



STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION  
REGION 3 RIGHT OF WAY DIVISION  
6601 CENTENNIAL BOULEVARD  
NASHVILLE, TENNESSEE 37243-0360  
(615) 350-4200

**BUTCH ELEY**  
DEPUTY GOVERNOR &  
COMMISSIONER OF TRANSPORTATION

**BILL LEE**  
GOVERNOR

Authorization Date: JANUARY 18, 2023

Pamela S Caskie  
Spring Hill, City of  
P.O. Box 789  
Spring Hill, TN 37174

PERMIT NO.: GA-2007068894-2023

GA: \$50,000.00

DESCRIPTION: Installation of water line extension via open cut across SR 247 approx. 25 feet.

Route	Begin LM	Ending LM	County	Start Long/Lat	End Long/Lat
SR 247	19.16	19.15	Maury	-86.935626, 35.752859	-86.935641, 35.752933

Dear Pamela S Caskie:

Enclosed is an approved drawing covering the installation of the above referenced facilities. This permit was approved **01/18/2023**. The performance of this work will be covered under terms of the enclosed permit or general agreement between the utility and the Department of Transportation and the attached Permit Notes.

Please make sure your work forces have a copy of this approved drawing on hand at all times while working on the state rights-of-way. The attached notes are approval conditions to this permit and drawings.

In accordance with the State's Rules and Regulations, the Utility shall provide appropriate signing at all times during the construction and maintenance of facilities; therefore, signs must be in place before construction begins.

Please notify the District Utility Inspector at least three working days prior to the proposed date to begin work, of the date construction will begin in order to determine if a preconstruction conference is needed and to arrange proper inspection.

**DISTRICT UTILITY CONTACT:**

Name: Zachary Fluhart  
Address: 10241 U.S. 70 E McEwen TN 37101  
Phone: (931) 296-9606  
Fax:  
Cell (931) 952-0593

**The Utility must notify the District Utility Inspector upon completion of the installation in order that a final inspection can be made to facilitate the release of the bond. This permit expires one year from date of issuance.**

Regards,

*Joseph Tosh*

TDOT Region 3 Utility Office  
6601 Centennial Boulevard 2nd Floor, "A" Building Nashville TN 37243

Enclosure:

CC: Zachary Fluhart

Conditions:

- 1 Note: The permit proprietor will be responsible for the repair of any damage to the roadway or TDOT appurtenances caused by utility construction.  
Comments:
- 2 Note: The Permit Proprietor is to ensure that all Parties associated with this project complies with all "Rules and Regulations for Accommodating Utilities within Highway Rights-of-Ways."  
Comments:
- 3 Note: All installations and repairs are to be installed in compliance to TDOT'S "Rules and Regulations for Accommodating Utilities within Highway Rights-of Ways".  
Comments:
- 4 Note: The Permit Proprietor is responsible for all erosion and sediment control required for the Utility installation  
Comments:
- 5 Note: The T.D.O.T. inspector must be notified at least three (3) days before the commencement of the work to arrange proper inspection to ensure a valid permit.  
Comments:
- 6 Note: T.D.O.T. approved drawings and permit must be present at the job site while work is in progress.  
Comments:
- 7 Tennessee811. Dial 811 for Utility locates  
Comments:
- 8 Note: Flaggers and workers in work zones shall wear Safety apparel meeting the requirements of ISEA "American National Standard for High Visibility Apparel" Refer to the latest edition of the "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES." (MUTCD), Section 6E.02  
Comments:
- 9 Note: Delineator cones or barrels required along with the proper signage to close shoulders or lanes for Work-Zones or Buffer-Zones according to the latest edition of the "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES." (MUTCD)  
Comments:
- 10 Note: Signing and Traffic Control Must be in conformance with the latest edition of the "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES." (MUTCD)  
Comments:
- 11 Note: Machinery, materials and workers are not to be located in the roadway, shoulders or in the clear-zones without proper traffic control measures in compliance with the MUTCD requirements. D)  
Comments:
- 12 Note: All logs, stumps, and other construction related debris must be removed from the Right-of-Ways.  
Comments:
- 13 Note: Rule 1680-6-1-.06,(f) Pedestals, fire hydrants, markers, or other above Ground utility appurtenances installed as a part of Underground utility facilities shall be located at or as near the highway Right-of-Way lines as practical. In all cases they must be outside the Clear-Zone.  
Comments:
- 14 Note: Underground Pneumatic Piercing tools (Hammerhead Mole, Hole-Hog, etc..,) shall not be used for boring under State Routes.  
Comments:
- 15 Note: All casings and conduits installed under State Routes shall meet or exceed the minimum AASHTO requirements.  
Comments:
- 16 Note: All steel casings must have continuous welds around every joint.  
Comments:
- 17 Note: The Utility installation must be installed with 36" or more of cover where installed within 5 feet of the drainage ditch.  
Comments:
- 18 Note: Buried installation shall not go over culverts or other TDOT structures.  
Comments:
- 19 Note: All side roads must be bored where installation is within the state Right-of-Way.  
Comments:
- 20 Note: The Pipeline or Transmission line shall be identified by a permanent marker at the Right-of-Way lines or as near thereto as possible.

Comments:

21 Note: Applicant is responsible for identifying, surveying, and staking the State highway right-of-way boundary in the above-described work area, and for maintaining said staking for the duration of the installation of Applicant's facilities. Applicant is responsible for acquiring all utility rights-of-way or easements outside the State highway right-of-way as may be needed to perform the installation and maintenance of its facilities, and is responsible for any damages caused by trespass or installation or maintenance of facilities outside the State highway right-of-way.

Comments:

22 APPROVED AS NOTED BY: Joseph Tosh TDOT REGION 3 UTILITY DEPARTMENT  
DATE: 18 Jan 2023

Comments:

23 Note: Prior to commencing work under this agreement, the Utility shall have adequate and appropriate general liability insurance providing liability coverage in an amount not less than \$1,000,000 dollars per occurrence and \$300,000 per claimant.

Comments:



TDOT/Region 3 Utilities Office  
6601 Centennial Blvd.  
Nashville, TN 37243 – 0360

## REGION 3 UTILITIES PERMIT #GA-2007068894-2023

**ALL UTILITY WORK PERFORMED SHALL BE IN ACCORDANCE WITH THE “STATE RULES AND REGULATIONS FOR ACCOMODATING UTILITIES WITH HIGHWAY RIGHTS OF WAY”, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:**

If a permit has been issued that requires a lane or traffic alteration that **MUST BE OBTAINED BEFORE THE WORK GRANTED BY THE PERMIT CAN INITIATE**. All lane closures need to be turned into this office 10 days before Project to allow for approvals and media release. **Aerial X-ing's/Lane Closures require coordination beyond the normal permit process. ADEQUATE/ APPROPRIATE** safety measures, i.e., police presence, signs, cones, etc., must be utilized as needed/directed. Detour information/notifications must be disseminated as appropriate. Coordinate with local authorities/Law Enforcement for traffic control as appropriate/needed. Coordinate all utility work with businesses/homeowners 24 hours before work is started. Do not block homeowners/businesses.

**No Utility installations within areas where Controlled Access conditions exist**

**BLASTING** is not permitted via this permit. Obtain all necessary permissions/permits for such activity before requesting TDOT Utility Permit. **Consult TDOT Utility manual and all other applicable agencies for specifics on Blasting. Attach copies of blasting and all other required documents (TDOT, TDEC, FIRE MARSHALL, etc.) With TDOT permit application.**

Replace original markings on roadway upon project completion. Restripe Temporarily if needed.

Driveways that are concrete or asphalt surface, **1<sup>st</sup> choice** is to be bored, **2<sup>nd</sup> choice** is to be open-cut and replaced **in-kind** and brought to a neat line by mechanical sawing. Gravel Driveways can be open cut and replaced **in-kind**. Existing pavement bases such as curbs, gutters, and sidewalks shall be cut and

brought to a neat line by mechanical sawing.

New installations shall be run as close to the outer edge of Right-of-Way as possible.

Locate underground facilities per law: **Tennessee One Call 1-800-351-1111.**



Installation of buried/trenched utilities trenches shall be backfilled daily and mulched or sodded no later than 7 days after trenching. Stabilize slopes and take all necessary measures to prevent erosion. Permit proprietor is responsible for all erosion control measures and seed/sod deployment as needed.

Repair all open cuts by milling 25' beyond disturbed area, full width, and re-surface with minimum of 9" of binder and a minimum of 2" of surface mix

**unless otherwise directed by utility permit.** Open cuts will be backfilled with a minimum of 24" of Flowable Fill material. Use steel plates if needed. Plates must be stabilized by staking and bordered by tapered asphalt.

Open-cut trenching, backfilling, and replacement paving to be done at night after evening rush hour.

All bore pits shall be placed outside of the current right-of-way and a minimum of 5' from toe of slopes with appropriate protections in place at all times.

3 days' notice shall be given to the SEE PERMIT AS NOTED

District Maintenance Engineer before work is started.

**SPECIAL NOTES:** 9AM-3PM / 8PM-5AM ....Exercise all necessary/prudent traffic safety measures. Coordinate as needed with City/County & Law Enforcement for traffic control. Lane closure request must be received in this office and acted upon before work begins..**SPECIFIC WORK HOURS MAY APPLY. SEE PERMIT DETAILS.**

**NOTE:** NOTIFICATION TO THIS OFFICE FOR TRAFFIC ALTERATION APPROVALS ASSOCIATED WITH THE UTILITY PERMIT MUST BE RECEIVED NO LESS THAN TEN DAYS PRIOR TO THE EVENT. IT IS THE RESPONSIBILITY OF THE UTILITY TO OBTAIN THE NECESSARY SUPPORT FOR TRAFFIC CONTROL OPERATIONS.

**THE UTILITY MUST PROVIDE TO THE REGIONAL OFFICE A *NOTARIZED* STATEMENT AFFIRMING COMPLIANCE WITH THE PROVISIONS OF TDOT CONSTRUCTION SPECIFICATION 712.04 BY THE TRAFFIC CONTROL ENTITY WITH EACH PERMIT REQUEST REQUIRING SUCH TRAFFIC ALTERATIONS.**

THE AFFORMENTIONED SPECIFICATION CAN BE FOUND HERE IN THE 2015 STANDARD SPECIFICATIONS:

<https://www.tn.gov/tdot/section/tdot-construction-division>

See TDOT Website: <https://www.tn.gov/tdot/article/row-utilities-office-forms> for appropriate forms to accompany permit application, i.e. Environmental, Encroachments, etc., Environmental forms must now accompany permit applications.

**A COPY OF THE PERMIT AND CHECKLIST IS REQUIRED TO BE KEPT ON-SITE.**

Consult the following URL's for questions and call if questions persist.

**URL for guidance/permit requests:**

**Utilities Office Home**

<https://www.tn.gov/tdot/topic/row-utilities-office>

**REGION 3/ROW/UTILITIES OFFICE #'s:**

**(615) 253-4869 ~ Daisy Aboagye**

**(615) 350-4229 ~ David E. Smith**

**(615) 350-4230 (615) 476-8921 (Cell) ~ Tim Ross**

REVISED 8/17/2017  
SUPERCEDES ALL PREVIOUS



## Pipeline Encroachment Application

For JMB Beechcroft Townhomes  
At Beechcroft Road (TN-247)  
Spring Hill, TN 37174

**RECEIVED**

*By Tom Cole at 7:08 am, Jan 13, 2023*

October 28, 2022

**To the Tennessee Department of Transportation, Region 3**

This submittal is prepared to request approval for encroachment from TDOT to install a water line extension within TDOT right-of-way. The proposed project is situated along TN-247, Beechcroft Road, with the project of interest and closest utility main on opposite sides of TN-247 TDOT right-of-way. A connection is proposed to be constructed crossing the roadway for the installation of a 2" water pipe. The pipeline is to be installed via boring to avoid disturbance to traffic and all work is specified to be completed according to the latest TDOT and other appropriate construction standards.

Documents included in this submittal:

- Cover Letter
- Site and Utility Plan
- Pipeline Encroachment Form
- Environmental Agreement

Addresses to be served by this project:

375, 377, 379, and 381 Beechcroft Road Spring Hill, TN 37174

Approximate coordinates of project (NAD83):

Start: 35.7528872, -86.935512

End: 35.7528591, -86.9356259

pcaskie@springhilltn.org



OFFICE OF THE PLANNING DIRECTOR

199 Town Center Parkway • Spring Hill, Tennessee 37174

931-486-2252, ext 233

[www.springhilltn.org](http://www.springhilltn.org)

# Environmental Agreement for Utility Projects

I, the undersigned representative of the Utility named below, state the following:

1. The Utility desires to construct the project described below (the named project).
2. The Utility is aware that it may be required by law to obtain one or more environmental permits prior to constructing the named project; that determining which permits are necessary and obtaining those permits are the sole responsibility of the Utility; and that the activities of the Utility in constructing the named project are not covered under any permit associated with TDOT construction activities.
3. The Utility agrees that if the total area of disturbed land associated with the construction of the named project is planned to, or does at any time actually exceed one (1) acre, the Utility shall obtain coverage under the *National Pollutant Discharge Elimination System General Permit For Discharges Of Stormwater Associated With Construction Activities*.
4. The Utility agrees that during all phases of construction of the named project, the Utility shall implement and maintain appropriate Erosion Prevention and Sediment Control (EPSC) measures, as published in the TDOT *Standards and Specifications* and/or the Tennessee Department of Environment and Conservation (TDEC) *Erosion and Sediment Control Handbook*.
5. The Utility agrees that it shall comply with all State and Federal laws, rules, regulations and permit terms and conditions applicable to the construction of the named project.

**Utility Name:** City of Spring Hill - Water Department

**Utility Address:** 3893 Mahlon More Rd. Spring Hill, TN 37174

**Utility Phone:** (931) 486-1265      **Fax:** (931) 486-1268

**Project Description:** 2" Water Line installation within TDOT right-of-way

**Representative Name:** Pamela S. Caskie

Pamela Caskie      119123

(SIGNATURE)

(DATE)

## Notice to Utilities

When a utility performs work along the highway rights-of-way, either by a State utility permit or due to a construction project, the utility shall be subject to and must comply with ALL of the following:

1. Section 404 of the Federal Clean Water Act (33 U.S.C. 1344) as defined in 33 CFR, Part 323, latest edition, which can currently be found on pages 2079-2080 of the Federal Register dated January 15, 2002.
2. **(U.S. Army Corps of Engineers Nationwide Permit Number 12 (Utility Line Activities))**  
The Tennessee Water Quality Control Act of 1977, as amended (**Tennessee Code Annotated Section 69-3-105**) which is outlined in the Rules of the Tennessee Department of Environment and Conservation, Division of Water Pollution Control, and its **General Aquatic Resource Alteration Permit for Utility Line Crossings of Streams**
3. Section 402, also referred to as the **National Pollutant Discharge Elimination System (NPDES)**, which is outlined in the Rules of the Tennessee Department of Environment and Conservation, Water Pollution Control – Storm Water Office, implements the EPA Phase I and Phase II regulations to address storm water runoff in Tennessee. Under the NPDES program any person responsible for the discharge of a pollutant or pollutants from one acre or more of land disturbance, into any waters of the United States, from any point source must apply for and obtain a permit.
4. Section 26a of the TVA Act requiring that TVA approval be obtained before any construction activities can be carried out that affect navigation, flood control, or public lands along the shoreline of the TVA reservoirs or in the Tennessee River or its tributaries (any streams or wetlands in the drainage basin of the Tennessee River).
5. Section 209 (Project Erosion and Siltation Control) of the Tennessee Department of Transportation's "Standard Specifications for Road and Bridge Construction" and any related Special Provisions of that section.
6. In addition to complying with the rules and regulations identified in (1) - (5), consideration should also be given to Class V Injection Well Permit requirements where utility work may affect runoff into a sinkhole, and Reelfoot Watershed Permit requirements where utility work affects streams, springs or wetlands in the drainage basin of the Reelfoot Lake.
7. Any regulatory permit requirements or conditions previously issued within the permits received by TDOT for highway construction, i.e. survival of trees specified as replacement or mitigation, must remain undisturbed or replaced exactly as stated by the requirements.

**The regulatory agencies may be contacted at the following addresses:**

Tennessee Department of Environment and Conservation ..... Phone: 615.532.0625  
Division of Water Pollution Control; Natural Resources Section  
7<sup>th</sup> Floor L & C Annex, 401 Church Street  
Nashville, TN 37243-1534

(For the Cumberland River and Tennessee River Valleys): ..... Phone: 615-369-7500  
Regulatory Branch  
U.S. Army Corps of Engineers, Nashville District  
3701 Bell Road  
Nashville, TN 37214

(For the Mississippi River Valley): ..... Phone: 901-544-0736  
Regulatory Branch  
U.S. Army Corps of Engineers, Memphis District  
167 North Main Street, Room B-202  
Memphis, Tennessee 38103-1894

# Pipeline Encroachments

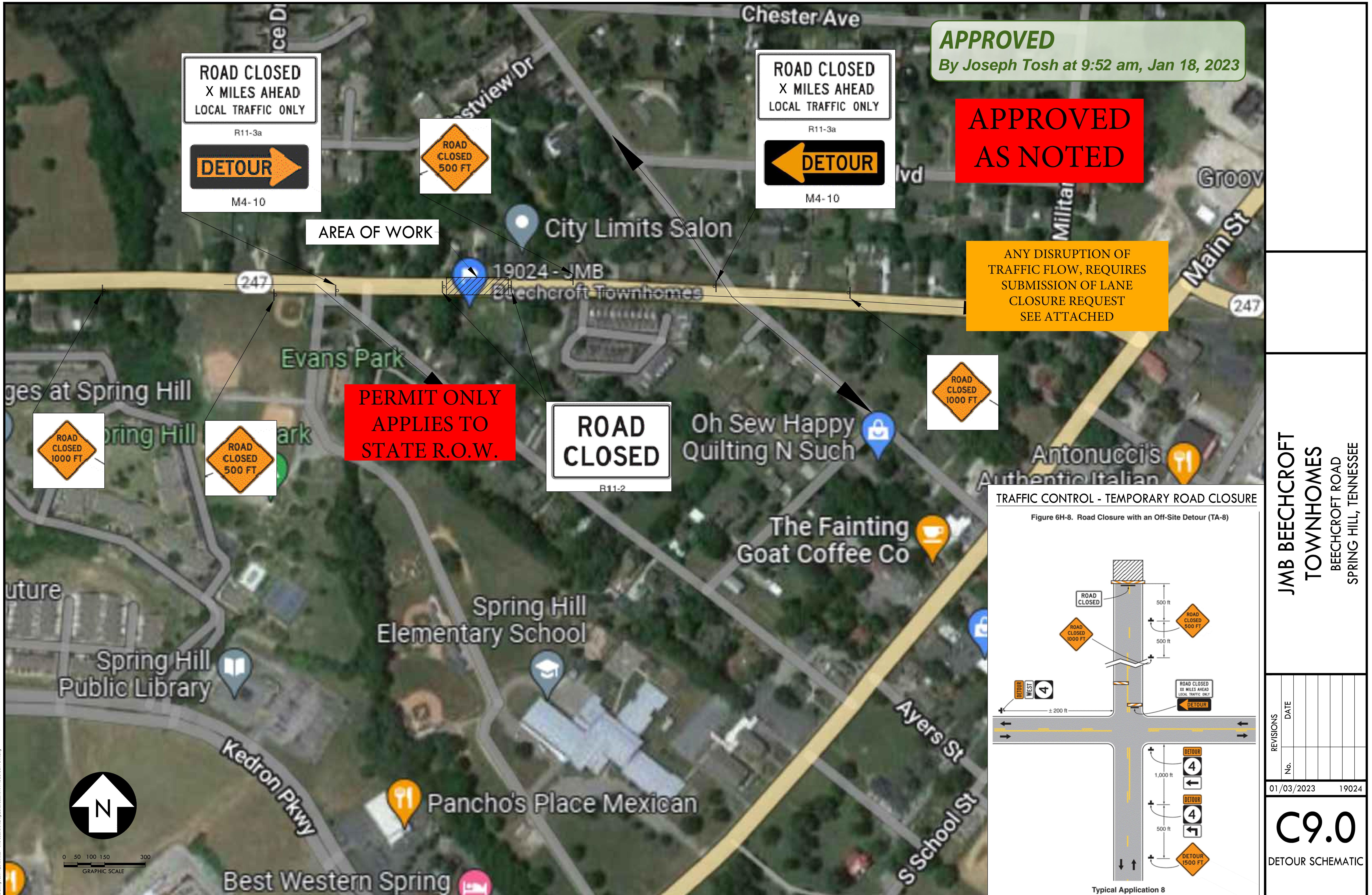
The following information is required to accompany all plans for pipeline encroachments.

	Carrier Pipe	Casing Pipe
1. Contents to be handled	<u><b>DOMESTIC WATER</b></u>	_____
2. Outside Diameter	<u><b>(1) 2"</b></u>	_____
3. Pipe material	<u><b>PVC</b></u>	_____
4. Pipe Specification and grade	<u><b>AWWA 1% GRADE</b></u>	_____
5. Wall thickness	<u><b>APPX. 0.154"</b></u>	_____
6. Design Pressure	<u><b>200 psi</b></u>	_____
7. Actual Working Pressure	<u><b>&lt; 200 psi</b></u>	_____
8. Type of joint	<u><b>TEE</b></u>	_____
9. Coating	<u><b>PVC</b></u>	_____
10. Method of installation	<u><b>BORING</b></u>	_____
11. Protection at end of casing	<u><b>WATER METER</b></u>	_____
	Both Ends _____	One end _____
	Type _____	
12. Cover: Finished grade to top of casing or carrier	<u><b>36"</b></u>	_____
	Bottom of ditch or toe of slope to top of carrier to casing	<u><b>36"</b></u>
	_____	
13. Cathodic protection	<u><b>N/A</b></u>	_____
14. Size and height of casing vent	<u><b>N/A</b></u>	_____
15. Distance from casing vent to edge of nearest traffic lane	<u><b>N/A</b></u>	_____

# Pipeline Encroachments

The following information is required to accompany all plans for pipeline encroachments.

	Carrier Pipe	Casing Pipe
1. Contents to be handled	<u><b>FIRE</b></u>	<u></u>
2. Outside Diameter	<u><b>(1) 6"</b></u>	<u></u>
3. Pipe material	<u><b>PVC</b></u>	<u><b>CONCRETE ENCASEMENT</b></u>
4. Pipe Specification and grade	<u><b>AWWA 1% GRADE</b></u>	<u></u>
5. Wall thickness	<u><b>APPX. 0.280"</b></u>	<u></u>
6. Design Pressure	<u><b>280 psi</b></u>	<u></u>
7. Actual Working Pressure	<u><b>200 psi</b></u>	<u></u>
8. Type of joint	<u><b>TEE</b></u>	<u></u>
9. Coating	<u><b>PVC</b></u>	<u></u>
10. Method of installation	<u><b>BORING</b></u>	<u></u>
11. Protection at end of casing	<u><b>FIRE HYDRANT</b></u>	<u></u>
	Both Ends <u>      </u> One end <u>      </u> Type <u>                  </u>	
12. Cover: Finished grade to top of casing or carrier	<u><b>36"</b></u>	
	Bottom of ditch or toe of slope to top of carrier to casing <u><b>36"</b></u>	
13. Cathodic protection	<u><b>N/A</b></u>	
14. Size and height of casing vent	<u><b>N/A</b></u>	
15. Distance from casing vent to edge of nearest traffic lane	<u><b>N/A</b></u>	



# JMB BEECHCROFT TOWNHOMES

## BEECHCROFT ROAD SPRING HILL, TENNESSEE

### TDOT SUBMITTAL

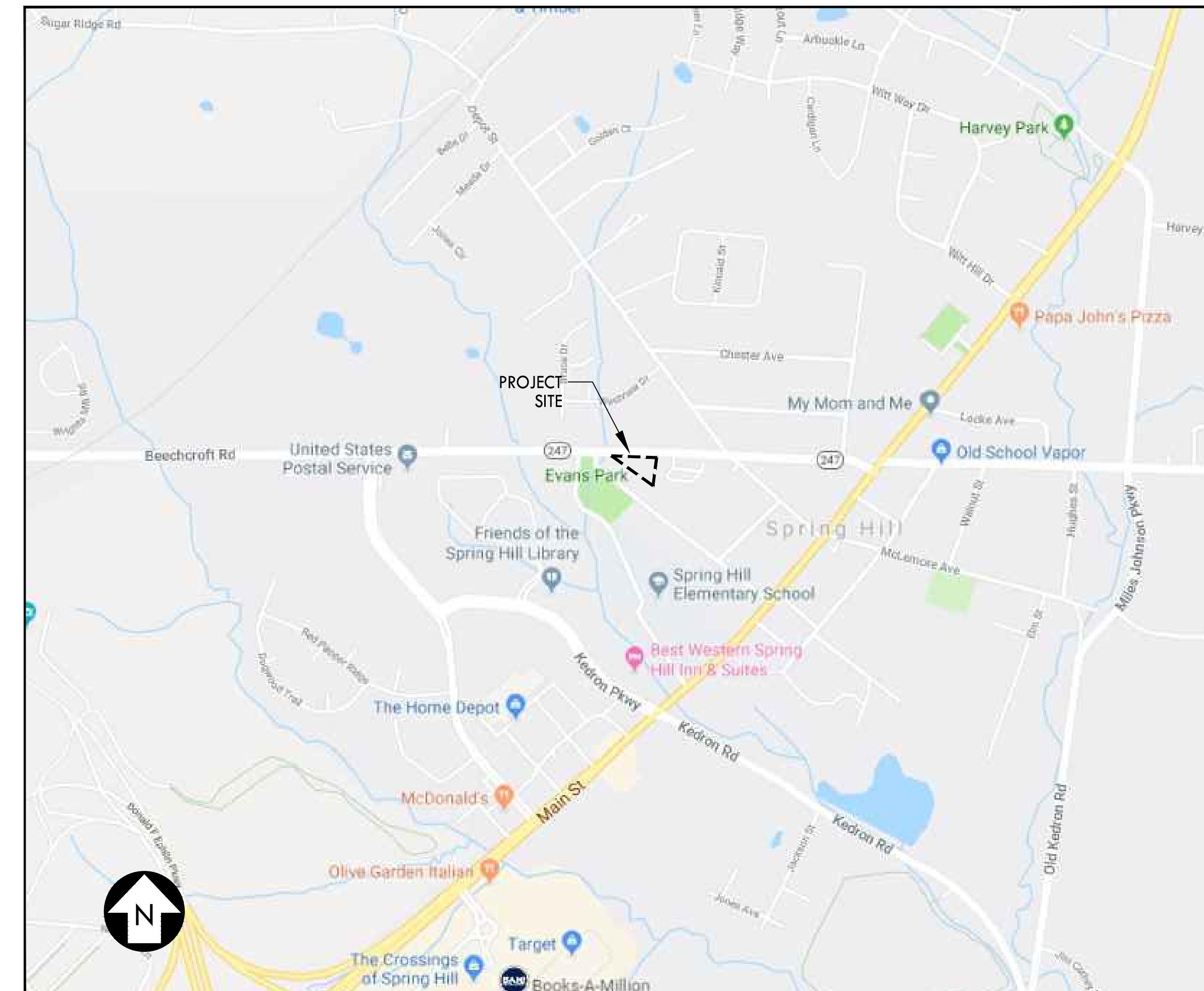
#### GENERAL INFORMATION

##### CONSULTANT

Crunk Engineering LLC  
1894 General George Patton Dr, Suite 600  
Franklin, TN 37067  
Contact: Adam Crunk, PE  
Phone: 615.873.1795  
Email: adam@crunkeng.com

##### DEVELOPER

John Maher Builders, Inc.  
P.O. Box 681727  
Contact: John Maher  
Phone: 931.489.1981



LOCATION MAP  
NOT TO SCALE

Sheet List Table	
Sheet Number	Sheet Title
C0.0	COVER SHEET
C2.0	NOTES
C7.0	UTILITY PLAN
C8.0	DETAILS



APPROVED AS NOTED:  
1. These plans are approved for coordination with TDOT regarding bore or open cut for installation of a waterline for service to a proposed development and NOT FOR CONSTRUCTION. Construction plans will be required to be reviewed and approved by the City of Spring Hill prior to issuance of permits for this development.  
2. Lane closures will require BOMA approval prior to authorization of closure.

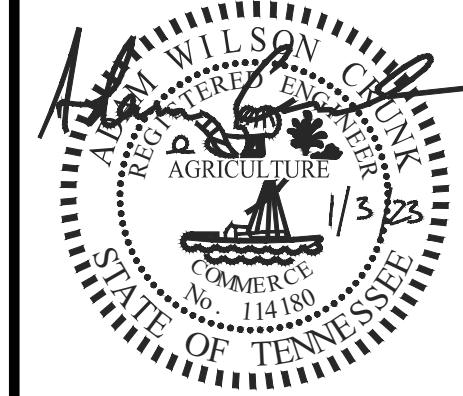
JMB BEECHCROFT  
TOWNHOMES  
BEECHCROFT ROAD  
SPRING HILL, TENNESSEE

REVISIONS	DATE
No.	19024

01/03/2023 19024

C0.0  
COVER SHEET

CRUNK ENGINEERING LLC  
1894 GENERAL GEORGE PATTON DR.  
SUITE 600  
FRANKLIN, TN 37067  
(615) 873-1795  
WWW.CRUNKENG.COM



## EROSION CONTROL NOTES:

1. EROSION PREVENTION AND SEDIMENT CONTROL MEASURES MUST BE IN PLACE AND FUNCTIONAL BEFORE GRADING ACTIVITIES BEGIN AND MUST BE CONSTRUCTED AND MAINTAINED THROUGH THE DURATION OF THE PROJECT. TEMPORARY MEASURES MAY BE REMOVED AT THE BEGINNING OF THE WORKDAY BUT MUST BE REPLACED AT THE END OF THE WORKDAY.
2. THE CONTRACTOR SHALL SEQUENCE CONSTRUCTION TO MINIMIZE THE EXPOSURE TIME OF GRADED OR DENUDED AREAS.
3. CONSTRUCT SILT BARRIERS BEFORE BEGINNING GRADING OPERATIONS.
4. PROVIDE TEMPORARY CONSTRUCTION ACCESS(ES) AT THE POINT(S) WHERE CONSTRUCTION VEHICLES EXIT THE CONSTRUCTION AREA. MAINTAIN PUBLIC ROADWAYS FREE OF TRACKED MUD AND DIRT.
5. EXISTING VEGETATION AND GROUND COVER SHALL NOT BE DESTROYED, REMOVED OR DISTURBED MORE THAN 10 DAYS PRIOR TO GRADING OR EARTH MOVING UNLESS THE AREA IS SEEDED AND/OR MULCHED OR OTHER TEMPORARY COVER IS INSTALLED.
6. USE TEMPORARY VEGETATION AND/OR MULCH TO PROTECT BARE AREAS FROM EROSION DURING CONSTRUCTION.
7. INSPECTION AND MAINTENANCE OF EROSION CONTROL DEVICES SHALL BE PERFORMED ON A REGULAR BASIS. IF AT ANY TIME DURING CONSTRUCTION, THE EROSION AND SEDIMENT CONTROL MEASURES INSTALLED FAIL TO FUNCTION PROPERLY, NEED MAINTENANCE OR REPAIR, OR NEED NEW REPLACEMENT IN KIND, THE CONTRACTOR WILL EFFECT SUCH ACTIONS AS ARE NEEDED TO CORRECT THE SITUATION AT NO ADDITIONAL COST TO THE OWNER.
8. THE CONTRACTOR SHALL USE WATER SPRINKLING AND OTHER SUITABLE METHODS AS NECESSARY TO CONTROL DUST AND DIRT CAUSED BY CONSTRUCTION ACTIVITY. THE USE OF MOTOR OILS AND OTHER PETROLEUM BASED OR TOXIC LIQUIDS FOR DUST CONTROL ARE PROHIBITED.
9. ALL WASH WATER (CONCRETE TRUCKS, VEHICLE CLEANING, EQUIPMENT CLEANING, ETC.) SHALL BE DETAINED AND PROPERLY TREATED OR DISPOSED.
10. STABILIZATION PRACTICES SHOULD BE INITIATED AS SOON AS PRACTICAL, BUT IN NO CASE MORE THAN 7 DAYS WHERE CONSTRUCTION HAS TEMPORARILY OR PERMANENTLY CEASED. DISTURBED AREAS WHERE CONSTRUCTION ACTIVITY HAS PERMANENTLY STOPPED SHALL BE PERMANENTLY STABILIZED NO LATER THAN 7 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY OCCURRED.
11. SEDIMENT SHOULD BE REMOVED FROM SEDIMENT AND EROSION CONTROL DEVICES AS NECESSARY AND MUST BE REMOVED WHEN DESIGN CAPACITY HAS BEEN REDUCED BY 50% OR AS DIRECTED BY OWNER'S REPRESENTATIVE.
12. THE CONTRACTOR SHALL REMOVE SEDIMENT BUILD UP FROM ALL DRAINAGE STRUCTURES BEFORE ACCEPTANCE BY LOCAL GOVERNING AGENCY OR AS DIRECTED BY THE OWNER'S REPRESENTATIVE.
13. THE CONTRACTOR SHALL REMOVE THE TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES ONLY AFTER A GOOD STAND OF VEGETATIVE COVER HAS BEEN ESTABLISHED ON GRADED AREAS AND WHEN IN THE OPINION OF THE OWNER'S REPRESENTATIVE, THEY ARE NO LONGER NEEDED.

## UTILITY NOTES:

1. ALL WATER LINES, SEWER LINES AND APPURTENANCES SHALL BE CONSTRUCTED OF MATERIALS THAT CONFORM WITH LOCAL AGENCY(S) AND UTILITY PROVIDER DETAILS AND SPECIFICATIONS.
2. SANITARY SEWER SHALL BE OF MATERIAL AS SPECIFIED ON PLANS. POLYVINYLCHLORIDE (PVC) SHALL MEET ASTM D3034 SDR35. DUCTILE IRON PIPE (DIP) SHALL MEET ANSI21.51/AWWA C-151 CLASS 52.
3. WATER LINES SHALL BE OF MATERIAL AS SPECIFIED ON PLANS. CEMENT LINED DUCTILE IRON (DIP) SHALL MEET AWWA C-151 CLASS 52. POLYVINYLCHLORIDE (PVC) SHALL MEET AWWA C-900, SDR 18, CLASS 150.
4. A MINIMUM COVER OF 36" SHALL BE PROVIDED OVER ALL WATER LINES.
5. THE CONTRACTOR SHALL MAINTAIN A HORIZONTAL SEPARATION OF 10 FEET BETWEEN SANITARY SEWER LINES AND WATER LINES. WHERE THESE CRITERIA CANNOT BE MET, THE CONTRACTOR SHALL MAINTAIN 18" VERTICAL SEPARATION BETWEEN WATER AND SEWER LINES.
6. EXISTING UTILITIES SHOWN ARE LOCATED ACCORDING TO THE INFORMATION AVAILABLE TO THE SURVEYOR AT THE TIME OF THE TOPOGRAPHIC SURVEY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR THE ENGINEER. GUARANTEE IS NOT MADE THAT ALL EXISTING UNDERGROUND UTILITIES ARE SHOWN OR THAT THE LOCATION OF THOSE SHOWN ARE ENTIRELY ACCURATE. FINDING THE ACTUAL LOCATION OF ANY EXISTING UTILITIES IS THE CONTRACTOR'S RESPONSIBILITY AND SHALL BE DONE BEFORE HE COMMENCES ANY WORK IN THE VICINITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL DAMAGES DUE TO THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES. THE OWNER OR ENGINEER WILL ASSUME NO LIABILITY FOR ANY DAMAGES SUSTAINED OR COST INCURRED BECAUSE OF THE OPERATIONS IN THE VICINITY OF EXISTING UTILITIES OR STRUCTURES, NOR FOR TEMPORARY BRACING AND SHORING OF SAME. IF IT IS NECESSARY TO SHORE, BRACE, SWING OR RELOCATE A UTILITY, THE UTILITY COMPANY OR DEPARTMENT AFFECTED SHALL BE CONTACTED AND THEIR PERMISSION OBTAINED REGARDING THE METHOD TO USE FOR SUCH WORK.
7. THE CONTRACTOR SHALL VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF THE POINT OF CONNECTIONS OF ALL UTILITIES PRIOR TO ORDERING OF MATERIALS OR COMMENCEMENT OF WORK. REPORT ANY DISCREPANCIES TO THE ENGINEER IMMEDIATELY.
8. THE CONTRACTOR SHALL COORDINATE THE SEQUENCE OF CONSTRUCTION FOR ALL UTILITY LINES TO PREVENT CONFLICTS WITH EXISTING OR PROPOSED WATER LINES, SANITARY SEWER LINES, SANITARY SEWER SERVICES, STORM SEWERS, OR ANY OTHER UTILITY OR STRUCTURE.
9. BEFORE CONNECTIONS ARE MADE INTO EXISTING UTILITIES, THE NEW LINES ARE TO BE FLUSHED AND TESTED BY THE CONTRACTOR IN ACCORDANCE WITH THE LOCAL AGENCY(S) AND UTILITY PROVIDER(S) WATER AND SEWER SPECIFICATIONS.
10. REDUCED PRESSURE BACKFLOW PREVENTOR (RPBP) OR DUAL CHECK WILL BE REQUIRED ON ALL TESTS AND FILL LINES (JUMPER) NEEDED FOR WATER MAIN CONSTRUCTION AND MUST BE APPROVED BY LOCAL AGENCY AND UTILITY PROVIDER.
11. THE CONTRACTOR SHALL PROVIDE ALL HORIZONTAL AND VERTICAL BENDS TO ATTAIN THE ALIGNMENT INDICATED ON THE PLANS. PROVIDE VERTICAL BENDS WHERE NECESSARY TO ALLOW WATER LINES TO PASS UNDER OR OVER OTHER UTILITY LINES (ALL BENDS AND BRACES NEEDED MAY NOT BE SHOWN ON THESE PLANS). PROVIDE BRACING AND/OR RODDING AT ALL BENDS AND TEES AS REQUIRED.
12. THE CONTRACTOR SHALL COORDINATE EXACT LOCATION OF UTILITY CONNECTIONS AT THE BUILDING WITH PLUMBING PLANS.
13. PROPOSED GAS LINE, ELECTRIC LINE AND TELEPHONE LINE CONSTRUCTION AND INSTALLATION SHALL BE COORDINATED WITH THE RESPECTIVE UTILITY PROVIDERS.
14. EXISTING CASTINGS LOCATED IN FILL/CUT AREAS SHALL BE ADJUSTED TO ENSURE THAT THE TOP OF CASTING IS FLUSH WITH THE FINISHED GRADE.
15. THE CONTRACTOR SHALL MARK THE LOCATION OF ALL NEW PVC LINES WITH #8 WIRE.
16. ALL CONNECTIONS TO EXISTING MANHOLES SHALL BE BY THE CORING AND RESILIENT SEAL METHOD.
17. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY PROTECTIVE MEASURES TO SAFEGUARD EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION OF THIS PROJECT. IN THE EVENT THAT SPECIAL EQUIPMENT IS REQUIRED TO WORK OVER AND AROUND THE UTILITIES, THE CONTRACTOR WILL BE REQUIRED TO FURNISH SUCH EQUIPMENT AT NO ADDITIONAL COST TO THE OWNER.
18. ALL FIRE LINES SHALL BE INSTALLED BY A SPRINKLER CONTRACTOR LICENSED IN THE STATE OF THE PROJECT.
19. PRIOR TO SUBMITTING OF BID, THE CONTRACTOR WILL BE RESPONSIBLE FOR CONTACTING OWNERS OF ALL AFFECTED UTILITIES IN ORDER TO DETERMINE THE EXTENT TO WHICH UTILITY RELOCATIONS AND/OR ADJUSTMENTS WILL HAVE UPON THE SCHEDULE OF WORK FOR THE PROJECT. WHILE SOME WORK MAY BE REQUIRED 'AROUND' UTILITY FACILITIES THAT WILL REMAIN IN PLACE, OTHER UTILITY FACILITIES MAY NEED TO BE ADJUSTED CONCURRENTLY WITH THE CONTRACTOR'S OPERATIONS.

## EROSION CONTROL TYPICAL NOTES:

1. ALL CONTROL MEASURES MUST BE PROPERLY SELECTED, INSTALLED, AND MAINTAINED IN ACCORDANCE WITH THE MANUFACTURE'S SPECIFICATIONS AND THE CONTRACT DOCUMENTS. IF PERIODIC INSPECTIONS OR OTHER INFORMATION INDICATES A CONTROL HAS BEEN USED INAPPROPRIATELY OR INCORRECTLY, THE CONTRACTOR MUST REPLACE OR MODIFY THE CONTROL FOR SITE SITUATIONS.
2. IF SEDIMENT ESCAPES THE CONSTRUCTION SITE, OFF-SITE ACCUMULATIONS OF SEDIMENT THAT HAVE NOT REACHED A STREAM MUST BE REMOVED AT A FREQUENCY SUFFICIENT TO MINIMIZE OFFSITE IMPACTS. PERMITTEES SHALL NOT INITIATE REMEDIATION/RESTORATION OF A STREAM WITHOUT CONSULTING THE DIVISION FIRST. THIS PERMIT DOES NOT, HOWEVER, AUTHORIZE ACCESS TO PRIVATE PROPERTY.
3. SEDIMENT SHOULD BE REMOVED FROM SEDIMENT TRAPS, SILT FENCES, SEDIMENTATION PONDS, AND OTHER SEDIMENT CONTROLS AS NECESSARY, AND MUST BE REMOVED WHEN DESIGN CAPACITY HAS BEEN REDUCED BY 33%.
4. LITTER, CONSTRUCTION DEBRIS, AND CONSTRUCTION CHEMICALS EXPOSED TO STORM WATER SHALL BE PICKED UP PRIOR TO ANTICIPATED STORM EVENTS, OR OTHERWISE PREVENTED FROM BECOMING A POLLUTANT SOURCE FOR STORM WATER DISCHARGES.
5. PRE-CONSTRUCTION VEGETATIVE GROUND COVER SHALL NOT BE DESTROYED, REMOVED OR DISTURBED MORE THAN 20 CALENDAR DAYS PRIOR TO GRADING OR EARTH MOVING UNLESS THE AREA IS SEEDED AND/OR MULCHED OR OTHER TEMPORARY COVER IS INSTALLED.
6. CLEARING AND GRUBBING MUST BE HELD TO THE MINIMUM NECESSARY FOR GRADING AND EQUIPMENT OPERATION.
7. CONSTRUCTION MUST BE SEQUENCED TO MINIMIZE THE EXPOSURE TIME OF GRADED OR DENUDED AREAS.
8. EROSION AND SEDIMENT CONTROL MEASURES MUST BE IN PLACE AND FUNCTIONAL BEFORE EARTH MOVING OPERATIONS BEGIN, AND MUST BE CONSTRUCTED AND MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD. TEMPORARY MEASURES MAY BE REMOVED AT THE BEGINNING OF THE WORK DAY, BUT MUST BE REPLACED AT THE END OF THE WORK DAY.
9. THE FOLLOWING RECORDS SHALL BE MAINTAINED ON SITE; THE DATES WHEN MAJOR GRADING ACTIVITIES OCCUR; THE DATES WHEN CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON A PORTION OF THE SITE; AND THE DATES WHEN STABILIZATION MEASURES ARE INITIATED.
10. STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICAL IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN SEVEN DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED. EXCEPT IN THE FOLLOWING TWO SITUATIONS: 1. WHERE THE INITIATION OF STABILIZATION MEASURES BY THE SEVENTH DAY IS PRECLUDED BY SNOW COVER OR FROZEN GROUND CONDITIONS, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICAL; OR 2. WHERE CONSTRUCTION ACTIVITY ON A PORTION OF THE SITE IS TEMPORARILY CEASED, AND EARTH DISTURBING ACTIVITIES WILL BE RESUMED WITHIN 15 DAYS, TEMPORARY STABILIZATION MEASURES DO NOT HAVE TO BE INITIATED ON THAT PORTION OF SITE.
11. CONSTRUCTION MUST BE PHASED FOR PROJECTS IN WHICH OVER 50 ACRES OF SOIL WILL BE DISTURBED. AREAS OF THE COMPLETED PHASE MUST BE STABILIZED WITHIN 21 DAYS AFTER ANOTHER PHASE HAS BEEN INITIATED OR OTHERWISE PREVENTED FROM BECOMING A POLLUTANT SOURCE FOR STORM WATER DISCHARGES: AFTER USE, SILT FENCES SHOULD BE REMOVED OR OTHERWISE PREVENTED FROM BECOMING A POLLUTANT SOURCE FOR STORM WATER DISCHARGES.
12. TEMPORARY OR PERMANENT SOIL STABILIZATION SHALL BE ACCOMPLISHED WITHIN 15 DAYS AFTER FINAL GRADING OR OTHER EARTH WORK. PERMANENT STABILIZATION WITH PERENNIAL VEGETATION OR OTHER PERMANENTLY STABLE, NON-ERODING SURFACE SHALL REPLACE ANY TEMPORARY MEASURES AS SOON AS PRACTICABLE.
13. NO SOLID MATERIALS INCLUDING BUILDING MATERIAL, SHALL BE DISCHARGED TO WATERS OF THE UNITED STATES EXCEPT AS AUTHORIZED BY A SECTION 404 PERMIT AND/OR TENNESSEE AQUATIC RESOURCE ALTERATION PERMIT
14. OFFSITE VEHICLE TRACKING OF SEDIMENTS AND THE GENERATION OF DUST SHALL BE MINIMIZED.

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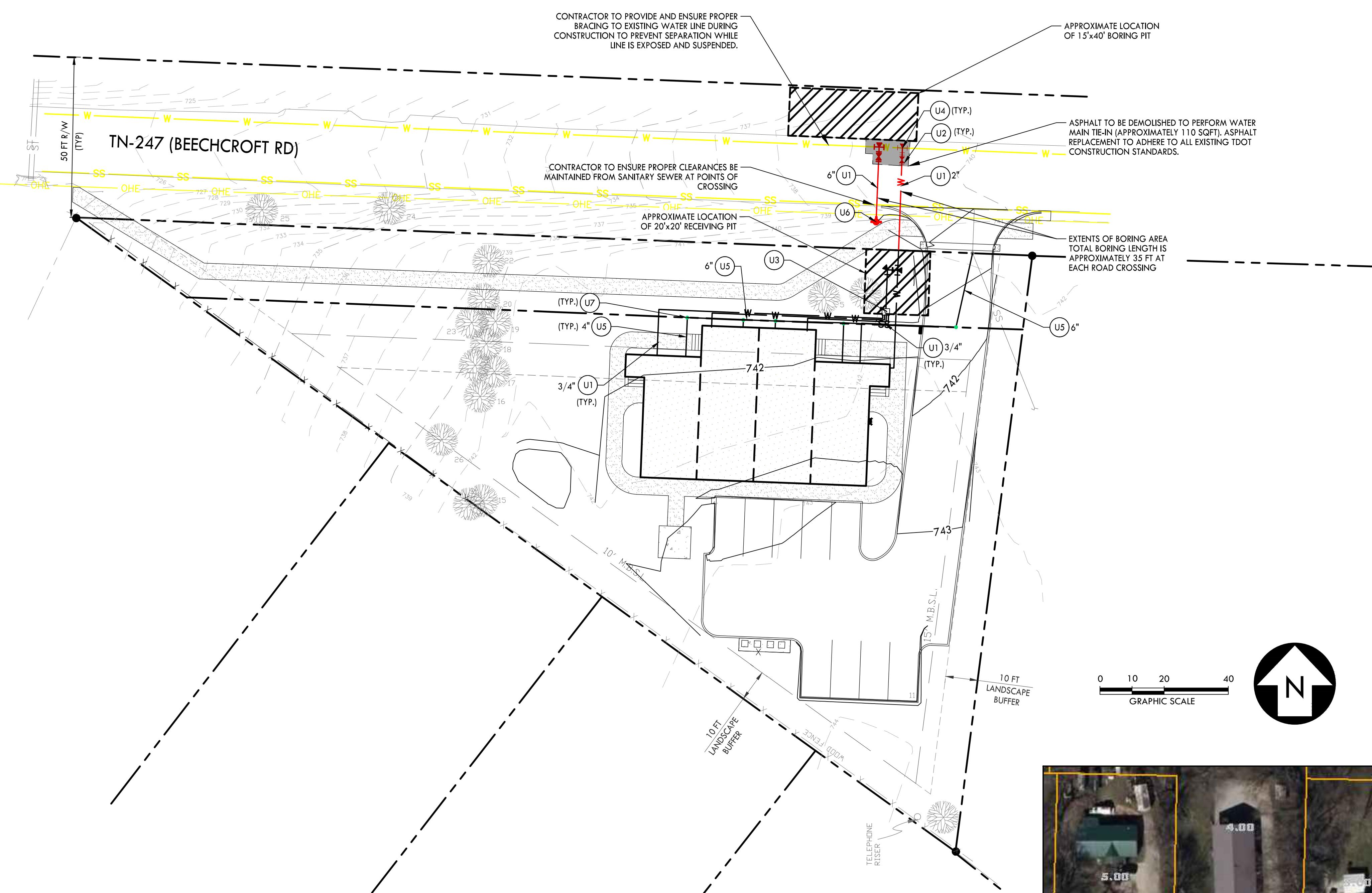
# BEECHCROFT TOWNHOMES

## BEECHCROFT ROAD SPRING HILL, TENNESSEE

No.	DATE		
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01/03/2023 19024

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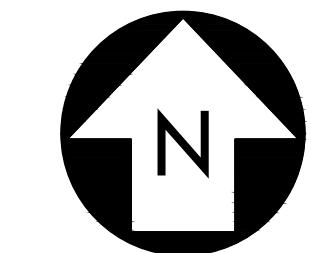
# UTILITY PLAN KEYNOTES

CODE	DESCRIPTION	DETAIL LOCATION
(U1)	WATER LINE - 2"	-
(U2)	GATE VALVE	C8.1 - 1
(U3)	WATER METER BANK - $\frac{3}{4}$ " METERS (QTY 4)	-
(U4)	TEE - SEE PLAN FOR SIZE	-
(U5)	SANITARY SEWER LINE - 6"	-
(U6)	FIRE HYDRANT	-
(U7)	CLEANOUT	C8.0 - 7
(U8)	ENCASED WATER LINE - 6"	NOTE 5

NOTES:

1. ALL BORING WORK TO BE COMPLETED IN COMPLIANCE WITH LOCAL RULES AND REGULATIONS.
2. LOCATION OF FIRE HYDRANT TO BE FINALIZED IN THE FIELD.
3. TRAFFIC CONTROL PLAN FOR LANE CLOSURE OF LOW VOLUME 2-LANE 2-WAY SHALL BE APPLIED DURING CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR ACQUIRING THE PROPER PERMITS FROM THE APPROPRIATE JURISDICTION. SEE ATTACHED FOR DETAILS.
4. ALL PROPOSED KICKERS ARE TO BE CONSTRUCTED AND SET PRIOR TO WATER UTILITY BEING MADE LIVE.
5. ENCASEMENTS SHALL BE OF A DURABLE MATERIAL AND SHALL CONFORM TO THE TDOT RULES AND REGULATIONS FOR ACCOMMODATING UTILITIES WITHIN HIGHWAY RIGHTS-OF-WAY.

## PROPOSED UTILITY LEGEND



# JMB BEECHCROFT TOWNHOMES

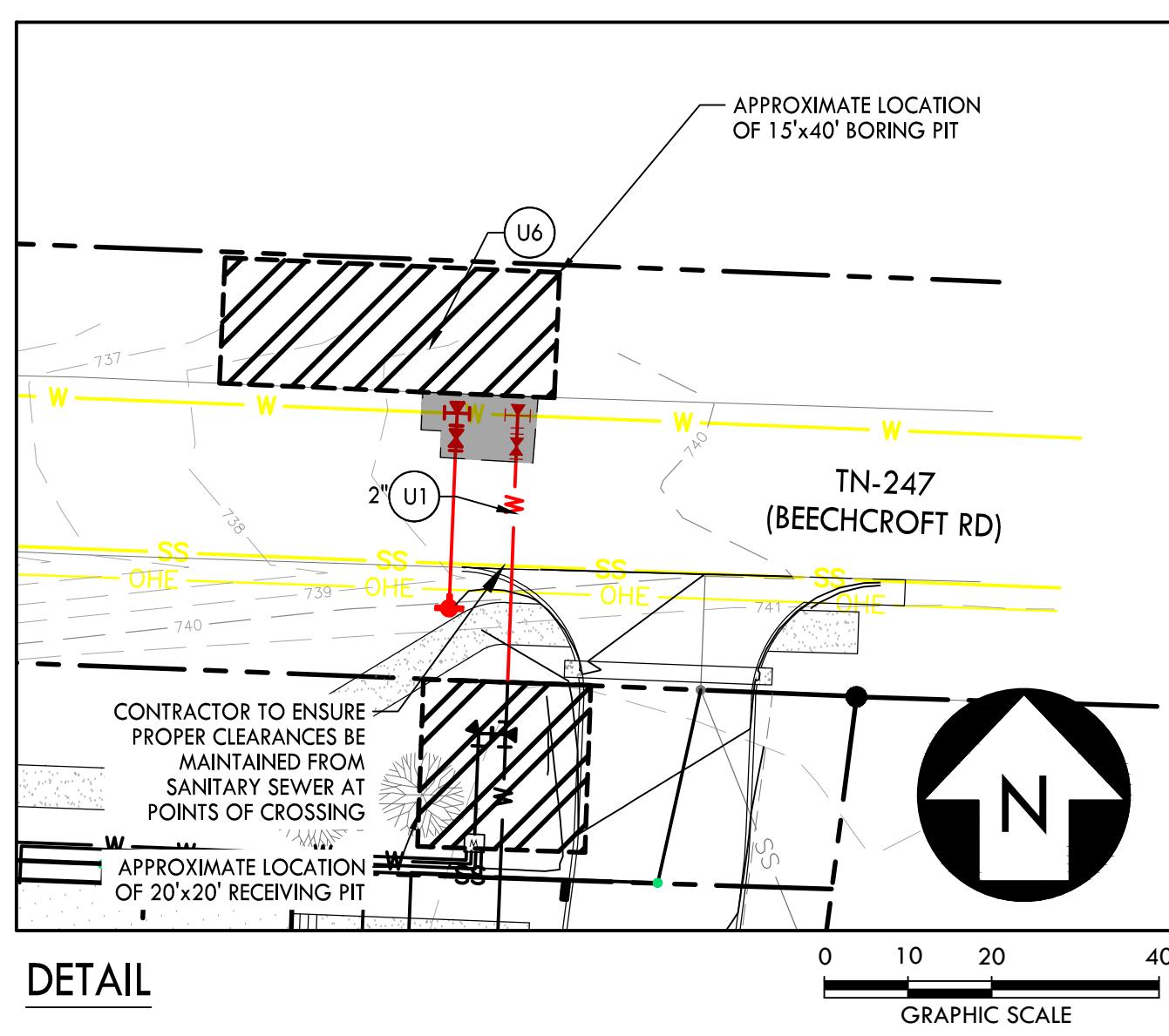
## BEECHCROFT ROAD

BEECHCROFT ROAD  
SPRING HILL, TENNESSEE

REVISIONS	DATE				
No.					
	2/14/2022				
					19024

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## UTILITY PLAN



4

**SECTION A-A**

**SEDIMENT FILTER BAG GENERAL NOTES**

- (A) SPECIAL PROVISION 209B IS TO BE USED FOR SEDIMENT FILTER BAGS. ALL REFERENCES IN SPECIAL PROVISION 209B TO PUMPING FROM SEDIMENT TRAPS ALSO APPLIES TO PUMPING FROM COFFERDAMS.
- (B) SEDIMENT FILTER BAG INSTALLATION, INCLUDING DOWNSLOPE GEOTEXTILE AND SILT FENCE WITH WIRE BACKING SHOULD NOT BE PLACED WITHIN A JURISDICTIONAL WETLAND OR WITHIN 15 FEET (30 FEET DESIRABLE) OF A STABILIZED OUTLET, STREAM, OR OTHER NATURAL WATER RESOURCE. WHEN DISCHARGING TO SEDIMENT-IMPAIRED STREAMS OR EXCEPTIONAL TENNESSEE WATERS, THE BUFFER SHALL BE A MINIMUM OF 30 FEET WITH A DESIRABLE WIDTH OF 60 FEET. BUFFER REQUIREMENT DOES NOT APPLY TO ANY LOCATION ON SITE WITH A VALID ARAP OR EQUIVALENT PERMIT BY FEDERAL AGENCIES.
- (C) CONTRACTOR SHALL EXERCISE CAUTION NOT TO BURST OR DAMAGE THE SEDIMENT FILTER BAG WHEN PUMPING.
- (D) THE LENGTH AND WIDTH OF THE SEDIMENT BAG SHOWN ON THIS DRAWING MAY VARY PER VENDOR SPECIFICATIONS. THE MINIMUM "FOOTPRINT" OF THE BAG SHALL BE 150 SQUARE FEET.
- (E) SEDIMENT FILTER BAGS MAY BE EQUIPPED WITH A SEWN-IN SLEEVE OF SUFFICIENT SIZE TO ACCEPT A MINIMUM FOUR-INCH DIAMETER PUMP DISCHARGE HOSE. A HOSE CONNECTION THROUGH A SLIT IN THE BAG IS ALSO ACCEPTABLE. THE DISCHARGE HOSE SHOULD BE EXTENDED INTO THIS SLEEVE A MINIMUM OF SIX INCHES AND BE TIGHTLY SECURED WITH A HOSE CLAMP OR OTHER SUITABLE MEANS TO PREVENT LEAKAGE.
- (F) THE PUMP DISCHARGE HOSE CONNECTION SLEEVE, OR SLIT, SHALL BE SECURELY TIED OFF DURING DISPOSAL OF THE SEDIMENT FILTER BAG IN ORDER TO PREVENT LEAKAGE OF COLLECTED SEDIMENTS.
- (G) ONLY GEOTEXTILE FABRIC (TYPE III) LISTED ON THE QUALIFIED PRODUCTS LIST SHALL BE USED.
- (H) SURROUND SEDIMENT FILTER BAG ASSEMBLY WITH SILT FENCE WITH WIRE BACKING. SEE STANDARD DRAWINGS EC-STR-3C AND EC-STR-3E FOR INSTALLATION DETAILS.
- (I) EXISTING VEGETATIVE BUFFER TO REMAIN BETWEEN SILT FENCE WITH WIRE BACKING AND STABILIZED OUTLET, STREAM OR OTHER NATURAL WATER RESOURCE. BUFFER ZONE EXEMPTIONS ARE DEFINED BASED ON EXISTING LAND USES.
- (J) SEDIMENT TUBES OR FILTER SOCKS MAY BE USED AS AN ALTERNATIVE TO SILT FENCE WITH WIRE BACKING. SEE STANDARD DRAWINGS EC-STR-37 AND EC-STR-8 FOR INSTALLATION DETAILS. FILTER SOCKS MAY NOT REQUIRE STAKING WHEN APPROVED BY THE ENGINEER.
- (K) SEDIMENT FILTER BAGS SHALL BE PAID FOR UNDER THE FOLLOWING ITEM NUMBERS:
 

209-09.03	SEDIMENT FILTER BAG (15' X 15') PER EACH
209-09.04	SEDIMENT FILTER BAG (15' X 10') PER EACH
303-10.01	MINERAL AGGREGATE (SIZE 57) PER TON
740-10.03	GEOTEXTILE (TYPE III) (EROSION CONTROL) PER SQUARE YARD
- (L) SILT FENCE WITH BACKING, SEDIMENT TUBES, AND FILTER SOCKS SHALL BE PAID FOR ACCORDING TO ITS RESPECTIVE STANDARD DRAWING.
- (M) PAYMENT SHALL INCLUDE ALL MATERIALS AND LABOR NECESSARY FOR CONSTRUCTION, MAINTENANCE, AND REMOVAL OF SEDIMENT FILTER BAGS.
- (N) WHEN SEDIMENT FILTER BAGS ARE REPLACED ONLY THE REPLACEMENT BAG SHALL BE PAID FOR. MAINTENANCE ON ALL OTHER PARTS OF THE SEDIMENT FILTER BAG ASSEMBLY SHALL BE INCLUDED IN THE INITIAL PAYMENT.
- (O) ONLY SEDIMENT FILTER BAGS LISTED ON THE QUALIFIED PRODUCTS LIST MAY BE USED.
- (P) SEDIMENT FILTER BAGS SHALL BE REPLACED WHEN SEDIMENT HAS ACCUMULATED TO ONE-HALF OF THE BAGS CAPACITY OR IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

**PLAN VIEW**

**FILTER BAG SPECIFICATIONS**

PROPERTIES	TEST METHOD
WEIGHT	10.0 oz./yd.
TENSILE STRENGTH	250 lbs.
TENSILE ELONGATION AT BREAK	50%
PUNCTURE STRENGTH	115 lbs.
TRAPEZOIDAL TEAR	100 lbs.
MULLEN BURST	350 lbs.
WATER FLOW RATE	80 gpm/ft. <sup>2</sup>
PERMITTIVITY	1.2 sec. <sup>-1</sup>
UV RESISTANCE	70% str. Ret.

STANDARD BAG MINIMUM DIMENSIONS

15 x 10 ft.	up to 1500 gpm
15 x 15 ft.	up to 2000 gpm

MAXIMUM FLOW RATE

**NOTE:** THE MATERIAL SHALL BE A NON-WOVEN GEOTEXTILE FABRIC BAG RESISTANT TO ROT, MILDEW, PUNCTURE AND TEARING. WITH A MINIMUM SEAM BREAKING STRENGTH OF 200 LBS (90 Kgs) THE SEAMS SHALL DEMONSTRATE LESS ELONGATION AND DEFORMATION OF THE GEOTEXTILE FABRIC.

**EROSION CONTROL PLAN LEGEND:**  SEDIMENT FILTER BAG

**REV. 8-1-12: MODIFIED BUFFER DIMENSION, ADDED BUFFER NOTE, MINOR EDITS TO GENERAL NOTES.**

**REV. 10-26-03: ADDED EROSION CONTROL SYMBOL.**

**REV. 5-27-04: CORRECTED DIMENSION IN SECTION A-A.**

**REV. 4-15-06: ADDED CONNECTION SLEEVE AND OPTIONAL LIFTING STRAPS. REFORMATTED SHEET, REVISED NOTES, MISC. EDITS TO DRAWING.**

**REV. 4-1-08: REMOVED TEMPORARY REFERENCE, REVISED GENERAL NOTES, AND DRAFTING EDITS.**

**REV. 5-14-10: ADDED FILTER BAG SPECIFICATIONS.**

**REV. 2-28-01: CORRECTED PA NUMBER IN PLAN VIEW.**

**REV. 5-27-01: CHANGED ITEM 209-08 TO 209-08.03, 209-08-09.02 AND 303-15.01 TO CHANGED DESCRIPTION IN ITEM 209-20.03.**

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**REV. 5-**

# SEDIMENT FILTER BAG DETAIL

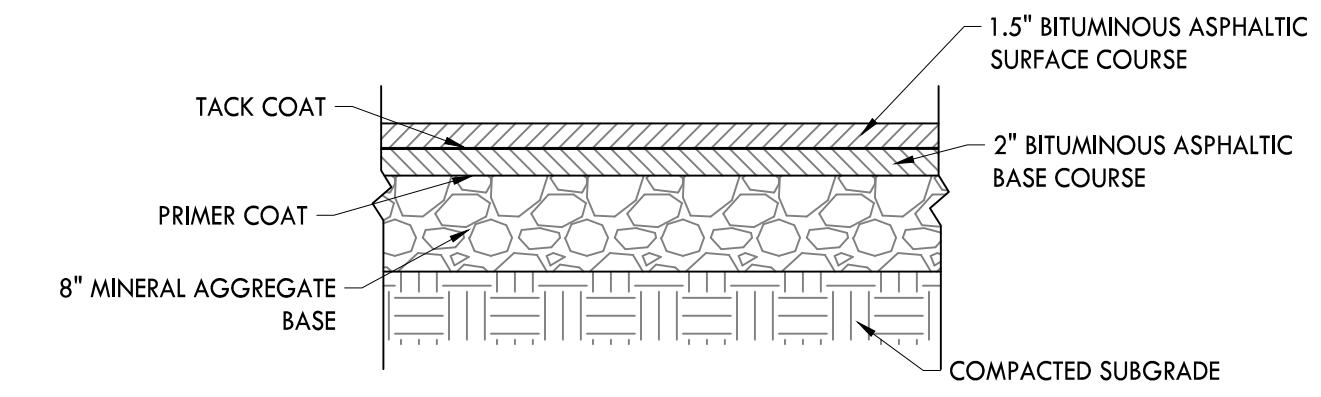
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NOT TO SCALE

5

1

1. ASPHALT REPAIRS TO BE FLUSH WITH EXISTING PAVEMENT.
2. EXISTING ASPHALT BEING REPLACED SHOULD BE CUT AND BROUGHT TO A NEAT LINE BY USING APPROPRIATE EQUIPMENT.



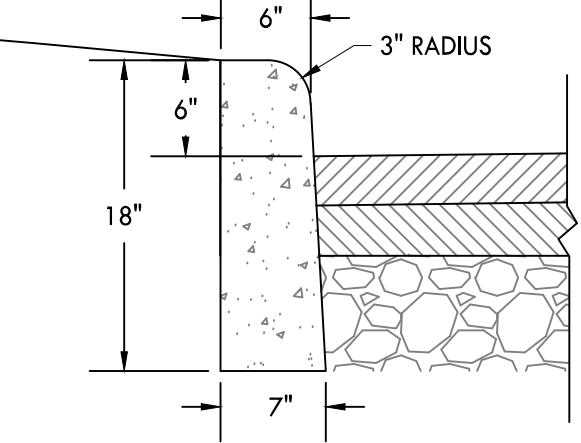
## HEAVY DUTY ASPHALT SECTION

1

## **PAVEMENT SECTIONS**

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NOT TO SCALE



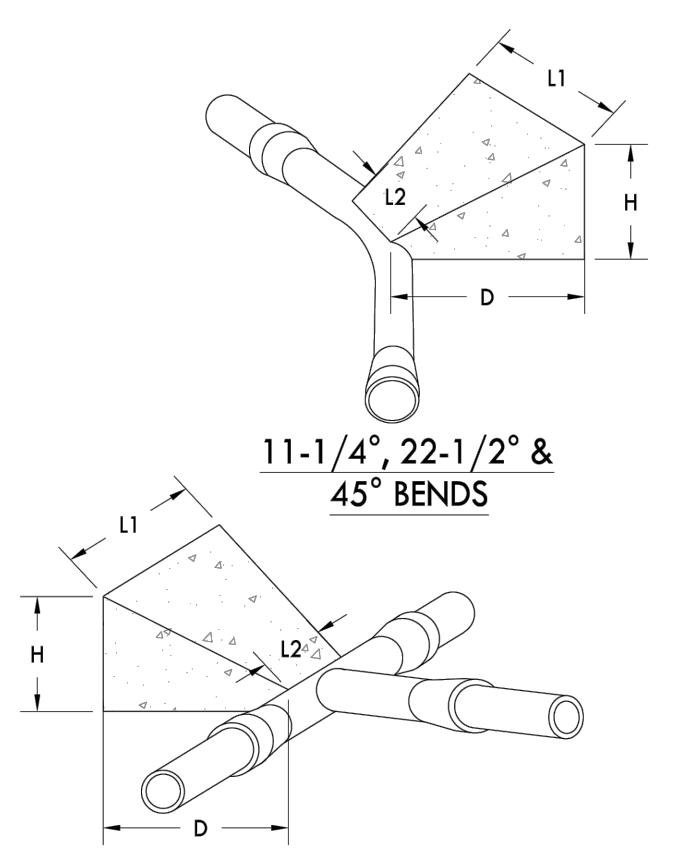
NOTES:

1. CONCRETE TO BE 4000 PSI.
2. PROVIDE CONTROL JOINTS EVERY 10 LINEAR FEET ALONG C
3. PROVIDE EXPANSION JOINTS EVERY 90 LINEAR FEET.

2

# POST CURB

NOT TO SCALE



## THRUST BLOCK DIMENSIONS

THRUST BLOCK DIMENSIONS							
PIPE SIZE (IN)	2" & 2-1/4"	3" & 4"	6"	8"	10"	12"	14"
TEES, PLUGS & TAPPING SLEEVES	L1	18"	24"	24"	36"	48"	54"
	L2	10"	12"	16"	18"	24"	30"
	H	12"	12"	18"	18"	18"	24"
	D	18"	18"	18"	18"	24"	24"
	CU. FT	1.90	2.25	3.50	5.05	7.15	13.00
90° BENDS	L1	18"	24"	30"	39"	54"	54"
	L2	10"	12"	16"	18"	32"	32"
	H	12"	12"	18"	24"	24"	36"
	D	18"	18"	18"	18"	18"	24"
	CU. FT	1.90	2.25	4.05	7.30	10.25	18.00
45° BENDS	L1	18"	18"	24"	30"	36"	42"
	L2	6"	8"	10"	11"	18"	18"
	H	12"	12"	16"	18"	21"	24"
	D	18"	18"	18"	18"	18"	24"
	CU. FT	1.50	1.60	3.20	3.95	4.60	9.00
22-1/2° BENDS	L1	18"	18"	24"	24"	24"	24"
	L2	6"	8"	10"	11"	18"	18"
	H	12"	12"	16"	18"	21"	24"
	D	18"	18"	18"	18"	18"	24"
	CU. FT	1.50	1.60	3.20	3.40	4.60	6.80
11-1/4° BENDS	L1	18"	18"	24"	24"	24"	24"
	L2	6"	8"	10"	11"	18"	18"
	H	12"	12"	16"	18"	21"	21"
	D	18"	18"	18"	18"	18"	24"
	CU. FT	1.50	1.60	3.20	3.40	4.60	6.10

3

# THRUST BLOCK DETAIL

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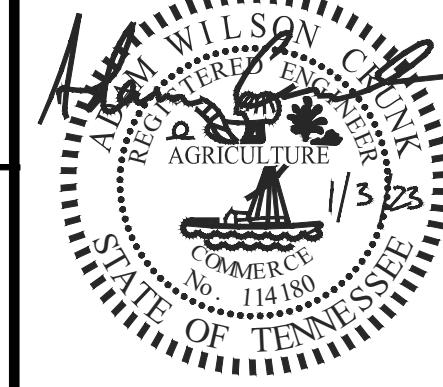
NOT TO SCALE

NOT TO SCALE

# JMB BEECHCROFT TOWNHOMES

BEECHCROFT ROAD  
SPRING HILL, TN 37174

CRUNK ENGINEERING LLC  
44 GENERAL GEORGE PATTON DR.  
SUITE 600  
FRANKLIN, TN 37067  
(615) 873-1795  
[WWW.CRUNKENG.COM](http://WWW.CRUNKENG.COM)



# C8.0



## LANE CLOSURE REQUEST PROCEDURE

### REGION 3 UTILITIES



Lane closure requests are accepted via email, **MONDAY mornings 5AM-10AM only**.

You may submit your request a couple of weeks in advance, (this is particularly helpful prior to a **Holiday**), but the **request must be submitted on a MONDAY morning during the specified hours**.

Please be sure to send the lane closure requests to David Smith, and Tom Cole.

( [David.E.Smith@tn.gov](mailto:David.E.Smith@tn.gov), [Thomas.Cole@tn.gov](mailto:Thomas.Cole@tn.gov) ) Copying both of us will help ensure your request is not missed.

The requests turned in on MONDAY morning would be eligible to begin work the following Thursday at the earliest, daytime 9AM-3PM, nighttime 8PM-5AM, pending the final approval of the Director and/or Commissioner.

**Aerial interstate crossings as well as crossings of interstate ramps, are to be performed Sunday "First-light" 6AM-8AM with rolling roadblock as per TDOT standard TWZ61 (attached).**

***PLEASE NOTE: where Rolling Roadblocks are required, or a Law Enforcement Officer is specifically required on site by an Engineer, by permit, or safety coordinator, TDOT defines Law Enforcement as a Federal, State, County, City or Metropolitan law enforcement officer, with a thusly marked vehicle, who has the authority to write tickets and make arrests within the project limits.***

We do not notify each approved closure.

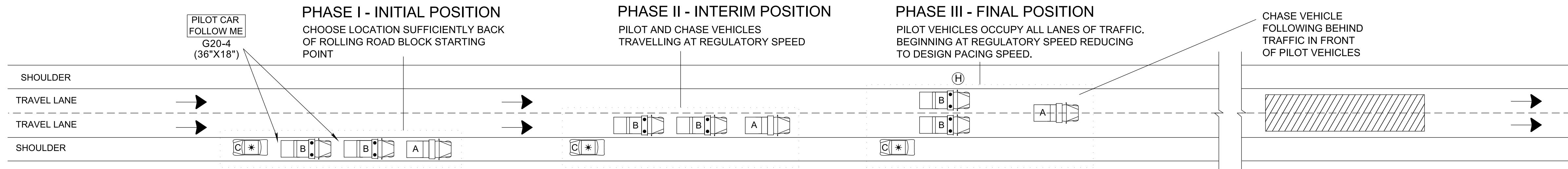
If there is an issue, or your request is denied for any reason, we will reach out to you.(The individual requesting the closure)

You are welcome to inquire as to the status of your lane closure request, but please wait until Wednesday afternoon/Thursday morning to do so.

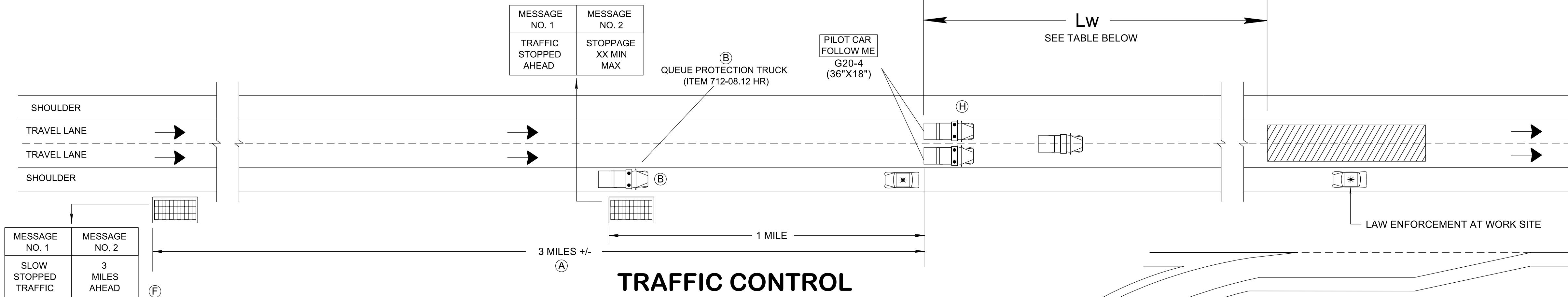
The preferred format for submitting your request is:

**"From Thursday July 8th, through Friday July 23rd, 9AM-3PM someones fiber (Via jimmy joes Construction) will have lane closures on SR6 FRANKLIN PIKE for fiber installation, in between SR 155 Thompson Ln and CALDWELL LN LM 5.35-4.99 Permit# GA-20070612345-2021"**

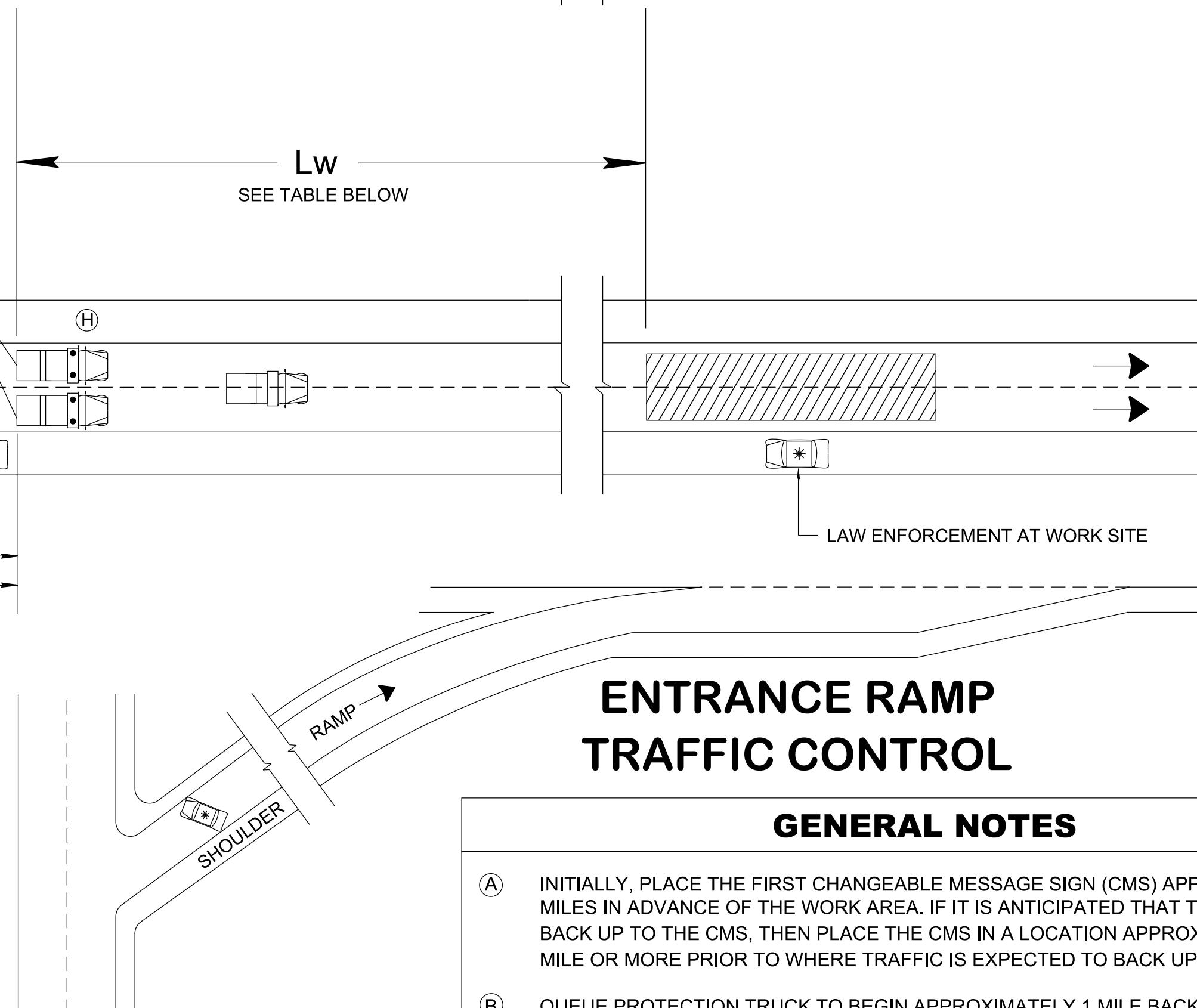
This format gives us all the information we need for submitting your request.



## VEHICLE PROCESSION POSITIONS



## TRAFFIC CONTROL LAYOUT



## ENTRANCE RAMP TRAFFIC CONTROL

### GENERAL NOTES

- (A) INITIALLY, PLACE THE FIRST CHANGEABLE MESSAGE SIGN (CMS) APPROXIMATELY 3 MILES IN ADVANCE OF THE WORK AREA. IF IT IS ANTICIPATED THAT TRAFFIC WILL BACK UP TO THE CMS, THEN PLACE THE CMS IN A LOCATION APPROXIMATELY  $\frac{1}{2}$  MILE OR MORE PRIOR TO WHERE TRAFFIC IS EXPECTED TO BACK UP.
- (B) QUEUE PROTECTION TRUCK TO BEGIN APPROXIMATELY 1 MILE BACK OF PILOT VEHICLES. MAINTAIN  $\frac{1}{2}$  TO 1 MILE DISTANCE FROM BACK OF QUEUE.
- (C) START ROLLING ROAD BLOCK BY HAVING ALL VEHICLES LEAVE THE OUTSIDE SHOULDER AND ACCELERATE TO NORMAL ROADWAY SPEEDS. WHEN NORMAL ROADWAY SPEEDS ARE ATTAINED, THE PILOT VEHICLES (B) WILL POSITION THEMSELVES SIDE BY SIDE AND THEN DECELERATE TO THE SPECIFIED ROLLING ROAD BLOCK SPEED. THE CHASE VEHICLE(S) (A) WILL CONTINUE TO TRAVEL AT NORMAL ROADWAY SPEEDS BEHIND ANY VEHICLES IN FRONT OF THE ROLLING ROAD BLOCK. CLOSE ON-RAMPS/ LOOPS OR STOP TRAFFIC ON SAME BETWEEN PILOT VEHICLES (B) AND THE WORK AREA. LAW ENFORCEMENT MAY BE USED AS A SUBSTITUTE FOR ANY VEHICLE(S). CONSTRUCTION SHALL NOT COMMENCE IN ANY LOCATION WITHIN THE WORK AREA UNTIL THE CHASE VEHICLE(S) (A) HAS CLEARED THAT LOCATION
- (D) COMMUNICATION SHALL BE REQUIRED BETWEEN PILOT VEHICLE, CHASE CAR, AND WORK CREW.
- (E) LAW ENFORCEMENT SHALL BE REQUIRED TO BE PART OF ANY ROLLING ROAD BLOCK PROCESSION AND AT THE WORK SITE AS ENFORCEMENT. AFFECTED ENTRANCE RAMPS SHALL BE CLOSED BY USE OF LAW ENFORCEMENT OR AS DIRECTED BY ENGINEER.
- (F) CMS SHALL BE IN POSITION APPROXIMATELY 7 DAYS AHEAD OF WORK. MESSAGE SHALL DISPLAY PROPOSED DATE AND TIME OF ROLLING ROAD BLOCKS. MESSAGE WILL BE CHANGED JUST PRIOR TO WORK OCCURRING.
- (G) ROLLING ROAD BLOCK TIME OF PERFORMANCE SHOULD BE CAREFULLY CONSIDERED TO HAVE A MINIMAL IMPACT ON TRAFFIC. NIGHT TIME AND OTHER OFF-PEAK HOURS SHOULD BE SELECTED.
- (H) PILOT VEHICLES ARE REQUIRED TO OCCUPY EACH LANE OF THROUGH TRAFFIC FOR THE DURATION OF ROLLING ROAD BLOCK. VEHICLES MUST BE EQUIPPED WITH FLASHING LIGHTS AND "PILOT CAR FOLLOW ME" SIGN (G20-4).
- (I) COST FOR PLANNING, SETUP AND EXECUTION OF ROLLING ROAD BLOCKS TO BE PAID FOR UNDER 712-01 TRAFFIC CONTROL (LS) EXCEPT FOR QUEUE PROTECTION TRUCKS, LAW ENFORCEMENT, AND ADDITIONAL PORTABLE MESSAGE BOARDS IF NEEDED.
- (J) ROLLING ROAD BLOCKS SHALL BE COORDINATED AND APPROVED THROUGH REGIONAL TRAFFIC ENGINEER OR TDOT REGIONAL DIRECTOR.

### NOTES FOR TABLE:

WORK DURATION ( $T_w$ ) IS THE TOTAL TIME ALLOWED FOR WORK ACTIVITY IN MINUTES. THIS TIME STARTS JUST AFTER THE LAST VEHICLE TRAVELING AT THE PRE-PACING REGULATORY SPEED CLEARS THE WORK AREA AND ENDS JUST AS THE PACING OPERATION REACHES THE WORK AREA.  $T_w$  MUST INCLUDE THE TIME REQUIRED TO CLEAR THE ROADWAY OF EQUIPMENT, MATERIALS, AND PERSONNEL.

HOURLY TRAFFIC REQUIREMENTS SHALL BE BASED ON ESTIMATED REAL TIME CONDITIONS AND NOT EXTRAPOLATED FROM AADT. DATA MAY BE REQUIRED TO ACCURATELY CALCULATE HOURLY DIRECTIONAL TRAFFIC VOLUMES. HOURLY TRAFFIC VOLUMES MAY BE CONVERTED TO pcphpl USING THE FOLLOWING:

PASSENGER CARS PER HOUR PER LANE (pcphpl) = (HOURLY DIRECTIONAL VOLUME/ # LANES EACH DIRECTION) \* HEAVY VEHICLE FACTOR

S<sub>r</sub> = REGULATORY SPEED (MPH)  
S<sub>p</sub> = PACING SPEED (MPH)  
T<sub>w</sub> = WORK DURATION (MIN)  
L = TOTAL PACING DISTANCE IN MILES

$$L = (tw/60) * Sp \left( \frac{Sp}{(S_r - Sp)} \right) + 1$$

$$L = L_c + L_w$$

L<sub>c</sub> = DISTANCE PACED VEHICLES MUST TRAVEL BEFORE THE VEHICLES AT REGULATORY SPEED HAVE CLEARED THE WORK ZONE

$$L_c = \left( \frac{(tw/60) * Sp^2}{(S_r - Sp)} \right)$$

L<sub>w</sub> = DISTANCE PACED VEHICLES TRAVEL WHILE WORK IS PERFORMED

$$L_w = \left( \frac{tw}{60} * Sp \right)$$

F<sub>hv</sub> = HEAVY VEHICLE FACTOR

$$F_{hv} = 1 + \left( \frac{Pt}{100} \right) * 0.5$$

Pt = % TRUCKS

### TOTAL TRAFFIC PACING DISTANCES

#### Lw (MILES)

$$Sp = 20; pcphpl \leq 1,750$$

Tw Sr	5 min	10 min	15 min	20 min	25 min	30 min
70 mph	2.3	4.7	7.0	9.3	*	*
65 mph	2.4	4.8	7.2	9.6	*	*
60 mph	2.5	5.0	7.5	10.0	*	*
55 mph	2.6	5.2	7.9	*	*	*
50 mph	2.8	5.6	8.3	*	*	*

\* DISTANCE NOT RECOMMENDED DUE TO EXCESSIVE WORK TIMES AND TRAFFIC QUEUES POSSIBLE. APPROVAL OF WORK ZONE DESIGN DEVIATION IS REQUIRED

$$Sp = 15; pcphpl \leq 1,440$$

Tw Sr	5 min	10 min	15 min	20 min	25 min	30 min
70	1.6	3.2	4.8	6.4	*	*
65	1.6	3.3	4.9	6.5	*	*
60	1.7	3.3	5.0	6.7	*	*
55	1.7	3.4	5.2	6.9	*	*
50	1.8	3.6	5.4	7.1	*	*

\* DISTANCE NOT RECOMMENDED DUE TO EXCESSIVE WORK TIMES AND TRAFFIC QUEUES POSSIBLE. APPROVAL OF WORK ZONE DESIGN DEVIATION IS REQUIRED

### SPECIAL NOTES

IF THE MINIMUM DESIGN REQUIREMENTS OF THIS STANDARD DRAWING CANNOT BE MET, A WORK ZONE DESIGN DEVIATION MUST BE SUBMITTED TO AND APPROVED BY THE STATE WORK ZONE ENGINEER.

### CHANNELIZATION DEVICE LEGEND



DIRECTION OF TRAFFIC



WORK SPACE



PILOT VEHICLE



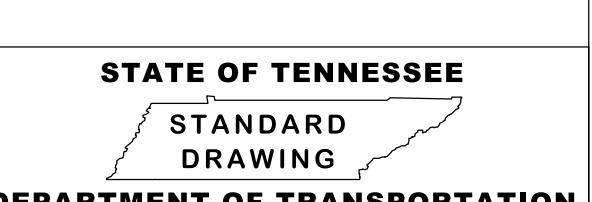
CHASE VEHICLE



LAW ENFORCEMENT (ITEM NO 712-08.01 HR)



CHANGEABLE MESSAGE SIGN (ITEM NO 713-16.01 EA)



ROLLING  
ROADBLOCK  
DETAIL FOR  
DIVIDED  
HIGHWAYS