



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)

Notice of Intent (NOI) for General NPDES Permit for Stormwater Discharges from Construction Activities (TNR100000)

Site or Project Name: W Hotel		NPDES Tracking Number: TNR	
Street Address or Location: 603 12th Avenue South, Nashville, TN 37203		Construction Start Date: 08/05/2018	
Site Description: Hotel		Estimated End Date: 08/05/2019	
County(ies): Davidson		Latitude (dd.dddd): 36.153222	
MS4 (if applicable):		Longitude (-dd.dddd): -86.784995	
Check box if a SWPPP is attached: <input checked="" type="checkbox"/>		Acres Disturbed: 1.23	
Check box if a site location map is attached: <input checked="" type="checkbox"/>		Total Acres: 1.23	
Check the appropriate box(s) if there are streams and/or wetlands on or adjacent to the construction site:		Streams <input type="checkbox"/> Wetlands <input type="checkbox"/>	
Has a jurisdictional determination been made by the USACE or EPA identifying waters of the United States?: Yes <input type="checkbox"/> No <input type="checkbox"/>			
Note: if yes, attach the jurisdictional determination			
If an Aquatic Resource Alteration Permit (ARAP) has been obtained for this site, what is the permit number? NR(S)			
Receiving waters: Cumberland River			
Site Owner/Developer (Primary Permittee): (Provide person, company, or entity that has operational or design control over construction plans and specifications): 12th Avenue Realty Holding Company, LLC (c/o Magellan Development Group, LLC)			
For corporate entities only, provide correct Tennessee Secretary of State (SOS) Control Number: (an incorrect SOS control number may delay NOI processing) SOS #000826454			
Site Owner or Developer Contact Name: (signs the certification below) David Carlins		Title or Position: Authorized Signatory	
Mailing Address: 225 N Columbus Drive, Suite 100		City: Chicago	State: IL Zip: 60601
Phone: (312) 469-8100	Fax: ()	E-mail: dcarlins@magellanddevelopment.com	
Optional Contact: Matt Schlicker		Title or Position: Project Manager	
Mailing Address: 214 Oceanside Drive		City: Nashville	State: TN Zip: 37204
Phone: (615) 564-2701	Fax: ()	E-mail: matt.schlicker@kimley-horn.com	
Owner/Developer(s) Certification: (must be signed by president, vice-president or equivalent, or ranking elected official) (Primary Permittee)			
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.			
Owner/Developer Name (print/type): David Calins		Signature:	Date: 7/3/2018
Owner/Developer Name (print/type):		Signature:	Date:
Contractor Certification: (must be signed by president, vice-president or equivalent, or ranking elected official) (Secondary Permittee)			
I certify under penalty of law that I have reviewed this document, any attachments, and the SWPPP referenced above. Based on my inquiry of the construction site owner/developer identified above and/or my inquiry of the person directly responsible for assembling this NOI and SWPPP, I believe the information submitted is accurate. I am aware that this NOI, if approved, makes the above-described construction activity subject to NPDES permit number TNR100000, and that certain of my activities on-site are thereby regulated. I am aware that there are significant penalties, including the possibility of fine and imprisonment for knowing violations, and for failure to comply with these permit requirements. As specified in Tennessee Code Annotated Section 39-16-702(a)(4), this declaration is made under penalty of perjury.			
Contractor name, address, and SOS control number (if applicable):		Signature:	Date:


OFFICIAL STATE USE ONLY

Received Date: 7-5-18	Reviewer:	Field Office: 04	Permit Tracking Number: TNR 242742	Exceptional TN Water:
Fee(s): 250.	T & E Aquatic Flora/Fauna:	SOS Corporate Status:	Waters with Unavailable Parameters:	Notice of Coverage Date:

MAGELLAN DEVELOPMENT GROUP LLC

225 NORTH COLUMBUS, STE. 100
CHICAGO, IL 60601

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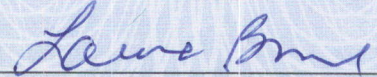
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TDEC

MEMO

W Nashville/general permit application





AUTHORIZED SIGNATURE

Security features. Details on back.



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Storm Water Pollution Prevention Plan

for

**The W Hotel Nashville
603 12th Avenue South
Nashville, TN 37203**

Prepared for:

**12th Avenue Realty Holding Company, LLC
(c/o Magellan Development Group, LLC)**

**225 N Columbus Drive, Suite 100
Chicago, IL 60601**

Prepared by:

**Kimley-Horn and Associates, Inc.
214 Oceanside Drive
Nashville, TN 37204**

March 20, 2018

The logo for Kimley-Horn and Associates, Inc. features the word "Kimley" in a dark grey sans-serif font, followed by a red double arrow symbol (»), and then the word "Horn" in a red sans-serif font.

Storm Water Pollution Prevention Plan For
The W Hotel Nashville
Nashville, Tennessee

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Storm Water Pollution Prevention Plan
For
The W Hotel Nashville
Nashville, Tennessee
Davidson County

1. General

This Storm Water Pollution Prevention Plan (SWPPP) is developed in accordance with the Tennessee General NPDES Permit (TNR100000) for Storm Water Discharges Associated with Construction Activity (TNCGP) and is prepared using sound engineering practices. It is the intention and goal of this SWPPP to minimize to the maximum extent practical storm water discharge from the subject site that has objectionable pollutant characteristics which could impair the usefulness of the waters on the property or downstream of the property. A copy of the SWPPP will be maintained at the construction site at all times.

As instructed by Section 2.7 of the CGP, this plan and all attachments are hereby submitted to the local Environmental Field Office (EFO), along with the complete, correctly signed Notice of Intent (NOI). Construction activities that could result in the release of storm water runoff from disturbed areas will not be initiated prior to receipt of a Notice of Coverage (NOC) from the Tennessee Department of Environment and Conservation (TDEC). A copy of the NOC with the associated NPDES tracking number for the project and a contact person and phone number will be posted at the site and is included in Appendix A.

A Notice of Intent (NOI) is being submitted in conjunction with this SWPPP (Appendix A). Upon commencement of construction, the SWPPP instructions will be implemented. In the event of a change of operator or an additional operator, a new NOI will be submitted as soon as practical and at least 48 hours prior to when the new operator assumes operational control over the site specifications or work commencement.


The contractor of the project shall be responsible for the implementation of the practices within this SWPPP and the Tennessee General Construction Permit, including installation and maintenance of BMPs for both stormwater and non-stormwater discharges, temporary and permanent stabilization, erosion and sediment controls, housekeeping, material delivery & storage, hazardous materials, and hazardous waste management BMPs. A copy of this SWPPP shall be maintained on-site at all times near the construction entrance or construction trailer.

This SWPPP will be kept current throughout the project. It will also be amended if there is a change in scope of the project that affects the volume of discharge or the quality of discharge; if inspections indicate that the current SWPPP is ineffective in eliminating, controlling or significantly reducing pollutants being discharged; if there is a change in contractor; or if there is a need to include measures to protect state, federally listed, proposed, threatened, or endangered aquatic fauna.

Upon completion of construction and final stabilization of the site, a Notice of Termination (NOT) will be submitted (Appendix B) to the Environmental Field Office (EFO). In the event all operations and responsibilities are transferred to a new individual, an NOT will be submitted by the original operator.

Developer: 12th Avenue Realty Holding Company, LLC
(c/o Magellan Development Group, LLC)
225 N. Columbus Drive, Suite 100
Chicago, IL 60601
(404) 229-4498
Contact person: David Carlins
email: pborzenski@magellanddevelopment.com
dcarlins@magellanddevelopment.com

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that the qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted 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 for knowing violations.

Representative of owner/developer and title; print or type David Carlins, Authorized Signatory	Signature (must be signed by president, V.P. or equivalent, or ranking elected official) 	Date 7/3/2018
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Primary Contractor: TBD

I certify under penalty of law that I have reviewed this document and any attachments. Based on my inquiry of the construction site owner/developer identified above, and /or my inquiry of the person directly responsible for assembling this Storm Water Pollution Prevention Plan, I believe the information submitted is accurate. I am aware that this plan, if approved, makes the above-described construction activity subject to NPDES permit number TNR100000, and that certain of my activities on-site are thereby regulated. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Representative of owner/developer and title; print or type	Signature (must be signed by president, V.P. or equivalent, or ranking elected official)	Date
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Engineer: Kimley-Horn and Associates, Inc.
209 10th Avenue South, Suite 501
Nashville, TN 37203
(615) 564-2701
Contact person: Mr. Brendan Boles
email: brendan.boles@kimley-horn.com

I certify under penalty of law that this report and all attachments are, 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 for knowing violations.

Representative of SWPPP Preparer	Signature	Date
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2. Project and Site Description

The purpose of this project is to construct a new mixed-use project with retail, 200-residential units, and 250-hotel keys. The site will have an onsite, subsurface parking structure to provide parking for residents and guest. The site and disturbed area for the multifamily structure is 1.24 acres and is located on 12th Avenue North between Pine Street and Laurel Street (36.152904°N, 86.784839°W) in the Gulch neighborhood of Nashville, TN. A site vicinity map is attached (Appendix C). Construction is anticipated to start on January 2nd, 2019 and end on April 12th, 2021.

2.1 Existing Conditions

The site was previously a developed commercial area consisting of three structures and their respective parking lots on three separate lots. The three structures have been demolished leaving only exposed concrete foundations, retaining walls, and surface parking. The majority of the site is concrete with little vegetation. There is a mild elevation drop across the site, but retaining walls constructed during development have minimized slopes on the sites. See the USGS Quadrangle Map (Appendix D). All existing pavement, structures, and utilities within project limits are to be demolished.

According to a web soil survey of the area, the soil on site is 95% Maury-Urban land complex of Hydrologic Soil Group A and 5% Stiversville-Urban land complex of Hydrologic Soil Group A (see Appendix G). It is also shown by the Federal Emergency Management Agency (FEMA) Flood Rate Insurance Map that no portion of the site is within a FEMA regulated floodplain. According to the National Wetlands Inventory Map and site reconnaissance, there are no wetlands present on site.

The existing drainage patterns on this site are from southwest to northeast, predominantly sheet flowing over the retaining wall into the existing adjacent surface parking lot. These existing outfalls discharge within the Nashville MS4 Permit Area (TNS068047). These drain to the Cumberland River.

Because the site is a majority concrete and asphalt from previous development, the estimated runoff coefficients before construction of the mixed-use building is estimated at 0.85, while the post-construction estimated runoff coefficient is estimated to be 0.98.

The erosion and sedimentation control plans and details are provided in Appendix F.

2.1.1 Impaired/Exceptional Waters & TMDL

This site discharges into the Cumberland River in Nashville. There is currently no set TMDL for any type of construction runoff. This river is part of the Middle Tennessee – Cumberland Watershed.

Wetlands and Waters of the State

According to the National Wetlands inventory and site reconnaissance, there are no wetlands or waters of the State present on site.

2.1.2 Other Permits

There are no additional environmental water permits anticipated for this site. A land disturbance permit from the Metro Nashville will be required prior to land disturbing activities.

2.1.3 Endangered and Threatened Species

There are a total of 25 endangered species, 11 threatened, 14 deemed in need of management, and 15 of special concern listed as living in Davidson County. However, it is not believed any of these species are present on the proposed site. A detailed Endangered and Threatened Species investigation for this site has not been completed at this time. Contractor is to notify engineer and owner if any species noted in this section are identified on the site. See the table below for the species and its current endangered classification based on the proposed site location and conditions.

Table 2.1 – Endangered and Threatened Species List Based on Site Location and Condition

Category	Scientific Name	Common Name	State Status
Bird	Falco peregrinus	Peregrine Falcon	Endangered
Bird	Thryomanes bewickii	Bewick's Wren	Endangered
Flowering Plant	Lonicera flava	Yellow Honeysuckle	Threatened

2.1.4 Environmental Site Assessments

Kimley-Horn has no knowledge or record of past pollutants or chemicals and their respective disposition on the property. Contractor shall refer to environmental reports prepared by others prior to demolition of existing structures for potential soil contaminants and any other environmental considerations.

2.2 Adjacent Property Description

This property is situated on 12th Avenue North between Laurel Street and Pine Street. The adjacent property to the northeast is a surface parking lot and multi-tenant commercial building. All adjacent properties are fully developed and completely paved. There is no site runoff from up-gradient developments.

2.3 Construction Description

The development is comprised of removal of existing retaining walls, foundations and pavement, stabilizing the existing ground, and constructing a new 17 story, mixed use building with a subsurface parking structure. The total ±1.5 acre site will be disturbed to construct the proposed improvements.

Erosion prevention and sediment control measures throughout the site will consist of construction entrance exit, construction fencing, erosion eels, and inlet protection.

Phase I of the Erosion Prevention and Sediment Control plans begins with the installation of one construction entrance/ exit off 12th Avenue. Construction fencing and erosion eels will be installed along the existing back of sidewalks to slow and filter any construction runoff before it leaves the site. Existing storm inlets shall also have inlet protection installed and check dams will be installed.

After these measures are in place, the demolition and grading will begin. Most of the land disturbance will occur during this time. After all infrastructure has been completed, the subsurface parking structure construction will begin. Material will be hauled offsite during the grading and construction process. Waste, material, and equipment storage areas will be added during construction.

Inlet protection will be installed at all storm inlets as soon as the inlet is functional and receiving storm water runoff. As final grading is completed, erosion control matting will be immediately installed on slopes steeper than 3:1 to reinforce surface soils and allow stabilization by permanent vegetation.

2.4 Post-Construction Development

Once the construction areas have been stabilized, all structural erosion control measures such as erosion eels shall be removed. Construction fencing should remain until construction has concluded. No future development of the site is anticipated. The improvements will add a closed storm sewer network that will discharge into the existing network on Pine Street after passing through a water quality unit and detention vault. The water quality unit will be managed and maintained by the building owner after construction.

3 Best Management Practices

3.1 General Information

This permit does not authorize discharges of storm water or other discharges that would result in a violation of a State water quality standard. Discharges of this type are a direct violation of this permit.

3.1.1 Non-Stormwater Discharges (NSDs)

In addition to storm water discharges, this SWPPP and the associated permit covers the following non-storm water components of discharge:

- Dewatering of work areas of collected stormwater and ground water (filtering or chemical treatment may be necessary prior to discharge);
- Waters used to wash vehicles (of dust and soil, not process materials such as oils, asphalt, or concrete) where detergents are not used and detention and/or filtering is provided before the water leaves site;
- Water used to control dust in accordance with Tennessee CGP Section 3.5.5;
- Potable water sources including waterline flushings from which chlorine has been removed to the maximum extent practicable;
- Routine external building washdown that does not use detergents or other chemicals;
- Uncontaminated groundwater or spring water; and
- Foundation or footing drains where flows are not contaminated with pollutants (process materials such as solvents, heavy metals, etc.);

These non-storm water related discharges will be allowed only if detergents are not used, detention and filtering is provided, and no other solvents are used in any of the water-related activities. In addition, all non-stormwater discharges (NSD) authorized must be free of sediment or other solids and must not cause erosion of soil or the stream bank, or result in sediment impacts to the receiving stream.

During the course of construction there are activities that may have the potential to create a NSD. Below is a list of construction activities that may be encountered at this project that have the potential to create a NSD and the companion best management practices to eliminate the discharge:

3.1.1.1 Waters to Control Dust

The TDEC Erosion and Sediment Control Handbook includes dust control measures that will be implemented when there is visible dust generated from the site. Dust palliative will be used to control dust and applied via a small diameter fire or garden hose, or, with a water truck or hydro-sprayer depending on the palliative being used and the size of the area treated. The CM and contractor will monitor the application of the dust palliative regularly while it is being applied to ensure the water is not over applied. All efforts will be made to not over apply the spray to avoid any surface runoff. In the event there is surface runoff as a result of the over application of the palliative to control dust, the operator applying dust control will cease the application until an

additional application is needed for the control of dust. Runoff will be controlled by ceasing application operations, soil roughening; silt fence, sediment traps or ponds.

Responsible party: CM & all trades are responsible to control dust for their operations.

3.1.1.2 Uncontaminated Excavation Dewatering

Discharges from groundwater dewatering operations shall be conducted in accordance with the DSW permit. In certain instances stormwater will need to be removed from excavated basements or utility excavations. Pumping operations will be initiated to remove the accumulated stormwater as needed. "Dirt Bags" or other filtration devices will be utilized at the end of the discharge hose to filter sediment. Velocity dissipaters will be used as needed at the discharge point in the event there is a chance of erosion or scour caused by the pumping operation. All efforts will be made to pump from the surface of the water. In cases where shallow water is encountered and the depth of water does not allow for pumping from the surface, the intake will be placed in a 5 gallon bucket or other device so the underlying soils are protected from being pumped out of the excavation. All efforts are to be made to discharge onto a permeable and vegetated area, or, into a temporary sediment basin or sediment trap. Apply erosion and sediment control as needed to slow or channel the flow to eliminate erosion and scour. The discharges are to be monitored regularly while excavation pumping is taking place. Pumping is to immediately cease if the sediment discharge exceeds acceptable limits. Best management practices are to be adjusted as needed prior to continuing the pumping operation.

Responsible party: CM & all trades responsible for building, trench or utility excavations

3.1.1.3 Potable Water Including Uncontaminated Water Line Flushing

Domestic potable water lines will be flushed prior to completion of construction. The owner or contractor of the water line will confirm that there are no chemicals or other pollutants contained in the water. If lines have been chlorinated, the contractor will de-chlorinate and test the lines prior to flushing. The discharge from the water line flushing will be controlled and contained onsite. In the event there is the potential for an offsite discharge of waters generated from the line flushing operation, the operation will be immediately stopped until the water can be diverted so that it is contained onsite. The Contractor will monitor discharged water and cease operations in the event sediment or other pollutants are being discharged as a result of the uncontaminated water line flushing. Best management practices are to be adjusted as needed prior to continuing the pumping operation.

Responsible party: Underground "wet" utility contractor

3.1.1.4 Uncontaminated air conditioning or compressor condensate

The discharges from air conditioning condensate are expected to be seasonal and minimal. Water will be diverted into the landscaped and permeable areas so as not to be discharged into the streets, gutters or storm drain system. The discharges will be monitored and if there is a chance of discharge to the storm drain system, BMPs will be installed to divert the water to a permeable vegetated area.

Responsible party: Construction Manager

3.1.1.5 Landscape Irrigation

Irrigation water will be sprayed onto permeable recently planted and landscaped surfaces only. Landscape irrigation will be monitored regularly to prevent over watering. In the event there is a potential for an offsite discharge from landscape irrigation, the irrigation system will be shut off until adjustments to the irrigation system are made. Watering times and schedules will be adjusted in the event there is the potential for surface runoff from the irrigated areas. Sprinkler heads and valves will be adjusted to eliminate overspraying; spraying onto the street; or, onto a watercourse that could cause the irrigation water to be discharged offsite.

Responsible party: CM & landscape and irrigation contractor

3.1.1.6 Routine external building wash down without detergents

Building siding may be washed down prior to the application of paint. The contractor will use the least amount of water possible to wash the buildings. Any residues including caulking or adhesives will be removed and properly disposed of prior to the wash down. Contractor will use a spray nozzle that will shut off and stop the flow of water when not in use. The wash waters are to be contained within the building pad and not allowed to migrate into the street or gutters. Building pad soils will be roughened and sediment controls will be installed at the perimeters of the lots and in any areas where it will be needed to prevent the wash water from discharging off the building pad. Contractor will inspect inlet protection prior to wash down to be sure it is in place and functional.

Responsible party: Painting contractor

Any changes in construction that will produce other allowable NSDs will be identified. The nonstormwater BMPs will be amended and the appropriate controls will be implemented.

3.1.1.7 Hazardous Substances

This SWPPP and associated permit do not cover the release of any hazardous substance or oil in the storm water discharges from the site of construction. This sort of action will be prevented or minimized and in the event of a release, the permittee is obligated under the reporting requirements of 40 CFR 117 and 40 CFR 302. The following actions will be taken:

- The National Response Center (800-424-8802) and the Tennessee Emergency Management Agency (emergencies: 800-262-330; non-emergencies: 800-262-3400) will be notified as soon as the discharge has been acknowledged;
- Within 14 calendar days of the knowledge of the release, the permittee will submit a description of the release to the EAC; and
- The SWPPP will be modified within 14 calendar days of the knowledge of release to provide a description of the release and the plan will be reviewed to prevent any reoccurrences.

3.1.1.8 SWPPP Considerations

The following items were considered for the development of this Storm Water Pollution Prevention Plan (SWPPP) and the selection of erosion and sediment controls:

- Disturbing the smallest area possible;
- Sequencing construction to minimize exposure time of cleared surface areas;
- Staging grading and construction for the larger site;
- Constructing erosion and sediment controls prior to earth-moving activities;
- Preserving existing vegetation;
- Avoiding disturbance of sensitive areas;
- Diverting upslope and upstream water;
- Limiting exposure of disturbed areas;
- Re-vegetating disturbed areas as soon as possible;
- Reducing runoff velocities;
- Removing sediment from storm water prior to drainage from the site;

3.2 Planned Erosion and Sediment Controls

In summary, erosion and sediment control measures, must be in place and functioning before any earth moving operations begin. In addition, they must be constructed and maintained throughout the construction period. Contractor is responsible for ensuring the BMP installer is qualified and providing documentation of SWPPP training of all BMP installers. All erosion and sediment control practices will be inspected at least twice weekly, a minimum of 72 hours apart. Needed repairs will be made immediately. Temporary measures may be removed at the beginning of the workday but must be replaced at the end of the workday. Stabilization measures shall be initiated as soon as practicable 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. There are two exceptions: where the initiation of stabilization measures by the seventh day is precluded by snow cover or frozen ground conditions; or where construction activity on a portion of the site has temporarily ceased, and earth-disturbing activities will be resumed within 15 days.

The erosion and sediment controls and management techniques planned for this site include vegetative controls, structural controls, and construction management. Site erosion and sedimentation control plans are attached in Appendix F. Erosion Prevention and Sediment Controls shall be designed to minimize erosion and maximize sediment removal resulting from a 2-year, 24-hour design storm. All EPSC measures shall be installed per manufacturer's recommendations.

3.2.1 Vegetative Controls

- 3.2.1.1 Appropriate annual vegetation for temporary soil stabilization will be applied within 7 days and maintained on areas that will remain unfinished for more than 30 calendar days. See Table 3.1 for seeding information.

Table 3.1 – Annual Vegetation for Temporary Soil Stabilization

Seeding Dates	Grass Seed	Percentages
January 1 to May 1	Italian Rye	33%
	Korean Lespedeza	33%
	Summer Oats	34%
May 1 to July 15	Sudan - Sorghum	100%
May 1 to July 15	Starr Millet	100%
July 15 to January 1	Balboa Rye	67%
	Italian Rye	33%

- 3.2.1.2 Stabilization practices may include: temporary seeding, permanent seeding, hydroseeding, mulching, sod stabilization, vegetative buffer strips, protection of trees, preservation of mature vegetation, and other appropriate measures.
- 3.2.1.3 Perennial vegetation for permanent soil stabilization will be applied as soon as practicable. See Table 3.2 for seeding information. Unpaved areas will be seeded or sodded as soon as final grading is complete.
- 3.2.1.4 Use of impervious for stabilization will be avoided where possible.
- 3.2.1.5 There are no stream buffers present on this site.
- 3.2.1.6 Refer to the Tennessee Erosion & Sediment Control Handbook for additional temporary and permanent vegetative measures.

Table 3.2 – Annual Vegetation for Permanent Soil Stabilization

Seeding Dates	Grass Seed	Percentages
February 1 to July 1	Kentucky 31 Fescue	80%
	Korean Lespedeza	15%
	English Rye	5%
June 1 to August 15	Kentucky 31 Fescue	55%
	English Rye	20%
	Korean Lespedeza	15%
	German Millet	10%
April 15 to August 15	Bermudagrass (hulled)	70%
	Annual Lespedeza	30%
August 1 to December 1	Kentucky 31 Fescue	70%
	English Rye	20%
	White Clover	10%
February 1 to December 1	Kentucky 31 Fescue	70%
	Crown Vetch	25%
	English Rye	5%

Source: TDOT Standard Specifications

3.2.2 Structural Controls

- 3.2.2.1 Erosion Control Eels will be installed along the entire downslope perimeter of graded or disturbed areas, excluding the entrance; to minimize sheet flow carrying sediment from leaving the construction site. All storm drain inlets which receive runoff from disturbed areas will also be surrounded by erosion eels, mulch socks or other suitable inlet protection devices as approved by the Project Engineer.
- 3.2.2.2 A 4 to 6 inch gravel layer will be applied to the roadway once it has been graded. The gravel will help to contain the silt and sediment from the construction of the roadways as well as to control erosion when the roadways are being used before they are paved.
- 3.2.2.3 A temporary gravel construction entrance will provide access to the site's unpaved areas as necessary. The stone-stabilized pads will consist of no less than six inches of well-graded, washed #1 or #2 (by TDOT specifications) stone. Construction vehicles will only enter/exit over these pads. Pads should not be placed at steep grades or near curves in public roads whenever possible.
- 3.2.2.4 A designated concrete washout area will be installed near the construction exit to prevent the contamination of nearby waters from the washing of concrete chutes and hoppers. Washouts are to be used to wash equipment and vehicles coated with concrete, as well as washing exposed aggregate concrete. Consideration must be given to ensure the washout is watertight, and is located away from heavy construction traffic and inlets where practical.
- 3.2.2.5 Any on-site temporary stockpile areas will be surrounded with silt fence.
- 3.2.2.6 Inlet Protection will be placed around all existing and newly installed inlets on the construction site. This inlet protection will consist of block and gravel and/or silt fence inlet protection. Alternative inlet protection devices may be considered.
- 3.2.2.7 Soil Binders and Tackifiers shall be considered to stabilize disturbed areas and prevent dust and tracking should additional control be necessary. If used, avoid over spray onto roads, sidewalks, drainage channels, existing vegetation, etc. Refer to the Tennessee Erosion & Sediment Control Handbook for additional information.

3.2.2.8 PAM (Polyacrylamide) shall be considered on the site in the event other structural measures are not effective in minimizing the escape of sediment from the site. Refer to the Tennessee Erosion & Sediment Control Handbook for additional information on flocculants.

3.2.2.9 Refer to the Tennessee Erosion & Sediment Control Handbook for additional structural controls.

3.2.3 Construction Management Techniques

3.2.3.1 Cleared surface area exposure time will be minimized by sequenced construction.

3.2.3.2 Construction and maintenance of erosion and sediment control measures will be carried out throughout the construction period.

3.2.3.3 Sediment should be removed from sediment traps, silt fences, sediment ponds, and other sediment controls as recommended in the Tennessee Erosion & Sediment Control Handbook and must be removed when design capacity has been reduced by 50%.

3.2.3.4 Pre-construction vegetative ground cover shall not be destroyed, removed, or disturbed more than 15 days prior to grading or earth moving unless the area is seeded and/or mulched.

3.2.3.5 Clearing and grubbing must be held to the minimum necessary for grading and equipment operation. Existing vegetation at the site should be preserved to the maximum extent practical.

3.3 Other Control Items

3.3.1 No solid materials, including building materials, will be discharged to waters exiting the site.

3.3.2 Off-site vehicle tracking of sediments and the generation of dust will be minimized. Adjacent roadways shall be inspected at the end of each work day and cleaned as necessary.

3.3.3 Sediment controls for installation of any waste disposal systems or sanitary sewer or septic systems on site will be provided.

3.3.4 Storage for construction and waste materials will be stored onsite properly. Containment will be provided to prevent spills and exposure to storm water. The proper authorities will be notified in the event of a release.

3.3.5 If an off-site disposal area for excavated material is deemed necessary, the disposal areas will be fitted with proper erosion and sediment control measures throughout construction until permanent stabilization is achieved.

3.3.6 Litter, construction debris, and construction chemicals exposed to stormwater shall be picked up prior to anticipated storm events or before begin carried off of the site by wind (e.g., forecasted by local weather reports), or otherwise prevented from becoming a pollutant source for stormwater discharges (e.g., screening outfalls, daily pick-up, etc.). After use, materials used for erosion prevention and sediment control (such as silt fence) should be removed or otherwise prevented from becoming a pollutant source for stormwater discharges.

- 3.3.7 Practices such as trash disposal, recycling, proper material handling, and cleanup measures can reduce the potential for construction site waste materials from becoming stormwater pollutants. Keep dumpsters covered to prevent trash from being blown out and into the stormwater system. For larger, solid construction debris, an open containment system (as simple as a wire fenced in area) can provide enough protection from materials moving around the construction site and into the storm drain system.
- 3.3.8 Paints, solvents, pesticides, fuels and oils, other hazardous materials or any building materials that have the potential to contaminate stormwater should be stored inside the construction trailer, in a storage building, or under cover whenever possible. If such a scenario isn't feasible on the construction site, secondary containment should be provided. Secondary containment systems provide a means to capture spills and prevent them from moving offsite in stormwater runoff. More information on secondary containment systems can be found in section 7.19 of the TDEC Erosion Prevention & Sediment Control Handbook. Training employees and subcontractors on materials storage and spill prevention is essential to the success of this pollution prevention principle.
- 3.3.9 Designate specific on-site washout areas and design facilities to handle the anticipated volume of concrete washout. The washout area should be clearly marked, and operators and contractors made aware of its location. Once the concrete washout slurry sets up, the material can be broken up and removed or used where allowed as suitable fill material. In slurry form, concrete washout can impact a receiving stream or watercourse in numerous ways, including covering habitat, clogging fish gills, and altering the pH of the water.
- 3.3.10 Performing equipment/vehicle fueling and maintenance at an off-site facility is preferred over performing these activities on the site. However, on some projects, onsite vehicle maintenance may be necessary. The goal of this pollution prevention principle is to keep fuel, oils and greases from coming into contact with stormwater. Create an on-site fueling and maintenance area that is clean and dry, equipped with a spill kit, and staff should be trained in how to properly use it. Maintenance and refueling stations should be established well away from streams, wetlands and storm drain systems. Drip pans should be installed under any leaky equipment. Any material in the drip pans should be collected and taken offsite for proper disposal. Lubricants, solvents and fuels should be stored under cover or have secondary containment systems installed to prevent spills or leaks from mixing with stormwater.
- 3.3.11 A comprehensive spill prevention and response plan is needed where any fluids are stored on a construction project. The plan should clearly identify the site contact for spills; identify ways to reduce the chance of spills; identify methods to stop the source of spills; describe how to contain and clean up spills; identify the location of the closest stormwater system component, stream or wetland; describe the disposal method for materials contaminated by spills; and provide a mechanism to train personnel responsible for spill prevention and response. Chapter 7 contains additional information on spill prevention and response.
- 3.3.12 A rainfall gauge is required on the construction site and should be read at least once a day at approximately the same time to get a 24 hour rainfall depth total. In addition, when a rain event occurs, the approximate beginning and ending time should be documented to provide the rain event duration. The rainfall depth and duration together can be used to determine the storm frequency and related back to the permit and design requirements. Rainfall data should be kept with the field SWPPP. A rain gauge log is included in Appendix J.

3.4 Spill Prevention and Control BMP

The BMPs in this section are suitable for all construction projects. Spill control procedures are implemented anytime chemicals or hazardous substances are stored on the construction site, including the following materials:

- Soil stabilizers/binders
- Dust palliatives
- Herbicides
- Growth inhibitors
- Fertilizers
- Deicing/anti-icing chemicals
- Fuels
- Lubricants
- Other petroleum distillates

Implementation

- To the extent that the work can be accomplished safely, spills of oil, petroleum products, and substances listed under 40 CFR parts 110,117, and 302, and sanitary and septic wastes should be contained and cleaned up immediately.
- Store hazardous materials and wastes in covered containers and protect from vandalism.
- Place a stockpile of spill cleanup materials onsite or adjacent to the site where it will be readily accessible.
- Train employees in spill prevention and cleanup.
- Designate responsible individuals to oversee and enforce control measures.
- Spills should be covered and protected from stormwater run on during rainfall to the extent that it doesn't compromise clean up activities.
- Do not bury or wash spills with water.
- Store and dispose of used clean up materials, contaminated materials, and recovered spill material that is no longer suitable for the intended purpose in conformance with the provisions in applicable BMPs.
- Do not allow water used for cleaning and decontamination to enter storm drains or watercourses.
- Contain water overflow or minor water spillage and do not allow it to discharge into drainage facilities or watercourses.
- Place proper storage, cleanup, and spill reporting instructions for hazardous materials stored or used on the project site in an open, conspicuous, and accessible location.
- Keep waste storage areas clean, well-organized, and equipped with ample clean supplies as appropriate for the materials being stored. Perimeter controls, containment structures, covers, and liners should be repaired or replaced as needed to maintain proper function.

Cleanup

- Clean up leaks and spills immediately.
- Use a rag for small spills on paved surfaces, a damp mop for general cleanup, and absorbent material for larger spills. If the spilled material is hazardous, then the used cleanup materials are also hazardous and must be sent to either a certified laundry (rags) or disposed of as hazardous waste.
- Never hose down or bury dry material spills. Clean up as much of the material as possible and dispose of properly.

Minor Spills

- Minor spills typically involve small quantities of oil, gasoline, paint, etc. which can be controlled at the discovery of the spill.
- Contain the spread of the spill.
- Use absorbent materials on small spills rather than hosing down or burying the spill.
- Notify the project foreman immediately
- Recover spilled materials.
- Clean the contaminated area and properly dispose of contaminated materials.
- If the spill occurs on paved or impermeable surfaces, clean up using "dry" methods (absorbent materials, cat litter and/or rags). Contain the spill by encircling with absorbent materials and do not let the spill spread widely.
- If the spill occurs in dirt areas, immediately contain the spill by constructing an earthen dike. Dig up and properly dispose of contaminated soil.

- If the spill occurs during rain, cover spill with tarps or other material to prevent contaminating runoff.

Semi-Significant Spills

- Semi-significant spills still can be controlled by the first responder along with the aid of other personnel such as laborers and the foreman, etc. This response may require the cessation of all other activities. Spills should be cleaned up immediately:

Significant/Hazardous Spills

- For significant or hazardous spills that cannot be controlled by personnel in the immediate vicinity,
- the following steps should be taken:
 - Notify the local emergency response by dialing 911. In addition to 911, the contractor will notify the proper City or County officials. All emergency phone numbers will be posted at the construction site.
 - Contact your Supervisor and the Divisional Environmental Manager. For spills of federal reportable quantities, (examples are listed below) in conformance with the requirements in 40 CFR parts 110, 119, and 302, the Division Environmental Manager (DEM) will notify the National Response Center at (800) 424-8802. The DEM will notify the Soil Conservation District and any other applicable agencies
- The services of an emergency spill response contractor or a Haz-Mat team should be obtained immediately. Construction personnel should not attempt to clean up until the appropriate and qualified staff have arrived at the job site.
- Notification to the appropriate regulatory agency should first be made by telephone and followed up with a written report in accordance with local regulation.
- Other agencies which may need to be consulted include, but are not limited to, the Public Works Department, the Coast Guard, the Highway Patrol, the City/County Police Department, Department of Toxic Substances, Department of Environmental Protection, Division of Oil and Gas, etc.
- Federal regulations require that any significant oil spill into a water body or onto an adjoining shoreline be reported to the National Response Center (NRC) at 800-424-8802 (24 hours).

Use the following measures related to specific activities:

Vehicle and Equipment Maintenance

- If maintenance must be performed onsite, use a designated area and secondary containment, located away from drainage courses, to prevent the run on of stormwater and the runoff of spills.
- Regularly inspect onsite vehicles and equipment for leaks and repair immediately
- Check incoming vehicles and equipment (including delivery trucks, and employee and subcontractor vehicles) for leaking oil and fluids. Do not allow leaking vehicles or equipment onsite.
- Always use secondary containment, such as a drain pan or drop cloth, to catch spills or leaks when removing or changing fluids.
- Place drip pans or absorbent materials under paving equipment when not in use.
- Use absorbent materials on small spills rather than hosing down or burying the spill.
- Remove the absorbent materials promptly and dispose of properly.
- Promptly transfer used fluids to the proper waste or recycling drums. Don't leave full drip pans or other open containers lying around.
- Oil filters disposed of in trash cans or dumpsters can leak oil and pollute stormwater. Place the oil filter in a funnel over a waste oil-recycling drum to drain excess oil before disposal. Oil filters can also be recycled. Ask the oil supplier or recycler about recycling oil filters.
- Store cracked and sound "inventory" batteries in a non-leaking secondary container. Do this with all cracked batteries even if you think all the acid has drained out. If you drop a battery, treat it as if it is cracked. Put it into the containment area until you are sure it is not leaking.

Vehicle and Equipment Fueling

- If fueling must be performed onsite, designate areas located away from drainage courses to prevent the run on of stormwater and the runoff of spills.
- Discourage "topping off" of fuel tanks.

- Always use secondary containment, such as a drain pan, when fueling to catch spills/ leaks.

Typical Reportable Quantities for Construction Sites		
Material	Released To	Quantity
Engine Oil, Fuel Hydraulic & Brake Fluid	Land	25 gallons
Engine Oil, Fuel Hydraulic & Brake Fluid	Water	Visible Sheen
Gasoline	Land and/or Water	32 Gallons
Anti-Freeze	Land and/or Water	5,000 lbs (539 gallons)
Engine Degreaser	Land and/or Water	100 lbs (10 gallons)
Inspection and Maintenance	<ul style="list-style-type: none"> • Verify that activity-based BMPs are in place prior to the commencement of the associated activities. • Observe BMPs subject to non-stormwater discharge while non-stormwater discharges occur as part of routine activities. • Keep ample supplies of spill control and cleanup materials onsite, or adjacent to the site. • Update your spill prevention and control plan and stock cleanup. 	

3.5 Hazardous Waste Management BMP

Hazardous waste management practices are implemented on construction projects that generate waste from the use of:

- Petroleum Products, Asphalt Products, Concrete Curing Compounds, Pesticides, Palliatives, Acids, Septic Wastes, Paints, Stains, Solvents, Wood Preservatives, Roofing Tar and any materials deemed a hazardous waste in N.J.A.C. 7:1E-1.6 or listed in 40 CFR Parts 110, 117, 261, or 302,

In addition, sites with existing structures may contain wastes, which must be disposed of in accordance with federal, state, and local regulations. These wastes include:

- Sandblasting grit mixed with lead-, cadmium-, or chromium-based paints
- Asbestos
- Lead paint
- PCBs (particularly in older transformers)

Implementation

- Wastes should be stored in sealed containers constructed of a suitable material and should be labeled as required by 49 CFR Parts 172, 173, 178, and 179.
- All hazardous waste should be stored, transported, and disposed as required in 49 CFR 261-263.
- Waste containers should be stored in temporary containment facilities that should comply with the following requirements:
 - Designate hazardous waste storage areas onsite away from storm drains or watercourses and away from moving vehicles and equipment to prevent accidental spills.
 - Minimize production or generation of hazardous materials and hazardous waste on the job site.

- Use containment berms in fueling and maintenance areas and where the potential for spills is high.
- Segregate potentially hazardous waste from non-hazardous construction site debris.
- Keep liquid or semi-liquid hazardous waste in appropriate containers (closed drums or similar) and under cover.
- Temporary containment facilities should provide for a spill containment volume equal to the greater of 10% of the aggregate volume of all containers or 100% of the capacity of the largest tank within its boundary, whichever is greater, plus the volume of precipitation from a 25 year storm event
- Temporary containment facility should be impervious to the materials stored there for a minimum contact time of 72 hours.
- Temporary containment facilities should be maintained free of accumulated rainwater and spills. In the event of spills or leaks, accumulated rainwater and spills should be placed into drums after each rainfall. These liquids should be handled as a hazardous waste unless testing determines them to be non-hazardous. Non-hazardous liquids should be sent to an approved disposal site.
- Sufficient separation should be provided between stored containers to allow for spill cleanup and emergency response access.
- Incompatible materials, such as chlorine and ammonia, should not be stored in the same temporary containment facility.
- Throughout the rainy season, temporary containment facilities should be covered during non-working days, and prior to rain events. Covered facilities may include use of plastic tarps for small facilities or constructed roofs with overhangs.
- Drums should not be overfilled and wastes should not be mixed.
- Unless watertight, containers of dry waste should be stored on pallets.
- Do not over-apply herbicides and pesticides. Prepare only the amount needed. Follow the recommended usage instructions. Over application is expensive and environmentally harmful. Apply surface dressings in several smaller applications, as opposed to one large application. Allow time for infiltration and avoid excess material being carried offsite by runoff. Do not apply these chemicals just before it rains. People applying pesticides must be certified in accordance with federal and state regulations.
- Paint brushes and equipment for water and oil based paints should be cleaned within a contained area and should not be allowed to contaminate site soils, watercourses, or drainage systems. Waste paints, thinners, solvents, residues, and sludges that cannot be recycled or reused should be disposed of as hazardous waste. When thoroughly dry, latex paint and paint cans, use brushes, rags, absorbent materials, and drop cloths should be disposed of as solid waste.
- Do not clean out brushes or rinse paint containers into the dirt, street, gutter, storm drain, or stream. "Paint out" brushes as much as possible. Rinse water-based paints to the sanitary sewer. Filter and reuse thinners and solvents. Dispose of excess oil-based paints and sludge as hazardous waste.
- Clearly label all hazardous waste containers with the waste being stored and the date of accumulation.
 - Place hazardous waste containers in secondary containment.
 - Do not allow potentially hazardous waste materials to accumulate on the ground.
 - Do not mix wastes.
 - Use the entire product before disposing of the container.
 - Do not remove the original product label; it contains important safety and disposal information.

Waste Recycling Disposal

- Select designated hazardous waste collection areas onsite.
- Hazardous materials and wastes should be stored in covered containers and protected from vandalism.
- Place hazardous waste containers in secondary containment.

- Do not mix wastes, this can cause chemical reactions, making recycling impossible and complicating disposal.
- Recycle any useful materials such as used oil or water-based paint.
- Make sure that toxic liquid wastes (used oils, solvents, and paints) and chemicals (acids, pesticides, additives, curing compounds) are not disposed of in dumpsters designated for construction debris.
- Arrange for regular waste collection before containers overflow.
- Make sure that hazardous waste (e.g., excess oil-based paint and sludge) is collected, removed, and disposed of only at authorized disposal areas.

Disposal Procedures

- Waste should be disposed of by a licensed hazardous waste transporter at an authorized and licensed disposal facility or recycling facility utilizing properly completed Uniform Hazardous Waste Manifest forms.
- A State certified laboratory should sample waste to determine the appropriate disposal facility.
- Properly dispose of rainwater in secondary containment that may have mixed with hazardous waste.
- Place a stockpile of spill cleanup materials onsite or adjacent to the site where it will be readily accessible.
- If a container does spill, clean up immediately

Education

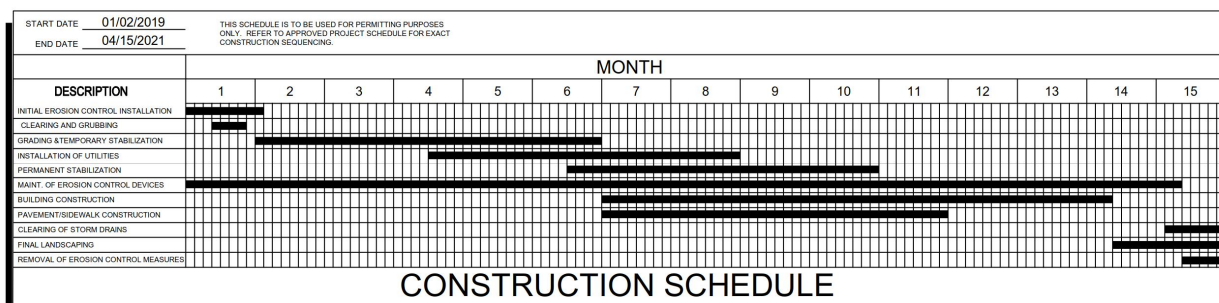
- The Construction Manager and Division Environmental Manager will oversee and enforce proper hazardous waste management procedures and practices.

3.6 Construction Sequence and Schedule

The following is an estimated sequence of events and anticipated construction schedule Gantt chart:

- 3.6.1 Plan approval and other applicable permits are obtained.
- 3.6.2 Limits of disturbance and tree protection fence flagged and construction staked out to begin.
- 3.6.3 All Phase I erosion control measures are installed.
 - 3.6.3.2 Inlet protection, silt fence, erosion eels, construction entrances, concrete washouts
- 3.6.4 Mass grading of the site.
 - 3.6.4.2 Phase 2 EPSC measures to be installed as able during grading and building construction.
- 3.6.5 Construction of sewer, water, and storm utilities.
- 3.6.6 Construction of the parking structure and 17 story, mixed-use building.
- 3.6.7 Construction of pavement and sidewalks.
- 3.6.8 Permanent vegetation to be put in place to stabilize the disturbed areas on site and any other Phase 3 EPSC measures to be implemented.
- 3.6.9 All temporary erosion control measures to be removed.
- 3.6.10 Submit NOT – Anticipated 04/15/2021 (see Table 3.2 below for anticipated construction schedule)

Table 3.2 – Anticipated Project Schedule Gantt Chart



Operation and Maintenance

4.1 Inspections

Inspections shall be documented and include the scope of the inspection, name(s) and title(s) or qualifications of personnel making the inspection, the date(s) of the inspection, major observations relating to the implementation of the storm water pollutants from the site and of any control devices that failed to operate as designed (or proved inadequate for a particular location), and actions taken based on the results of the inspection. An inspection form is provided in Appendix E.

The permittee must certify on a weekly basis that the weekly inspection of erosion and sediment controls and of outfall points was performed, and whether or not all planned and designed erosion and sediment controls are installed and in working order.

Inspections must be conducted a minimum of two (2) times per week at least 72 hours apart. Written notification of the intent to change the inspection frequency and the justification for such request must be submitted to the local Environmental Field Office or the division's Nashville Central Office for projects of TDOT and TVA.

Any inadequate control measures or control measures in disrepair shall be replaced, modified, or repaired as necessary, before the next rain event, but in no case more than seven days after the need is identified or construction activities must cease at the site.

If periodic inspections or other information indicates a control has been used inappropriately, or incorrectly, the permittee must replace or modify the control for site situations. 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. This permit, however, does not authorize access to private property.

Litter, construction debris, and construction chemicals exposed to storm water will be picked up prior to anticipated storm events. Pre-construction vegetative ground cover will 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.

Finally, 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 will all be maintained at the construction site.

4.2 Temporary Measures (vegetative and structural)

Stabilization measures will be initiated as soon as possible in areas where construction activities have ceased and in no more than seven days after the activity stopped. There are two exceptions: 1) where the initiation of stabilization measures by the seventh day is precluded by snow cover or frozen ground conditions; and 2) where construction activity on a portion of the site is temporarily ceased, and earth disturbing activities will be resumed within 15 days.

- 4.2.1 Temporary measures may be removed at the beginning of the workday but will be replaced at the end of the workday.
- 4.2.2 Silt will be inspected after each rainfall and at least daily during prolonged rainfall.
- 4.2.3 Sediment removal will be monitored to avoid damage to erosion control structures.
- 4.2.4 Sediment will be removed from behind the silt fence when it reaches approximately 6 inches deep.

-
- 4.2.5 Sediment will be removed from traps when they reach 50% of their capacity.
 - 4.2.6 Soil stabilization, with temporary controls, after final grading will be accomplished within 15 days.
 - 4.2.7 Steep slopes (35% or greater) shall be temporarily stabilized no later than 7 days after construction activity on the slope has temporarily or permanently ceased.
 - 4.3 Control Management
 - 4.3.1 All control measures will be inspected prior to anticipated storm events.
 - 4.3.2 All control measures will be inspected on a weekly basis and after each rainfall.
 - 4.3.3 All controls will be checked during prolonged rainfall.
 - 4.3.4 Construction debris will be inhibited from entering drainage channels.
 - 4.3.5 A specific individual will be designated responsible for erosion control measures at the site.
 - 4.4 Permanent Measures (vegetative and structural)
 - 4.4.1 Vegetated areas will be maintained in adequate condition to provide proper ground cover.
 - 4.4.2 Areas where vegetation is lost, will be fertilized, seeded and maintained as necessary to restore proper ground cover.
 - 4.4.3 Soil stabilization, with permanent controls, after final grading will be accomplished within 15 days and will replace temporary measures as soon as practicable.
 - 4.4.4 Structural measures will be examined at least annually and maintenance performed as needed.
 - 4.5 Records and Reports
 - 4.5.1 The following records must be maintained on site: the date(s) when major grading activities occur, the date(s) when construction activities temporarily or permanently cease on a portion of the site, and the date(s) when stabilization measures are initiated. The permittee shall retain copies of storm water pollution prevention plans, and all reports required by the permit and records of all data used to complete the Notice of Intent covered by this permit for a period of at least three years from the date of notice of termination is filed. The permittee will submit a Notice of Termination (Appendix B) in accordance with the requirements of the NPDES permit when the site has been finally stabilized and all storm water discharges from construction activities authorized by the permit are eliminated.

The following information must be posted near the main entrance of the construction site:

 - 4.5.1.1 The SWPPP;
 - 4.5.1.2 The location of the SWPPP, if the site is inactive or does not have an on-site location to store the plan;
 - 4.5.1.3 A copy of the Notice of Coverage with the NPDES permit number for the project;
 - 4.5.1.4 The name, address, and telephone number of the local contact person; and

4.5.1.5 A brief description of the project.

4.6 Site Assessment

- 4.6.1 Site assessment shall be conducted within a month of construction commencing at each outfall involving drainage totaling 10 or more acres (or 5 or more acres if draining to impaired or exceptional waters) by individuals with the following qualifications:
 - 4.6.1.1 A licensed professional engineer or landscape architect
 - 4.6.1.2 A Certified Professional in Erosion and Sediment Control (CPESC) or
 - 4.6.1.3 A person that successfully completed the “Level II Design Principles for Erosion Prevention and Sediment Control for Construction Sites” course.
- 4.6.2 Site assessment should be performed to verify the installation, functionality, and performance of the EPSC measures described herein.
- 4.6.3 Site assessment should be performed with the inspector and should include a review and update of this SWPPP. Modifications of plans and specifications shall be prepared by a licensed professional engineer or landscape architect and stamped and certified.
- 4.6.4 Site assessment findings shall be documented and the documentation attached to this SWPPP to be kept on site.
- 4.6.5 The site assessment may take the place of one of the twice weekly inspections requirement.

5 Employee Continuing Education

- 5.1. New employees to a site will be familiarized with the erosion, sediment, and stormwater control plan and the implementation schedule.
- 5.2. Subcontractors and their employees shall be given an overview of the plan and their responsibilities for following the plan.
- 5.3. Employees responsible for long-term maintenance will be informed of the proper function of BMPs, how to detect deficiencies, and how to take corrective action.
- 5.4. Inspectors must have completed the TDEC EPSC Level I course.

APPENDIX A

NOTICE OF INTENT & NOTICE OF COVERAGE

ORIGINAL APPLICATION

**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)**Notice of Intent (NOI) for General NPDES Permit for Stormwater Discharges from Construction Activities (TNR100000)**

Site or Project Name: W Hotel		NPDES Tracking Number: TNR	
Street Address or Location: 603 12th Avenue South, Nashville, TN 37203		Construction Start Date: 08/05/2018	
		Estimated End Date: 08/05/2019	
Site Description: Hotel		Latitude (dd.dddd):	
		Longitude (-dd.dddd):	
County(ies): Davidson		MS4 (if applicable):	
Check box if a SWPPP is attached : <input checked="" type="checkbox"/>		Check box if a site location map is attached: <input checked="" type="checkbox"/>	
Acres Disturbed: 1.23		Total Acres: 1.23	
Check the appropriate box(s) if there are streams and/or wetlands on or adjacent to the construction site: Streams <input type="checkbox"/> Wetlands <input type="checkbox"/>			
Has a jurisdictional determination been made by the USACE or EPA identifying waters of the United States?: Yes <input type="checkbox"/> No <input type="checkbox"/>			
Note: if yes, attach the jurisdictional determination			
If an Aquatic Resource Alteration Permit (ARAP) has been obtained for this site, what is the permit number? NR(S)			
Receiving waters: Cumberland River			

Site Owner/Developer (Primary Permittee): (Provide person, company, or entity that has operational or design control over construction plans and specifications): 12th Avenue Realty Holding Company, LLC (c/o Magellan Development Group, LLC)

For corporate entities only, provide correct Tennessee Secretary of State (SOS) Control Number:
(an incorrect SOS control number may delay NOI processing)

Site Owner or Developer Contact Name: (signs the certification below) David Carlins		Title or Position: Authorized Signatory	
Mailing Address: 225 N Columbus Drive, Suite 100		City: Chicago	State: IL
Phone: (312) 469-8100		Fax: ()	Zip: 60601
E-mail: dcarlins@magellanddevelopment.com			

Optional Contact: Matt Schlicker		Title or Position: Project Manager	
Mailing Address: 214 Oceanside Drive		City: Nashville	State: TN
Phone: (615) 564-2701		Fax: ()	Zip: 37204
E-mail: matt.schlicker@kimley-horn.com			

Owner/Developer(s) Certification: (must be signed by president, vice-president or equivalent, or ranking elected official) (Primary Permittee)

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.

Owner/Developer Name (print/type): David Calins	Signature: 	Date: 7/3/2018
Owner/Developer Name (print/type):	Signature:	Date:

Contractor Certification: (must be signed by president, vice-president or equivalent, or ranking elected official) (Secondary Permittee)

I certify under penalty of law that I have reviewed this document, any attachments, and the SWPPP referenced above. Based on my inquiry of the construction site owner/developer identified above and/or my inquiry of the person directly responsible for assembling this NOI and SWPPP, I believe the information submitted is accurate. I am aware that this NOI, if approved, makes the above-described construction activity subject to NPDES permit number TNR100000, and that certain of my activities on-site are thereby regulated. I am aware that there are significant penalties, including the possibility of fine and imprisonment for knowing violations, and for failure to comply with these permit requirements. As specified in Tennessee Code Annotated Section 39-16-702(a)(4), this declaration is made under penalty of perjury.

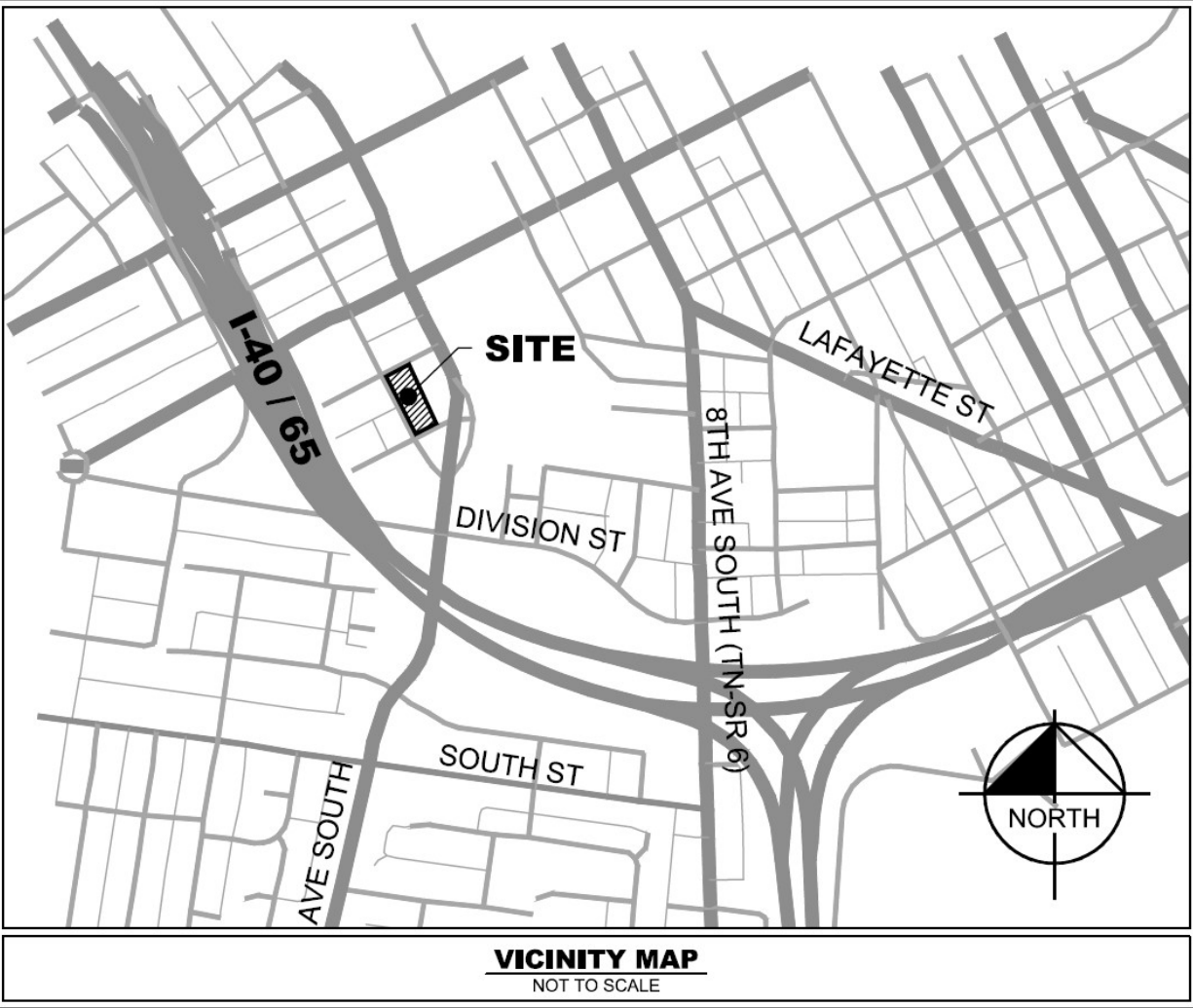
Contractor name, address, and SOS control number (if applicable):	Signature:	Date:
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OFFICIAL STATE USE ONLY

Received Date:	Reviewer:	Field Office:	Permit Tracking Number: TNR	Exceptional TN Water:
Fee(s):	T & E Aquatic Flora/Fauna:	SOS Corporate Status:	Waters with Unavailable Parameters:	Notice of Coverage Date:

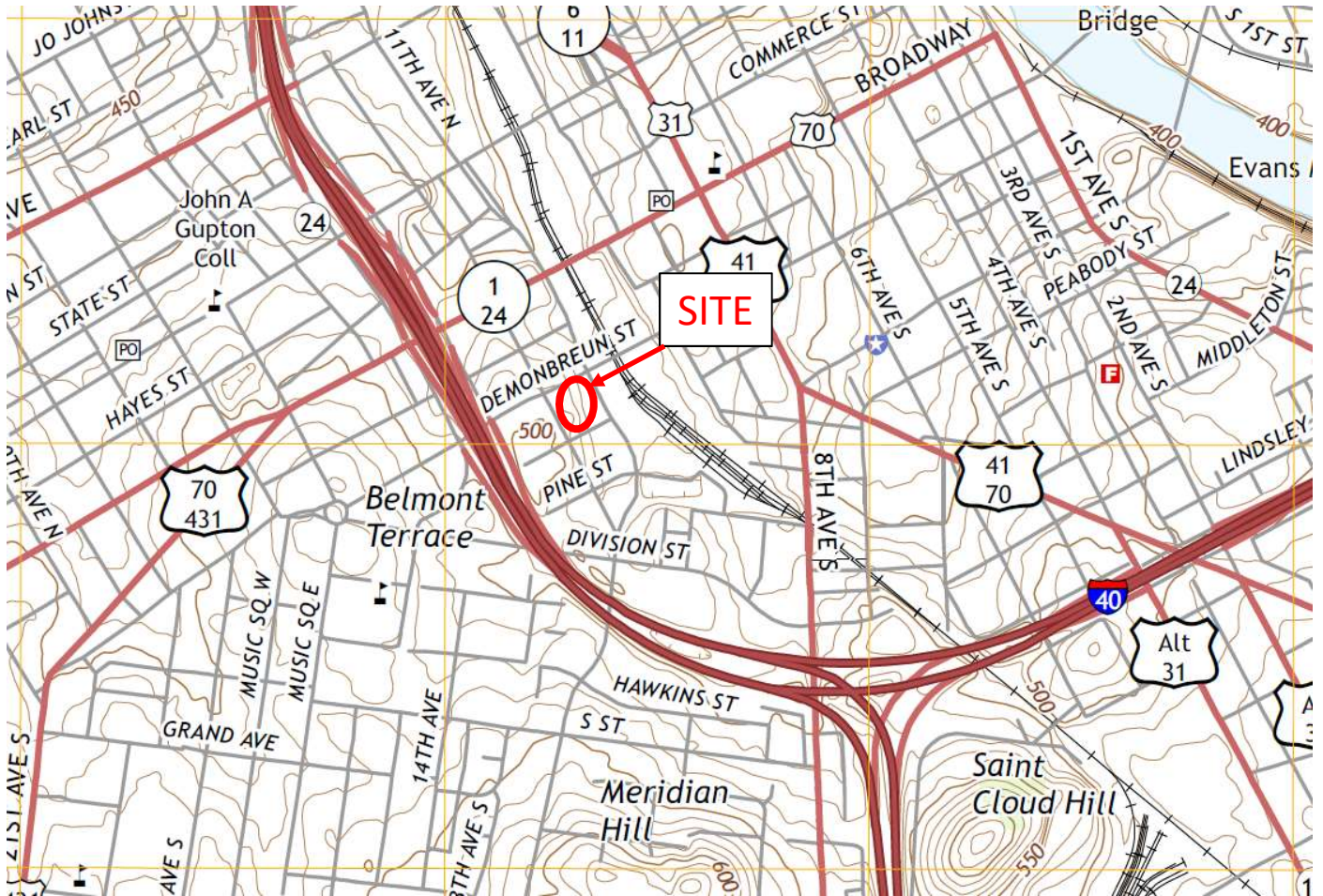
APPENDIX C

SITE VICINITY MAP



APPENDIX D

UNITED STATES GEOLOGICAL SURVEY QUADRANGLE MAP



Kimley»Horn

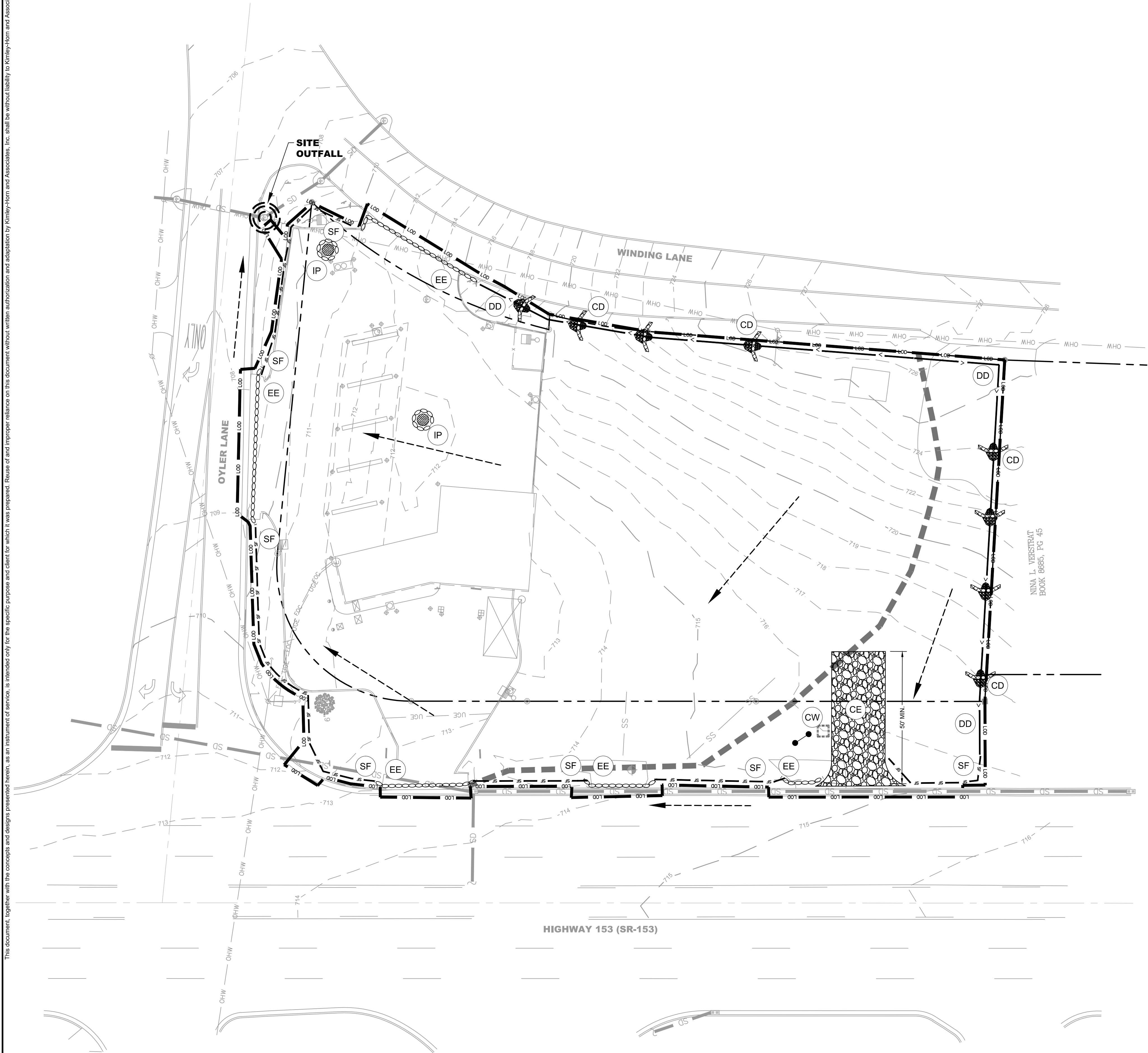
W Hotel
306 12th Avenue South
Nashville, TN 37203

USGS MAP

APPENDIX F

EROSION AND SEDIMENT CONTROL PLANS AND DETAILS

This document, together with the concepts and designs presented herein, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.



EROSION CONTROL LEGEND	
	(SF) SILT FENCE - REFER TO DETAIL SHEET C3-50
	(CW) CONCRETE WASHOUT AREA - REFER TO DETAIL SHEET C3-50
	(MA) EROSION CONTROL MATTING - CONTECH LANDLOK S2 OR APPROVED EQUAL. CONTRACTOR TO INSTALL ON ALL SLOPES 3(H):1(V) OR STEEPER - REFER TO DETAIL SHEET C3-50
	(CE) CONSTRUCTION EXIT - REFER TO DETAIL SHEET C3-50
	(OP) OUTLET PROTECTION - REFER TO DETAIL SHEET C3-50
	(DD) DIVERSION DITCH - REFER TO DETAIL SHEET C3-50
	(EE) EROSION EELS - REFER TO DETAIL SHEET C3-50
	(CD) ROCK CHECK DAM - REFER TO DETAIL SHEET C3-50
	(TS) TEMPORARY STABILIZATION - REFER TO DETAIL SHEET C3-50
	(PS) PERMANENT STABILIZATION - REFER TO DETAIL SHEET C3-50
	— LOD — LIMITS OF DISTURBANCE
	••• CONSTRUCTION SIGN

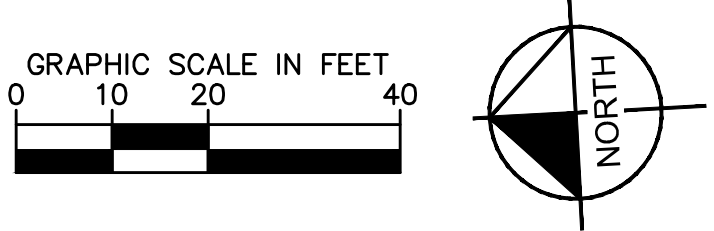
EROSION CONTROL NOTES	
1.	A MINIMUM OF 24 HOURS PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE CITY OF CHATTANOOGA CONSTRUCTION INSPECTION OFFICE.
2.	ALL NEWLY CUT OR FILLED AREA, LACKING ADEQUATE VEGETATION, SHALL BE SEEDED, MULCHED, FERTILIZED, AND/OR SODDED AS REQUIRED TO EFFECTIVELY CONTROL SOIL EROSION.
3.	CONTRACTOR SHALL MAINTAIN ACCESS TO ALL PROPERTIES.
4.	ALL FILL SOILS SHALL BE COMPACTED TO A MINIMUM OF 95% OF STANDARD PROCTOR DENSITY (ASTM D-698) WITHIN 3% OF OPTIMUM MOISTURE CONTENT IN LIFTS NOT TO EXCEED SIX INCHES OF COMPACTED THICKNESS.
5.	ALL CONSTRUCTION MATERIALS AND PROCEDURES SHALL MEET OR EXCEED THE REQUIREMENTS OF THE CITY OF CHATTANOOGA STANDARD CONSTRUCTION SPECIFICATIONS.
6.	PROPERTY LINES SHALL BE FIELD VERIFIED PRIOR TO CONSTRUCTION, GRADING, CLEARING, AND THE ERECTION OR REMOVAL OF FENCES ALONG PROPERTY LINES SHALL BE FULLY COORDINATED WITH ADJACENT PROPERTY OWNERS.
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8.	ALL GRADING WORK SHALL BE PERFORMED IN SUCH A MANNER THAT ADJACENT PROPERTIES ARE NOT DAMAGED OR ADVERSELY AFFECTED.
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10.	THE CONTRACTOR SHALL PROVIDE ADEQUATE AND EFFECTIVE EROSION CONTROL AS NECESSARY TO PREVENT ANY SILTATION INTO EXISTING DRAINAGE SYSTEM AND/OR ADJACENT PROPERTIES.
11.	ALL EROSION CONTROL MEASURES MUST BE INSTALLED PRIOR TO COMMENCEMENT OF GRADING OPERATIONS AND BE MAINTAINED UNTIL ALL DISTURBED AREAS ON THE SITE HAVE BEEN RESTORED.
12.	ALL TEMPORARY EROSION CONTROL INSTALLATIONS SHALL REMAIN IN PLACE AND BE MAINTAINED IN GOOD CONDITIONS BY THE CONTRACTOR UNTIL THE SITE HAS BEEN RE-VEGETATED, AT WHICH TIME IT SHALL BE REMOVED, FOR PROPOSED PAVED SURFACE AREAS, THE CONTRACTOR MAY REMOVE NECESSARY SILT FENCE TO CONSTRUCT ROADWAYS, WHILE MAINTAINING ADEQUATE EROSION CONTROL IN ADJACENT AREAS.
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14.	ALL CONTROL MEASURES SHALL BE CHECKED, AND REPAIRED AS NECESSARY, TWICE WEEKLY AT LEAST 72 HOURS APART AND IN DRY PERIODS AND WITHIN 24 HOURS AFTER ANY RAINFALL OF 0.5 INCHES WITHIN A 24 HOUR PERIOD. DURING PROLONGED RAINFALL DAILY CHECKING AND REPAIRING IS NECESSARY. THE PERMITTEE SHALL MAINTAIN RECORDS OF CHECKS AND REPAIRS. A RAIN GAUGE MUST BE MAINTAINED AT THE CONSTRUCTION SITE.
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27.	DURING CONSTRUCTION OF THE PROJECT, SOIL STOCKPILES SHALL BE STABILIZED OR PROTECTED WITH SEDIMENT TRAPPING MEASURES. THE APPLICANT IS RESPONSIBLE FOR THE TEMPORARY PROTECTION AND PERMANENT STABILIZATION OF ALL SOIL STOCKPILES ON SITE AS WELL AS SOIL INTENTIONALLY TRANSPORTED FROM THE PROJECT SITE.
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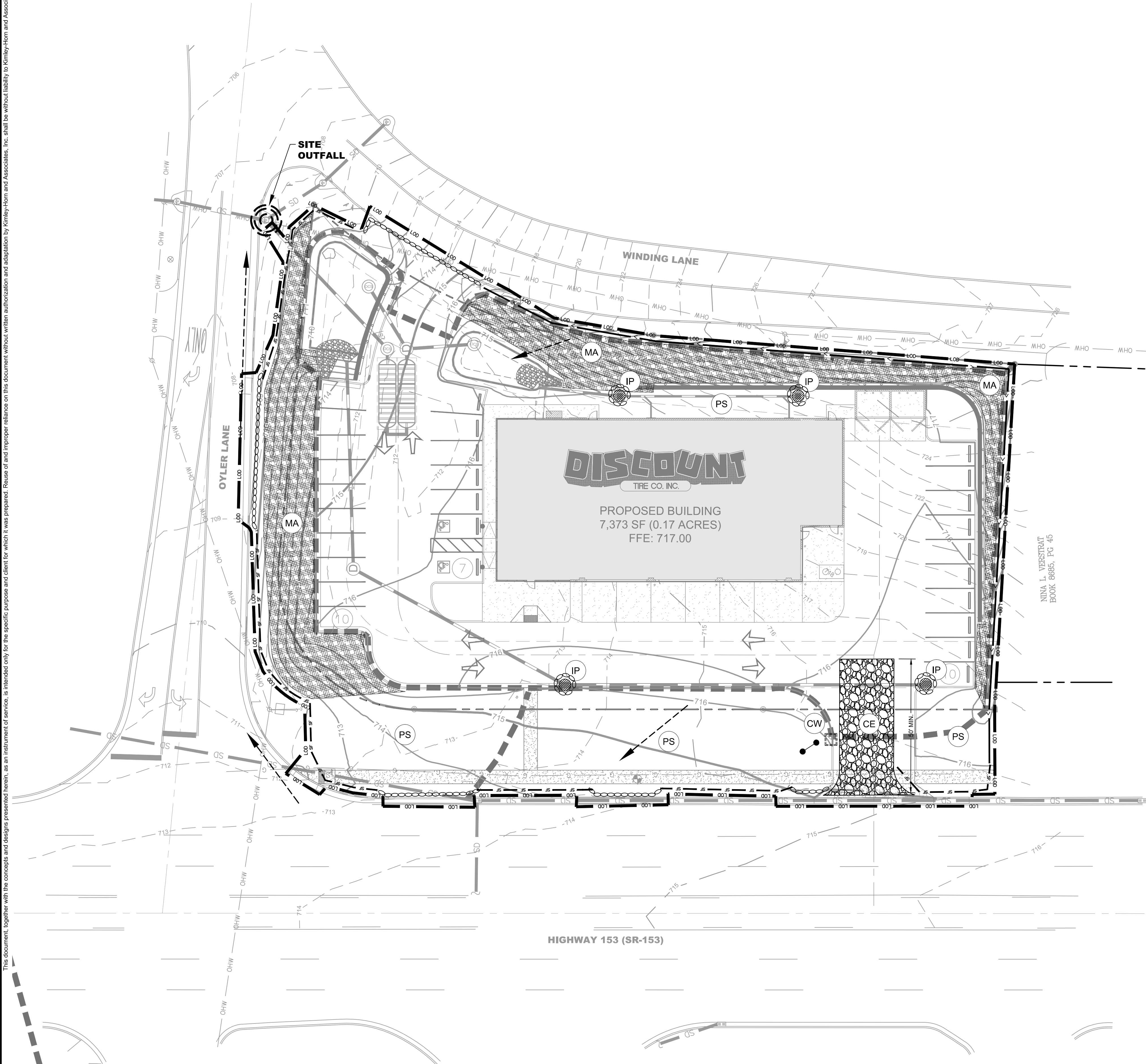
THE CO. INC.

HWY 153
CHATTANOOGA, TENNESSEE

BY	
DATE	
REVISIONS	
No.	
DESIGNED BY:	PHN
DRAWN BY:	PHN
CHECKED BY:	JP
DATE:	09/06/16
KIMLEY-HORN PROJECT NO. 115082023	
EROSION CONTROL PLAN - PHASE I	
SHEET NUMBER C3-10	



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REVISIONS	DATE	BY
No.		

DESIGNED BY:	PHN
DRAWN BY:	PHN
CHECKED BY:	JP
DATE:	09/06/16
KIMLEY-HORN PROJECT NO. 115082023	

EROSION CONTROL PLAN - PHASE II

SHEET NUMBER

C3-20

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1 EROSION EELS
NOT TO SCALE

LATE WINTER/EARLY SPRING PLANTING

SPECIES	RATE (LB/ACRE)
RYE	120
SEEDING DATES	
EAST	ABOVE 2500 FEET: FEB. 15 - MAY 15
	BELOW 2500 FEET: FEB. 1 - MAY 1
MIDDLE	JAN. 1 - MAY 1
WEST	DEC. 1 - APR. 15

MAINTENANCE
REFERTILIZE IF GROWTH IS NOT FULLY ADEQUATE. RESEED, REFERTILIZE AND MULCH IMMEDIATELY FOLLOWING EROSION OR OTHER DAMAGE.

FALL PLANTING

SPECIES	RATE (LB/ACRE)
OATS WINTER WHEAT	30
SEEDING DATES	
EAST	AUG. 15 - DEC. 15
MIDDLE	AUG. 15 - DEC. 30
WEST	AUG. 15 - DEC. 30

MAINTENANCE
REFERTILIZE IF GROWTH IS NOT FULLY ADEQUATE. RESEED, REFERTILIZE AND MULCH IMMEDIATELY FOLLOWING EROSION OR OTHER DAMAGE. IF NECESSARY TO EXTEND TEMPORARY COVER BEYOND JUNE 15, OVERSEED WITH 50 LB/AC CRIMSON CLOVER IN LATE FEBRUARY OR EARLY MARCH.

NOTES:
1. TEMPORARY STABILIZATION MEASURES SHALL BE DONE IN ACCORDANCE WITH TDEC EROSION AND SEDIMENT CONTROL HANDBOOK, FOURTH EDITION OR NEWER.

5 TEMPORARY STABILIZATION
NOT TO SCALE

SUMMER PLANTING

SPECIES	RATE (LB/ACRE)
OATS BROWN TOP MILLET	60 30
SEEDING DATES	
EAST	MAY 15 - AUG. 15
MIDDLE	MAY 1 - AUG. 15
WEST	APR. 15 - AUG. 15

MAINTENANCE
REFERTILIZE IF GROWTH IS NOT FULLY ADEQUATE. RESEED, REFERTILIZE AND MULCH IMMEDIATELY FOLLOWING EROSION OR OTHER DAMAGE.

ALL SEASON NOTES

SOIL AMENDMENTS
FOLLOW RECOMMENDATIONS OF SOIL TESTS OR APPLY 2,000 LB/ACRE GROUND AGRICULTURAL LIMESTONE AND 750 LB/ACRE 10-10-10 FERTILIZER.

MULCH
APPLY 4,000 LB/ACRE STRAW. ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING, OR A MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL.

LOW MAINTENANCE AREAS - SLOPES, POOR AND SHALLOW SOILS

PREFERRED RATE/MIX (LB/AC PLS)	SEEDING DATES	MARGINAL
15 BROWN TOP MILLET (NURSE CROP)	BEST AUG. 25 - SEP. 15	SEP. 15 - OCT. 25
5 LITTLE BLUESTEM		MAR. 21 - MAY 30
2 SWITCH GRASS		
2 TALL DROPSEED		
5 SIDE OATS GRAMMA		
2 BLACK-EYED SUSAN		
2 PARTRIDGE PEA		
1 GREYHEADED CONEFLOWER		

LOW MAINTENANCE AREAS - SLOPES, SOILS > 6" DEEP

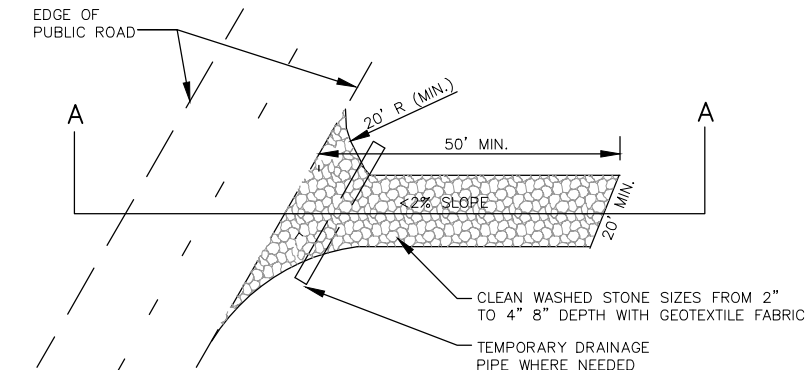
PREFERRED RATE/MIX (LB/AC PLS)	SEEDING DATES	MARGINAL
15 BROWN TOP MILLET (NURSE CROP)	BEST AUG. 25 - SEP. 15	SEP. 15 - OCT. 25
5 PURPLE TOP		MAR. 21 - APR. 15
5 LITTLE BLUESTEM		
5 VIRGINIA WILD RYE		
2 BLACK-EYED SUSAN		
2 PARTRIDGE PEA		
1 GREYHEADED CONEFLOWER		

HIGH MAINTENANCE AREAS - LAWNS, ETC.

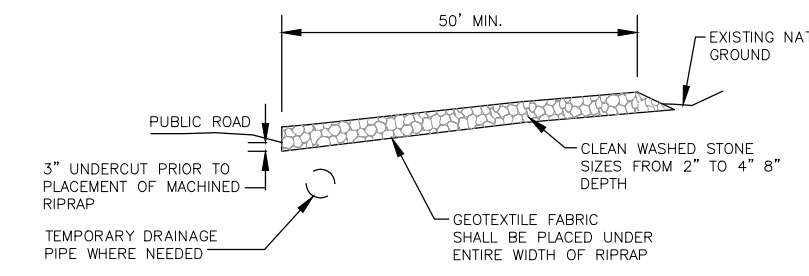
PREFERRED RATE/MIX (LB/AC PLS)	SEEDING DATES	MARGINAL
15 BROWN TOP MILLET (NURSE CROP)	BEST AUG. 30 - OCT. 15	FEB. 15 - APR. 15
2 PARTRIDGE PEA		
45 RED FESCUE		
45 HARD FESCUE		
25 CHEWING FESCUE		

NOTES:
1. MIXES INDICATED ABOVE ARE FOR THE REGION II PLANTING AREA (MIDDLE TENNESSEE).
2. PERMANENT STABILIZATION MEASURES SHALL BE DONE IN ACCORDANCE WITH TDEC EROSION AND SEDIMENT CONTROL HANDBOOK, FOURTH EDITION OR NEWER.
3. REFER TO LANDSCAPE PLANS FOR PERMANENT STABILIZATION PRACTICES AND AREAS TO RECEIVE SOD.

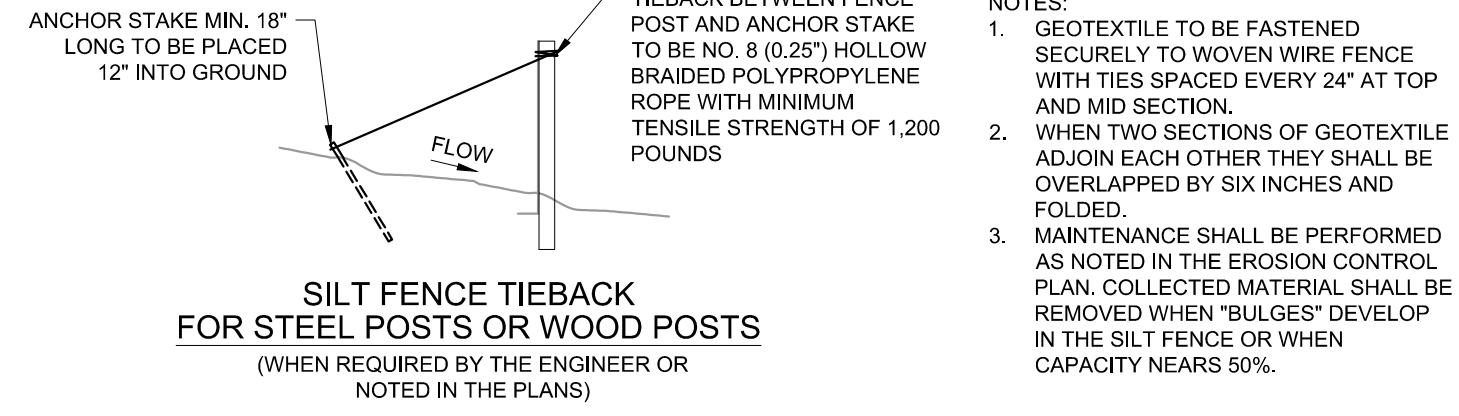
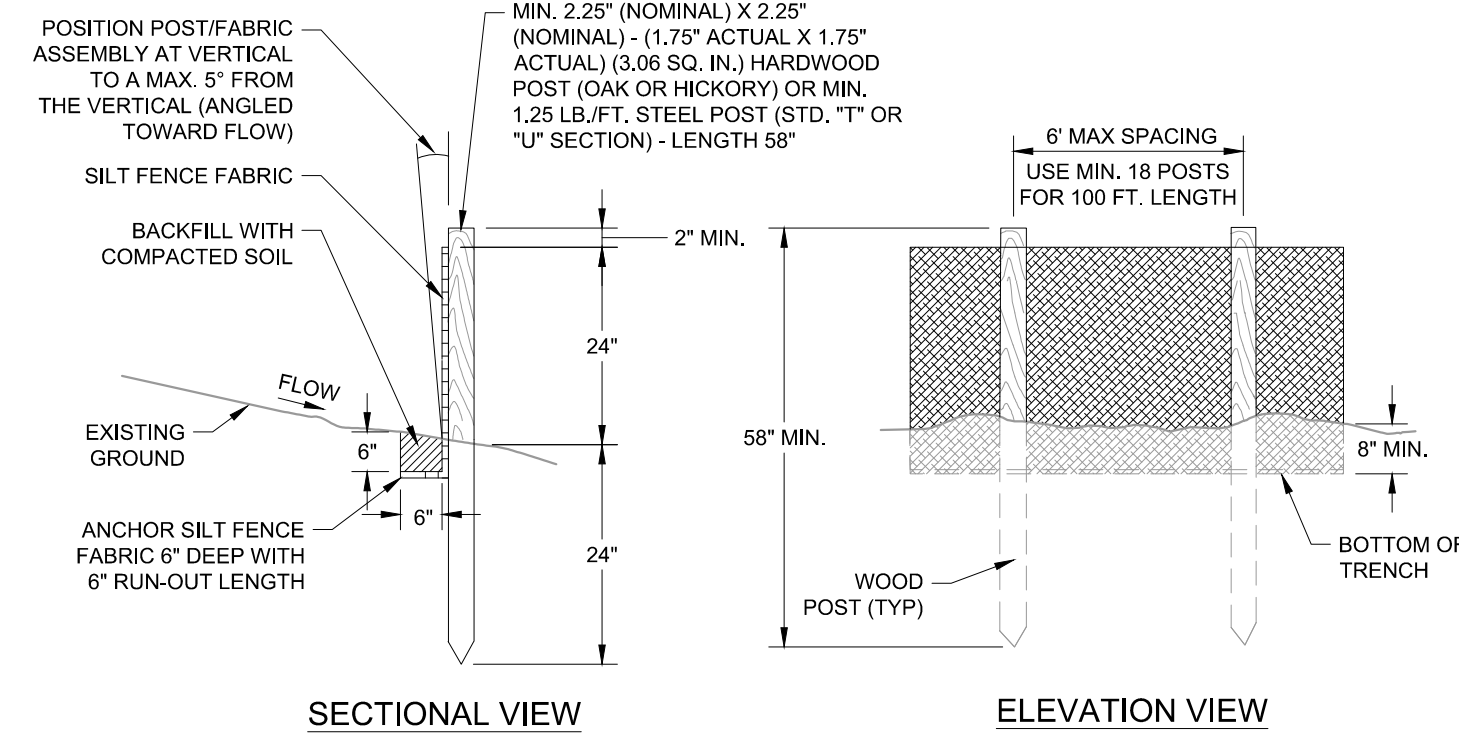
6 PERMANENT STABILIZATION
NOT TO SCALE



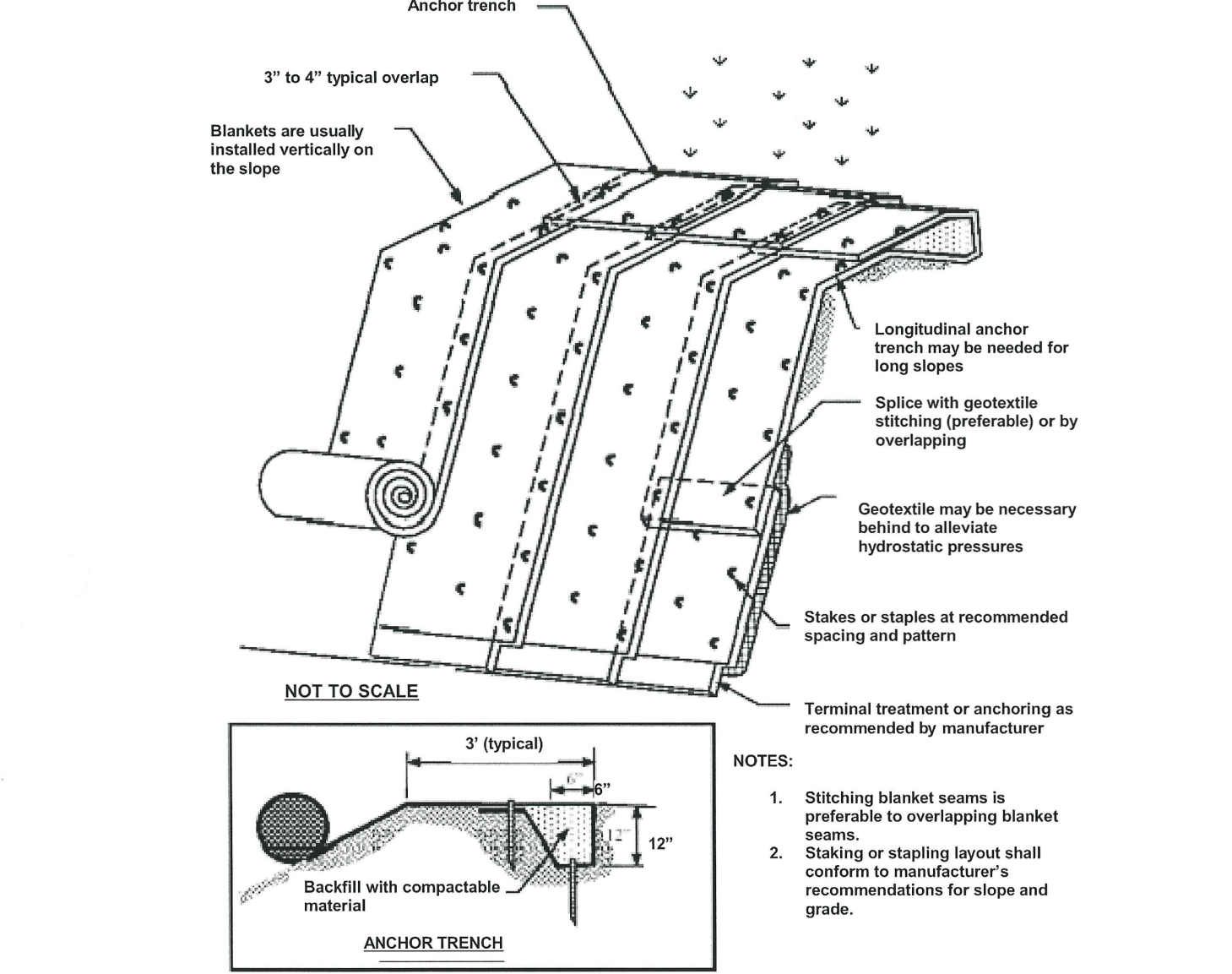
PLAN VIEW OF TEMPORARY CONSTRUCTION ROAD



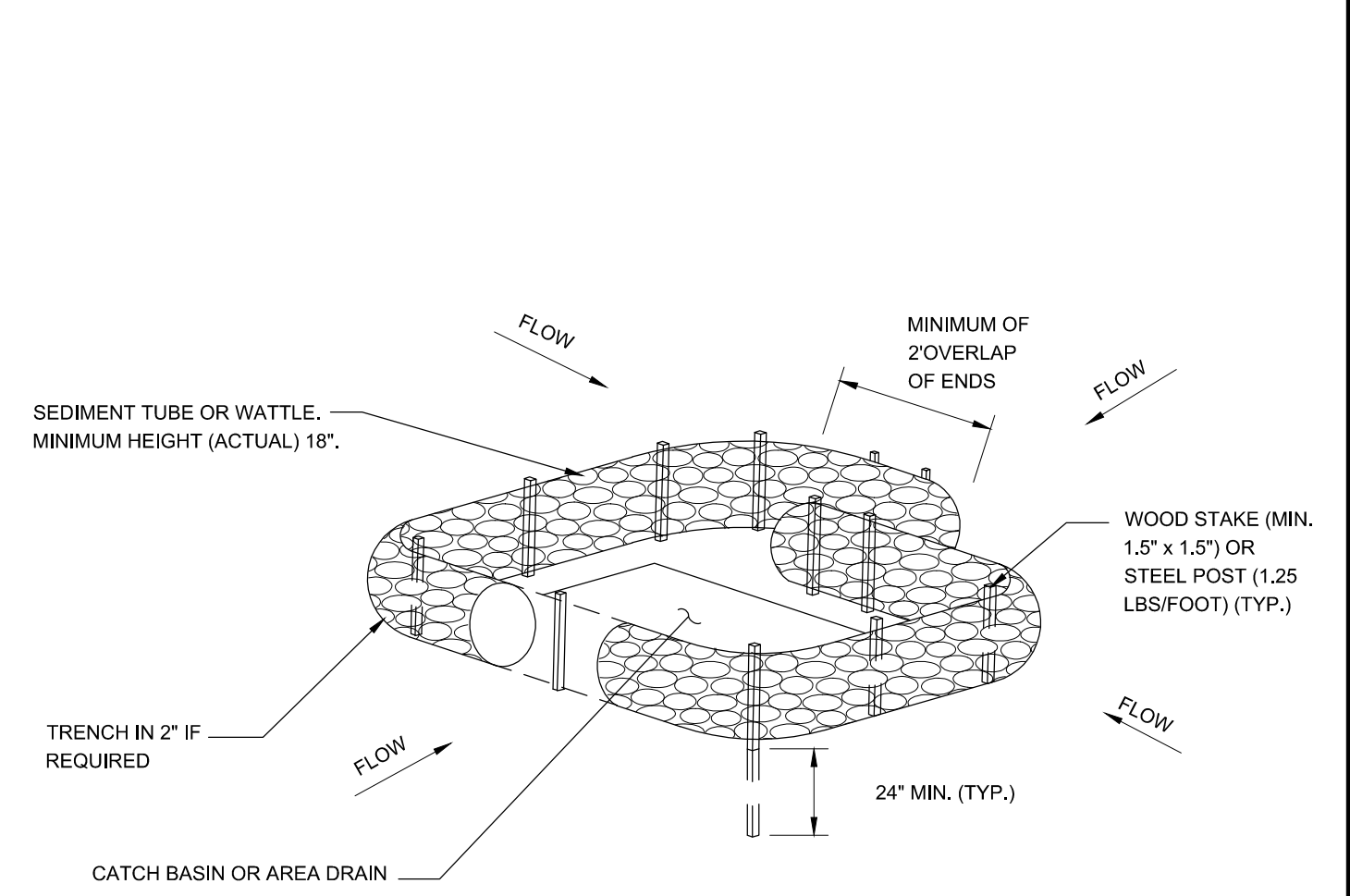
SECTION A-A



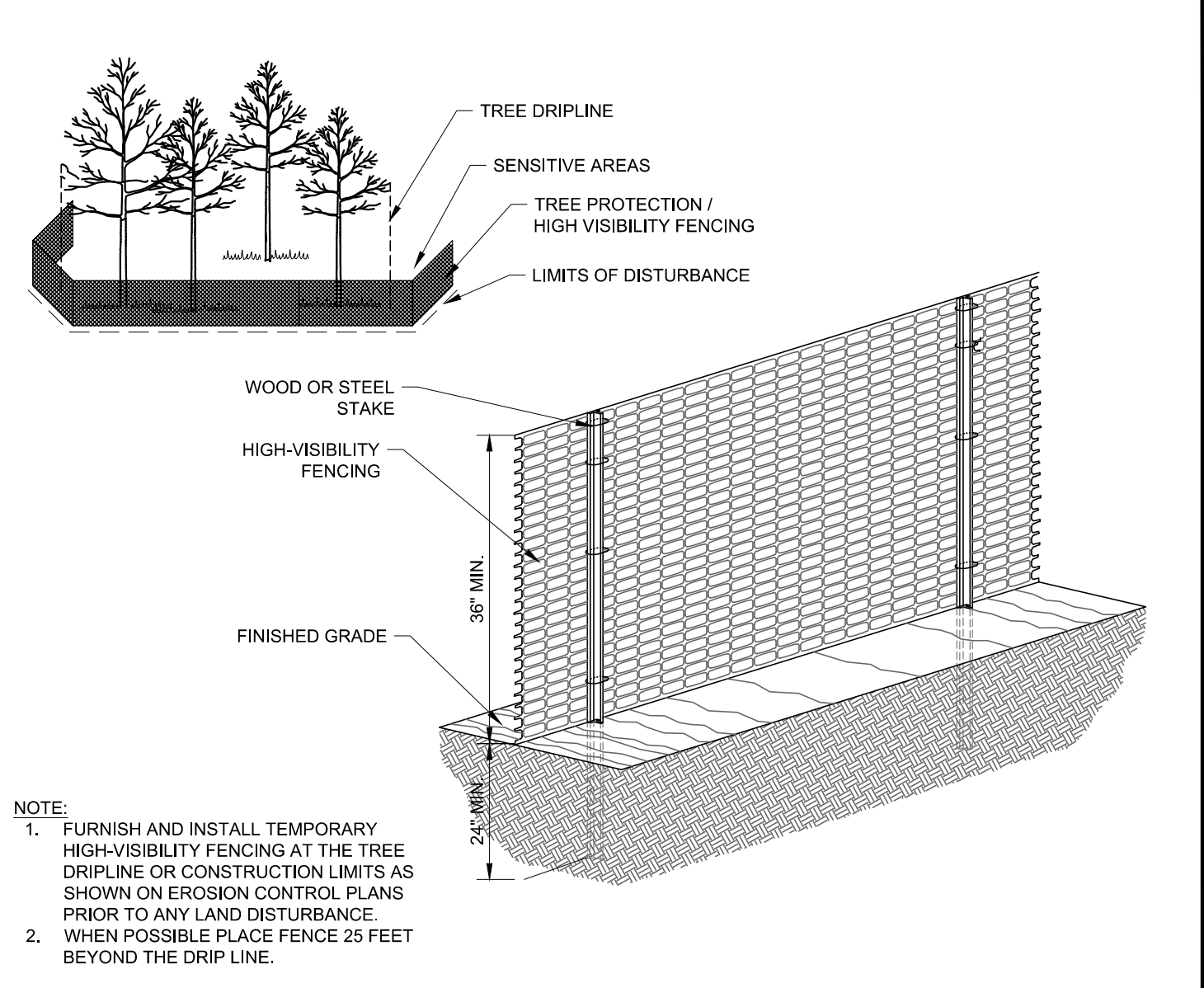
7 SILT FENCE
NOT TO SCALE



9 EROSION CONTROL MATTING
NOT TO SCALE

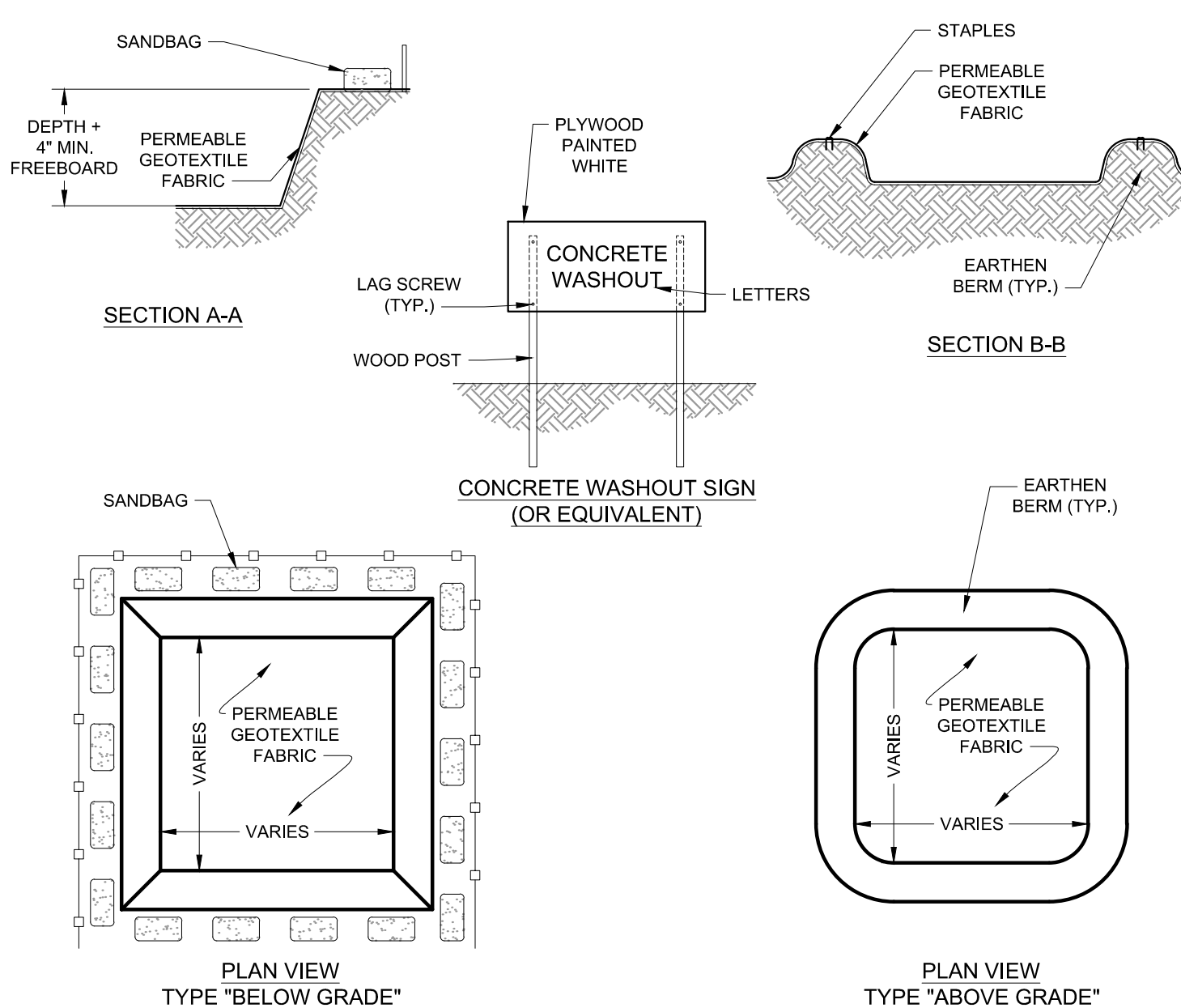


8 INLET PROTECTION
NOT TO SCALE



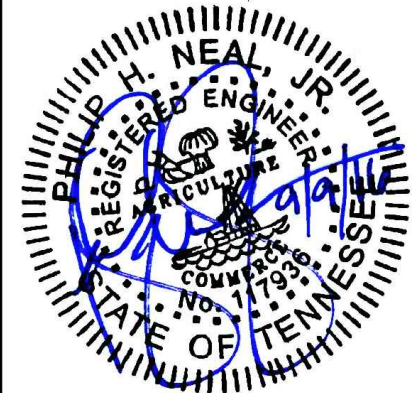
4 TREE PROTECTION / HIGH VISIBILITY FENCE
NOT TO SCALE

3 CONCRETE WASHOUT AREA
NOT TO SCALE



2 CONSTRUCTION EXIT
NOT TO SCALE

DISCOUNT
THE CO. INC.
HWY 153
CHATTANOOGA, TENNESSEE



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EROSION CONTROL
DETAILS

SHEET NUMBER
C3-50

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APPENDIX G

NRCS WEB SOIL SURVEY REPORT


Custom Soil Resource Report Soil Map



Custom Soil Resource Report


MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)


Soils


 Soil Map Unit Polygons


 Soil Map Unit Lines


 Soil Map Unit Points

Special Point Features

 Blowout

 Borrow Pit


 Clay Spot


 Closed Depression

 Gravel Pit

 Gravelly Spot

 Landfill

 Lava Flow

 Marsh or swamp

 Mine or Quarry

 Miscellaneous Water


 Perennial Water

 Rock Outcrop


 Saline Spot

 Sandy Spot

 Severely Eroded Spot


 Sinkhole


 Slide or Slip


 Sodic Spot


 Spoil Area

 Stony Spot


 Very Stony Spot

 Wet Spot


 Other

 Special Line Features

Water Features

 Streams and Canals


Transportation

 Rails

 Interstate Highways

 US Routes

 Major Roads

 Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Davidson County, Tennessee
Survey Area Data: Version 14, Sep 12, 2015

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 12, 2014—Jul 26, 2014

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Davidson County, Tennessee (TN037)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
McB	Maury-Urban land complex, 2 to 7 percent slopes	1.4	98.9%
SvD	Stiversville-Urban land complex, 3 to 25 percent slopes	0.0	1.1%
Totals for Area of Interest		1.4	100.0%

Map Unit Descriptions

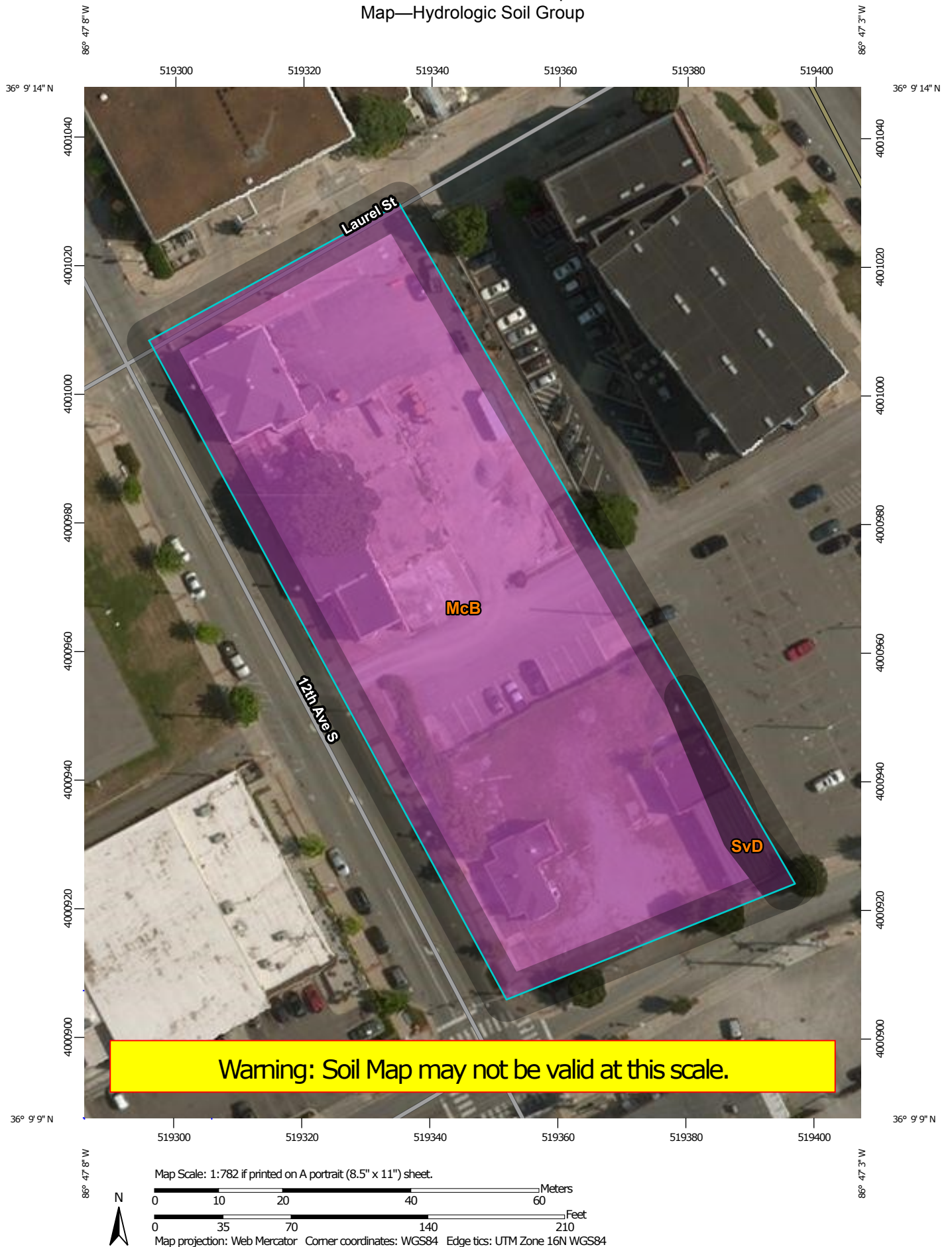
The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If

Custom Soil Resource Report
Map—Hydrologic Soil Group



MAP LEGEND

Area of Interest (AOI)









 Area of Interest (AOI)

Soils

Soil Rating Polygons





 A
 A/D
 B
 B/D
 C
 C/D
 D
 Not rated or not available

Soil Rating Lines


 A
 A/D
 B
 B/D
 C
 C/D
 D
 Not rated or not available

Soil Rating Points






 A
 A/D
 B
 B/D

 C
 C/D
 D
 Not rated or not available


Water Features

 Streams and Canals

Transportation

 Rails
 Interstate Highways
 US Routes
 Major Roads
 Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

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Table—Hydrologic Soil Group

Hydrologic Soil Group— Summary by Map Unit — Davidson County, Tennessee (TN037)				
Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
McB	Maury-Urban land complex, 2 to 7 percent slopes	A	1.4	98.9%
SvD	Stiversville-Urban land complex, 3 to 25 percent slopes	A	0.0	1.1%
Totals for Area of Interest			1.4	100.0%

Rating Options—Hydrologic Soil Group

Aggregation Method: Dominant Condition

Aggregation is the process by which a set of component attribute values is reduced to a single value that represents the map unit as a whole.

A map unit is typically composed of one or more "components". A component is either some type of soil or some nonsoil entity, e.g., rock outcrop. For the attribute being aggregated, the first step of the aggregation process is to derive one attribute value for each of a map unit's components. From this set of component attributes, the next step of the aggregation process derives a single value that represents the map unit as a whole. Once a single value for each map unit is derived, a thematic map for soil map units can be rendered. Aggregation must be done because, on any soil map, map units are delineated but components are not.

For each of a map unit's components, a corresponding percent composition is recorded. A percent composition of 60 indicates that the corresponding component typically makes up approximately 60% of the map unit. Percent composition is a critical factor in some, but not all, aggregation methods.

The aggregation method "Dominant Condition" first groups like attribute values for the components in a map unit. For each group, percent composition is set to the sum of the percent composition of all components participating in that group. These groups now represent "conditions" rather than components. The attribute value associated with the group with the highest cumulative percent composition is returned. If more than one group shares the highest cumulative percent composition, the corresponding "tie-break" rule determines which value should be returned. The "tie-break" rule indicates whether the lower or higher group value should be returned in the case of a percent composition tie. The result returned by this aggregation method represents the dominant condition throughout the map unit only when no tie has occurred.

Component Percent Cutoff: None Specified

Components whose percent composition is below the cutoff value will not be considered. If no cutoff value is specified, all components in the database will be considered. The data for some contrasting soils of minor extent may not be in the database, and therefore are not considered.

Tie-break Rule: Higher

APPENDIX H

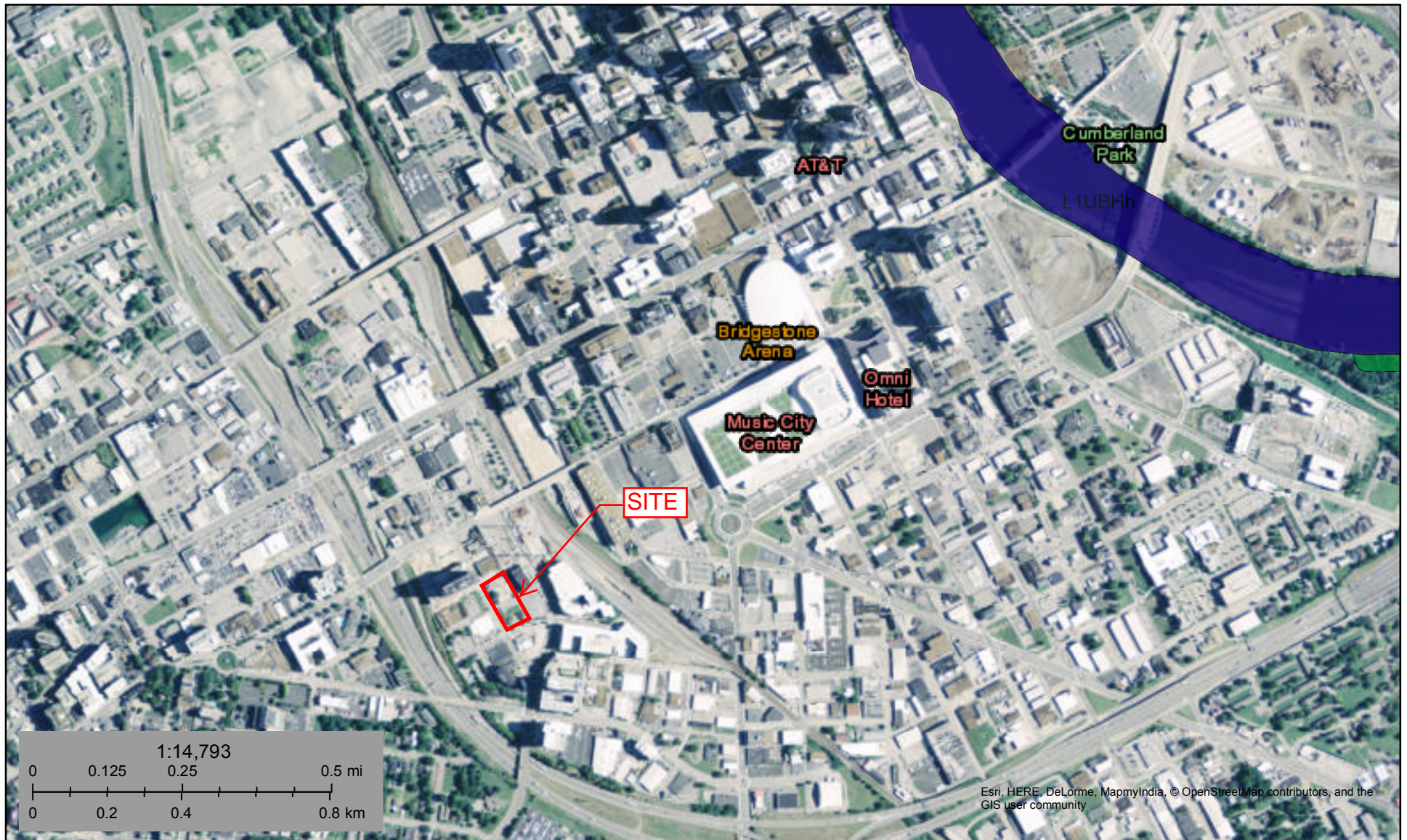
NATIONAL WETLANDS INVENTORY MAP



U.S. Fish and Wildlife Service

National Wetlands Inventory

306 12th Avenue South, Nashville, TN



October 25, 2016

- | | | |
|--------------------------------|-----------------------------------|----------|
| Estuarine and Marine Deepwater | Freshwater Forested/Shrub Wetland | Other |
| Estuarine and Marine Wetland | Freshwater Pond | Riverine |
| Freshwater Emergent Wetland | Lake | |

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.