WAY GRANTOR.</p> <p>20. ANY AND ALL IMPROVEMENTS, SUCH AS ASPHALT OR CONCRETE PAVEMENT, CURBS, GUTTERS, WALKS, DRAINAGE DITCHES, EMBANKMENTS, SHRUBS, TREES, GRASS SOD, ETC., IF DISTURBED, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND RESTORED TO ORIGINAL CONDITION.</p> <p>21. SHORING OF BORE PITS AND TRENCHES IN ACCORDANCE WITH OSHA REGULATIONS SHALL BE MANDATORY.</p> <p>22. BURIED CABLE MARKERS WILL BE PLACED AT ALL UNDERGROUND UTILITY LOCATIONS AND ALL OTHER LOCATIONS IN ACCORDANCE WITH THE CONSTRUCTION DRAWINGS AND THE OUTSIDE PLANT HANDBOOK. FLUSH MARKERS TO BE USED WHEN ABOVE GROUND. MARKERS ARE NOT APPROVED.</p> <p>23. ALL CONDUITS WILL BE SDR 11 OR AS SPECIFIED.</p> <p>24. UNDERGROUND CONDUIT WILL BE PLACED AT 48" MINIMUM COVER UNLESS SPECIFIED ON THE CONSTRUCTION DRAWINGS.</p> |
|--|--|---|

## ADDENDUM NOTES





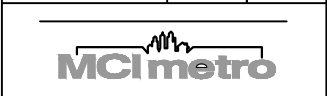
PROJECT: # 1905BZOP

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MTSO

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MAP FOOTAGE:  
SURVEY:  
RAILROAD:



PROJECT NUMBER  
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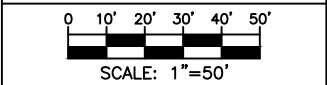
TITLE: FIBER OPTIC CABLE ROUTE  
FROM

TO

## REVISIONS

[illegible]

SCALE



MB	TO	MB
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MF	TO	MF
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SHEET GENERAL NOTES (2)

DWG. NAME
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CLM\_1905BZOP\_MTSO\_H1003A\_SCDOT\_68.dwg

GENERAL NOTES / CLARIFICATION NOTES

CONSTRUCTION NOTES

1. ALL CONDUIT WILL BE 4" ID SCHEDULE 40 (i.e. PVC OR BSP/GSP, MANUFACTURED SPLIT PVC OR SPLIT BSP/GSP), UNLESS SPECIFIED OTHERWISE.
2. CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UTILITIES 48 HOURS PRIOR TO CONSTRUCTION ACTIVITY. SEE CONTACT SHEET FOR CONTACT NAME AND TELEPHONE NUMBER.
3. ALL UNDERGROUND OBSTRUCTIONS, WHEN LOCATED, WILL REQUIRE THE PLACEMENT OF A BURIED CABLE MARKER AND THE PLACEMENT OF 4" MANUFACTURED SPLIT PVC, BSP/GSP OVER OR UNDER EACH OBSTRUCTION.
4. SHORING MAY BE REQUIRED AND SHALL COMPLY TO O.S.H.A. STANDARDS.
5. ALL BURIED CONDUIT/CABLE WILL BE PLACED AT 42" MINIMUM COVER UNLESS SPECIFIED OTHERWISE ON THE CONSTRUCTION DRAWINGS.
6. MECHANICAL PROTECTION SHALL BE REQUIRED ANYTIME A 36" MINIMUM COVER IS UNOBTAINABLE UNLESS SPECIFIED OTHERWISE ON THE CONSTRUCTION DRAWINGS.
7. ALL 90 DEGREE BENDS IN CONDUIT CONSTRUCTION WILL BE A MINIMUM 38.2" RADIUS UNLESS SPECIFIED OTHERWISE. ALL SPLIT CONDUIT BENDS AND SOLID PVC BENDS SHALL REQUIRE CONCRETE ENCASEMENT, UNLESS SPECIFIED OTHERWISE.
8. OPERATIONS PERSONNEL TO BE CONTACTED BY THE CONTRACTOR 48 HOURS PRIOR TO CONSTRUCTION. SEE CONTACT SHEET FOR CONTACT NAME AND TELEPHONE NUMBER.
9. ALL STATIONING IS BASED ON AS-BUILT INFORMATION, THEREFORE SOME VARIANCE SHOULD BE ANTICIPATED. ADJUST AS NEEDED.
10. RAILROAD COMMUNICATION AND SIGNAL CABLES TO BE LOCATED PRIOR TO CONSTRUCTION ACTIVITY. RAILROAD TO BE GIVEN 48 HOURS NOTICE PRIOR TO CONSTRUCTION.
11. ALL BURIED CABLE MARKER POSTS AND HARDWARE PLACED AND/OR REMOVED ON ALL NEW AND EXISTING ROUTES SHALL BE IMPLEMENTED AS FOLLOWS:
  - A. ON THOSE ROUTES THAT ARE CONSIDERED TO BE IN A NORTH TO SOUTH GEOGRAPHICAL ORIENTATION, THE SOUTHERN-MOST SIGN AND POST SHOULD BE REMOVED.  
\* FOR NEW ROUTES BEING CONSTRUCTED, ONE SIGN POST WILL BE PLACED AT THE NORTH END OF EACH HANDHOLE.
  - B. ON THOSE ROUTES THAT ARE CONSIDERED TO BE IN AN EAST TO WEST GEOGRAPHICAL ORIENTATION, THE WESTERN-MOST SIGN AND POST SHOULD BE REMOVED.  
\* FOR NEW ROUTES BEING CONSTRUCTED, ONE SIGN POST WILL BE PLACED AT THE EAST END OF EACH HANDHOLE.

## GENERAL NOTES

1. MCI COMPRISES THE FOLLOWING OPERATING ENTITIES:
    - BROOKS FIBER PROPERTIES, INC.
    - MCI METRO ACCESS TRANSMISSION SERVICES, LLC.
    - MCI WORLDCOM NETWORK SERVICES, INC.  
(COMPRISES MCI TELECOMMUNICATIONS CORP. (MCI LD)  
AND WORLDCOM NETWORK SERVICES, INC. (WORLDCOM))
    - SOUTHERNET, INC.
    - MFS TELECOM, INC.
    - TELECOM\*USA, INC.
    - INTERMEDIA, INC.
    - SOUTHERNET SYSTEMS, INC.
    - MCI WORLDCOM NETWORK SERVICES OF VIRGINIA, INC.
    - MCI METRO ACCESS TRANSMISSION SERVICES OF VIRGINIA, INC.
  - \* THE MCI FACILITIES WITHIN THIS CONSTRUCTION PACKAGE ARE HELD BY THE OPERATING ENTITY(IES) INDICATED BY AN ASTERICK.
2. ALL WORK TO BE DONE WITH EXTREME CAUTION !  
FIBER OPTIC CABLE IS CARRYING TRAFFIC AND LOSS OF SERVICE WILL RESULT IN LOSS OF REVENUE. CONTRACTOR SHALL NOT WORK IN A MANNER THAT MAY AFFECT TRAFFIC-CARRYING FACILITIES IN THE ABSENCE OF AN MCI EMPLOYEE OR CERTIFIED CONTRACTOR.
3. ALL WORK TO BE PERFORMED IN STRICT ACCORDANCE WITH THE APPLICABLE CODES OR REQUIREMENTS OF ANY REGULATING GOVERNMENTAL AGENCY, MCI TELECOMMUNICATIONS CORPORATION, OR THE RIGHT-OF-WAY- GRANTOR.
  4. LOCATIONS OF SOME OF THE PHYSICAL FEATURES WERE OBTAINED FROM DATED RAILROAD VALUATION MAPS OR OTHER DRAWINGS, AND MAY BE AS SHOWN OR DEPICTED ON THESE DRAWINGS.
  5. 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 FEET IN ADVANCE OF TRENCHING OR PLOWING, SO THAT CHANGES IN CABLE PLACEMENT CAN BE MADE IN EVENT OF CONFLICTS.
  6. ALL KNOWN BURIED OBSTRUCTIONS ARE SHOWN ON THE CONSTRUCTION DRAWINGS. ANY AND ALL OTHERS ENCOUNTERED ARE ALSO THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE, PROTECT, AND REPAIR, IF DAMAGED.
  7. ANY AND ALL IMPROVEMENTS, SUCH AS ASPHALT OR CONCRETE PAVEMENT, CURBS, GUTTERS, WALKS, DRAINAGE DITCHES, EMBANKMENTS, SHRUBS, TREES, GRASS SOD, ETC., IF DAMAGED, SHALL BE RESTORED TO ORIGINAL OR BETTER CONDITION.
  8. EQUIPMENT TYPES SPECIFIED HEREIN (ie: "BACKHOE, "SWAMP PLOW", ETC.) ARE SUGGESTIONS ONLY AND ARE NOT INTENDED AS REQUIREMENTS. CONTRACTOR WILL BE NOTIFIED AS TO EXCEPTIONS.

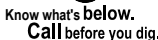
CLARIFICATION NOTES
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- |    |  |
|----|--|
| 1. | 1. STATION   |
| 2. | 2. LOCATION I.D.   |
| 3. | 3. CLARIFICATION NO., MINIMUM COVER  |
| 4. | 4. QUANTITY, SIZE OF HANDHOLE, SIZE OF MANHOLE, DIMENSION OF WALL, LINEAR FOOTAGE/SQUARE FOOTAGE, SIZE OF PULL/SPLICE BOX, HEIGHT/CLASS/TYPE |
| 5. | 5. DRAWING NO. AND TYPICAL DETAIL DWG. NO.   |
| 6. | 6. PLANT ACCOUNTING CODE   |
| 7. | 7. SPECIFIED CONDUIT, HANDHOLE NO., MANHOLE NO., SPECIFIED PURPOSE AND MATERIAL, BRIDGE NO. AND RR STATION, MATERIAL, POLE NO.               |

## ADDENDUM NOTES

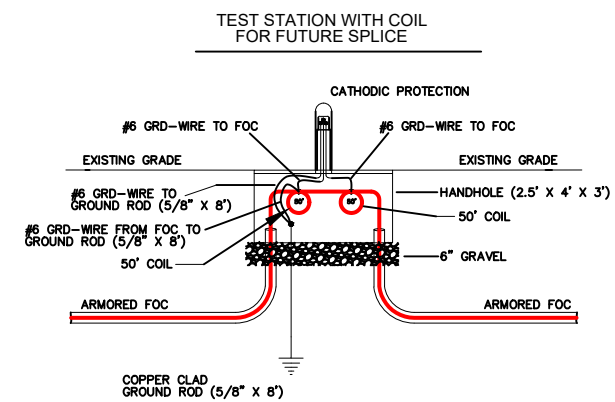
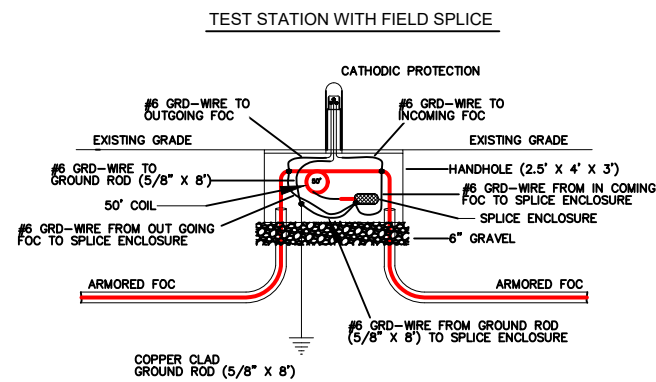
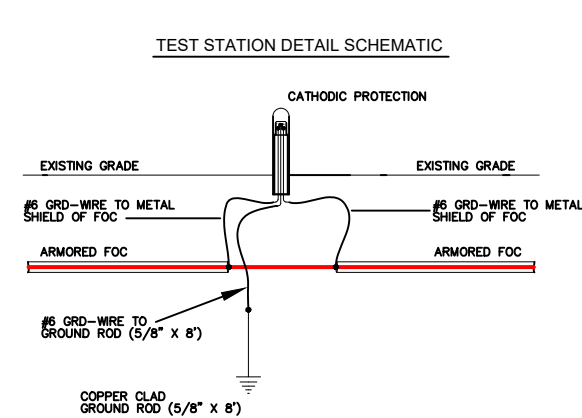

#### CLARIFICATION NOTES (CONTINUED)

100	110	JACK AND DRY BORE CONDUIT(S)
200	210	PLACE CONDUIT
	212	PLACE HIGH DENSITY POLYETHYLENE (HDPE)
	213	ROCK ADDER
	214	SLURRY BACKFILL ADDER
	215	EXPOSE CONDUIT
	216	EXPOSE CONDUIT AND RELOCATE
	217	EXPOSE CONDUIT AND REPLACE/SUBSTITUTE
	218	EXPOSE AND REMOVE CONDUIT
	219	EXPOSE AND REMOVE CONDUIT (ABANDONED)
	220	CONCRETE ENCASE
	221	REMOVE CONCRETE ENCASUREMENT
	222	REMOVE CONCRETE CAP
	240	PLACE HANDHOLE
	244	REMOVE EXISTING HANDHOLE
	245	RELOCATE HANHOLE
		REPLACE/SUBSTITUTE HANDHOLE
	247	EXCAVATE SPLICE PIT
	250	PLACE MANHOLE
	252	REMOVE EXISTING MANHOLE
	255	RELOCATE PRECAST MANHOLE
	256	REPLACE/SUBSTITUTE PRECAST MANHOLE
	260	CONSTRUCT WALL
	270	REMOVE AND RESTORE ASPHALT
	280	REMOVE AND RESTORE CONCRETE
	281	REMOVE AND RESTORE SIDEWALK
	282	REMOVE AND RESTORE CURBING
300	310	ATTACH CONDUIT TO WALL OR STRUCTURE
	315	DETACH CONDUIT FROM WALL OR STRUCTURE
	320	CORE BORE
	330	ATTACH PULL/SPLICE BOX TO WALL OR STRUCTURE
400	410	PULL CABLE
	411	PULL THROUGH DUCT (INNERDUCT)
	415	REMOVE CABLE FROM CONDUIT
	420	REPOSITION ACTIVE CABLE SLACK
500	510	DIRECT BURY CABLE
	515	EXPOSE DIRECT BURIED CABLE
	516	EXPOSE DIRECT BURIED CABLE AND RELOCATE
	517	REMOVE AND DISPOSE OF CABLE
	520	PLACE AERIAL CABLE
	525	RELOCATE AERIAL CABLE
	526	DELASH AERIAL CABLE
	527	RELASH AERIAL CABLE
	528	REMOVE AERIAL CABLE
	530	PLACE POLE/PUSH BRACE
	535	REMOVE POLE/PUSH BRACE
600	610	JETTING CONDUIT
	620	EMBEDMENT PLOW
	630	DIRECTIONAL BORE
700	710	PLACE BURIED CABLE MARKERS AND SIGNS/MWCOM
		WATER CROSSING SIGNS
	711	PLACE ISOLATOR/PROTECTION SYSTEM AT EXISTING
		HANDHOLES/MANHOLES
	712	REMOVE BURIED CABLE MARKER POST/HARDWARE
	714	REMOVE CONCRETE BURIED CABLE MARKER POST



Know what's below.  
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## BONDING AND GROUNDING DETAILS



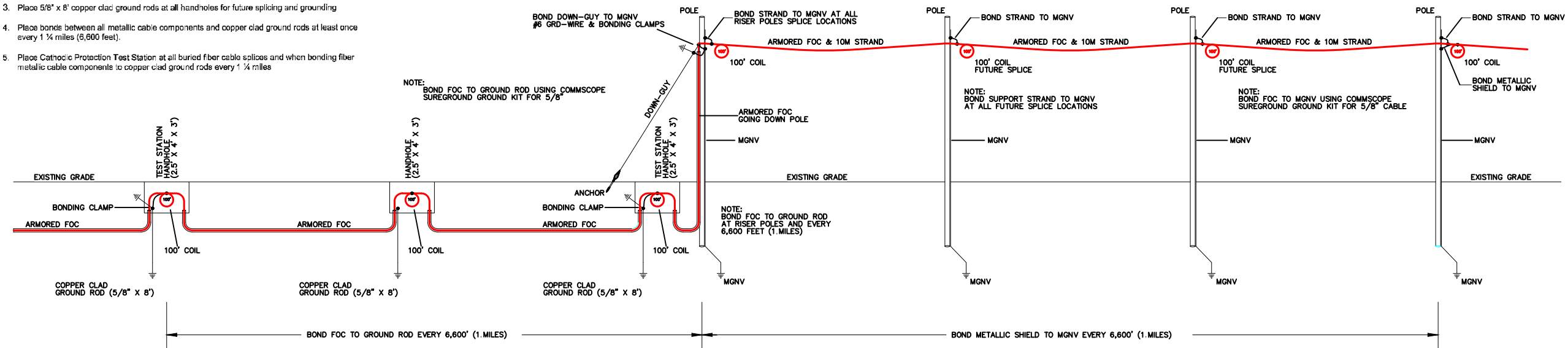
AERIAL NOTES:

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, fiber loop (2,000') locations for future splice and fiber splice locations.
4. Place bonds between all metallic cable components and the support strand at least once every 1 ¼ miles (6,000 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 a bond between all metallic cable components and copper clad ground rods at least once every 1 1/4 miles (5,600 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

### LAYOUT DETAIL



PROJECT: # 1905BZOP

SEG/SPAN: \_\_\_\_\_

MTSO

MAP FOOTAGE:  
SURVEY:  
RAILROAD:

[illegible]

PROJECT NUMBER  
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MTSO H1003A

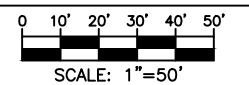
TITLE: FIBER OPTIC CABLE ROUTE  
FROM

TO

## REVISIONS

[illegible]

SCALE



MP	TO MP
SHEET	GROUNDING

DWG. NAME
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CLM\_1905BZOP\_MTSO\_H1003A\_SCDOT\_68.dwg

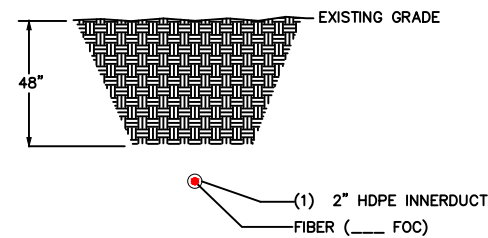


Know what's below.  
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## PLOW AND DIRECTIONAL BORE DETAIL

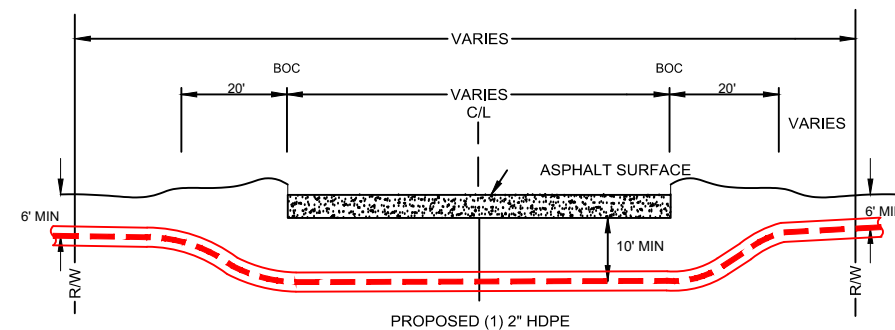
TYPICAL DETAIL "A"

### PLOW AND DIRECTIONAL BORE CROSS SECTION FOR CONDUIT



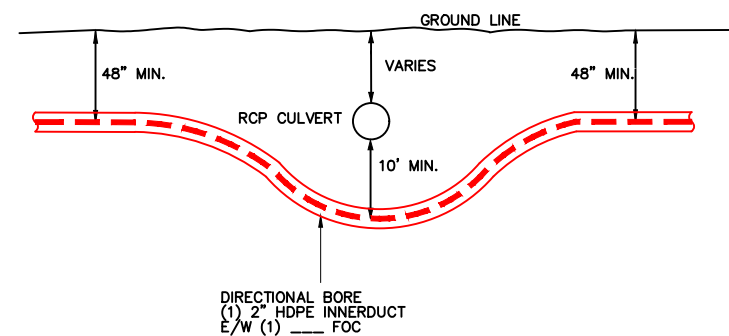
TYPICAL DETAIL "D"

### PRIMARY & SECONDARY ROADWAY CROSSINGS



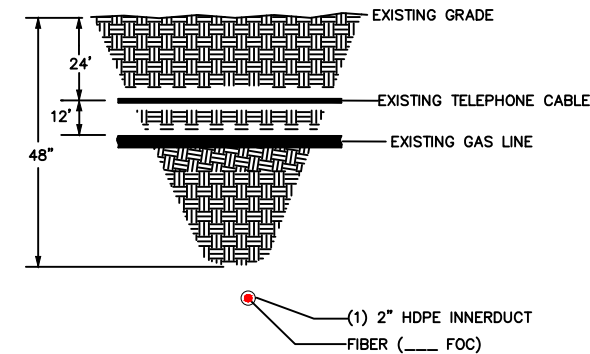
TYPICAL DETAIL "F"

CULVERT CROSSING DETAIL



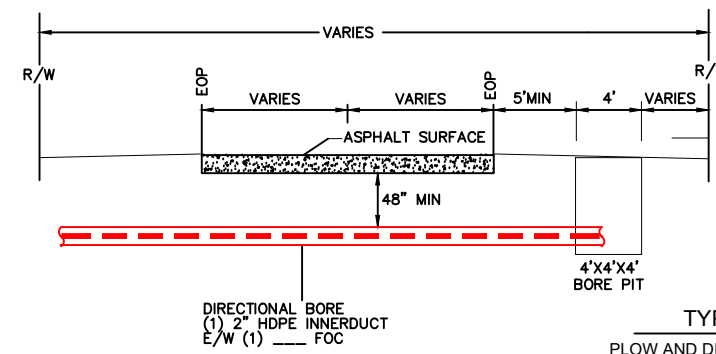
TYPICAL DETAIL "B"

DIRECTIONAL BORE CROSS SECTION  
FOR CONDUIT PLACED BENEATH / PERPENDICULAR  
TO EXISTING UTILITIES



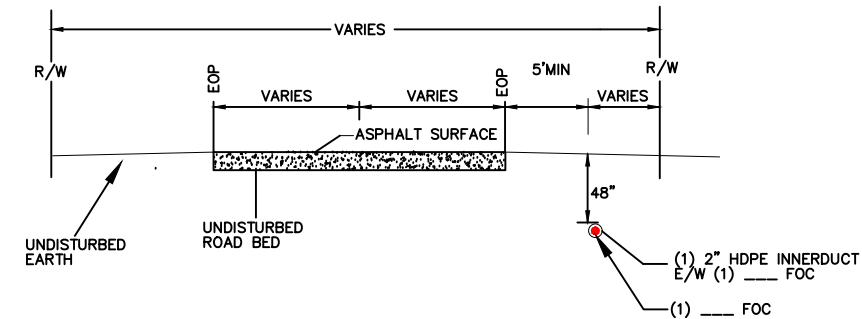
TYPICAL DETAIL "E"

DRIVEWAY CROSSING



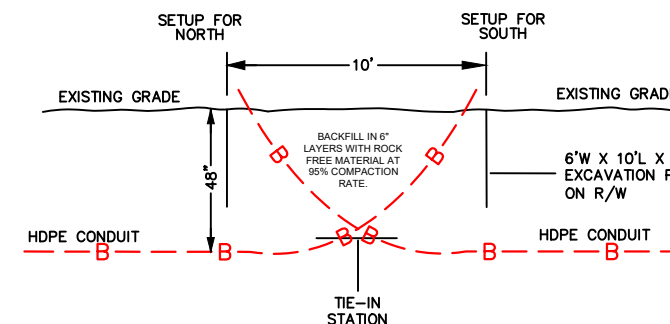
TYPICAL DETAIL "C"

PLOW &  
DIRECTIONAL BORE  
PARALLEL CONDUIT DETAIL  
FOR DOT RIGHT OF WAY



TYPICAL DETAIL "G"

### PLOW AND DIRECTIONAL BORE TIE-IN DETAIL



- \* BORE FROM EACH DIRECTION IS RUN AT DESIGN DEPTH TO SOME POINT PAST THE INTENDED TIE-IN, THEN TURNED UP TO DAYLIGHT.
- \* THE TIE-IN POINT IS EXCAVATED, PIPES CUT OFF WHERE THEY CROSS EACH OTHER AT DESIGN DEPTH, AND A COUPLER IS INSTALLED TO CONNECT THE TWO PIPES AT THE DESIGN DEPTH.
- \* USE DOUBLE "E" LOCK OR BETTER COUPLER TO CONNECT PIPE
- \* ALL EXCAVATIONS OR TRENCHES 4 FEET OR GREATER IN DEPTH SHALL BE APPROPRIATELY BENCHED, SHORED, OR SLOPED ACCORDING TO THE PROCEDURES AND REQUIREMENTS SET FORTH IN OSHA'S EXCAVATION STANDARD, 29 CFR 1926.650, .651, and .652.



PROJECT: # 1905BZOP

SEG/SPAN: \_\_\_\_\_

MTSO

MAP FOOTAGE:
SURVEY:
RAILROAD:

[illegible]

PROJECT NUMBER  
1905BZOP  
PROJECT TITLE

MTSO H1003A

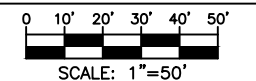
TITLE: FIBER OPTIC CABLE ROUTE  
FROM

TO

## REVISIONS

[illegible]

## SCALE



MP	TO MP
----	-------

**SHEET D.BORE DETAIL**

DWG. NAME
-----------

CLM\_1905BZOP\_MTSO\_H1003A\_SCDOT\_68.dwg



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

# PAVEMENT REPAIRS



PROJECT: # 1905BZOP

SEG/SPAN: \_\_\_\_\_

MTSO

MAP FOOTAGE:  
SURVEY:  
RAILROAD:

[illegible]

PROJECT NUMBER  
1905BZOP  
PROJECT TITLE

MTSO H1003A

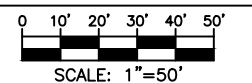
TITLE: FIBER OPTIC CABLE ROUTE  
FROM

TO

## REVISIONS

[illegible]

## SCALE

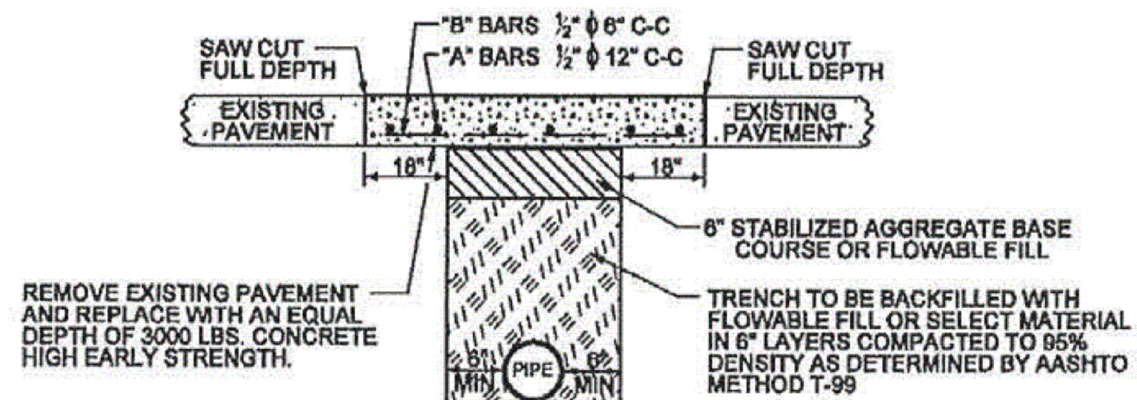
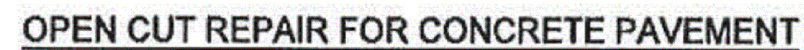


MP	TO	MP
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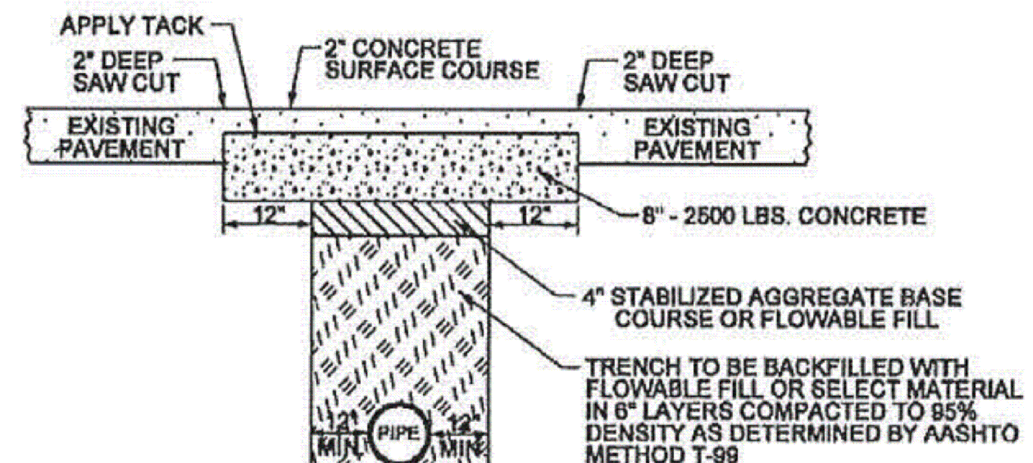
SHEET PAVEMENT REPAIRS

DWG. NAME
-----------

CLM\_1905BZOP\_MTSO\_H1003A\_SCDOT\_68.dwg



## OPEN CUT REPAIR FOR HIGH VOLUME ASHALT PAVEMENT



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



## SIDEWALK CUT & RESTORE DETAIL



PROJECT: # 1905BZOP

SEG/SPAN: \_\_\_\_\_

MTSO

MAP FOOTAGE:
SURVEY:
RAILROAD:

[illegible]

PROJECT NUMBER  
1905BZOP  
PROJECT TITLE

MTSO H1003A

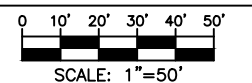
TITLE: FIBER OPTIC CABLE ROUTE  
FROM

TO

## REVISIONS

[illegible]

SCALE



MP	TO	MP
----	----	----



SHEET SW CUT & RESTORE

DWG. NAME
-----------

CLM\_1905BZOP\_MTSO\_H1003A\_SCDOT\_68.dwg



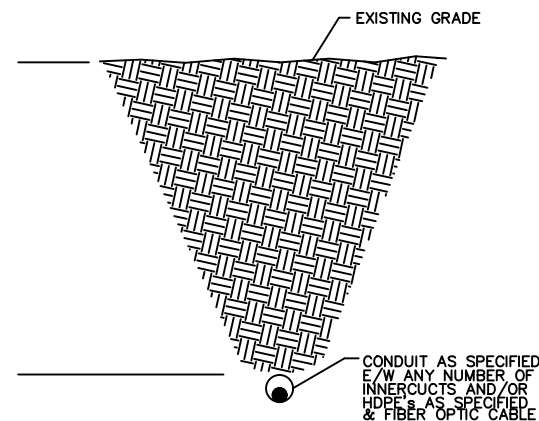
Know what's below.  
**Call** before you dig.

REFERENCES			
NATIONAL DOCUMENTS			
SCDOT DOCUMENTS			
RELATED DRAWINGS & KEYWORDS			
THIS DRAWING IS ONLY VALID FOR CONSTRUCTION WHEN SEALED AND SIGNED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF SOUTH CAROLINA. CHECK <a href="http://WWW.SCDOT.ORG">WWW.SCDOT.ORG</a> FOR LATEST UPDATE.			
			
<i>James W. Kendall</i> SIGNATURE			
10/30/2015 DATE			
6	----	----	----
5	----	----	----
4	----	----	----
3	----	----	----
2	----	----	----
1	----	----	----
1/2018	DSB	NEW DRAWING	
#	DATE	CHK	DESCRIPTION
			
SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION DESIGN STANDARDS OFFICE 955 PARK STREET ROOM 405 COLUMBIA, SC 29201			
STANDARD DRAWING			
SIDEWALK ADJACENT TO CURB			
720-150-00			
EFFECTIVE LETTING DATE		JAN. 2018	



## CONSTRUCTION DETAILS

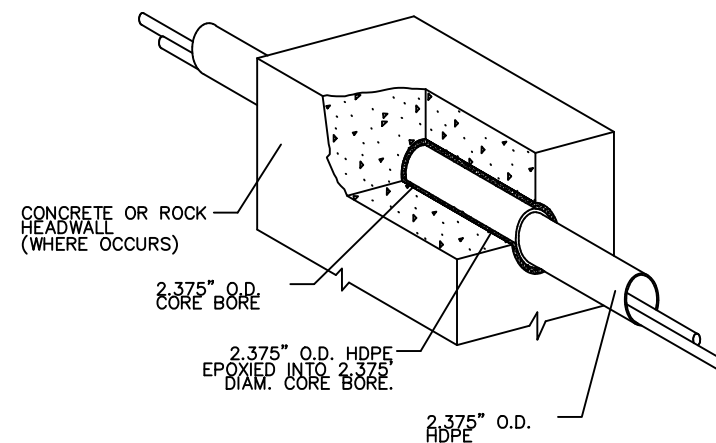
TYPICAL DETAIL "A"  
DIRECTIONAL BORE CROSS SECTION  
FOR CONDUIT



TYPICAL DETAIL "B"

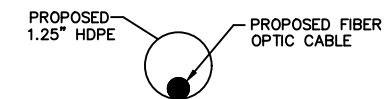
---

2" CORE BORE



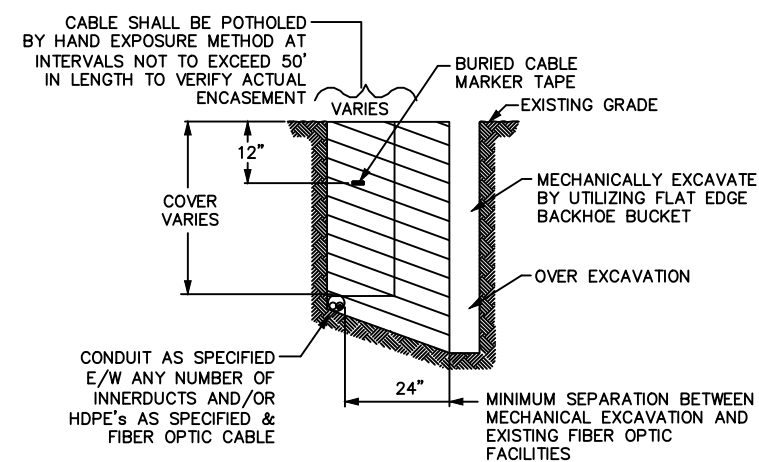
NOTE:  
EPOXY GROUT IS USED AT BOTH ENDS OF  
CORE BORE TO SEAL GAP BETWEEN  
4" CONDUIT AND PVC SHEEVE

TYPICAL DETAIL "C"  
CROSS SECTION OF PROPOSED HDPE



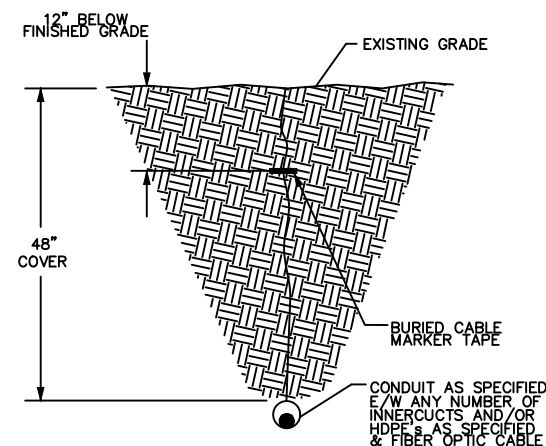
TYPICAL DETAIL "D"

EXPOSE DIRECT BURIED CABLE BY  
POTHOLE/SIDE EXPOSURE METHOD



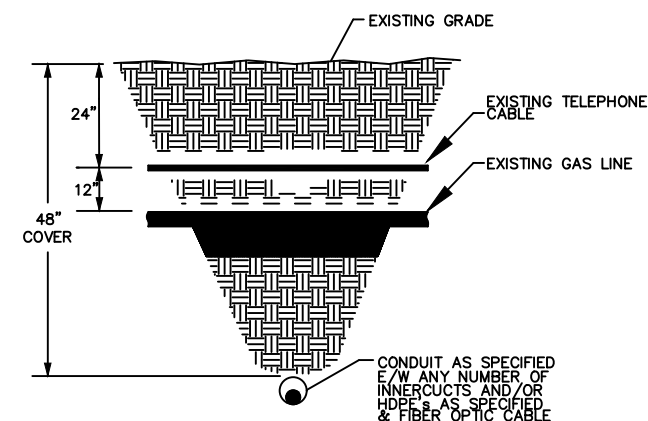
NOTE:  
DETAIL SHALL ONLY APPLY FOR  
THE EXPOSURE OF ALL BURIED CONDUIT,  
WHICH SHALL INCLUDE HDPE

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

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



PROJECT: # 1905BZOP

SEG/SPAN: \_\_\_\_\_

MTSO

MAP FOOTAGE:	
SURVEY:	
RAILROAD:	

[illegible]

PROJECT NUMBER  
1905BZOP  
PROJECT TITLE

MTSO H1003A

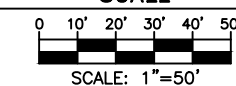
TITLE: FIBER OPTIC CABLE ROUTE  
FROM

TO

## REVISIONS

[illegible]

## SCALE



MP	TO	MP
----	----	----

SHEET	CONS. DETAIL
-------	--------------

DWG. NAME
-----------

CLM\_1905BZOP\_MTSO\_H1003A\_SCDOT\_68.dwg



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









PROJECT: # 1905BZOP

SEG/SPAN: \_\_\_\_\_

MTSO

MAP FOOTAGE:
SURVEY:
RAILROAD:

[illegible]

PROJECT NUMBER  
1905BZOP  
PROJECT TITLE

MTSO H1003A

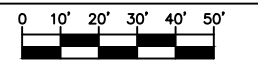
TITLE: FIBER OPTIC CABLE ROUTE  
FROM

TO

## REVISIONS

[illegible]

**SCALE**



SCALE: 1"=50'

MP	TO MP
----	-------

DWG. NAME
-----------

CLM\_1905BZOP\_MTSO\_H1003A\_SCDOT\_68.dwg

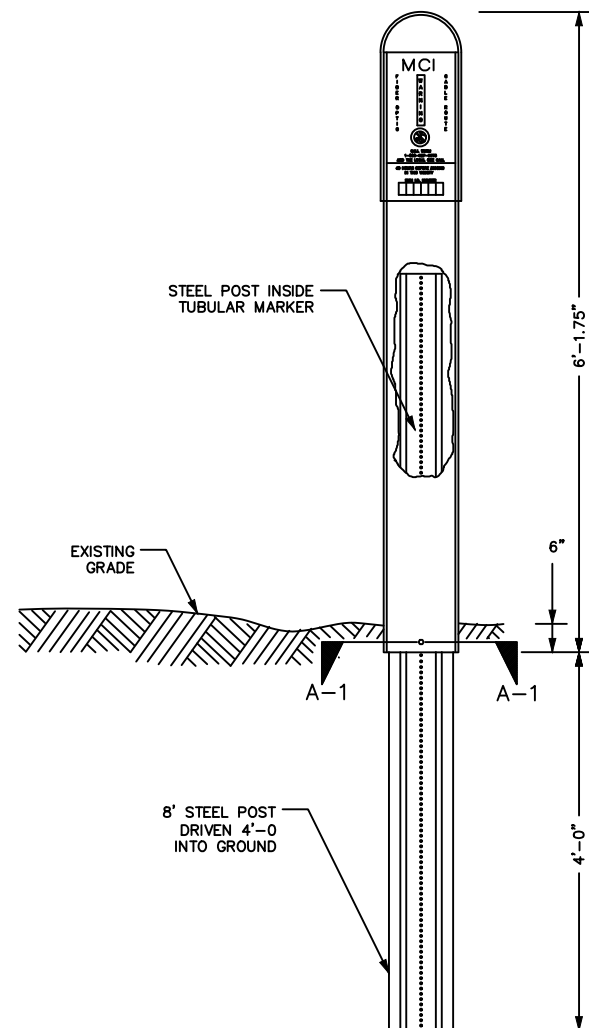
## TUBULAR MARKER DETAILS

(TUBULAR MARKERS TO BE USED ON SCDOT RIGHT OF WAYS ONLY)

DETAIL "A"

---

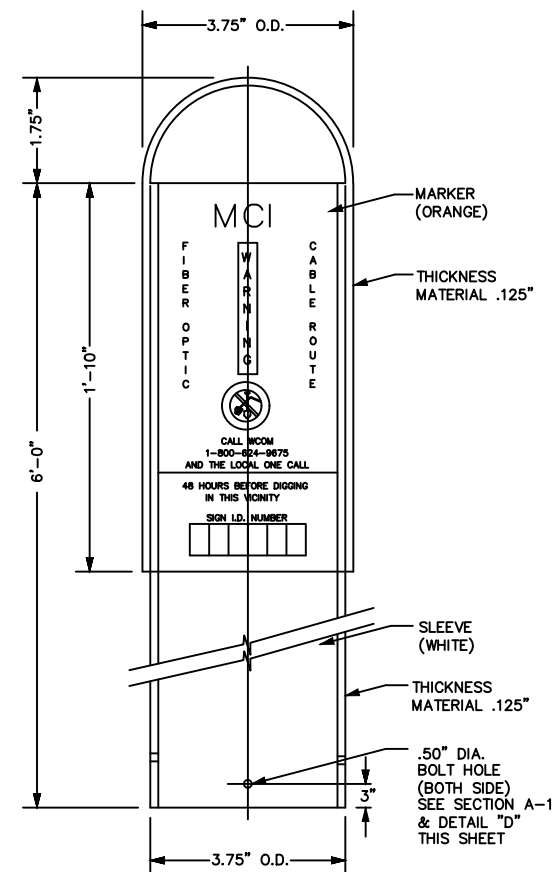
INSTALLATION VIEW



DETAIL "B"

---

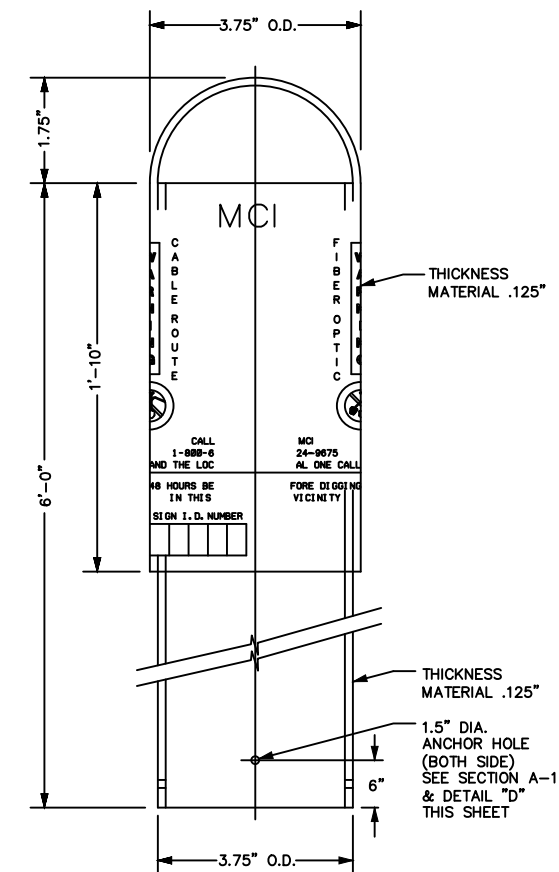
FRONT VIEW



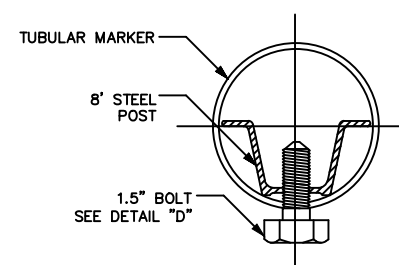
DETAIL "C"

---

SIDE VIEW



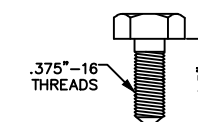
SECTION A-1  
TUBULAR MARKER



DETAIL "D"

---

1.5" BOLT



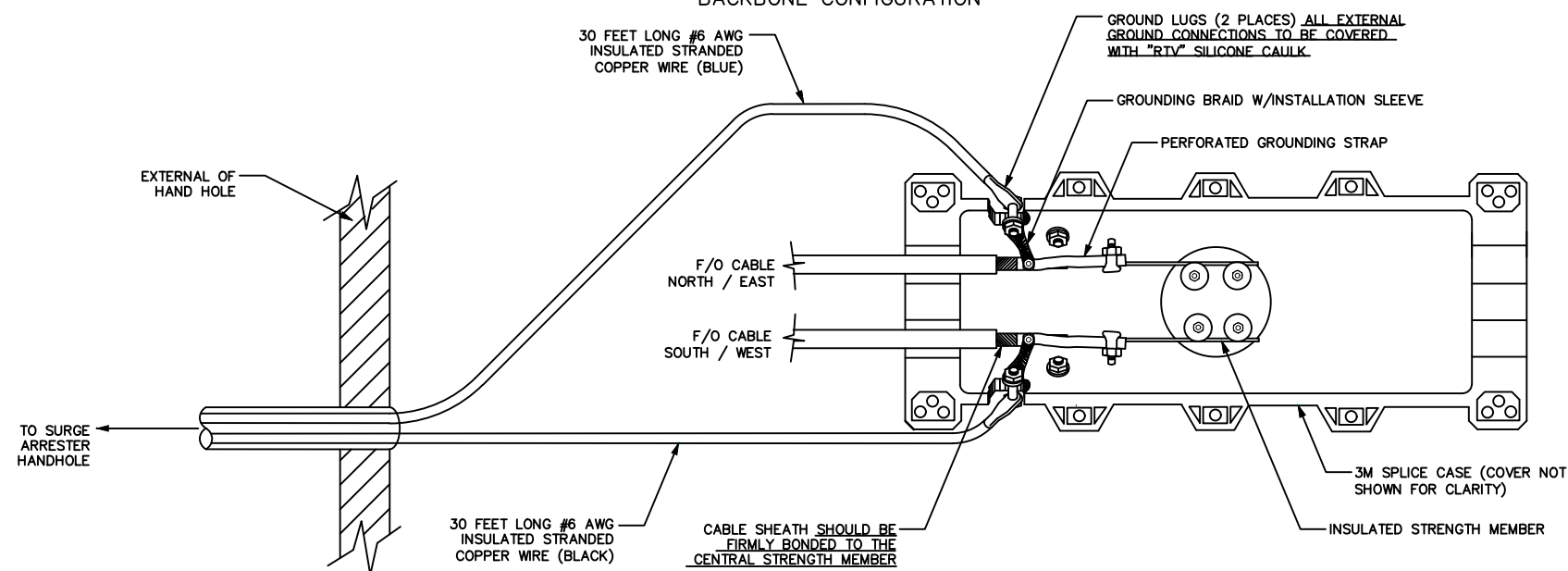
Know what's below.  
**Call** before you dig.



## BACKBONE / BACKBONE AND SPUR CONFIGURATION DETAILS

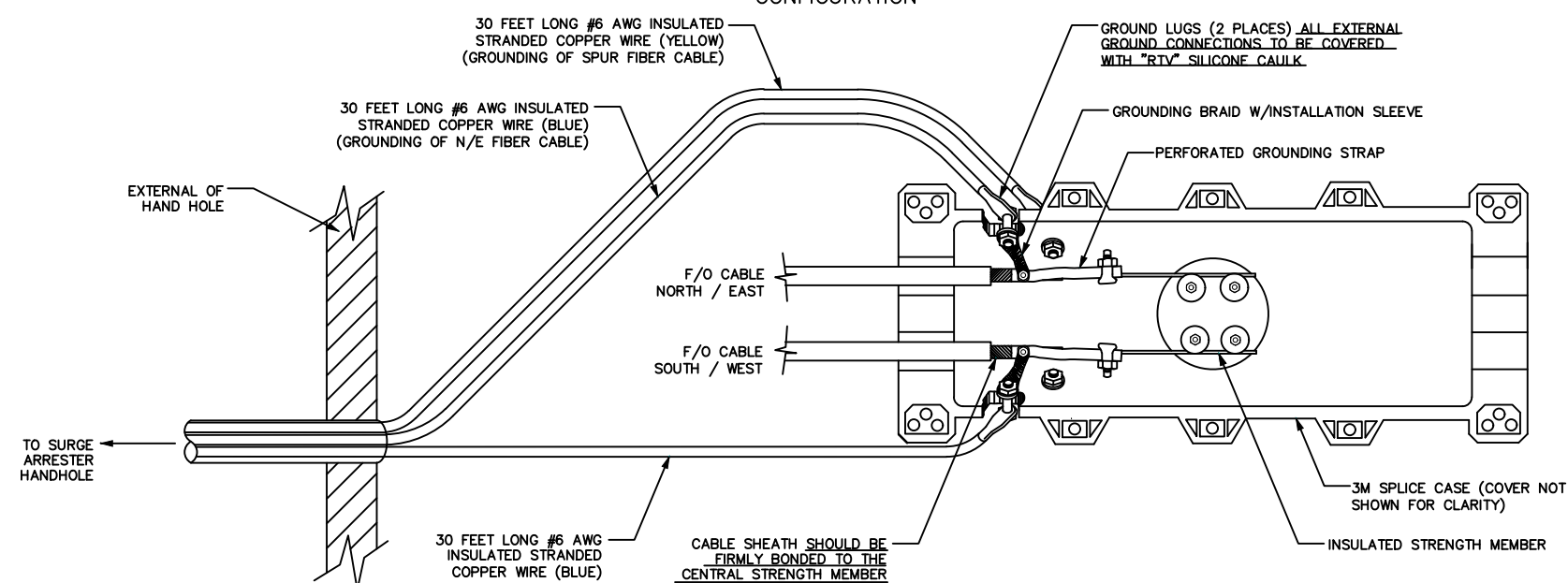
DETAIL "A"

## BACKBONE CONFIGURATION



DETAIL "B"

## BACKBONE AND SPUR CONFIGURATION



PROJECT: # 1905BZOP

SEG/SPAN: \_\_\_\_\_

MTSO

MAP FOOTAGE:  
SURVEY:  
RAILROAD:

[illegible]

PROJECT NUMBER  
1905BZOP  
PROJECT TITLE

MTSO H1003A

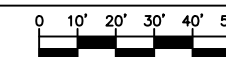
TITLE: FIBER OPTIC CABLE ROUTE  
FROM

TO

## REVISIONS

[illegible]

SCALE



SCALE: 1"=50'

MP	TO	MP
----	----	----

SHEET	BACK BONE SPUR
-------	----------------

DWG. NAME
-----------

CLM\_1905BZOP\_MTSO\_H1003A\_SCDOT\_68.dwg



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



PROJECT: # 1905BZOP

SEG/SPAN: \_\_\_\_\_

**MTSO**

MAP FOOTAGE:  
SURVEY:  
RAILROAD:

[illegible]

PROJECT NUMBER  
1905BZOP  
PROJECT TITLE

MTSO H1003A

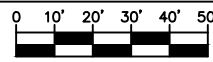
TITLE: FIBER OPTIC CABLE ROUTE  
FROM

TO

## REVISIONS

[illegible]

## SCALE



SCALE: 1"=50'

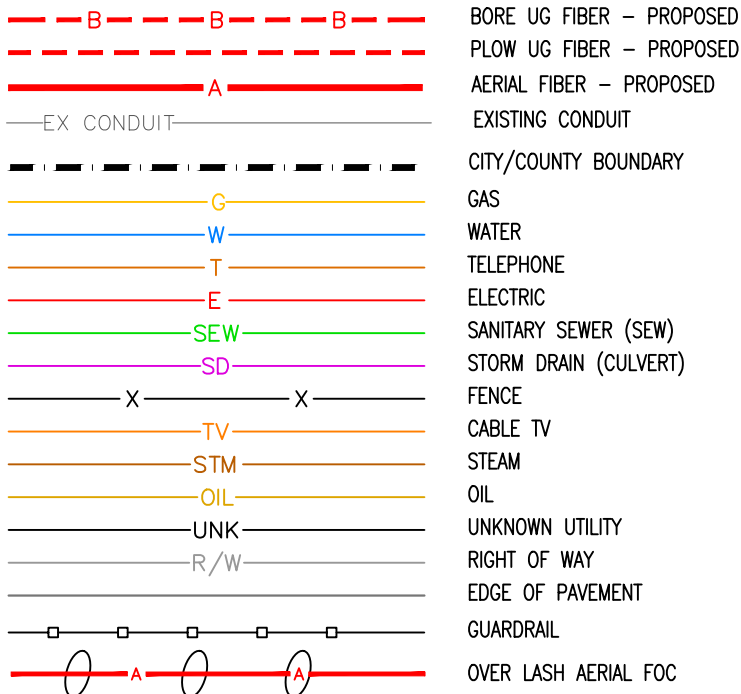
MP TO MP

## SHEET SYMBOLS KEY

DWG. NAME

CLM\_1905BZOP\_MTSO\_H1003A\_SCDOT\_68.dwg

## LINETYPES



<u>SYMBOL</u>	<u>DESCRIPTION</u>
SW	SIDEWALK
FH	FIRE HYDRANT
DW	DRIVEWAY
CL	CENTER LINE
EOP	EDGE OF PAVEMENT
S	SEWER
BOC	BACK OF CURB
HDPE	HIGH DENSITY POL
HH	HANDHOLE
RCP	CONCRETE PIPE
MH	MANHOLE
P	PULL
P=DE	PULL = DEAD END
SR	STATE ROAD NAME
RGS	RIGID GALVANIZED
ROW	RIGHT OF WAY
STA.	STATION

## SYMBOLS KEY

<u>SYMBOL</u>	<u>DESCRIPTION</u>	<u>SYMBOL</u>	<u>DESCRIPTION</u>	<u>SYMBOL</u>	<u>DESCRIPTION</u>
	EXISTING HH		ADA/HANDICAP SYMBOL		CELL TOWER
	WATER METER/VALVE/VAULT		FIBER OPTIC MARKER POST		ASPHALT OR ROAD CUT & RESTORE
	RISER		BORE PIT (4' x 4' x 4')		CUT & RESTORE SIDEWALKS
	TELEPHONE/PED		HANDHOLE - EXISTING		UTILITY POLE - EXISTING
	POWER VAULT		HANDHOLE - PROPOSED		POLE - PROPOSED
	CATCH BASIN/INLET		MANHOLE - EXISTING		OWNER ID
	FIRE HYDRANT		PROPOSED SPLICE ARROW		AERIAL STORAGE - EXISTING
	GROUND/BOND		EXISTING SPLICE ARROW		AERIAL STORAGE - PROPOSED
	TREE		SPAN MEASUREMENT		VAULT/BUILDING STORAGE - EXISTING
	CULVERT		MISC. UTILITY		VAULT/BUILDING STORAGE - PROPOSED
	WING WALL		ELECTRIC VAULT/BOX		POLE ANCHOR/DOWN GUY - EXISTING
	BRIDGE		GAS METER/VALVE		POLE ANCHOR/DOWN GUY - PROPOSED
	SEWER				PROPOSED DOWN GUY ON EXISTING ANCHOR
					PROPOSED SIDEWALK ANCHOR/DOWN GUY



Know what's below.  
Call before you dig.



PROJECT: # 1905BZOP

SEG/SPAN: \_\_\_\_\_

MTSO

MAP FOOTAGE:  
SURVEY:  
RAILROAD:

MATERIAL LIST	QUANTITY	
	ESTIMATED	ACTUAL
MATERIAL1	EST1	ACT1
MATERIAL2	EST2	ACT2
MATERIAL3	EST3	ACT3
MATERIAL4	EST4	ACT4
MATERIAL5	EST5	ACT5
MATERIAL6	EST6	ACT6
MATERIAL7	EST7	ACT7
MATERIAL8	EST8	ACT8
MATERIAL9	EST9	ACT9
MATERIAL10	EST10	ACT10
MATERIAL11	EST11	ACT11
MATERIAL12	EST12	ACT12
MATERIAL13	EST13	ACT13
MATERIAL14	EST14	ACT14
MATERIAL15	EST15	ACT15
MATERIAL16	EST16	ACT16
MATERIAL17	EST17	ACT17
MATERIAL18	EST18	ACT18



PROJECT NUMBER  
1905BZOP  
PROJECT TITLE

MTSO H1003A

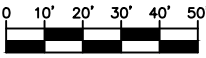
TITLE: FIBER OPTIC CABLE ROUTE  
FROM

TO

REVISIONS

DATE	DESCRIPTION	INITIAL

SCALE



SCALE: 1"=50'

MP TO MP

SHEET FDH DETAIL 288

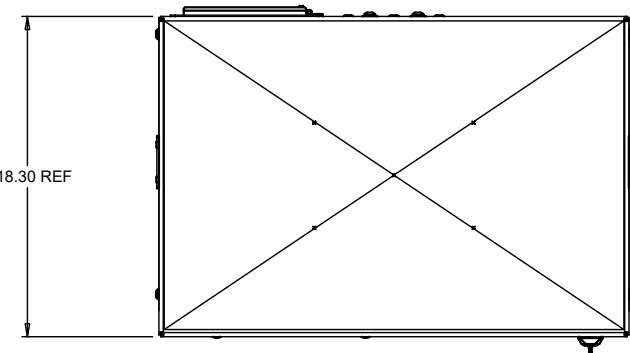
DWG. NAME

CLM\_1905BZOP\_MTSO\_H1003A\_SCDOT\_68.dwg

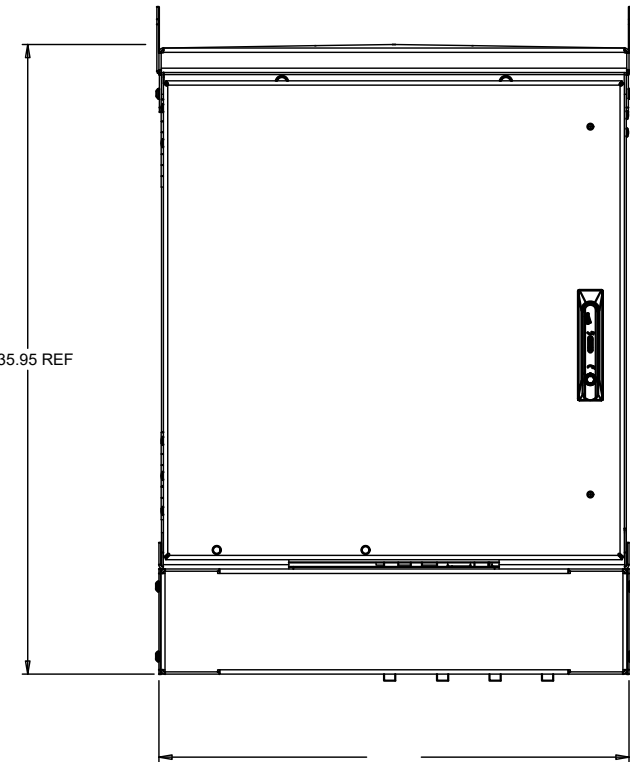
HAND HOLE KITS

288 TERMINATION FDH 3000  
THIRD ANGLE PROJECTION, DIMENSIONS IN INCHES

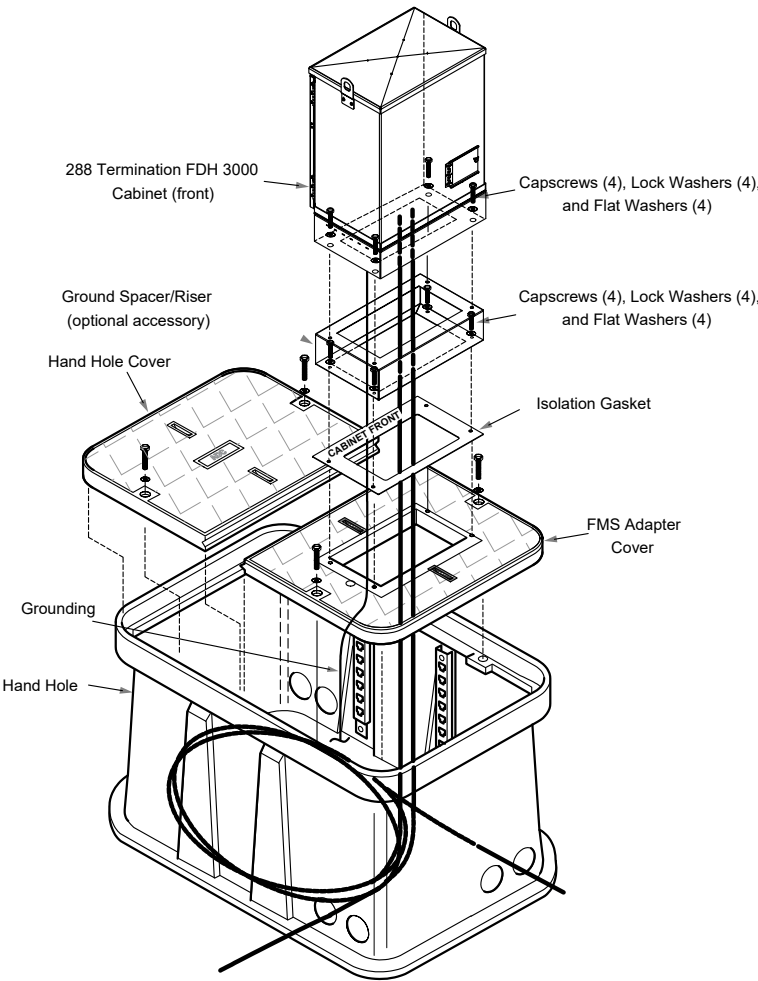
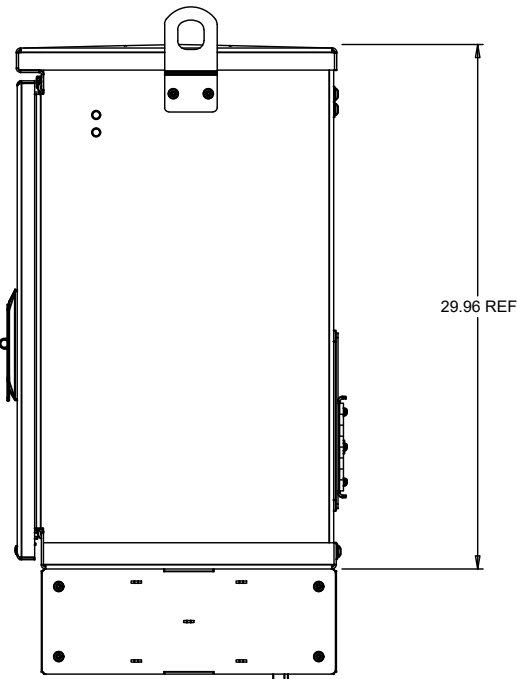
TOP VIEW



FRONT VIEW

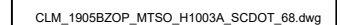


SIDE VIEW

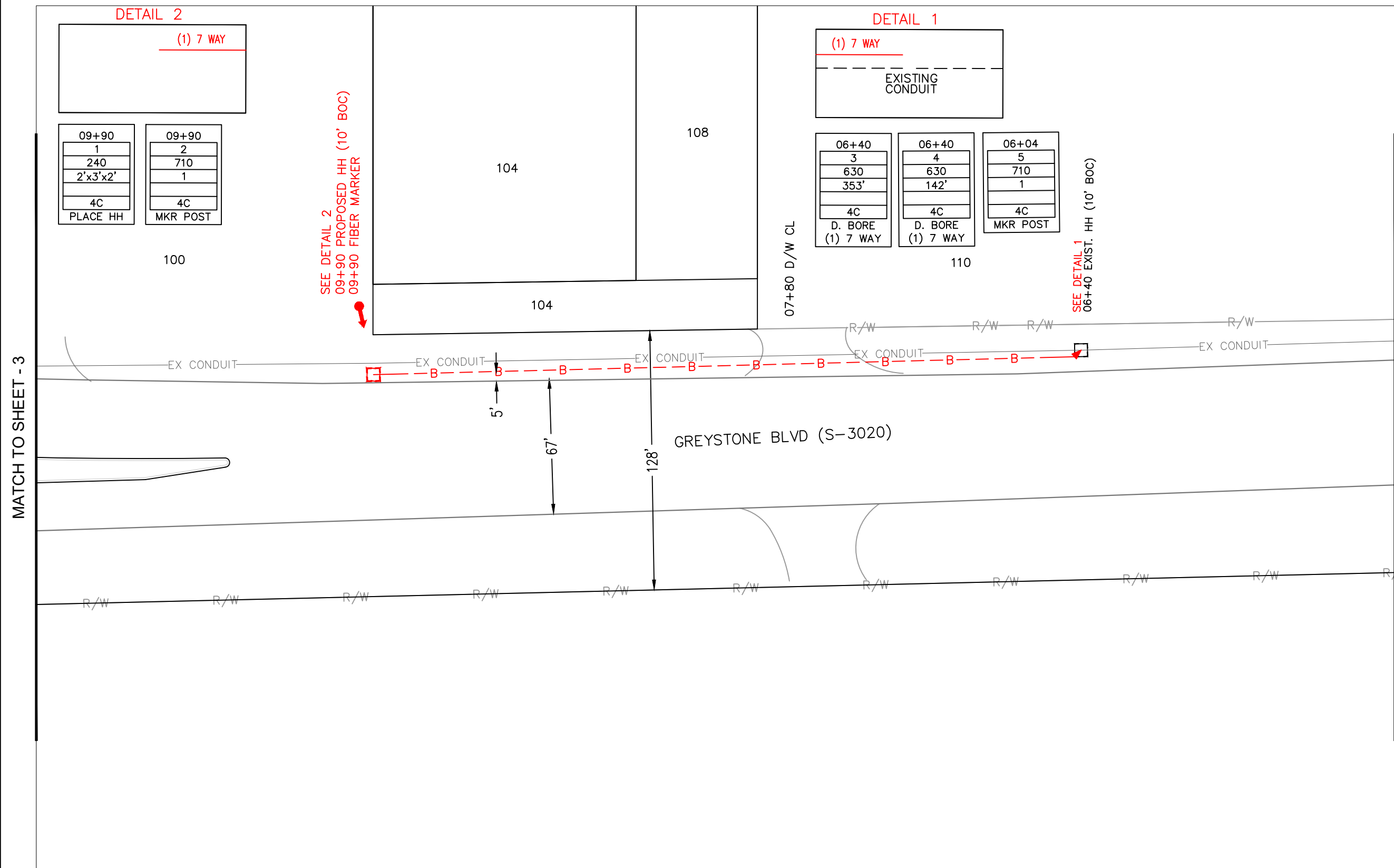


Know what's below.  
Call before you dig.

MATCH TO SHEET - 2



NOTE:  
42" MINIMUM BETWEEN EOP AND BACK OF R/W  
48" MINIMUM FOR ROAD CROSSINGS



PROJECT: # 1905BZOP

SEG/SPAN: \_\_\_\_\_

MTSO

MAP FOOTAGE:
SURVEY:
RAILROAD:

[illegible]

PROJECT NUMBER  
1905BZOP  
PROJECT TITLE

MTSO H1003A

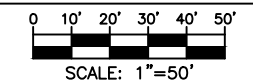
TITLE: FIBER OPTIC CABLE ROUTING FROM

TO

## REVISIONS

[illegible]

SCALE



MP	TO	MP
SHEET 2	OF	34

DWG. NAME
-----------

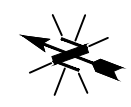
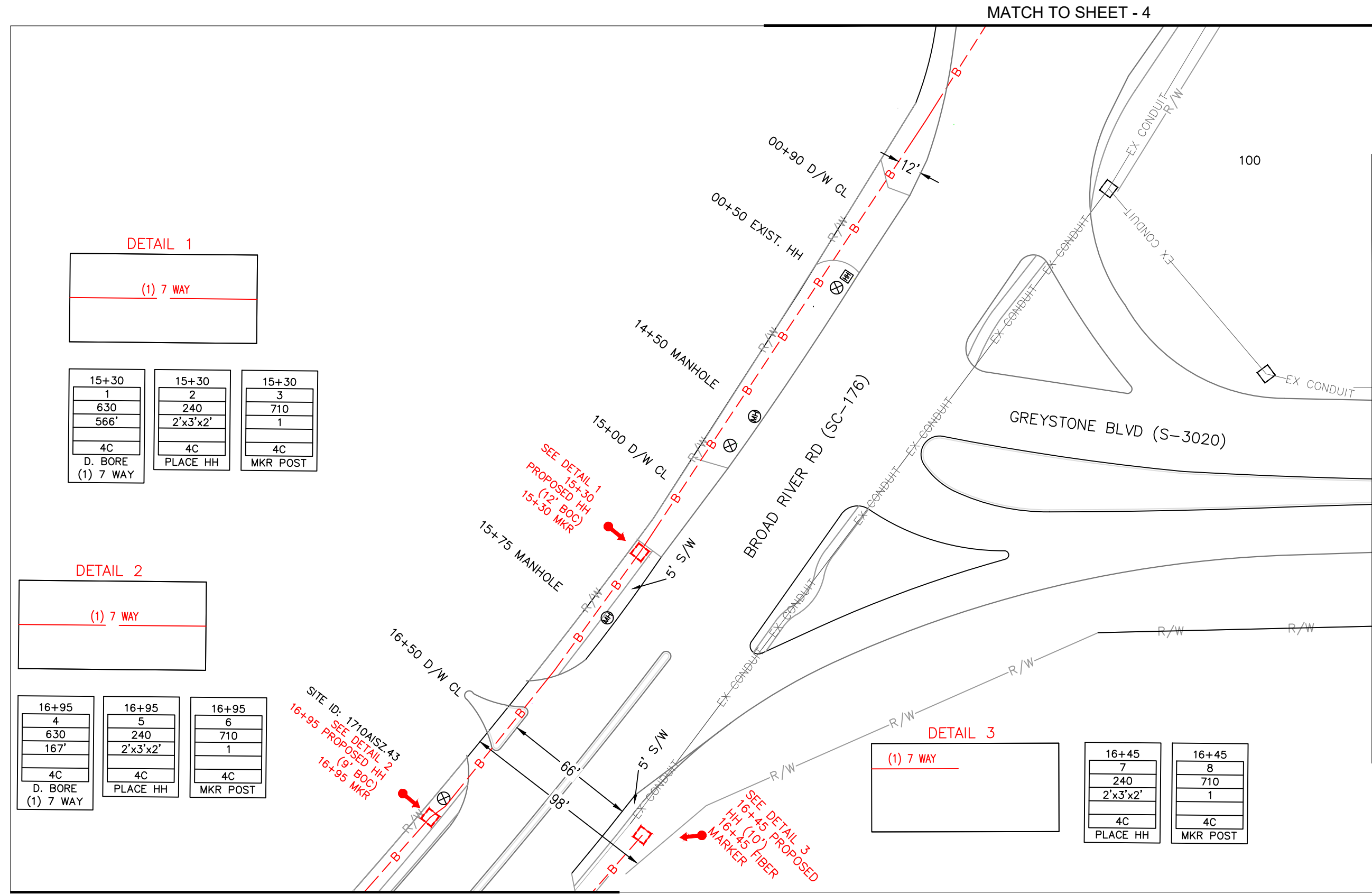
CLM\_1905BZOP\_MTSO\_H1003A\_SCDOT\_68.



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



NOTE:  
42" MINIMUM BETWEEN EOP AND BACK OF R/W  
48" MINIMUM FOR ROAD CROSSINGS



PROJECT: # 1905BZOP

SEG/SPAN: \_\_\_\_\_

MTSO

MAP FOOTAGE: SURVEY: RAILROAD:
--------------------------------------

[illegible]

PROJECT NUMBER  
1905BZOP  
PROJECT TITLE

MTSO H1003A

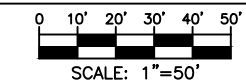
TITLE: FIBER OPTIC CABLE ROUTE  
FROM

TO

## REVISIONS

[illegible]

SCALE



MP	TO	MP
SHEET 3	OF	34

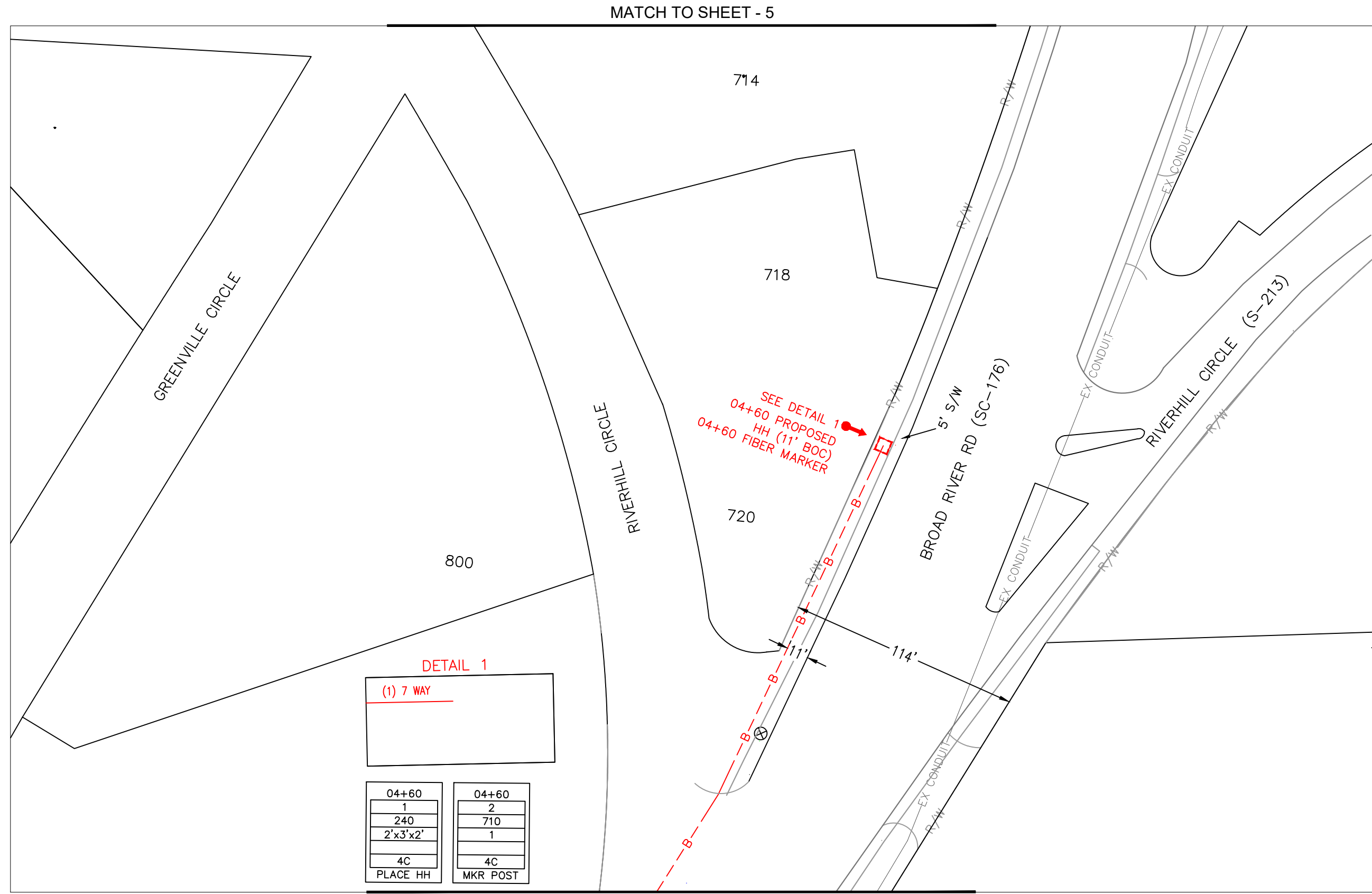
DWG. NAME

CLM\_1905BZOP\_MTSO\_H1003A\_SCDOT\_68.dwg



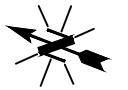
Know what's below.  
**Call** before you dig.

NOTE:  
42" MINIMUM BETWEEN EOP AND BACK OF R/W  
48" MINIMUM FOR ROAD CROSSINGS



MATCH TO SHEET - 5

### MATCH SHEET - 3



PROJECT: # 1905BZOP

SEG/SPAN: \_\_\_\_\_

MTSO

MAP FOOTAGE: SURVEY: RAILROAD:
--------------------------------------

[illegible]

PROJECT NUMBER  
1905BZOP  
PROJECT TITLE

MTSO H1003A

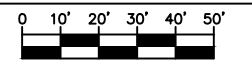
TITLE: FIBER OPTIC CABLE ROUTE  
FROM

TO

## REVISIONS

[illegible]

## SCALE



SCALE: 1"=50'

MP	TO	MP
----	----	----

**SHEET 4 OF 34**

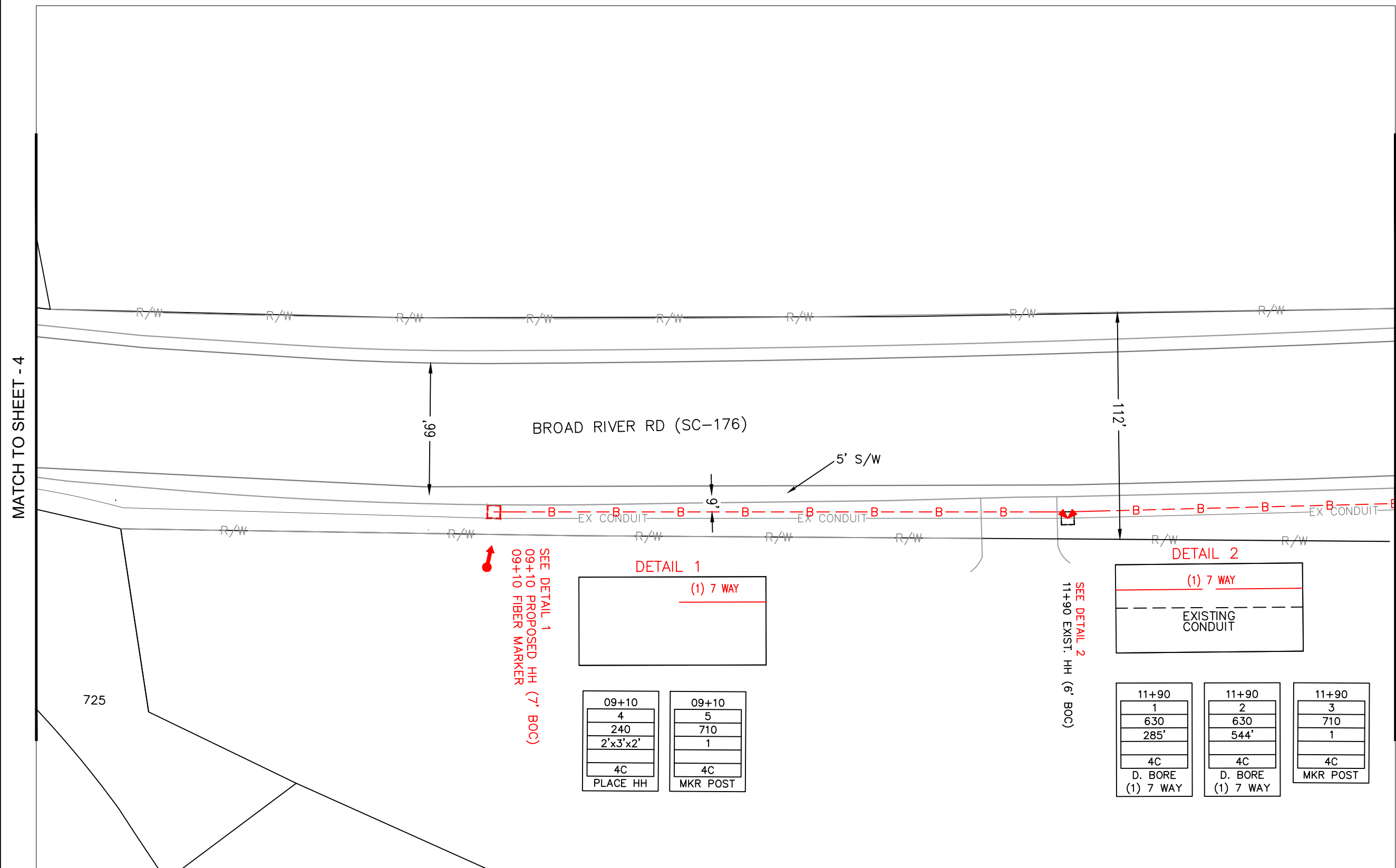
DWG. NAME
-----------

CLM\_1905BZOP\_MTSO\_H1003A\_SCDOT\_68.dwg



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

NOTE:  
42" MINIMUM BETWEEN EOP AND BACK OF R/W  
48" MINIMUM FOR ROAD CROSSINGS



PROJECT: # 1905BZOP

SEG/SPAN: \_\_\_\_\_

MTSO

MAP FOOTAGE:  
SURVEY:  
RAILROAD:

[illegible]

PROJECT NUMBER  
1905BZOP  
PROJECT TITLE

MTSO H1003A

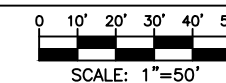
TITLE: FIBER OPTIC CABLE ROUTE  
FROM

TO

## REVISIONS

[illegible]

## SCALE



MP	TO	MP
----	----	----

**SHEET 5 OF 34**

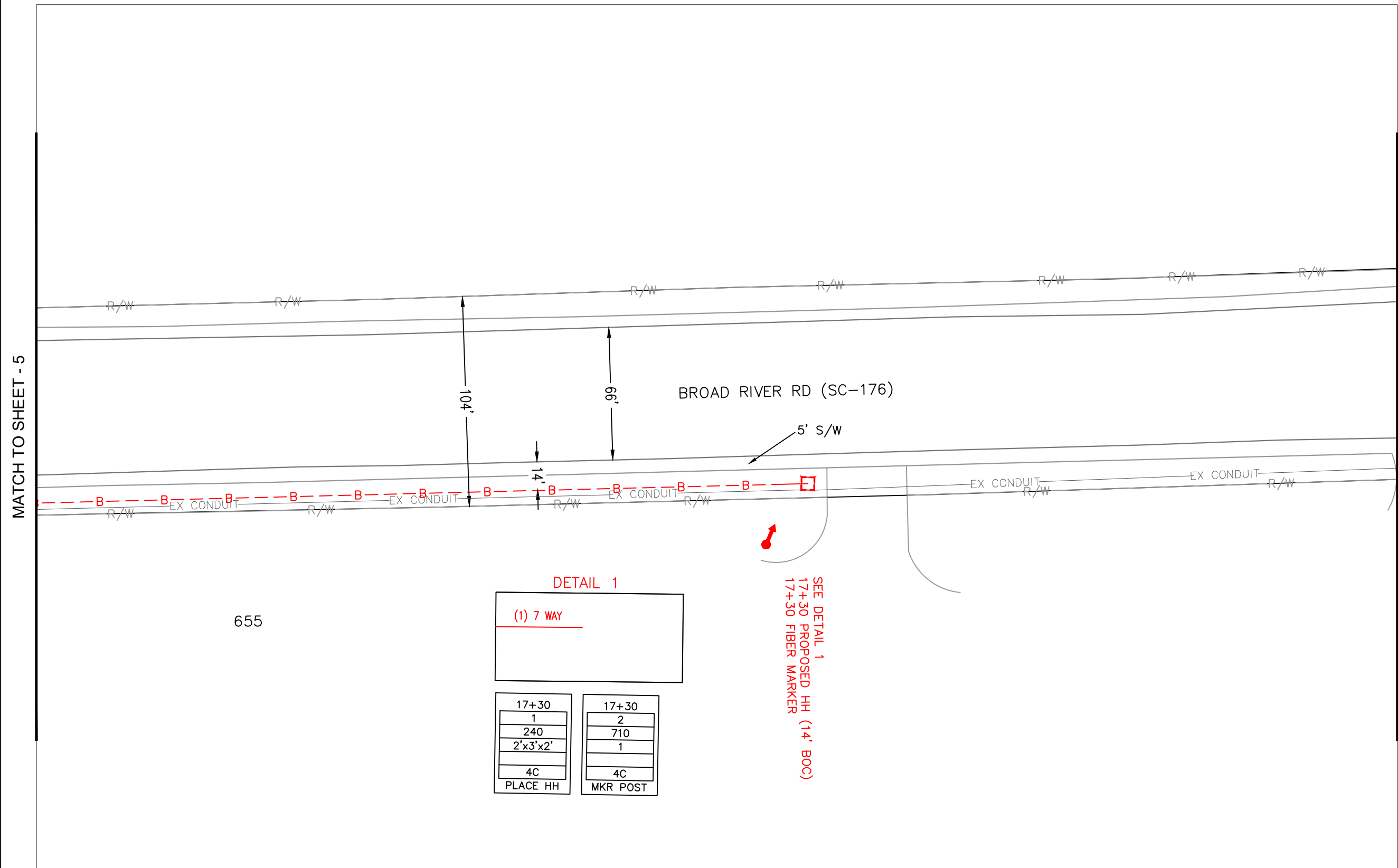
DWG. NAME
-----------

CLM\_1905BZOP\_MTSO\_H1003A\_SCDOT\_68.dwg



Know what's below.  
Call before you dig

NOTE:  
42" MINIMUM BETWEEN EOP AND BACK OF R/W  
48" MINIMUM FOR ROAD CROSSINGS



PROJECT: # 1905BZOP

SEG/SPAN: \_\_\_\_\_

**MTSO**

MAP FOOTAGE:  
SURVEY:  
RAILROAD:

[illegible]

PROJECT NUMBER  
1905BZOP  
PROJECT TITLE

MTSO H1003A

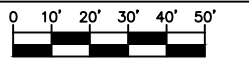
TITLE: FIBER OPTIC CABLE ROUTE  
FROM

TO

## REVISIONS

[illegible]

SCALE



SCALE: 1"=50'

MP                      TO   MP

**SHEET 6 OF 34**

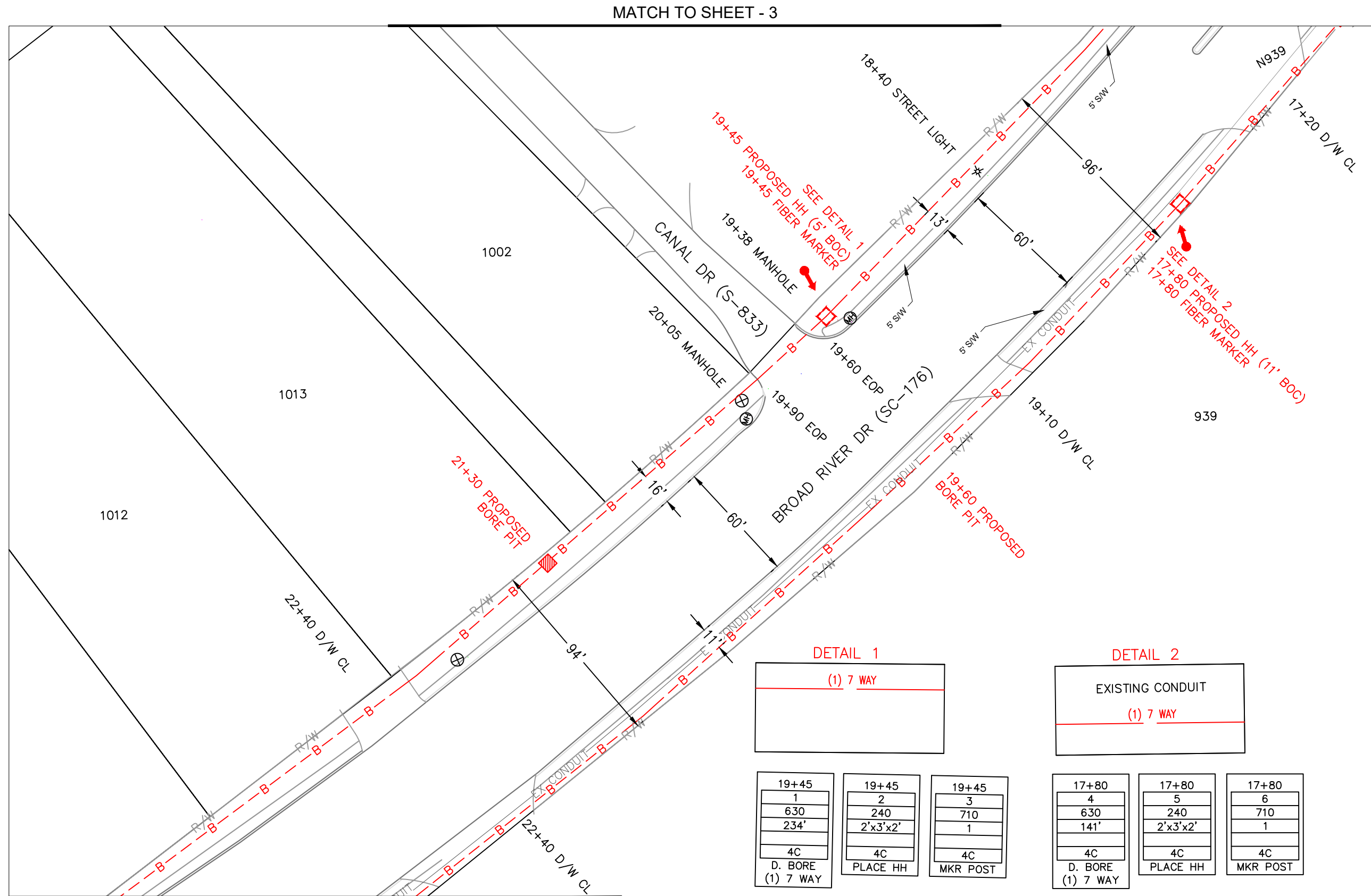
DWG. NAME
-----------

CLM\_1905BZOP\_MTSO\_H1003A\_SCDOT\_68.dwg

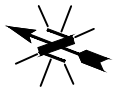


Know what's **below**.  
**Call** before you dig.

NOTE:  
42" MINIMUM BETWEEN EOP AND BACK OF R/W  
48" MINIMUM FOR ROAD CROSSINGS



MATCH SHEET - 9



PROJECT: # 1905BZOP

SEG/SPAN: \_\_\_\_\_

MTSO

MAP FOOTAGE: SURVEY: RAILROAD:
--------------------------------------

[illegible]

PROJECT NUMBER  
1905BZOP  
PROJECT TITLE

MTSO H1003A

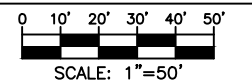
TITLE: FIBER OPTIC CABLE ROUTE  
FROM

	TO	
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## REVISIONS

[illegible]

## SCALE



MP	TO MP
----	-------

SHEET 8 OF 34

DWG. NAME
-----------



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

CLM\_1905BZOP\_MTSO\_H1003A\_SCDOT\_68.dwg

MATCH TO SHEET - 10

MTSO

CLM\_1905BZOP\_MTSO\_H1003A\_SCDOT\_68.dwg

CLM\_1905BZOP\_MTSO\_H1003A\_SCDOT\_68.dwg

CLM\_1905BZOP\_MTSO\_H1003A\_SCDOT\_68.dwg

SCALE: 1"=50'

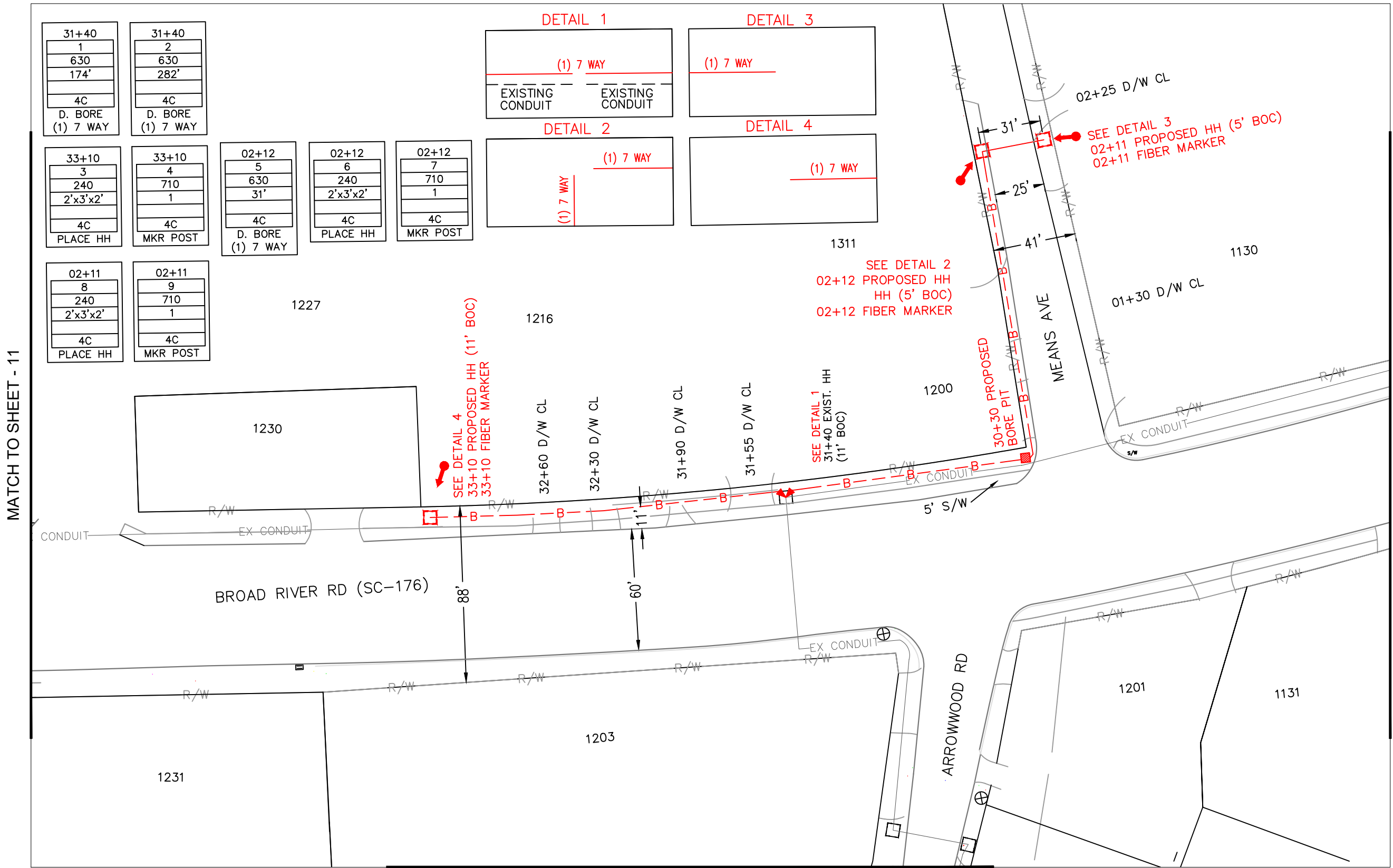
CLM\_1905BZOP\_MTSO\_H1003A\_SCDOT\_68.dwg

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

CLM\_1905BZOP\_MTSO\_H1003A\_SCDOT\_68.dwg



NOTE:  
42" MINIMUM BETWEEN EOP AND BACK OF R/W  
48" MINIMUM FOR ROAD CROSSINGS



MATCH SHEET - 13

MATCH SHEET - 9



PROJECT: # 1905BZOP

SEG/SPAN:

MTSO

MAP FOOTAGE:  
SURVEY:  
RAILROAD:

MATERIAL LIST	QUANTITY	
	ESTIMATED	ACTUAL
7 WAY	485'	
2'x3'x2'	3	
FIBER MKR	3	



PROJECT NUMBER  
1905BZOP  
PROJECT TITLE

MTSO H1003A

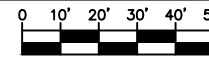
TITLE: FIBER OPTIC CABLE ROUTE  
FROM

TO

REVISIONS

DATE	DESCRIPTION	INITIAL

SCALE



SCALE: 1"=50'

MP TO MP

SHEET 10 OF 34

DWG. NAME

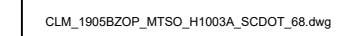
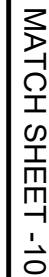
CLM\_1905BZOP\_MTSO\_H1003A\_SCDOT\_68.dwg



Know what's below.  
Call before you dig.

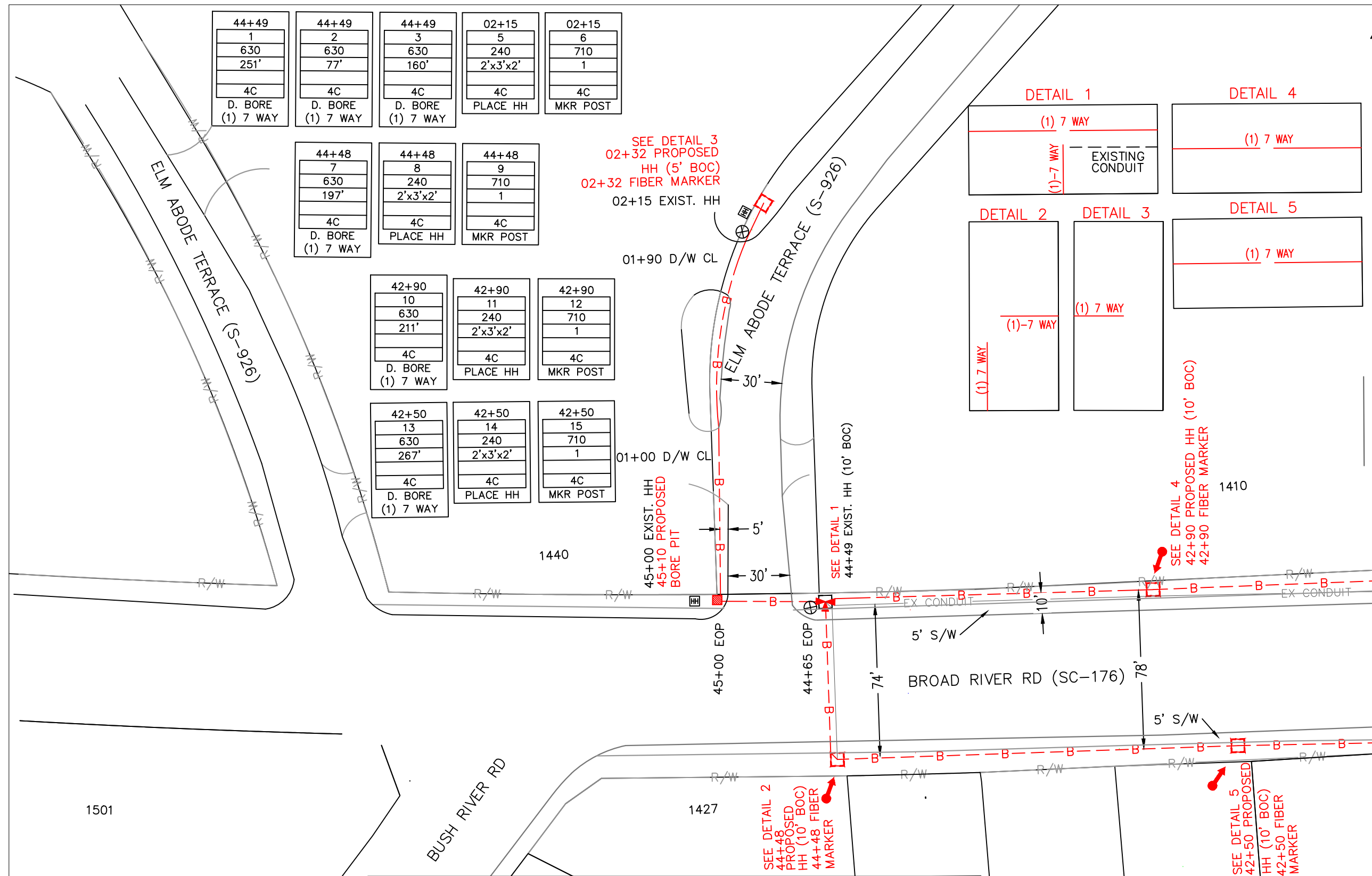


MATCH TO SHEET - 11



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

NOTE:  
42" MINIMUM BETWEEN EOP AND BACK OF R/W  
48" MINIMUM FOR ROAD CROSSINGS



PROJECT: # 1905BZOP

SEG/SPAN: \_\_\_\_\_

MTSO

MAP FOOTAGE:  
SURVEY:  
RAILROAD:

[illegible]

PROJECT NUMBER  
1905BZOP  
PROJECT TITLE

MTSO H1003A

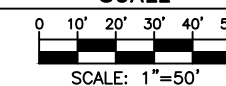
TITLE: FIBER OPTIC CABLE ROUTE  
FROM

TO

## REVISIONS

[illegible]

SCALE



MP	TO	MP
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SHEET 12 OF 34

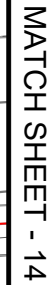
DWG. NAME
-----------

CLM\_1905BZOP\_MTSO\_H1003A\_SCDOT\_68.dwg

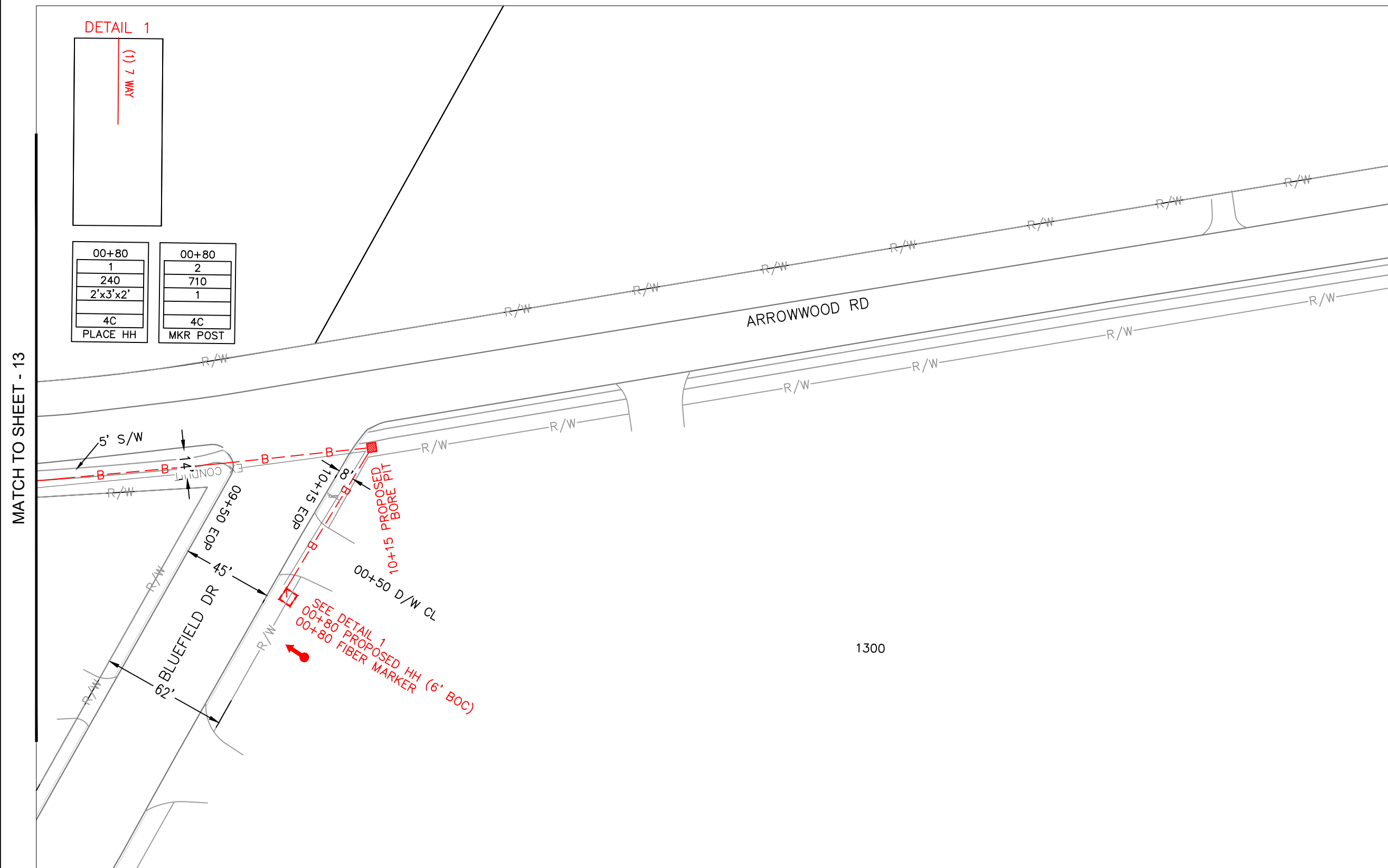


Know what's below.  
**Call** before you dig

MATCH TO SHEET - 10



NOTE:  
42" MINIMUM BETWEEN EOP AND BACK OF R/W  
48" MINIMUM FOR ROAD CROSSINGS



PROJECT: # 1905BZOP

SEG/SPAN: \_\_\_\_\_

MTSO

MAP FOOTAGE:	
SURVEY:	
RAILROAD:	

[illegible]

PROJECT NUMBER  
1905BZOP  
PROJECT TITLE

MTSO H1003A

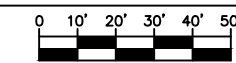
TITLE: FIBER OPTIC CABLE ROUTE  
FROM

TO

## REVISIONS

[illegible]

SCALE



SCALE: 1"=50'

MP	TO MP
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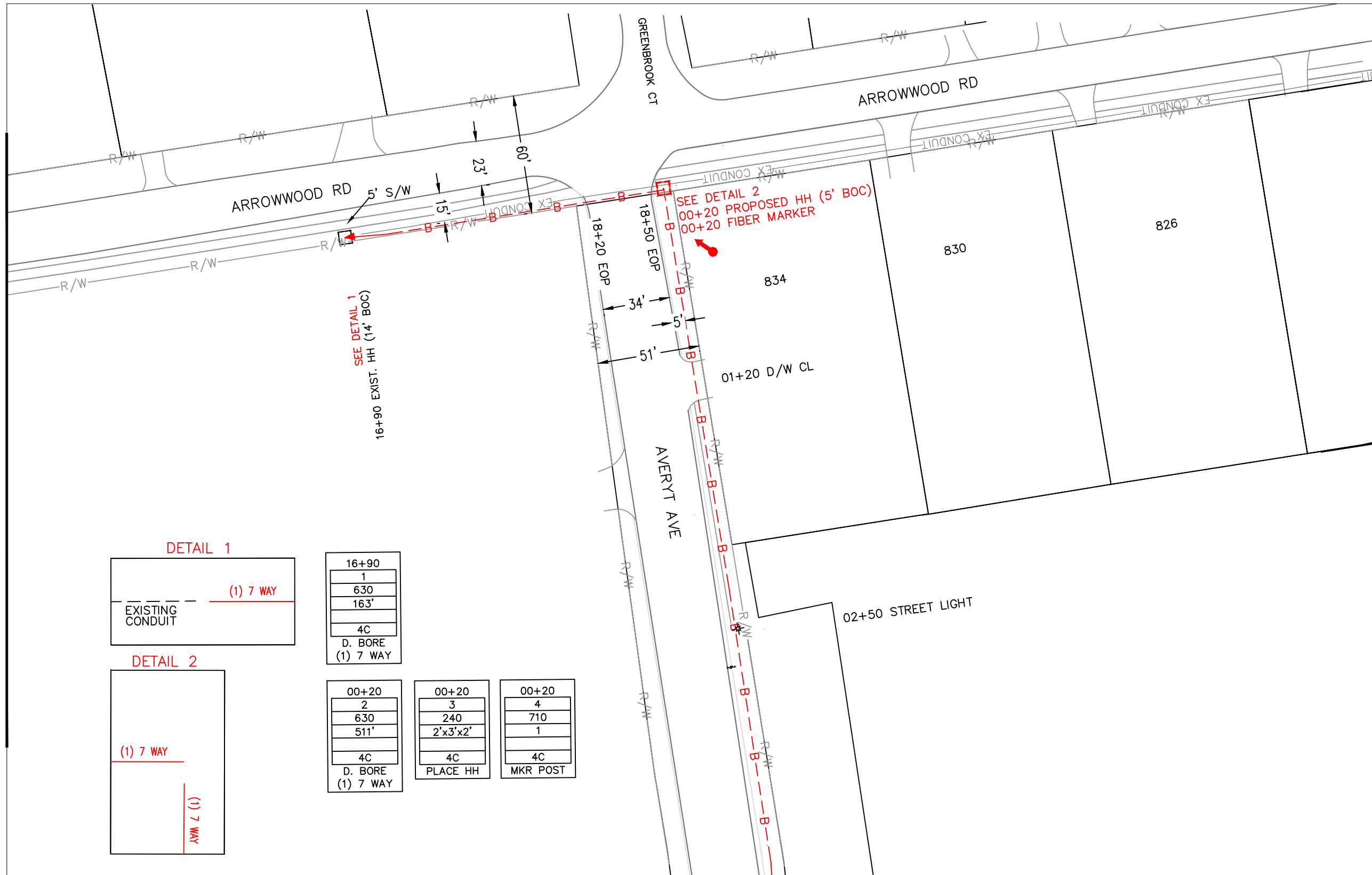
DWG. NAME
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CLM\_1905BZOP\_MTSO\_H1003A\_SCDOT\_68.dwg



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

MATCH TO SHEET - 14



MATCH SHEET - 16



SEG/SPAN: \_\_\_\_\_

MAP FOOTAGE: SURVEY: RAILROAD:
--------------------------------------

[illegible]

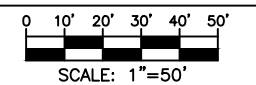
MTSO H1003A

TO

## REVISIONS

[illegible]

## SCALE



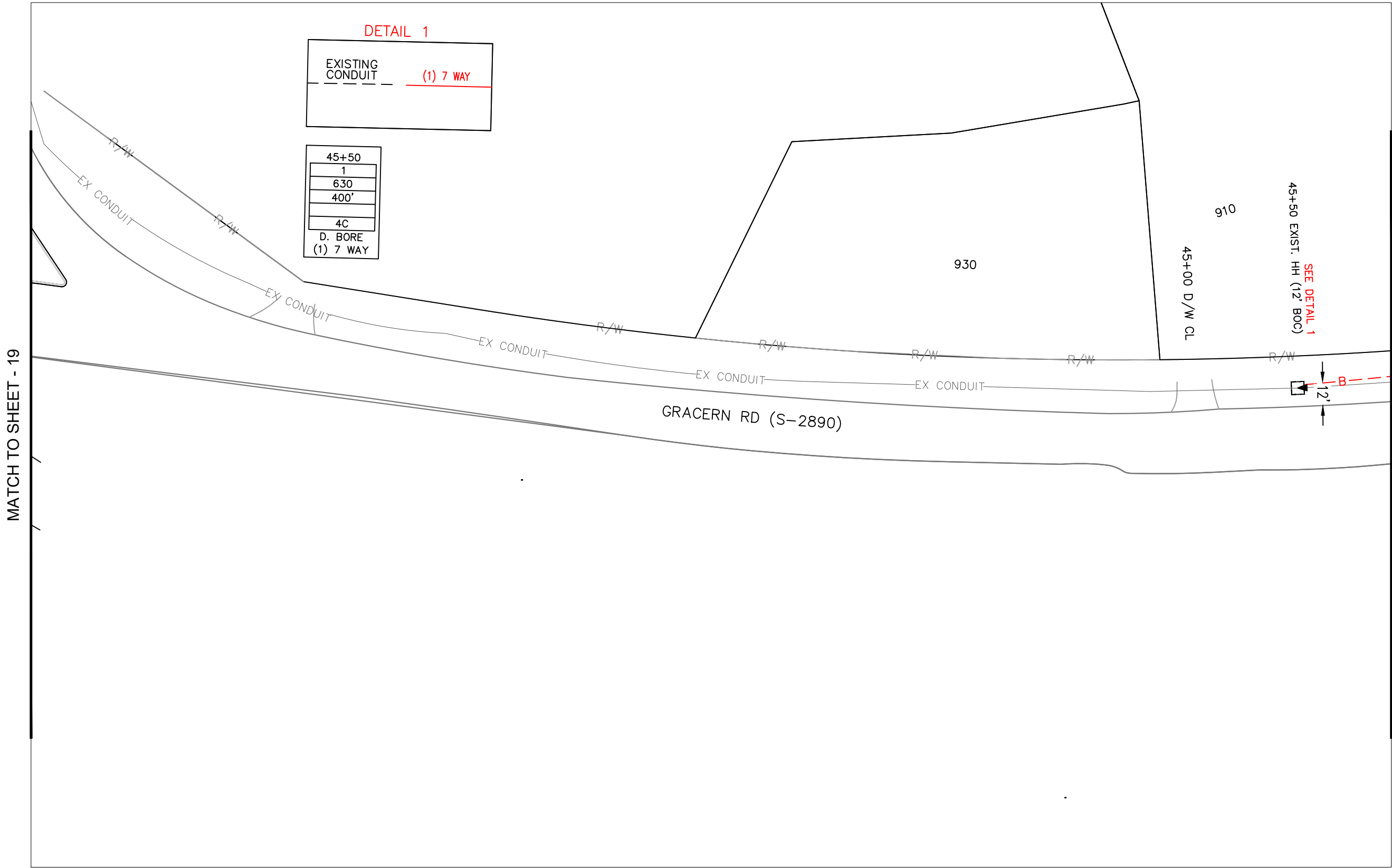
DWG. NAME
-----------

CLM\_1905BZOP\_MTSO\_H1003A\_SCDOT\_68.dwg



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

NOTE:  
42" MINIMUM BETWEEN EOP AND BACK OF R/W  
48" MINIMUM FOR ROAD CROSSINGS



PROJECT: # 1905BZOP

SEG/SPAN:

MTSO

MAP FOOTAGE:  
SURVEY:  
RAILROAD:

MATERIAL LIST	QUANTITY	
	ESTIMATED	ACTUAL
7 WAY	46'	
2'x3'x2'	0	
FIBER MKR	0	

PROJECT NUMBER  
1905BZOP  
PROJECT TITLE

MTSO H1003A

TITLE: FIBER OPTIC CABLE ROUTE FROM  
  
TO

REVISIONS

DATE	DESCRIPTION	INITIAL

SCALE

SCALE: 1"=50'

MP TO MP

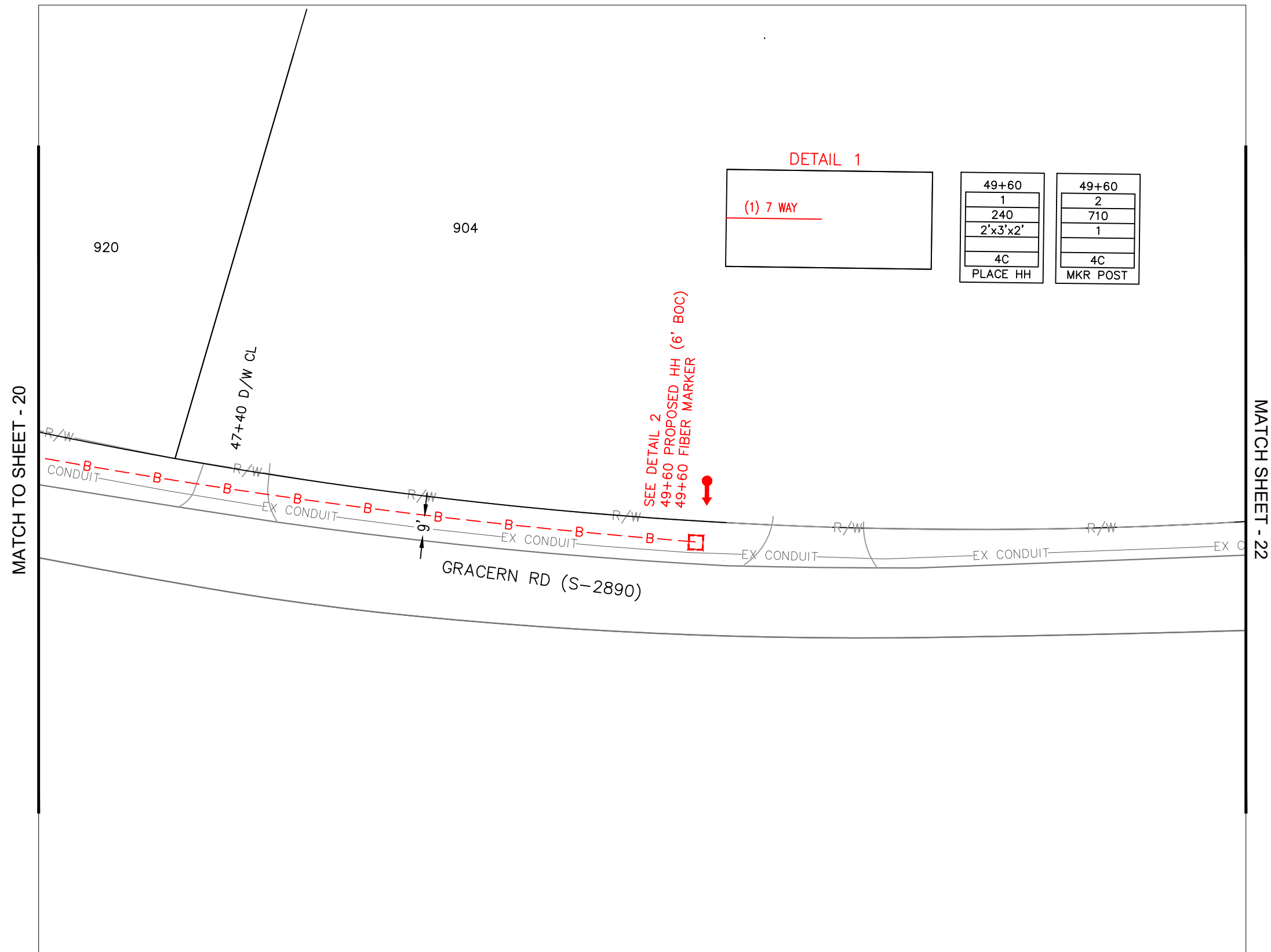
SHEET 20 OF 34

DWG. NAME

CLM\_1905BZOP\_MTSO\_H1003A\_SCDOT\_68.dwg



NOTE:  
42" MINIMUM BETWEEN EOP AND BACK OF R/W  
48" MINIMUM FOR ROAD CROSSINGS



PROJECT: # 1905BZOP

SEG/SPAN: \_\_\_\_\_

MTSO

MAP FOOTAGE: SURVEY: RAILROAD:
--------------------------------------

[illegible]

PROJECT NUMBER  
1905BZOP  
PROJECT TITLE

MTSO H1003A

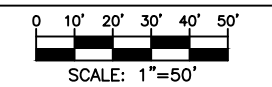
TITLE: FIBER OPTIC CABLE ROUTE  
FROM

TO

## REVISIONS

[illegible]

SCALE



MP	TO MP
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**SHEET 21 OF 34**

DWG. NAME
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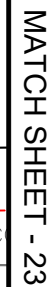
CLM\_1905BZOP\_MTSO\_H1003A\_SCDOT\_68.dwg



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



MATCH TO SHEET - 21



MTSO

MATERIAL LIST	QUANTITY	
	ESTIMATED	ACTUAL

[illegible]

MTSO H1003A

TO

[illegible]

SCALE: 1"=50'

**SHEET 22 OF 34**

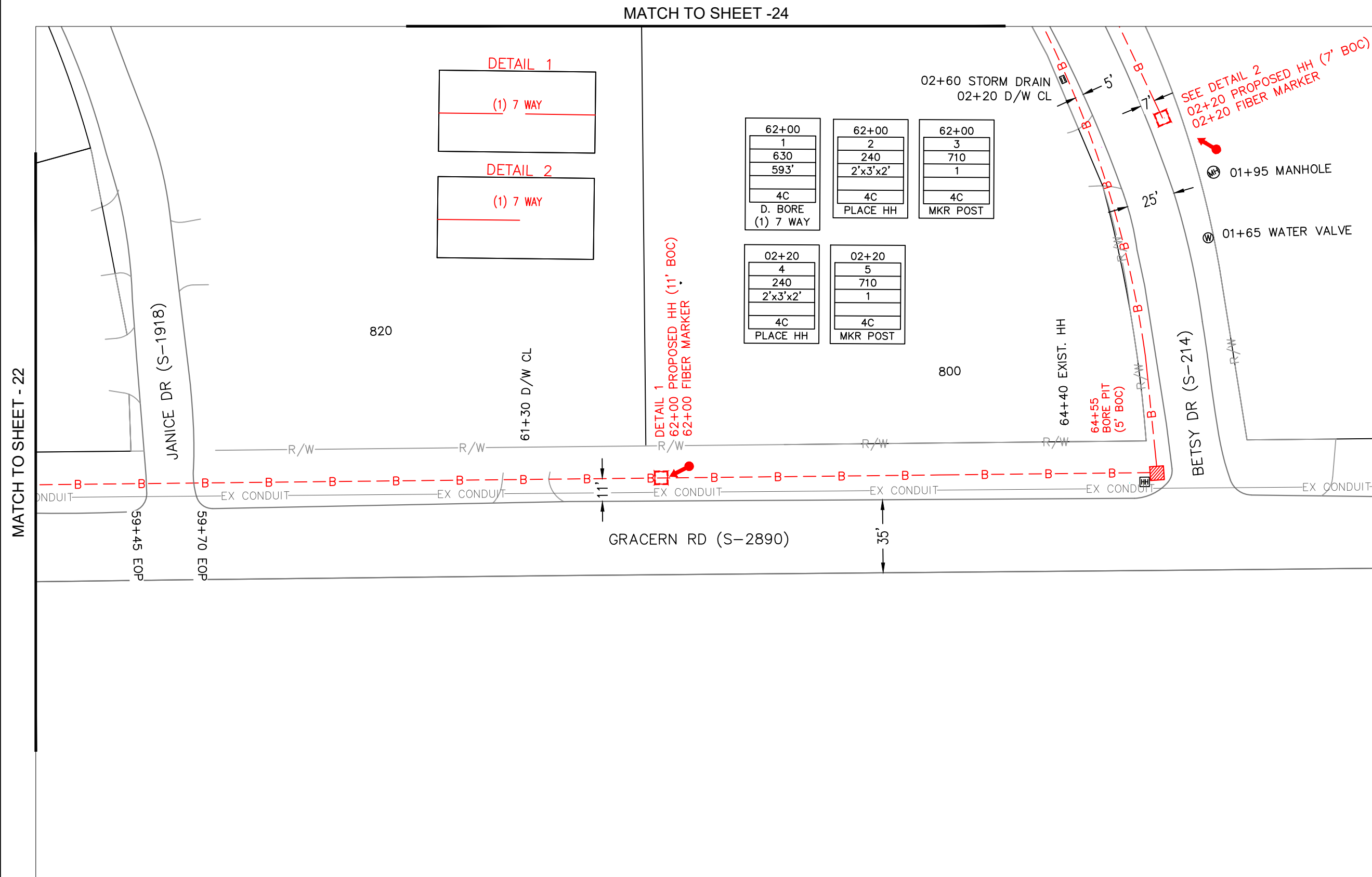
DWG. NAME
-----------

CLM\_1905BZOP\_MTSO\_H1003A\_SCDOT\_68.dwg



Know what's below.  
Call before you dig

NOTE:  
42" MINIMUM BETWEEN EOP AND BACK OF R/W  
48" MINIMUM FOR ROAD CROSSINGS



PROJECT: # 1905BZOP

SEG/SPAN: \_\_\_\_\_

MTSO

MAP FOOTAGE: SURVEY: RAILROAD:
--------------------------------------

[illegible]

PROJECT NUMBER  
1905BZOP  
PROJECT TITLE

MTSO H1003A

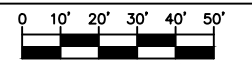
TITLE: FIBER OPTIC CABLE ROUTE  
FROM

TO

## REVISIONS

[illegible]

SCALE



SCALE: 1"=50'

MP	TO	MP
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SHEET 23 OF 34

DWG. NAME	
-----------	--

CLM\_1905BZOP\_MTSO\_H1003A\_SCDOT\_68.dwg



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

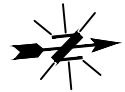
NOTE:  
42" MINIMUM BETWEEN EOP AND BACK OF R/W  
48" MINIMUM FOR ROAD CROSSINGS



MATCH TO SHEET -23



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



PROJECT: # 1905BZOP

SEG/SPAN: \_\_\_\_\_

MTSO

MAP FOOTAGE:
SURVEY:
RAILROAD:

[illegible]

PROJECT NUMBER  
1905BZOP  
PROJECT TITLE

MTSO H1003A

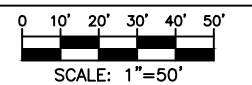
TITLE: FIBER OPTIC CABLE ROUTE  
FROM

TO
----

## REVISIONS

[illegible]

**SCALE**



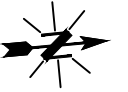
MP	TO	MP
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**SHEET 24 OF 34**

DWG. NAME
-----------

CLM\_1905BZOP\_MTSO\_H1003A\_SCDOT\_68.dwg

NOTE:  
42" MINIMUM BETWEEN EOP AND BACK OF R/W  
48" MINIMUM FOR ROAD CROSSINGS



PROJECT: # 1905BZOP

SEG/SPAN: \_\_\_\_\_

MTSO

MAP FOOTAGE:

**SURVEY:**

**RAILROAD:**

MATERIAL LIST	QUANTITY	
	ESTIMATED	ACTUAL
7 WAY	64'	
2'X3'X2'	1	
FIBER MKR	1	

[illegible]

PROJECT NUMBER  
1905BZOP  
PROJECT TITLE

MTSO H1003A

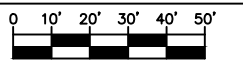
TITLE: FIBER OPTIC CABLE ROUTE  
FROM

TO

## REVISIONS

[illegible]

SCALE



SCALE: 1"=50'

MP	TO	MP
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**SHEET 25 OF 34**

DWG. NAME
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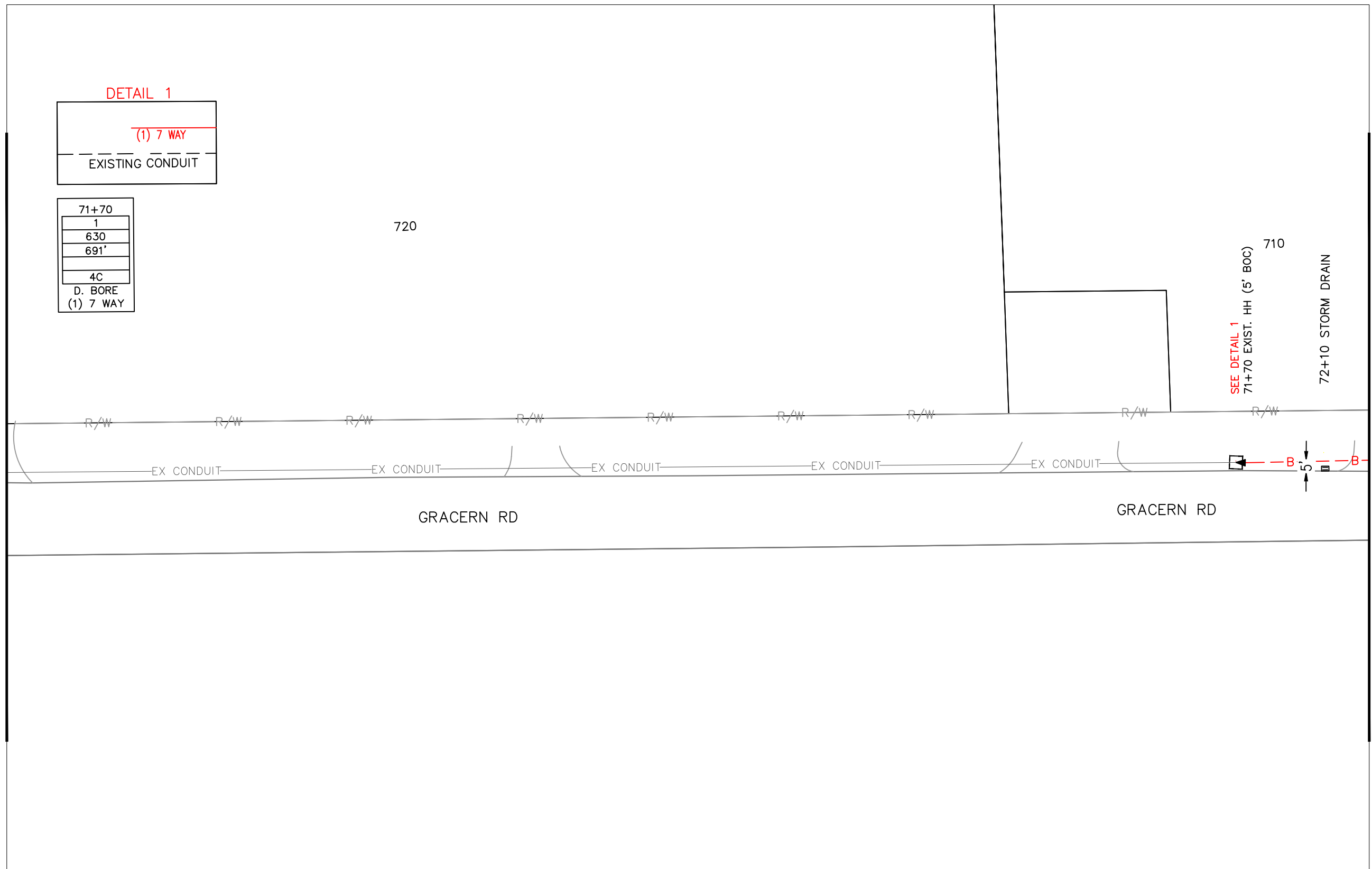
CLM\_1905BZOP\_MTSO\_H1003A\_SCDOT\_68.dwg



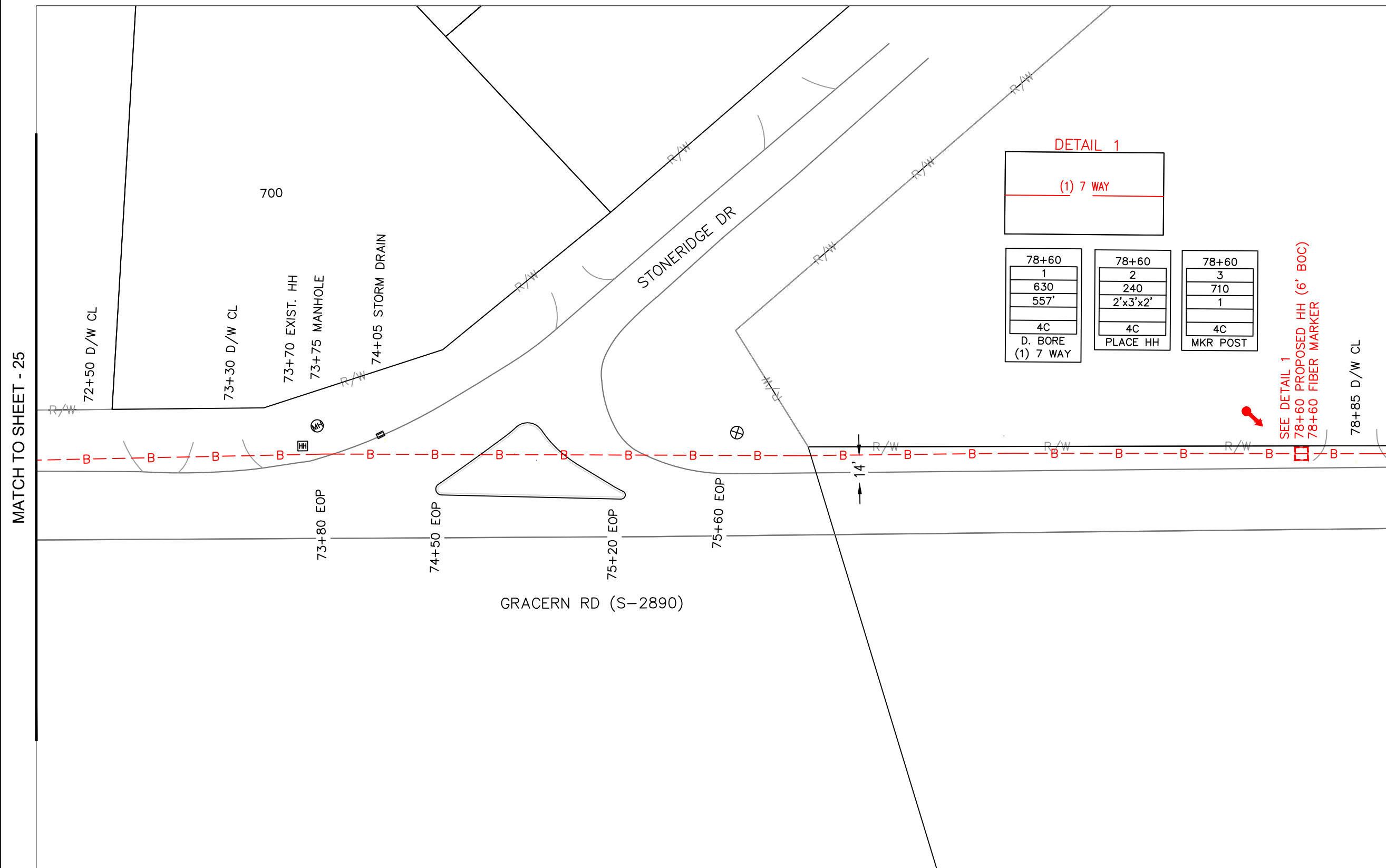
Know what's **below**.  
**Call** before you dig.

MATCH TO SHEET - 23

MATCH SHEET - 26



NOTE:  
42" MINIMUM BETWEEN EOP AND BACK OF R/W  
48" MINIMUM FOR ROAD CROSSINGS



PROJECT: # 1905BZOP

SEG/SPAN: \_\_\_\_\_

MTSO

MAP FOOTAGE:  
SURVEY:  
RAILROAD:

[illegible]

PROJECT NUMBER  
1905BZOP  
PROJECT TITLE

MTSO H1003A

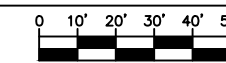
TITLE: FIBER OPTIC CABLE ROUTE  
FROM

TO

## REVISIONS

[illegible]

SCALE



SCALE: 1"=50'

MP	TO	MP
----	----	----

**SHEET 26 OF 34**

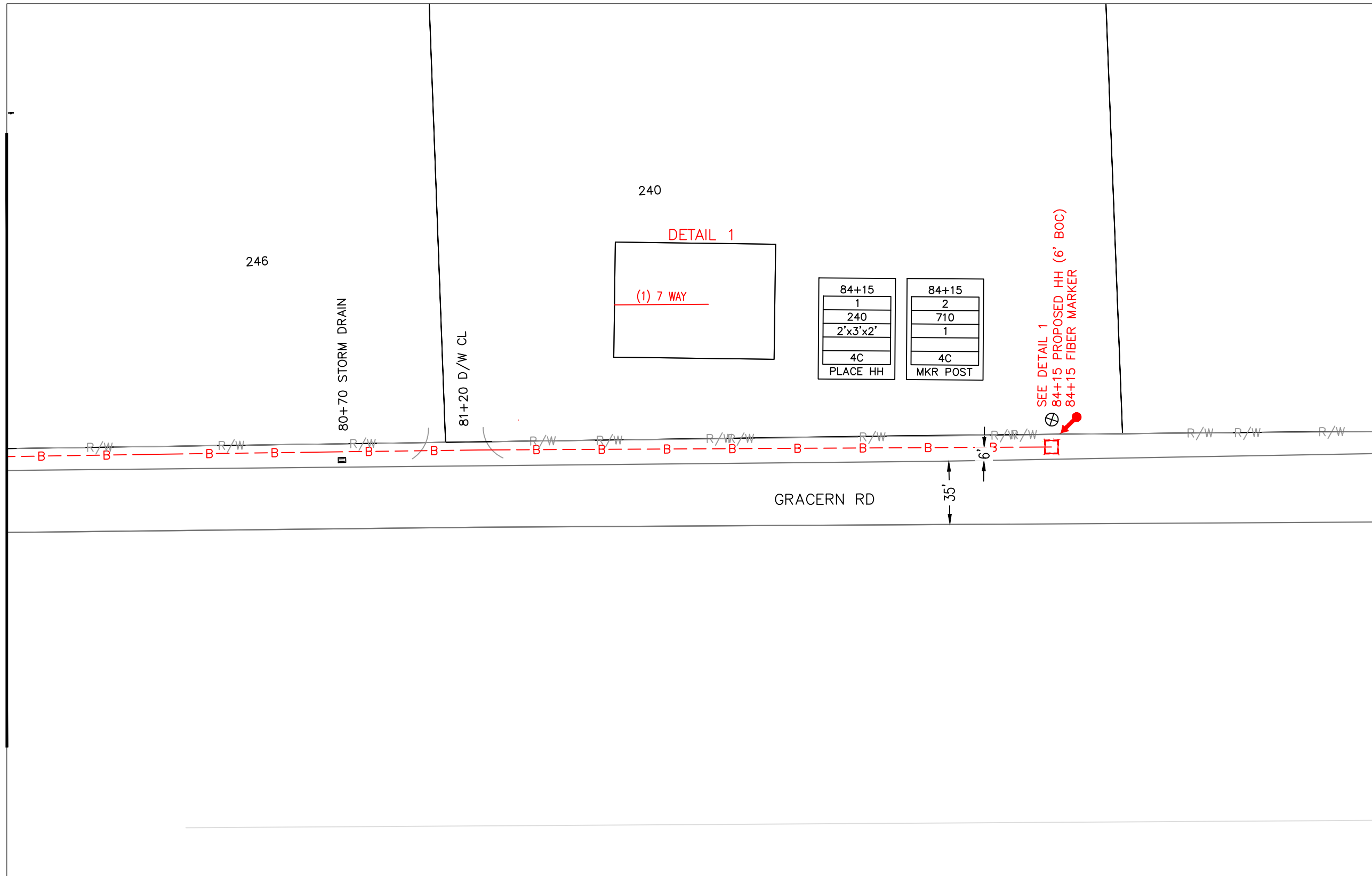
DWG. NAME
-----------

CLM\_1905BZOP\_MTSO\_H1003A\_SCDOT\_68.dwg



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

MATCH TO SHEET - 26



MTSO

MATERIAL LIST	QUANTITY	
	ESTIMATED	ACTUAL
7 WAY	334'	
2'x3'x2'	1	
FIBER MKR	1	

MATERIAL LIST	QUANTITY	
	ESTIMATED	ACTUAL
7 WAY	334'	
2'x3'x2'	1	
FIBER MKR	1	



MTSO H1003A

TO

[illegible]

SCALE: 1"=50'

**SHEET 27 OF 34**

CLM\_1905BZOP\_MTSO\_H1003A\_SCDOT\_68.dwg



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



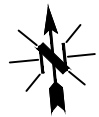
NOTE:  
42" MINIMUM BETWEEN EOP AND BACK OF R/W  
48" MINIMUM FOR ROAD CROSSINGS



MATCH SHEET - 29



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



PROJECT: # 1905BZOP

SEG/SPAN: \_\_\_\_\_

MTSO

MAP FOOTAGE: SURVEY: RAILROAD:
--------------------------------------

[illegible]

PROJECT NUMBER  
1905BZOP  
PROJECT TITLE

MTSO H1003A

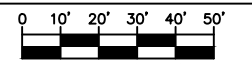
TITLE: FIBER OPTIC CABLE ROUTE  
FROM

TO

## REVISIONS

[illegible]

## SCALE



SCALE: 1"=50'

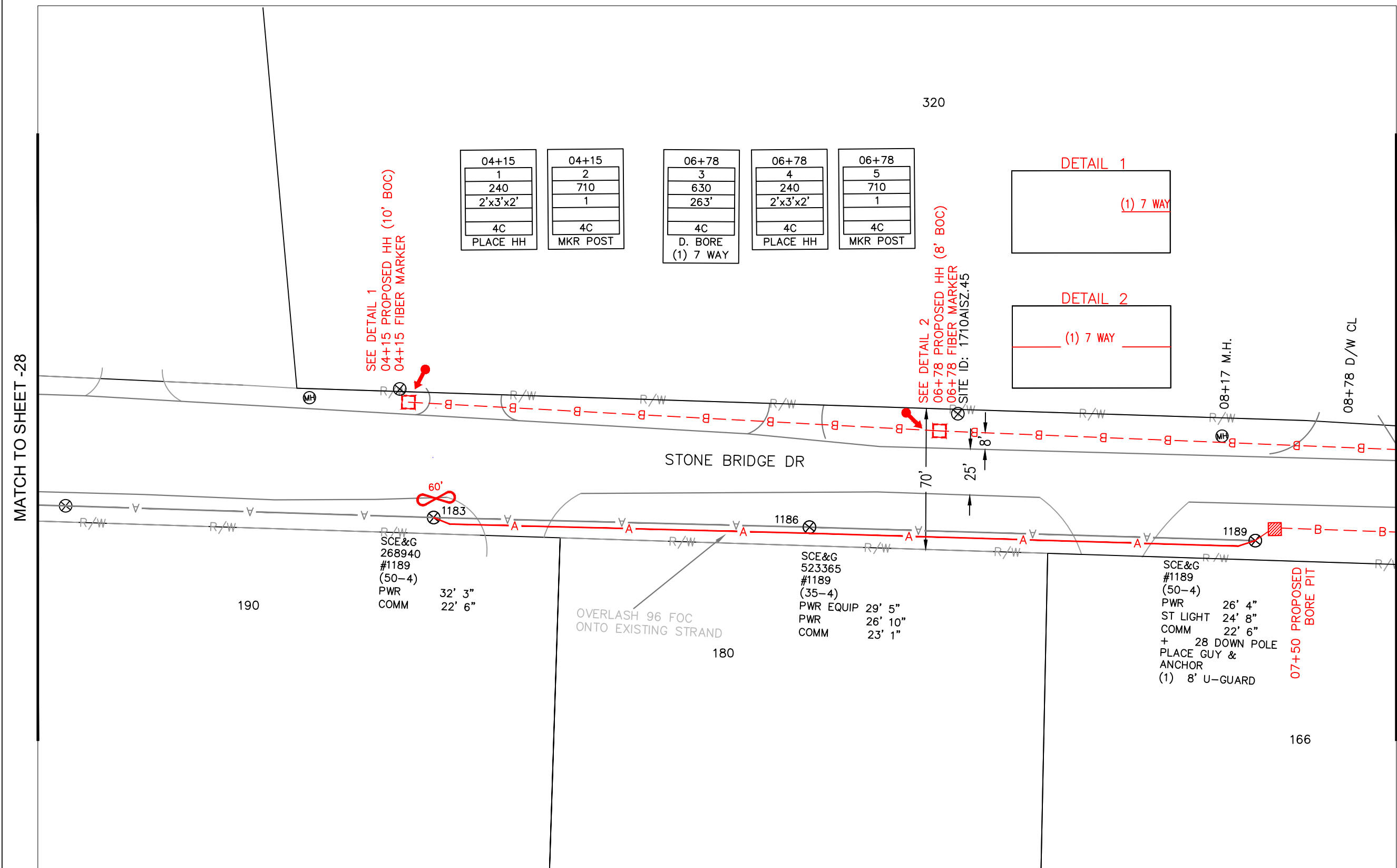
MP	TO MP
----	-------

SHEET 28 OF 34

DWG. NAME	
-----------	--

CLM\_1905BZOP\_MTSO\_H1003A\_SCDOT\_68.dwg

NOTE:  
42" MINIMUM BETWEEN EOP AND BACK OF R/W  
48" MINIMUM FOR ROAD CROSSINGS



PROJECT: # 1905BZOP

SEG/SPAN: \_\_\_\_\_

MTSO

MAP FOOTAGE:
SURVEY:
RAILROAD:

[illegible]

PROJECT NUMBER  
1905BZOP  
PROJECT TITLE

MTSO H1003A

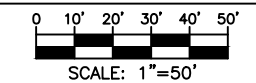
TITLE: FIBER OPTIC CABLE ROUTING FROM

TO

## REVISIONS

[illegible]

## SCALE



MP	TO MP
----	-------

**SHEET 29 OF 34**

DWG. NAME
-----------

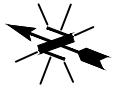
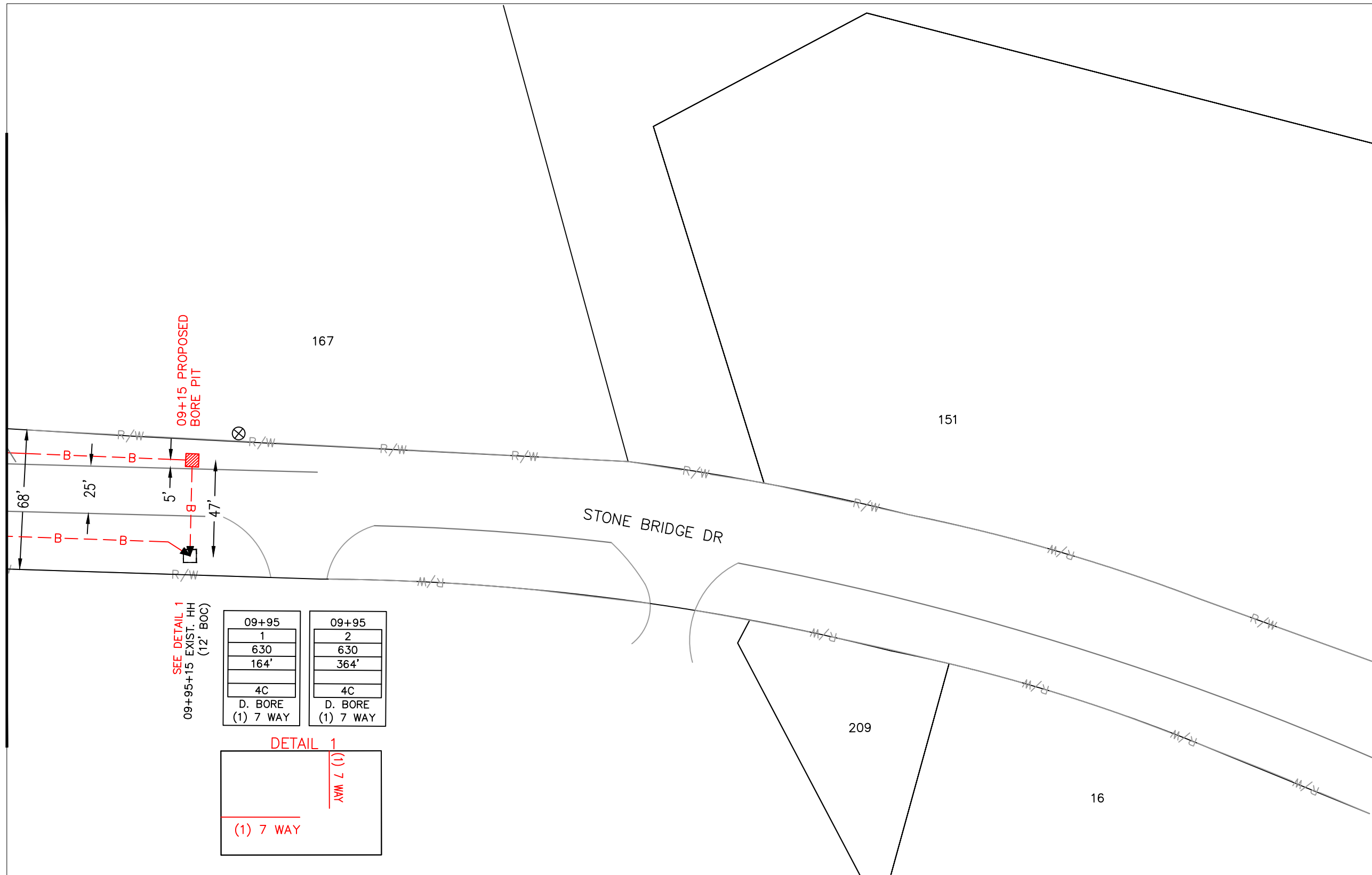
CLM\_1905BZOP\_MTSO\_H1003A\_SCDOT\_68.



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

CLM\_1905BZOP\_MTSO\_H1003A\_SCDOT\_68.

MATCH TO SHEET - 29



MAP FOOTAGE: SURVEY: RAILROAD:
--------------------------------------

[illegible]

MTSO H1003A

TO
----

[illegible]

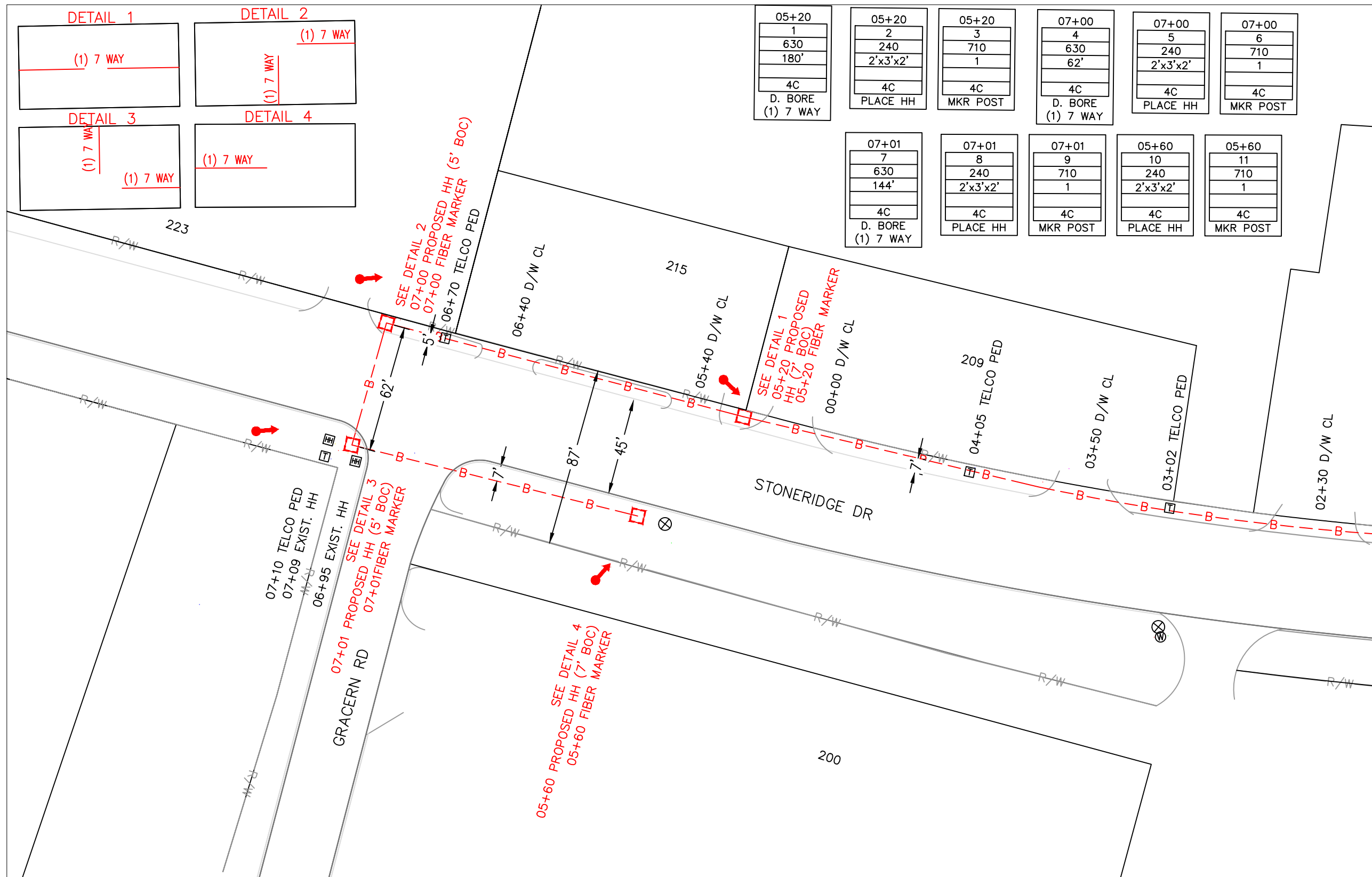
DWG. NAME
-----------

CLM\_1905BZOP\_MTSO\_H1003A\_SCDOT\_68.dwg



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

NOTE:  
42" MINIMUM BETWEEN EOP AND BACK OF R/W  
48" MINIMUM FOR ROAD CROSSINGS



PROJECT: # 1905BZOP

SEG/SPAN: \_\_\_\_\_

MTSO

MAP FOOTAGE:

**SURVEY:**

RAILROAD:

MATERIAL LIST	QUANTITY	
	ESTIMATED	ACTUAL
7 WAY	704'	
2'X3'X2'	4	
FIBER MKR	4	

[illegible]

PROJECT NUMBER  
1905BZOP  
PROJECT TITLE

MTSO H1003A

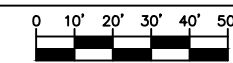
TITLE: FIBER OPTIC CABLE ROUTE  
FROM

TO

## REVISIONS

[illegible]

SCALE



SCALE: 1"=50'

MP	TO	MP
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SHEET 31 OF 34

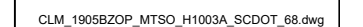
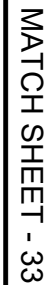
DWG. NAME
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CLM\_1905BZOP\_MTSO\_H1003A\_SCDOT\_68.dwg

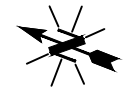


Know what's below.  
Call before you dig

MATCH TO SHEET -28



NOTE:  
42" MINIMUM BETWEEN EOP AND BACK OF R/W  
48" MINIMUM FOR ROAD CROSSINGS



PROJECT: # 1905BZOP

SEG/SPAN: \_\_\_\_\_

MTSO

**MAP FOOTAGE:**

**SURVEY:**

RAILROAD:

[illegible]

PROJECT NUMBER  
1905BZOP  
PROJECT TITLE

MTSO H1003A

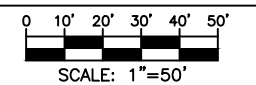
TITLE: FIBER OPTIC CABLE ROUTE  
FROM

TO

## REVISIONS

[illegible]

## SCALE



MP	TO	MP
----	----	----

**SHEET 34 OF 34**

DWG. NAME
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CLM\_1905BZOP\_MTSO\_H1003A\_SCDOT\_68.dwg



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



COUNTY \_\_\_\_\_  
CITY, STATE \_\_\_\_\_



PROJECT: # 1905BZOP

SEG/SPAN: \_\_\_\_\_

MTSO

MAP FOOTAGE:
SURVEY:
RAILROAD:

[illegible]

PROJECT NUMBER  
1905BZOP  
PROJECT TITLE

MTSO H1003A

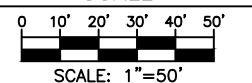
TITLE: FIBER OPTIC CABLE ROUTE  
FROM

TO

## REVISIONS

[illegible]

SCALE



MP	TO MP
SHEET	TCP (1)

DWG. NAME
-----------

CLM\_1905BZOP\_MTSO\_H1003A\_SCDOT\_68.dwg



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

## REFERENCES

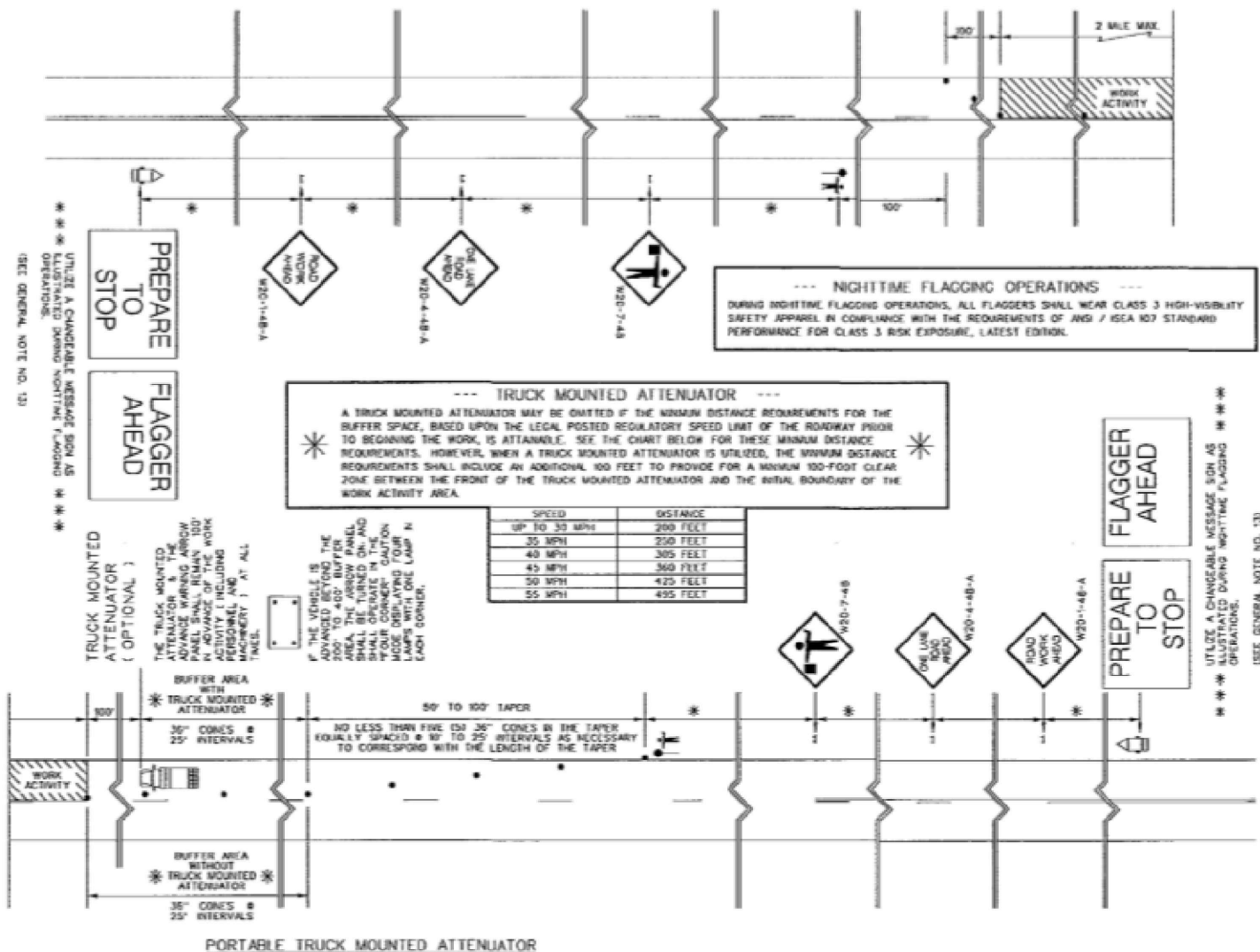
### GENERAL NOTES

1. ALL SIGN LOCATIONS ARE TO BE MEASURED FROM THE WORK AREA. WORK LIMITS FOR THE PROJECT WILL BE DETERMINED BY THE ENGINEER AND AS INDICATED IN THE CONTRACT.
2. INSTALL ADVANCE WARNING SIGNS MOUNTED ON PORTABLE SIGN SUPPORTS NO LESS THAN 4 FEET FROM THE NEAR EDGE OF THE SIGN TO THE NEAR EDGE OF AN ADJACENT TRAVEL LANE ON ROADWAYS WITH EARTH SHOULDERS AND NO LESS THAN 6 FEET FROM THE NEAR EDGE OF THE SIGN TO THE NEAR EDGE OF AN ADJACENT TRAVEL LANE ON ROADWAYS WITH PAVED SHOULDERS. WHEN CURB & GUTTER IS PRESENT, INSTALL THE SIGN NO LESS THAN 2 FEET FROM THE NEAR EDGE OF THE SIGN TO THE FACE OF THE CURB.
3. SPACINGS INDICATED ARE FOR NORMAL CONDITIONS; ADJUSTMENTS MAY BE REQUIRED DUE TO HORIZONTAL AND/OR VERTICAL ALIGNMENTS OR OTHER SIGHT DISTANCE RESTRICTIONS.
4. ALL SIGNS MOUNTED ON PORTABLE SIGN SUPPORTS SHALL HAVE A MINIMUM MOUNTING HEIGHT OF 5 FEET FROM THE GROUND TO THE BOTTOM OF THE SIGN. ALL SIGNS MOUNTED ON CONCRETE OR METAL CHANNEL OR SQUARE STEEL TUB POSTS SHALL HAVE A MINIMUM MOUNTING HEIGHT OF 7 FEET FROM THE GRADE ELEVATION OF THE NEAR EDGE OF THE ADJACENT TRAVEL LANE TO THE BOTTOM OF THE SIGN UNLESS OTHERWISE DIRECTED BY THE DEPARTMENT. MOUNT ALL SIGNS STRAIGHT AND LEVEL AND WITH THE FACE OF THE SIGNS PERPENDICULAR TO THE SURFACE OF THE ROADWAY.
5. REFLECTORIZED ORANGE ADVANCE WARNING SIGNS AND ANY ORANGE AREAS OF A MULTI-COLORED ADVANCE WARNING SIGN WITH A FLUORESCENT ORANGE COLORED PRISMATIC RETROREFLECTIVE SHEETING SHALL BE REPEATED BY REDUCED SIZE SIGNS AND ANY WHITE AREAS OF A MULTI-COLORED ADVANCE WARNING SIGN WITH A WHITE COLORED PRISMATIC RETROREFLECTIVE SHEETING.
6. ALL TRAFFIC CONTROL DEVICES SHALL COMPLY WITH ALL NCHRP REPORT 350 REQUIREMENTS AND SHALL REQUIRE APPROVAL BY THE DEPARTMENT. ONLY THOSE TRAFFIC CONTROL DEVICES INCLUDED ON THE "APPROVED PRODUCTS LIST FOR TRAFFIC CONTROL DEVICES IN WORK ZONES" ARE CONSIDERED ACCEPTABLE FOR USE. THIS LIST MAY BE ACCESSED ON THE DEPARTMENT'S WEB SITE AT: [www.scoed.org](http://www.scoed.org).
7. REFLECTORIZATION OF 36" TRAFFIC CONES USED DURING DAYLIGHT HOURS IS NOT REQUIRED. ALL TRAFFIC CONES SELECTED FOR USE DURING THE NIGHTTIME HOURS, REAR FACE 36" TRAFFIC CONES WITH EITHER PORTABLE PLASTIC DRUMS OR 42" OVERSIZED TRAFFIC CONES, REFLECTORIZED ALL PORTABLE PLASTIC DRUMS AND 42" OVERSIZED TRAFFIC CONES WITH TYPE B FLEXIBLE PRISMATIC RETROREFLECTIVE SHEETING UNLESS OTHERWISE DIRECTED BY THE DEPARTMENT.
8. LANE CLOSURES ARE RESTRICTED TO A MAXIMUM DISTANCE OF 2 MILES UNLESS OTHERWISE DIRECTED BY THE SPECIAL PROVISIONS, THE PLANS AND/OR THE DIRECTOR OF TRAFFIC ENGINEERING.
9. INSTALL, CONDUCT AND MAINTAIN FLAGGING OPERATIONS IN ACCORDANCE WITH THE STANDARD DRAWING AND THE LATEST EDITIONS OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, THE MUTCD AND THE "SOUTH CAROLINA'S HANDBOOK", UNLESS OTHERWISE DIRECTED BY THE DEPARTMENT. ERRECT ALL SIGNS RELATIVE TO A FLAGGING OPERATION PRIOR TO INITIATION OF THE OPERATION AND REMOVE OR COVER ALL SIGNS IMMEDIATELY UPON TERMINATION OF THE OPERATION. EQUIP EACH FLAGGER WITH A 24" x 24" STOP/GOAL PADDLE MOUNTED ON A WOOD HANDLE WITH A MINIMUM LENGTH OF 7 FEET. THE DEPARTMENT PROHIBITS THE USE OF PLACS EXCEPT DURING EMERGENCY SITUATIONS.
10. INSTALL AND MAINTAIN THE PROPER ARRAY OF ADVANCE WARNING SIGNS FOR EACH APPROACH WHEN A FLAGGING OPERATION IS IN PLACE AND ACTIVE. WHEN NECESSARY TO RELOCATE THE FLAGGER STATION WHILE ACTIVELY MAINTAINING THE FLAGGING OPERATION, INSTALL AN ADDITIONAL ARRAY OF ADVANCE WARNING SIGNS AT THE NEW LOCATION FOR THE FLAGGER STATION PRIOR TO RELOCATING THE FLAGGER STATION PRIOR TO REMOVING THE ORIGINAL ARRAY OF ADVANCE WARNING SIGNS.
11. DURING NIGHTTIME FLAGGING OPERATIONS, ILLUMINATE EACH FLAGGER STATION WITH ANY COMBINATION OF PORTABLE LIGHTS, STANDARD ELECTRIC LIGHTS, EXISTING STREET LIGHTS, ETC., THAT PROVIDE A MINIMUM ILLUMINATION LEVEL OF 100 Lx OR 10 fc.
12. DURING NIGHTTIME FLAGGING OPERATIONS, FLAGGERS SHALL WEAR SAFETY APPAREL THAT MEET THE REQUIREMENTS OF ANSI/ISA 107, STANDARD PERFORMANCE FOR CLASS 3 RISK EXPOSURE, LATEST REVISION, AND A FLUORESCENT HARDSHIRT.
13. DURING NIGHTTIME FLAGGING OPERATIONS, SUPPLEMENT EACH ARRAY OF ADVANCE WARNING SIGNS ON EACH APPROACH WITH A TRAILER MOUNTED CHANGEBLE MESSAGE SIGN. THESE CHANGEBLE MESSAGE SIGNS ARE NOT REQUIRED DURING DAYTIME FLAGGING OPERATIONS. INSTALL THE CHANGEBLE MESSAGE SIGNS ADVANCE OF THE ADVANCE WARNING SIGNS APPROXIMATELY 1/2 MILE TO BE PREPARED TO TURN "FLAGGED AHEAD" TO A TRAILER MOUNTED CHANGEBLE MESSAGE SIGN NOT AN ACCEPTABLE ALTERNATIVE TO A TRAILER MOUNTED CHANGEBLE MESSAGE SIGN DURING FLAGGING OPERATIONS.
14. CONDUCT THE WORK IN SUCH A MANNER SO AS NOT TO ENCRUACH ONTO THE ADJACENT TRAVEL LANE OPEN TO TRAFFIC. INSTALL, MAINTAIN AND ADJUST THE TRAFFIC CONTROL DEVICES AS NECESSARY TO ENSURE PROPER DELINEATION OF THE WORK AREA.
15. IF WORK IS BEING CONDUCTED AT TWO DIFFERENT LOCATIONS AT THE SAME TIME, THE TWO LOCATIONS ARE TO BE SEPARATED BY NO LESS THAN 2 MILES FROM THE END OF THE FIRST LANE CLOSURE TO THE BEGINNING OF THE TAPER OF THE SECOND LANE CLOSURE.
16. THE DEPARTMENT RESERVES THE RIGHT TO RESTRICT WORK OPERATIONS AND/OR WITHHOLD THE MONTHLY ESTIMATE, THE TRAFFIC CONTROL IS NOT PROPERLY INSTALLED AND MAINTAINED AS DIRECTED BY THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, THE STANDARD DRAWINGS, THE PLANS AND/OR THE ENGINEER.

ADVANCE WARNING ARROW PANEL

DURING FLAGGING OPERATIONS, AN ADVANCE WARNING ARROW PANEL SHALL OPERATE IN THE "FOUR CORNERS" CAUTION MODE ONLY. DISPLAY OF AN ARROW OR CHEVRON OPERATING MODE OR ANY OTHER TYPE OF CAUTION MODE OTHER THAN THE "FOUR CORNERS" IS PROHIBITED DURING FLAGGING OPERATIONS.

ALL ADVANCE WARNING ARROW PANELS SHALL BE 48" x 96" WITH A MINIMUM LEGIBILITY DISTANCE OF 1 MILE. PLACEMENT OF AN ADVANCE WARNING ARROW PANEL MAY REQUIRE ADJUSTMENTS DUE TO HORIZONTAL AND/OR VERTICAL ALIGNMENT OR OTHER SIGHT DISTANCE RESTRICTIONS. THE PANEL FACE SHALL BE NONREFLECTIVE BLACK. ALL ADVANCE WARNING ARROW PANELS SHALL COMPLY WITH THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, LATEST EDITION.



## TRAFFIC CONTROL DEVICES NOTE

THE CONTRACTOR SHALL DELINEATE THE TANGENT AREA OF THE LANE CLOSURE UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

THE CONTRACTOR SHALL DELINEATE THE TANGENT AREA OF THE LANE CLOSURE DURING WORK OPERATIONS THAT CREATE GRADE ELEVATION DIFFERENCES GREATER THAN 2 INCHES WITHIN OR ADJACENT TO THE CLOSED TRAVEL LANE UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

THE CONTRACTOR SHALL DELINEATE THE TANGENT AREA OF THE LANE CLOSURE WITH EITHER PORTABLE PLASTIC DRUMS OR OVERSIZED CONES DURING NIGHTTIME FLAGGING OPERATIONS.

ROAD TYPE	*	*	*
* < 35 MPH (LOW SPEED)	200	200	200
* 40 - 50 MPH (INTERMEDIATE SPEED)	350	350	350
* 55 MPH (HIGH SPEED)	500	500	500

- REGULATORY POSTED SPEED LIMIT PRIOR TO BEGINNING WORK

WORK ZONE TRAFFIC  
CONTROL ENGINEER



SIGNATURE \_\_\_\_\_

4/8/2013  
DATE

6	4-5-13	JCS	TMA UPDATE (OPTIONAL)
5	0-1-11	JCS	TMA UPDATE
4	1-5-11	JCS	SIGN NUMBER UPDATE
3	5-28-09	JCS	TC DEVICES NOTE REV
2	8-8-08	JCS	TC DEVICES UPDATE
1	2-27-08	JCS	FLAGGER STATION REV
0	8-20-07	JCS	DRAWING NO. UPDATE
M	DATE	CHK	DESCRIPTION



SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION  
DESIGN STANDARDS OFFICE  
955 PARK STREET  
ROOM 405  
COLUMBIA, SC 29201

STANDARD DRAWING

FLAGGING  
OPERATIONS  
TWO-LANE TWO-WAY  
PRIMARY &  
SECONDARY ROUTES

610-005-00

EFFECTIVE LETTING DATE 1/15, 2013 THIS DRAWING IS NOT TO SCALE

COUNTY \_\_\_\_\_  
CITY, STATE \_\_\_\_\_



PROJECT: # 1905BZOP

SEG/SPAN: \_\_\_\_\_

MTSO

MAP FOOTAGE:

**SURVEY:**

RAILROAD:

[illegible]

PROJECT NUMBER  
1905BZOP  
PROJECT TITLE

MTSO H1003A

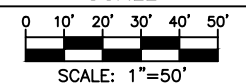
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FROM

TO

## REVISIONS

[illegible]

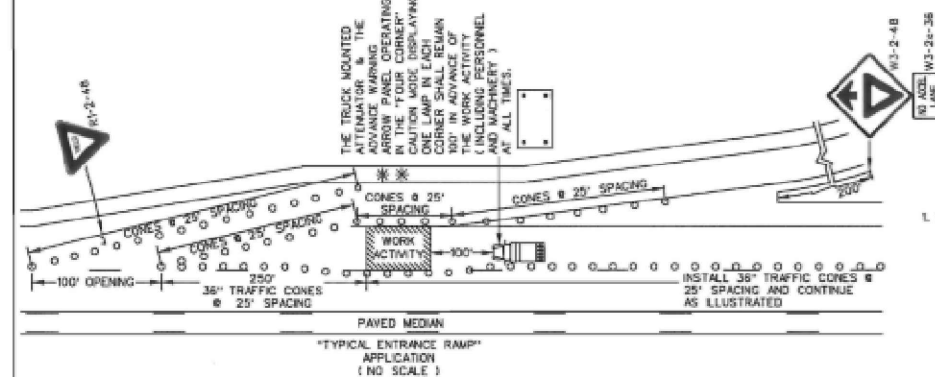
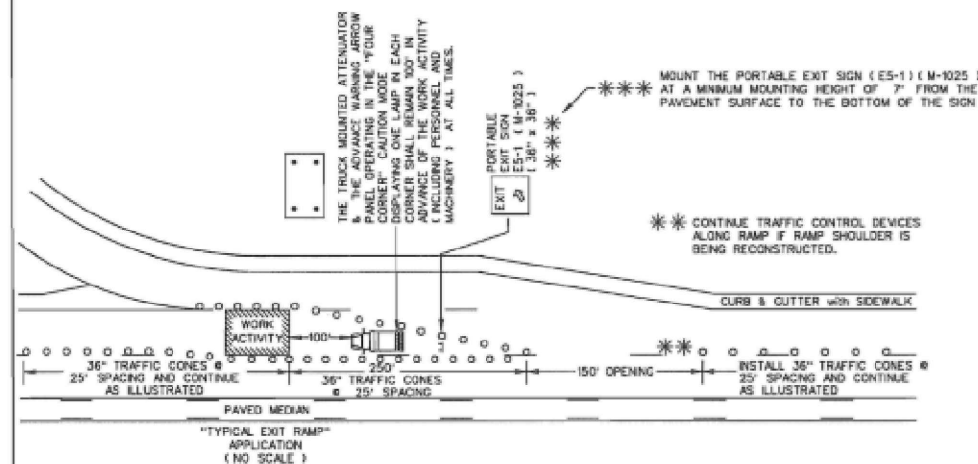
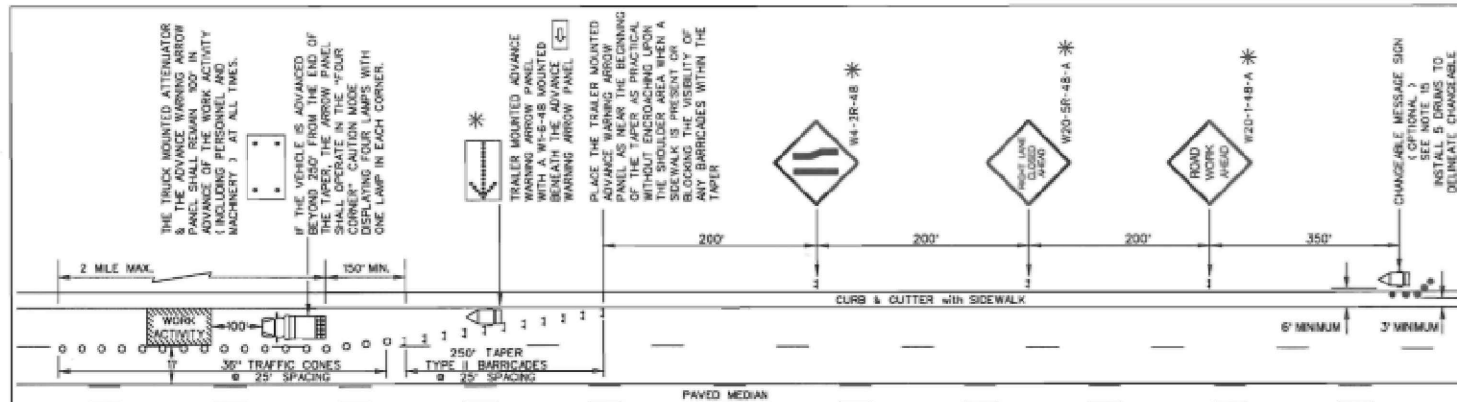
SCALE



MP	TO MP
SHEET	TCP (2)

DWG. NAME
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CLM\_1905BZOP\_MTSO\_H1003A\_SCDOT\_68.dwg



ADVANCE WARNING ARROW PANEL

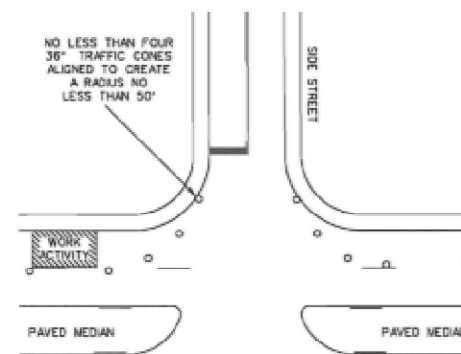
ALL ADVANCE WARNING ARROW PANELS SHALL BE 48" x 96" WITH A MINIMUM LEGIBILITY DISTANCE OF 1 MILE. PLACEMENT OF AN ADVANCE WARNING ARROW PANEL MAY REQUIRE ADJUSTMENTS DUE TO HORIZONTAL AND/OR VERTICAL ALIGNMENT OR OTHER SIGHT DISTANCE RESTRICTIONS. THE PANEL FACE SHALL BE NONREFLECTIVE BLACK. ALL ADVANCE WARNING ARROW PANELS SHALL COMPLY WITH THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, LATEST EDITION.

WHEN AN ADVANCE WARNING ARROW PANEL IS REQUIRED TO OPERATE IN THE CAUTION MODE, THE ADVANCE WARNING ARROW PANEL SHALL DISPLAY THE "FOUR CORNERS" CAUTION MODE WITH ONE LAMP IN EACH CORNER, DISPLAY OF ANY OTHER TYPE OF CAUTION MODE OTHER THAN THE "FOUR CORNERS" CAUTION MODE SUCH AS THE "FLASHING BAR" OR THE "ALTERNATING DIAMOND" CAUTION MODES ARE UNACCEPTABLE AND PROHIBITED.

LEGEND

- Q 36" TRAFFIC CONES

THIS DRAWING IS NOT TO SCALE



### PORTABLE TRUCK MOUNTED ATTENUATOR

1. UTILIZE A TRUCK MOUNTED ATTENUATOR ATTACHED TO THE REAR OF A TRUCK WITH A MINIMUM GROSS VEHICULAR WEIGHT (GVW) OF 15,000 POUNDS (ACTUAL WEIGHT). IF THE ADDITION OF SUPPLEMENTAL WEIGHT TO THE VEHICLE AS BALLAST IS NECESSARY, CONTAIN THE MATERIAL WITHIN A STRUCTURE CONSTRUCTED OF STEEL. CONSTRUCT THIS STEEL STRUCTURE TO HAVE A MINIMUM OF FOUR SIDES AND A BOTTOM. A TOP IS OPTIONAL. BOLT THIS STRUCTURE TO THE FRAME OF THE TRUCK. UTILIZE A SUFFICIENT NUMBER OF FASTENERS FOR ATTACHMENT OF THE STEEL STRUCTURE TO THE FRAME OF THE TRUCK TO ENSURE THE STRUCTURE WILL NOT SEPARATE FROM THE FRAME OF THE TRUCK DURING AN IMPACT UPON THE TRUCK MOUNTED ATTENUATOR. UTILIZE EITHER DRY LOOSE SAND OR STEEL REINFORCED CONCRETE FOR BALLAST MATERIAL WITHIN THE STEEL STRUCTURE TO ACHIEVE THE NECESSARY WEIGHT. THE BALLAST MATERIAL SHALL REMAIN CONTAINED WITHIN THE CONFINES OF THE STEEL STRUCTURE AND SHALL NOT PROTRUDE FROM THE STEEL STRUCTURE IN ANY MANNER.
2. LOCATE THE TRUCK MOUNTED ATTENUATOR 100 FEET IN ADVANCE OF THE WORK AREA UNLESS OTHERWISE SPECIFIED.
3. PROVIDE, INSTALL AND MAINTAIN THE TRUCK MOUNTED ATTENUATOR AS SPECIFIED BY THE STANDARD SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER.
4. DUE TO THE WEIGHT OF A TRUCK MOUNTED ATTENUATOR, THE TRUCK MOUNTED ATTENUATOR SUPPLEMENTED WITH AN ADVANCE WARNING ARROW PANEL, MAY BE REPLACED WITH A TRAILER MOUNTED ADVANCE WARNING ARROW PANEL WHEN THE TRAFFIC CONTROL SETUP IS UTILIZED FOR ASPHALT CONCRETE PAVEMENT OPERATIONS. REPLACEMENT WITH A TRAILER MOUNTED ADVANCE WARNING ARROW PANEL SHALL REQUIRE THE ENGINEER'S APPROVAL.

### GENERAL NOTES

1. ALL SIGN LOCATION ARE TO BE MEASURED FROM THE WORK AREA. WORK LIMITS FOR THE PROJECT WILL BE DETERMINED BY THE ENGINEER AND AS INDICATED IN THE CONTRACT.
2. INSTALL ADVANCE WARNING SIGNS MOUNTED ON PORTABLE SIGN SUPPORTS NO LESS THAN 4 FEET FROM THE NEAR EDGE OF THE SIGN TO THE NEAR EDGE OF AN ADJACENT TRAVEL LANE ON ROADWAYS WITH EARTH SHOULDERS AND NO LESS THAN 6 FEET FROM THE NEAR EDGE OF THE SIGN TO THE NEAR EDGE OF AN ADJACENT TRAVEL LANE ON ROADWAYS WITH GRADED SHOULDERS. IF A GUTTER IS PRESENT, INSTALL THE SIGN NO LESS THAN 2 FEET FROM THE NEAR EDGE OF THE SIGN TO THE FACE OF THE CURB.
3. SPACINGS INDICATED ARE FOR NORMAL CONDITIONS; ADJUSTMENTS MAY BE REQUIRED DUE TO HORIZONTAL AND/OR VERTICAL ALIGNMENTS OR OTHER SIGHT DISTANCE RESTRICTIONS.
4. ALL SIGNS MOUNTED ON PORTABLE SIGN SUPPORTS SHALL HAVE A MINIMUM MOUNTING HEIGHT OF 5 FEET FROM THE GROUND TO THE BOTTOM OF THE SIGN. ALL SIGNS MOUNTED ON GROUND MOUNTED U-CHANNEL, POSTS OR SQUARE STEEL TUBE POSTS SHALL HAVE A MINIMUM MOUNTING HEIGHT OF 7 FEET FROM THE GRADE ELEVATION OF THE NEAR EDGE OF THE ADJACENT TRAVEL LANE TO THE BOTTOM OF THE SIGN UNLESS OTHERWISE DIRECTED BY THE ENGINEER. SIGN POSTS SHALL BE PLACED AT LEAST 10 FEET FROM THE FACE OF THE SIGNS PERPENDICULAR TO THE SURFACE OF THE ROADWAY.
5. REFLECTORIZE ORANGE ADVANCE WARNING SIGNS AND ANY ORANGE AREAS OF A MULTI-COLORED ADVANCE WARNING SIGN WITH A FLUORESCENT ORANGE COLORED PRISMATIC RETROREFLECTIVE SHEETING. REFLECTORIZE WHITE REGULATORY SIGNS AND ANY WHITE AREAS OF A MULTI-COLORED ADVANCE WARNING SIGN WITH A WHITE COLORED PRISMATIC RETROREFLECTIVE SHEETING.
6. ALL TRAFFIC CONTROL DEVICES SHALL COMPLY WITH ALL NCHRP REPORT 350 REQUIREMENTS AND SHALL REQUIRE APPROVAL BY THE DEPARTMENT. ONLY THOSE TRAFFIC CONTROL DEVICES INCLUDED ON THE "APPROVED PRODUCTS LIST FOR TRAFFIC CONTROL DEVICES IN WORK ZONES" ARE CONSIDERED ACCEPTABLE FOR USE. THIS LIST MAY BE ACCESSED ON THE DEPARTMENT'S WEB SITE AT: [www.scdol.org](http://www.scdol.org)
7. THE CONTRACTOR SHALL PROVIDE AND UTILIZE ANY SPECIAL SIGN MOUNTING ASSEMBLIES AND HARDWARE THAT MAY BE NECESSARY FOR INSTALLING AND MOUNTING SIGNS IN AREAS OF CONCRETE MEDIAN BARRIER, BRIDGE PARAPET WALLS OR DOUBLESIDE GUARDRAIL.
8. REFLECTIONIZATION OF 36" TRAFFIC CONES USING DURING DAYLIGHT HOURS IS NOT REQUIRED. IF THIS TRAFFIC CONTROL SETUP EXTENDS INTO THE NIGHTTIME HOURS, REPLACE ALL 36" TRAFFIC CONES WITH 36" PORTABLE PLASTIC DRUMS OR 42" OVERSIZED TRAFFIC CONES. REFLECTORIZE ALL PORTABLE PLASTIC DRUMS AND 42" OVERSIZED TRAFFIC CONES WITH TYPE II FLEXIBLE PRISMATIC RETROREFLECTIVE SHEETING UNLESS OTHERWISE DIRECTED BY THE DEPARTMENT.
9. REFLECTORIZE ALL BARRICADES WITH A TYPE VII OR IX PRISMATIC RETROREFLECTIVE SHEETING ON ALL PROJECTS LET TO CONTRACT AFTER MAY 1, 2012 UNLESS OTHERWISE DIRECTED BY THE DEPARTMENT.
10. TYPE II BARRICADES SHALL HAVE A MINIMUM WIDTH OF 3 FEET UNLESS OTHERWISE DIRECTED BY THE DEPARTMENT.
11. CONDUCT THE WORK IN SUCH A MANNER THAT WILL MINIMIZE ENCRoACHMENT OF TRAFFIC CONTROL DEVICES, EQUIPMENT, PERSONNEL, MATERIALS OR ANY WORK RELATED VEHICLES ONTO OR ADJACENT TO THE WORK AREA. IF THE DEPARTMENT REQUESTS THAT THE CONTRACTOR REMOVE TRAFFIC CONTROL DEVICES AS NECESSARY TO ENSURE PROPER DELINEATION OF THE WORK AREA.
12. LANE CLOSURES ARE RESTRICTED TO MAXIMUM LENGTHS OF 2 MILES UNLESS OTHERWISE DIRECTED BY THE SPECIAL PROVISIONS AND/OR THE DEPARTMENT.
13. IF WORK IS BEING CONDUCTED SIMULTANEOUSLY AT TWO DIFFERENT LOCATIONS WITHIN THE SAME TRAVEL LANE UNDER TWO SEPARATE LANE CLOSURES ON A LOW SPEED URBAN ROADWAY, SEPARATE THE TWO LANE CLOSURES BY NO LESS THAN 1 MILE FROM THE END OF THE FIRST CLOSURE. A MOTORIST WILL ENCOUNTER TO THE BEGINNING OF THE TAPER OF THE SECOND CLOSURE.
14. IF WORK IS BEING CONDUCTED SIMULTANEOUSLY AT TWO DIFFERENT LOCATIONS IN THE SAME DIRECTION BUT WITHIN DIFFERENT TRAVEL LANES UNDER TWO SEPARATE LANE CLOSURES ON A LOW SPEED URBAN ROADWAY, SEPARATE THE TWO LANE CLOSURES BY NO LESS THAN 2 MILES FROM THE END OF THE FIRST CLOSURE THAT A MOTORIST WILL ENCOUNTER TO THE BEGINNING OF THE TAPER OF THE SECOND CLOSURE.
15. UTILIZATION OF A CHANGEABLE MESSAGE SIGN IS OPTIONAL WITH THIS TRAFFIC CONTROL SETUP. HOWEVER, WHEN A CHANGEABLE MESSAGE SIGN IS UTILIZED, INSTALL THE SIGN AS LISTED OR AS SHOWN ON THE STANDARD DRAWING UNLESS OTHERWISE DIRECTED BY THE SPECIAL PROVISIONS, THE PLANS AND/OR THE ENGINEER. INSTALL THE CHANGEABLE MESSAGE SIGN NO LESS THAN 6 FEET FROM THE NEAR EDGE OF THE ADJACENT TRAVEL LANE AND SUPPLEMENT THE SIGN LOCATION WITH NO LESS THAN 5 PORTABLE PLASTIC DRUMS FOR DELINEATION AS ILLUSTRATED, 36" STANDARD TRAFFIC CONES OR 42" OVERSIZED TRAFFIC CONES ARE PROVIDED TO DELINEATE THE POSTED SPEED LIMIT AND THE TAPER IN THIS APPLICATION. DURING A RIGHT LANE CLOSURE, THE SIGN SHOULD FLASH ALTERNATELY TO READ "RIGHT LANE CLOSED"; "MERGE LEFT" AT A RATE THAT WILL PERMIT MOTORISTS TO READ BOTH MESSAGES AT LEAST ONCE.
16. THE DEPARTMENT RESERVES THE RIGHT TO RESTRICT WORK OPERATIONS AND/OR WITHHOLD THE MONTHLY ESTIMATE IF THE TRAFFIC CONTROL IS NOT PROPERLY INSTALLED AND MAINTAINED AS DIRECTED BY THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, THE STANDARD DRAWINGS, THE PLANS AND/OR THE ENGINEER.
17. THIS TYPICAL TRAFFIC CONTROL SETUP APPLIES TO THE INSTALLATION OF A LANE CLOSURE ON AN URBAN ROADWAY WITH A POSTED REGULATORY SPEED LIMIT OF 35 MPH OR LESS.

## \* LEFT LANE CLOSURE

1. SIGNS ILLUSTRATED ARE FOR A RIGHT LANE CLOSURE.
2. WHEN CLOSING THE LEFT TRAVEL LANE, USE THE FOLLOWING:
  - 1 - W4-2L-4B
  - 1 - W2C-5L-4B-A
3. THE STRIPES ON THE BARRICADES TO THE LEFT OF TRAFFIC SHALL SLOPE DOWNWARD FROM THE UPPER LEFT TO THE LOWER RIGHT.
4. THE FLASHING ARROW AND THE "LARGE ARROW" SIGN (W1-6-4B) SHALL POINT TO THE RIGHT.
5. THE CHANGEABLE MESSAGE SIGN SHALL FLASH ALTERNATELY TO READ "LEFT LANE CLOSED", "MERGE RIGHT".

## REFERENCES

WORK ZONE TRAFFIC  
CONTROL ENGINEER



W. L. Cornwell  
SIGNATURE  
8/2/12  
DATE

6			
5			
4			
3			
2	2-11-11	JCS	GENERAL UPDATE
1	5-28-10	JCS	CORRECTION
0	8-21-07	JCS	DRAWING NO. UPDATE
#	DATE	CHK	DESCRIPTION



SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION  
DESIGN STANDARDS OFFICE  
955 PARK STREET  
ROOM 405  
COLUMBIA, SC 29201

STANDARD DRAWING

LANE CLOSURE  
DAYTIME  
URBAN LOW SPEED  
< / = 35 MPH

610-010-00
EFFECTIVE LETTING DATE: JAN. 2013



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

COUNTY \_\_\_\_\_  
CITY, STATE \_\_\_\_\_



PROJECT: # 1905BZOP

SEG/SPAN: \_

MTSO

MAP FOOTAGE:

**SURVEY:**

RAILROAD:

[illegible]

PROJECT NUMBER  
1905BZOP  
PROJECT TITLE

MTSO H1003A

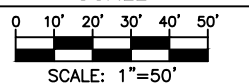
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FROM

**TO**

## REVISIONS

[illegible]

SCALE

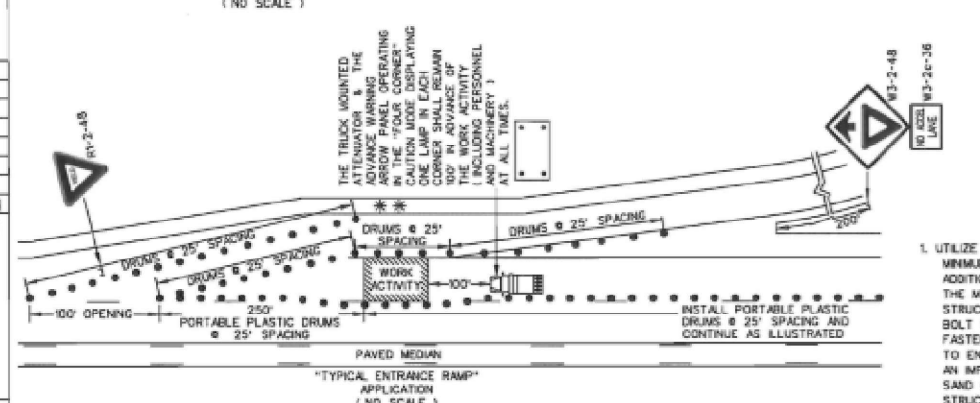
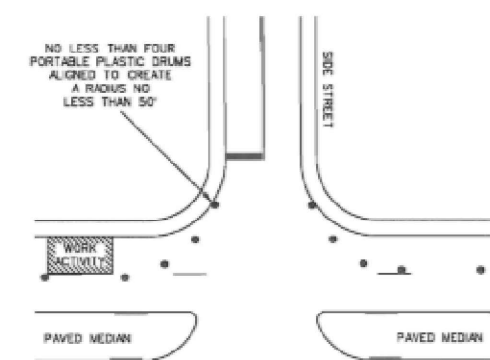
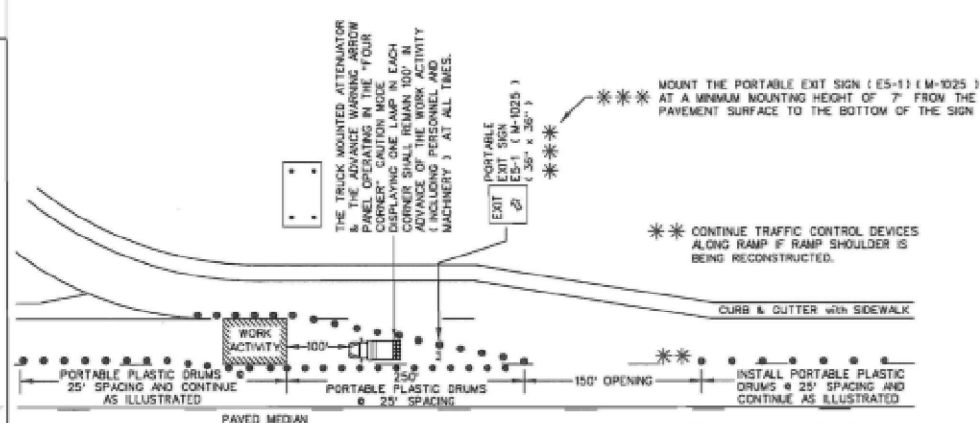
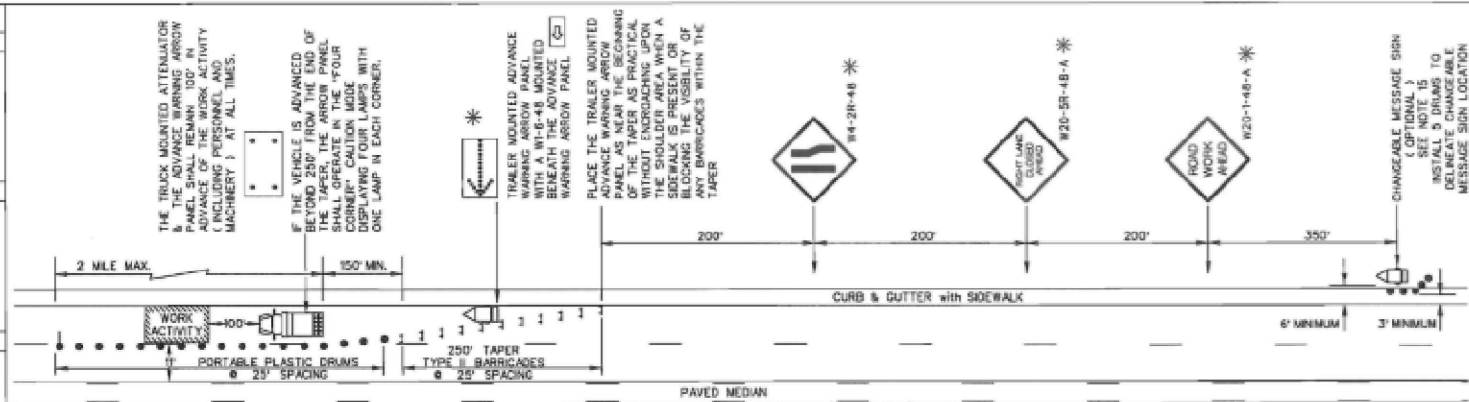


MP	TO	MP
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**SHEET TCP (3)**

DWG. NAME
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CLM\_1905BZOP\_MTSO\_H1003A\_SCDOT\_68.dwg



### PORTABLE TRUCK MOUNTED ATTENUATOR

1. UTILIZE A TRUCK MOUNTED ATTENUATOR ATTACHED TO THE REAR OF A TRUCK WITH A MINIMUM GROSS VEHICULAR WEIGHT (GVW) OF 15,000 POUNDS (ACTUAL WEIGHT). IF THE ADDITION OF SUPPLEMENTAL WEIGHT TO THE VEHICLE AS BALLAST IS NECESSARY, CONTAIN THE MATERIAL WITHIN A STRUCTURE CONSTRUCTED OF STEEL. CONSTRUCT THIS STEEL STRUCTURE TO HAVE A MINIMUM OF FOUR SIDES AND A BOTTOM. A TOP IS OPTIONAL. BOLT THIS STRUCTURE TO THE FRAME OF THE TRUCK. UTILIZE A SUFFICIENT NUMBER OF FASTENERS FOR ATTACHMENT OF THE STEEL STRUCTURE TO THE FRAME OF THE TRUCK TO ENSURE THE STRUCTURE WILL NOT SEPARATE FROM THE FRAME OF THE TRUCK DURING AN IMPACT UPON THE ATTACHED TRUCK MOUNTED ATTENUATOR. UTILIZE EITHER DRY LOOSE SAND OR STEEL REINFORCED CONCRETE FOR BALLAST MATERIAL WITHIN THE STEEL STRUCTURE TO ACHIEVE THE NECESSARY WEIGHT. THE BALLAST MATERIAL SHALL REMAIN CONTAINED WITHIN THE CONFINES OF THE STEEL STRUCTURE AND SHALL NOT PROTRUDE FROM THE STEEL STRUCTURE IN ANY MANNER.
2. LOCATE THE TRUCK MOUNTED ATTENUATOR 100 FEET IN ADVANCE OF THE WORK AREA UNLESS OTHERWISE SPECIFIED.
3. PROVIDE, INSTALL AND MAINTAIN THE TRUCK MOUNTED ATTENUATOR AS SPECIFIED BY THE STANDARD SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER.
4. DUE TO THE WEIGHT OF A TRUCK MOUNTED ATTENUATOR, THE TRUCK MOUNTED ATTENUATOR SUPPLEMENTED WITH AN ADVANCE WARNING ARROW PANEL MAY BE REPLACED WITH A TRAILER MOUNTED ADVANCE WARNING ARROW PANEL WHEN THIS TRAFFIC CONTROL SETUP IS UTILIZED FOR ASPHALT CONCRETE PAVEMENT OPERATIONS. REPLACEMENT WITH A TRAILER MOUNTED ADVANCE WARNING ARROW PANEL SHALL REQUIRE THE ENGINEER'S APPROVAL.

\* LEFT LANE CLOSURE

1. SIGNS ILLUSTRATED ARE FOR A RIGHT LANE CLOSURE.
2. WHEN CLOSING THE LEFT TRAVEL LANE, USE THE FOLLOWING:
  - 1 - W4-2L-4S
  - 1 - W20-5L-4S-A
3. THE STRIPES ON THE BARRICADES TO THE LEFT OF TRAFFIC SHALL SLOPE DOWNWARD FROM THE UPPER LEFT TO THE LOWER RIGHT.
4. THE FLASHING ARROW AND THE "LARGE ARROW" SIGN (W1-6-4S) SHALL POINT TO THE RIGHT.
5. THE CHANGEABLE MESSAGE SIGN SHALL FLASH ALTERNATELY TO READ "LEFT LANE CLOSED", "MERGE RIGHT".

ADVANCE WARNING ARROW PANEL

ALL ADVANCE WARNING ARROW PANELS SHALL BE 48" x 96" WITH A MINIMUM LEGIBILITY DISTANCE OF 1 MILE. PLACEMENT OF AN ADVANCE WARNING ARROW PANEL MAY REQUIRE ADJUSTMENTS DUE TO HORIZONTAL AND/OR VERTICAL ALIGNMENT OR OTHER SIGHT DISTANCE RESTRICTIONS. THE PANEL FACE SHALL BE NONREFLECTIVE BLACK. ALL ADVANCE WARNING ARROW PANELS SHALL COMPLY WITH THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, LATEST EDITION.

WHEN AN ADVANCE WARNING ARROW PANEL IS REQUIRED TO OPERATE IN THE CAUTION MODE, THE ADVANCE WARNING ARROW PANEL SHALL DISPLAY THE "FOUR CORNERS" CAUTION MODE WITH ONE LAMP IN EACH CORNER, DISPLAY OF ANY OTHER TYPE OF CAUTION MODE OTHER THAN THE "FOUR CORNERS" CAUTION MODE SUCH AS THE "FLASHING BAR" OR THE "ALTERNATING DIAMOND" CAUTION MODES ARE UNACCEPTABLE AND PROHIBITED.

### LEGEND

- PORTABLE PLASTIC DRUMS

## REFERENCES

WORK ZONE TRAFFIC  
CONTROL ENGINEER



SIGNATURE

8/2/12  
DATE

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1	2-14-11	JCS	GENERAL UPDATE
0	8-20-07	JCS	DRAWING NO. UPDATE
#	DATE	CHK	DESCRIPTION



SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION  
DESIGN STANDARDS OFFICE  
955 PARK STREET  
ROOM 405  
COLUMBIA, SC 29201

## STANDARD DRAWING

LANE CLOSURE  
NIGHTTIME  
URBAN LOW SPEED  
≤ 35 MPH

610-015-00

EFFECTIVE LETTING DATE JAN., 2013 THIS DRAWING IS NOT TO SCALE



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



COUNTY \_\_\_\_\_  
CITY, STATE \_\_\_\_\_



PROJECT: # 1905BZOP

SEG/SPAN: \_\_\_\_\_

MTSO

MAP FOOTAGE:
SURVEY:
RAILROAD:

[illegible]

PROJECT NUMBER  
1905BZOP  
PROJECT TITLE

MTSO H1003A

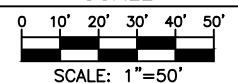
TITLE: FIBER OPTIC CABLE ROUTE  
FROM

TO

## REVISIONS

[illegible]

## SCALE



MP	TO MP
SHEET	TCP (4)

DWG. NAME
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CLM\_1905BZOP\_MTSO\_H1003A\_SCDOT\_68.dwg

## REFERENCES

WORK ZONE TRAFFIC  
CONTROL ENGINEER



SIGNATURE

8/2/12  
DATE

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1	2-15-11	JCS	GENERAL UPDATE
0	8-22-07	JCS	DRAWING NO. UPDATE
#	DATE	CHK	DESCRIPTION



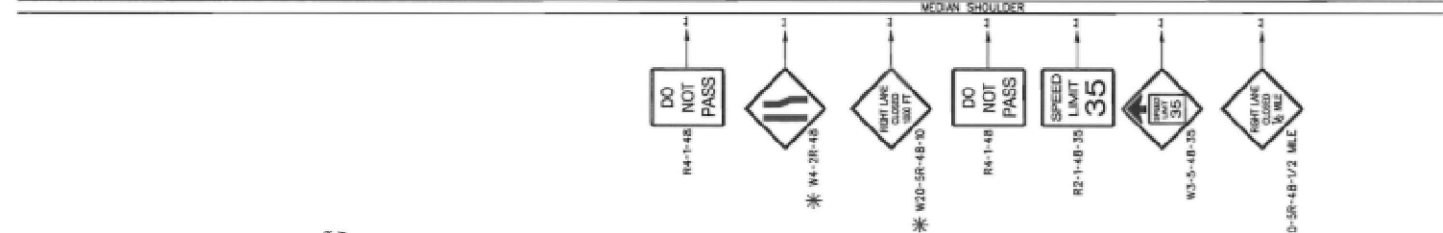
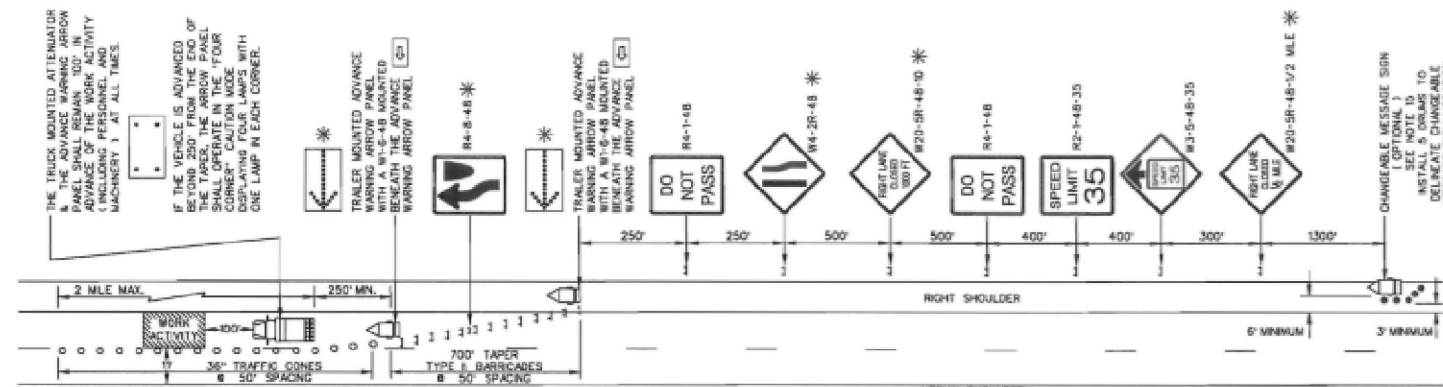
SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION  
DESIGN STANDARDS OFFICE  
955 PARK STREET  
ROOM 405  
COLUMBIA, SC 29201

## STANDARD DRAWING

LANE CLOSURE  
DAYTIME  
MULTILANE  
PRIMARY ROUTES

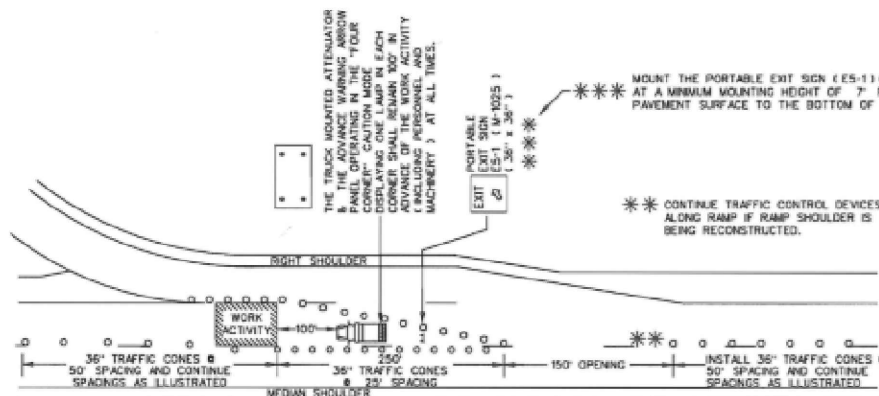
610-025-00

EFFECTIVE LETTING DATE: JAN. 2013 THIS DRAWING IS NOT TO SCALE



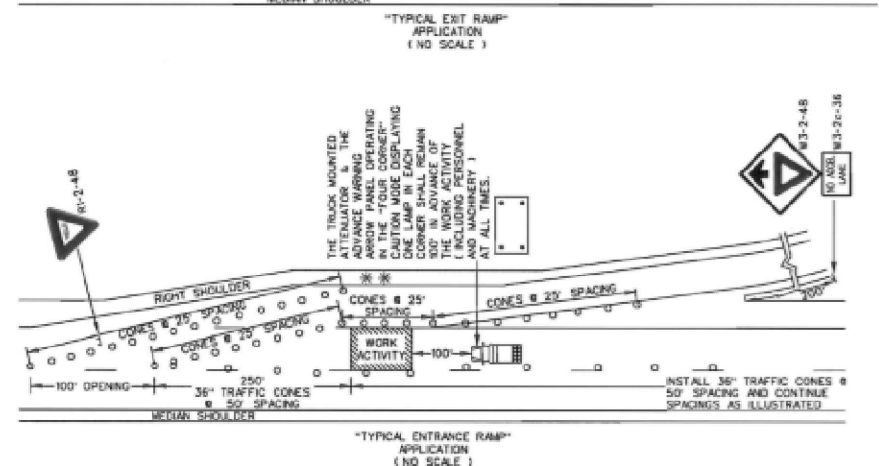
\* LEFT LANE CLOSURE

1. SIGNS ILLUSTRATED ARE FOR A RIGHT LANE CLOSURE.
2. WHEN CLOSING THE LEFT TRAVEL LANE, USE THE FOLLOWING:  
2 - W20-5L-4B+10      2 - W20-5L-4B+1/2 MILE  
    W4-2L-4B              1 - R4-7-4B
3. THE STRIPES ON THE BARRICADES TO THE LEFT OF TRAFFIC SHALL SLOPE DOWNWARD FROM THE UPPER LEFT TO THE LOWER RIGHT.
4. THE FLASHING ARROW AND THE "LARGE ARROW" SIGN (W1-6-4B) SHALL POINT TO THE RIGHT.
5. THE CHANGEABLE MESSAGE SIGN SHALL FLASH ALTERNATELY TO READ "LEFT LANE CLOSED", "MERGE RIGHT".



### PORTABLE TRUCK MOUNTED ATTENUATOR

1. UTILIZE A TRUCK MOUNTED ATTENUATOR ATTACHED TO THE REAR OF A TRUCK WITH A MINIMUM GROSS VEHICLE WEIGHT (GVW) OF 15,000 POUNDS. ACTUAL WEIGHTS, IF THE ADDITION OF SUPPLEMENTAL WEIGHT TO THE VEHICLE AS BALLAST IS NECESSARY, CONTAIN THE MATERIAL WITHIN A STRUCTURE CONSTRUCTED OF STEEL. CONSTRUCT THIS STEEL STRUCTURE TO HAVE A MINIMUM OF FOUR SIDES AND A BOTTOM. A TOP IS OPTIONAL. BOLT THIS STRUCTURE TO THE FRAME OF THE TRUCK. UTILIZE A SUFFICIENT NUMBER OF FASTENERS FOR ATTACHMENT OF THE STEEL STRUCTURE TO THE FRAME OF THE TRUCK TO ENSURE THE STRUCTURE WILL NOT SEPARATE FROM THE FRAME OF THE TRUCK DURING AN IMPACT UPON THE ATTACHED TRUCK MOUNTED ATTENUATOR. UTILIZE EITHER DRY LOOSE SAND OR STEEL REINFORCED CONCRETE FOR BALLAST MATERIAL WITHIN THE STEEL STRUCTURE TO ACHIEVE THE NECESSARY WEIGHT. THE BALLAST MATERIAL SHALL REMAIN CONTAINED WITHIN THE CONFINES OF THE STEEL STRUCTURE AND SHALL NOT PROTRUDE FROM THE STEEL STRUCTURE IN ANY MANNER.
2. LOCATE THE TRUCK MOUNTED ATTENUATOR 100 FEET IN ADVANCE OF THE WORK AREA UNLESS OTHERWISE SPECIFIED.
3. PROVIDE, INSTALL AND MAINTAIN THE TRUCK MOUNTED ATTENUATOR AS SPECIFIED BY THE STANDARD SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER.
4. DUE TO THE WEIGHT OF A TRUCK MOUNTED ATTENUATOR, THE TRUCK MOUNTED ATTENUATOR SUPPLEMENTED WITH AN ADVANCE WARNING ARROW PANEL MAY BE REPLACED WITH A TRAILER MOUNTED ADVANCE WARNING ARROW PANEL WHEN THIS TRAFFIC CONTROL SETUP IS UTILIZED FOR ASPHALT CONCRETE PAVEMENT OPERATIONS. REPLACEMENT WITH A TRAILER MOUNTED ADVANCE WARNING ARROW PANEL SHALL REQUIRE THE ENGINEER'S APPROVAL.



ADVANCE WARNING ARROW PANEL

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LEGEND

Q 36" TRAFFIC CONES

COUNTY \_\_\_\_\_  
CITY, STATE \_\_\_\_\_



PROJECT: # 1905BZOP

SEG/SPAN: \_\_\_\_\_

MTSO

MAP FOOTAGE: SURVEY: RAILROAD:
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[illegible]

PROJECT NUMBER  
1905BZOP  
PROJECT TITLE

MTSO H1003A

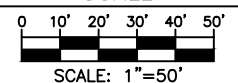
TITLE: FIBER OPTIC CABLE ROUTE  
FROM

TO

## REVISIONS

[illegible]

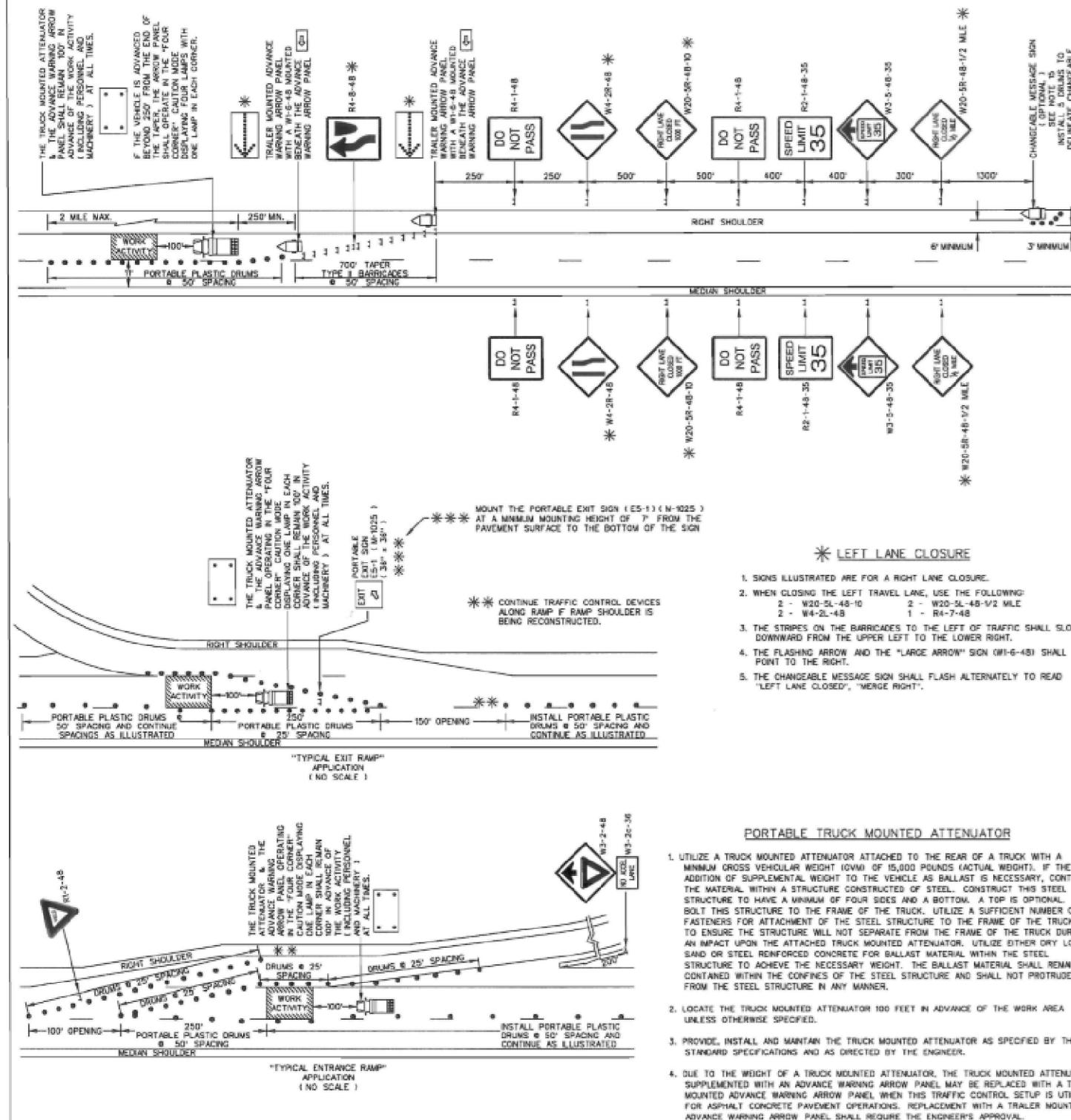
SCALE



MP	TO MP
SHEET	TCP (5)

DWG. NAME
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CLM\_1905BZOP\_MTSO\_H1003A\_SCDOT\_68.dwg



GENERAL NOTES

1. ALL SIGN LOCATION ARE TO BE MEASURED FROM THE WORK AREA, WORK LIMITS FOR THE PROJECT WILL BE DETERMINED BY THE ENGINEER AND AS INDICATED IN THE CONTRACT.
2. INSTALL ADVANCE WARNING SIGNS MOUNTED ON PORTABLE SIGN SUPPORTS NO LESS THAN 4 FEET FROM THE NEAR EDGE OF THE SIGN TO THE NEAR EDGE OF AN ADJACENT TRAVEL LANE ON ROADWAYS WITH SINGLE SHOULDER AND NO LESS THAN 6 FEET FROM THE NEAR EDGE OF THE SIGN TO THE NEAR EDGE OF THE ROAD. THE GRADE ELEVATION OF THE NEAR EDGE OF THE ROADWAYS WITH PAVED SHOULDER. WHEN CURB & GUTTER IS PRESENT, INSTALL THE SIGN NO LESS THAN 2 FEET FROM THE NEAR EDGE OF THE SIGN TO THE FACE OF THE CURB.
3. SPACINGS INDICATED ARE FOR NORMAL CONDITIONS; ADJUSTMENTS MAY BE REQUIRED DUE TO HORIZONTAL AND/OR VERTICAL ALIGNMENTS OR OTHER SIGHT DISTANCE RESTRICTIONS.
4. ALL SIGNS MOUNTED ON PORTABLE SIGN SUPPORTS SHALL HAVE A MINIMUM MOUNTING HEIGHT OF 5 FEET FROM THE GROUND TO THE BOTTOM OF THE SIGN. ALL SIGNS MOUNTED ON GROUND MOUNTED U-CANAL POSTS OR SQUARE TUBE POSTS SHALL HAVE A MINIMUM MOUNTING HEIGHT OF 5 FEET FROM THE GRADE ELEVATION OF THE NEAR EDGE OF THE ADJACENT TRAVEL LANE TO THE BOTTOM OF THE SIGN UNLESS OTHERWISE DIRECTED BY THE DEPARTMENT. MOUNT ALL SIGNS STRAIGHT AND LEVEL AND WITH THE FACE OF THE SIGNS PERPENDICULAR TO THE SURFACE OF THE ROADWAY.
5. REFLECTORIZED GRANGE ADVANCE WARNING SIGNS AND ANY GRANGE AREAS OF A MULTI-COLORED ADVANCE WARNING SIGN SHALL BE CONSIDERED AS ONE SIGN. ALL SIGNS SHALL BE RETROREFLECTIVE SHEETING. REFLECTORIZED WHITE REGULATORY SIGNS AND ANY WHITE AREAS OF A MULTI-COLORED ADVANCE WARNING SIGN WITH A WHITE COLORED PRISMATIC RETROREFLECTIVE SHEETING.
6. ALL TRAFFIC CONTROL DEVICES SHALL COMPLY WITH ALL NCHRP REPORT 350 REQUIREMENTS AND SHALL REQUIRE APPROVAL BY THE DEPARTMENT. ONLY THOSE TRAFFIC CONTROL DEVICES THAT ARE LISTED ON THE "APPROVED PRODUCTS LIST FOR TRAFFIC CONTROL DEVICES IN WORK ZONES" ARE CONSIDERED ACCEPTABLE FOR USE. THIS LIST MAY BE ACCESSED ON THE DEPARTMENT'S WEB SITE AT: [www.scdot.org](http://www.scdot.org).
7. THE CONTRACTOR SHALL PROVIDE AND UTILIZE ANY SPECIAL SIGN MOUNTING ASSEMBLIES AND HARDWARE THAT MAY BE NECESSARY FOR INSTALLING AND MOUNTING SIGNS IN AREAS OF CONCRETE MEDIAN BARRIER, BRIDGE, PARAPET WALLS OR DOUBLEDPAVED GUARDRAIL.
8. REFLECTORIZED ALL PORTABLE PLASTIC DRUMS AND 42" OVERSIZED TRAFFIC CONES WITH TYPE I FLEXIBLE POLYMER SHEETING ON THE "APPROVED PRODUCTS LIST FOR TRAFFIC CONTROL BY THE DEPARTMENT. 42" OVERSIZED TRAFFIC CONES MAY BE SUBSTITUTED FOR THE PORTABLE PLASTIC DRUMS IN THIS TYPICAL TRAFFIC CONTROL SETUP. THE 42" OVERSIZED TRAFFIC CONES SHALL COMPLY WITH ALL REQUIREMENTS OF THE STANDARD SPECIFICATIONS.
9. REFLECTORIZED ALL BARRICADES WITH A TYPE VII OR IX PRISMATIC RETROREFLECTIVE SHEETING ON ALL PROJECTS LET TO CONTRACT ON OR AFTER MAY 1, 2012 UNLESS OTHERWISE DIRECTED BY THE DEPARTMENT.
10. TYPE I BARRICADES SHALL HAVE A MINIMUM WIDTH OF 3 FEET UNLESS OTHERWISE DIRECTED BY THE DEPARTMENT.
11. CONDUCT THE WORK IN SUCH A MANNER THAT WILL MINIMIZE ENCROACHMENT OF TRAFFIC CONTROL DEVICES, EQUIPMENT, PERSONNEL, MATERIALS OR ANY WORK RELATED VEHICLES ONTO AN ADJACENT TRAVEL LANE OPEN TO TRAFFIC. INSTALL, MAINTAIN AND ADJUST THE TRAFFIC CONTROL DEVICES AS NECESSARY TO ENSURE PROPER DELINEATION OF THE WORK AREA.
12. LANE CLOSURES ARE RESTRICTED TO MAXIMUM LENGTHS OF 2 MILES UNLESS OTHERWISE DIRECTED BY THE SPECIAL PROVISIONS AND/OR THE CONTRACT.
13. IF WORK IS BEING CONDUCTED SIMULTANEOUSLY AT TWO DIFFERENT LOCATIONS WITHIN THE SAME LANE, SEPARATE THE TWO SEPARATE LANE CLOSURES ON A PRIMARY ROADWAY WITH A POSTED REGULATORY SPEED LIMIT OF 40 MPH OR GREATER, SEPARATE THE TWO LANE CLOSURES BY NO LESS THAN 2 MILES FROM THE END OF THE FIRST CLOSURE THAT A MOTORIST WILL ENCOUNTER TO THE BEGINNING OF THE TAPER OF THE SECOND CLOSURE.
14. IF WORK IS BEING CONDUCTED SIMULTANEOUSLY AT TWO DIFFERENT LOCATIONS IN THE SAME SECTION BUT DIFFERENT TRAVEL LANE, SEPARATE THE TWO SEPARATE LANE CLOSURES ON A PRIMARY ROADWAY WITH A POSTED REGULATORY SPEED LIMIT OF 40 MPH OR GREATER, SEPARATE THE TWO LANE CLOSURES BY NO LESS THAN 4 MILES FROM THE END OF THE FIRST CLOSURE THAT A MOTORIST WILL ENCOUNTER TO THE BEGINNING OF THE TAPER OF THE SECOND CLOSURE.
15. UTILIZATION OF A CHANGEABLE MESSAGE SIGN IS OPTIONAL WITH THIS TRAFFIC CONTROL SETUP. HOWEVER, IF A CHANGEABLE MESSAGE SIGN IS UTILIZED, INSTALL THE SIGN AS ILLUSTRATED ON THIS STANDARD DRAWING UNLESS OTHERWISE DIRECTED BY THE SPECIAL PROVISIONS, THE PLANS AND/OR THE ENGINEER. INSTALL THE CHANGEABLE MESSAGE SIGN NO LESS THAN 6 FEET FROM THE NEAR EDGE OF THE ADJACENT TRAVEL LANE AND SUPPLEMENT THE SIGN WITH A "RIGHT LANE LEFT" OR "LEFT LANE RIGHT" PLASTIC DRUMS FOR DELINEATION AS ILLUSTRATED. 36" STANDARD TRAFFIC CONES OR 42" OVERSIZED TRAFFIC CONES ARE PROHIBITED AS SUBSTITUTES FOR THE PORTABLE PLASTIC DRUMS IN THIS APPLICATION. DURING A RIGHT LANE CLOSURE, THE SIGN SHOULD FLASH ALTERNATELY TO READ "RIGHT LANE LEFT" AND "LEFT LANE RIGHT" AT A RATE THAT WILL PERMIT MOTORISTS TO READ BOTH MESSAGES AT LEAST ONCE.
16. THE DEPARTMENT RESERVES THE RIGHT TO RESTRICT WORK OPERATIONS AND/OR WITHHOLD THE MONTHLY ESTIMATE IF THE TRAFFIC CONTROL IS NOT PROPERLY INSTALLED AND MAINTAINED AS DIRECTED BY THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, THE STANDARD DRAWINGS, THE PLANS AND/OR THE ENGINEER.
17. THIS TYPICAL TRAFFIC CONTROL SETUP APPLIES TO THE INSTALLATION OF A LANE CLOSURE ON A PRIMARY ROADWAY WITH A POSTED REGULATORY SPEED LIMIT OF 40 MPH OR GREATER.

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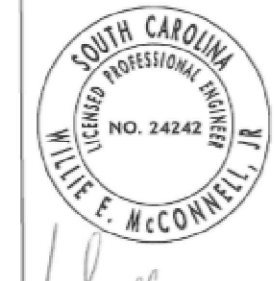
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LEGEND

- PORTABLE PLASTIC DRUMS

## REFERENCES

WORK ZONE TRAFFIC  
CONTROL ENGINEER



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COLUMBIA, SC 29201

STANDARD DRAWING

LANE CLOSURE  
NIGHTTIME  
MULTILANE  
PRIMARY ROUTES

610-030-00

EFFECTIVE LETTING DATE	JAN., 201
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