



TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION
Division of Water Resources
William R. Snodgrass Tennessee Tower, 312 Rosa L. Parks Avenue, 11th Floor,
Nashville, Tennessee, 37243
1-888-891-8332 (TDEC)

TDEC
NASHVILLE
OFFICE
RECEIVED
2018 DEC -3 PM 4:27

Application for Aquatic Resource Alteration Permit (ARAP) & State §401 Water Quality Certification

OFFICIAL STATE USE ONLY	Site #:	Permit #: NR1804.315	
Section 1. Applicant Information <i>(individual responsible for site, signs certification below)</i>			
Applicant Name (company or individual): Regent Development, LLC		SOS #: 000343007 Status: Active	
Primary Contact/Signatory: David McGowan		Signatory's Title or Position: President	
Mailing Address: 6901 Lenox Village Drive - Suite 107		City: Nashville	State: TN Zip: 37211
Phone: (615) 333-9000	Fax:	E-mail: David.McGowan@regenthomes-tn.com	
Section 2. Alternate Contact/Consultant Information <i>(a consultant is not required)</i>			
Alternate Contact Name: Eric Olsen			
Company: Anderson, Delk, Epps & Associates, Inc.		Title or Position: Engineer	
Mailing Address: 618 Grassmere Park Drive - Suite 4		City: Nashville	State: TN Zip: 37211
Phone: (615) 331-0809	Fax: (615) 331-0110	E-mail: AndersonDelk@bellsouth.net	
Section 3. Fee <i>(Application will be incomplete until fee is received)</i>			
<input type="checkbox"/> No Fee		<input checked="" type="checkbox"/> Fee Submitted with Application	
		Amount Submitted: \$ 500.00	
Current application fee schedules can be found at the Division of Water Resources webpage at: https://www.tn.gov/environment/permit-permits/water-permits1/aquatic-resource-alteration-permit--arap-.html or by calling (615) 532-0625. Please make checks payable to "Treasurer, State of Tennessee".			
Billing Contact Name (if different from Applicant):		Name:	Email:
Address:		Phone:	
Section 4. Project Details <i>(fill in information and check appropriate boxes)</i>			
Site or Project Name: Carothers Crossing - Phase 7, Section 1		Nearest City, Town or Major Landmark: Cane Ridge Park	
Street Address or Location (include Zip): Park Terrace Lane and Winding Creek Drive, Nolensville, TN 37135			
County(ies): Davidson		MS4 Jurisdiction: Nashville	Latitude (dd.dddd): 35.9836 Longitude (dd.dddd): -86.6155
Resource Proposed for Alteration: <input checked="" type="checkbox"/> Stream / River <input type="checkbox"/> Wetland <input type="checkbox"/> Reservoir			
Name of Water Resource (for more information, access http://tdeconline.tn.gov/dwr): Unnamed Drain to East Branch Hurricane Creek			
Brief Project Description (a more detailed description is required under Section 8): Installation of a minor road crossing on Park Terrace lane with water and utilities (35.9832, -86.6144).			
Does the proposed activity require approval from the U.S. Army Corps of Engineers, the Tennessee Valley Authority, or any other federal, state, or local government agency? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
If Yes, provide the permit reference numbers:			
Is the proposed activity associated with a larger common plan of development: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
If Yes, submit site plans and identify the location and overall scope of the common plan of development.			
Plans attached? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
If applicable, indicate any other federal, state, or local permits that are associated with the overall project site (common plan of development) that have been obtained in the past (e.g., construction general permit and/or other ARAP):			
TNR242073			

Application for Aquatic Resource Alteration Permit (ARAP) & State §401 Water Quality Permit

Section 5. Project Schedule (fill in information and check appropriate boxes)

Proposed Start Date: December 2018

Estimated End Date: January 2021

Is any portion of the activity complete now?

☐ Yes

☒ No

If yes, describe the extent of the completed portion:

The required information in Sections 6-11 must be submitted on a separate sheet(s) and submitted in the same numbered format as presented below. If any question is not applicable, state the reason why it is not applicable.

Section 6. Description

Attached
Yes No

6.1	A narrative description of the scope of the project	<input type="checkbox"/>	<input type="checkbox"/>
6.2	USGS topographic map indicating the exact location of the project (can be a photographic copy)	<input type="checkbox"/>	<input type="checkbox"/>
6.3	Photographs of the resource(s) proposed for alteration with location description (photo locations should be noted on map)	<input type="checkbox"/>	<input type="checkbox"/>
6.4	A narrative description of the existing stream and/or wetland characteristics including, but not limited to, dimensions (e.g., depth, length, average width), substrate and riparian vegetation	<input type="checkbox"/>	<input type="checkbox"/>
6.5	A narrative description of the proposed stream and/or wetland characteristics including, but not limited to, dimensions (e.g., depth, length, average width), substrate and riparian vegetation	<input type="checkbox"/>	<input type="checkbox"/>
6.6	In the case of wetlands, include a wetland delineation with delineation forms and site map denoting location of data points	<input type="checkbox"/>	<input type="checkbox"/>
6.7	A copy of all hydrologic or jurisdictional determination documents issued for water resources on the project site	<input type="checkbox"/>	<input type="checkbox"/>

Section 7. Project Rationale

Attached
Yes No

Describe the need for the proposed activity, including, but not limited to, the purpose, alternatives considered, and what will be done to avoid or minimize impacts to water resources

☐ ☐

Section 8. Technical Information

Attached
Yes No

8.1	Detailed plans, specifications, blueprints, or legible sketches of present site conditions and the proposed activity. Plans must be 8.5 x 11 inches. Additional larger plans may also be submitted to aid in application review. The detailed plans should be superimposed on existing and new conditions (e.g., stream cross sections where road crossings are proposed)	<input type="checkbox"/>	<input type="checkbox"/>
8.2	For both the proposed activity and compensatory mitigation, provide a discussion regarding the sequencing of events and construction methods	<input type="checkbox"/>	<input type="checkbox"/>
8.3	Depiction and narrative on the location and type of erosion prevention and sediment control (EPSC) measures for the proposed alterations	<input type="checkbox"/>	<input type="checkbox"/>

Section 9. Water Resources Degradation (degree of proposed impact) Note that in most cases, activities that exceed the scope of the General Permit limitations are considered greater than de minimis degradation to water quality.

Please provide your basis for concluding the proposed activity will cause one of the following levels of water quality

degradation:

a. ☒ De minimis degradation

b. ☐ Greater than de minimis degradation (if greater than de minimis complete Sections 10-11)

For information and guidance on the definition of de minimis and degradation, refer to the Antidegradation Statement in Chapter 0400-40-03-.06 of the Tennessee Water Quality Criteria Rule at: <http://publications.tnsosfiles.com/rules/0400/0400-40/0400-40.htm>

For information on specifics on what General Permits can cover, refer to the Natural Resources Unit webpage at:

<http://www.tn.gov/environment/permit-permits/water-permits/1/aquatic-resource-alteration-permit--arap-/permit-water-aquatic-resource-alteration-list-of-general-permits.html>

Application for Aquatic Resource Alteration Permit (ARAP) & State §401 Water Quality Permit


Section 10. Detailed Alternatives Analysis		Attached	
		Yes	No
10.1	Analyze all reasonable alternatives and describe the level of degradation caused by each of the feasible alternatives	<input type="checkbox"/>	<input checked="" type="checkbox"/>
10.2	Discuss the social and economic consequences of each alternative	<input type="checkbox"/>	<input checked="" type="checkbox"/>
10.3	Demonstrate that the degradation associated with the preferred alternative will not violate water quality criteria for uses designated in the receiving waters, and is necessary to accommodate important economic and social development in the area	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Section 11. Compensatory Mitigation		Attached	
		Yes	No
11.1	A detailed discussion of the proposed compensatory mitigation	<input type="checkbox"/>	<input checked="" type="checkbox"/>
11.2	Describe how the compensatory mitigation would result in no net loss of resource value	<input type="checkbox"/>	<input checked="" type="checkbox"/>
11.3	Provide a detailed monitoring plan for the compensatory mitigation site	<input type="checkbox"/>	<input checked="" type="checkbox"/>
11.4	Describe the long-term protection measures for the compensatory mitigation site (e.g., deed restrictions, conservation easement)	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Certification and Signature

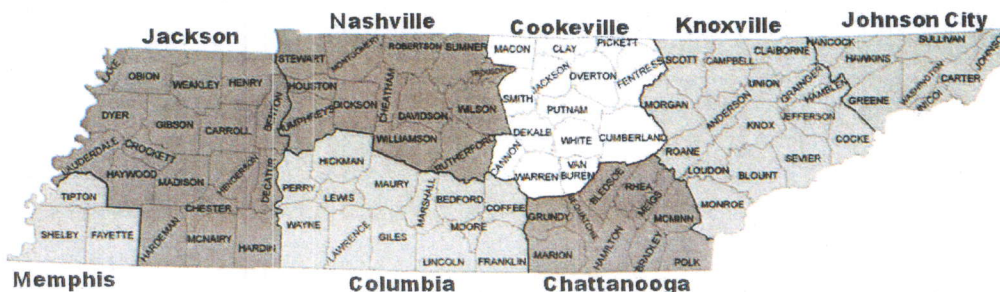
An application submitted by a corporation must be signed by a principal executive officer; from a partnership or proprietorship, by the partner or proprietor respectively; from a municipal, state, federal or other public agency or facility, the application must be signed by either a principal executive officer, ranking elected official, or other duly authorized employee.

I certify under penalty of law that this document and all attachments were prepared by me, or under my direction or supervision. The submitted information is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. As specified in Tennessee Code Annotated Section 39-16-702(a)(4), this declaration is made under penalty of perjury.

David McGowan	President		10/30/12
Printed Name	Official Title	Signature	Date

Submitting the form and obtaining more information. Note that this form must be signed by the principal executive officer, partner or proprietor, or a ranking elected official in the case of a municipality; for details see **Certification and Signature** statement above. For more information, contact your local EFO at the toll-free number 1-888-891-8332 (TDEC). Submit the completed ARAP Application form (keep a copy for your records) to the appropriate EFO for the county(ies) where the ARAP activity is located, addressed to **Attention: ARAP Processing**. You may also electronically submit the complete application and all associated attachments to water.permits@tn.gov.

EFO	Street Address	Zip Code	EFO	Street Address	Zip Code
Memphis	8383 Wolf Lake Drive, Bartlett	38133-4119	Cookeville	1221 South Willow Ave.	38506
Jackson	1625 Hollywood Drive	38305-4316	Chattanooga	1301 Riverfront Pkwy., Ste. 206	37402
Nashville	711 R S Gass Boulevard	37243	Knoxville	3711 Middlebrook Pike	37921
Columbia	1421 Hampshire Pike	38401	Johnson City	2305 Silverdale Road	37601



ANDERSON, DELK, EPPS & ASSOCIATES, INC.
618 GRASSMERE PARK, SUITE 4
NASHVILLE, TN 37211-3677

26574

DATE 11/30/2018

87-5/640

PAY
TO THE
ORDER OF

State of Tennessee

\$ 500.00

Five hundred and 00/100

DOLLARS



Security Features
Details on Back

usbank.

Application Fee

FOR Carothers Crossing Road Crossing ARAP

Pat Jee 3W

MP

Application for Aquatic Resource Alteration Permit (ARAP)

Carothers Crossing

Phase 7, Section 1

Property Map 188, p/o Parcel 8.00 Davidson County
7211 Carothers Road, Nolensville, TN 37135
November 1, 2018

ROADWAY CROSSING WITH UTILITIES – PARK TERRACE LANE

Section 6 : Project Description

- (6.1) **Description of Work to be Done :** Approximately 89 linear feet of a single-span, 8' wide x 4' high bottomless slab bridge (State Drawing No. STD-17-112 or equal) with utility crossings. The underground utilities will be installed in the fill above the bridge and will include an 8" water line, electric, gas, and telecom.
- (6.2) **See attached map**
- (6.3) **See attached photos**
- (6.4) **Description of Existing Drain :** Some flow at time of examination. The drain is roughly 5' wide with a rocky bottom with steep eroded banks covered in grass and scattered vegetation.
- (6.5) **Description of Proposed Drain :** The existing drain characteristics upstream and downstream of the proposed bottomless slab bridge are to be maintained. The slopes along the headwall are to be stabilized using rip rap. Graded slopes are to be 3 to 1 slopes maximum.
- (6.6) **Not Applicable**
- (6.7) **No determination documents issued for site.**

Section 7 : Project Rational

The purpose of the proposed project is to provide roadway and utilities connections within the Carothers Crossing development. The proposed road crossing will provide an access point to Phase 7, Section 1 and future phases/sections of Carothers Crossing.

The existing drain runs through the length of the entire remaining site, so the crossing is needed to provide access between both sides of the drain. Two crossings area proposed to provide the required two access paths for emergency vehicle as required by the International Fire Code.

The proposed roadway was designed to have the least amount of fill at the bridge location possible. A bottomless slab bridge was also used to minimize the obstruction to migrating wildlife. The proposed fill is sloped at a 3 to 1 slope from the edge of sidewalk to the toe of slope. This was to minimize the width of the proposed crossing.

An alternative to the proposed slab bridge would be to install a span bridge. While this would limit the fill and the enclosure of the crossing, it would be significantly more expensive. The price of such a bridge would be more than could be justified for such a development.

Section 8 : Technical Information

(8.1) See attached detailed plans

(8.2) Mitigation Details : No Mitigation required.

Proposed Sequence of Events : 1) Install perimeter silt fence. Any flow at time of construction to be blocked off and diverted using coffer dams, geotextile tubes, and/or pumps. 2) Area to be grubbed. Disturbance of the area to be done no greater than 20 days prior to planned grading or construction activity. 3) Bridge footing locations are to be excavated to suitable material. All excavation to be done by hoe ram. 4) Bridge to be constructed. 5) Backfill along bridge sides to be done as shown on bridge plans. 6) Remaining area to be filled as shown on approved plan. Silt fence, rip rap, and slope protection to be installed as shown on plan. All disturbed areas are to be seeded and strawed, unless planned grading activities are to resume within 15 days. 7) Install underground water line and utilities in fill above bridge. 8) Roadway construction. 9) Final stabilization.

Construction Methods: Excavation to be done by hoe ram. Back fill around bridge to be done as shown on state standard details or bridge plan. Any unsuitable material excavated is to be removed from crossing area and disposed of properly.

(8.3) EPSC Measures: Silt fence will be used to limit the amount of sediments being discharged. 3 to 1 slopes are to be stabilized with erosion control matting, and rip rap is to be used to stabilize the slopes along the banks of the wingwalls. All work to be in the dry by the contractor using coffer dams, geotextile tubes, and/or pumps. (see attached plan)

Section 9 : Water Resources Degradation (degree of proposed impact)

Will only cause de minimis degradation to water quality

The proposed work falls within the scope of the respective General Permit limitations.

Section 10 : Detailed Alternative Analysis

(10.1) Not Applicable (Section 9)

(10.2) Not Applicable (Section 9)

(10.3) Not Applicable (Section 9)

Section 11 : Mitigation

(11.1) Not Applicable (Section 9)

The proposed encapsulation by the two slab bridges is less than the allowable encapsulation without mitigation for the site. The approximately 89 linear feet of the Park Terrace Lane crossing combined with the approximately 85 linear feet of the Carson Meadows Lane crossing encapsulate approximately 175 linear feet of stream for the project site.

(11.2) Not Applicable (Section 9)

(11.3) Not Applicable (Section 9)

(11.4) Not Applicable (Section 9)

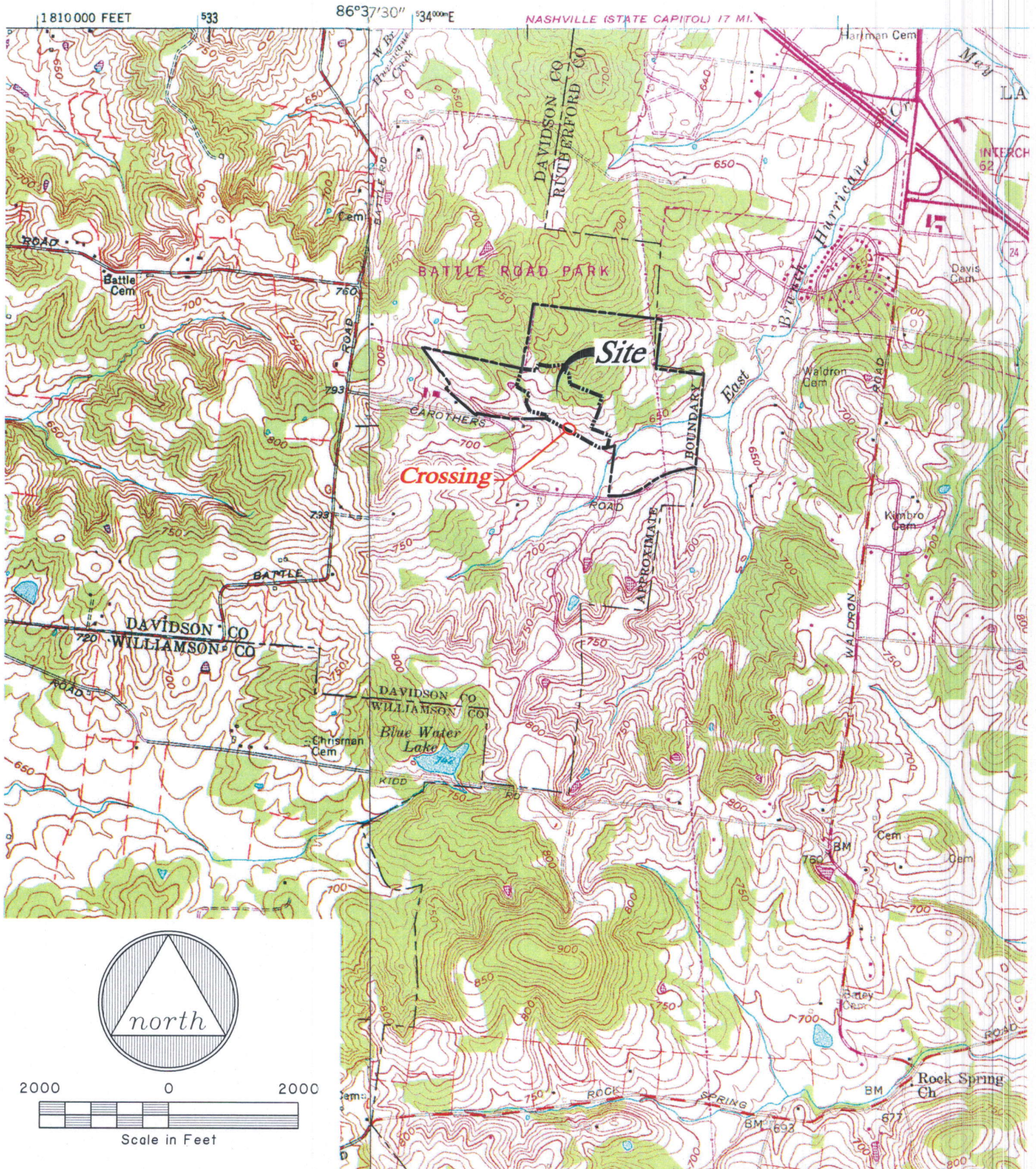
(11.5) Not Applicable (Section 9)

NOLENVILLE, TENN.
N3552.5-W8637.5/7.5
1957
PHOTOREVISED 1979
DMA 3655 I NW-SERIES V841

NOLENVILLE QUADRANGLE
TENNESSEE
7.5 MINUTE SERIES (TOPOGRAPHIC)

SMYRNA, TENN.
35086-H5-11-024
1957
PHOTOREVISED 1983
DMA 3655 I NE-SERIES V841

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY



CAROTHERS CROSSING ~ TN

MASTER PLAN

Master Plan

The Master Plan for Carothers Crossing strikes a balance between being a legitimate regional extension of a pre-existing community (Laverne), and a collection of freestanding villages in a rural landscape. The plan configuration of each of the four villages is dictated by the unique topography associated with each village's location on the site, the natural features of the site to be retained or enhanced, and the intended functional role or character of each particular village.

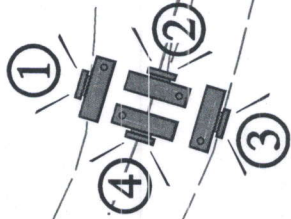
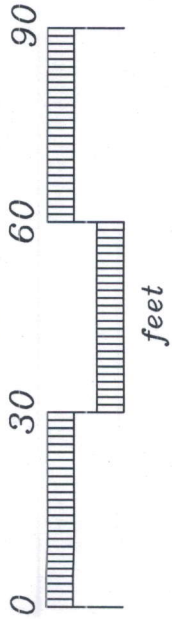
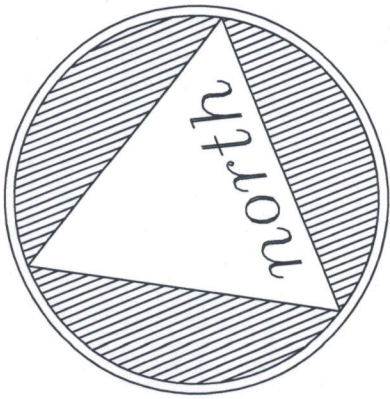
The primary form gives in terms of natural features and local amenities are the large open meadows to the east, the deep ravines and ridges to the south, the large knoll and the existing regional park to the north, and the creeks which traverse the site in a largely west to east direction. A single existing thoroughfare, Carothers Road, also traverses the site in an east and west orientation, which will be replaced by an interconnected street network, serving the larger regional road network.

This road, properly designed to allow it to be safely and appropriately integrated into the Master Plan, will also be slightly realigned to allow it to help energize the Town Center Village, provide convenient access to same, and to better deal with issues and concerns of adjoining property owners on Battle Road regarding traffic and headlights. This realignment, along with a more urbanized section, should not impact in any substantive way, either Carothers Road's capacity or its ability to carry out its role within the larger regional transportation network.

Altogether, the resulting master plan represents an optimal response to the unique features and attributes of the site and the needs of the present and future residents in and around Carothers Crossing.

* Master Plan shown for illustrative purposes and intent. Actual detailed plans and locations of individual villages, streets and lots may vary, subject to constraints and conditions as yet to be determined; however, any changes proposed must be consistent with the intent of the illustrative plan.





EXIST.

8"

Park Terrace Ln

S

W

Carothers Crossing

PHASE 2, SECTION 2

CAROTHERS CROSSING
PHASE 7, SECTION 1
PICTURE LOCATION EXHIBIT
ROAD CROSSING - PARK TERRACE LN

(123)

Carothers Crossing Phase 7, Section 1 - Proposed Road Crossing - Park Terrace Lane



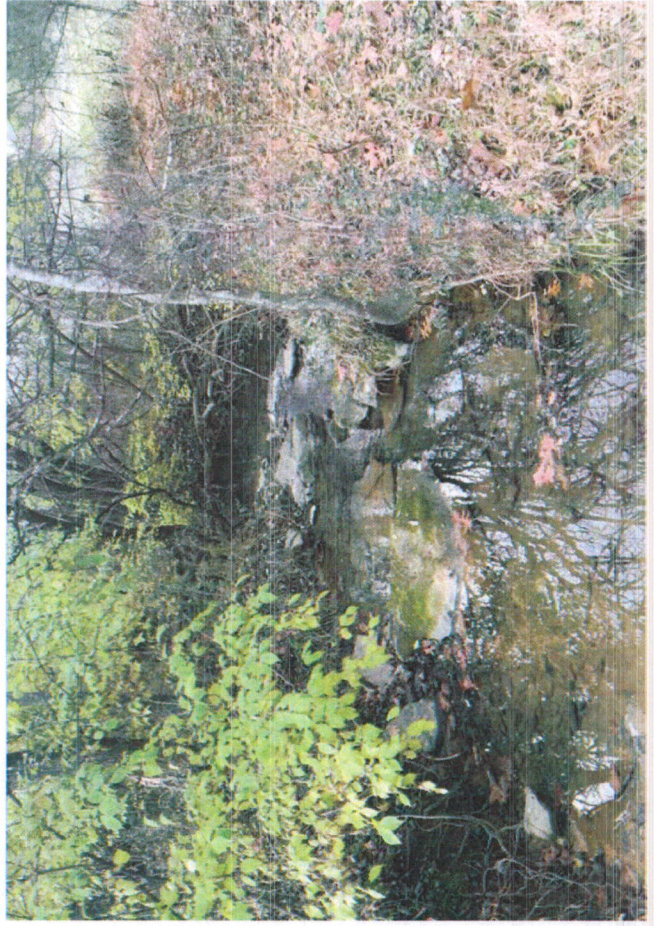
1. Looking at Bank (Northerly)



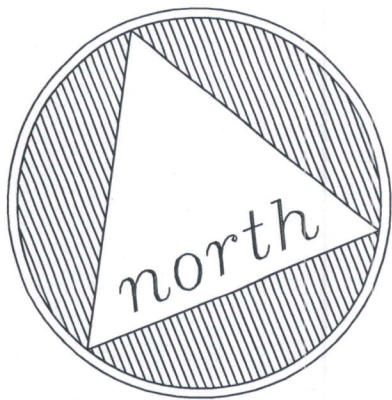
2. Looking Downstream (Easterly)



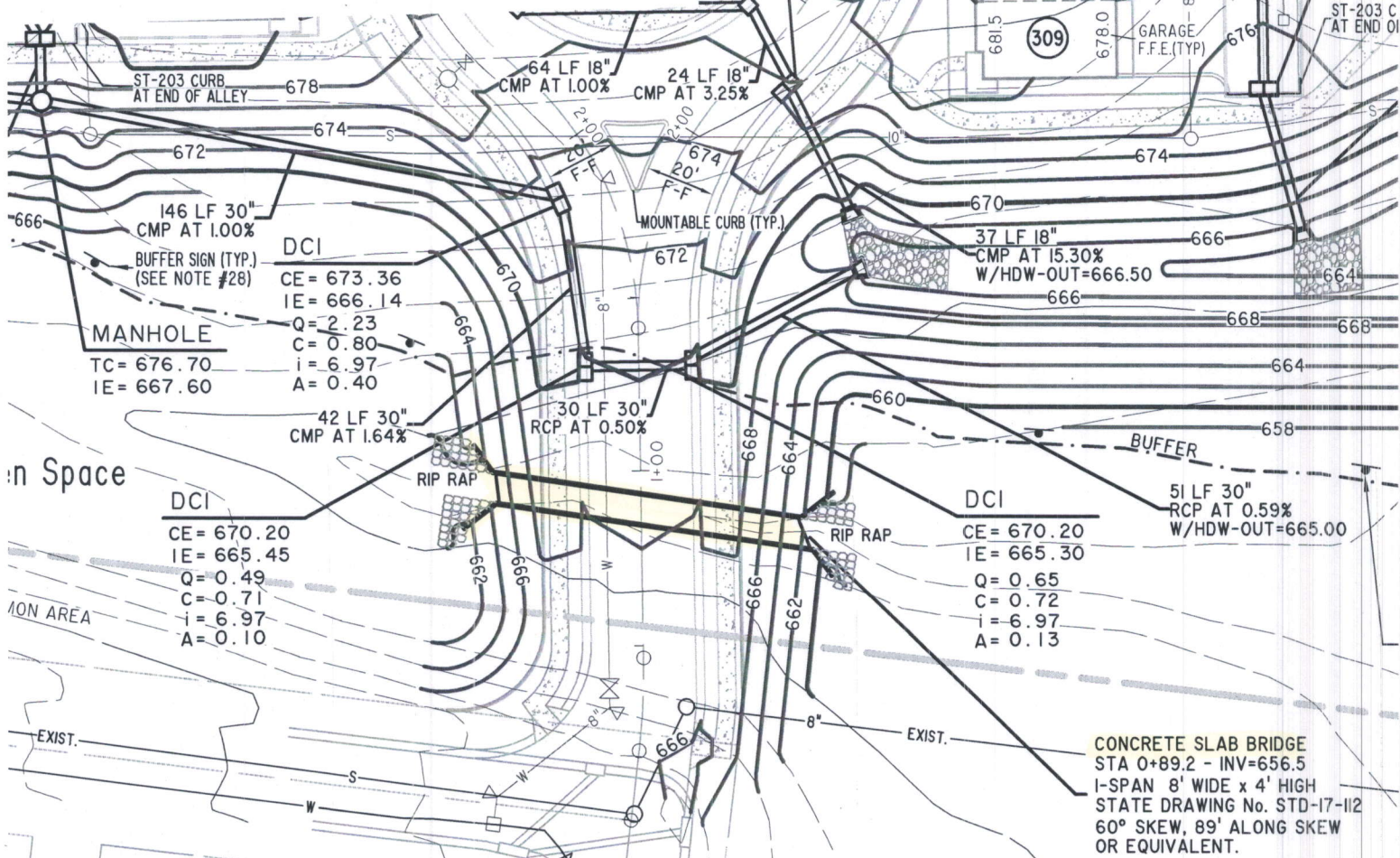
3. Looking at Bank (Southerly)



4. Looking Upstream (Westerly)



feet



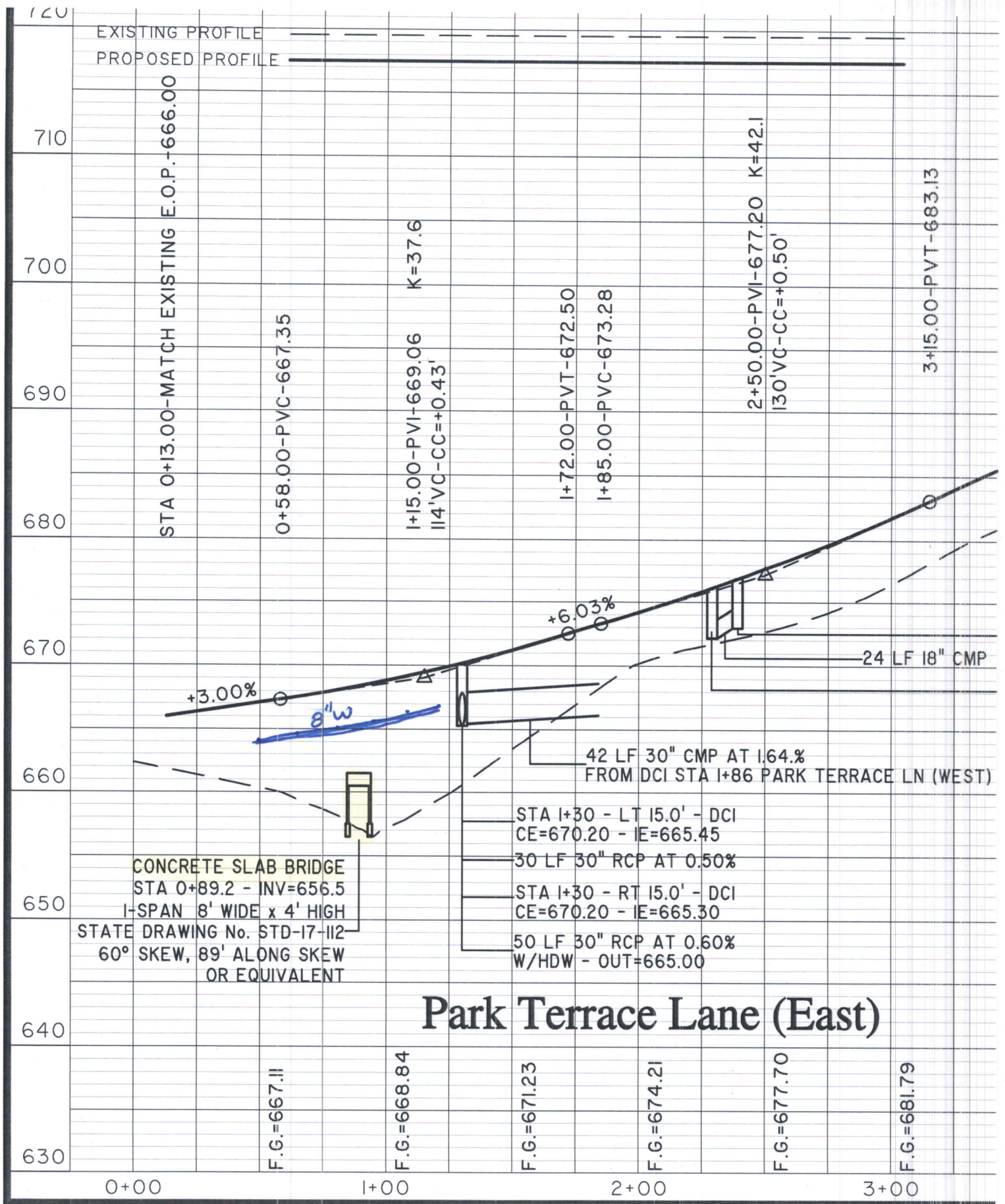
Carothers Crossing

PHASE 2, SECTION 2

INSTR. NO. 20070807-0093935
R.O.D.C., TN

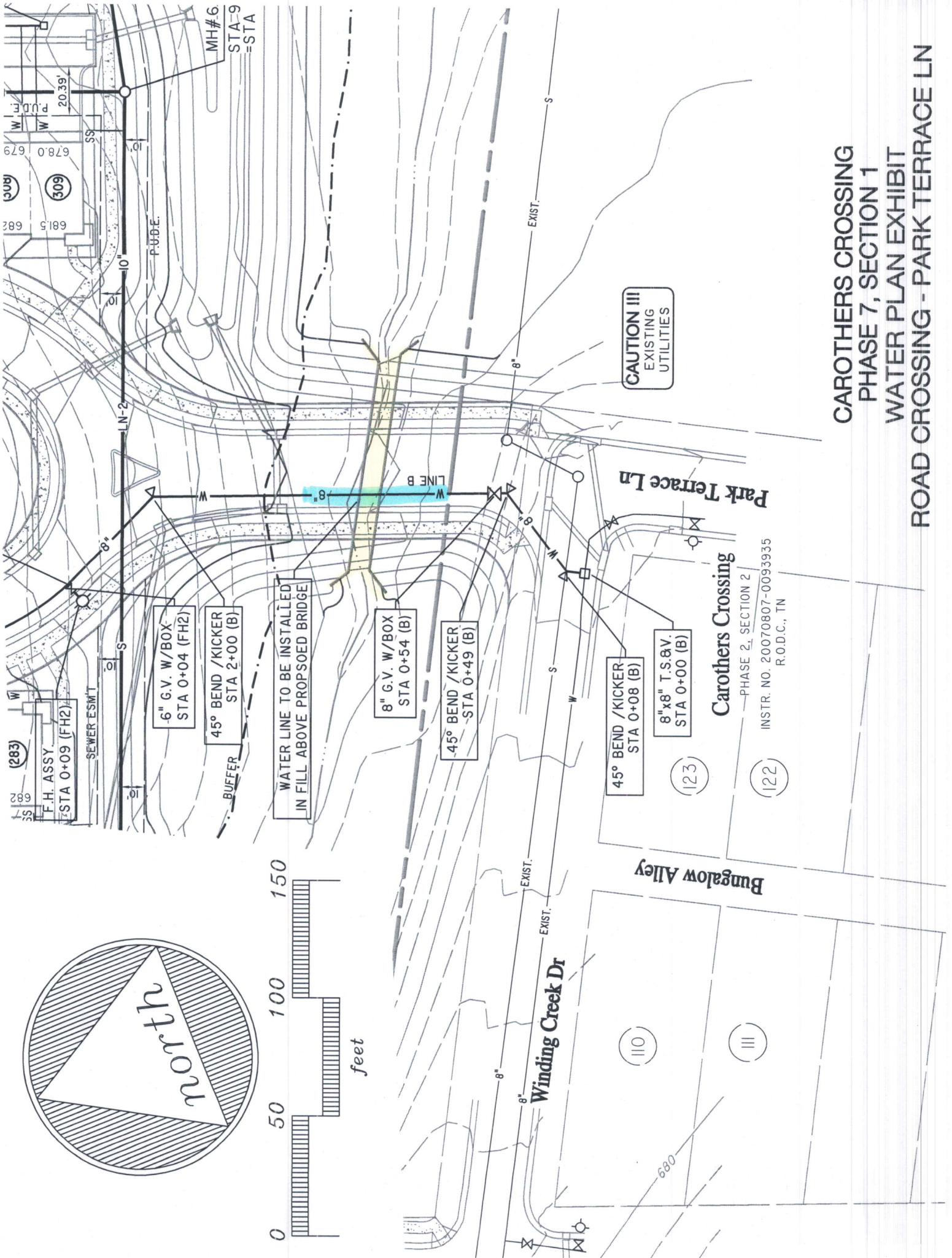
CAUTION !!!
EXISTING
UTILITIES

CAROTHERS CROSSING PHASE 7, SECTION 1 GRADING & DRAINAGE EXHIBIT ROAD CROSSING - PARK TERRACE LANE



CAROTHERS CROSSING
PHASE 7, SECTION 1
ROAD PROFILE EXHIBIT
ROAD CROSSING - PARK TERRACE LANE





CAROTHERS CROSSING
PHASE 7, SECTION 1
WATER PLAN EXHIBIT
ROAD CROSSING - PARK TERRACE LN

Carothers Crossing

PHASE 2, SECTION 2
INSTR. NO. 20070807-0093935
R.O.D.C., TN



TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION
Division of Water Resources
William R. Snodgrass Tennessee Tower, 312 Rosa L. Parks Avenue, 11th Floor,
Nashville, Tennessee, 37243
1-888-891-8332 (TDEC)

TDEC
NASHVILLE
FIELD OFFICE
RECEIVED
2018 DEC -3 PM 4:28

Application for Aquatic Resource Alteration Permit (ARAP) & State §401 Water Quality Certification

OFFICIAL STATE USE ONLY	Site #:	Permit #:	<u>NR1804-315</u>
Section 1. Applicant Information <i>(individual responsible for site, signs certification below)</i>			
Applicant Name (company or individual):		SOS #: 000343007 Status: Active	
Primary Contact/Signatory: David McGowan		Signatory's Title or Position: President	
Mailing Address: 6901 Lenox Village Drive - Suite 107		City: Nashville	State: TN Zip: 37211
Phone: (615) 333-9000	Fax:	E-mail: David.McGowan@regenthomes-tn.com	
Section 2. Alternate Contact/Consultant Information <i>(a consultant is not required)</i>			
Alternate Contact Name: Eric Olsen			
Company: Anderson, Delk, Epps & Associates, Inc.		Title or Position: Engineer	
Mailing Address: 618 Grassmere Park Drive - Suite 4		City: Nashville	State: TN Zip: 37211
Phone: (615) 331-0809	Fax: (615) 331-0110	E-mail: AndersonDelk@bellsouth.net	
Section 3. Fee <i>(Application will be incomplete until fee is received)</i>			
<input checked="" type="checkbox"/> No Fee		<input type="checkbox"/> Fee Submitted with Application Amount Submitted: \$ <u>\$500.00 total</u> fee for multiple impacts under General Permit paid with other road crossing application.	
Current application fee schedules can be found at the Division of Water Resources webpage at: https://www.tn.gov/environment/permit-permits/water-permits1/aquatic-resource-alteration-permit--arap-.html or by calling (615) 532-0625. Please make checks payable to "Treasurer, State of Tennessee".			
Billing Contact Name (if different from Applicant):		Name:	Email:
Address:		Phone:	
Section 4. Project Details <i>(fill in information and check appropriate boxes)</i>			
Site or Project Name: Carothers Crossing - Phase 7, Section 1		Nearest City, Town or Major Landmark: Cane Ridge Park	
Street Address or Location (include Zip): Carson Meadows Lane and Winding Creek Drive, Nolensville, TN 37135			
County(ies): Davidson		MS4 Jurisdiction: Nashville	Latitude (dd.ddd): 35.9831 Longitude (dd.ddd): -86.6145
Resource Proposed for Alteration: <input checked="" type="checkbox"/> Stream / River <input type="checkbox"/> Wetland <input type="checkbox"/> Reservoir			
Name of Water Resource (for more information, access http://tdeconline.tn.gov/dwr): Unnamed Drain to East Branch Hurricane Creek +			
Brief Project Description (a more detailed description is required under Section 8): Installation of a minor road crossing on Carson Meadows Lane with water and utilities (35.9838, -86.6154).			
Does the proposed activity require approval from the U.S. Army Corps of Engineers, the Tennessee Valley Authority, or any other federal, state, or local government agency? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
If Yes, provide the permit reference numbers:			
Is the proposed activity associated with a larger common plan of development: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
If Yes, submit site plans and identify the location and overall scope of the common plan of development.			
Plans attached? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
If applicable, indicate any other federal, state, or local permits that are associated with the overall project site (common plan of development) that have been obtained in the past (e.g., construction general permit and/or other ARAP):			
TNR242073			

Application for Aquatic Resource Alteration Permit (ARAP) & State §401 Water Quality Permit

Section 5. Project Schedule (fill in information and check appropriate boxes)

Proposed Start Date: December 2018

Estimated End Date: January 2021

Is any portion of the activity complete now?

☒ Yes

☐ No

If yes, describe the extent of the completed portion: A temporary stream crossing has been installed at this location and remains in place.

The required information in Sections 6-11 must be submitted on a separate sheet(s) and submitted in the same numbered format as presented below. If any question is not applicable, state the reason why it is not applicable.

Section 6. Description		Attached	
		Yes	No
6.1	A narrative description of the scope of the project	<input type="checkbox"/>	<input type="checkbox"/>
6.2	USGS topographic map indicating the exact location of the project (<i>can be a photographic copy</i>)	<input type="checkbox"/>	<input type="checkbox"/>
6.3	Photographs of the resource(s) proposed for alteration with location description (<i>photo locations should be noted on map</i>)	<input type="checkbox"/>	<input type="checkbox"/>
6.4	A narrative description of the existing stream and/or wetland characteristics including, but not limited to, dimensions (e.g., depth, length, average width), substrate and riparian vegetation	<input type="checkbox"/>	<input type="checkbox"/>
6.5	A narrative description of the proposed stream and/or wetland characteristics including, but not limited to, dimensions (e.g., depth, length, average width), substrate and riparian vegetation	<input type="checkbox"/>	<input type="checkbox"/>
6.6	In the case of wetlands, include a wetland delineation with delineation forms and site map denoting location of data points	<input type="checkbox"/>	<input type="checkbox"/>
6.7	A copy of all hydrologic or jurisdictional determination documents issued for water resources on the project site	<input type="checkbox"/>	<input type="checkbox"/>

Section 7. Project Rationale		Attached	
		Yes	No
Describe the need for the proposed activity, including, but not limited to, the purpose, alternatives considered, and what will be done to avoid or minimize impacts to water resources		<input type="checkbox"/>	<input type="checkbox"/>

Section 8. Technical Information		Attached	
		Yes	No
8.1	Detailed plans, specifications, blueprints, or legible sketches of present site conditions and the proposed activity. Plans must be 8.5x 11 inches. Additional larger plans may also be submitted to aid in application review. The detailed plans should be superimposed on existing and new conditions (e.g., <i>stream cross sections where road crossings are proposed</i>)	<input type="checkbox"/>	<input type="checkbox"/>
8.2	For both the proposed activity and compensatory mitigation, provide a discussion regarding the sequencing of events and construction methods	<input type="checkbox"/>	<input type="checkbox"/>
8.3	Depiction and narrative on the location and type of erosion prevention and sediment control (EPSC) measures for the proposed alterations	<input type="checkbox"/>	<input type="checkbox"/>

Section 9. Water Resources Degradation (degree of proposed impact) *Note that in most cases, activities that exceed the scope of the General Permit limitations are considered greater than de minimis degradation to water quality.*

Please provide your basis for concluding the proposed activity will cause one of the following levels of water quality

degradation:

a. ☒ De minimis degradation

b. ☐ Greater than de minimis degradation (if greater than de minimis complete Sections 10-11)

For information and guidance on the definition of de minimis and degradation, refer to the Antidegradation Statement in Chapter 0400-40-03-.06 of the Tennessee Water Quality Criteria Rule at: <http://publications.tnsofiles.com/rules/0400/0400-40/0400-40.htm>

For information on specifics on what General Permits can cover, refer to the Natural Resources Unit webpage at:

<http://www.tn.gov/environment/permit-permits/water-permits/1/aquatic-resource-alteration-permit-arap-/permit-water-aquatic-resource-alteration-list-of-general-permits.html>

Application for Aquatic Resource Alteration Permit (ARAP) & State §401 Water Quality Permit

Section 10. Detailed Alternatives Analysis		Attached	
		Yes	No
10.1	Analyze all reasonable alternatives and describe the level of degradation caused by each of the feasible alternatives	<input type="checkbox"/>	<input checked="" type="checkbox"/>
10.2	Discuss the social and economic consequences of each alternative	<input type="checkbox"/>	<input checked="" type="checkbox"/>
10.3	Demonstrate that the degradation associated with the preferred alternative will not violate water quality criteria for uses designated in the receiving waters, and is necessary to accommodate important economic and social development in the area	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Section 11. Compensatory Mitigation		Attached	
		Yes	No
11.1	A detailed discussion of the proposed compensatory mitigation	<input type="checkbox"/>	<input checked="" type="checkbox"/>
11.2	Describe how the compensatory mitigation would result in no net loss of resource value	<input type="checkbox"/>	<input checked="" type="checkbox"/>
11.3	Provide a detailed monitoring plan for the compensatory mitigation site	<input type="checkbox"/>	<input checked="" type="checkbox"/>
11.4	Describe the long-term protection measures for the compensatory mitigation site (e.g., deed restrictions, conservation easement)	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Certification and Signature			
<p>An application submitted by a corporation must be signed by a principal executive officer; from a partnership or proprietorship, by the partner or proprietor respectively; from a municipal, state, federal or other public agency or facility, the application must be signed by either a principal executive officer, ranking elected official, or other duly authorized employee.</p> <p><i>I certify under penalty of law that this document and all attachments were prepared by me, or under my direction or supervision. The submitted information is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. As specified in Tennessee Code Annotated Section 39-16-702(a)(4), this declaration is made under penalty of perjury.</i></p>			
<u>David McGowan</u> Printed Name	<u>President</u> Official Title	 Signature	<u>1-17-12</u> Date

Submitting the form and obtaining more information. Note that this form must be signed by the principal executive officer, partner or proprietor, or a ranking elected official in the case of a municipality; for details see **Certification and Signature** statement above. For more information, contact your local EFO at the toll-free number 1-888-891-8332 (TDEC). Submit the completed ARAP Application form (keep a copy for your records) to the appropriate EFO for the county(ies) where the ARAP activity is located, addressed to **Attention: ARAP Processing**. You may also electronically submit the complete application and all associated attachments to water.permits@tn.gov.

EFO	Street Address	Zip Code	EFO	Street Address	Zip Code
Memphis	8383 Wolf Lake Drive, Bartlett	38133-4119	Cookeville	1221 South Willow Ave.	38506
Jackson	1625 Hollywood Drive	38305-4316	Chattanooga	1301 Riverfront Pkwy., Ste. 206	37402
Nashville	711 R S Gass Boulevard	37243	Knoxville	3711 Middlebrook Pike	37921
Columbia	1421 Hampshire Pike	38401	Johnson City	2305 Silverdale Road	37601



Application for Aquatic Resource Alteration Permit (ARAP)

Carothers Crossing

Phase 7, Section 1

Property Map 188, p/o Parcel 8.00 Davidson County
7211 Carothers Road, Nolensville, TN 37135
November 1, 2018

ROADWAY CROSSING WITH UTILITIES – CARSON MEADOWS LANE

Section 6 : Project Description

- (6.1) **Description of Work to be Done :** Approximately 85 linear feet of a single-span, 8' wide x 4' high bottomless slab bridge (State Drawing No. STD-17-112 or equal) with utility crossings. The underground utilities will be installed in the fill above the bridge and will include an 8" water line, electric, gas, and telecom.
- (6.2) **See attached map**
- (6.3) **See attached photos**
- (6.4) **Description of Existing Drain :** Some flow at time of examination. An existing temporary crossing has been installed at this location and remains in place. Existing temporary crossing consists of stone drive crossing a reinforced concrete pipe. The drain above and below the crossing is roughly 3' wide with a rocky bottom with eroded banks covered in grass and scattered vegetation.
- (6.5) **Description of Proposed Drain :** The existing drain characteristics upstream and downstream of the proposed bottomless slab bridge are to be maintained. The slopes along the headwall are to be stabilized using rip rap. Graded slopes are to be 3 to 1 slopes maximum.
- (6.6) **Not Applicable**
- (6.7) **No determination documents issued for site.**

Section 7 : Project Rational

The purpose of the proposed project is to provide roadway and utilities connections within the Carothers Crossing development. The proposed road crossing will provide an access point to Phase 7, Section 1 and future phases/sections of Carothers Crossing.

The existing drain runs through the length of the entire remaining site, so the crossing is needed to provide access between both sides of the drain. Two crossings area proposed to provide the required two access paths for emergency vehicle as required by the International Fire Code.

The proposed roadway was designed to have the least amount of fill at the bridge location possible. A bottomless slab bridge was also used to minimize the obstruction to migrating wildlife. The proposed fill is sloped at a 3 to 1 slope from the edge of sidewalk to the toe of slope. This was to minimize the width of the proposed crossing.

An alternative to the proposed slab bridge would be to install a span bridge. While this would limit the fill and the enclosure of the crossing, it would be significantly more expensive. The price of such a bridge would be more than could be justified for such a development.

Section 8 : Technical Information

(8.1) See attached detailed plans

(8.2) Mitigation Details : No Mitigation required.

Proposed Sequence of Events : 1) Install perimeter silt fence. Any flow at time of construction to be blocked off and diverted using coffer dams, geotextile tubes, and/or pumps. 2) Remove existing temporary crossing. 3) Area to be grubbed. Disturbance of the are to be done no greater then 20 days prior to planed grading or construction activity. 4) Bridge footing locations are to be excavated to suitable material. All excavation to be done by hoe ram. 5) Bridge to be constructed. 6) Backfill along bridge sides to be done as shown on bridge plans. 7) Remaining area to be filled as shown on approved plan. Silt fence, rip rap, and slope protection to be installed as shown on plan. All disturbed areas are to be seeded and strawed, unless planed grading activities are to resume within 15 days. 8) Install underground water line and utilites in fill above bridge 9) Roadway construction. 10) Final stabilization.

Construction Methods: Excavation to be done by hoe ram. Back fill around bridge to be done as shown on state standard details or bridge plan. Any unsuitable material excavated is to be removed from crossing area and disposed of properly.

(8.3) EPSC Measures: Silt fence will be used to limit the amount of sediments being discharged. 3 to 1 slopes are to be stabilized with erosion control matting, and rip rap is to be used to stabilize the slopes along the banks of the wingwalls. All work to be in the dry by the contractor using coffer dams, geotextile tubes, and/or pumps. (see attached plan)

Section 9 : Water Resources Degradation (degree of proposed impact)

Will only cause de minimis degradation to water quality

The proposed work falls within the scope of the respective General Permit limitations.

Section 10 : Detailed Alternative Analysis

(10.1) Not Applicable (Section 9)

(10.2) Not Applicable (Section 9)

(10.3) Not Applicable (Section 9)

Section 11 : Mitigation

(11.1) Not Applicable (Section 9)

The proposed encapsulation by the two slab bridges is less than the allowable encapsulation without mitigation for the site. The approximately 85 linear feet of the Carson Meadows Lane crossing combined with the approximately 89 linear feet of the Park Terrace Lane crossing encapsulate approximately 175 linear feet of stream.

(11.2) Not Applicable (Section 9)

(11.3) Not Applicable (Section 9)

(11.4) Not Applicable (Section 9)

(11.5) Not Applicable (Section 9)

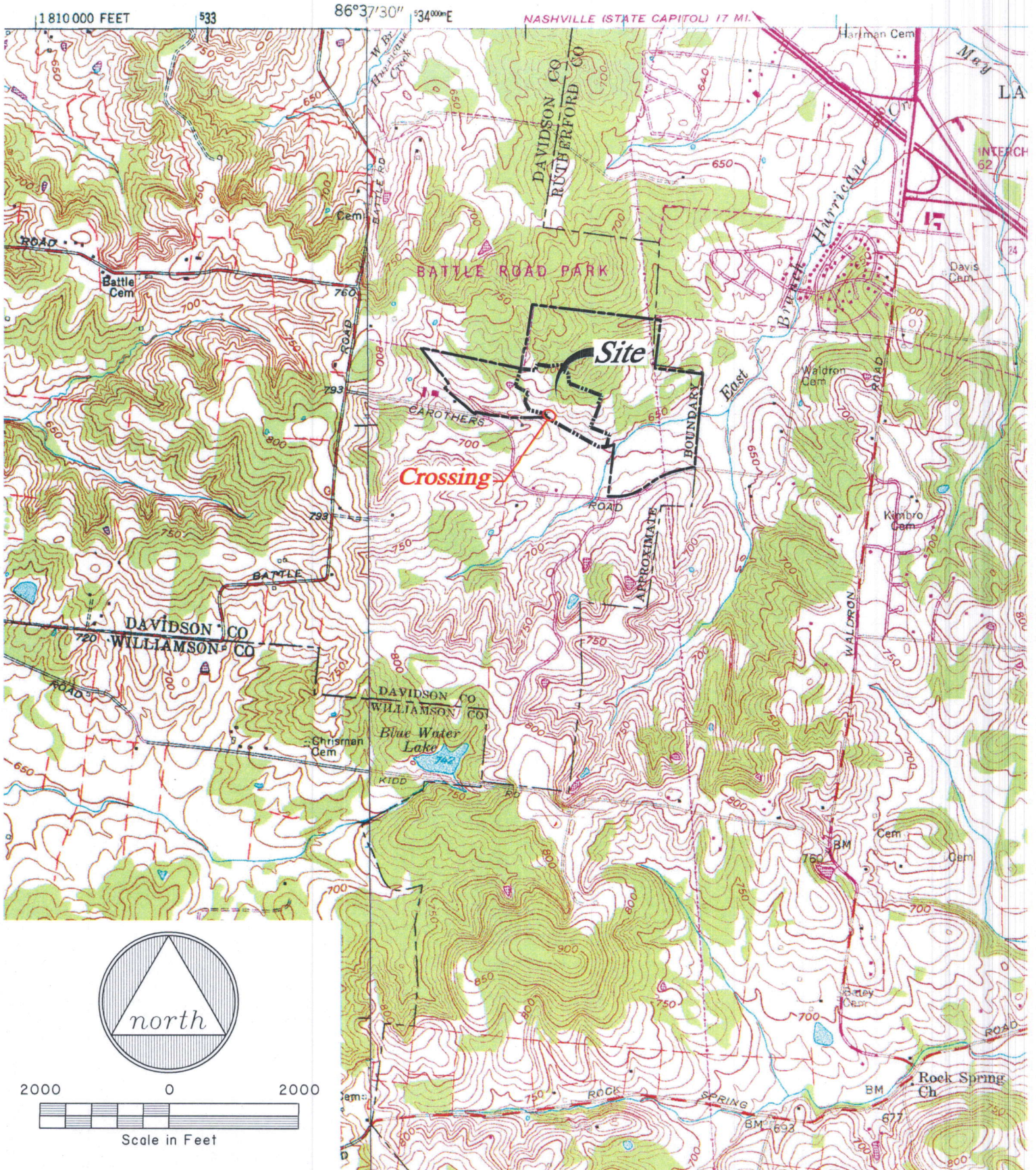
NOLENSVILLE, TENN.
N3552.5-W8637.5/7.5
1957
PHOTOREVISED 1979
DMA 3605 I NW-SERIES V841

NOLENSVILLE QUADRANGLE
TENNESSEE
7.5 MINUTE SERIES (TOPOGRAPHIC)

SMYRNA QUADRANGLE
TENNESSEE
7.5 MINUTE SERIES (TOPOGRAPHIC)

SMYRNA, TENN.
35086-H5-11-024
1957
PHOTOREVISED 1983
DMA 3605 I NE-SERIES V841

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY



Master Plan

The Master Plan for Carothers Crossing strikes a balance between being a legitimate regional extension of a pre-existing community (Laverne), and a collection of freestanding villages in a rural landscape. The plan configuration of each of the four villages is dictated by the unique topography associated with each village's location on the site, the natural features of the site to be retained or enhanced, and the intended functional role or character of each particular village.

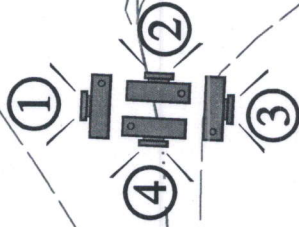
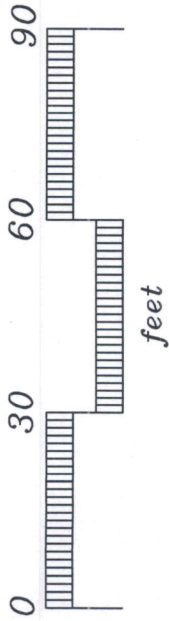
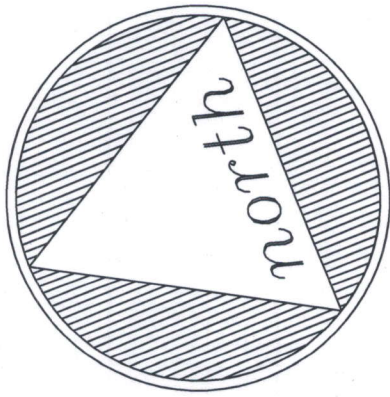
The primary form gives in terms of natural features and focal amenities are the large open meadows to the east, the deep ravines and ridges to the south, the large knoll and the existing regional park to the north, and the creeks which traverse the site in a largely west to east direction. A single existing thoroughfare, Carothers Road, also traverses the site in an east and west orientation, which will be replaced by an interconnected street network, serving the larger regional road network.

This road, properly designed to allow it to be safely and appropriately integrated into the Master Plan, will also be slightly realigned to allow it to help energize the Town Center Village, provide convenient access to same, and to better deal with issues and concerns of adjoining property owners on Battle Road regarding traffic and headlights. This realignment, along with a more urbanized section, should not impact in any substantive way, either Carothers Road's capacity or its ability to carry out its role within the larger regional transportation network.

Altogether, the resulting master plan represents an optimal response to the unique features and attributes of the site and the needs of the present and future residents in and around Carothers Crossing.

* Master Plan shown for illustrative purposes and intent. Actual detailed plans and locations of individual villages, streets and lots may vary, subject to constraints and conditions as yet to be determined; however, any changes proposed must be consistent with the intent of the illustrative plan.





Carson Meadows Ln

EXIST. 8"

8"

CAROTHERS CROSSING
PHASE 7, SECTION 1

Carothers Crossing

PHASE 2, SECTION 2

ROAD CROSSING - CARSON MEADOWS LN

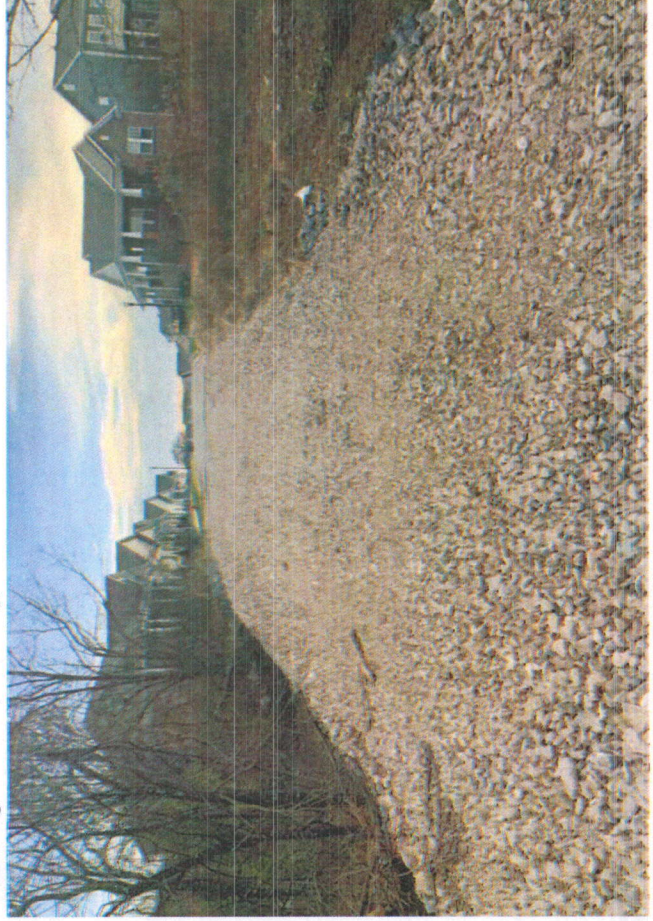
Carothers Crossing Phase 7, Section 1 - Proposed Road Crossing - Carson Meadows Lane



1. Looking at Bank (Northerly)



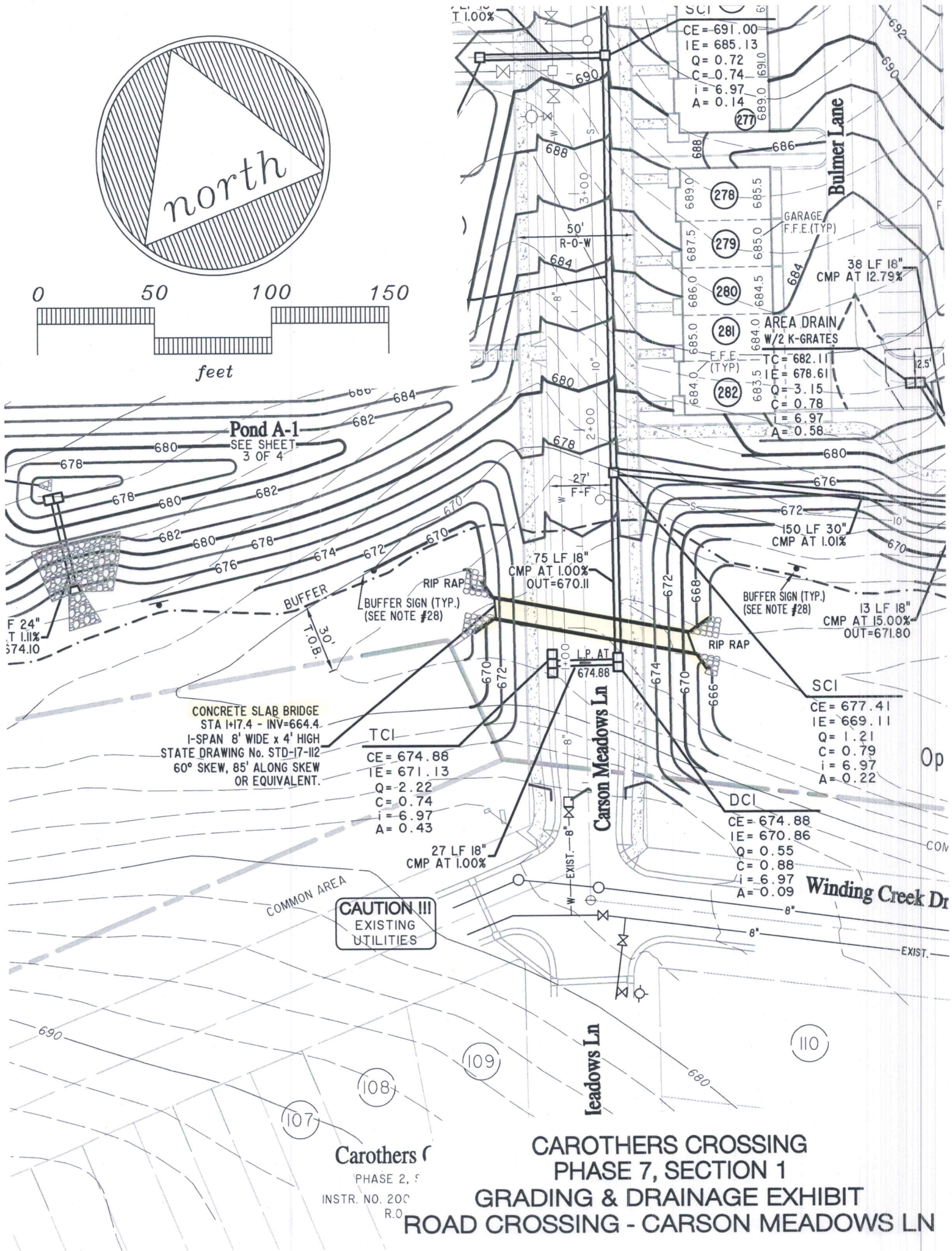
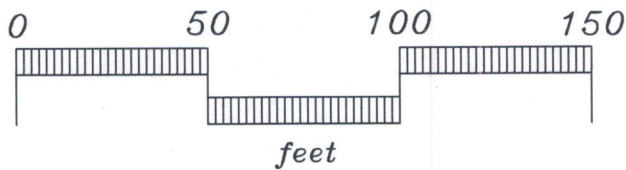
2. Looking Downstream (Easterly)



3. Looking at Bank (Southerly)



4. Looking Upstream (Westerly)



Pond A-1
SEE SHEET
3 OF 4

CONCRETE SLAB BRIDGE
STA 1+17.4 - INV=664.4
1-SPAN 8' WIDE x 4' HIGH
STATE DRAWING No. STD-17-112
60° SKEW, 85' ALONG SKEW
OR EQUIVALENT.

CAUTION III
EXISTING
UTILITIES

Carothers
PHASE 2, S
INSTR. NO. 200
R.O.

**CAROTHERS CROSSING
PHASE 7, SECTION 1
GRADING & DRAINAGE EXHIBIT
ROAD CROSSING - CARSON MEADOWS LN**

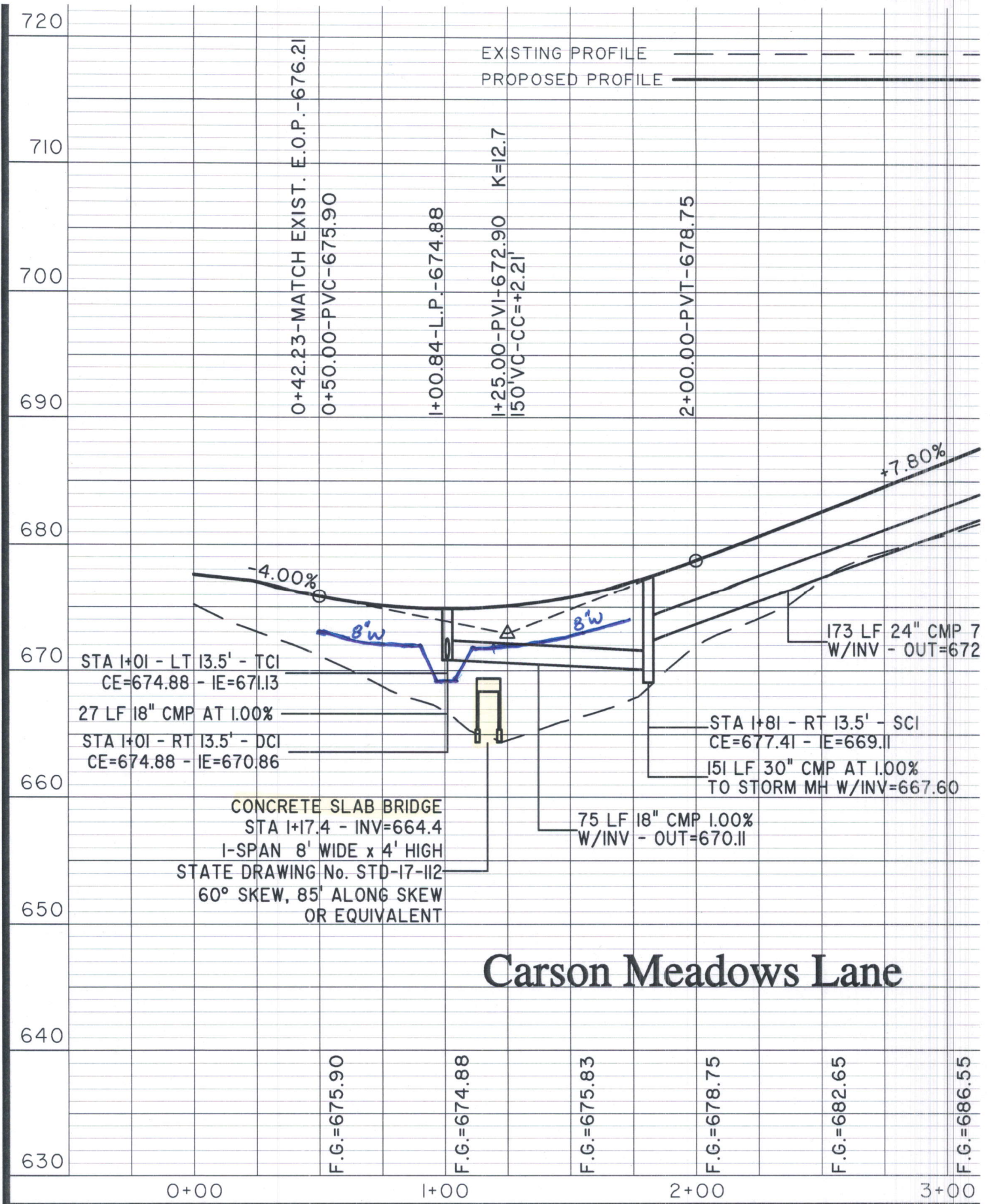
CE = 691.00
IE = 685.13
Q = 0.72
C = 0.74
i = 6.97
A = 0.14

AREA DRAIN
W/2 K-GRATES
TC = 682.11
IE = 678.61
Q = 3.15
C = 0.78
i = 6.97
A = 0.58

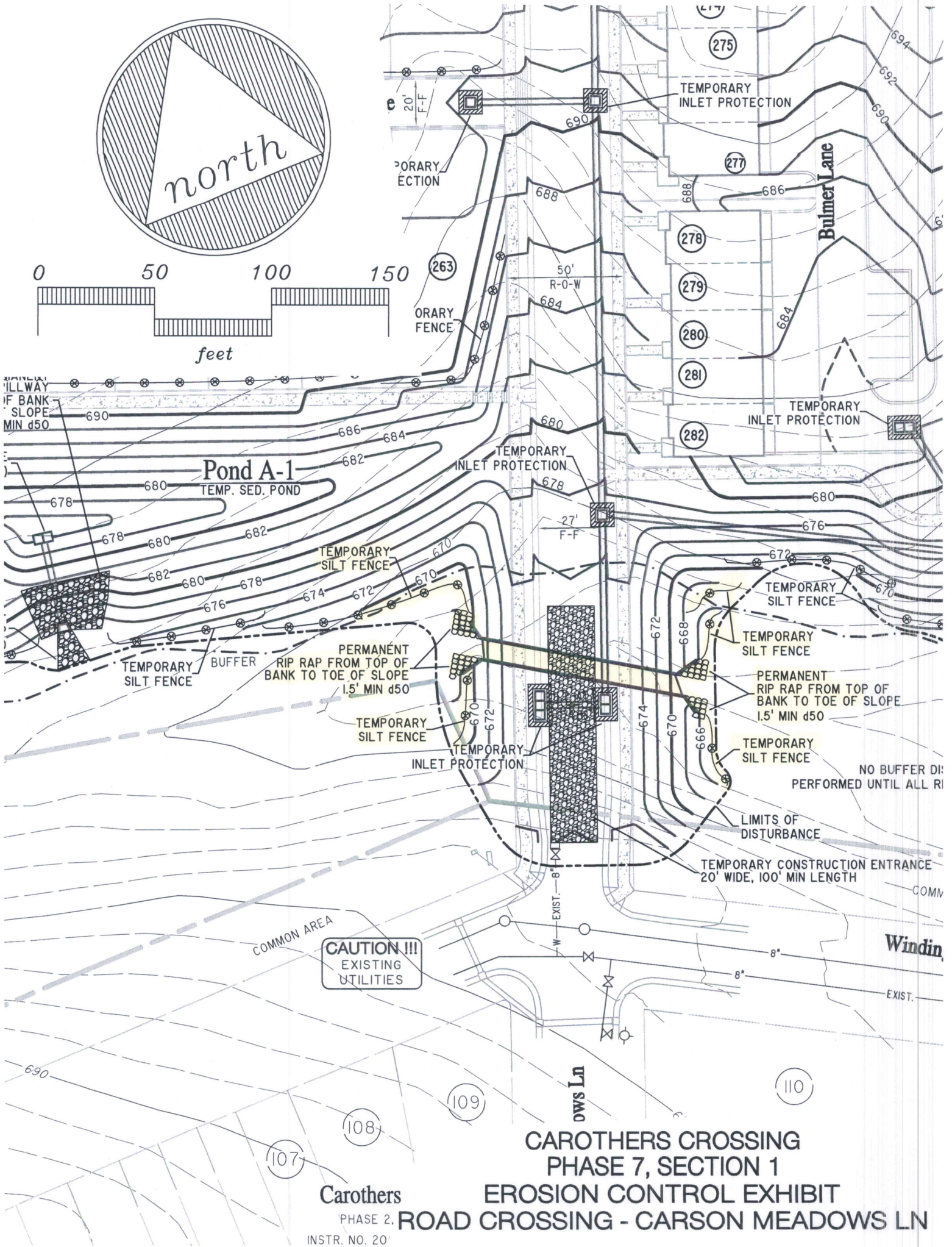
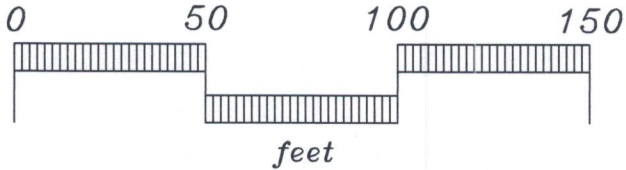
SCI
CE = 677.41
IE = 669.11
Q = 1.21
C = 0.79
i = 6.97
A = 0.22

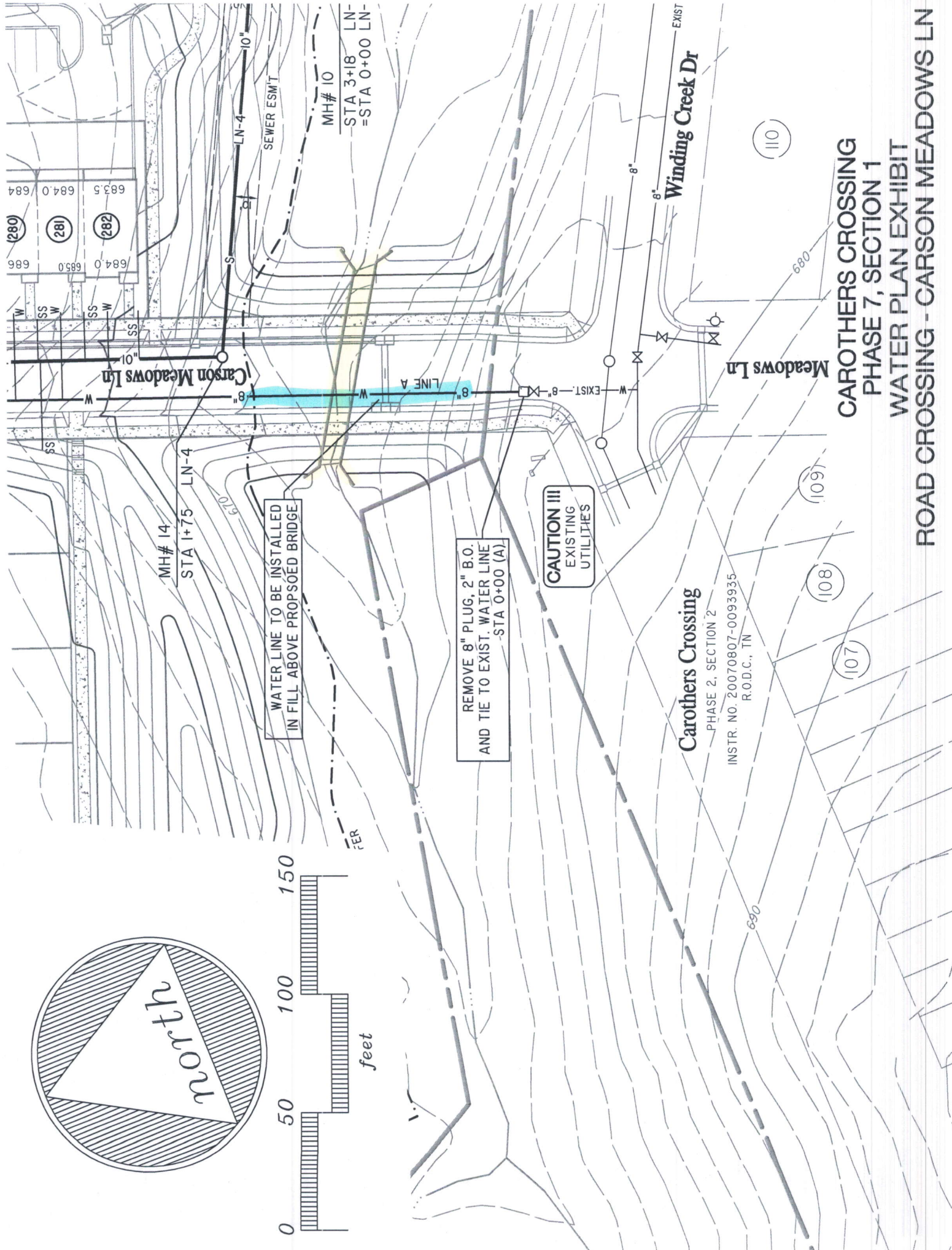
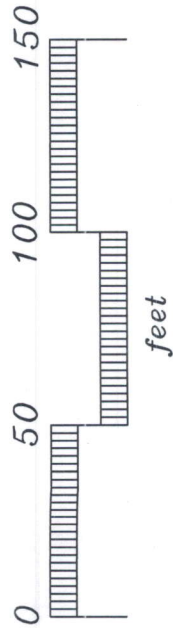
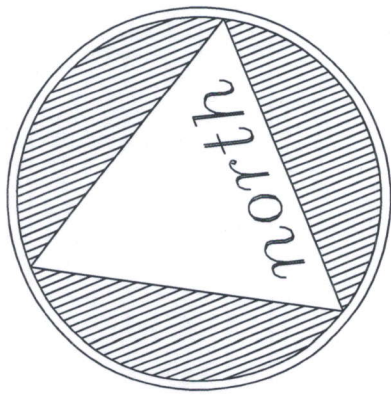
DCI
CE = 674.88
IE = 670.86
Q = 0.55
C = 0.88
i = 6.97
A = 0.09

TCI
CE = 674.88
IE = 671.13
Q = 2.22
C = 0.74
i = 6.97
A = 0.43



**CAROTHERS CROSSING
 PHASE 7, SECTION 1
 ROAD PROFILE EXHIBIT
 ROAD CROSSING - CARSON MEADOWS LN**





**CAROTHERS CROSSING
PHASE 2, SECTION 2
WATER PLAN EXHIBIT
ROAD CROSSING - CARSON MEADOWS LN**

INSTR. NO. 20070807-0093935
R.O.D.C., TN

ANDERSON, DELK, EPPS
& ASSOCIATES, INC.
618 Grassmere Park Drive Suite 4
NASHVILLE, TENNESSEE 37211
andersondelk@bellsouth.net

(615) 331-0809
FAX (615) 331-0110

LETTER OF TRANSMITTAL

1000
NASHVILLE
FIELD OFFICE
RECEIVED

2018 DEC -3 PM 4:26

TO

TDEC

NASHVILLE FIELD OFFICE

DATE	12-3-18	JOB NO.	17-130
ATTENTION	ARAP PROCESSING		
RE:	CAROTHERS CROSSING		
	PHASE 7 SECTION 1		
	ROAD CROSSING ARAP		

WE ARE SENDING YOU ☒ Attached ☐ Under separate cover via _____ the following items:

- ☐ Shop drawings ☐ Prints ☐ Plans ☐ Samples ☐ Specifications
☐ Copy of letter ☐ Change order ☐ _____

COPIES	DATE	NO.	DESCRIPTION
1	SET		ARAP APPLICATION AND REQUIRED DOCUMENTS
1	CHECK		\$500 APPLICATION FEE No 26573

THESE ARE TRANSMITTED as checked below:

- ☐ For approval ☐ Approved as submitted ☐ Resubmit _____ copies for approval
☐ For your use ☐ Approved as noted ☐ Submit _____ copies for distribution
☐ As requested ☐ Returned for corrections ☐ Return _____ corrected prints
☐ For review and comment ☐ _____
☐ FOR BIDS DUE _____ ☐ PRINTS RETURNED AFTER LOAN TO US

REMARKS

2 ARAP APPLICATIONS FOR TWO PROPOSED ROAD CROSSINGS
CAROTHERS CROSSING PHASE 7 SEC 1

THANK YOU

COPY TO _____

SIGNED: _____

If enclosures are not as noted, kindly notify us at once.