



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

J.R. "JOEY" HOPKINS
SECRETARY

July 17, 2024

MEMORANDUM TO: Division Environmental and Construction Units

FROM:  Jason L Dilday, ECAP Eastern Region Team Lead
Environmental Analysis Unit

SUBJECT: Environmental Permits for the Replacement of Upgrade of US70 from
Thurman Road to the Havelock Bypass in Craven County, Division 2,
TIP: R-5777C.

Please find enclosed the following permits for this project:

Agency	Permit Type	Permit Expiration
US Army Corps of Engineers Section 404 Clean Water Act Permit	Individual Permit SAW-2018-01012	December 31, 2029
NC Division of Water Resources Section 401 Water Quality Certification	Individual Certification No. 20240672	December 31, 2029
NC Division of Water Resources Neuse River Buffer Authorization	Buffer Authorization No.20240672	May 15, 2029

Work is authorized by the above referenced permit provided it is accomplished in strict accordance with the permitted plans.

The Environmental Coordination and Permitting Group or the Division Environmental Office must be consulted if any deviation from the permit(s) or accompanying drawings is required.

The General Conditions and Certifications for Nationwide and Regional Permits can be referenced at:
https://xfer.services.ncdot.gov/pdea/Permlssued/_General_Conditions_and_Certifications/

PROJECT COMMITMENTS

STIP Project No. R-5777C
Upgrade U.S. 70 to interstate standards and construct service roads
from the Havelock Bypass to East of Thurman Road (S.R. 1116)
Craven County
Federal Aid Project No. N/A
WBS Element 44648.1.4

COMMITMENTS FROM PROJECT DEVELOPMENT AND DESIGN

Craven County Potable Water Supply and Treatment Facilities – Water Supply Wells **(NCDOT Division 2, Hydraulics Unit)**

- There are four (4) potable water supply well sites associated with Craven County’s water supply system that are located within the project study area. These well sites are regulated by the North Carolina Department of Environmental Quality – Division of Water Resources Public Water Supply Section, in accordance with Title 15A NCAC Subchapter 18C – Water Supplies.

To ensure compliance with Title 15A NCAC Subchapter 18C, the Department shall continue to coordinate with Craven County regarding the driveway connections for the four potable water supply wells located within the R-5777C project limits. In addition, the Department will continue to coordinate with Craven County during procurement and post-award.

- The Department will adhere to the following requirements and restrictions associated with the well sites:

General Requirements

- Per 15A NCAC 18C .0203 (4), “there can be no grading that allows point discharge nor sheet drainage of storm drainage” onto the well sites.
- All costs associated with the relocations or modifications of the access driveways will be paid by NCDOT, including any engineering, permitting, wetland impacts or driveway piping.
- The driveway aprons shall be paved with a gravel surface for the drive and turnaround area.

Well Site Specific Requirements

- *Site FB3*

The access drive shall remain in its current location with access to the slightly relocated service road. The County will grant a 15-foot temporary construction easement to allow reconstruction of the service road shoulder and shoulder ditch. No

permanent road structure or paving shall be allowed within this easement. During final design, NCDOT Division 2 shall verify that the proposed 15-foot temporary construction easement is outside of the required 100-foot buffer radius from the well based on their proposed design. [15A NCAC 18C .0203 (a)(1)].

- *Site FB4*

The access drive shall be relocated to the rear of the site with access to the relocated service road. A new access gate similar in size to the existing gate will be required for the relocated access drive.

- *Site SP3*

The access drive shall be relocated to the vicinity of the northeast rear corner of the site with access to the relocated service road. If construction activities affect the location of the access gate, the Contractor shall relocate the gate to a location approved by the County.

Archaeological Site 31CV241 (NCDOT Division 2, NCDOT EAU-Cultural Resources)

- Site 31CV241 is recommended eligible for the National Register of Historic Places (NRHP). The archaeological site will not be impacted by the Undertaking as currently designed; however, if designs change prior to construction thereby causing an adverse effect to the site, the NCDOT, in consultation with the North Carolina State Historic Preservation Office (NC-SHPO) and US Forest Service (USFS), will develop an archaeological Data Recovery Plan (DRP) in order to mitigate any adverse effects to the site. Given the site's proximity to the Undertaking, Final Plans will identify the location of High-Visibility Fencing along the Proposed Right of Way / Control of Access (ROW / CA) or Easement, whichever extends farthest into Parcel# 6-011-019 (U.S. Government Property, Deed Book 0336, Deed Page 0061), beyond which is to be labeled as: "PROTECTED AREA." The High-Visibility Fencing shall: 1) be installed by the Contractor prior to any clearing and grubbing operations, 2) be maintained for the construction duration, and 3) not be removed until final project inspection. No construction equipment or personnel shall cross over the High-Visibility Fencing into the Protected Area.

Continued Coordination and Outreach (NCDOT Division 2)

- School Buses

In light of the large number of school buses that historically travel within the project corridor, the Department will evaluate the need to include time-of-day restrictions on lane closures and detours during school hours in the construction contract in order to minimize impacts to school transportation. The Contractor shall coordinate with Craven County Schools prior to construction activities, including but not limited to temporary closures of railroad crossings, that could result in substantial delays for school buses.

- Fire/EMS Outreach

To the extent practicable, all rail crossings shall remain open during construction to reduce impacts to emergency response services. The Contractor shall coordinate with Township 7 VFD (252-637-3812), Township 6 VFD (252-447-2700) and Craven

County Emergency Services (252- 636-6608), prior to the start of construction regarding the construction schedule and anticipated construction-related impacts to emergency services; and, prior to any temporary closures of railroad crossings.

- Marine Corps Air Station at Cherry Point
 - U.S. 70 is a designated Strategic Highway Network (STRAHNET) route and serves military commuters. Because the project is expected to have temporary impacts on mobility during construction, the Department will coordinate with the Commanding Officer of the Marine Corps Air Station at Cherry Point (252-466-2811) prior to project construction.
 - The Department will provide luminaires which contain the International Dark-Sky Association (IDA) Fixture Seal of Approval.
- NCDOT Rail Division, North Carolina Railroad (NCRR), and Norfolk Southern (NS)

The Department will coordinate with the NCDOT Rail Division, the NCRR and NS regarding potential impacts to railroad facilities and freight rail operations.
- Tuscarora Tribal Historic Preservation Office

A request for an input letter and the accompanying Programmatic Agreement Survey Required Form was sent to the Tuscarora Tribal Historic Preservation Officer on May 9th, 2021, asking for review and input on the proposed project. ~~Depending on the comments received, NCDOT will continue to coordinate with the Tuscarora Nation and USFS related to any concerns or questions the Tribe may have after reviewing the project information provided.~~

No comments from the Tuscarora Tribal Historic Preservation Officer have been received to date; however, NCDOT will continue to coordinate with the Tuscarora Nation and USFS related to any concerns or questions the Tribe may have after reviewing the project information provided.

United States Forest Service (USFS) Coordination (NCDOT Division 2, Division 2 Environmental Officer, NCDOT Biological Surveys Group, NCDOT Right of Way)

- Tribal Coordination – Tuscarora Tribe

Because the Tuscarora Tribe has expressed interest in any land disturbing activities that take place within the Croatan National Forest, NCDOT, on behalf of the USFS, sent a letter to the Tuscarora Tribal Historic Preservation Office (THPO) in May 2021 requesting review and comment of the proposed project. ~~Pending receipt of their response, the Department should continue to coordinate with FHWA, USFS, and the Tuscarora THPO if the Tuscarora have any concerns or additional questions related to the proposed project.~~

No comments from the Tuscarora Tribal Historic Preservation Officer have been received to date; however, the Department will continue to coordinate with FHWA, USFS, and the Tuscarora THPO if the Tuscarora THPO have any concerns or additional questions related to the proposed project.

- Land Transfer Agreement

The Department will continue to coordinate with the Federal Highway Administration (FHWA) and USFS regarding development of a federal land transfer agreement to address right of way impacts to Croatan National Forest property.

- Maintain Access to USFS Recreational Areas

In order to comply with a request from USFS to avoid impacts to potential Section 4(f) resources, the Contractor shall maintain access to Fishers Landing and Flanners Beach / Neuse River Recreation Area and Campground during ~~construction and replace any impacted signage.~~

NCDOT and USFS will coordinate replacement of impacted signage associated with the project. The sign replacements will be handled through a Memorandum of Agreement (MOU) between the Department and USFS or performed by the Contractor.

- Equipment Cleaning for National Forest Service Lands

All construction equipment, including but not limited to cranes, graders, pavers, excavators, loaders, pick-up trucks and dump trucks, shall be cleaned prior to being brought into the National Forest Service (NFS) lands construction areas to ensure they are free of seeds, rhizomes, or other propagules. The Contractor shall ensure that all subcontractors comply with this provision. Cleaning may be done with pressure washing or other acceptable methods sufficient to remove this material. The Contractor shall submit a cleaning plan to the Department for review and approval. This plan shall detail cleaning methods including the materials and equipment utilized for this process. The plan shall also detail the frequency and the location of the equipment cleaning. The Contractor shall coordinate and communicate any changes to the plan to the Department. Equipment shall be visually inspected by the Contractor for vegetation prior to moving from delineated non-native invasive species sites to ensure that seeds or other propagules are not transported outside of those areas.

- USFS Prescribed Burn Commitments

~~The Department shall coordinate with the USFS to maintain existing vehicular and personnel access to NFS lands to facilitate prescribed burns after project completion. NCDOT will maintain access for USFS “low-boy” trucks to move equipment to prescribed burn areas. For control of access fencing, NCDOT will use non-wooden posts throughout areas where burning will be conducted.~~

Commitment language has been updated as follows:

The Department shall coordinate with the USFS to maintain existing vehicular and personnel access to NFS lands to facilitate prescribed burns during project construction activities.

Because the proposed Control of Access fencing is separated by proposed service roads from all US Forest Service property within the project study area, the

commitment related to the use of “non wooden posts throughout areas where burning will be conducted” has been deleted from these project commitments. NCDOT coordinated this change with USFS staff and received acceptance of this proposed change to the commitments.

During project construction, NCDOT will maintain access for USFS “low-boy” trucks to move equipment to prescribed burn areas.

At access locations, NCDOT shall provide 16’ pipe gates that adhere to the following requirements: The USFS has provided the following specifications that shall be included in the construction contract:

- 1. Minimum vehicular turn radius of 50’ to allow for trafficability of log trucks and fire response.*
 - 2. Provide movement denial around a closed gate which may include steel pipe bollards 48” on center (max) to the tree line if the ditches are shallow and drivable.*
 - 3. Gate post foundations shall be 4’ deep and 2’ diameter concrete encasement.*
 - 4. Gate operations shall be designed to allow for a Forest Service padlock and a cooperator padlock and housed to prevent the use of bolt cutters.*
- *USFS Ranger Station Relocation Commitments*
The proposed Fisher Avenue interchange will require the relocation of the existing USFS ranger station located along Fisher Avenue on the east side of U.S. 70. Right of way impacts will be addressed through a federal land transfer agreement between the Federal Highway Administration (FHWA) and USFS prior to the commencement of project construction activities on existing USFS properties. NCDOT and FHWA have consulted with USFS staff and determined that impacts to the ranger station structure will be mitigated by the project through monetary compensation from project funds to USFS. This compensation will be for the replacement costs associated with relocating and constructing an in-kind ranger station on a suitable site determined by USFS staff. NCDOT will be responsible for any jurisdictional stream and / or wetland impacts, and associated mitigation costs related to the new ranger station.
 - *USFS Croatan Helicopter Base Commitments*
The NCDOT will continue to coordinate with the USFS regarding the relocation of the helicopter base, and effects that the project may have on the helicopter landing pad and flight path.
 - *USFS Review of Drainage Design/Erosion Control Plan Commitments*
Erosion and Sedimentation Control Plans (E&SCP) and proposed road drainage locations and flow quantity estimates on Forest Service lands will be provided to USFS staff for review prior to finalizing the final erosion and sedimentation control and drainage designs.

- Mitigation Measures for USFS Species of Conservative Concern (SCC)

In coordination with the USFS, to ensure no viability concerns for SCC animal or plant species on NFS lands in the Croatan National Forest (CNF), implementation of the following mitigation measures are required:

1. Seed collection and relocation have been determined to be appropriate mitigation measures for Spring-flowering Goldenrod (SOVE). Since no seeds have been produced within the final study area, transplants will be used to help establish new populations in suitable areas or bolster existing populations in coordination with USFS.
2. Successful completion of proposed mitigation measures for the Havelock Bypass and U.S. 17 improvements will help NCDOT ensure the viability for SOVE. If successful mitigation for these projects is not possible, ascertaining the status of remaining Element Occurrences (EOs) in the CNF will help NCDOT ensure viability.

A Spring-flowering Goldenrod (SOVE) Survey was performed in May/June of 2021 in which numbers of SOVE were counted and recorded. This information was provided to the USFS.

3. High-visibility fencing will be installed along the limits of the construction footprint on NFS land. These visual barriers will ensure construction equipment and contractors remain within approved disturbance limits.
4. NCDOT will ensure that no USFS property adjacent to an NCDOT right-of-way is used for staging or stockpiling of project fill material, storage of equipment or vehicles, excavation for fill material, or any ground disturbing activities, except with the express prior written consent of USFS under a special use permit.
5. At individual project sites where a total of 1.0 acre or more of tree clearing will occur, no tree clearing will occur during the portion of the day that the air temperature is <40 degrees Fahrenheit in order to protect Northern Long-eared Bats that may be in torpor. This measure *is part of the NLEB Programmatic Biological Opinion*, which will also protect other sensitive bat species, detailed in the project commitment below for NLEB.
6. ~~NCDOT will avoid tree clearing within 150 feet of known Northern Long-eared Bat maternity roost trees during the time frame of May 1 – June 30, thus reducing the probability of killing non-volant young.~~

Mitigation Item #6 has been revised as follows:

Currently, there are no known records of northern long-eared bat (NLEB) maternity roost trees within 150 feet of the project. Prior to beginning any tree clearing activities, the Contractor shall coordinate with the Department to reconfirm that no NLEB maternity roost trees exist within 150 feet of the

project. If the Department reconfirms that no NLEB maternity roost trees exist within 150 feet of the project, the Contractor will be allowed to clear trees between May 1st and June 30th. If any NLEB maternity roost trees are found within 150 feet of the project, no tree cutting will be allowed from May 1st through June 30th of any year.

7. NCDOT will work with USFS regarding herbicides and pesticides to minimize use adjacent to NFS land and obtain written confirmation for use on NFS land prior to applying. NCDOT will contact USFS for any use of herbicides and pesticides on National Forest Service lands.
- ~~8. To prevent the spread of non-native invasive plants on CNF lands, all construction equipment, including but not limited to cranes, graders, pavers, excavators, loaders, pick-up trucks and dump trucks, shall be cleaned prior to being brought into the National Forest Service (NFS) lands construction areas to ensure they are free of seeds, rhizomes, or other propagules. The contractor is also responsible for ensuring that all subcontractors comply with this provision.~~
9. To control the spread of non-native invasive plants on NFS lands, NCDOT, in coordination with the USFS, will locate and flag areas of non-native invasive plants within the project footprint at the parcel with the USFS ranger station. If any of these areas are within areas of proposed fill, those areas will be cleared and grubbed, and the material disposed of outside the limits of the CNF. If non-native invasive plants are located in areas of proposed cuts, then the material and actual thickness of root mat or other defined amount will be disposed of outside the limits of the CNF.
10. NCDOT will utilize completely biodegradable rolled matting or weed-free mulch for erosion control and revegetation on NFS lands. If erosion becomes problematic in any area post- construction, turfgrass may be used selectively to limit soil disturbance.
11. In consultation with USFS, seed mixes of native grasses and forbs or non-aggressive nonnatives will be used on NFS lands for erosion control and revegetation. NCDOT will coordinate with USFS on an erosion control and revegetation plan for NFS lands. The plan will detail appropriate native seeding mixes for erosion control.
12. With appropriate management, roadsides can support high levels of biodiversity (Jakobsson 2018). Typically, road shoulders adjacent to *NFS lands are mowed* as needed for safety, but to increase plant species richness, these road shoulders will be mowed a minimum of twice per year.
- ~~13. Mitigation for bats, Mabee's Salamander, Southern Chorus Frog, and Glossy Crayfish Snake: maintain large puddles/vernal pools in the vicinity of the~~

~~Mabee's Salamander capture as much as possible. These areas provide amphibian breeding habitat and produce prey in the form of aquatic insects, amphibians, and crustaceans, which provide food sources for bats (including SCC bats), birds, snakes (including the Glossy Crayfish Snake), and turtles. In addition, the vernal pools provide a location for drinking that doesn't require traveling to the Neuse River, which may expose small animals such as bats to increased predation.~~

Mitigation Item #13 has been revised as follows:

Mitigation for bats, Mabee's Salamander, Southern Chorus Frog, and Glossy Crayfish Snake: maintain existing large puddles / vernal pools in the vicinity of the Mabee's Salamander capture as much as possible. These areas provide amphibian breeding habitat and produce prey in the form of aquatic insects, amphibians, and crustaceans, which provide food sources for bats (including SCC bats), birds, snakes (including the Glossy Crayfish Snake), and turtles. In addition, the vernal pools provide a location for drinking that doesn't require traveling to the Neuse River, which may expose small animals such as bats to increased predation.

14. ~~NCDOT and / or USFS will avoid ditching / draining existing vernal pools in the vicinity of Mabee's Salamander and Southern Chorus Frog observations and avoid diverting surface water from roads or facilities into these pools and nearby wetland, if any work is to occur in these areas where feasible (Figure 6a).~~

Mitigation Item #14 has been revised as follows:

Where feasible, NCDOT and USFS will minimize to the extent practicable any ditching / draining of existing puddles / vernal pools in the vicinity of Mabee's Salamander and Southern Chorus Frog observations and diverting surface water from roads or facilities into these puddles / vernal pools and nearby wetland (Figure 6a).

15. NCDOT will withhold final payment to the Contractor until USFS has confirmed that silt fences and similar erosion control measures that create barriers to small amphibians and reptiles have been removed post-construction.
16. Attempt to find other occurrences of Mabee's Salamander and Southern Chorus Frog on NFS lands in the CNF that will not be affected by the U.S. 70 improvements. Completed – surveys were conducted for both species and Mabee's salamander was found in an area not affected by the U.S. 70 improvements.
17. Install a “dry” (no active flow) concrete pipe next to the existing culvert under U.S. 70 at the ranger station parcel to encourage passage of Mabee's Salamander and Southern Chorus Frogs into or out of the area and help maintain breeding populations. The pipe diameter shall be a minimum of 48 inches or

the maximum diameter allowed by the proposed roadway grade, whichever is greater. Any ramps or service roads constructed parallel to U.S. 70 at the culvert location should similarly include a concrete pipe with no active flow. This would also benefit other amphibians, reptiles, and small mammals, including any SCC that may be present in the vicinity but were not detected during surveys.

18. Retain or protect live hardwood cavity (den) trees and standing dead trees that are not a safety hazard to provide habitat for Northern Long Eared Bat and sensitive bat species, where feasible.

Northern long-eared bat (NCDOT Division 2, NCDOT Division 2 Division Environmental Officer)

- At individual project sites where a total of 1.0 acre or more of tree clearing will occur, no tree clearing will occur during the portion of the day that the air temperature is <40 degrees Fahrenheit in order to protect NLEBs that may be in torpor. This restriction is only subject to the known / potential range (30 coastal counties) that is shown in Figure 2 of the 2020 2022 PBO

[https://connect.ncdot.gov/resources/Environmental/EAU/BSG/Documents/NLEB Programmatic/PBO for NLEB in Divisions 1-8 20210101.pdf](https://connect.ncdot.gov/resources/Environmental/EAU/BSG/Documents/NLEB%20Programmatic/PBO%20for%20NLEB%20in%20Divisions%201-8%2020210101.pdf).

[https://connect.ncdot.gov/resources/Environmental/EAU/BSG/Documents/Bats/Bat%20 Programmatic%20\(Div%201-8\)/20221215_PBO_Revised_NLEB_Divisions1-8.pdf](https://connect.ncdot.gov/resources/Environmental/EAU/BSG/Documents/Bats/Bat%20Programmatic%20(Div%201-8)/20221215_PBO_Revised_NLEB_Divisions1-8.pdf)

Craven County is one of the 30 known/potential range counties.

Neuse River waterdog (NCDOT Division 2, NCDOT Division 2 Division Environmental Officer)

- ~~The Neuse River waterdog (NRWD) is proposed for listing as a Threatened Species (proposed / threatened). A NRWD Survey Report was completed for this project in which a biological conclusion of May Affect / Not Likely to Adversely Affect (MANLAA) was reached (if this species were to receive federal protection, which will likely occur before this project is Let). If the NRWD is officially listed as a Threatened Species when the project goes to Let, then this project is covered under the Programmatic Conference Opinion (PCO) for the Carolina madtom and NRWD for Divisions 2, 4, 5, and 7 (https://saw-reg.usace.army.mil/ESA/Bridge_Culvert_PCO.pdf). NCDOT Division 2 will follow the commitments and conservation measures outlined in this PCO.~~

Commitment language has been updated as follows:

The Neuse River waterdog (NRWD) is listed as a Threatened Species; therefore, a NRWD Survey Report was completed for this project in which a biological conclusion of May Affect / Not Likely to Adversely Affect (MANLAA) was reached. However, the project is covered under the Programmatic Conference Opinion (PCO) for the Carolina madtom and NRWD for Divisions 2, 4, 5, and 7 (https://saw-reg.usace.army.mil/ESA/Bridge_Culvert_PCO.pdf).. NCDOT Division 2 will follow the

commitments and conservation measures outlined in this PCO. In a letter received from the USFWS on August 3, 2021, they have officially adopted the PCO as the Programmatic Biological Opinion (PBO).

Surveys for the NRWD were completed in January / February 2020 and updated in January 2024. A biological concurrence of May Affect Not Likely to Adversely Affect was received from the USFWS on January 17, 2024. ~~If required, NRWD re-surveys shall be completed prior to construction.~~ Re-survey update: An email was received on June 24, 2024 from Gary Jordan, USFWS. He is not requesting additional surveys due to recently providing concurrence in January 2024.

COMMITMENTS FROM PERMITTING

Division Construction

404 condition 9a/9b

Endangered Species Act: The Permittee shall implement all necessary measures to ensure the authorized activity does not kill, injure, capture, harass, or otherwise harm any federally listed threatened or endangered species. While accomplishing the authorized work, if the Permittee discovers or observes an injured or dead threatened or endangered species, the U.S. Army Corps of Engineers, Wilmington District, Washington Regulatory Field Office, Attn: Thomas Steffens at 910-251-4615, or thomas.a.steffens@usace.army.mil will be immediately notified to initiate the required Federal coordination.

a. Northern long-eared bat

The USFWS has issued a programmatic biological opinion (PBO) in conjunction with the Federal Highway Administration (FHWA), the US Army Corps of Engineers (USACE), and NCDOT for the northern long-eared bat (NLEB) (*Myotis septentrionalis*) in eastern North Carolina. The PBO covers the entire NCDOT program in Divisions 1-8, including all NCDOT projects and activities. Although this programmatic covers Divisions 1-8, The USFWS only considers NLEBs to be known or potentially found in 30 counties within Divisions 1-8. NCDOT, FHWA, and USACE have agreed to two conservation measures which will avoid/minimize mortality of NLEBs. These conservation measures only apply to the 30 current known/potential counties shown on Figure 2 of the PBO at this time. The programmatic determination for NLEB for the NCDOT program is May Affect, Likely to Adversely Affect. The PBO will ensure compliance with Section 7 of the Endangered Species Act for ten years (effective through December 31, 2030) for all NCDOT projects with a federal nexus in Divisions 1-8, which includes Craven County, where R-5777C is located.

b. Tricolored bat

The U.S. Fish and Wildlife Service's (USFWS's) Programmatic Conference Opinion (PCO) titled "NCDOT Program Effects on the Tricolored Bat in Divisions 1-8", dated November 20, 2023, contains mandatory terms and conditions to implement the reasonable and prudent measures that are associated with "incidental take" that are specified in the PCO. Your authorization under this Corps permit is conditional upon your compliance with all the

mandatory terms and conditions associated with incidental take of the PCO, which terms and conditions are incorporated by reference in this permit. Failure to comply with the terms and conditions associated with incidental take of the PCO, where a take of the listed species occurs, would constitute an unauthorized take, and it would also constitute non-compliance with your Corps permit. The USFWS is the appropriate authority to determine compliance with the terms and conditions of its PCO, and with the ESA.



DEPARTMENT OF THE ARMY
WILMINGTON DISTRICT, CORPS OF ENGINEERS
69 DARLINGTON AVENUE
WILMINGTON, NORTH CAROLINA 28403-1343

July 12, 2024

Regulatory Division

Action ID SAW-2018-01012, STIP R-5777-C

Mr. Michael Turchy
Environmental Coordination and Permitting Group Leader
Environmental Analysis Unit
North Carolina Department of Transportation
1598 Mail Service Center
Raleigh, NC 27699-1598

Dear Mr. Turchy:

In accordance with your written request of February 12, 2024, and the ensuing administrative record, enclosed is a Department of the Army permit to discharge fill material into streams and wetlands to construct STIP R-5777-C. Construction of STIP R-5777-C will permanently impact 1.594 acres of jurisdictional wetlands including 1,558 linear feet of permanent stream impacts, 355 linear feet of temporary stream impacts and 0.409 acre of temporary hand clearing impacts in jurisdictional wetlands associated with an upgrading US 70 to interstate standards from the Havelock Bypass to the east of Thurman Road (S.R. 1116) near Havelock, Craven County, North Carolina.

Any deviation in the authorized work will likely require modification of this permit. If a change in the authorized work is necessary, you should promptly submit revised plans to the Corps showing the proposed changes. You may not undertake the proposed changes until the Corps notifies you that your permit has been modified.

Carefully read your permit. The general and special conditions are important. Your failure to comply with these conditions could result in a violation of Federal law. Certain significant general conditions require that:

- a. You must complete construction before December 31, 2029.
- b. You must notify this office in advance as to when you intend to commence and complete work.
- c. You must allow representatives from this office to make periodic visits to your worksite as deemed necessary to assure compliance with permit plans and conditions.

You should address all questions regarding this authorization to Mr. Tom Steffens in the Washington Regulatory Field Office at thomas.a.steffens@usace.army.mil or by phone at (910) 251-4615.

FOR THE CHIEF, REGULATORY DIVISION

Monte Matthews 2024.07.12
11:45:31 -04'00'

Monte Matthews
Chief, Transportation Permitting Branch
Wilmington District

Enclosures

Copies Furnished electronically (with enclosures):

Chief, Source Data Unit
NOAA/National Ocean Service
Attn: Sharon Tear N/CS261
1315 East-West Hwy., Rm 7316
Silver Spring, Maryland 20910-3282

Copies Furnished electronically (with special conditions):

Mr. Pete Benjamin
U.S. Fish and Wildlife Service
Raleigh Ecological Service Field Office
PO Box 33726
Raleigh, North Carolina 27636-3726

Mr. Fritz Rohde
Habitat Conservation Division – Atlantic Branch
101 Pivers Island Road
Beaufort, North Carolina 28516

Mr. Todd Bowers
Oceans, Wetlands and Streams Protection Branch
Wetlands and Streams Regulatory Section
U.S. Environmental Protection Agency – Region 4
Sam Nunn Atlanta Federal Center
61 Forsyth Street, SW
Atlanta, Georgia 30303-8931

Mr. Jonathan Howell
Division Coastal Management
N.C. Department of Environment
and Natural Resources
400 Commerce Avenue
Morehead City, North Carolina 28557

DEPARTMENT OF THE ARMY PERMIT

Permittee **NORTH CAROLINA DEPARTMENT OF TRANSPORTATION**
ATTN: MR. MICHAEL TURCHY

Permit No. **SAW-2018-01012, STIP R-5777-C**

Issuing Office **CESAW-RG-WRDA**

NOTE: The term "you" and its derivatives, as used in this permit, means the permittee or any future transferee. The term "this office" refers to the appropriate district or division office of the Corps of Engineers having jurisdiction over the permitted activity or the appropriate official of that office acting under the authority of the commanding officer.

You are authorized to perform work in accordance with the terms and conditions specified below.

Project Description: Construction of STIP R-5777-C, involves the discharge of fill to permanently impact 1.594 acres of jurisdictional wetlands including 1,558 linear feet of permanent stream impacts, 355 linear feet of temporary stream impacts and 0.409 acre of temporary land clearing impacts in jurisdictional wetlands associated with an upgrading US 70 to interstate standards from the Havelock Bypass (STIP No. R-1015) to the east of Thurman Road (S.R. 1116) near Havelock, Craven County, North Carolina.

Project Location: The R-5777-C project would upgrade US 70 to interstate standards for approximately 7 miles with grade-separated interchanges at three locations: Stately Pines Road (S.R. 1106), West Fisher Road/East Fisher Avenue (S.R. 1104), and West Camp Kiro Road/East Camp Kiro Road (S.R. 1112).

Permit Conditions:

General Conditions:

1. The time limit for completing the work authorized ends on **December 31, 2029**. If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least one month before the above date is reached.
2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.
3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and state coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.
4. If you sell the property associated with this permit, you must obtain the signature of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.

5. If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit. For your convenience, a copy of the certification is attached if it contains such conditions.

6. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit,

Special Conditions:

SEE ATTACHED SPECIAL CONDITIONS

Further Information:

1. Congressional Authorities: You have been authorized to undertake the activity described above pursuant to:

() Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403).

(X) Section 404 of the Clean Water Act (33 U.S.C. 1344).

() Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413).

2. Limits of this authorization.

a. This permit does not obviate the need to obtain other Federal, state, or local authorizations required by law.

b. This permit does not grant any property rights or exclusive privileges.

c. This permit does not authorize any injury to the property or rights of others.

d. This permit does not authorize interference with any existing or proposed Federal project.

3. Limits of Federal Liability. In issuing this permit, the Federal Government does not assume any liability for the following:

a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.

b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.

c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.

d. Design or construction deficiencies associated with the permitted work.

e. Damage claims associated with any future modification, suspension, or revocation of this permit.

4. Reliance on Applicant's Data: The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.

5. Reevaluation of Permit Decision. This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:

a. You fail to comply with the terms and conditions of this permit.

- b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (See 4 above).
- c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.

Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you to comply with the terms and conditions of your permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measures ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as those specified in 33 CFR 209.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.

6. Extensions. General condition 1 establishes a time limit for the completion of the activity authorized by this permit, Unless there are circumstances requiring either a prompt completion of the authorized activity or a reevaluation of the public interest decision, the Corps will normally give favorable consideration to a request for an extension of this time limit.

Your signature below, as permittee, indicates that you accept and agree to comply with the terms and conditions of this permit.

 Digitally signed by Michael A
Turchy
Date: 2024.07.12 11:20:23
-04'00'

(PERMITTEE) **NC DEPARTMENT OF TRANSPORTATION**
ATTN: MR. MICHAEL TURCHY

2024-July-12
(DATE)

This permit becomes effective when the Federal official, designated to act for the Secretary of the Army, has signed below.

 2024.07.12 11:58:46
-04'00'

FOR/_____
(DISTRICT COMMANDER) **BRAD A. MORGAN, COLONEL**

(DATE)

When the structures or work authorized by this permit are still in existence at the time the property is transferred, the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. To validate the transfer of this permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.

(TRANSFeree)

(DATE)

SPECIAL CONDITIONS
R-5777-C US 70 Upgrade between R-1015 Havelock Bypass and SR- 1116
(Thurman Road)
SAW-2018-01012

1. **Green sheets:** All Green Sheet and/or Categorical Exclusion (CE) project commitments for the R-5777-C Upgrade US 70 project are hereby incorporated by reference as special conditions of this permit.
2. **Work Limits:** All work authorized by this permit shall be performed in strict compliance with the attached permit plans dated February 12, 2024, which are a part of this permit. The Permittee shall ensure that the construction design plans for this project do not deviate from the permit plans attached to this authorization. Any modification to the attached permit plans must be approved by the US Army Corps of Engineers prior to any active construction in waters or wetlands.
 - a. Except as authorized by this permit or any U.S. Army Corps of Engineers approved modification to this permit, no excavation, fill, or mechanized land-clearing activities shall take place at any time in the construction or maintenance of this project, within waters or wetlands, or shall any activities take place that cause the degradation of waters or wetlands. There shall be no excavation from, waste disposal into, or degradation of, jurisdictional wetlands or waters associated with this permit without appropriate modification of this permit, including appropriate compensatory mitigation. This prohibition applies to all borrow and waste activities connected with this project. In addition, except as specified in the plans attached to this permit, no excavation, fill or mechanized land-clearing activities shall take place at any time in the construction or maintenance of this project, in such a manner as to impair normal flows and circulation patterns within, into, or out of waters or wetlands or to reduce the reach of waters or wetlands.
3. **Permit Distribution:** The Permittee shall require its contractors and/or agents to comply with the terms and conditions of this permit in the construction and maintenance of this project and shall provide each of its contractors and/or agents associated with the construction or maintenance of this project with a copy of this permit. A copy of this permit, including all conditions, drawings and attachments shall be available at the project site during the construction and maintenance of this project.
4. **Pre-Construction Meeting:** The Permittee shall schedule and attend a preconstruction meeting between its representatives, the contractors' representatives, and the U.S. Army Corps of Engineers, Washington Regulatory Field Office, NCDOT Regulatory Project Manager, prior to any work within

SPECIAL CONDITIONS
R-5777-C US 70 Upgrade between R-1015 Havelock Bypass and SR- 1116
(Thurman Road)
SAW-2018-01012

jurisdictional waters and wetlands to ensure that there is a mutual understanding of all the terms and conditions contained with this Department of Army Permit. The Permittee shall provide the Corps, Washington Regulatory Field Office, NCDOT Project Manager, with a copy of the final permit plans at least two weeks prior to the preconstruction meeting along with a description of any changes that have been made to the project's design, construction methodology or construction timeframe. The Permittee shall schedule the preconstruction meeting for a time frame when the Corps, NCDCM, and NCDWR Project Managers can attend. The Permittee shall invite the Corps, NCDCM, and NCDWR Project Managers a minimum of thirty (30) days in advance of the scheduled meeting to provide those individuals with ample opportunity to schedule and participate in the required meeting. The thirty (30) day requirement can be waived with the concurrence of the Corps.

5. **Notification of Construction Commencement and Completion:** The Permittee shall notify the U.S. Army Corps of Engineers in writing prior to beginning the work authorized by this permit and again upon completion of the work authorized by this permit.
6. **Reporting Address:** All reports, documentation, and correspondence required by the conditions of this permit shall be submitted to the following: U.S. Army Corps of Engineers, Wilmington District Washington Regulatory Field Office, Attn: Mr. Thomas Steffens, 2407 West 5th St., Washington, NC 27889. The Permittee shall reference the following permit number, SAW-2018-01012, on all submittals.
7. **Permit Revocation:** The Permittee, upon receipt of a notice of revocation of this permit or upon its expiration before completion of the work will, without expense to the United States and in such time and manner as the Secretary of the Army or his authorized representative may direct, restore the water or wetland to its pre-project condition. **Reporting Violations:** Violation of these permit conditions or violation of Section 404 of the Clean Water Act or Section 10 of the Rivers and Harbors Act shall be reported to the Corps in writing and by telephone at: 910-251-4615 within 24 hours of the Permittee's discovery of the violation.
8. **Clean Fill:** The Permittee shall use only clean fill material for this project. The fill material shall be free from items such as trash, construction debris, metal and plastic products, and concrete block with exposed reinforcement bars. Soils used for fill shall not be contaminated with any toxic substance in concentrations governed by Section 307 of the Clean Water Act. Unless otherwise authorized by this permit, all fill material placed in waters or wetlands shall be generated from an upland source.

SPECIAL CONDITIONS
R-5777-C US 70 Upgrade between R-1015 Havelock Bypass and SR- 1116
(Thurman Road)
SAW-2018-01012

9. **Endangered Species Act:** The Permittee shall implement all necessary measures to ensure the authorized activity does not kill, injure, capture, harass, or otherwise harm any federally listed threatened or endangered species. While accomplishing the authorized work, if the Permittee discovers or observes an injured or dead threatened or endangered species, the U.S. Army Corps of Engineers, Wilmington District, Washington Regulatory Field Office, Attn: Thomas Steffens at 910-251-4615, or thomas.a.steffens@usace.army.mil will be immediately notified to initiate the required Federal coordination.

a. Northern long-eared bat

The USFWS has issued a programmatic biological opinion (PBO) in conjunction with the Federal Highway Administration (FHWA), the US Army Corps of Engineers (USACE), and NCDOT for the northern long-eared bat (NLEB) (*Myotis septentrionalis*) in eastern North Carolina. The PBO covers the entire NCDOT program in Divisions 1-8, including all NCDOT projects and activities. Although this programmatic covers Divisions 1-8, The USFWS only considers NLEBs to be known or potentially found in 30 counties within Divisions 1-8. NCDOT, FHWA, and USACE have agreed to two conservation measures which will avoid/minimize mortality of NLEBs. These conservation measures only apply to the 30 current known/potential counties shown on Figure 2 of the PBO at this time. The programmatic determination for NLEB for the NCDOT program is May Affect, Likely to Adversely Affect. The PBO will ensure compliance with Section 7 of the Endangered Species Act for ten years (effective through December 31, 2030) for all NCDOT projects with a federal nexus in Divisions 1-8, which includes Craven County, where R-5777C is located.

b. Tricolored bat

The U.S. Fish and Wildlife Service's (USFWS's) Programmatic Conference Opinion (PCO) titled "NCDOT Program Effects on the Tricolored Bat in Divisions 1-8", dated November 20, 2023, contains mandatory terms and conditions to implement the reasonable and prudent measures that are associated with "incidental take" that are specified in the PCO. Your authorization under this Corps permit is conditional upon your compliance with all the mandatory terms and conditions associated with incidental take of the PCO, which terms and conditions are incorporated by reference in this permit. Failure to comply with the terms and conditions associated with incidental take of the PCO,

SPECIAL CONDITIONS
R-5777-C US 70 Upgrade between R-1015 Havelock Bypass and SR- 1116
(Thurman Road)
SAW-2018-01012

where a take of the listed species occurs, would constitute an unauthorized take, and it would also constitute non-compliance with your Corps permit. The USFWS is the appropriate authority to determine compliance with the terms and conditions of its PCO, and with the ESA.

10. Culverts:

- a. Unless otherwise requested in the application and depicted on the approved permit plans, culverts greater than 48 inches in diameter shall be buried at least one foot below the bed of the stream. Culverts 48 inches in diameter and less shall be buried or placed on the stream bed as practicable and appropriate to maintain aquatic passage, and every effort shall be made to maintain existing channel slope. The bottom of the culvert shall be placed at a depth below the natural stream bottom to provide for passage during drought or low flow conditions. Culverts shall be designed and constructed in a Manner that minimizes destabilization and head cutting.
- b. Measures shall be included in the construction/installation that will promote the safe passage of fish and other aquatic organisms. The dimension, pattern, and profile of the stream above and below a pipe or culvert shall not be modified by widening the stream channel or by reducing the depth of the stream in connection with the construction activity. The width, height, and gradient of a proposed opening shall be such as to pass the average historical low flow and spring flow without adversely altering flow velocity. Spring flow should be determined from gauge data, if available. In the absence of such data, bank full flow can be used as a comparable level.
- c. The Permittee shall implement all reasonable and practicable measures to ensure that equipment, structures, fill pads, work, and operations associated with this project do not adversely affect upstream and/or downstream reaches. Adverse effects include, but are not limited to, channel instability, flooding, and/or stream bank erosion. The Permittee shall routinely monitor for these effects, cease all work when detected, take initial corrective measures to correct actively eroding areas, and notify this office immediately. Permanent corrective measures may require additional authorization by the Corps.
- d. Culverts placed within wetlands must be installed in a manner that does not restrict the flows and circulation patterns of waters of the United

SPECIAL CONDITIONS
R-5777-C US 70 Upgrade between R-1015 Havelock Bypass and SR- 1116
(Thurman Road)
SAW-2018-01012

States. Culverts placed across wetland fills purely for the purposes of equalizing surface water shall not be buried, but the culverts must be of adequate size and/or number to ensure unrestricted transmission of water.

11. Sediment and Erosion Control:

- a. During the clearing phase of the project, heavy equipment shall not be operated in surface waters or stream channels. Temporary stream crossings will be used to access the opposite sides of stream channels. All temporary diversion channels and stream crossings will be constructed of non-erodible materials. Grubbing of riparian vegetation will not occur until immediately before construction begins on a given segment of stream channel.
- b. No fill or excavation impacts for the purposes of sedimentation and erosion control shall occur within jurisdictional waters, including wetlands, unless the impacts are included on the plan drawings and specifically authorized by this permit. This includes, but is not limited to, sediment control fences and other barriers intended to catch sediment losses.
- c. The Permittee shall remove all sediment and erosion control measures placed in waters and/or wetlands, orange safety fencing and shall restore natural grades on those areas, prior to project completion.
- d. The Permittee shall use appropriate sediment and erosion control practices which equal or exceed those outlined in the most recent version of the "North Carolina Sediment and Erosion Control Planning and Design Manual" to ensure compliance with the appropriate turbidity water quality standard. Erosion and sediment control practices shall be in full compliance with all specifications governing the proper design, installation and operation and maintenance of such Best Management Practices in order to ensure compliance with the appropriate turbidity water quality standards. This shall include, but is not limited to, the immediate installation of silt fencing or similar appropriate devices around all areas subject to soil disturbance or the movement of earthen fill, and the immediate stabilization of all disturbed areas. Additionally, the project shall remain in full compliance with all aspects of the Sedimentation Pollution Control Act of 1973 (North Carolina General Statutes Chapter 113A, Article 4). Adequate sedimentation and erosion control measures shall be implemented prior to any ground disturbing activities to minimize impacts to downstream aquatic resources. These measures shall be

SPECIAL CONDITIONS
R-5777-C US 70 Upgrade between R-1015 Havelock Bypass and SR- 1116
(Thurman Road)
SAW-2018-01012

inspected and maintained regularly, especially following rainfall events. All fill material shall be adequately stabilized at the earliest practicable date to prevent sediment from entering into adjacent waters and wetlands.

12. **Temporary Fills:** Within thirty (30) days of the date of completing the authorized work, the Permittee shall remove all temporary fills in waters of the United States and restore the affected areas to pre-construction contours and elevations. The affected areas shall be re-vegetated with native, non-invasive vegetation as necessary to minimize erosion and ensure site stability.

Due to the possibility that compaction and/or other site alterations might prevent the temporary wetland impact areas from re-attaining jurisdictional wetland status; the permittee shall provide an update on the wetland areas temporarily impacted. This update shall be conducted two growing seasons after completion of the work and shall consist of photographs and a brief report on the progress of the areas in re-attaining wetland jurisdictional status. Upon submission of this update to the USACE, the permittee shall schedule an agency field meeting with the USACE to determine if the temporarily impacted wetlands by this project have re-attained jurisdictional wetland status. If the wetland areas temporarily impacted by this project have not re-attained jurisdictional wetland status, the USACE shall determine if additional compensatory wetland mitigation is required.

13. **Borrow and Waste:** To ensure that all borrow and waste activities occur on high ground and do not result in the degradation of adjacent waters and wetlands, except as authorized by this permit, the Permittee shall require its contractors and/or agents to identify all areas to be used as borrow and/or waste sites associated with this project. The Permittee shall provide the U.S. Army Corps of Engineers with appropriate maps indicating the locations of proposed borrow and/or waste sites as soon as such information is available. The Permittee shall submit to the Corps site-specific information needed to ensure that borrow and/or waste sites comply with all applicable Federal requirements, to include compliance with the Endangered Species Act and the National Historic Preservation Act, such as surveys or correspondence with agencies (e.g., the USFWS, the NC-HPO, etc.). The required information shall also include the location of all aquatic features, if any, out to a distance of 400 feet beyond the nearest boundary of the site. The Permittee shall not approve any borrow and/or waste sites before receiving written confirmation from the Corps that the proposed site meets all Federal requirements, whether or not waters of the U.S., including wetlands, are located in the proposed borrow and/or waste

SPECIAL CONDITIONS
R-5777-C US 70 Upgrade between R-1015 Havelock Bypass and SR- 1116
(Thurman Road)
SAW-2018-01012

site. All delineations of aquatic sites on borrow and/or waste sites shall be verified by the U.S. Army Corps of Engineers and shown on the approved reclamation plans. The Permittee shall ensure that all borrow and/or waste sites comply with Special Condition 2.a. of this permit. Additionally, the Permittee shall produce and maintain documentation of all borrow and waste sites associated with this project. This documentation will include data regarding soils, vegetation, hydrology, any delineation(s) of aquatic sites, and any jurisdictional determinations made by the Corps to clearly demonstrate compliance with Special Condition 2.a. All information will be available to the U.S. Army Corps of Engineers upon request. The Permittee shall require its contractors to complete and execute reclamation plans for each borrow and/or waste site and provide written documentation that the reclamation plans have been implemented and all work is completed. This documentation will be provided to the U.S. Army Corps of Engineers within 30 days of the completion of the reclamation work.

14. **Mitigation:** In order to compensate for impacts associated with this permit, mitigation shall be provided in accordance with the provisions outlined on the most recent version of the attached Compensatory Mitigation Responsibility Transfer Form. The requirements of this form, including any special conditions listed on this form, are hereby incorporated as special conditions of this permit.
15. **Utilities and Temporary Impacts Restoration Measures:** Within thirty (30) days of the date of completing the authorized work, the Permittee shall remove all temporary fills in waters of the United States and restore the affected areas to pre-construction contours and elevations. The affected areas shall be re-vegetated with native, non-invasive vegetation as necessary to minimize erosion and ensure site stability. In wetland areas where pipeline installation via trenching is authorized, wetland topsoil shall be segregated from the underlying subsoil, and the top 6 to 12 inches of the trench shall be backfilled with topsoil from the trench.

Cleared wetland areas shall be re-vegetated with a wetland seed mix or a mix of native woody species. Fescue grass or any invasive species such as *Lespedeza* spp., shall not be used within the wetland areas.

U.S. ARMY CORPS OF ENGINEERS
Wilmington District
Compensatory Mitigation Responsibility Transfer Form

Permittee: NCDOT

Action ID: SAW 2018-01012

Project Name: R-5777-C US 70 Upgrade Thurman Rd to Havelock Bypass

County: Craven

Instructions to Permittee: The Permittee must provide a copy of this form to the Mitigation Sponsor, either an approved Mitigation Bank or the North Carolina Division of Mitigation Services (NCDMS), who will then sign the form to verify the transfer of the mitigation responsibility. Once the Sponsor has signed this form, it is the Permittee's responsibility to ensure that Wilmington District Project Manager identified on page two is in receipt of a signed copy of this form before conducting authorized impacts, unless otherwise specified below. If more than one Mitigation Sponsor will be used to provide the mitigation associated with the permit, or if the impacts and/or the mitigation will occur in more than one 8-digit Hydrologic Unit Code (HUC), multiple forms will be attached to the permit, and the separate forms for each Sponsor and/or HUC must be provided to the appropriate Mitigation Sponsors.

Instructions to Sponsor: The Sponsor verifies that the mitigation requirements (credits) shown below have been released and are available at the identified site. By signing below, the Sponsor is accepting full responsibility for the identified mitigation, regardless of whether they have received payment from the Permittee. Once the form is signed, the Sponsor must update the bank ledger and provide a copy of the signed form and the updated ledger to the Permittee, the Project Manager who issued the permit, the Bank Project Manager, and the District Mitigation Office (see contact information on page 2). The Sponsor must also comply with all reporting requirements established in their authorizing instrument.

Permitted Impacts and Compensatory Mitigation Requirements

Permitted Impacts Requiring Mitigation*:

8-digit HUC and Basin: 03020204, Neuse River Basin

Stream Impacts (linear feet)			Wetland Impacts (acres)			
Warm	Cool	Cold	Riparian Riverine	Riparian Non-Riverine	Non-Riparian	Coastal
1558			1.478		0.116	

*If more than one mitigation sponsor will be used for the permit, only include impacts to be mitigated by this sponsor.

Compensatory Mitigation Requirements:

8-digit HUC and Basin: 03020204, Neuse River Basin

Stream Mitigation (credits)			Wetland Mitigation (credits)			
Warm	Cool	Cold	Riparian Riverine	Riparian Non-Riverine	Non-Riparian	Coastal
1558			2.956		0.116	

Mitigation Site Debited: NCDMS

(List the name of the bank to be debited. For umbrella banks, also list the specific site. For NCDMS, list NCDMS. If the NCDMS acceptance letter identifies a specific site, also list the specific site to be debited).

Section to be completed by the Mitigation Sponsor

Statement of Mitigation Liability Acceptance: I, the undersigned, verify that I am authorized to approve mitigation transactions for the Mitigation Sponsor shown below, and I certify that the Sponsor agrees to accept full responsibility for providing the mitigation identified in this document (see the table above), associated with the USACE Permittee and Action ID number shown. I also verify that released credits (and/or advance credits for NCDMS), as approved by the Wilmington District, are currently available at the mitigation site identified above. Further, I understand that if the Sponsor fails to provide the required compensatory mitigation, the USACE Wilmington District Engineer may pursue measures against the Sponsor to ensure compliance associated with the mitigation requirements.

Mitigation Sponsor Name: _____

Name of Sponsor's Authorized Representative: _____

Signature of Sponsor's Authorized Representative

Date of Signature

**USACE Wilmington District
Compensatory Mitigation Responsibility Transfer Form, Page 2**

Conditions for Transfer of Compensatory Mitigation Credit:

- Once this document has been signed by the Mitigation Sponsor and the District is in receipt of the signed form, the Permittee is no longer responsible for providing the mitigation identified in this form, though the Permittee remains responsible for any other mitigation requirements stated in the permit conditions.
- Construction within jurisdictional areas authorized by the permit identified on page one of this form can begin only after the District is in receipt of a copy of this document signed by the Sponsor, confirming that the Sponsor has accepted responsibility for providing the mitigation requirements listed herein. When NCDMS provides mitigation for authorized impacts conducted by the North Carolina Department of Transportation (NCDOT), construction within jurisdictional areas may proceed upon permit issuance; however, a copy of this form signed by NCDMS must be provided to the District within 30 days of permit issuance. NCDOT remains fully responsible for the mitigation until the District has received this form, confirming that the Sponsor has accepted responsibility for providing the mitigation requirements listed herein.
- Signed copies of this document must be retained by the Permittee, Mitigation Sponsor, and in the USACE administrative records for both the permit and the Bank/ILF Instrument. It is the Permittee's responsibility to ensure that the District Project Manager (address below) is provided with a signed copy of this form.
- If changes are proposed to the type, amount, or location of mitigation after this form has been signed and returned to the District, the Sponsor must obtain case-by-case approval from the District Project Manager and/or North Carolina Interagency Review Team (NCIRT). If approved, higher mitigation ratios may be applied, as per current District guidance and a new version of this form must be completed and included in the District administrative records for both the permit and the Bank/ILF Instrument.

Comments/Additional Conditions:

This form is not valid unless signed below by the District Project Manager and by the Mitigation Sponsor on Page 1. ***Once signed, the Sponsor should provide copies of this form along with an updated bank ledger to: 1) the Permittee, 2) the District Project Manager at the address below, 3) the Bank Manager listed in RIBITS, and 4) the Wilmington District Mitigation Office, 3331 Heritage Trade Drive, Suite 105, Wake Forest, NC 27587 (or by email to SAWMIT@usace.army.mil).***

Questions regarding this form or any of the permit conditions may be directed to the District Mitigation Office.

USACE Project Manager: Thomas Steffens
USACE Field Office: Washington Regulatory Field Office
US Army Corps of Engineers
2407 West Fifth Street
Washington, NC 27889
Email: thomas.a.steffens@usace.army.mil



Wilmington District Project Manager Signature

July 11, 2024

Date of Signature

Current Wilmington District mitigation guidance, including information on mitigation ratios, functional assessments, and mitigation bank location and availability, and credit classifications (including stream temperature and wetland groupings) is available at <http://ribits.usace.army.mil>.

ROY COOPER

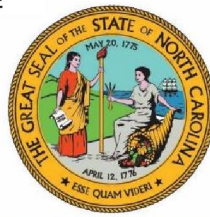
Governor

ELIZABETH S. BISER

Secretary

RICHARD E. ROGERS, JR.

Director



NORTH CAROLINA
Environmental Quality

May 15, 2024

Mr. Michael Turchy
Environmental Coordination and Permitting Group Leader
Environmental Analysis Unit
North Carolina Department of Transportation
1598 Mail Service Center
Raleigh, North Carolina, 27699-1598

Subject: 401 Water Quality Certification Pursuant to Section 401 of the Federal Clean Water Act with
ADDITIONAL CONDITIONS for the Proposed Upgrade to US 70 from Thurman Road to the Havelock
Bypass in Craven County. STIP No. R-5777C.
NCDWR Project No. 20240672

Dear Mr. Turchy:

Attached hereto is a copy of Certification No. WQC006842 issued to The North Carolina Department of
Transportation (NCDOT) dated May 15, 2024.

This approval is for the purpose and design described in your application. The plans and specifications for this project
are incorporated by reference as part of this Water Quality Certification. If you change your project, you must notify
the Division and you may be required to submit a new application package with the appropriate fee. If the property
is sold, the new owner must be given a copy of this Certification and is responsible for complying with all conditions.
[15A NCAC 02H .0507(d)(2)]. This Certification does not relieve the permittee of the responsibility to obtain all
other required Federal, State, or Local approvals before proceeding with the project, including those required by, but
not limited to, Sediment and Erosion Control, Non-Discharge, Water Supply Watershed, and Trout Buffer
regulations.

If we can be of further assistance, do not hesitate to contact us.

Sincerely,

DocuSigned by:

Amy Chapman

9C9886312DCD474...

Richard E. Rogers, Jr., Director
Division of Water Resources

cc: Tom Steffens, USACE, Washington Field Office
Stephen Lane, NC Division of Coastal Management
Cathy Brittingham, NC Division of Coastal Management
Jay Johnson, NC Department of Transportation, Division Two
Gary Jordan, US Fish and Wildlife Service
Travis Wilson, NC Wildlife Resources Commission
Beth Harmon, Division of Mitigation Services
Garcy Ward, NC Division of Water Resources, Washington Regional Office
File Copy



North Carolina Department of Environmental Quality | Division of Water Resources
512 North Salisbury Street | 1617 Mail Service Center | Raleigh, North Carolina 27699-1617
919.707.9000

401 Water Quality Certification Pursuant to Section 401 of the Federal Clean Water Act with ADDITIONAL CONDITIONS

THIS CERTIFICATION is issued in conformity with the requirements of Section 401 Public Laws 92-500 and 95-217 of the United States and subject to the North Carolina Division of Water Resources (NCDWR) Regulations in 15 NCAC 2H .0500. This certification authorizes the NCDOT to impact **2.00 acres** of jurisdictional wetlands, and **1,913 linear feet** of stream in Craven County. The project shall be constructed pursuant to the application dated received February 7, 2024. The authorized impacts are as described below:

Wetland Impacts in the Neuse River Basin

Site	Fill (ac)	Excavation (ac)	Mechanized Clearing (ac)	Hand Clearing (ac)	Total Wetland Impact (ac)
1	0.005	--	0.006	--	0.011
2	--	--	0.011	--	0.011
3	0.007	--	--	--	0.007
4	--	--	0.001	--	0.001
5	0.494	-	0.080	0.001	0.575
6	0.121	--	0.030	0.032	0.183
7	0.126	--	0.050	0.043	0.219
8	--	--	0.007	--	0.007
9	0.062	--	0.014	0.004	0.080
10	0.013	0.010	0.002	0.031	0.056
15	0.099	0.043	0.033	0.089	0.264
17	0.004	0.019	0.016	--	0.039
19	0.032	--	0.037	--	0.069
20	0.069	--	0.008	0.005	0.082
22	0.138	--	0.018	0.019	0.175
Total	1.17	0.072	0.313	0.224	1.779
4-utility	--	--	--	0.037	0.037
6-utility	--	--	--	0.065	0.065
9-utility	--	--	--	0.018	0.018
10-utility	--	--	--	0.029	0.029
20-utility	--	--	--	0.032	0.032



24-utility	--	--	--	0.001	0.001
25-utility	--	--	--	0.003	0.003
Total-utility	--	--	--	0.185	0.185
Total	1.17	0.072	0.313	0.409	1.964
	Permanent (ac)			Temp (ac)	
Total	1.555			0.409	1.964
20-WP*	0.039			--	0.039
Net Total	1.594			0.409	2.003

* remainder of WP not directly impacted but counted as total take = 0.039 ac

Total Wetland Impact for Project: 1.594 permanent ac + 0.409 temporary ac = 2.003 acres

Stream Impacts in the Neuse River Basin

Site	Streams Permanent (lf)	Streams Temporary (lf)	Total (lf)
1	113	30	143
7-1	142	43	185
7-2	210	26	236
8	150	65	215
11	26	15	41
12	121	20	141
13	38	11	49
14	104	49	153
16	53	7	60
18	265	31	296
21	87	12	99
23	93	18	111
24	156	28	184
Total	1,558	355	1,913

Total Stream Impact for Project: 1,913 linear feet.



The application provides adequate assurance that the discharge of fill material into the waters of the Neuse River Basin in conjunction with the proposed development will not result in a violation of applicable Water Quality Standards and discharge guidelines. Therefore, the State of North Carolina certifies that this activity will not violate the applicable portions of Sections 301, 302, 303, 306, 307 of PL 92-500 and PL 95-217 if conducted in accordance with the application and conditions hereinafter set forth.

This approval is only valid for the purpose and design that you submitted in your application dated received February 7, 2024. Should your project change, you are required to notify the NCDWR and submit a new application. If the property is sold, the new owner must be given a copy of this Certification and approval letter and is thereby responsible for complying with all the conditions. If any additional wetland impacts, or perennial stream impacts, for this project (now or in the future) exceed one tenth of one acre or 300 linear feet, respectively, additional compensatory mitigation may be required as described in 15A NCAC 2H .0506 (c).

For this approval to remain valid, you are required to comply with all the conditions listed below. In addition, you should obtain all other federal, state or local permits before proceeding with your project including (but not limited to) Sediment and Erosion control, Coastal Stormwater, Non-discharge and Water Supply watershed regulations. This Certification shall expire on the same day as the expiration date of the corresponding Corps of Engineers Permit.

This Water Quality Certification neither grants nor affirms any property right, license, or privilege in any lands or waters, or any right of use in any waters. This Water Quality Certification does not authorize any person to interfere with the riparian rights, littoral rights, or water use rights of any other person and does not create any prescriptive right or any right of priority regarding any usage of water. This Water Quality Certification shall not be interposed as a defense in any action respecting the determination of riparian or littoral rights or other rights to water use. No consumptive user is deemed by virtue of this Water Quality Certification to possess any prescriptive or other right of priority with respect to any other consumptive user regardless of the quantity of the withdrawal or the date on which the withdrawal was initiated or expanded. Upon the presentation of proper credentials, the Division may inspect the property.

Condition(s) of Certification:

1. Compensatory mitigation for impacts to 1.594 acres of wetlands is required. This total includes 1.478 acres of riparian wetlands and 0.116 acres of non-riparian wetlands. We understand that you have chosen to perform compensatory mitigation for impacts to wetlands through the North Carolina Division of Mitigation Services (DMS), and that the DMS has agreed to implement the mitigation for the project. DMS has indicated in a letter dated February 5, 2024 that they will assume responsibility for satisfying the federal Clean Water Act compensatory mitigation requirements for the above-referenced project, in accordance with DMS's Mitigation Banking Instrument signed July 28, 2010. [15A NCAC 02H .0506(c)]
2. The issuance of this certification does not exempt the Permittee from complying with any and all statutes, rules, regulations, or ordinances that may be imposed by other government agencies (i.e. local, state, and federal) having jurisdiction, including but not limited to applicable buffer rules, stormwater management rules, soil erosion and sedimentation control requirements, etc.
3. Impacts to Neuse Riparian Buffers are covered under a separate Buffer Authorization. All activities shall be in compliance with any applicable State Regulated Riparian Buffer Rules in Chapter 2B of Title 15A in the North Carolina Administrative Code. [15A NCAC 02H .0507(c) and 15A NCAC 02H .0506 (b)]
4. The Permittee shall ensure that the final design drawings adhere to the permit and to the permit drawings submitted for approval. [15A NCAC 02H .0507(c) and 15A NCAC 02H .0506 (b)(2)]
5. The outside buffer, wetland or water boundary located within the construction corridor approved by this authorization, including all non-commercial borrow and waste sites associated with the project, shall be clearly marked by highly visible fencing prior to any land disturbing activities. Impacts to areas within the fencing are prohibited unless otherwise authorized by this certification. [15A NCAC 02H.0506(b)(3)]



6. During the construction of the project, no staging of equipment of any kind is permitted in waters of the U.S., or protected riparian buffers. [15A NCAC 02H.0506(b)(2)]
7. All work in or adjacent to stream waters shall be conducted in a dry work area. Approved BMP measures from the most current version of NCDOT Construction and Maintenance Activities manual such as sandbags, rock berms, cofferdams and other diversion structures shall be used to prevent excavation in flowing water. [15A NCAC 02H.0506(b)(2) and 15A NCAC 02H .0507(c)]
8. If concrete is used during construction, a dry work area shall be maintained to prevent direct contact between curing concrete and stream water. Water that inadvertently contacts uncured concrete shall not be discharged to surface waters due to the potential for elevated pH and possible aquatic life and fish kills. [15A NCAC 02H.0506(b)(2) and 15A NCAC 02H .0507(c); 15A NCAC 02B .0200]
9. Unless otherwise approved in this certification, placement of culverts and other structures in open waters and streams, shall be placed below the elevation of the streambed by one foot for all culverts with a diameter greater than 48 inches, and 20 percent of the culvert diameter for culverts having a diameter less than 48 inches, to allow low flow passage of water and aquatic life. Design and placement of culverts and other structures including temporary erosion control measures shall not be conducted in a manner that may result in dis-equilibrium of wetlands or streambeds or banks, adjacent to or upstream and down stream of the above structures. The applicant is required to provide evidence that the equilibrium is being maintained if requested in writing by the NCDWR. If this condition is unable to be met due to bedrock or other limiting features encountered during construction, please contact the NCDWR for guidance on how to proceed and to determine whether or not a permit modification will be required. [15A NCAC 02H.0506(b)(2) and 15A NCAC 02H .0507(c)]
10. If multiple pipes or barrels are required, they shall be designed to mimic natural stream cross section as closely as possible including pipes or barrels at flood plain elevation and/or sills where appropriate. Widening the stream channel should be avoided. Stream channel widening at the inlet or outlet end of structures typically decreases water velocity causing sediment deposition that requires increased maintenance and disrupts aquatic life passage. [15A NCAC 02H.0506(b)(2) and 15A NCAC 02H .0507(c)]
11. Installation of culverts in wetlands shall ensure continuity of water movement and be designed to adequately accommodate high water or flood conditions. When roadways, causeways, or other fill projects are constructed across FEMA-designated floodways or wetlands, openings such as culverts or bridges shall be provided to maintain the natural hydrology of the system as well as prevent constriction of the floodway that may result in destabilization of streams or wetlands. [15A NCAC 02H.0506(b)(2) and 15A NCAC 02H .0507(c)]
12. No rock, sand or other materials shall be dredged from the stream channel except where authorized by this certification. [15A NCAC 02H.0506(b)(3)]
13. The dimension, pattern and profile of the stream above and below the crossing shall not be modified. Disturbed floodplains and streams shall be restored to natural geomorphic conditions. [15A NCAC 02H.0506(b)(2)]
14. All mechanized equipment operated near surface waters must be regularly inspected and maintained to prevent contamination of stream waters from fuels, lubricants, hydraulic fluids, or other toxic materials. [15A NCAC 02H.0506(b)(3)]
15. All fill slopes located in jurisdictional wetlands shall be placed at slopes no flatter than 3:1, unless otherwise authorized by this certification. [15A NCAC 02H.0506(b)(2)]
16. When applicable, all construction activities shall be performed and maintained in full compliance with G.S. Chapter 113A Article 4 (Sediment and Pollution Control Act of 1973). Regardless of applicability of the Sediment and Pollution Control Act, all projects shall incorporate appropriate Best Management Practices for the control of sediment and erosion so that no violations of state water quality standards, statutes, or rules occur. [15A NCAC 02H .0506(b)(3) and (c)(3) and 15A NCAC 02B .0200]



- a. Design, installation, operation, and maintenance of all sediment and erosion control measures shall be equal to or exceed the requirements specified in the most recent version of the *North Carolina Sediment and Erosion Control Manual*, or for linear transportation projects, the *NCDOT Sediment and Erosion Control Manual*.
 - b. All devices shall be maintained on all construction sites, borrow sites, and waste pile (spoil) sites, including contractor-owned or leased borrow pits associated with the project. Sufficient materials required for stabilization and/or repair of erosion control measures and stormwater routing and treatment shall be on site at all times.
 - c. For borrow pit sites, the erosion and sediment control measures shall be designed, installed, operated, and maintained in accordance with the most recent version of the *North Carolina Surface Mining Manual*. Reclamation measures and implementation shall comply with the reclamation in accordance with the requirements of the Sedimentation Pollution Control Act and the Mining Act of 1971.
 - d. If the project occurs in waters or watersheds classified as Primary Nursery Areas (PNAs), SA, WS-1, WS-11, High Quality Waters (HQW), or Outstanding Resource Waters (ORW), then the sedimentation and erosion control designs shall comply with the requirements set forth in 15A NCAC 04B .0124, *Design Standards in Sensitive Watershed*. [15A NCAC 02H.0506(b)(3) and (c)(3); GC 4135]
17. Sediment and erosion control measures shall not be placed in wetlands or surface waters or within 5 feet of the top of bank without prior approval from DWR. [15A NCAC 02H.0506(b)(3)]
 18. Erosion control matting in riparian areas shall not contain a plastic or nylon mesh grid which can impinge and entrap small animals. Matting should be secured in place by staples, stakes, or wherever possible live stakes of native trees. Riparian areas are defined as a distance 25 feet from top of stream bank. [15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)]
 19. If placement of sediment and erosion control devices in wetlands and waters is unavoidable, then design and placement of temporary erosion control measures shall not be conducted in a manner that may result in disequilibrium of wetlands, stream beds, or banks, adjacent to or upstream and downstream of the above structures. All sediment and erosion control devices shall be removed from wetlands and waters and the natural grade restored within two (2) months of the date that the Division of Energy, Mining and Land Resources (DEMLR) or locally delegated program has released the specific area within the project. [15A NCAC 02H.0506(b); 15A NCAC 02H .0507(c); 15A NCAC 02B .0200; 15A NCAC 02B .0231]
 20. The use of rip-rap above the Normal High Water Mark shall be minimized. Any rip-rap placed for stream stabilization shall be placed in stream channels in such a manner that it does not impede aquatic life passage. [15A NCAC 02H.0506(b)(2)]
 21. Any rip-rap required for proper culvert placement, stream stabilization, or restoration of temporarily disturbed areas shall be restricted to the area directly impacted by the approved construction activity. All rip-rap shall be placed such that the original streambed elevation and streambank contours are restored and maintained and shall consist of clean rock or masonry material free of debris or toxic pollutants. Placement of rip-rap or other approved materials shall not result in de-stabilization of the stream bed or banks upstream or downstream of the area or be installed in a manner that precludes aquatic life passage. [15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)]
 22. Any rip-rap used for stream or shoreline stabilization shall be of a size and density to prevent movement by wave, current action, or stream flows, and shall consist of clean rock or masonry material free of debris or toxic pollutants. Rip-rap shall not be installed in the streambed except in specific areas required for velocity control and to ensure structural integrity of bank stabilization measures. [15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c); 15A NCAC 02B .0201]
 23. Native riparian vegetation must be reestablished in the riparian areas within the construction limits of the project by the end of the growing season following completion of construction. [15A NCAC 02H.0506(b)(2)]
 24. Discharging hydroseed mixtures and washing out hydroseeders and other equipment in or adjacent to surface waters is prohibited. [15A NCAC 02H.0506(b)(3)]



25. NCDOT shall be in compliance with the NCS00250 issued to the NCDOT, including the applicable requirements of the NCG01000.
26. The permittee and its authorized agents shall conduct its activities in a manner consistent with State water quality standards (including any requirements resulting from compliance with §303(d) of the Clean Water Act) and any other appropriate requirements of State and Federal law. If the NCDWR determines that such standards or laws are not being met (including the failure to sustain a designated or achieved use) or that State or federal law is being violated, or that further conditions are necessary to assure compliance, the NCDWR may reevaluate and modify this certification. [15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)]
27. The Permittee shall report any violations of this certification to the Division of Water Resources within 24 hours of discovery. [15A NCAC 02B.0507(c); 15A NCAC 02B .0506(b)]
28. The NCDOT will conduct a pre-construction meeting with all appropriate staff to ensure that the project supervisor and essential staff understand the permit conditions and any potential issues at the permitted site. NCDWR staff shall be invited to the pre-construction meeting. [15A NCAC 02H.0506(b); 15A NCAC 02H .0507(c)]
29. Upon completion of the project (including any impacts at associated borrow or waste sites), the NCDOT Division Engineer shall complete the "Certification of Completion Form" to notify the NCDWR when all work included in the 401 Certification has been completed. [15A NCAC 02H.0507(c)]
30. A copy of this Water Quality Certification shall be maintained on the construction site at all times. In addition, the Water Quality Certification and all subsequent modifications, if any, shall be maintained with the Division Engineer and the on-site project manager. [15A NCAC 02H .0507(c) and 15A NCAC 02H .0506(b)]

This Certification shall become null and void unless the above conditions are made conditions of the Federal 404 and/or Coastal Area Management Act Permit. This Certification shall expire upon the expiration of the 404 or CAMA permit. Please be aware that impacting waters without first applying for and securing the issuance of a 401 Water Quality Certification violates Title 15A of the North Carolina Administrative Code (NCAC) 2H .0500. Title 15A NCAC 2H .0500 requires certifications pursuant to Section 401 of the Clean Water Act whenever construction or operation of facilities will result in a discharge into navigable waters, including wetlands, as described in 33 Code of Federal Regulations (CFR) Part 323. It also states any person desiring issuance of the State certification or coverage under a general certification required by Section 401 of the Federal Water Pollution Control Act shall file with the Director of the North Carolina Division of Water Quality. Violations of any condition herein set forth may result in revocation of this Certification and may result in criminal and/or civil penalties. Pursuant to G.S. 143-215.6A, these violations and any future violations are subject to a civil penalty assessment of up to a maximum of \$25,000.00 per day for each violation.

This approval and its conditions are final and binding unless contested [G.S. 143-215.5]. Please be aware that impacting waters without first applying for and securing the issuance of a 401 Water Quality Certification violates Title 15A of the North Carolina Administrative Code (NCAC) 2H .0500. Title 15A NCAC 2H .0500 requires certifications pursuant to Section 401 of the Clean Water Act whenever construction or operation of facilities will result in a discharge into navigable waters, including wetlands, as described in 33 Code of Federal Regulations (CFR) Part 323. It also states any person desiring issuance of the State certification or coverage under a general certification required by Section 401 of the Federal Water Pollution Control Act shall file with the Director of the North Carolina Division of Water Quality. Pursuant to G.S. 143-215.6A, these violations and any future violations are subject to a civil penalty assessment of up to a maximum of \$25,000.00 per day for each violation.

This Certification can be contested as provided in Chapter 150B of the North Carolina General Statutes by filing a Petition for a Contested Case Hearing (Petition) with the North Carolina Office of Administrative Hearings (OAH) within sixty (60) calendar days. Requirements for filing a Petition are set forth in Chapter 150B of the North Carolina General Statutes and Title 26 of the North Carolina Administrative Code. Additional information regarding requirements for filing a Petition and Petition forms may be accessed at <http://www.ncoah.com/> or by calling the OAH Clerk's Office at (919) 431-3000.



A party filing a Petition must serve a copy of the Petition on:

William F. Lane, General Counsel
Department of Environmental Quality
1601 Mail Service Center
Raleigh, NC 27699-1601

If the party filing the Petition is not the permittee, then the party must also serve the recipient of the Certification in accordance with N.C.G.S 150B-23(a).

This the 15th day of May 2024

DIVISION OF WATER RESOURCES

DocuSigned by:

Amy Chapman

Richard L. Rogers, Jr., Director

WQC No. 006842



North Carolina Department of Environmental Quality | Division of Water Resources
512 North Salisbury Street | 1617 Mail Service Center | Raleigh, North Carolina 27699-1617
919.707.9000

ROY COOPER

Governor

ELIZABETH S. BISER

Secretary

RICHARD E. ROGERS, JR.

Director



May 15, 2024

DWR # 20240672

Craven County

Mr. Michael Turchy
Environmental Coordination and Permitting Group Leader
Environmental Analysis Unit
North Carolina Department of Transportation
1598 Mail Service Center
Raleigh, North Carolina, 27699-1598

Subject: APPROVAL of NEUSE RIPARIAN BUFFER IMPACTS WITH ADDITIONAL CONDITIONS for the proposed Upgrade to US 70 from Thurman Road to the Havelock Bypass in Craven County.
TIP R-5777C.

Dear Mr. Turchy:

You have our approval for the impacts listed below for the purpose described in your application dated received by the Division of Water Resources (Division) February 7, 2024. These impacts are covered by the Neuse Buffer Rules and the conditions listed below. Please note that you should get any other federal, state or local permits before proceeding with your project, including those required by (but not limited to) Sediment and Erosion Control, Non-Discharge, and Water Supply Watershed regulations.

This approval is for the purpose and design described in your application. The plans and specifications for this project are incorporated by reference as part of this Authorization Certificate. If you change your project, you must notify the Division and you may be required to submit a new application package. If the property is sold, the new owner must be given a copy of this Authorization Certificate and is responsible for complying with all conditions. [15A NCAC 02B .0714]

If you are unable to comply with any of the conditions below, you must notify the Washington Regional Office within 24 hours (or the next business day if a weekend or holiday) from the time the permittee becomes aware of the circumstances.

The permittee shall report to the Washington Regional Office Regional Office any noncompliance with the conditions of this Authorization Certificate and/or any violation of state regulated riparian buffer rules [15A NCAC 02B .0714]. Information shall be provided orally within 24 hours (or the next business day if a weekend or holiday) from the time the applicant became aware of the circumstances.

The following impacts are hereby approved, provided that all of the Conditions listed below and all of the conditions of the Neuse Buffer Rules [15A NCAC 02B .0714] are met. No other impacts are approved, including incidental impacts.



North Carolina Department of Environmental Quality | Division of Water Resources
512 North Salisbury Street | 1617 Mail Service Center | Raleigh, North Carolina 27699-1617
919.707.9000

Riparian Buffer Impacts in the Neuse River Basin

Site	Zone 1 Impact (sq ft)	minus Wetlands in Zone 1 (sq ft)	= Zone 1 Buffers (not wetlands) (sq ft)	Zone 1 Buffer Mitigation Required (using 3:1 ratio)	Zone 2 Impact (sq ft)	minus Wetlands in Zone 2 (sq ft)	= Zone 2 Buffers (not wetlands) (sq ft)	Zone 2 Buffer Mitigation Required (using 1.5:1 ratio)
1	4341	0	4341	n/a	1002	0	1002	n/a
7-1	14348	1	14347	43041	9430	23	9407	14111
7-2	15634	8046	7588	22764	7634	74	7560	11340
8	14035	258	13777	41331	8439	0	8439	12659
11	4005	0	4005	n/a	2651	0	2651	n/a
12	11863	0	11863	35589	7919	0	7919	11879
13	3072	0	3072	n/a	1628	0	1628	n/a
14	10697	0	10697	32091	7105	0	7105	10658
16	3802	0	3802	n/a	1503	0	1503	n/a
23	5493	0	5493	n/a	3518	0	3518	n/a
24	10307	0	10307	n/a	3839	0	3839	n/a
Total	97,597	8,305	89,292	174,816	54,668	97	54,571	60,647

Total Buffer Impact = 152,265 square feet

n/a = allowable activity or less than 1/3 ac impact, no mitigation required.

Additional Conditions:

1. There are 10,071 square feet of buffer impacts associated with utilities at Sites 7, 8, 23, and 24 combined. These impacts are either deemed allowable or already accounted for under impacts for the road crossing and not included in the table above.
2. This approval is associated with Water Quality Certification No. WQC006842 that was issued on May 15, 2024, for the subject activity.
3. Compensatory mitigation for impacts to 58,272 square feet of protected riparian buffers in Zone 1 and 40,430 square feet of protected riparian buffers in Zone 2 shall be required. Applying a 3:1 ratio for Zone 1 impacts and a 1.5:1 ratio for Zone 2 impacts results in a mitigation requirement of **174,816** square feet and **60,645** square feet respectively (refer to the buffer impact table for a breakdown of mitigation totals). We understand that you have chosen to perform compensatory mitigation for impacts to protected buffers through use of the North Carolina Division of Mitigation Services (DMS). Mitigation for unavoidable impacts to Neuse Riparian Buffers shall be provided in the Neuse River Basin and done in accordance with 15A NCAC .02B .0295. The DMS has indicated in a letter dated February 5, 2024 that they will assume responsibility for satisfying the compensatory mitigation requirements for the above-referenced project, in accordance with DMS's Mitigation Banking Instrument signed June 14, 2016.



4. The issuance of this certification does not exempt the Permittee from complying with any and all statutes, rules, regulations, or ordinances that may be imposed by other government agencies (i.e. local, state, and federal) having jurisdiction, including but not limited to applicable buffer rules, stormwater management rules, soil erosion and sedimentation control requirements, etc.
5. The Permittee shall ensure that the final design drawings adhere to the permit and to the permit drawings submitted for approval. [15A NCAC 02H .0507(c) and 15A NCAC 02H .0506 (b)(2)]
6. During the construction of the project, no staging of equipment of any kind is permitted in waters of the U.S., or protected riparian buffers. [15A NCAC 02H.0506(b)(2)]
7. All mechanized equipment operated near surface waters must be regularly inspected and maintained to prevent contamination of stream waters from fuels, lubricants, hydraulic fluids, or other toxic materials. [15A NCAC 02H.0506(b)(2)]
8. When applicable, all construction activities shall be performed and maintained in full compliance with G.S. Chapter 113A Article 4 (Sediment and Pollution Control Act of 1973). Regardless of applicability of the Sediment and Pollution Control Act, all projects shall incorporate appropriate Best Management Practices for the control of sediment and erosion so that no violations of state water quality standards, statutes, or rules occur. [15A NCAC 02H .0506(b)(2) and 15A NCAC 02B.0200]
9. Sediment and erosion control measures shall not be placed in wetlands or surface waters or within 5 feet of the top of bank without prior approval from DWR. [15A NCAC 02H.0506(b)(2) and 15A NCAC 02H .0507(c)]
10. Erosion control matting in riparian areas shall not contain a plastic or nylon mesh grid which can impinge and entrap small animals. Matting should be secured in place by staples, stakes, or wherever possible live stakes of native trees. [15A NCAC 02H.0506(b)(2) and 15A NCAC 02H .0507(c)]
11. If placement of sediment and erosion control devices in the riparian buffer is unavoidable, then design and placement of temporary erosion control measures shall not be conducted in a manner that may result in dis-equilibrium of buffers, stream beds, or banks, adjacent to or upstream and downstream of the above structures. All sediment and erosion control devices shall be removed from buffers and waters and the natural grade restored within two (2) months of the date that the project was completed and stabilized. [15A NCAC 02H.0506(b)(2) and 15A NCAC 02H .0507(c)]
12. Pursuant to 15A NCAC 2B .0714 (11)(ff), all riparian buffers impacted by temporary fill or clearing activities or temporary sediment and erosion control devices shall be restored to preconstruction topographic and hydrologic conditions and replanted with comparable vegetation within two months of when construction is complete.
13. Stormwater runoff into the riparian buffer shall meet dispersed flow as defined in 15A NCAC 02H .1002 except as otherwise described in 15A NCAC 2B .0714(9).



14. The permittee and its authorized agents shall conduct its activities in a manner consistent with State water quality standards (including any requirements resulting from compliance with §303(d) of the Clean Water Act) and any other appropriate requirements of State and Federal law. If the NCDWR determines that such standards or laws are not being met (including the failure to sustain a designated or achieved use) or that State or federal law is being violated, or that further conditions are necessary to assure compliance, the NCDWR may reevaluate and modify this certification. [[15A NCAC 02H.0507(c)]
15. Upon completion of the project, the applicant shall complete the "Certification of Completion Form" to notify the NCDWR when all work included in the Buffer Authorization has been completed. [15A NCAC 02H.0507(c)]
16. A copy of this Approval shall be maintained on the construction site at all times. In addition, the Approval and all subsequent modifications, if any, shall be maintained with the on-site project manager. [15A NCAC 02H .0507(c)]

This approval and its conditions are final and binding unless contested. [G.S. 143-215.5]

This Authorization Certificate can be contested as provided in Chapter 150B of the North Carolina General Statutes by filing a Petition for a Contested Case Hearing (Petition) with the North Carolina Office of Administrative Hearings (OAH) **within sixty (60) calendar days**. Requirements for filing a Petition are set forth in Chapter 150B of the North Carolina General Statutes and Title 26 of the North Carolina Administrative Code. Additional information regarding requirements for filing a Petition and Petition forms may be accessed at <http://www.ncoah.com/> or by calling the OAH Clerk's Office at (919) 431-3000.

One (1) copy of the Petition must also be served to the North Carolina Department of Environmental Quality:

William F. Lane, General Counsel
Department of Environmental Quality
1601 Mail Service Center
Raleigh, NC 27699-1601

This Authorization shall expire five (5) years from the date of this letter.



This letter completes the review of the Division under the Neuse Riparian Buffer Rules as described in 15A NCAC 02B .0714. Please contact Garcy Ward at 252-948-3917 or garcy.ward@deq.nc.gov if you have any questions or concerns.

Sincerely,

DocuSigned by:
Amy Chapman

9C9886312DCD474...
Richard E. Rogers, Jr., Director
Division of Water Resources

CC:

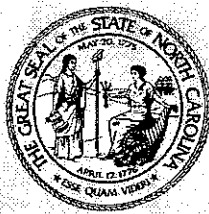
Tom Steffens, USACE, Washington Field Office
Stephen Lane, NC Division of Coastal Management
Cathy Brittingham, NC Division of Coastal Management
Jay Johnson, NC Department of Transportation, Division Two
Gary Jordan, US Fish and Wildlife Service
Travis Wilson, NC Wildlife Resources Commission
Beth Harmon, Division of Mitigation Services
Garcy Ward, NC Division of Water Resources, Washington Regional Office
File Copy



ROY COOPER
Governor

ELIZABETH S. BISER
Secretary

TANCRED MILLER
Director



NORTH CAROLINA
Environmental Quality

May 17, 2024

Mr. Michael Turchy
N.C. Department of Transportation
Environmental Coordination and Permitting
1598 Mail Service Center
Raleigh, North Carolina 27699-1598

SUBJECT: Consistency Concurrence regarding the proposed Upgrade of US 70 from
Thurman Road to the Havelock Bypass in Craven County, TIP No. R-5777C
(DCM2024013)

Dear Mr. Turchy:

The N.C. Division of Coastal Management (DCM) received a consistency certification from the N.C. Department of Transportation (NCDOT) on February 6, 2024 for TIP No. R-5777C, the proposed Upgrade of US 70 from Thurman Road (SR 1116) to the Havelock Bypass (TIP No. R-1015) in Craven County.

The proposed project would upgrade US 70 from an existing four-lane divided roadway to interstate standards for a distance of approximately 7 miles with grade-separated interchanges at three locations: Stately Pines Road (SR 1106); West Fisher Road/East Fisher Avenue (SR 1104); and West Camp Kiro Road/East Camp Kiro Road (SR 1112). At the interchanges, roundabouts will be constructed where the US 70 on/off ramps connect to the intersecting cross streets. Full control of access is proposed. In addition, existing driveway connections, intersections, and median crossovers will be removed, and service roads will be extended along portions of the project to provide access for property owners and to ensure mobility for local traffic.

DCM circulated the consistency certification to State agencies that would have a regulatory interest in the proposed development. No comments were received asserting that the proposed project would be inconsistent with North Carolina's coastal management program.

North Carolina's coastal zone management program consists of, but is not limited to, the Coastal Area Management Act, the State's Dredge and Fill Law, Chapter 7 of Title 15A of North Carolina's Administrative Code, and the land use plan(s) of the county and/or local municipalities in which the proposed project is located. It is the objective of DCM to manage the State's coastal resources to ensure that proposed Federal activities would be compatible with



North Carolina Department of Environmental Quality | Division of Coastal Management
Morehead City Office | 400 Commerce Avenue | Morehead City, North Carolina 28557
252.515.5400

safeguarding and perpetuating the biological, social, economic and aesthetic values of the State's coastal resources.

DCM has reviewed the submitted information pursuant to the management objectives and enforceable policies of Subchapters 7H and 7M of Chapter 7 in Title 15A of the North Carolina Administrative Code. DCM concurs that the proposed project is consistent, to the maximum extent practicable, with North Carolina's certified coastal management program, with the following conditions:

1. This project shall be implemented in accordance with the Individual 401 Water Quality Certification No. WQC006842 and Buffer Certification for Neuse Riparian buffer impacts that were issued by the N.C. Division of Water Resources (DWR) on May 15, 2024 (NCDWR Project No. 20240672).
2. In accordance with comments received from the DWR Public Water Supply Section on February 12, 2024, if existing water lines will be relocated during construction, plans for the water line relocation shall be submitted to the DWR Public Water Supply Section at 1634 Mail Service Center, Raleigh, NC 27699-1634. For more information contact the Public Water Supply Section at (919) 707-9100.

Prior to the initiation of the described activities, NCDOT should obtain any required State approvals or authorizations. Should the proposed action be modified, a revised consistency determination could be necessary. This might take the form of either a supplemental consistency certification pursuant to 15 CFR 930.46, or a new consistency certification pursuant to 15 CFR 930.36. Likewise, if further project assessments reveal environmental effects not previously considered by the proposed development, a supplemental consistency certification may be required.

If you have any questions, please contact DCM Transportation Project Coordinator Cathy Brittingham at (919) 707-9149 or via e-mail at cathy.brittingham@deq.nc.gov. Thank you for your consideration of the North Carolina Coastal Management Program.

Sincerely,



Daniel Govoni
Federal Consistency Coordinator

cc: Gregg Bodnar, DCM
Stephen Lane, DCM
Tom Steffens, USACE
Garcy Ward, DWR
Clif Whitfield, Public Water Supply Section
Deanna Riffey, NCDOT

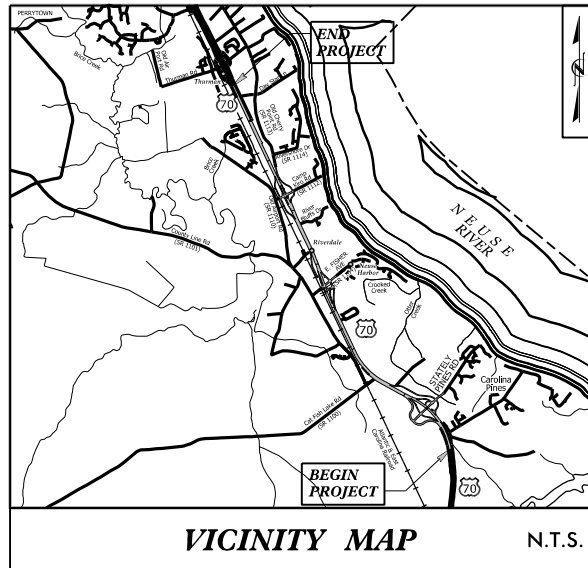


1/15/2024
R-5777C-Hyd.prm_wet_psh_01.dgn
Belam

CONTRACT: C204695

TIP PROJECT: R-5777C

See Sheet 1A For Index of Sheets
See Sheet 1B For Standard Symbology Sheet



Submittal February 6, 2024

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CRAVEN COUNTY

LOCATION: U.S. 70 FROM THE HAVELOCK BYPASS TO EAST OF S.R. 1116 (THURMAN ROAD)

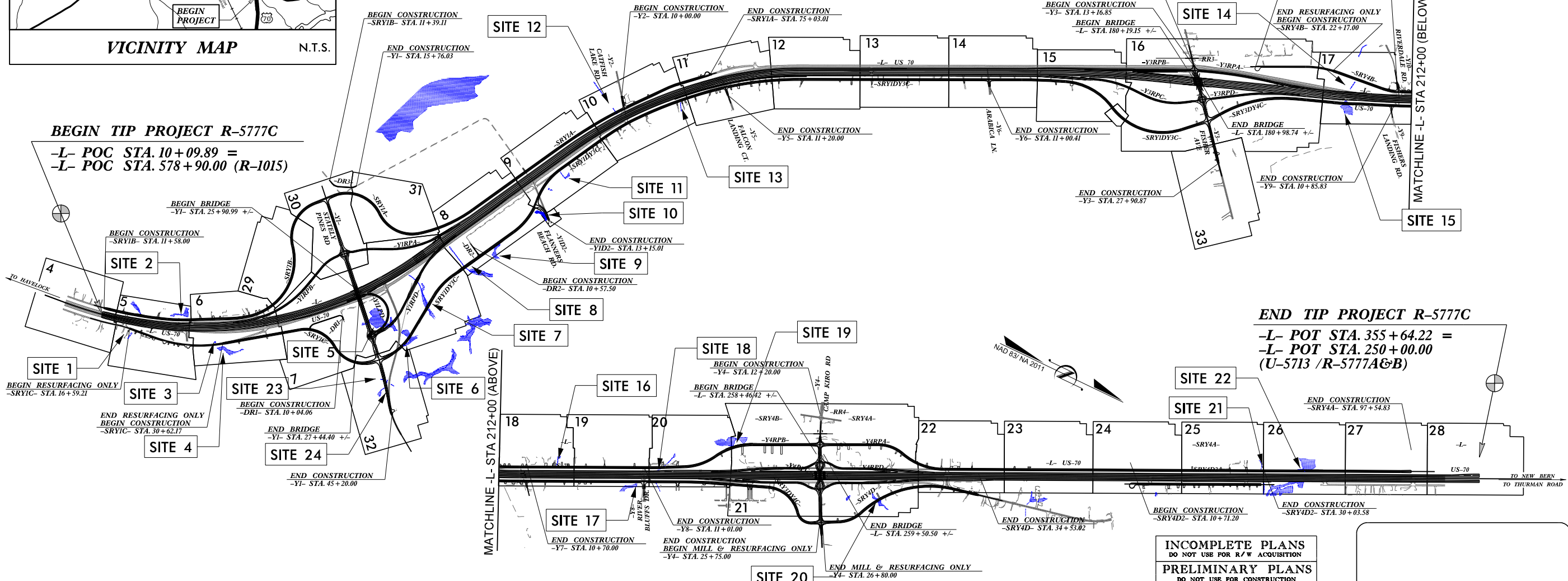
TYPE OF WORK: GRADING, DRAINAGE, PAVING, SIGNING, ITS AND STRUCTURES

WETLAND AND SURFACE WATER IMPACTS PERMIT

PERMIT DRAWING
SHEET 1 OF 89

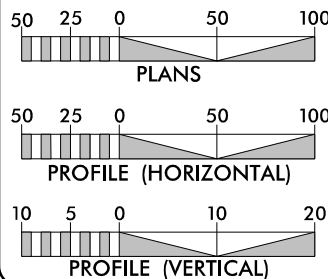
DATE: 1/15/2024

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-5777C	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
44648.3.4	N/A	DESIGN-BUILD	



THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARY OF THE CITY OF NEW BERN
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III.
THIS IS A CONTROLLED ACCESS PROJECT WITH ACCESS BEING LIMITED TO INTERCHANGES.

GRAPHIC SCALES



DESIGN DATA

ADT 2019 = 31,800
ADT 2045 = 41,800
K = 9%
D = 55%
T = 8%*
V = 75 MPH
* (TTST = 3% + DUAL 5%)
FUNC. CLASSIFICATION =
INTERSTATE
STATEWIDE TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT R-5777C = 6.486 MILES
LENGTH STRUCTURE TIP PROJECT R-5777C = 0.058 MILES
TOTAL LENGTH OF TIP PROJECT R-5777C = 6.544 MILES

NCDOT CONTACT: BYRON KYLE
NCDOT - DESIGN-BUILD UNIT

PLANS PREPARED FOR THE NCDOT BY:

Balfour Beatty

2018 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
JANUARY 17, 2023

LETTING DATE:
JANUARY 17, 2023

stv

NC LICENSE NUMBER F-0991
900 W TRADE ST STE 715,
CHARLOTTE, NC 28202

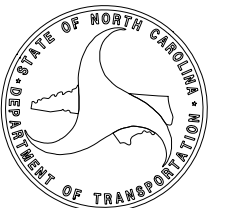
J. ADAM FREEMAN, PE
PROJECT ENGINEER

NARONG PHAL, PE
PROJECT DESIGN ENGINEER

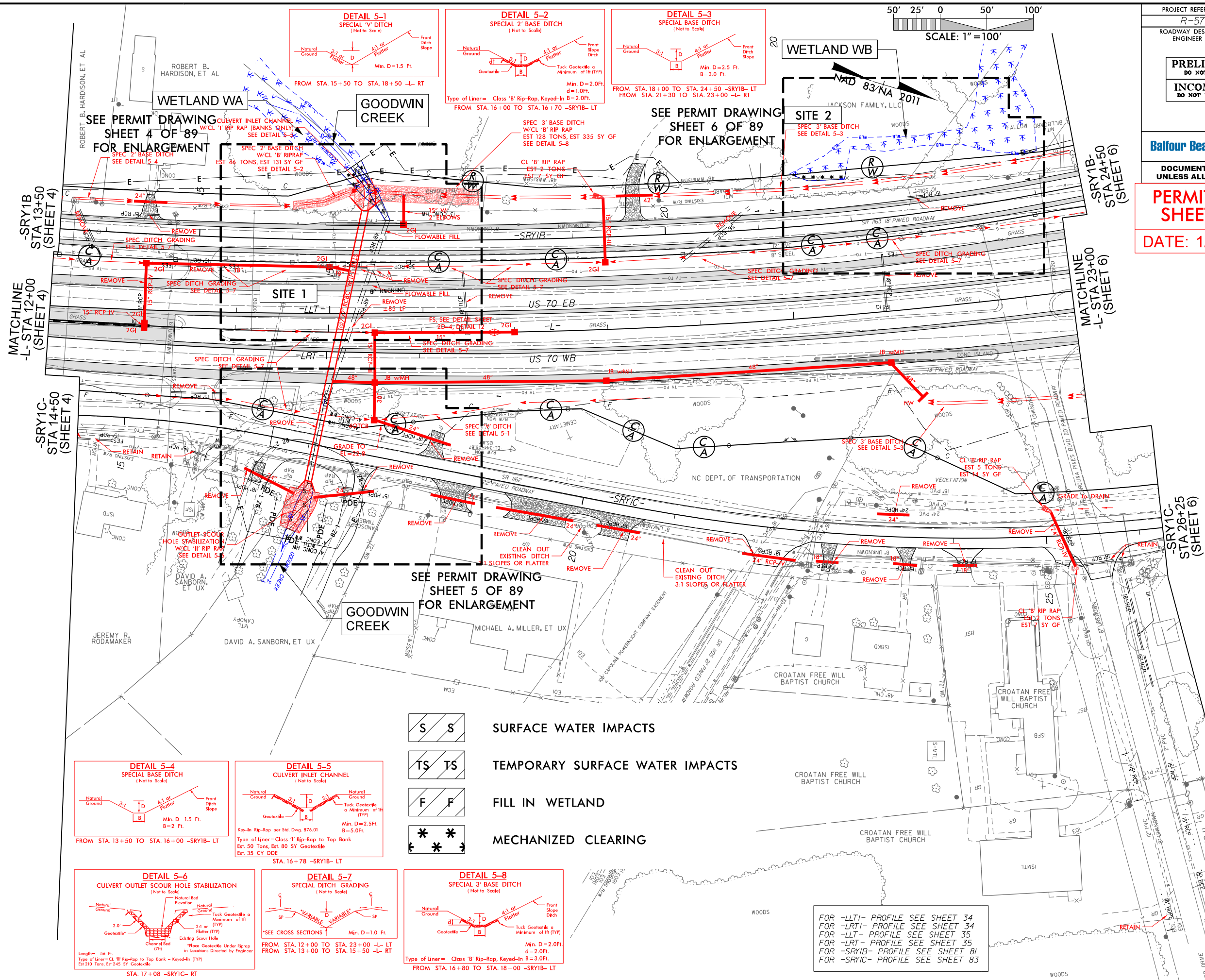
HYDRAULICS ENGINEER

SIGNATURE: P.E.
ROADWAY DESIGN ENGINEER

SIGNATURE: P.E.

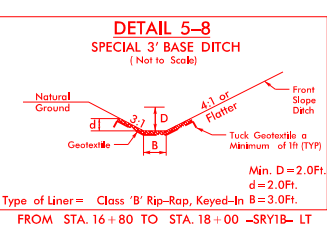
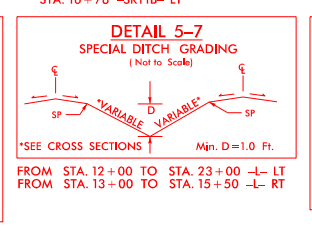
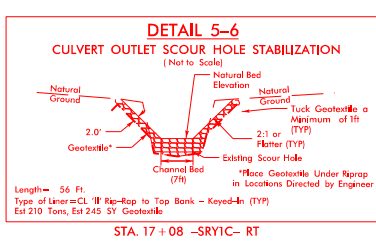
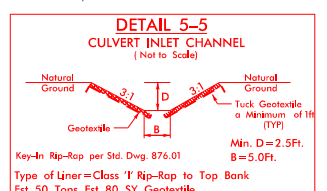
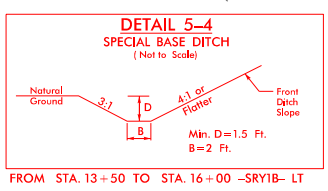
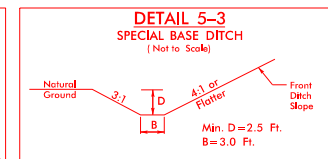
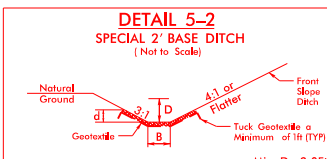
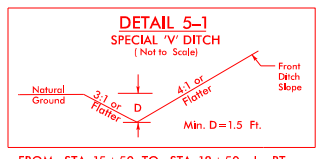
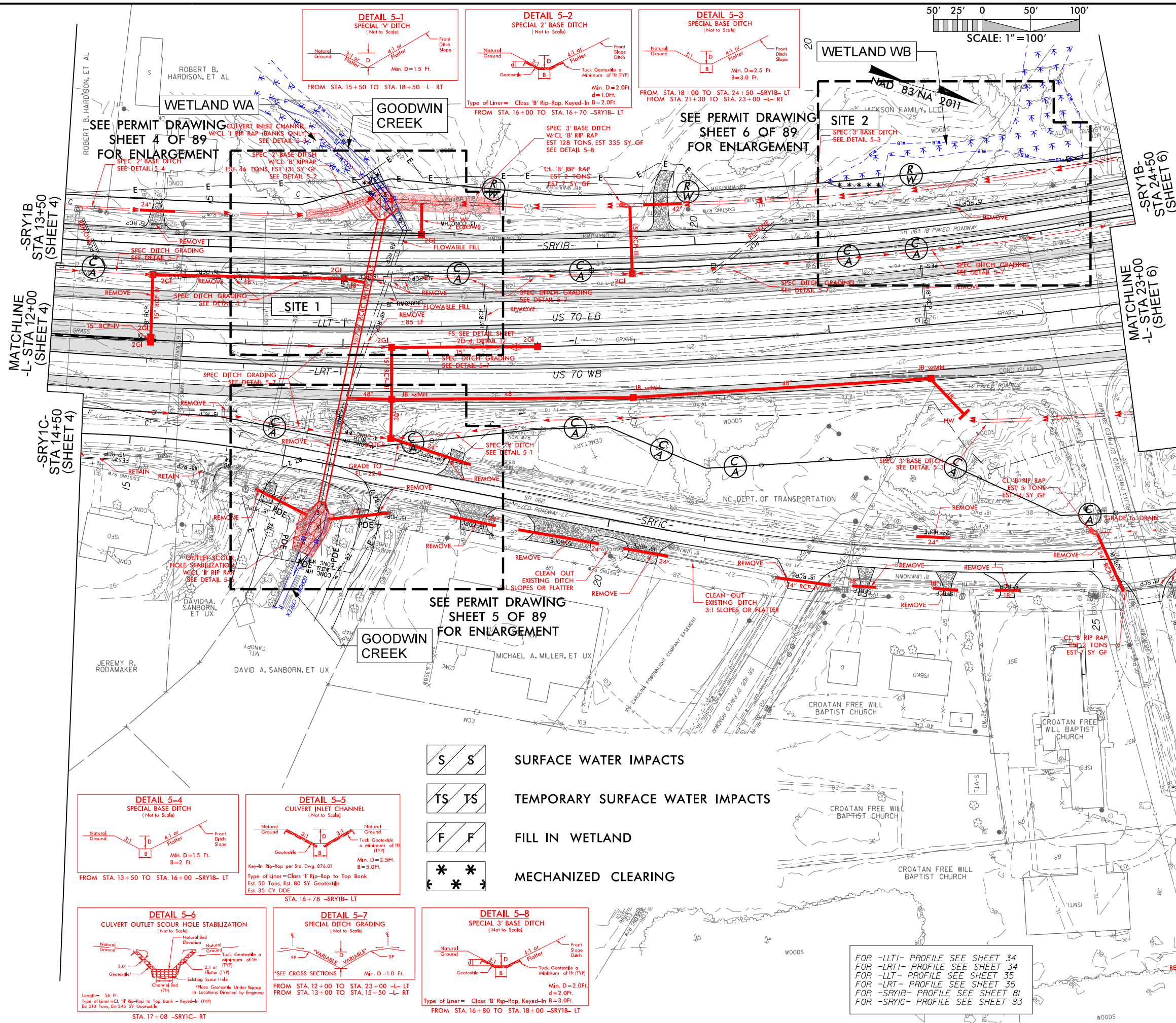


PROJECT REFERENCE NO. R-5777C		SHEET NO. 5
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION		
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION		
Balfour Beatty stv		
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		
PERMIT DRAWING SHEET 2 OF 89		
DATE: 1/15/2024		



1/15/2024 R-5777C-Hyd.prm-wet.psh.05.dgn

PROJECT REFERENCE NO. R-5777C		SHEET NO. 5
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION		
Balfour Beatty stv DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		
PERMIT DRAWING SHEET 3 OF 89 DATE: 1/15/2024		



- SURFACE WATER IMPACTS
- TEMPORARY SURFACE WATER IMPACTS
- FILL IN WETLAND
- MECHANIZED CLEARING

FOR -LTI- PROFILE SEE SHEET 34
 FOR -LRT- PROFILE SEE SHEET 34
 FOR -LRT- PROFILE SEE SHEET 35
 FOR -LRT- PROFILE SEE SHEET 35
 FOR -LRT- PROFILE SEE SHEET 35
 FOR -LRT- PROFILE SEE SHEET 35
 FOR -LRT- PROFILE SEE SHEET 35

1/15/2024 R-5777C-Hyd.prm_wet.psh.05-1.dgn

F

F

FILL IN WETLAND

*

*

MECHANIZED CLEARING

S

S

SURFACE WATER IMPACTS

TS

TS

TEMPORARY SURFACE WATER IMPACTS

WETLAND WA

CULVERT INLET CHANNEL
W/CL 'I' RIP RAP (BANKS ONLY)

SPEC 2' BASE DITCH
W/CL 'B' RIPRAP
EST 46 TONS, EST 131 SY GF

SPEC 3' BASE DITCH
W/CL 'B' RIP RAP
EST 28 TONS, EST 335 SY GF

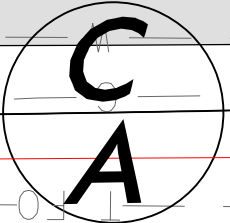
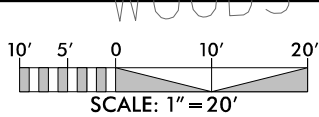
15" W/
2 ELBOWS

SITE 1

PERMIT DRAWING
SHEET 4 OF 89

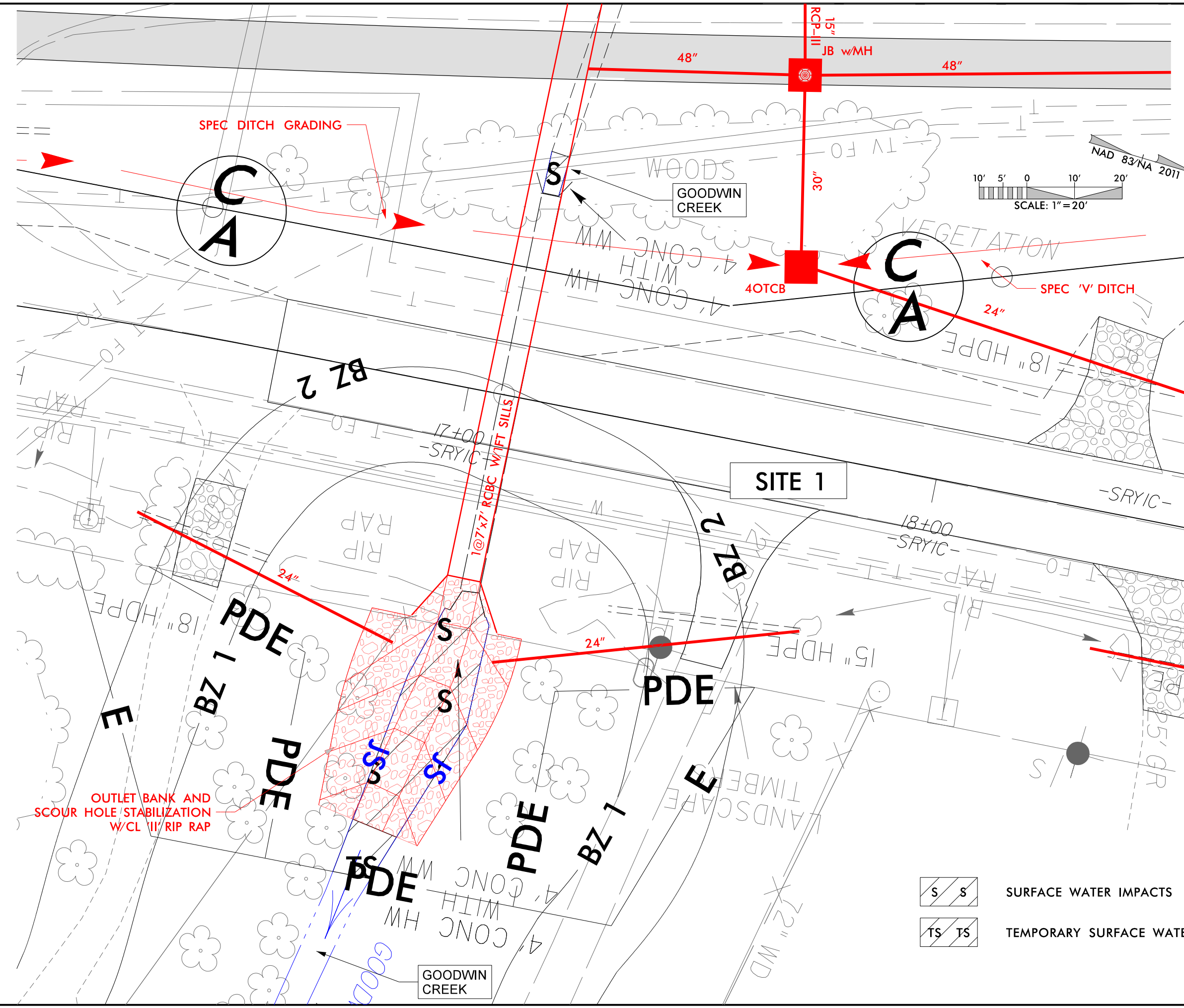
DATE: 1/15/2024

PROJECT REFERENCE NO.	SHEET NO.
R-5777C	
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



8/17/99

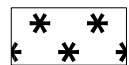
PROJECT REFERENCE NO. R-5777C		SHEET NO.	
RW SHEET NO.		HYDRAULICS ENGINEER	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION			
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			
PERMIT DRAWING SHEET 5 OF 89			
DATE: 1/15/2024			



OUTLET BANK AND
SCOUR HOLE STABILIZATION
W/CL 11' RIP RAP

- SURFACE WATER IMPACTS
- TEMPORARY SURFACE WATER IMPACTS

8/17/99



MECHANIZED CLEARING



PROJECT REFERENCE NO.		SHEET NO.	
R-5777C			
R/W SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION			

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING
SHEET 6 OF 89

DATE: 1/15/2024

JACKSON FAMILY, LLC

WETLAND WB

WOODS

SITE 2

MECHANIZED CLEARING

R
W

SPEC 3' BASE DITCH

22+00 -SRYIB-

24+00 -SRYIB-

15" RCP
10' SOIL

-SRYIB-

SR 1163 18' PAVED ROADWAY

C
A

C
A

SPEC DITCH GRADING

GRASS

1/15/2024
R-5777C-Hyd.prm-wet.psh_05-4-ViewIn.dgn
bent

6/23/16

010	PROJ. REFERENCE NO.	SHEET NO.
0 10 20	R-5777	L-2

PERMIT DRAWING
SHEET 7 OF 89

DATE: 1/15/2024

SITE 1

WETLAND WA
GOODWIN CREEK

SURFACE WATER
IMPACTS

FILL IN WETLAND

WETLAND

WETLAND

WETLAND

WETLAND

STATION
STA. 11+25.04

0.020 0.020

4.683:1

6:1

0.040

4.879:1

6.8:1

0.040

6:1

3:1

0.008

23.90

26.09

16+00.00

STATION
STA. 11+88.94

0.020 0.020

4:1

6:1

0.040

4.453:1

6.342:1

0.040

6:1

6:1

22.80

25.94

15+50.00

STATION
STA. 11+37.85

0.020 0.020

4:1

6:1

0.040

4.080:1

6:1

0.040

6:1

23.47

26.09

15+00.00

STATION
STA. 11+95.74

0.020 0.020

4:1

6:1

0.040

4.3:1

7:1

0.040

6:1

6:1

24.24

26.24

14+50.00

STATION
STA. 11+41.44

0.020 0.020

4:1

6:1

0.040

4:1

6.892:1

0.040

5:1

5:1

25.14

26.39

14+00.00

STATION
STA. 11+15.04

0.020 0.020

4:1

5.122:1

0.040

4:1

7.718:1

0.040

5.5:1

4.4:1

26.08

27.75

13+50.00

STATION
STA. 11+15.04

0.020 0.020

4:1

5.122:1

0.040

4:1

7.718:1

0.040

5.5:1

4.4:1

26.08

27.75

13+50.00

STATION
STA. 11+15.04

0.020 0.020

4:1

5.122:1

0.040

4:1

7.718:1

0.040

5.5:1

4.4:1

26.08

27.75

13+50.00

STATION
STA. 11+15.04

0.020 0.020

4:1

5.122:1

0.040

4:1

7.718:1

0.040

5.5:1

4.4:1

26.08

27.75

13+50.00

STATION
STA. 11+15.04

0.020 0.020

4:1

5.122:1

0.040

4:1

7.718:1

0.040

5.5:1

4.4:1

26.08

27.75

13+50.00

STATION
STA. 11+15.04

0.020 0.020

4:1

5.122:1

0.040

4:1

7.718:1

0.040

5.5:1

4.4:1

26.08

27.75

13+50.00

STATION
STA. 11+15.04

0.020 0.020

4:1

5.122:1

0.040

4:1

7.718:1

0.040

5.5:1

4.4:1

26.08

27.75

13+50.00

STATION
STA. 11+15.04

0.020 0.020

4:1

5.122:1

0.040

4:1

7.718:1

0.040

5.5:1

4.4:1

26.08

27.75

13+50.00

STATION
STA. 11+15.04

0.020 0.020

4:1

5.122:1

0.040

4:1

7.718:1

0.040

5.5:1

4.4:1

26.08

27.75

13+50.00

STATION
STA. 11+15.04

0.020 0.020

4:1

5.122:1

0.040

4:1

7.718:1

0.040

5.5:1

4.4:1

26.08

27.75

13+50.00

STATION
STA. 11+15.04

0.020 0.020

4:1

5.122:1

0.040

4:1

7.718:1

0.040

5.5:1

4.4:1

26.08

27.75

13+50.00

STATION
STA. 11+15.04

0.020 0.020

4:1

5.122:1

0.040

4:1

7.718:1

0.040

5.5:1

4.4:1

26.08

27.75

13+50.00

STATION
STA. 11+15.04

0.020 0.020

4:1

5.122:1

0.040

4:1

7.718:1

0.040

5.5:1

4.4:1

26.08

27.75

13+50.00

STATION
STA. 11+15.04

0.020 0.020

4:1

5.122:1

0.040

4:1

7.718:1

0.040

5.5:1

4.4:1

26.08

27.75

13+50.00

STATION
STA. 11+15.04

0.020 0.020

4:1

5.122:1

0.040

4:1

7.718:1

0.040

5.5:1

4.4:1

26.08

27.75

13+50.00

STATION
STA. 11+15.04

0.020 0.020

4:1

5.122:1

0.040

4:1

7.718:1

0.040

5.5:1

4.4:1

26.08

27.75

13+50.00

STATION
STA. 11+15.04

0.020 0.020

4:1

5.122:1

0.040

4:1

7.718:1

0.040

5.5:1

4.4:1

26.08

27.75

13+50.00

STATION
STA. 11+15.04

0.020 0.020

4:1

6/23/16

	PROJ. REFERENCE NO.	SHEET NO.
	R-5777	L-4

PERMIT DRAWING
SHEET 8 OF 89
DATE: 1/15/2024

SITE 2

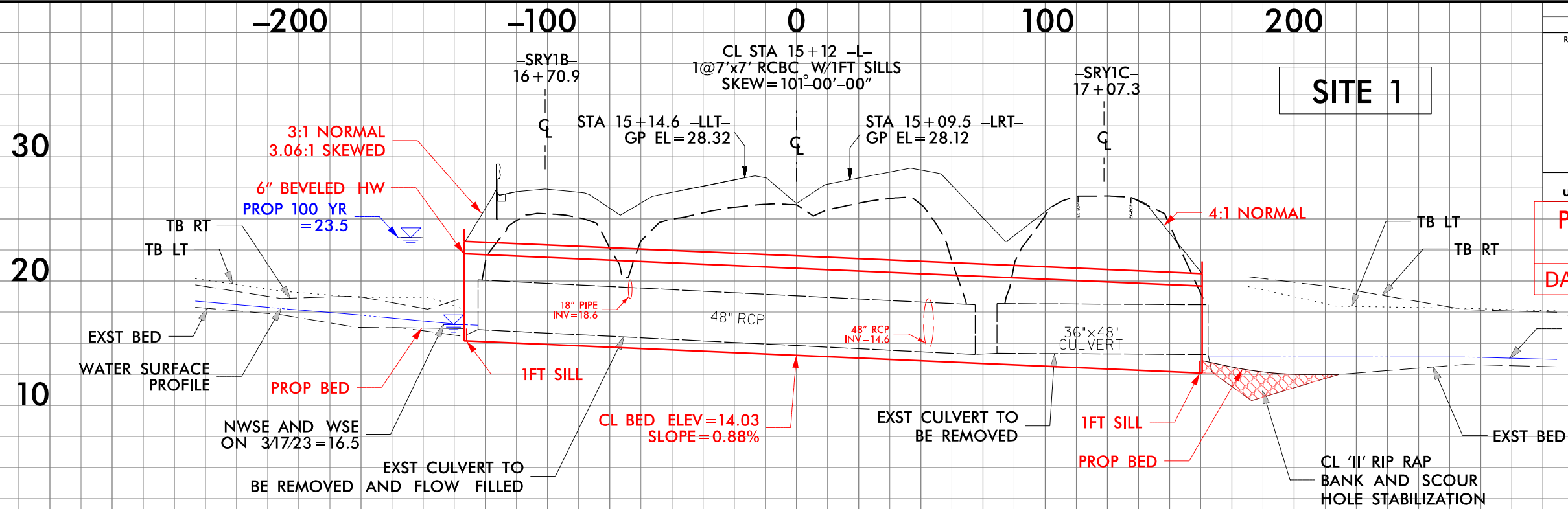
WETLAND WB

MECHANIZED CLEARING

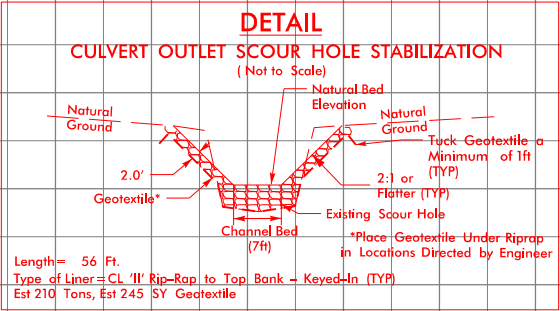
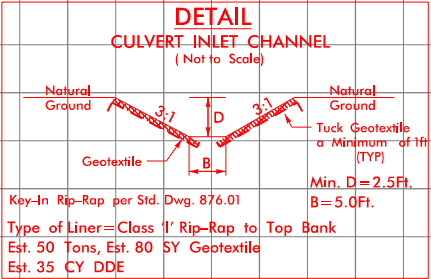
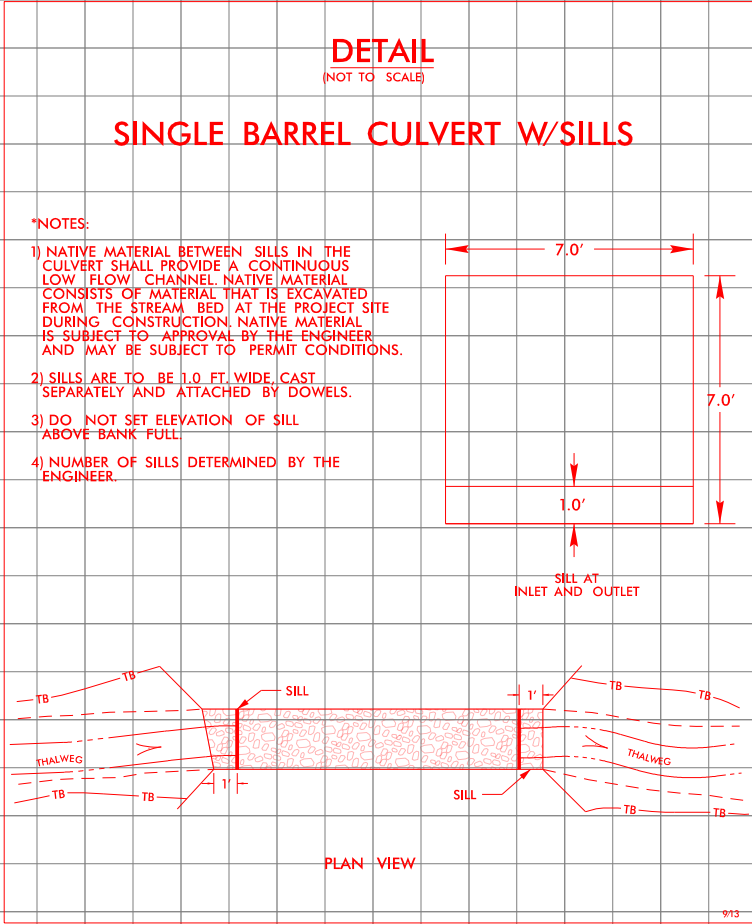
1/15/2024
R-5777C-Hyd-prm.wet.psh.05-6-rp.l.dgn
belom

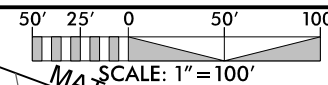
5/14/99

1/15/2024
R-5777C-Hyd.prm-wet.psh_05-7-Sect.dgn



PROJECT REFERENCE NO. R-5777C		SHEET NO.
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION		
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		
PERMIT DRAWING SHEET 9 OF 89		
DATE: 1/15/2024		

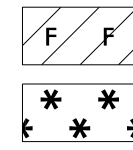
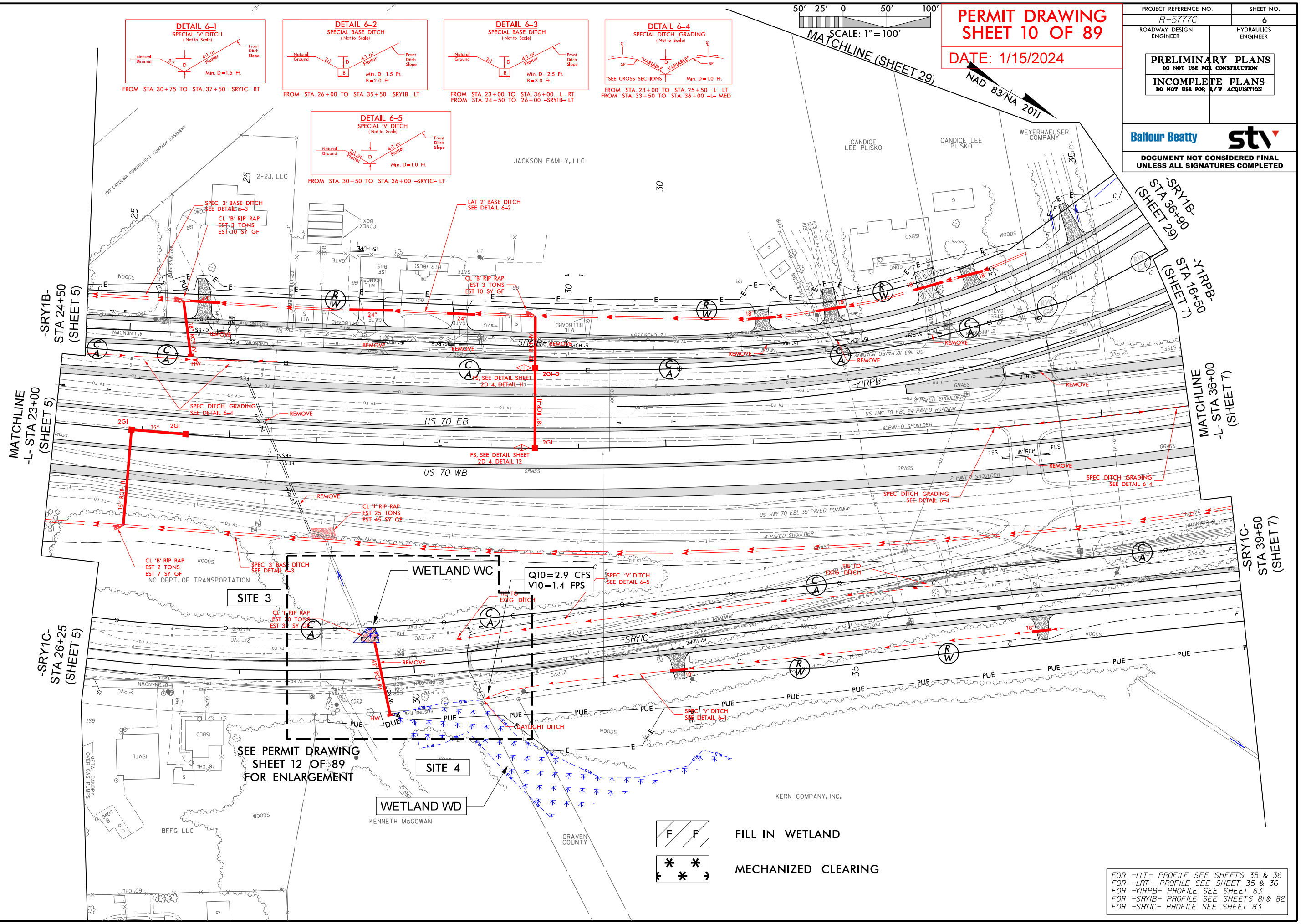




**PERMIT DRAWING
SHEET 10 OF 89**

DATE: 1/15/2024

PROJECT REFERENCE NO. R-5777C	SHEET NO. 6
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION	
Balfour Beatty st	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

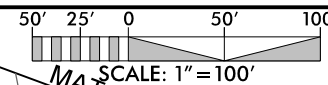


FILL IN WETLAND

MECHANIZED CLEARING

FOR -LLT- PROFILE SEE SHEETS 35 & 36
FOR -LRT- PROFILE SEE SHEETS 35 & 36
FOR -YIRPB- PROFILE SEE SHEET 63
FOR -SRYIB- PROFILE SEE SHEETS 81 & 82
FOR -SRYIC- PROFILE SEE SHEET 83

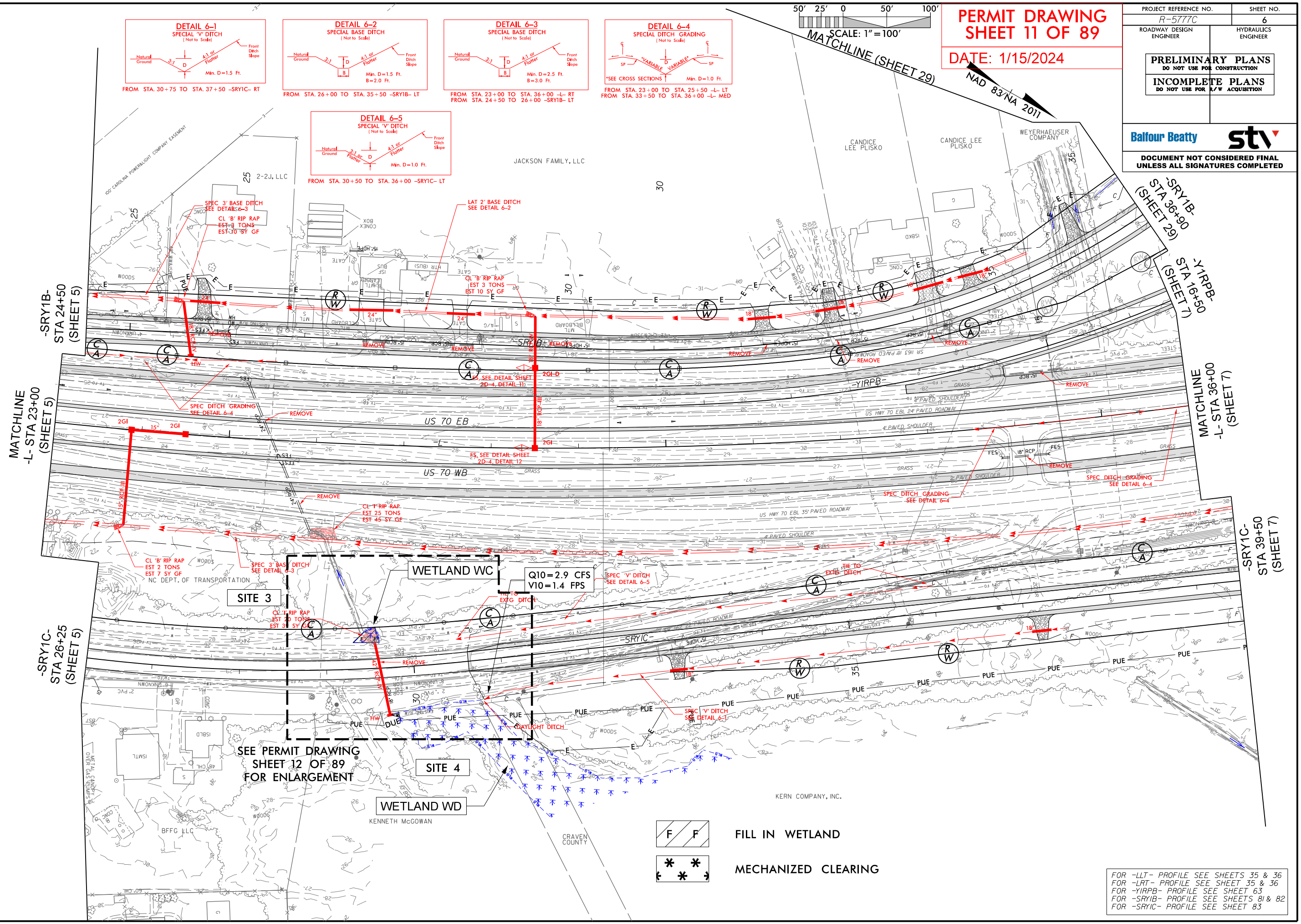
1/15/2024
R-5777C-Hyd.prm-wet.psh.06.dgn
Bentley



PERMIT DRAWING
SHEET 11 OF 89

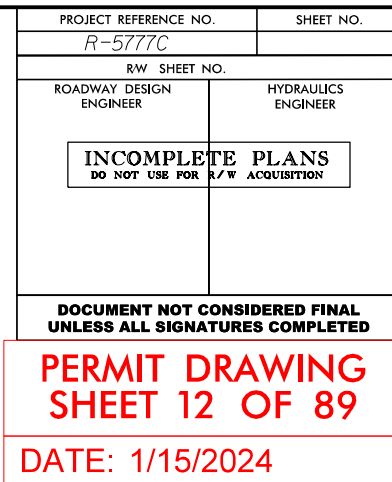
DATE: 1/15/2024

PROJECT REFERENCE NO. R-5777C	SHEET NO. 6
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION	
Balfour Beatty	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



1/15/2024
R-5777C-Hyd.prm-wet.psh.06-1.dgn

FOR -LLT- PROFILE SEE SHEETS 35 & 36
FOR -LRT- PROFILE SEE SHEET 35 & 36
FOR -YIRPB- PROFILE SEE SHEET 63
FOR -SRYIB- PROFILE SEE SHEETS 81 & 82
FOR -SRYIC- PROFILE SEE SHEET 83

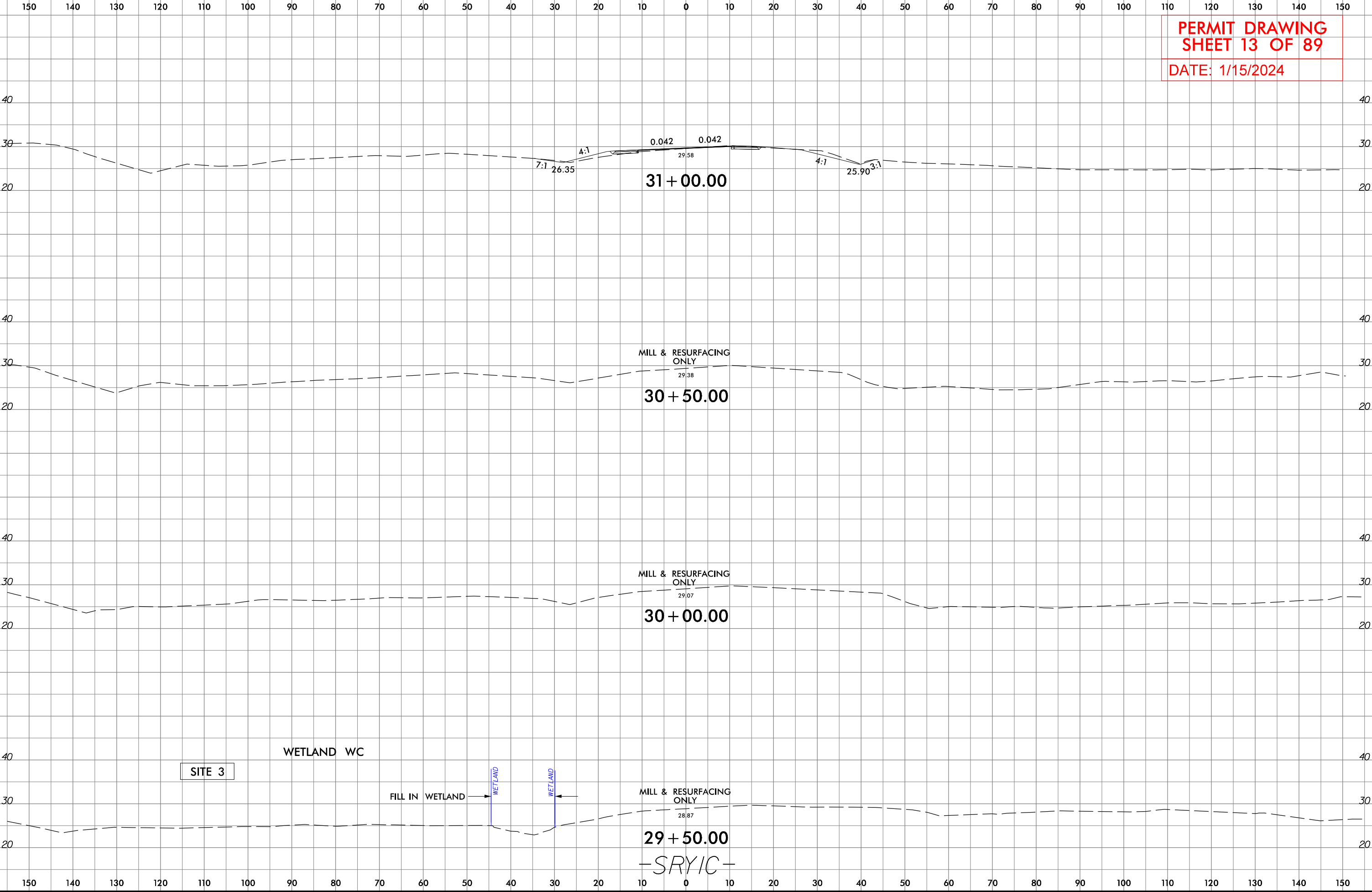


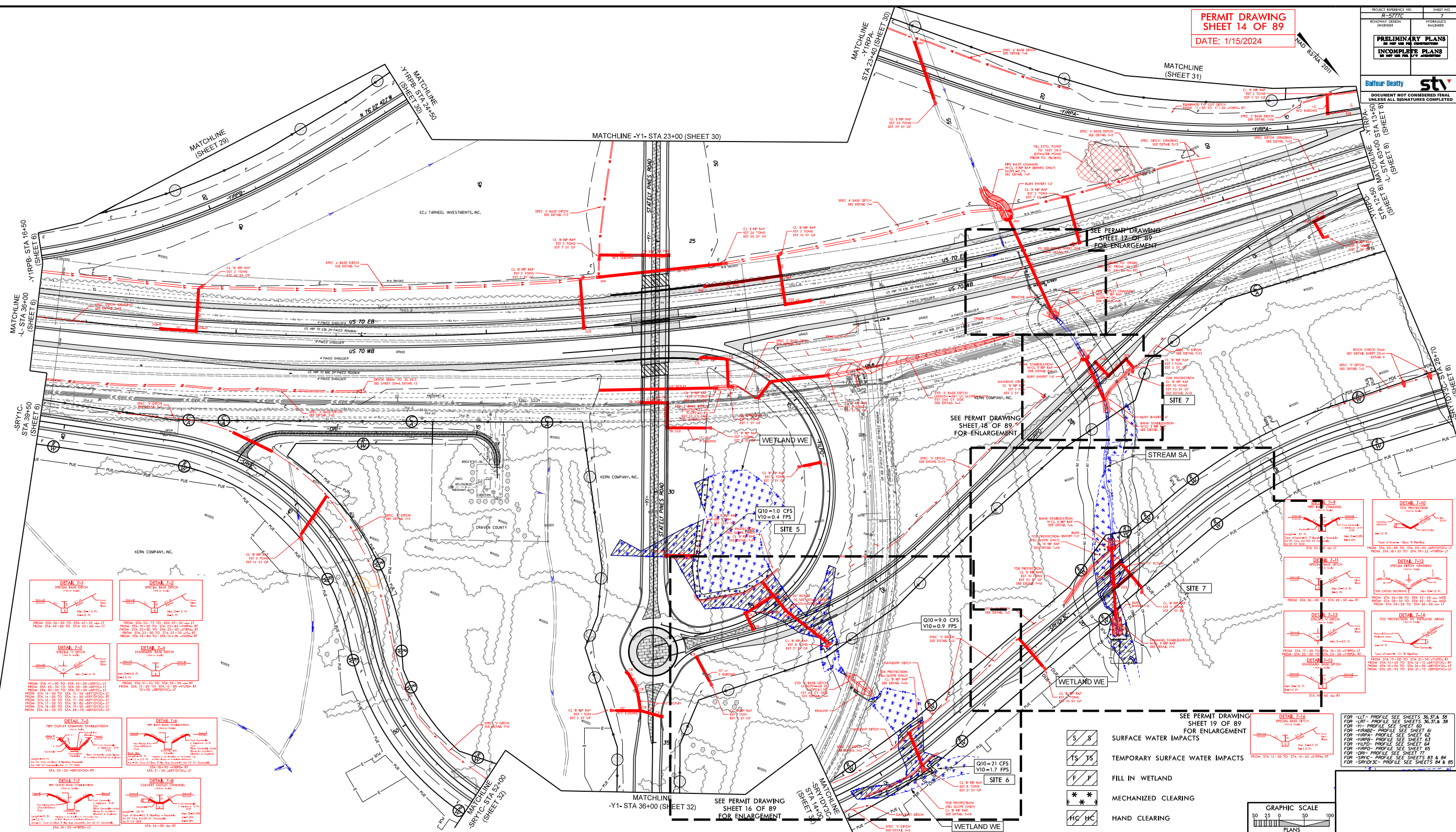
6/23/16

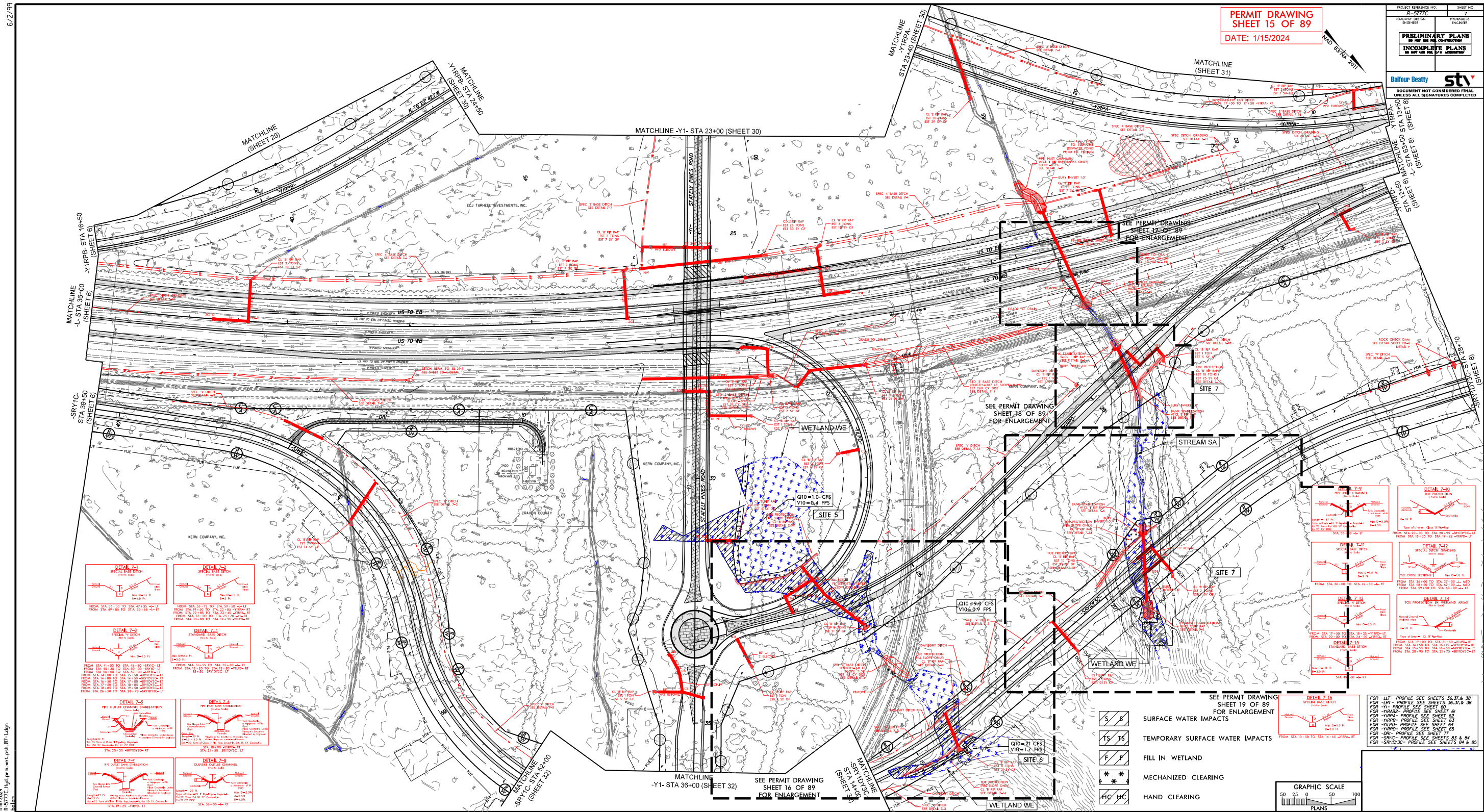
0510	PROJ. REFERENCE NO.	SHEET NO.
	R-5777C	SR1C-8

PERMIT DRAWING
 SHEET 13 OF 89

DATE: 1/15/2024







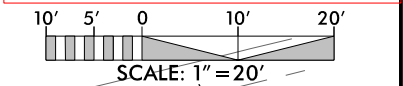
8/17/99

PROJECT REFERENCE NO.	SHEET NO.
R-5777C	
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	

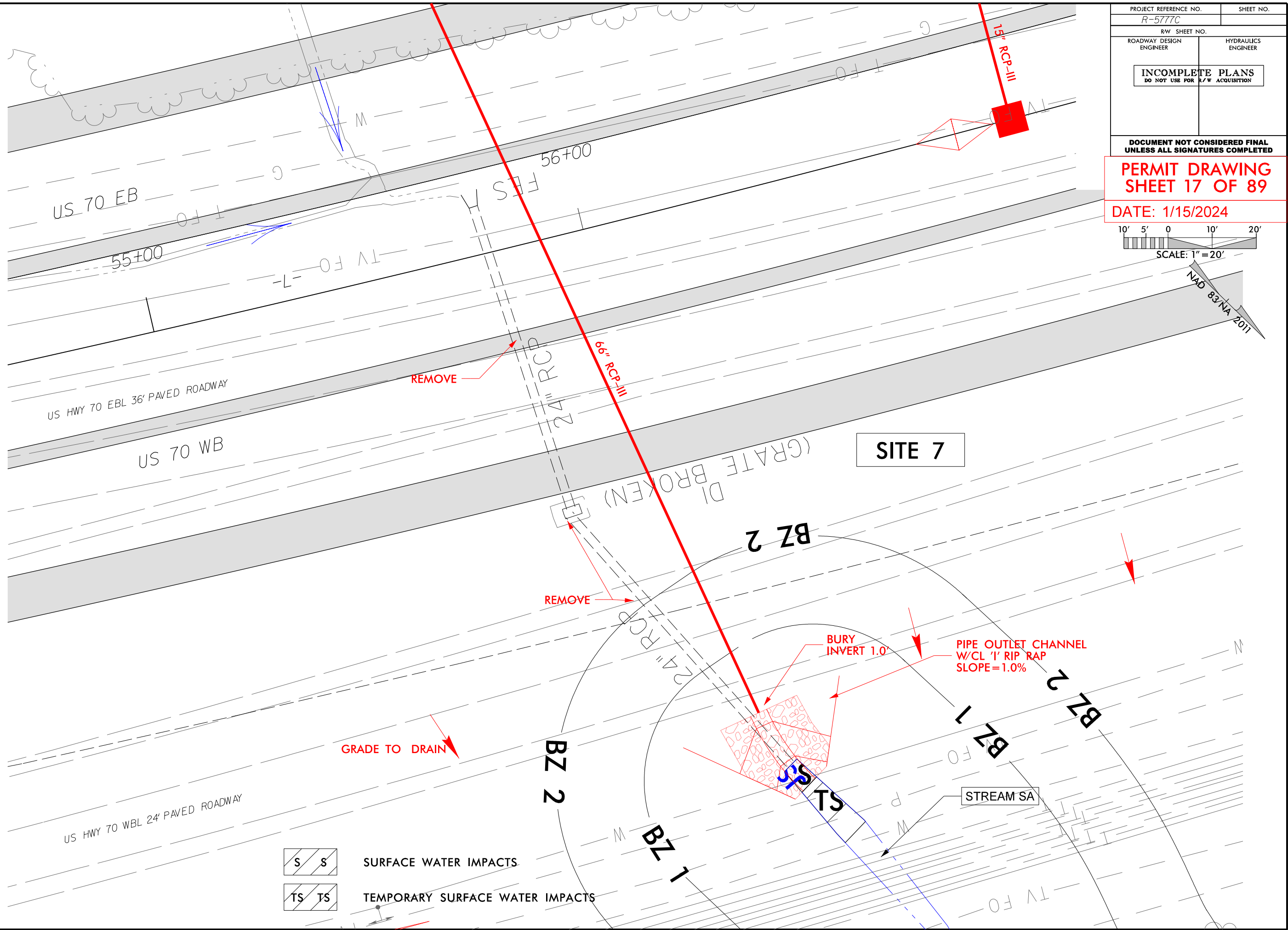
DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING
SHEET 17 OF 89

DATE: 1/15/2024



I:\5777C-Hyd.prm-wet.psh_07-3-V1exIn.dgn
R-5777C
1/15/2024
celcom



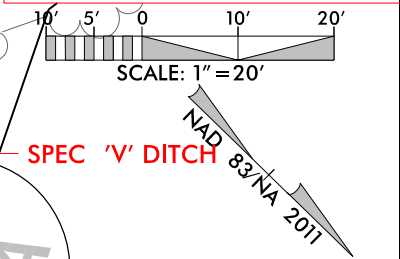
8/17/99

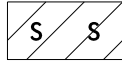
PROJECT REFERENCE NO.	SHEET NO.
R-5777C	
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING
SHEET 18 OF 89

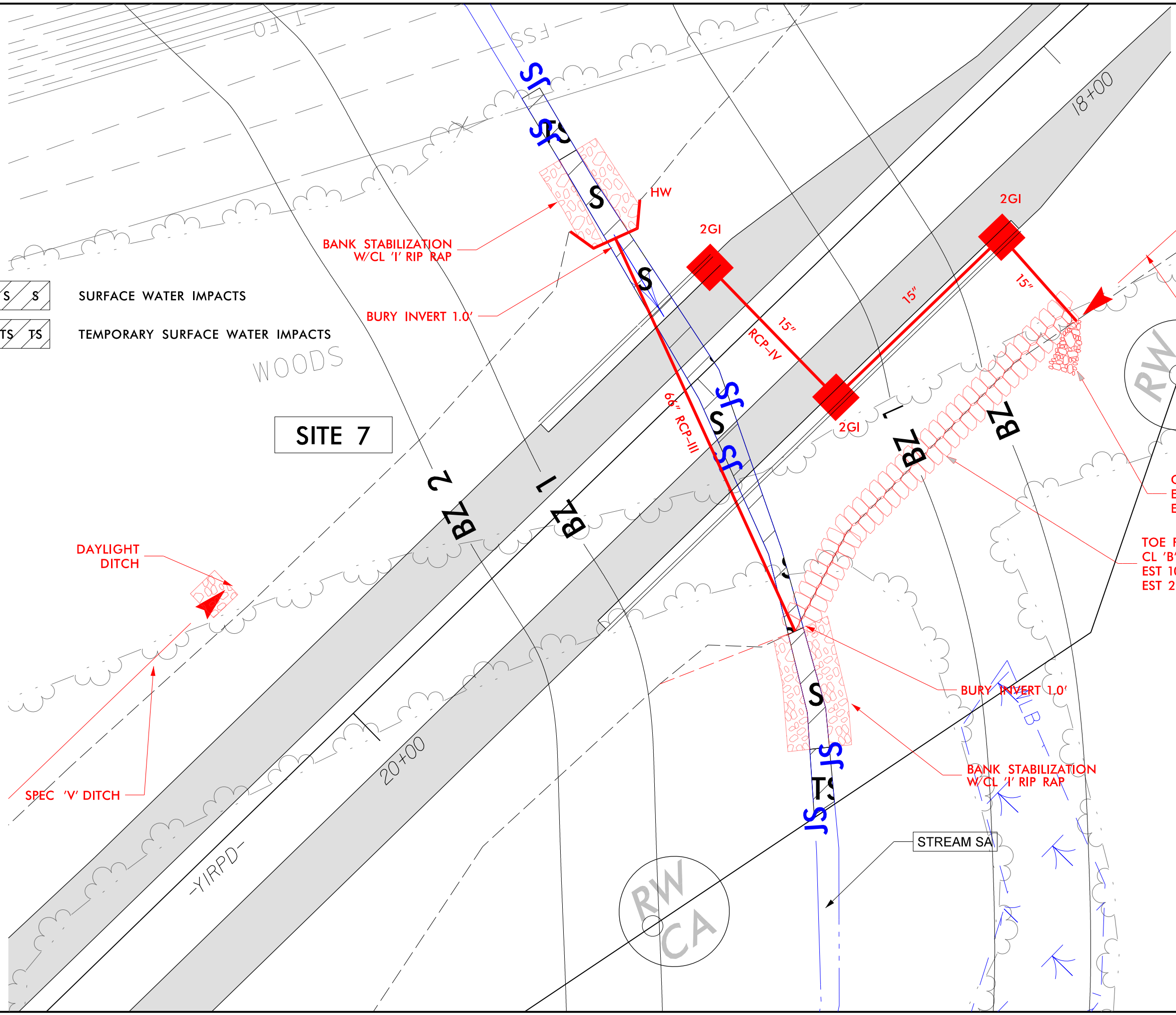
DATE: 1/15/2024



-  SURFACE WATER IMPACTS
-  TEMPORARY SURFACE WATER IMPACTS

WOODS

SITE 7



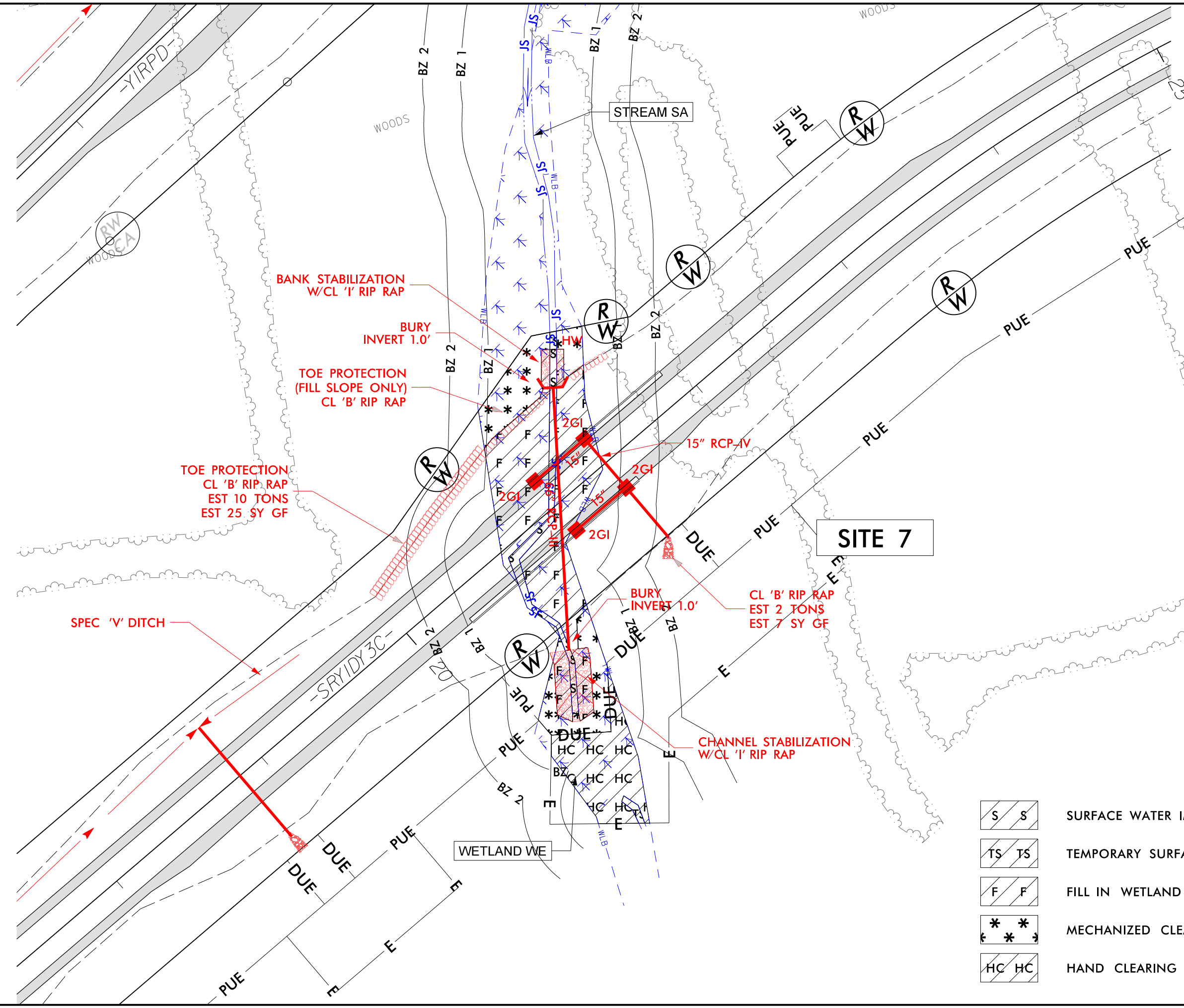
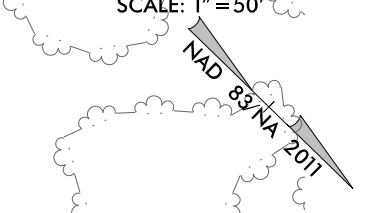
PROJECT REFERENCE NO.	SHEET NO.
R-5777C	
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

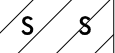
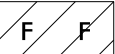
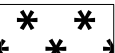
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING
SHEET 19 OF 89

DATE: 1/15/2024



-  SURFACE WATER IMPACTS
-  TEMPORARY SURFACE WATER IMPACTS
-  FILL IN WETLAND
-  MECHANIZED CLEARING
-  HAND CLEARING

6/23/16

0510	PROJ. REFERENCE NO.	SHEET NO.
	R-5777C	Y1-11

PERMIT DRAWING
 SHEET 20 OF 89
 DATE: 1/15/2024

SITE 5

WETLAND WE

MECHANIZED CLEARING

FILL IN WETLAND

FILL IN WETLAND

31 + 00.00

30 + 50.00

30 + 00.00

SITE 5

WETLAND WE

MECHANIZED CLEARING

FILL IN WETLAND

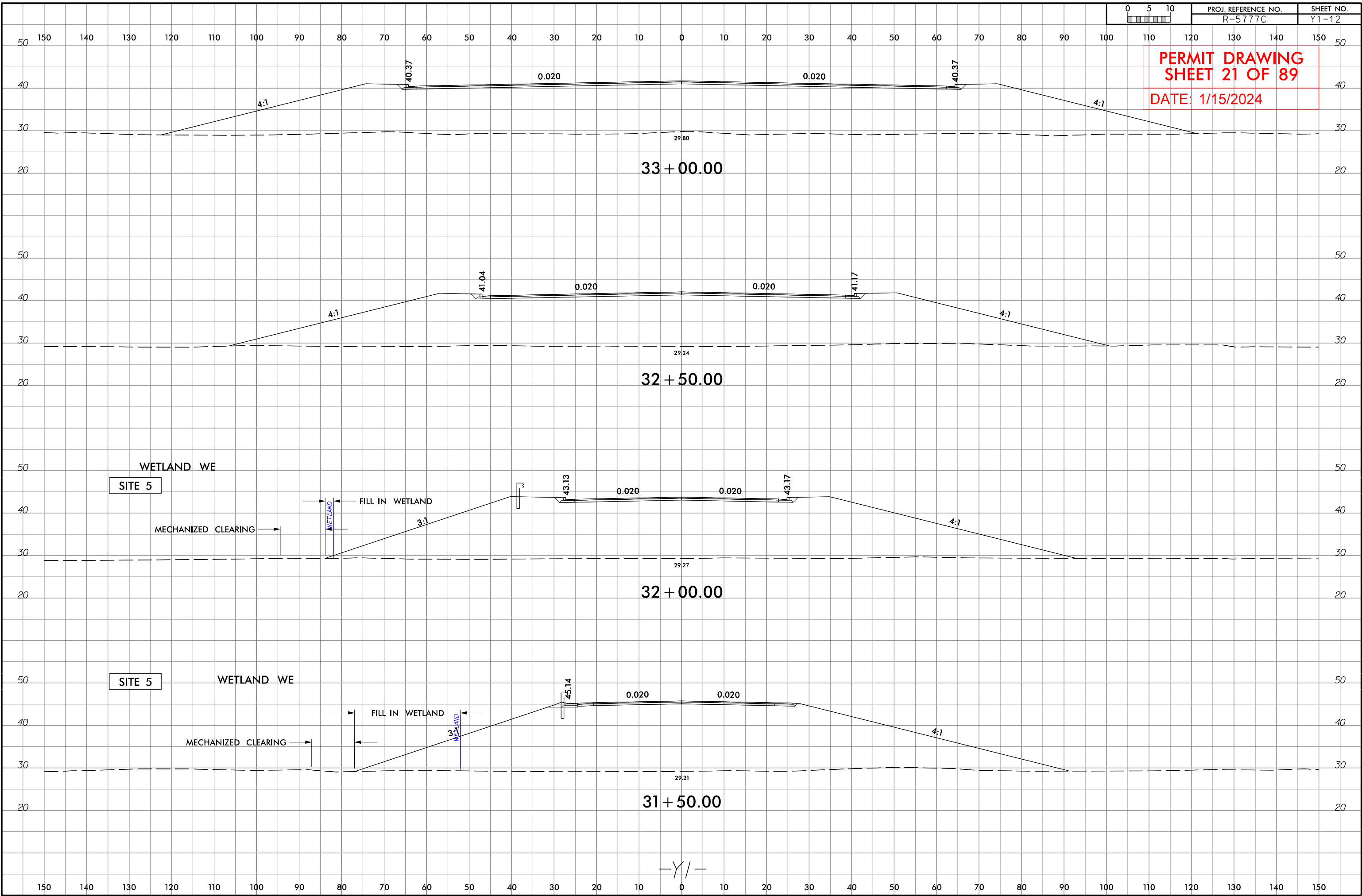
-Y/-

1/15/2024
 R-5777C_Hyd-prm.wet.psh.07-6-rp.l.dgn
 below

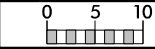
6/23/16

05	PROJ. REFERENCE NO.	SHEET NO.
	R-5777C	Y1-12

PERMIT DRAWING
SHEET 21 OF 89
DATE: 1/15/2024



6/23/16



PROJ. REFERENCE NO.
R-5777C

SHEET NO.
Y1LPD-4

PERMIT DRAWING
SHEET 22 OF 89

DATE: 1/15/2024

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

50 50

40 40

30 30

20 20

50 50

WETLAND WE

SITE 5

FILL IN WETLAND

MECHANIZED CLEARING

40 40

30 30

28.82

20 + 00.00

20 20

50 50

WETLAND WE

SITE 5

FILL IN WETLAND

MECHANIZED CLEARING

40 40

30 30

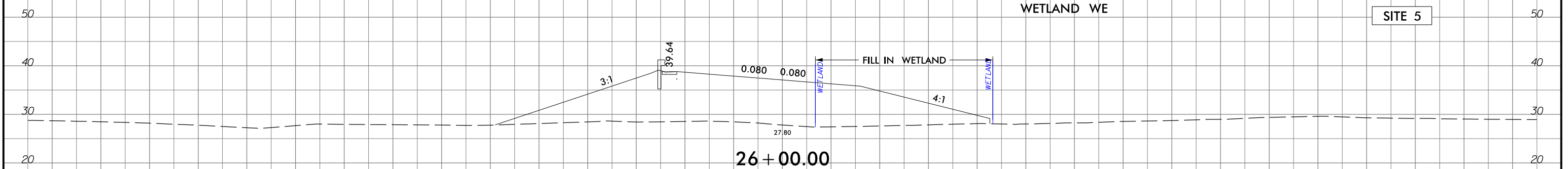
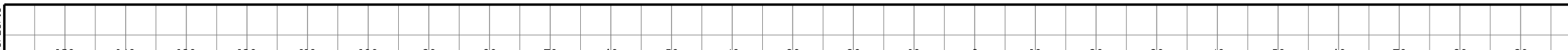
28.09

19 + 50.00

Y1LPD

20 20

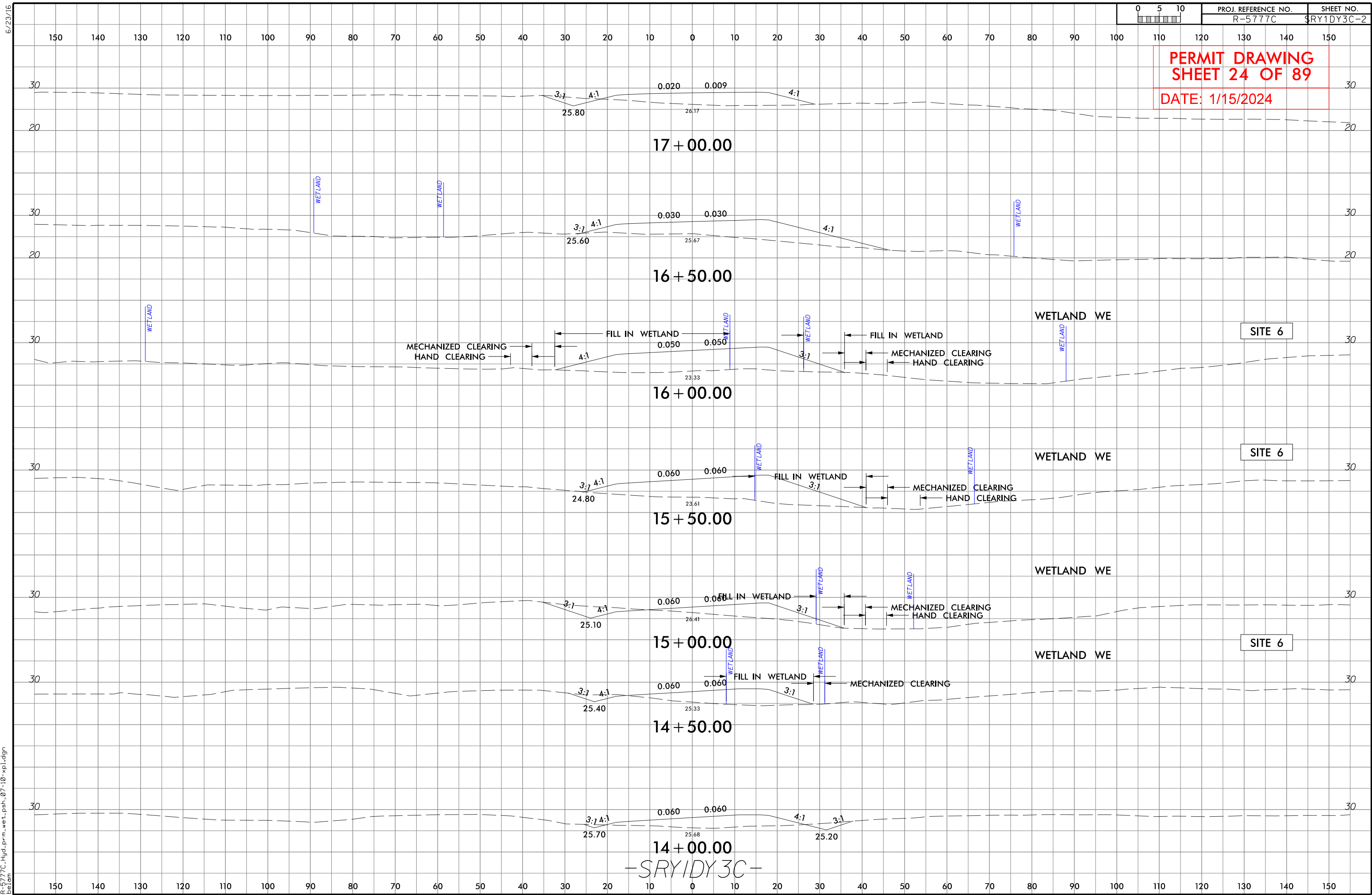
150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150



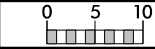
6/23/16

0	5	10	PROJ. REFERENCE NO.	SHEET NO.
			R-5777C	RY1DY3C-2

PERMIT DRAWING
SHEET 24 OF 89
DATE: 1/15/2024



6/23/16



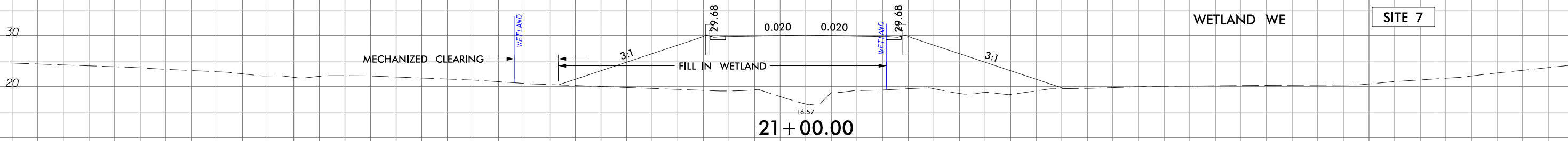
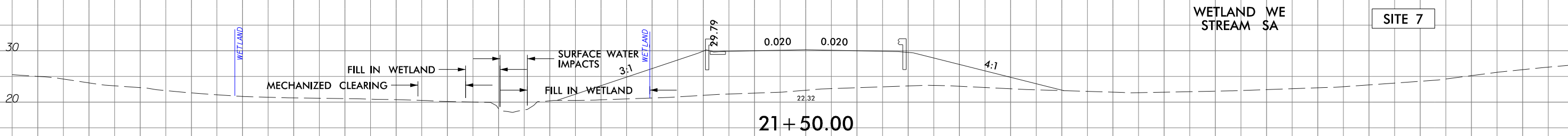
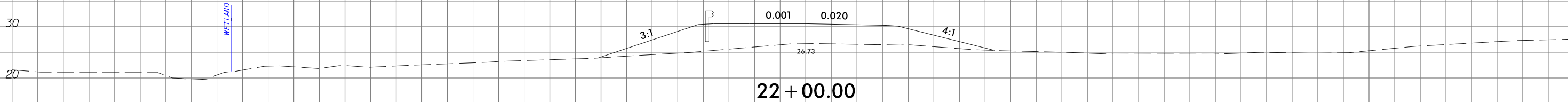
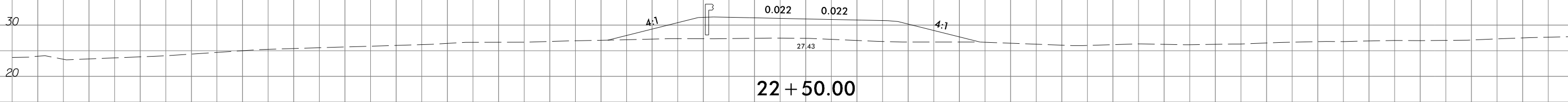
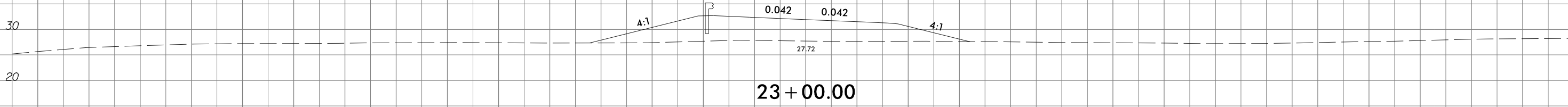
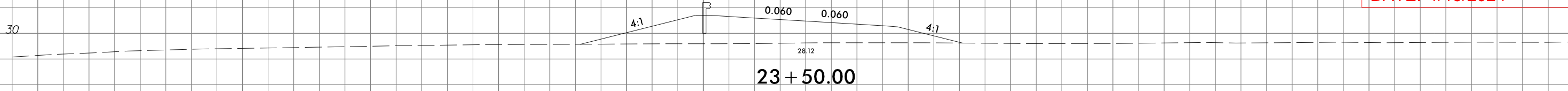
PROJ. REFERENCE NO.
R-5777C

SHEET NO.
RY1DY3C-4

PERMIT DRAWING
SHEET 25 OF 89

DATE: 1/15/2024

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150



-SRYIDY3C-

5/14/99

PROJECT REFERENCE NO.	SHEET NO.
R-5777C	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	

DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING
 SHEET 26 OF 89

DATE: 1/15/2024

200

100

0

100

200

SITE 7

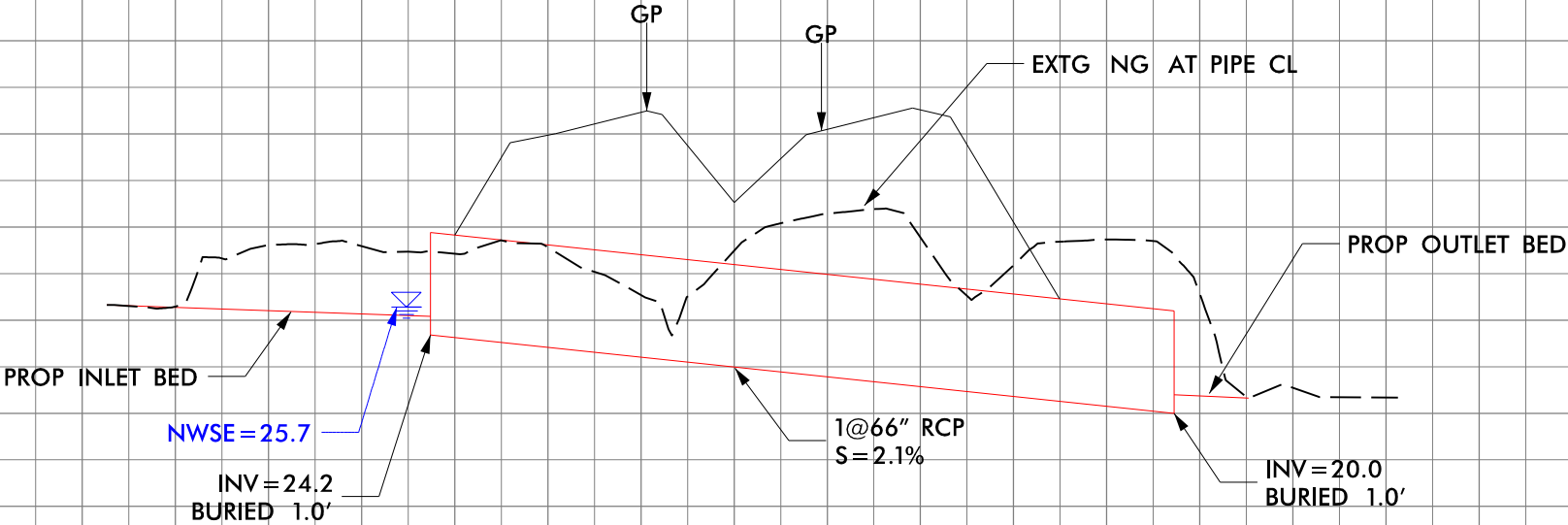
CL STA 55+90 -L-
 1@66" RCP (BURIED 1.0')

40

30

20

10



5/14/99

200

100

0

100

200

CL STA 19+04 -YIRPD-
1@66" RCP (BURIED 1.0')

SITE 7

PROJECT REFERENCE NO.	SHEET NO.
R-5777C	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING
SHEET 27 OF 89

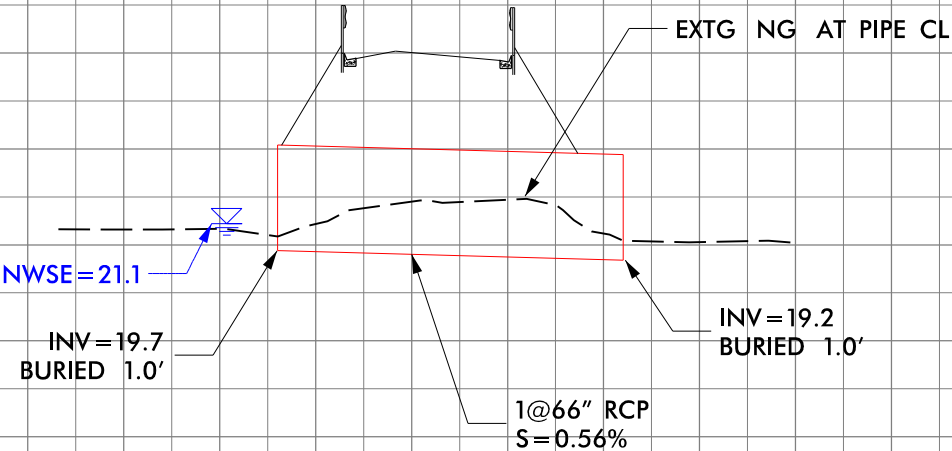
DATE: 1/15/2024

40

30

20

10



5/14/99

200

100

0

100

200

PROJECT REFERENCE NO.	SHEET NO.
R-5777C	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING
SHEET 28 OF 89

DATE: 1/15/2024

SITE 7

CL STA 21+06 -SRY1DY3C-
1@66" RCP (BURIED 1.0')

40

30

20

10

NWSE = 18.7

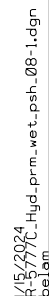
INV = 17.0
BURIED 1.0'

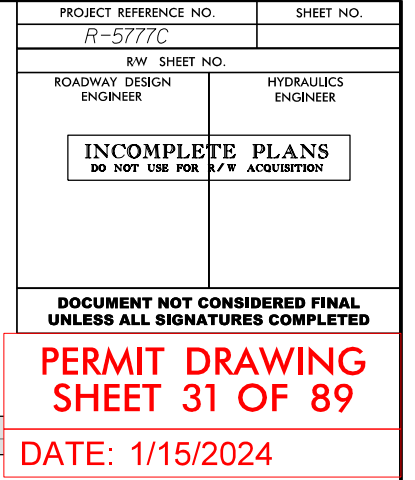
1@66" RCP
S = 3.41%

EXTG NG AT PIPE CL

INV = 12.5
BURIED 1.0'





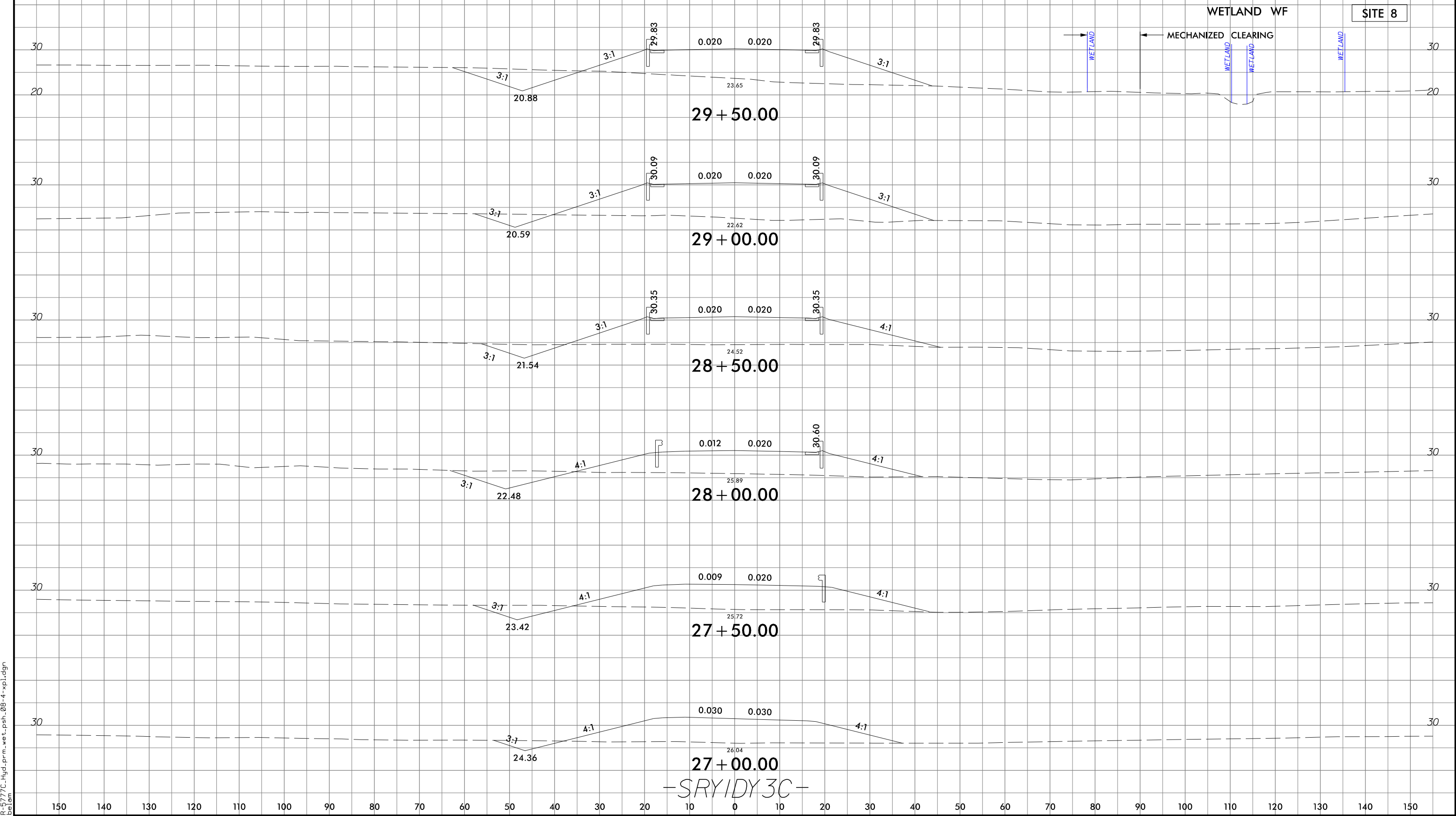




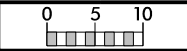
6/23/16

0	5	10	PROJ. REFERENCE NO.	SHEET NO.
			R-5777C	RY1DY3C-6

PERMIT DRAWING
SHEET 33 OF 89
DATE: 1/15/2024

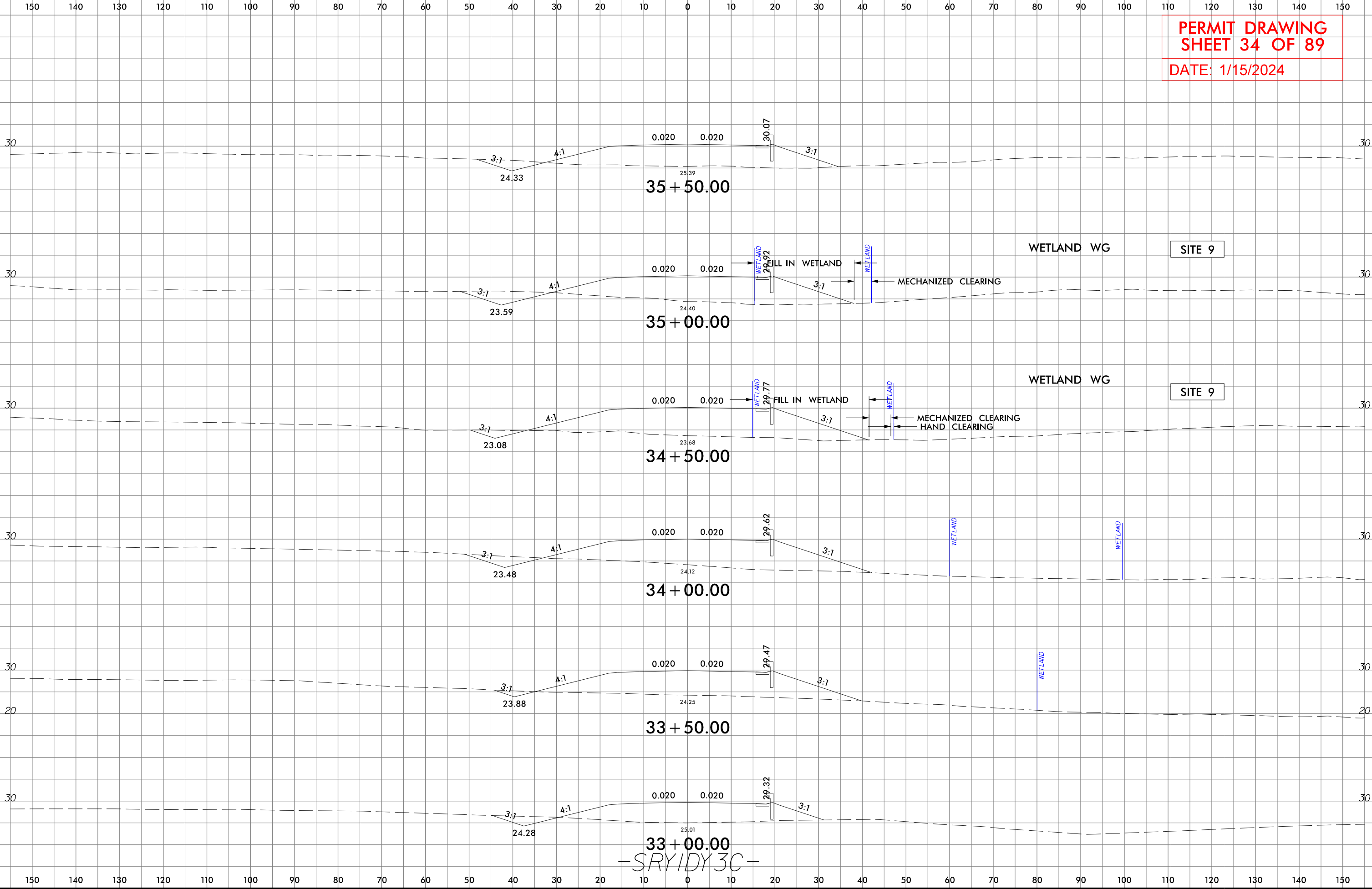


6/23/16



PROJ. REFERENCE NO.	SHEET NO.
R-5777C	RY1DY3C-8

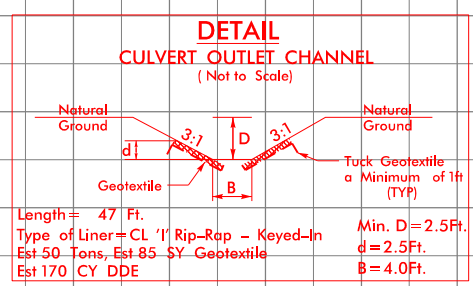
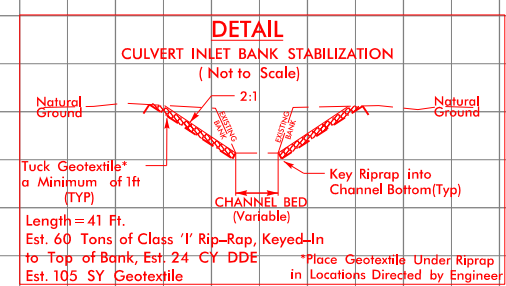
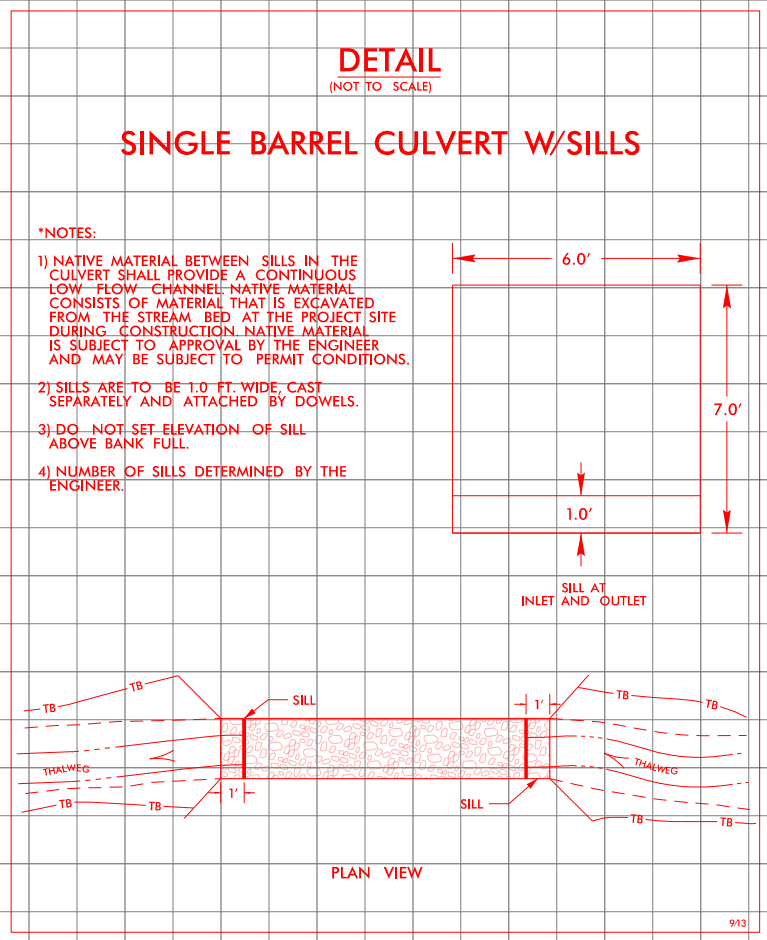
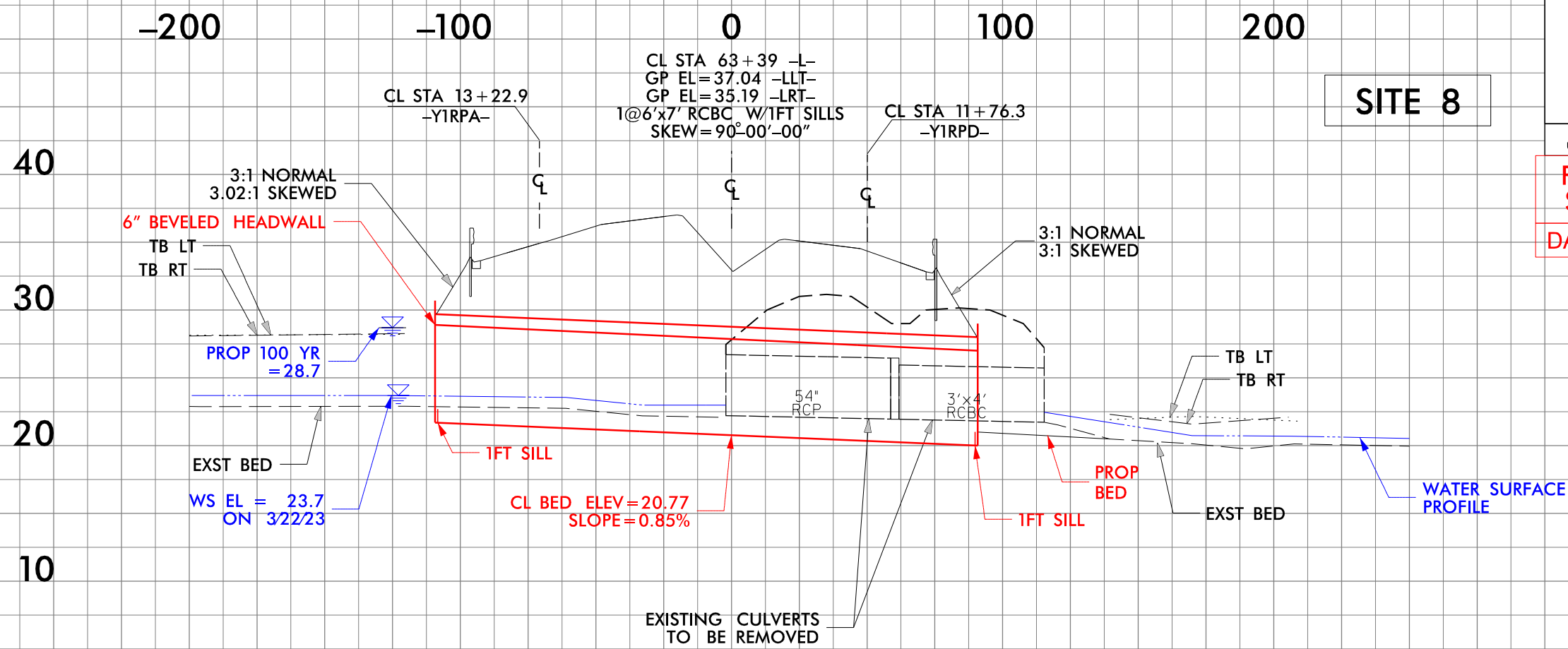
PERMIT DRAWING
SHEET 34 OF 89
DATE: 1/15/2024



PROJECT REFERENCE NO.	SHEET NO.
R-5777C	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING
SHEET 35 OF 89
DATE: 1/15/2024



5/14/99

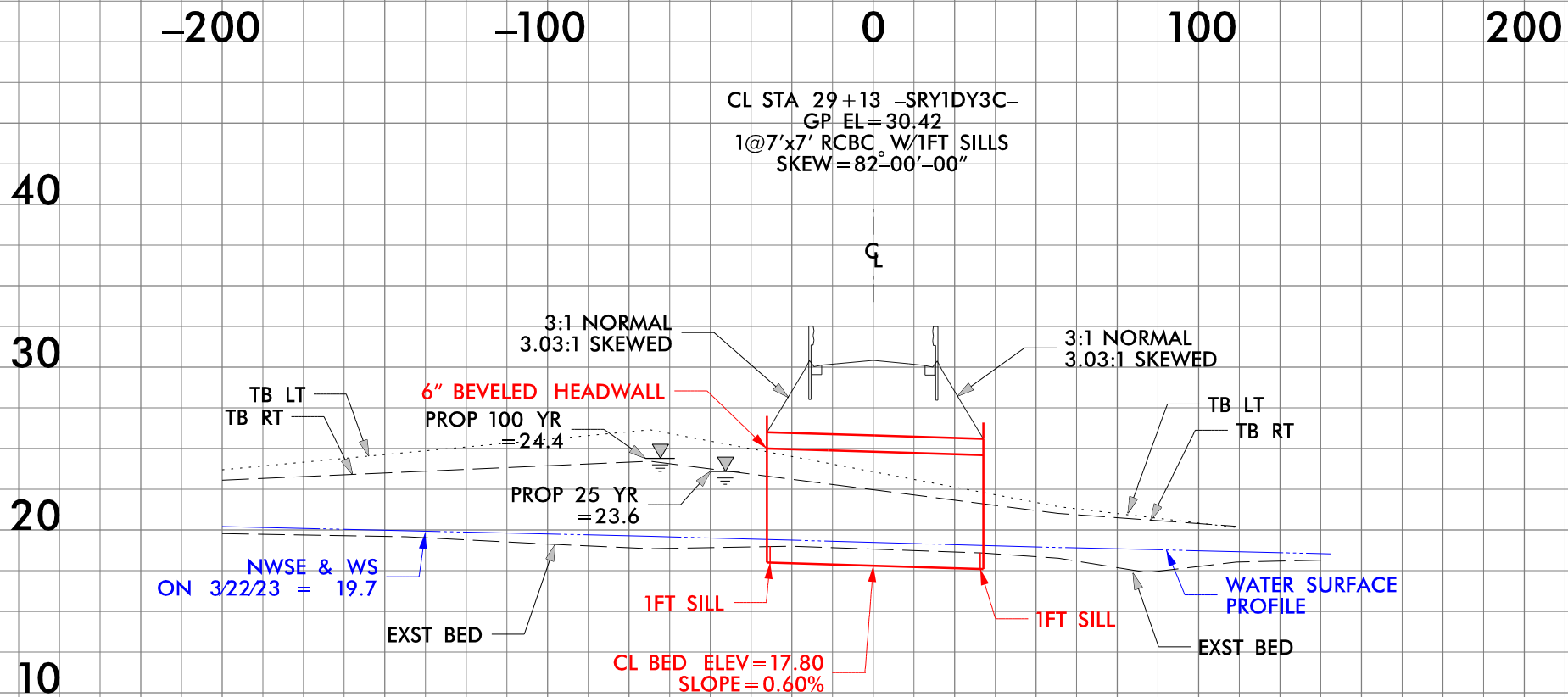
PROJECT REFERENCE NO.	SHEET NO.
R-5777C	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING
SHEET 36 OF 89

DATE: 1/15/2024

SITE 8

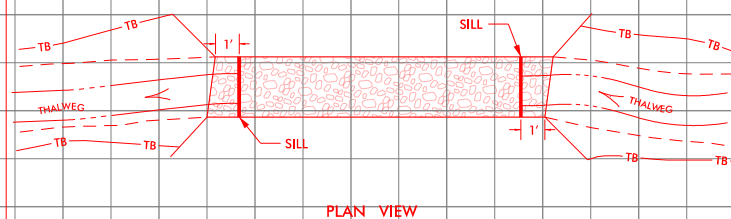
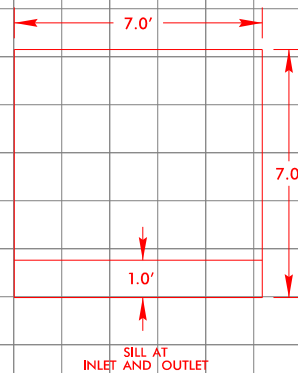


DETAIL
(NOT TO SCALE)

SINGLE BARREL CULVERT W/SILLS

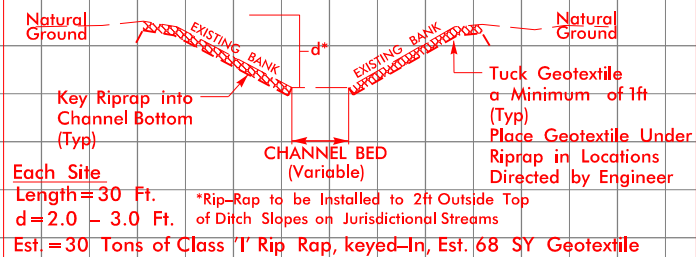
***NOTES:**

- 1) NATIVE MATERIAL BETWEEN SILLS IN THE CULVERT SHALL PROVIDE A CONTINUOUS LOW FLOW CHANNEL. NATIVE MATERIAL CONSISTS OF MATERIAL THAT IS EXCAVATED FROM THE STREAM BED AT THE PROJECT SITE DURING CONSTRUCTION. NATIVE MATERIAL IS SUBJECT TO APPROVAL BY THE ENGINEER AND MAY BE SUBJECT TO PERMIT CONDITIONS.
- 2) SILLS ARE TO BE 1.0 FT WIDE, CAST SEPARATELY AND ATTACHED BY DOWELS.
- 3) DO NOT SET ELEVATION OF SILL ABOVE BANK FULL.
- 4) NUMBER OF SILLS DETERMINED BY THE ENGINEER.



DETAIL
(Not to Scale)

CULVERT INLET/OUTLET BANK STABILIZATION



1/15/2024
R-5777C-Hyd.prm-wet.psh_08-7-Sect.dgn

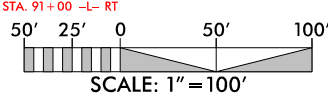
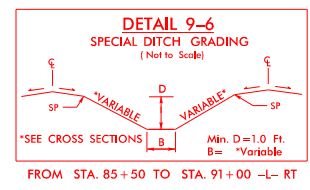
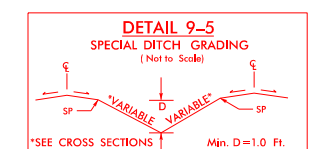
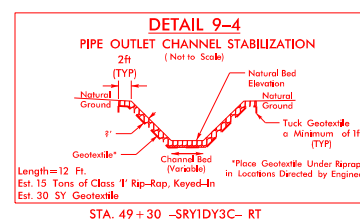
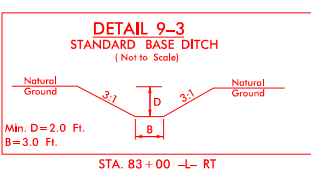
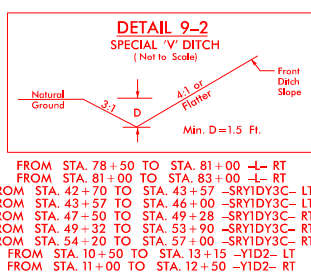
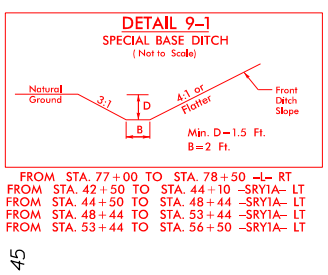
PROJECT REFERENCE NO. R-5777C		SHEET NO. 9	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION			
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION			

Balfour Beatty **stv**

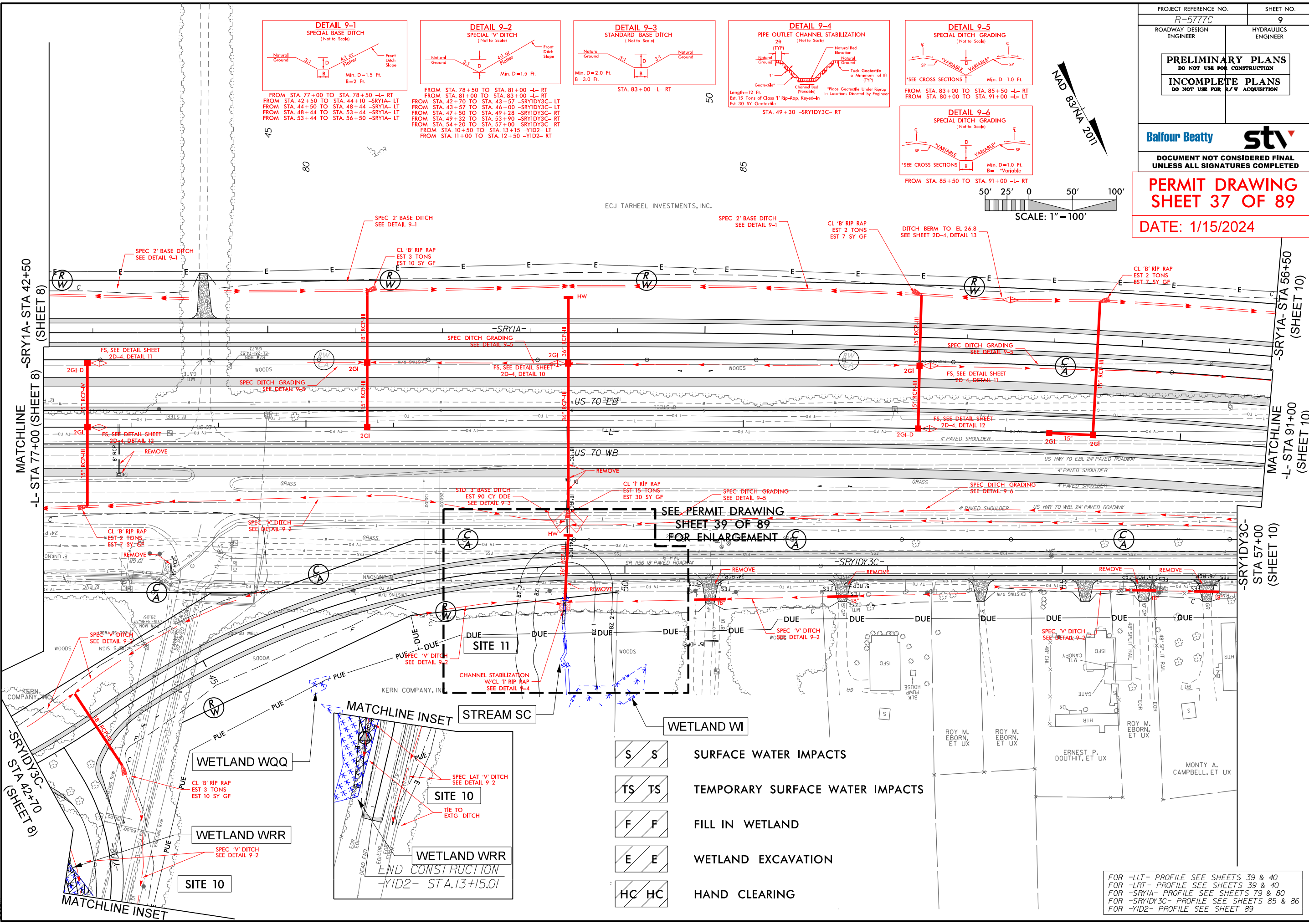
DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING
SHEET 37 OF 89

DATE: 1/15/2024



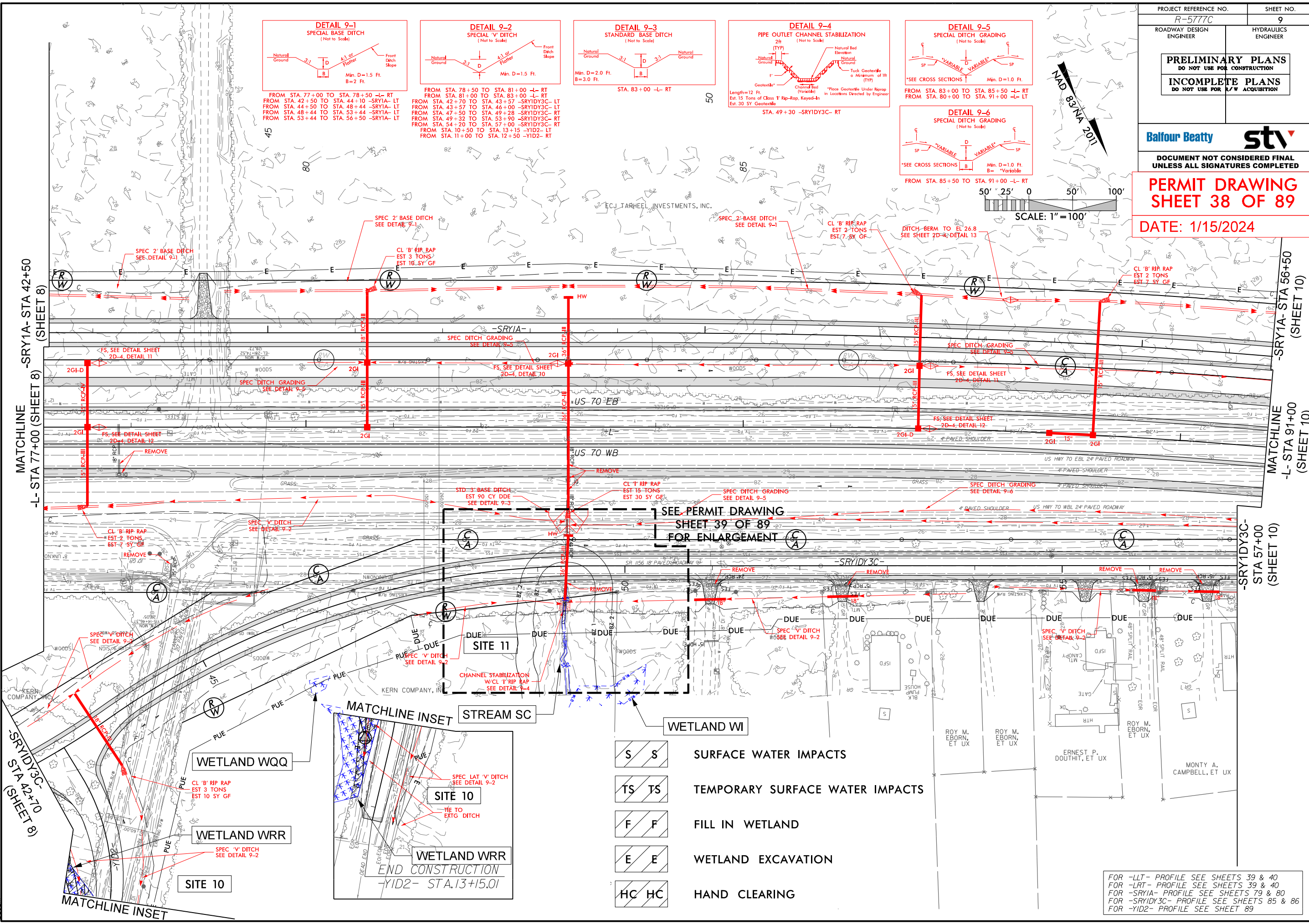
NAD 83/NA 2011



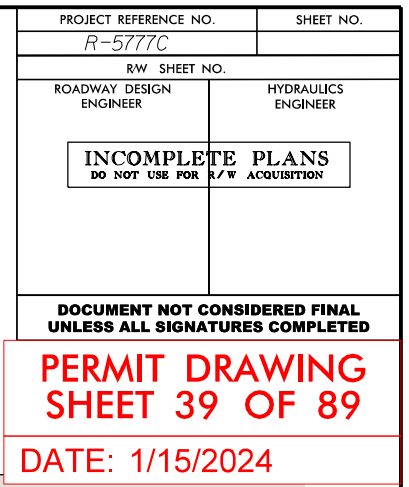
FOR -LLT- PROFILE SEE SHEETS 39 & 40
FOR -LRT- PROFILE SEE SHEETS 39 & 40
FOR -SRY1A- PROFILE SEE SHEETS 79 & 80
FOR -SRY1DY3C- PROFILE SEE SHEETS 85 & 86
FOR -YID2- PROFILE SEE SHEET 89

PROJECT REFERENCE NO.	SHEET NO.
R-5777C	9
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION INCOMPLETE PLANS DO NOT USE FOR A/E ACQUISITION	

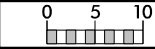
Balfour Beatty	st
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
PERMIT DRAWING SHEET 38 OF 89	
DATE: 1/15/2024	



FOR -LLT- PROFILE SEE SHEETS 39 & 40
FOR -LRT- PROFILE SEE SHEETS 39 & 40
FOR -SRYIA- PROFILE SEE SHEETS 79 & 80
FOR -SRYIDY3C- PROFILE SEE SHEETS 85 & 86
FOR -YID2- PROFILE SEE SHEET 89

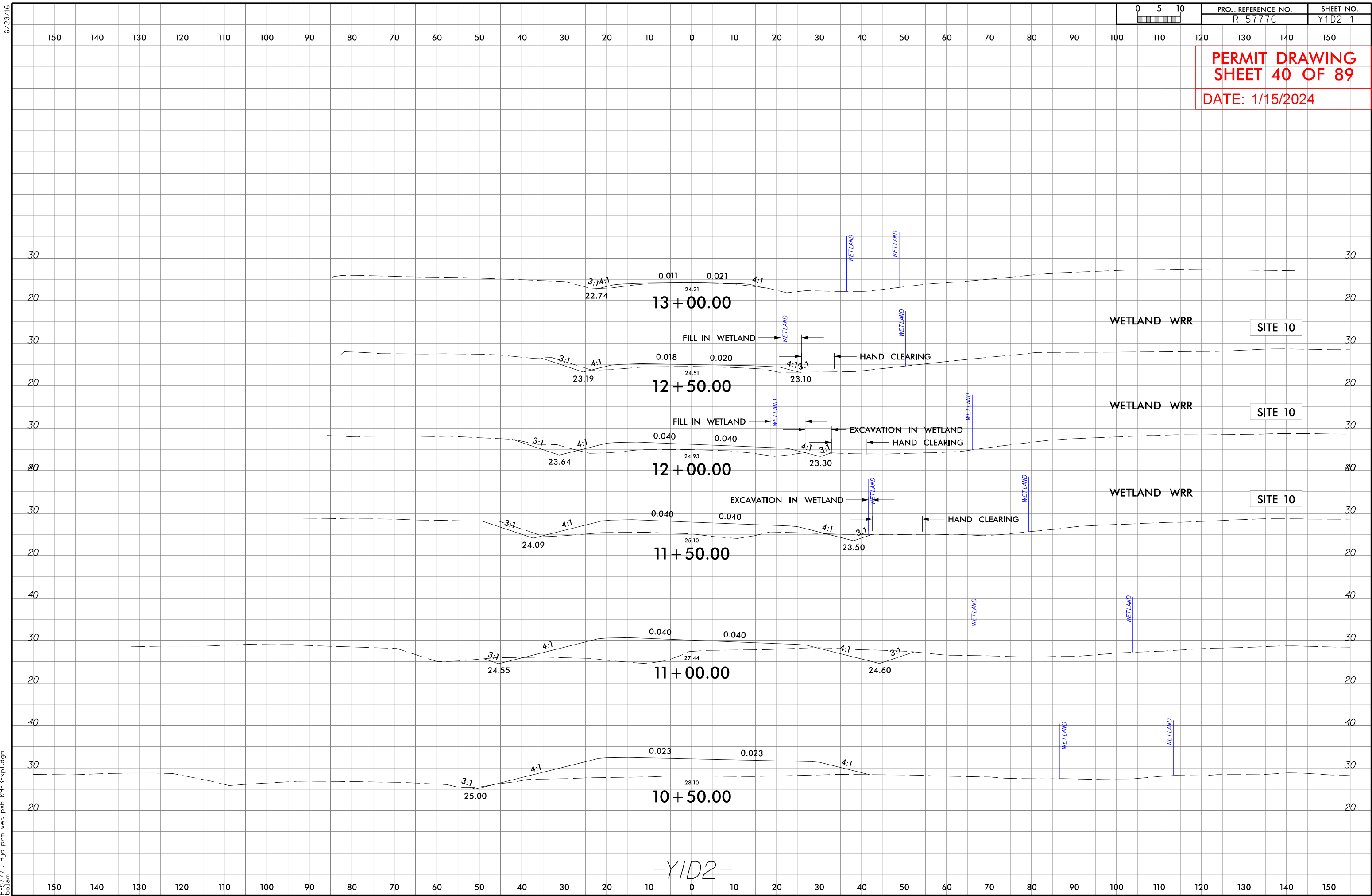


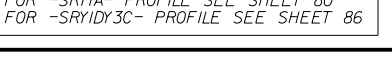
6/23/16



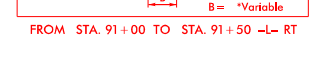
PROJ. REFERENCE NO.	SHEET NO.
R-5777C	Y1D2-1

PERMIT DRAWING
 SHEET 40 OF 89
 DATE: 1/15/2024





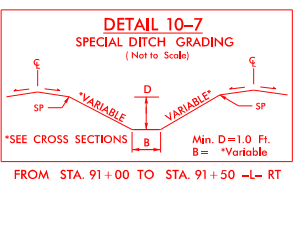
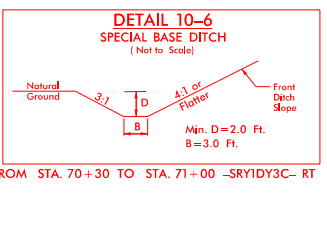
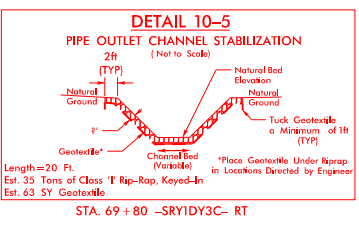
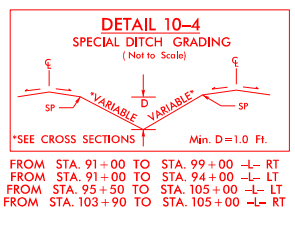
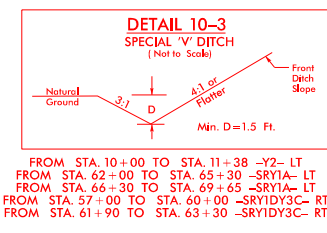
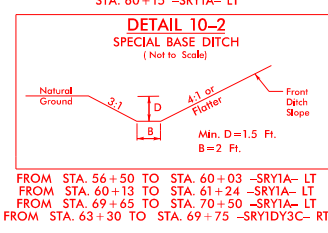
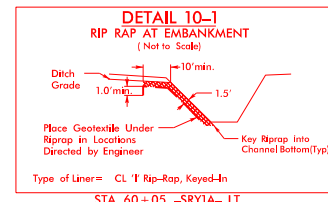
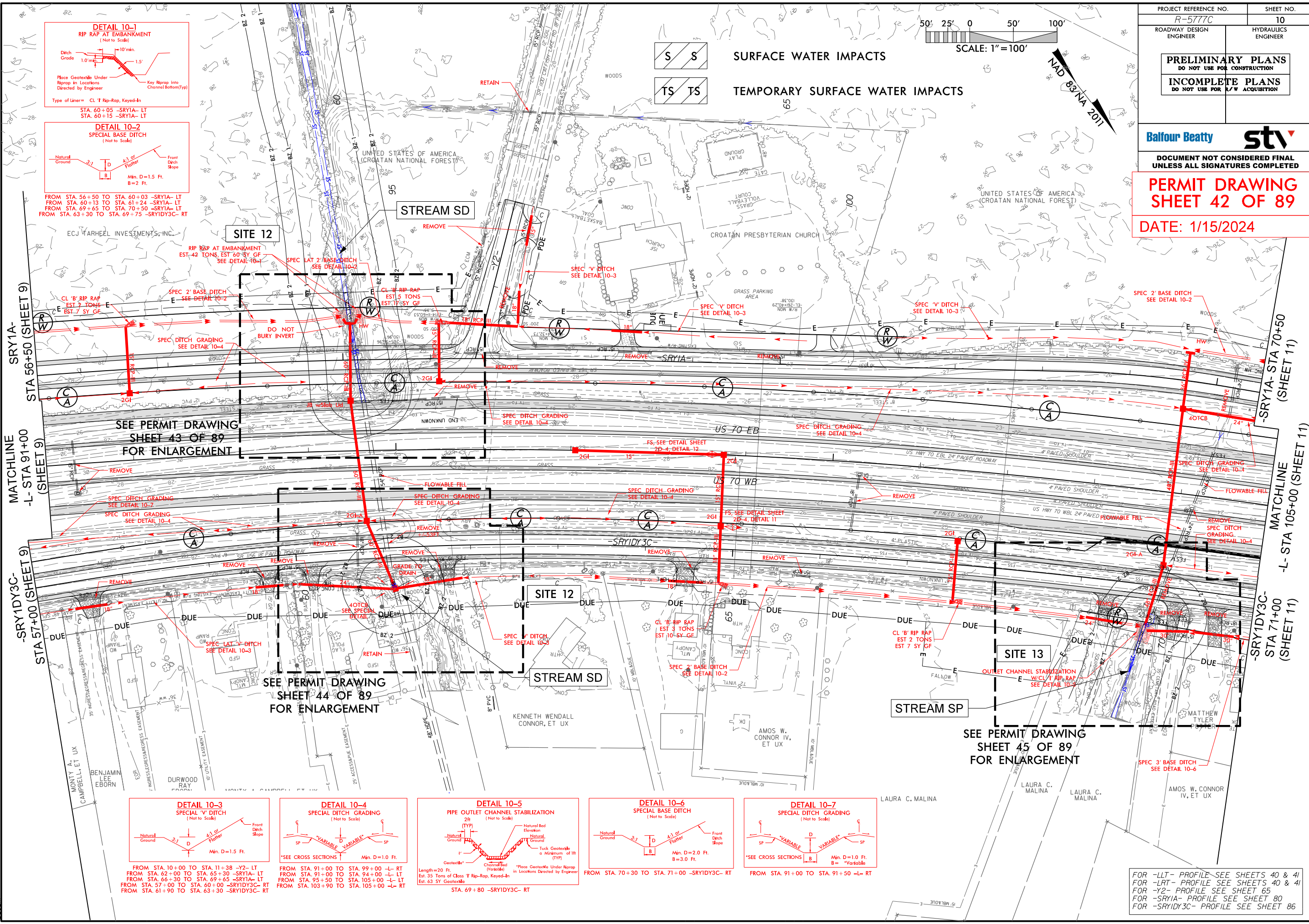
FOR -SRTHA- PROFILE SEE SHEET 80
FOR -SRYIDY3C- PROFILE SEE SHEET 86



FOR -SRTHA- PROFILE SEE SHEET 80
FOR -SRYIDY3C- PROFILE SEE SHEET 86

PROJECT REFERENCE NO. R-5777C		SHEET NO. 10	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION			
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION			
Balfour Beatty st			
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			

PERMIT DRAWING
SHEET 42 OF 89
DATE: 1/15/2024

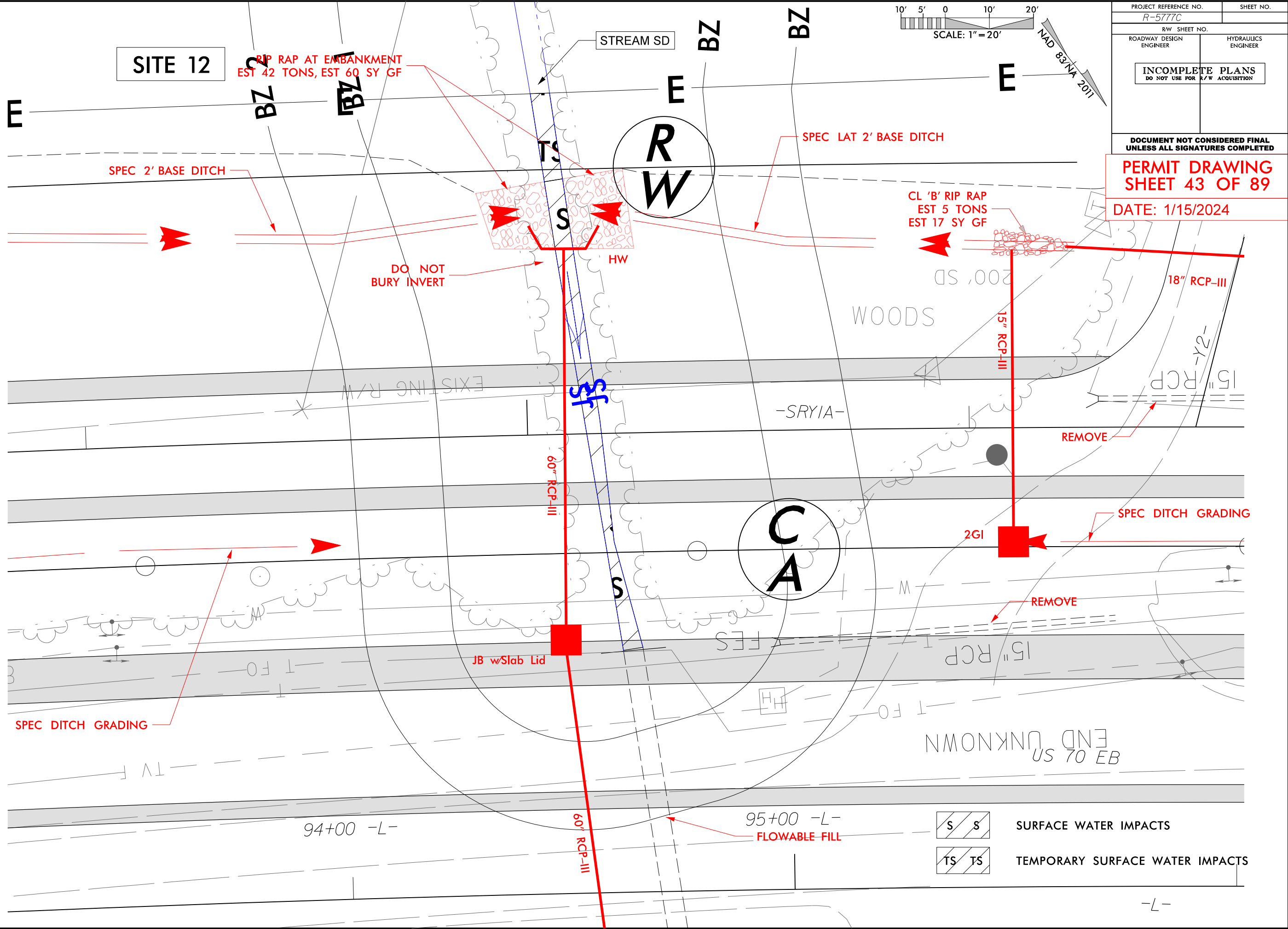


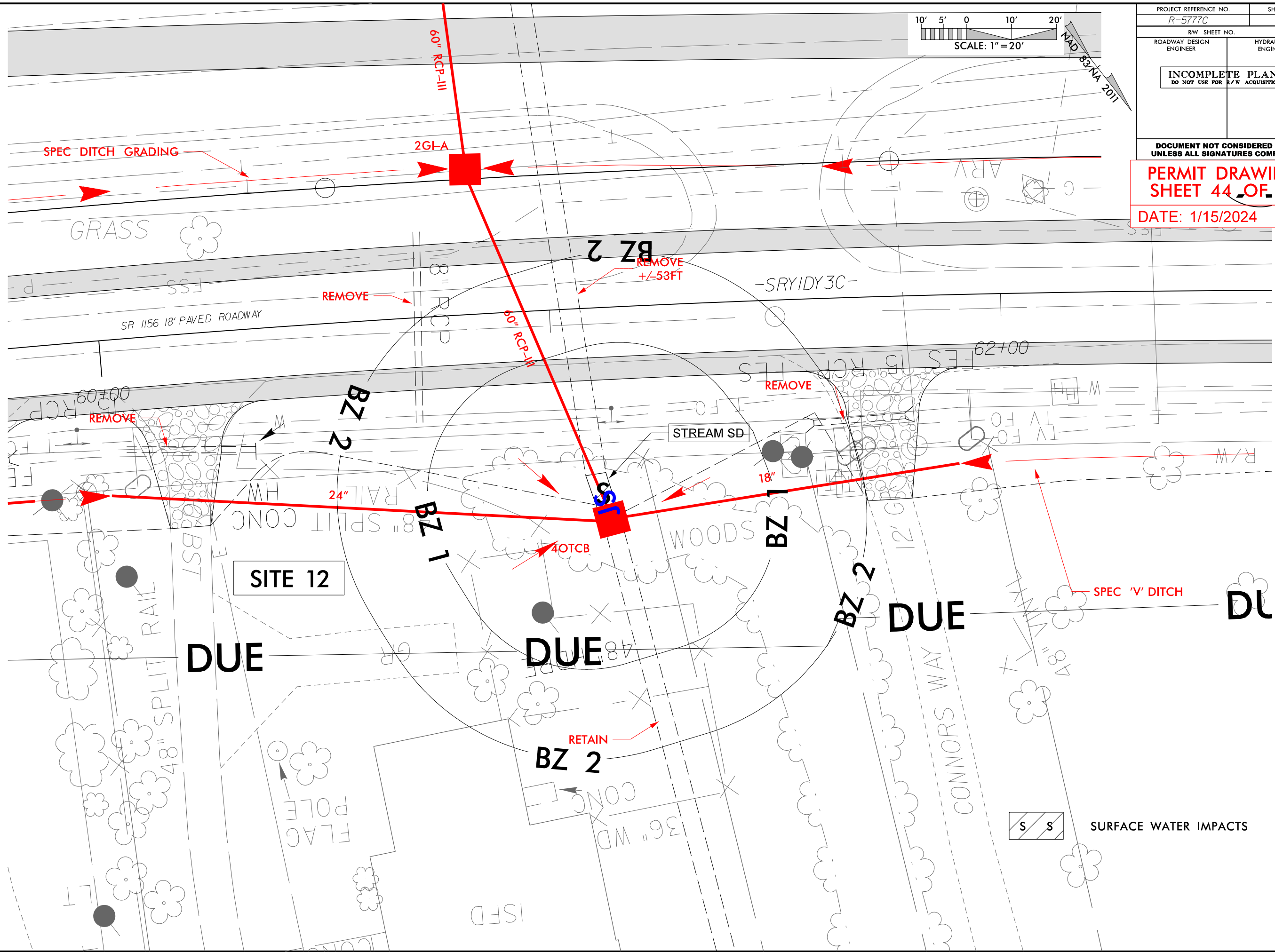
FOR -LLT- PROFILE SEE SHEETS 40 & 41
FOR -LRT- PROFILE SEE SHEETS 40 & 41
FOR -Y2- PROFILE SEE SHEET 65
FOR -SR1A- PROFILE SEE SHEET 80
FOR -SR1DY3C- PROFILE SEE SHEET 86

1/15/2024 R-5777C-Hyd.prm-wet.psh.10-1.dgn

8/17/99

1/15/2024
R-5777C-Hyd.prm-wet.psh.10-2-ViewIn.dgn
b3.com

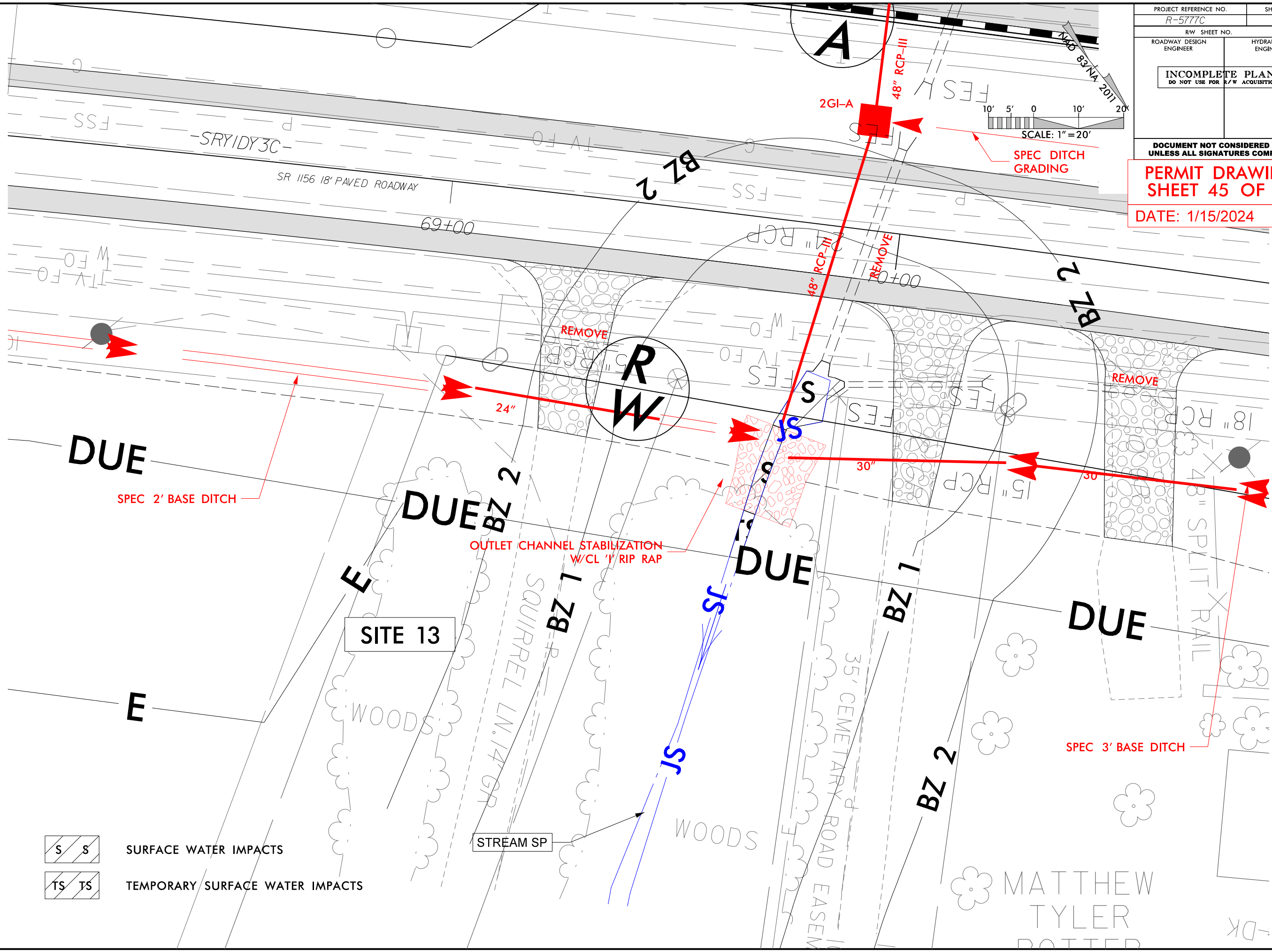




PROJECT REFERENCE NO. R-5777C		SHEET NO.	
RW SHEET NO.		HYDRAULICS ENGINEER	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION			
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			
PERMIT DRAWING SHEET 44 OF 89			
DATE: 1/15/2024			

8/17/99

PROJECT REFERENCE NO. R-5777C		SHEET NO.	
RW SHEET NO.		HYDRAULICS ENGINEER	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION			
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			
PERMIT DRAWING SHEET 45 OF 89			
DATE: 1/15/2024			



- S

S

SURFACE WATER IMPACTS
- TS

TS
- TEMPORARY SURFACE WATER IMPACTS

1/15/2024
R-5777C-Hyd.prm-wet.psh.10-4-ViewIn.dgn
celcom

200

SITE 12

48" HDPE

10

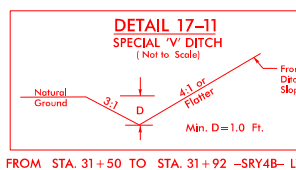
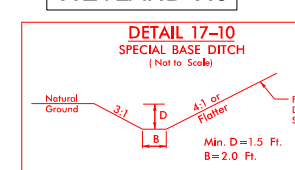
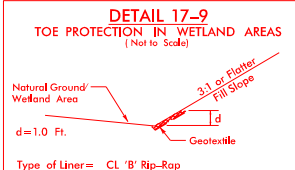
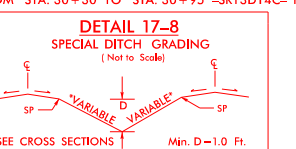
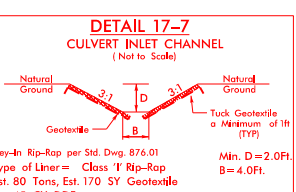
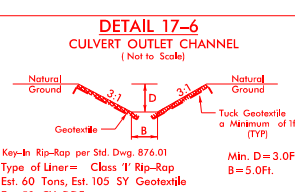
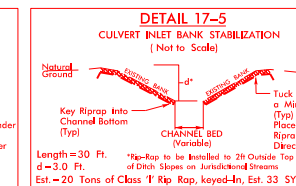
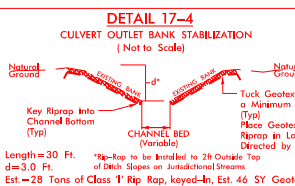
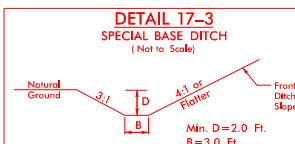
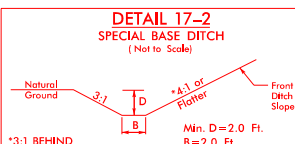
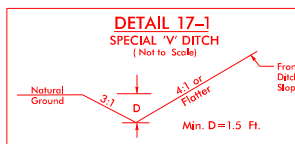
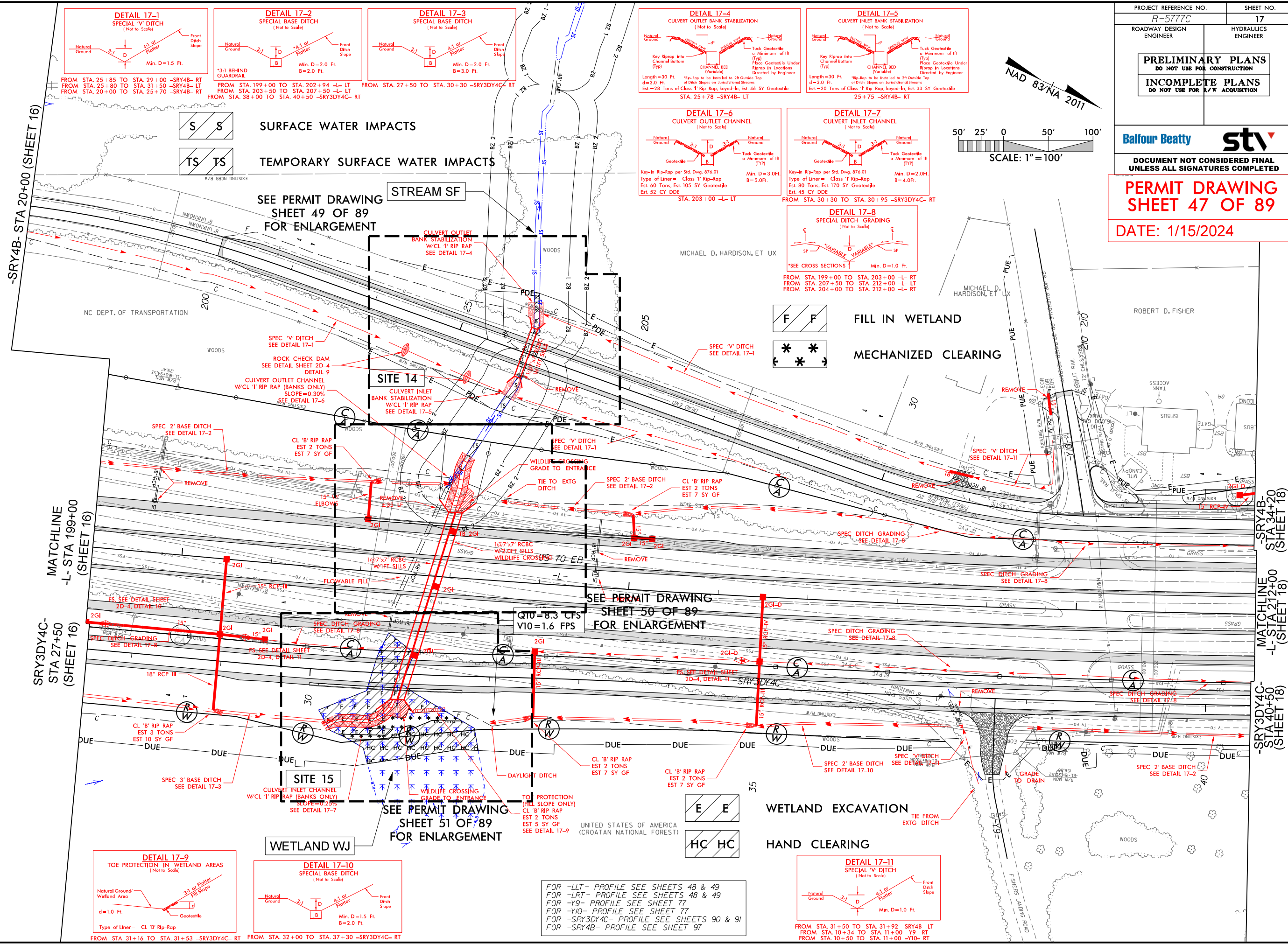
PROJECT REFERENCE NO.	SHEET NO.
<i>R-5777C</i>	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
PERMIT DRAWING SHEET 46 OF 89	
DATE: 1/15/2024	

PROJECT REFERENCE NO. R-5777C	SHEET NO. 17
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION	

Balfour Beatty **st**
DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING
SHEET 47 OF 89

DATE: 1/15/2024



FOR -LRT- PROFILE SEE SHEETS 48 & 49
FOR -LRT- PROFILE SEE SHEETS 48 & 49
FOR -Y9- PROFILE SEE SHEET 77
FOR -Y10- PROFILE SEE SHEET 77
FOR -SR3DY4C- PROFILE SEE SHEETS 90 & 91
FOR -SR4B- PROFILE SEE SHEET 97

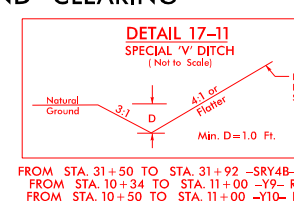
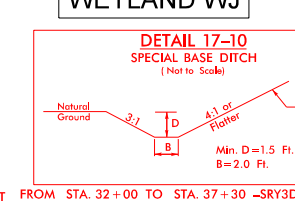
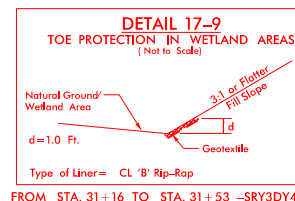
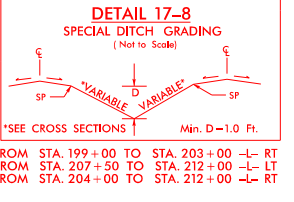
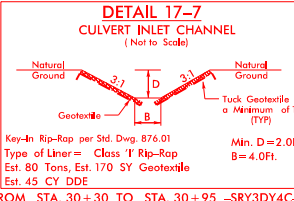
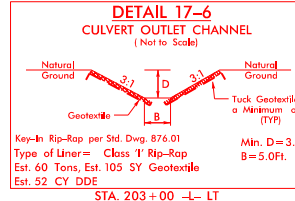
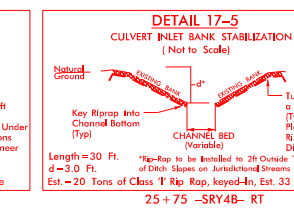
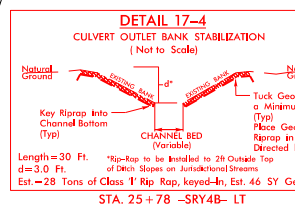
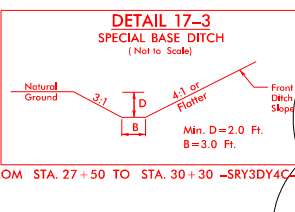
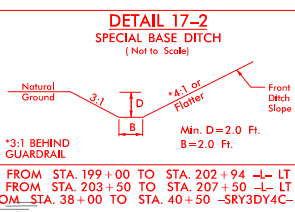
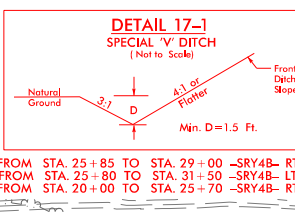
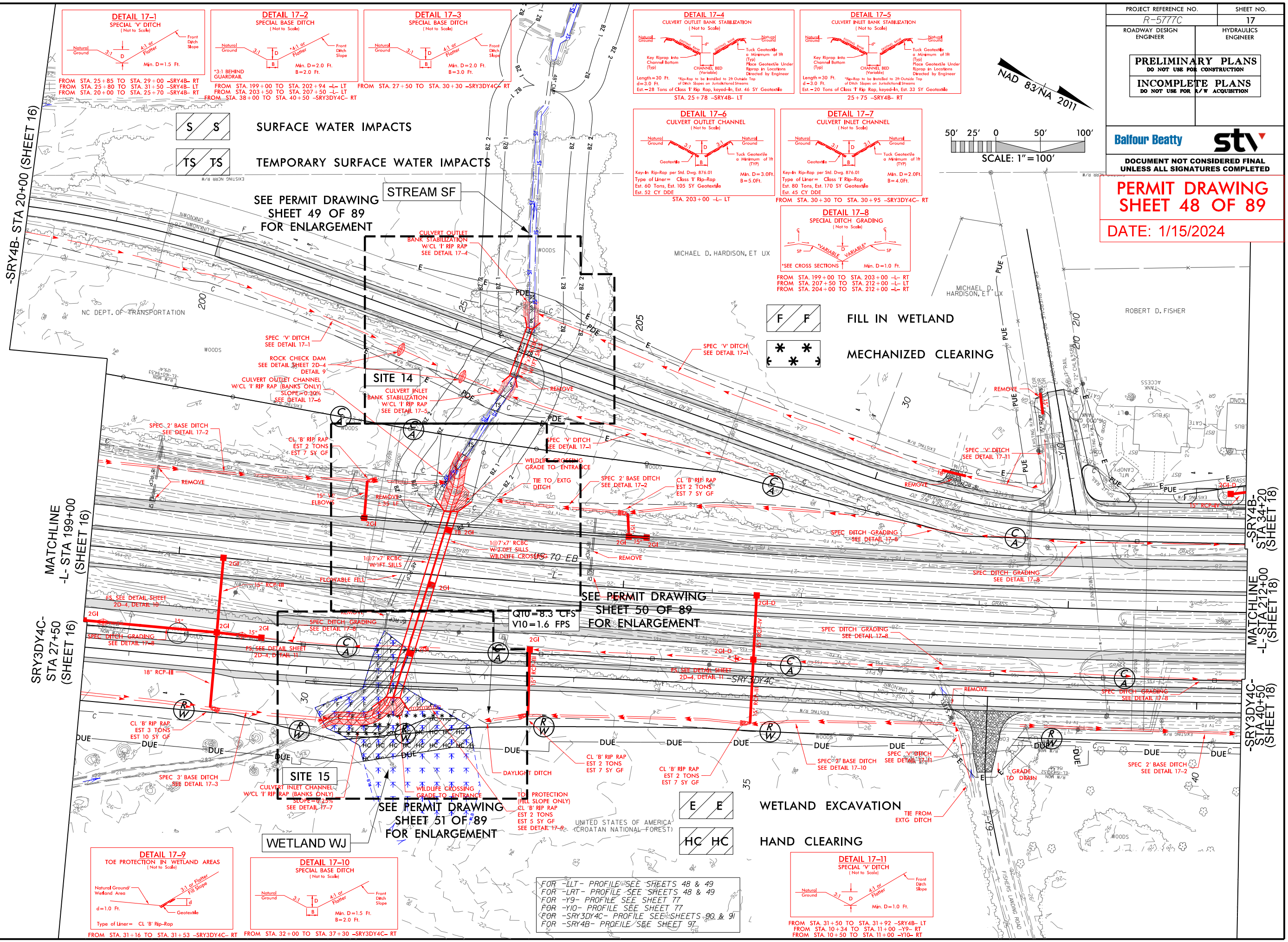
PROJECT REFERENCE NO.	SHEET NO.
R-5777C	17
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION	

Balfour Beatty **stv**

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

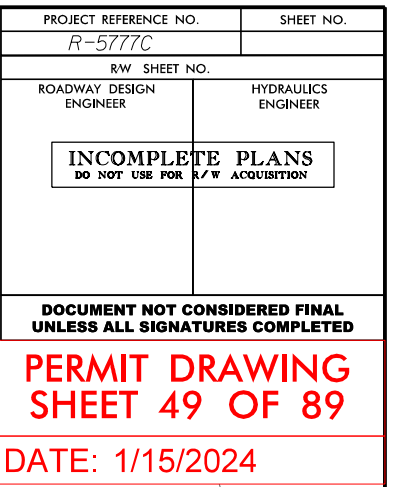
PERMIT DRAWING
SHEET 48 OF 89

DATE: 1/15/2024



FOR -L- PROFILE SEE SHEETS 48 & 49
FOR -LRT- PROFILE SEE SHEETS 48 & 49
FOR -Y9- PROFILE SEE SHEET 77
FOR -Y10- PROFILE SEE SHEET 77
FOR -SRY3DY4C- PROFILE SEE SHEETS 80 & 91
FOR -SRY4B- PROFILE SEE SHEET 91

1/5/2024 R-5777C-Hyd.prm-wet.psh.17-1.dgn

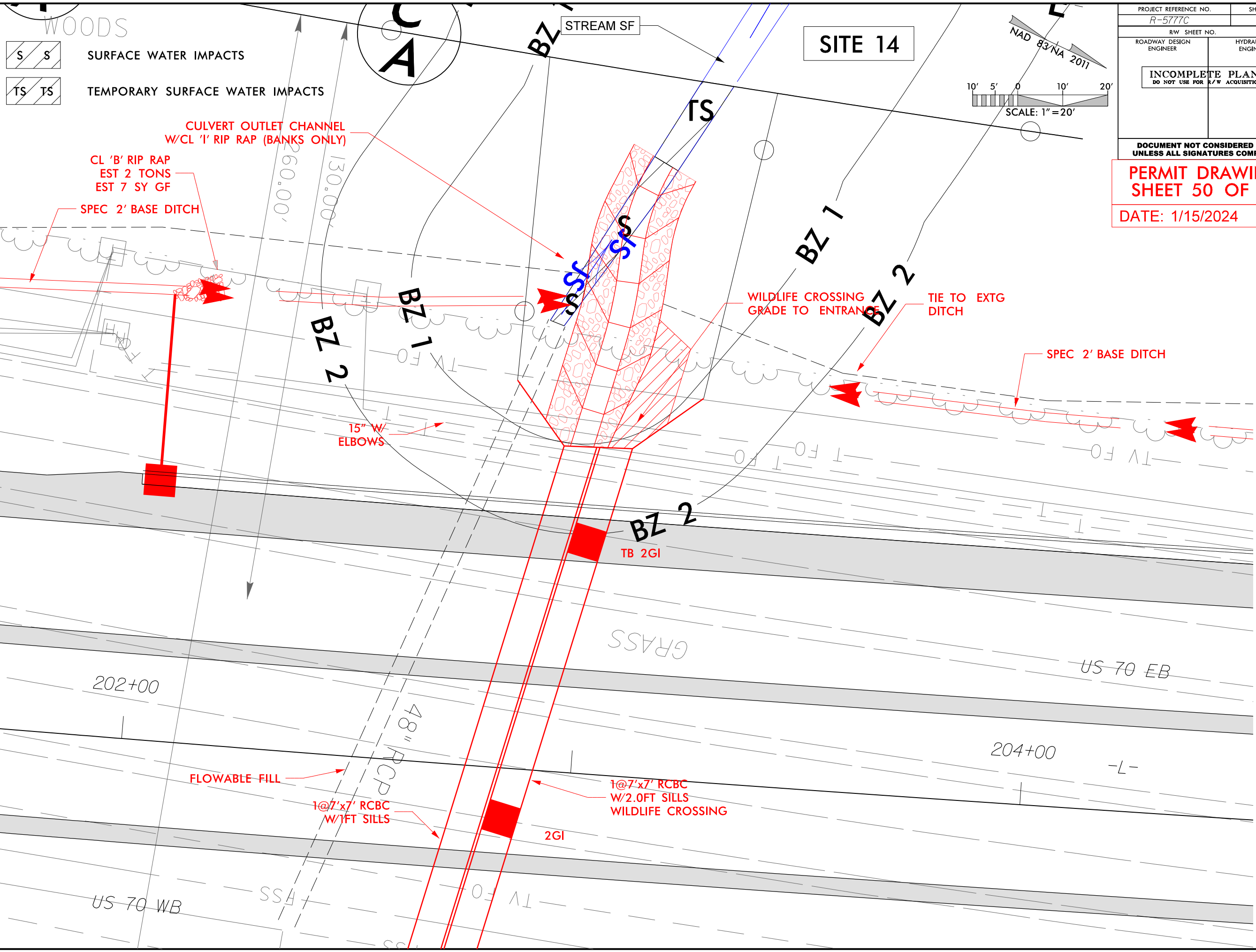


PROJECT REFERENCE NO.	SHEET NO.
R-5777C	
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING
SHEET 50 OF 89

DATE: 1/15/2024



8/17/99
1/15/2024
R-5777C-Hyd.prm-wet.psh.17-3-ViewIn.dgn
celom

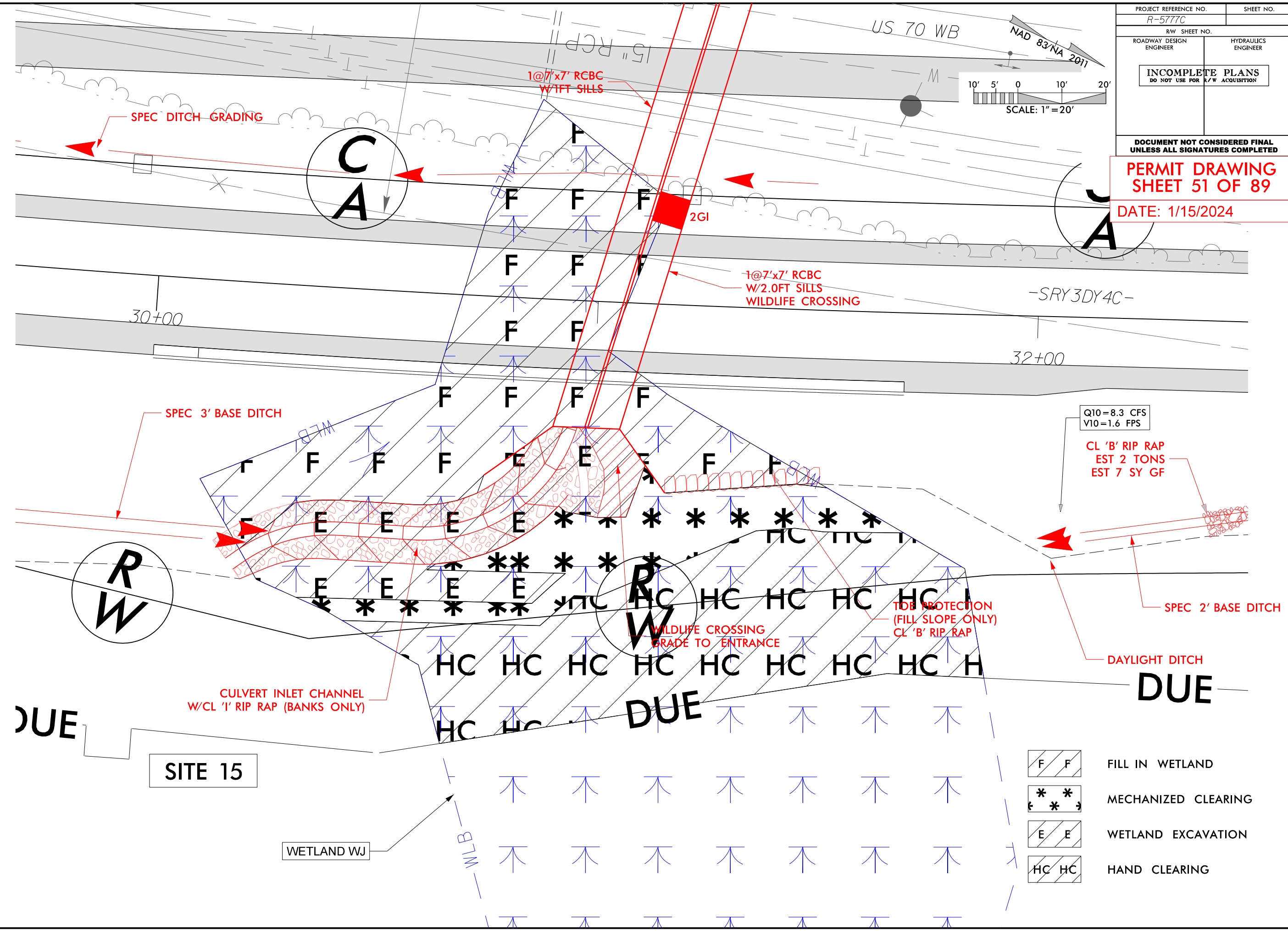
8/17/99

PROJECT REFERENCE NO.	SHEET NO.
R-5777C	
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING
SHEET 51 OF 89

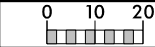
DATE: 1/15/2024



F F	FILL IN WETLAND
* *	MECHANIZED CLEARING
E E	WETLAND EXCAVATION
HC HC	HAND CLEARING

1/15/2024
R-5777C-Hyd.prm-wet.psh_17-4-ViewIn.dgn
celcom

6/23/16



PROJ. REFERENCE NO.
R-5777

SHEET NO.
L-69

PERMIT DRAWING
SHEET 52 OF 89

DATE: 1/15/2024

WETLAND WJ

SITE 15

FILL IN WETLAND

EXCAVATION

MECHANIZED CLEARING

WETLAND

WETLAND

202+00.00

201+50.00

201+00.00

200+50.00

200+00.00

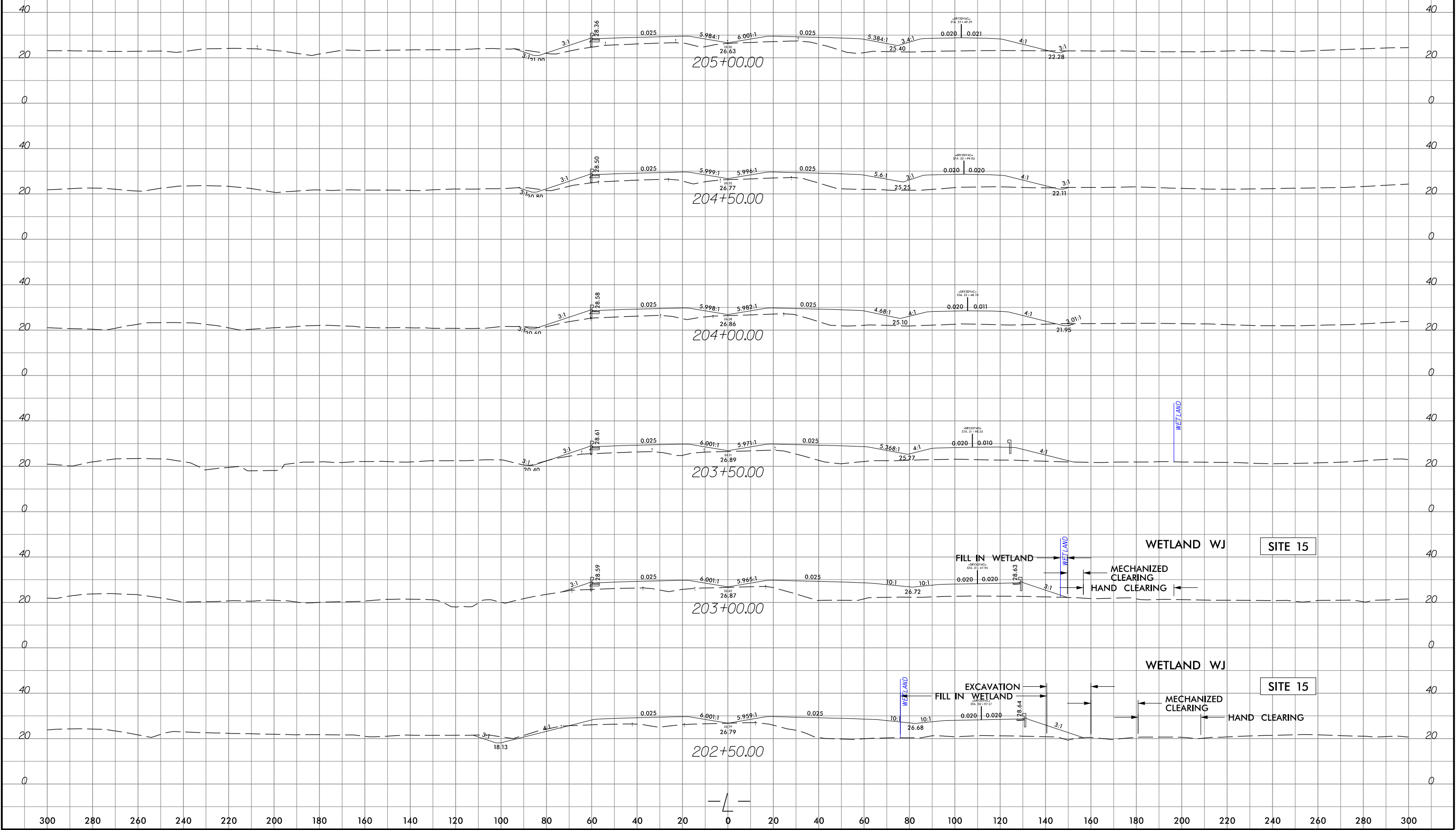
199+50.00

— 4 —

6/23/16

010 0 10 20	PROJ. REFERENCE NO.	SHEET NO.
	R-5777	L-70

PERMIT DRAWING
SHEET 53 OF 89
DATE: 1/15/2024



PROJECT REFERENCE NO.	SHEET NO.
R-5777C	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING
SHEET 54 OF 89

DATE: 1/15/2024

-200

-100

0

100

200

SITE 14

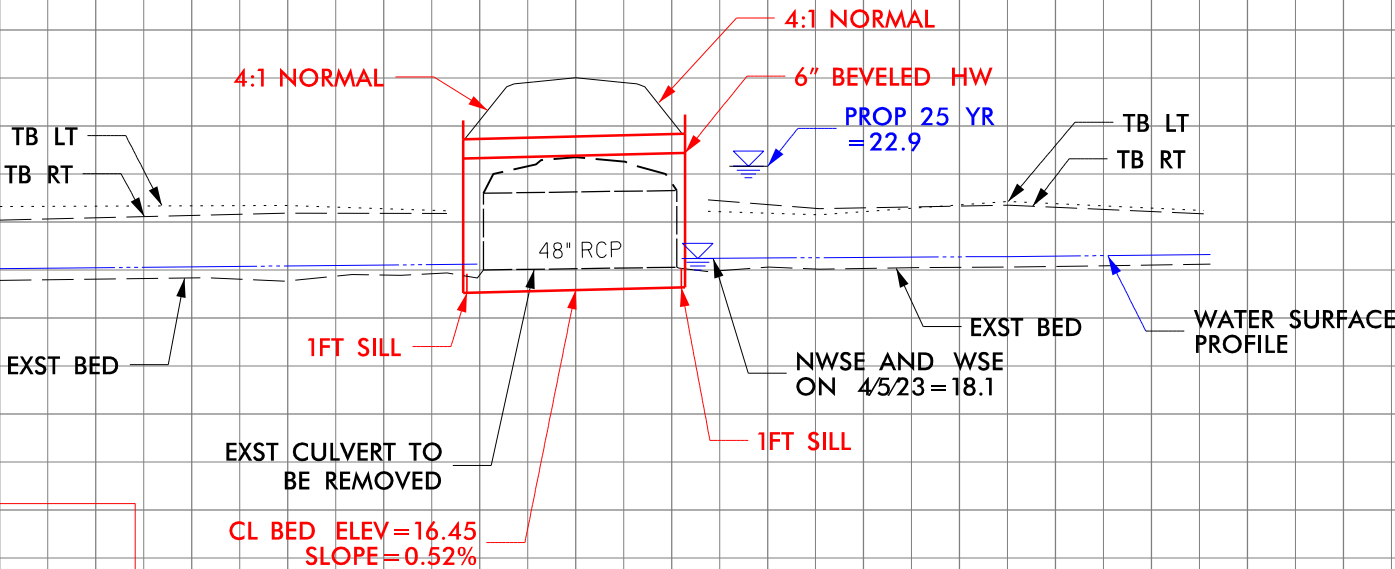
CL STA 25+78 -SRV4B-
GP EL= 27.52
1@7'x7' RCBC W/1FT SILLS
SKEW=90°-00'-00"

40

30

20

10

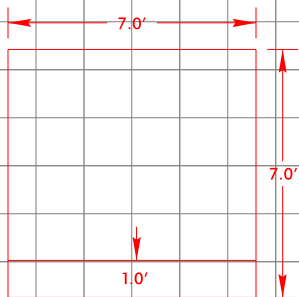


DETAIL
(NOT TO SCALE)

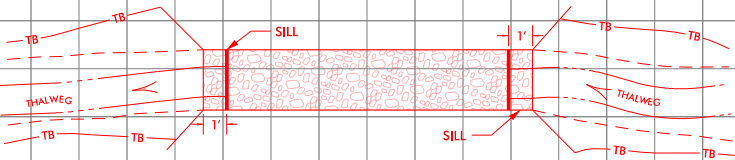
SINGLE BARREL CULVERT W/SILLS

*NOTES:

- 1) NATIVE MATERIAL BETWEEN SILLS IN THE CULVERT SHALL PROVIDE A CONTINUOUS LOW FLOW CHANNEL. NATIVE MATERIAL CONSISTS OF MATERIAL THAT IS EXCAVATED FROM THE STREAM BED AT THE PROJECT SITE DURING CONSTRUCTION. NATIVE MATERIAL IS SUBJECT TO APPROVAL BY THE ENGINEER AND MAY BE SUBJECT TO PERMIT CONDITIONS.
- 2) SILLS ARE TO BE 1.0 FT. WIDE, CAST SEPARATELY AND ATTACHED BY DOWELS.
- 3) DO NOT SET ELEVATION OF SILL ABOVE BANK FULL.
- 4) NUMBER OF SILLS DETERMINED BY THE ENGINEER.



SILL AT
INLET AND OUTLET

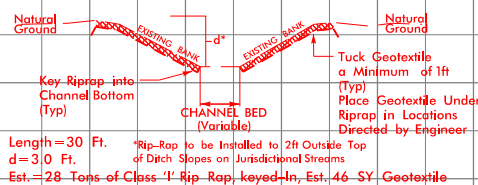


PLAN VIEW

913

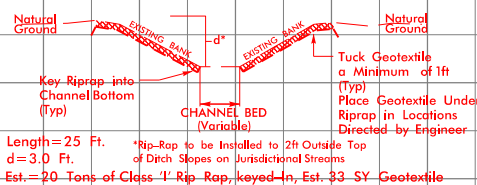
DETAIL

CULVERT OUTLET BANK STABILIZATION
(Not to Scale)



DETAIL

CULVERT INLET BANK STABILIZATION
(Not to Scale)

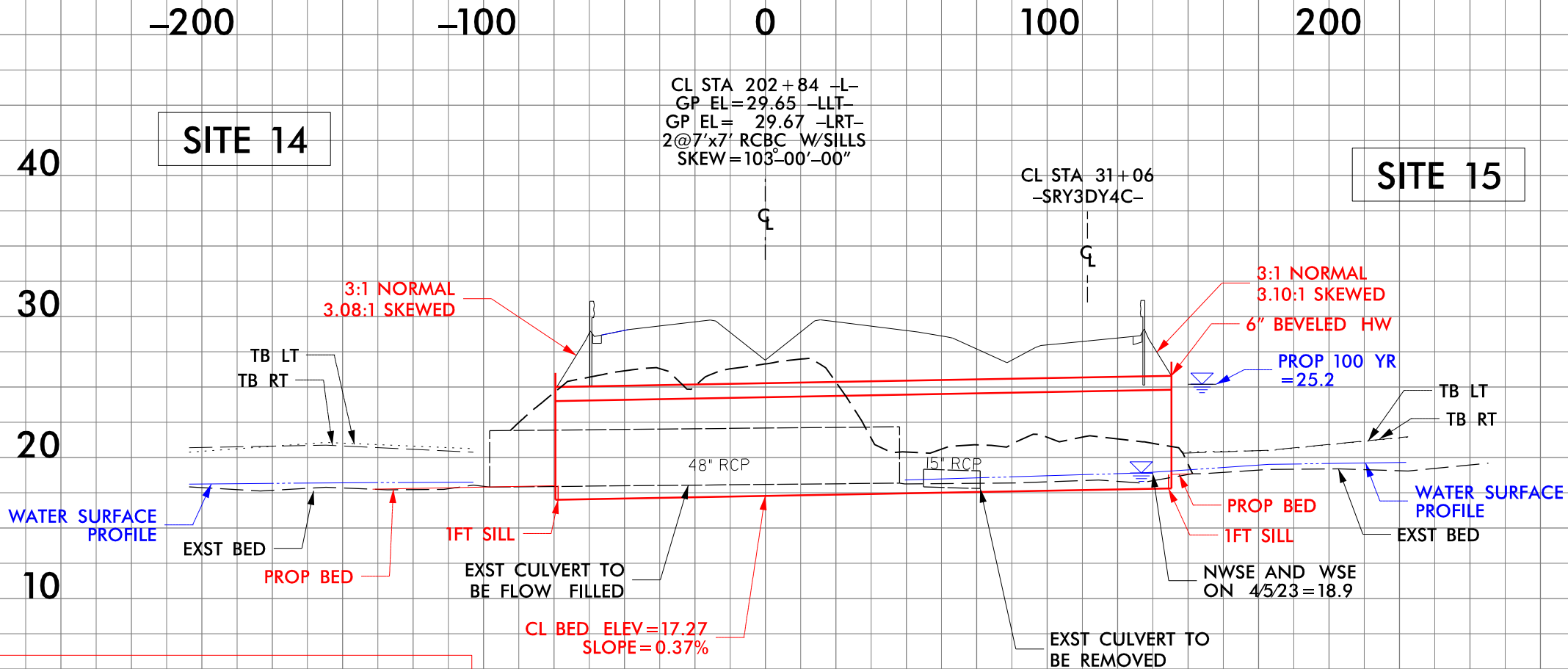


PROJECT REFERENCE NO.	SHEET NO.
R-5777C	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING
SHEET 55 OF 89

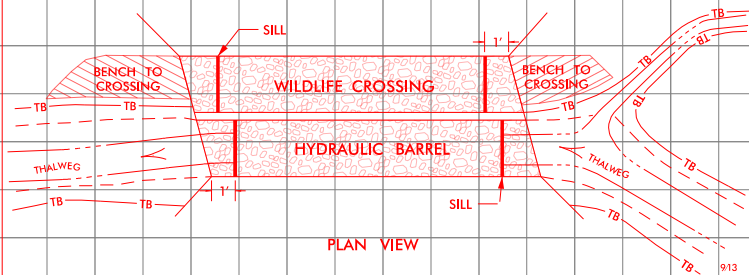
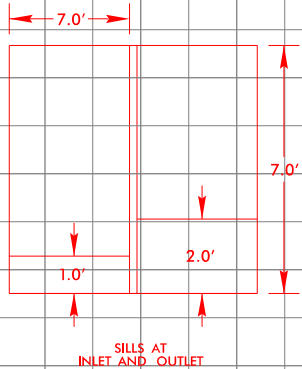
DATE: 1/15/2024



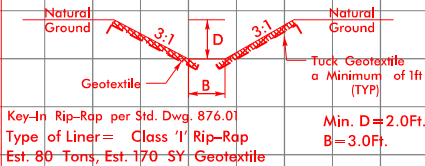
DETAIL
(NOT TO SCALE)
MULTI-BARREL CULVERT
HYDRAULIC BARREL W/1FT SILLS
WILDLIFE CROSSING W/2FT SILLS

*NOTES:

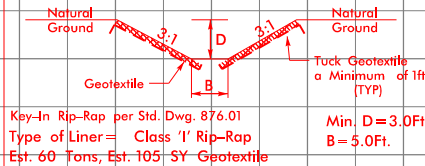
- 1) NATIVE MATERIAL BETWEEN SILLS IN THE CULVERT SHALL PROVIDE A CONTINUOUS LOW FLOW CHANNEL. NATIVE MATERIAL CONSISTS OF MATERIAL THAT IS EXCAVATED FROM THE STREAM BED AT THE PROJECT SITE DURING CONSTRUCTION. NATIVE MATERIAL IS SUBJECT TO APPROVAL BY THE ENGINEER AND MAY BE SUBJECT TO PERMIT CONDITIONS.
- 2) SILLS ARE TO BE 1.0 FT. WIDE, CAST SEPARATELY AND ATTACHED BY DOWELS.
- 3) DO NOT SET ELEVATION OF SILL ABOVE BANK FULL.
- 4) NUMBER OF SILLS DETERMINED BY THE ENGINEER.



DETAIL
CULVERT INLET CHANNEL
(Not to Scale)



DETAIL
CULVERT OUTLET CHANNEL
(Not to Scale)



PROJECT REFERENCE NO.	SHEET NO.
R-5777C	18
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION	

Balfour Beatty
st

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING
SHEET 56 OF 89
DATE: 1/15/2024

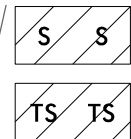
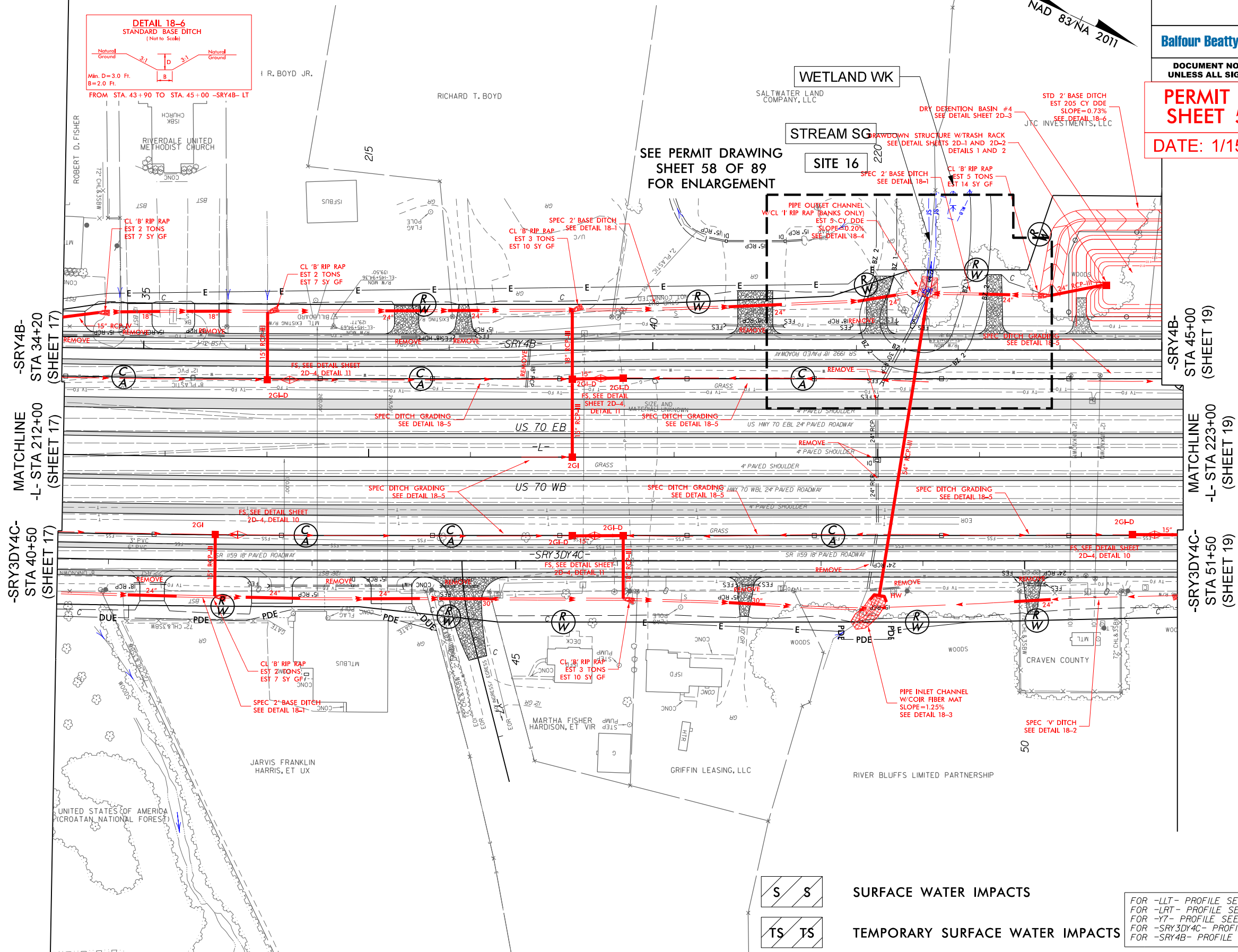
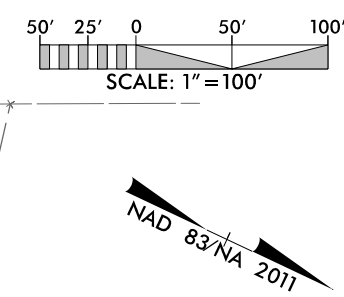
DETAIL 18-1
SPECIAL BASE DITCH
(Not to Scale)
FROM STA. 34+55 TO STA. 42+62 -SR4B- LT
FROM STA. 42+75 TO STA. 43+90 -SR4B- LT
FROM STA. 40+50 TO STA. 48+45 -SR3DY4C- RT

DETAIL 18-2
SPECIAL 'V' DITCH
(Not to Scale)
FROM STA. 48+57 TO STA. 51+50 -SR3DY4C- RT

DETAIL 18-3
PIPE INLET CHANNEL
(Not to Scale)
Length=40ft.
Type of Liner=75 SY COIR FIBER MAT
Est. 35 CY DDE
STA. 48+55 -SR3DY4C- RT

DETAIL 18-4
PIPE OUTLET CHANNEL
(Not to Scale)
Key-In Rip-Rap per Std. Dwg. 876.01
Type of Liner= Class 'I' Rip-Rap
Est. 25 Tons, Est. 43 SY Geotextile
STA. 42+70 -SR4B- LT

DETAIL 18-5
SPECIAL DITCH GRADING
(Not to Scale)
"SEE CROSS SECTIONS"
Min. D=1.0 Ft.
FROM STA. 212+00 TO STA. 223+00 -L- RT
FROM STA. 212+00 TO STA. 220+50 -L- LT
FROM STA. 216+50 TO STA. 217+00 -L- M
FROM STA. 222+00 TO STA. 223+00 -L- LT



SURFACE WATER IMPACTS

TEMPORARY SURFACE WATER IMPACTS

FOR -L- PROFILE SEE SHEET 49
FOR -L- PROFILE SEE SHEET 49
FOR -L- PROFILE SEE SHEET 76
FOR -SR3DY4C- PROFILE SEE SHEET 91
FOR -SR4B- PROFILE SEE SHEETS 97 & 98

1/15/2024
R-5777C-Hyd.prm-wet.psh.18.dgn
Bentley

PROJECT REFERENCE NO. R-5777C		SHEET NO. 18	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION			
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION			

Balfour Beatty **st**

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING
SHEET 57 OF 89

DATE: 1/15/2024

DETAIL 18-1
SPECIAL BASE DITCH
(Not to Scale)

FROM STA. 34+55 TO STA. 42+62 -SR4B- LT
FROM STA. 42+75 TO STA. 43+90 -SR4B- LT
FROM STA. 40+50 TO STA. 48+45 -SR3DY4C- RT

DETAIL 18-2
SPECIAL 'V' DITCH
(Not to Scale)

FROM STA. 48+57 TO STA. 51+50 -SR3DY4C- RT

DETAIL 18-3
PIPE INLET CHANNEL
(Not to Scale)

Length=40ft.
Type of Liner=75 SY COIR FIBER MAT
Est. 35 CY DDE
STA. 48+55 -SR3DY4C- RT

DETAIL 18-4
PIPE OUTLET CHANNEL
(Not to Scale)

Key-In Rip-Rap per Std. Dwg. 876.01
Type of Liner= Class 'I' Rip-Rap
Est. 25 Tons, Est. 43 SY Geotextile
STA. 42+70 -SR4B- LT

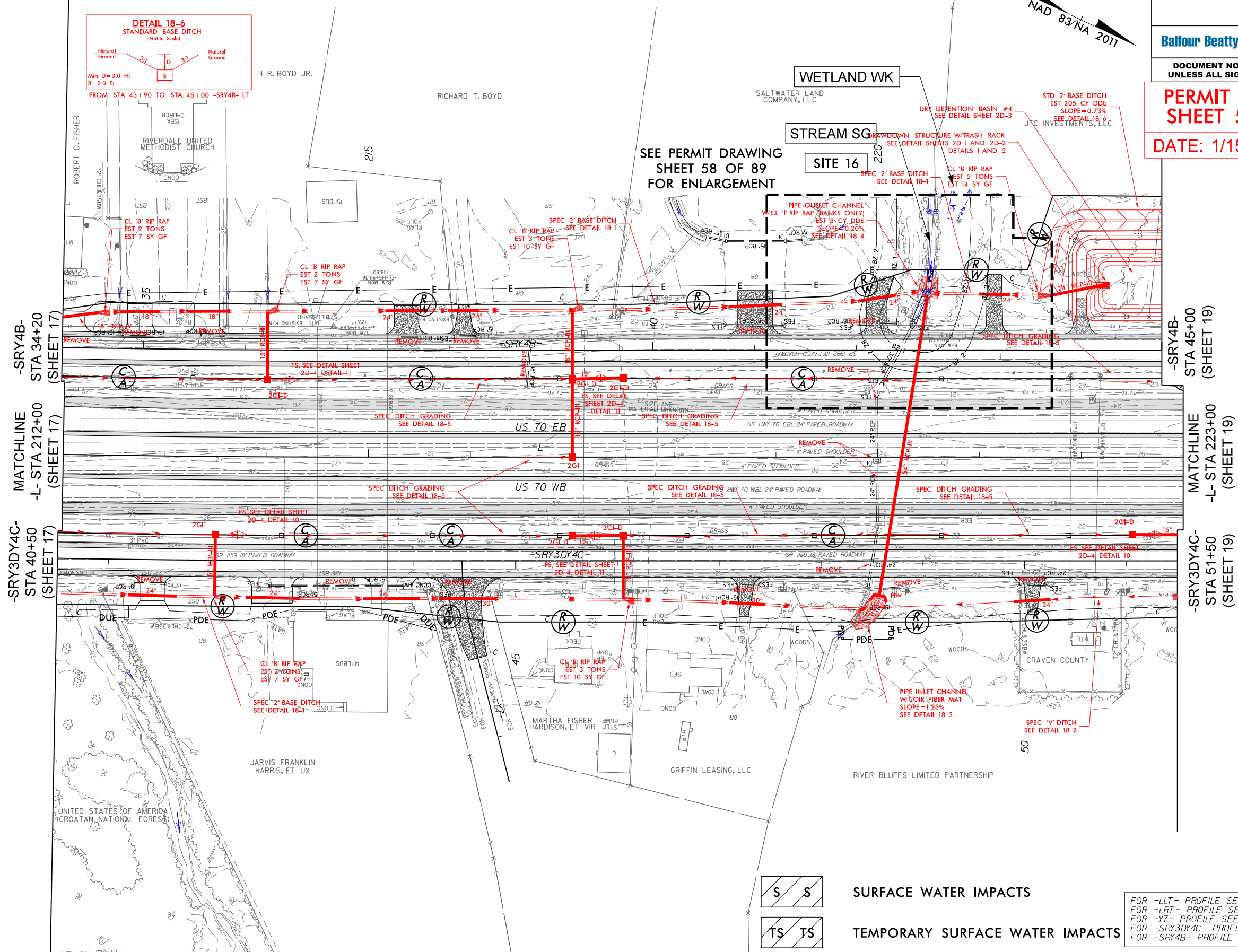
DETAIL 18-5
SPECIAL DITCH GRADING
(Not to Scale)

*SEE CROSS SECTIONS
FROM STA. 212+00 TO STA. 223+00 -L- RT
FROM STA. 212+00 TO STA. 220+50 -L- LT
FROM STA. 216+50 TO STA. 217+00 -L- M
FROM STA. 222+00 TO STA. 223+00 -L- LT

50' 25' 0 50' 100'

SCALE: 1"=100'

NAD 83/NA 2011



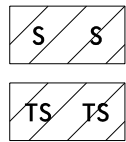
S S
TS TS

SURFACE WATER IMPACTS

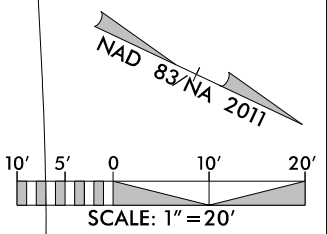
TEMPORARY SURFACE WATER IMPACTS

FOR -LRT- PROFILE SEE SHEET 49
FOR -LRT- PROFILE SEE SHEET 49
FOR -Y7- PROFILE SEE SHEET 76
FOR -SR3DY4C- PROFILE SEE SHEET 91
FOR -SR4B- PROFILE SEE SHEETS 97 & 98

8/17/99



SURFACE WATER IMPACTS
TEMPORARY SURFACE WATER IMPACTS

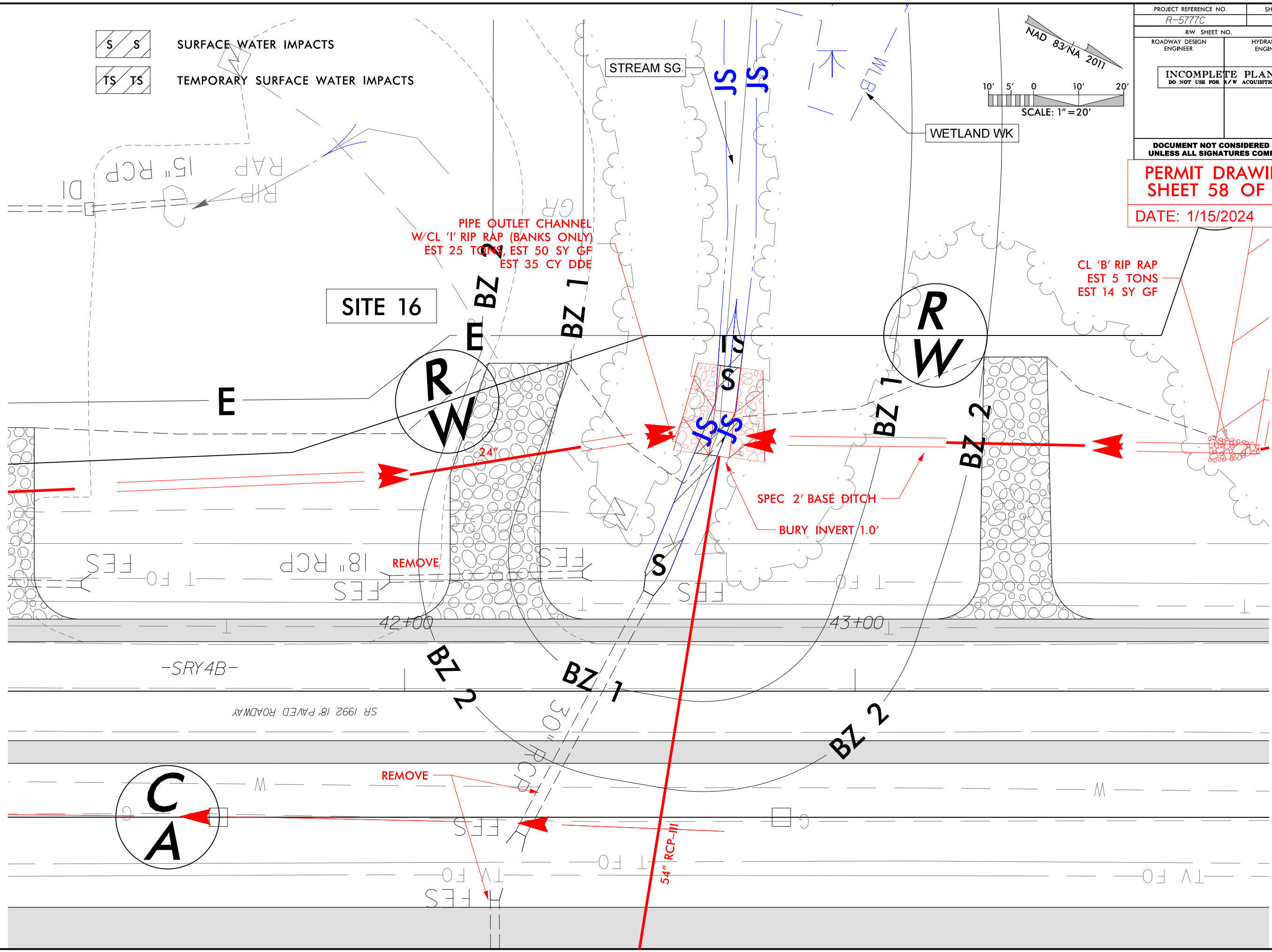


PROJECT REFERENCE NO. <i>R-5777C</i>		SHEET NO.	
RW SHEET NO.		HYDRAULICS ENGINEER	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION			

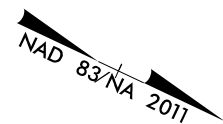
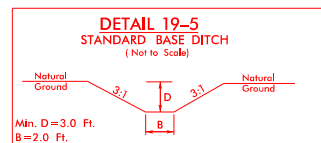
DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING
SHEET 58 OF 89

DATE: 1/15/2024



1/15/2024
R-5777C-Hyd.prm-wet.psh.18-2-ViewIn.dgn
celcom



PROJECT REFERENCE NO.	SHEET NO.
<i>R-5777C</i>	19
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

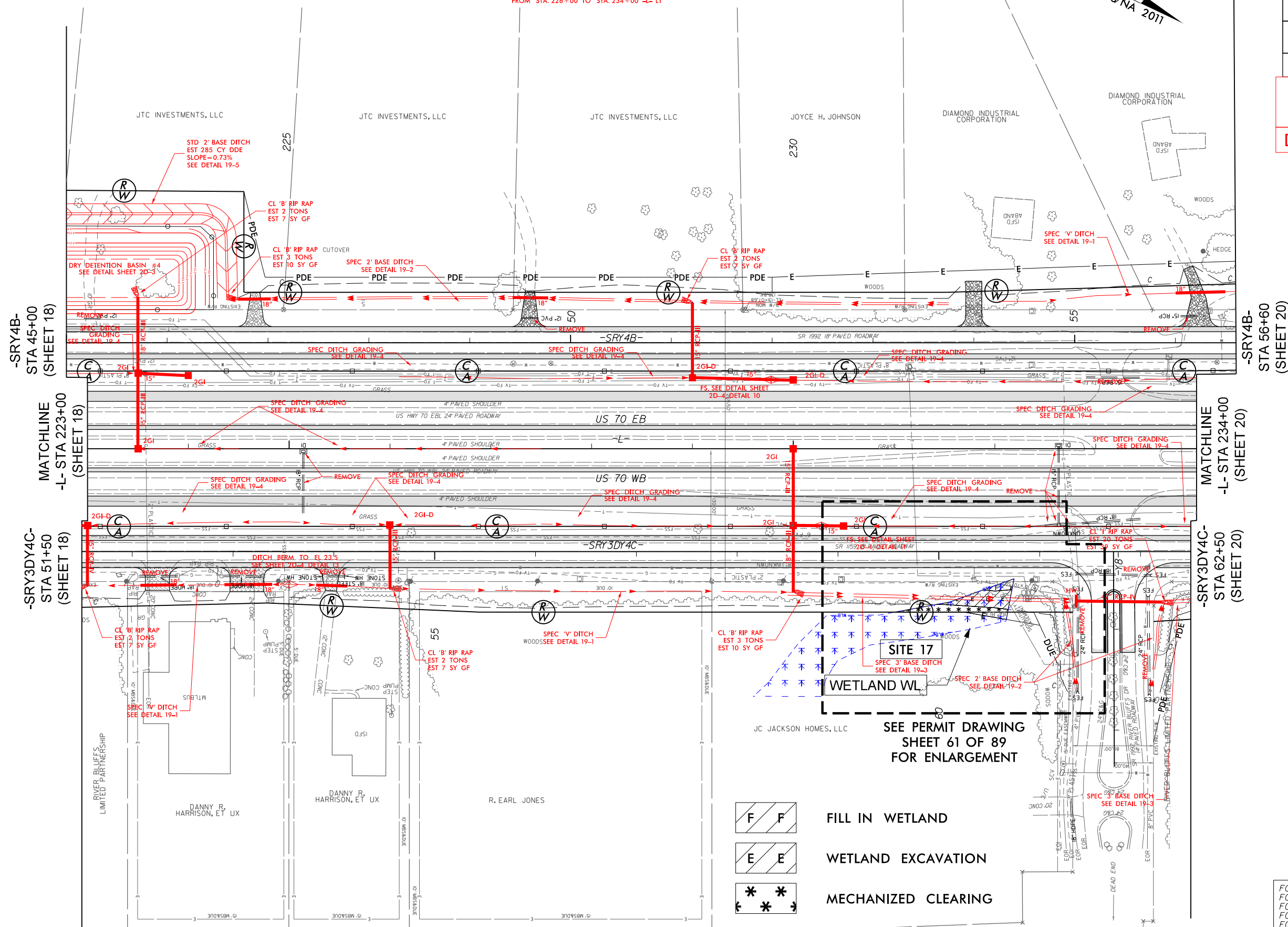
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

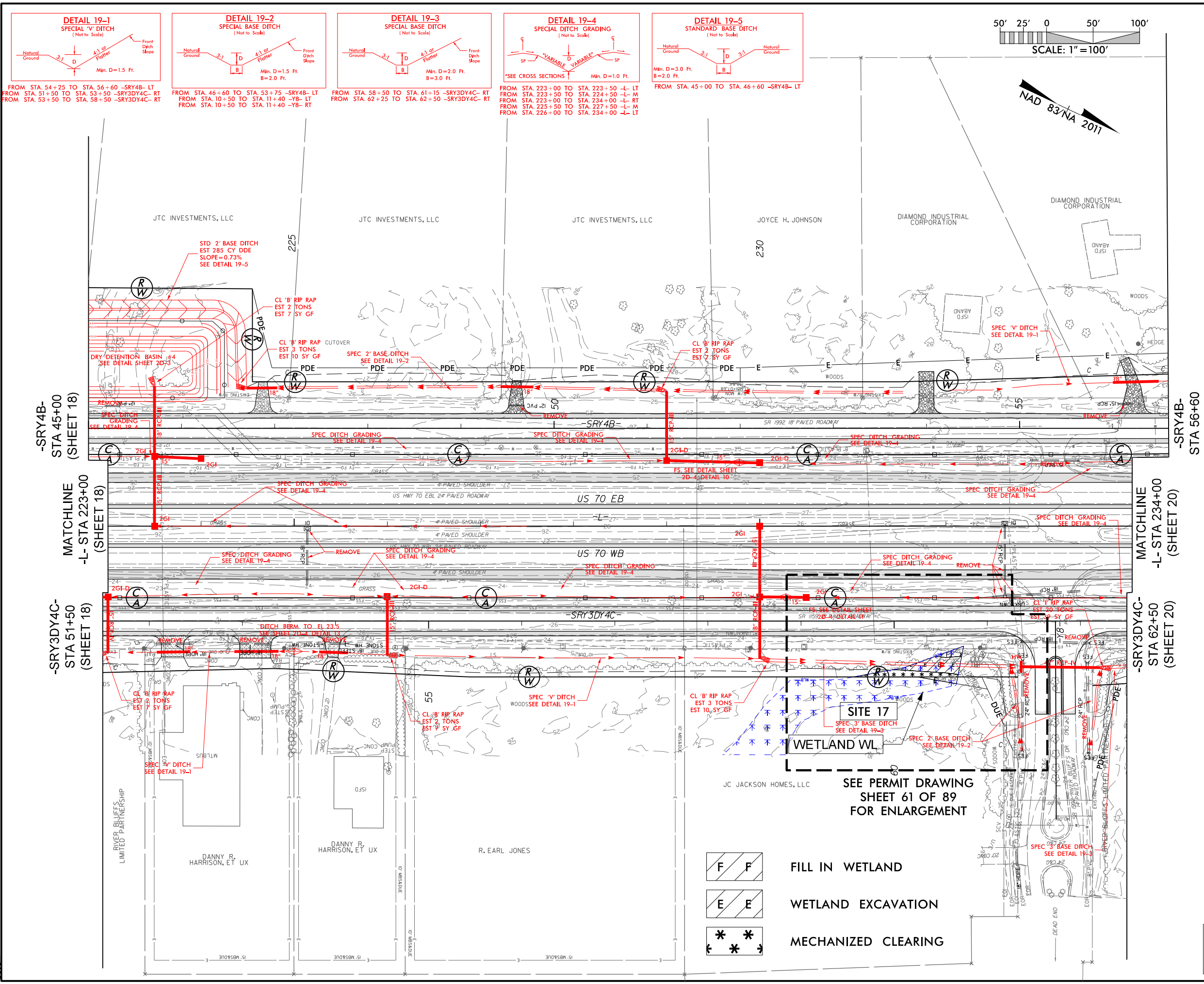
Balfour Beatty **stv**
DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING
SHEET 59 OF 89

DATE: 1/15/2024

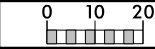


FOR -LLT- PROFILE SEE SHEET 50
FOR -LRT- PROFILE SEE SHEET 50
FOR -Y8- PROFILE SEE SHEET 76
FOR -SRY3DY4C- PROFILE SEE SHEET 91
FOR -SRY4B- PROFILE SEE SHEET 98





6/23/16



PROJ. REFERENCE NO.
R-5777

SHEET NO.
L-79

PERMIT DRAWING
SHEET 62 OF 89

DATE: 1/15/2024

WETLAND WL

SITE 17

FILL IN WETLAND

EXCAVATION
MECHANIZED CLEARING

WETLAND WL

SITE 17

EXCAVATION
MECHANIZED CLEARING

WETLAND

WETLAND

WETLAND

WETLAND

WETLAND

232+00.00

231+50.00

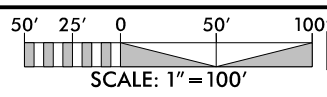
231+00.00

230+50.00

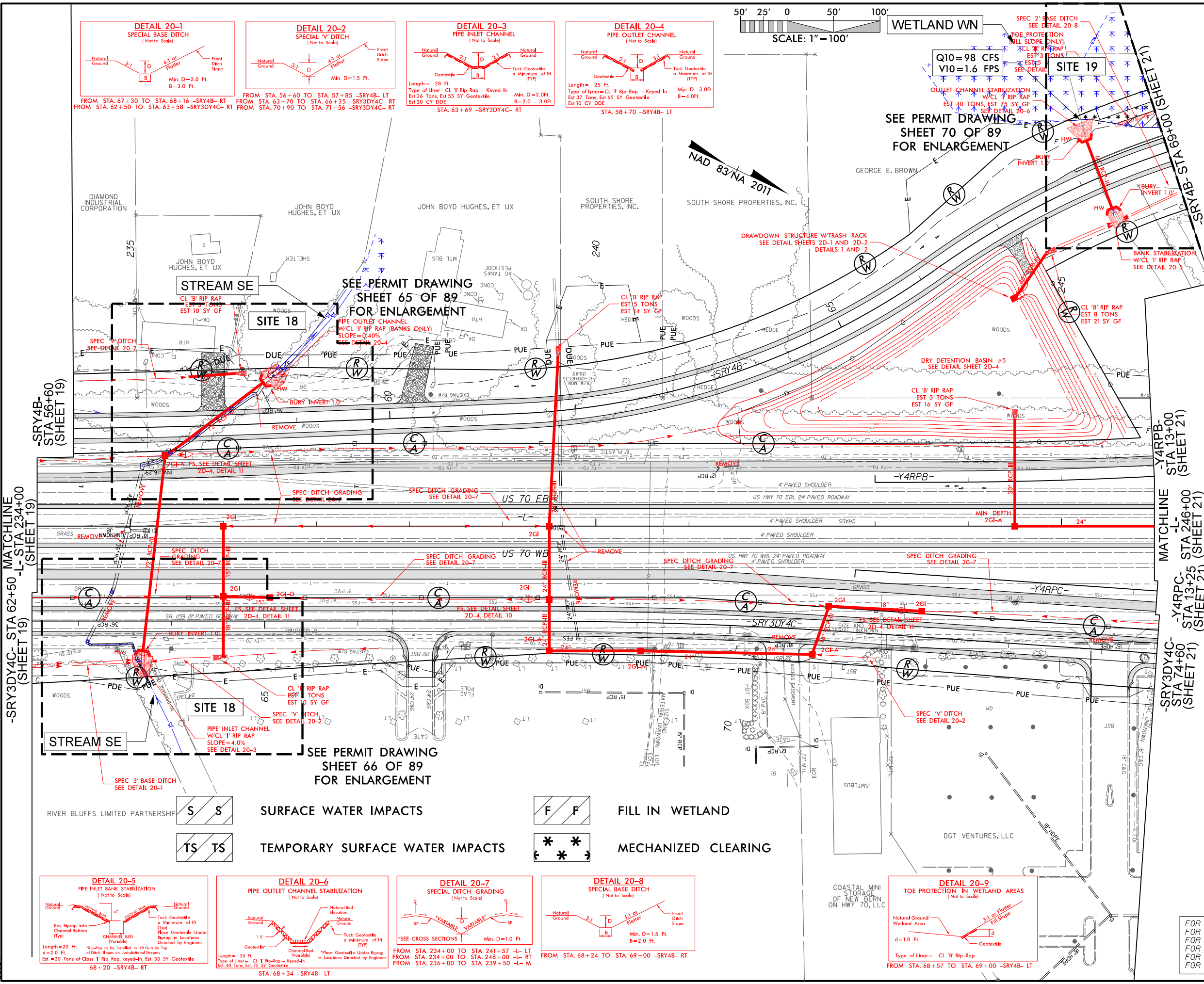
230+00.00

229+50.00

— 4 —

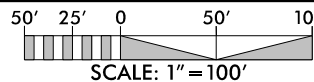


PROJECT REFERENCE NO. R-5777C		SHEET NO. 20
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION		
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION		
Balfour Beatty stv		
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		
PERMIT DRAWING SHEET 63 OF 89		
DATE: 1/15/2024		



FOR -LLT- PROFILE SEE SHEETS 50 & 51
FOR -LRT- PROFILE SEE SHEETS 50 & 51
FOR -Y4RPB- PROFILE SEE SHEET 73
FOR -Y4RPC- PROFILE SEE SHEET 74
FOR -SRY3DY4C- PROFILE SEE SHEETS 91 & 92
FOR -SRY4B- PROFILE SEE SHEETS 98 & 99

1/15/2024 R-5777C-Hyd.prm-wet.psh-20.dgn



WETLAND WN

SPEC 2' BASE DITCH
SEE DETAIL 20-8

TOE PROTECTION
NILL SLOPE ONLY
TCL 1' RIP RAP
EST 3 TONS
SEE DETAIL 20-6

Q10=98 CFS
V10=1.6 FPS

SITE 19

SEE PERMIT DRAWING
SHEET 70 OF 89
FOR ENLARGEMENT

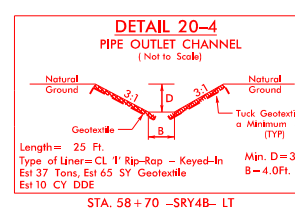
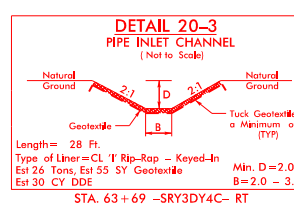
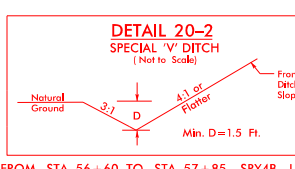
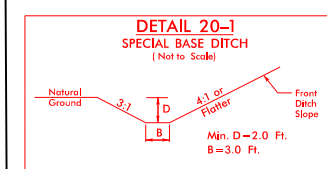
DRAWDOWN STRUCTURE W/TRASH RACK
SEE DETAIL SHEETS 2D-1 AND 2D-2
DETAILS 1 AND 2

BANK STABILIZATION
W/CL 1' RIP RAP
SEE DETAIL 20-5

PERMIT DRAWING
SHEET 64 OF 89

DATE: 1/15/2024

PROJECT REFERENCE NO.	SHEET NO.
R-5777C	20
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION	
Balfour Beatty st	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

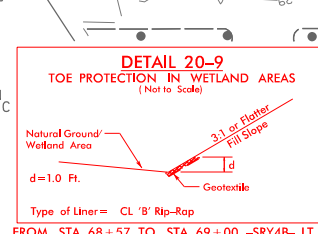
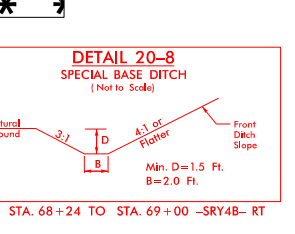
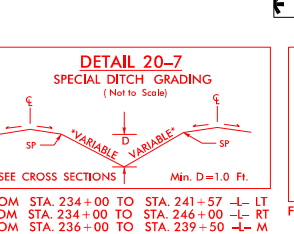
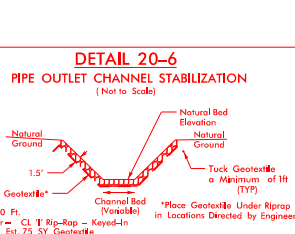
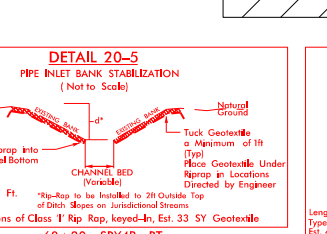
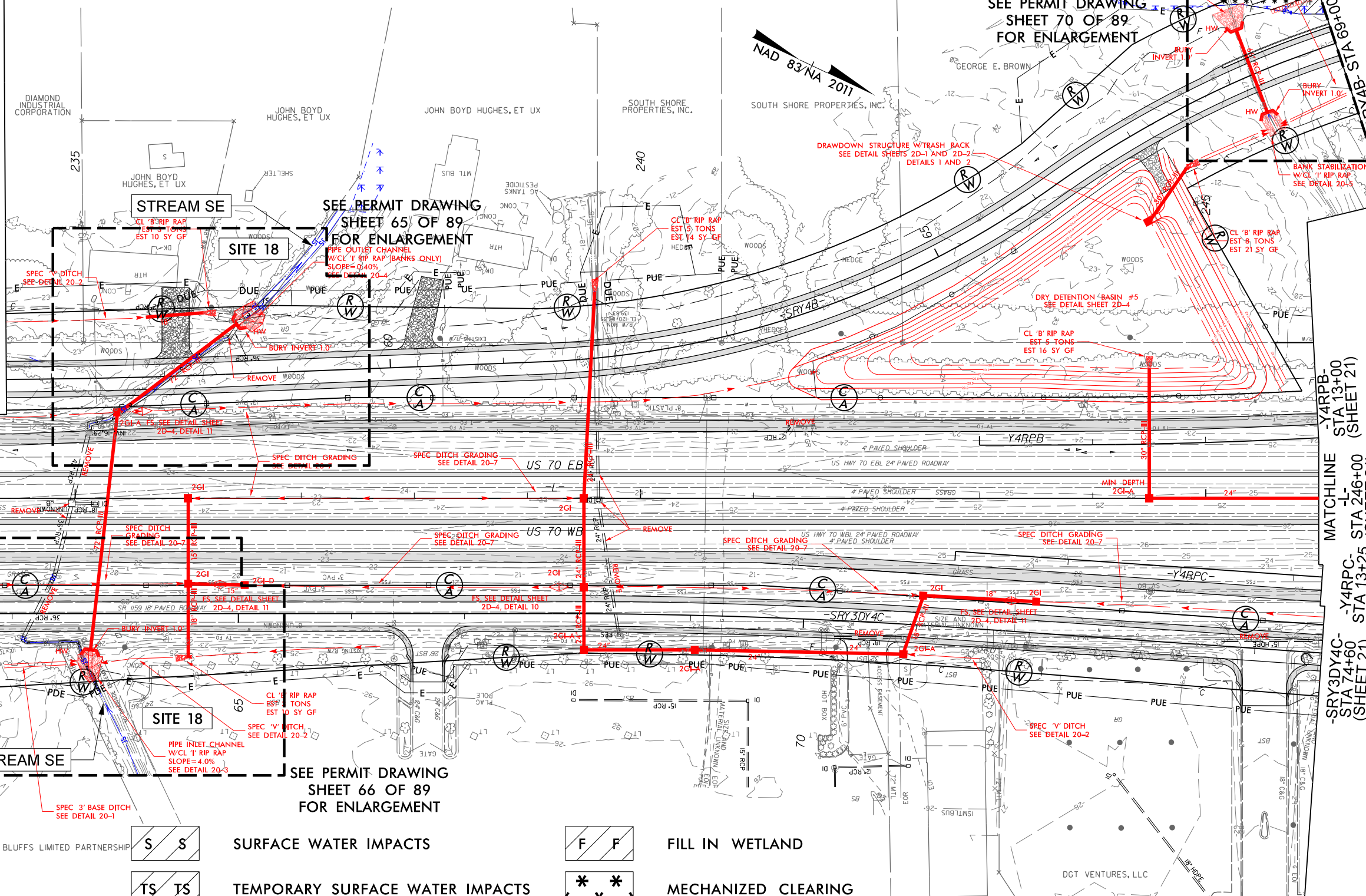


FROM STA. 67+30 TO STA. 68+16 -SRY4B- RT
FROM STA. 62+50 TO STA. 63+58 -SRY3DY4C- RT

FROM STA. 56+60 TO STA. 57+85 -SRY4B- LT
FROM STA. 63+70 TO STA. 64+25 -SRY3DY4C- RT
FROM STA. 70+90 TO STA. 71+56 -SRY3DY4C- RT

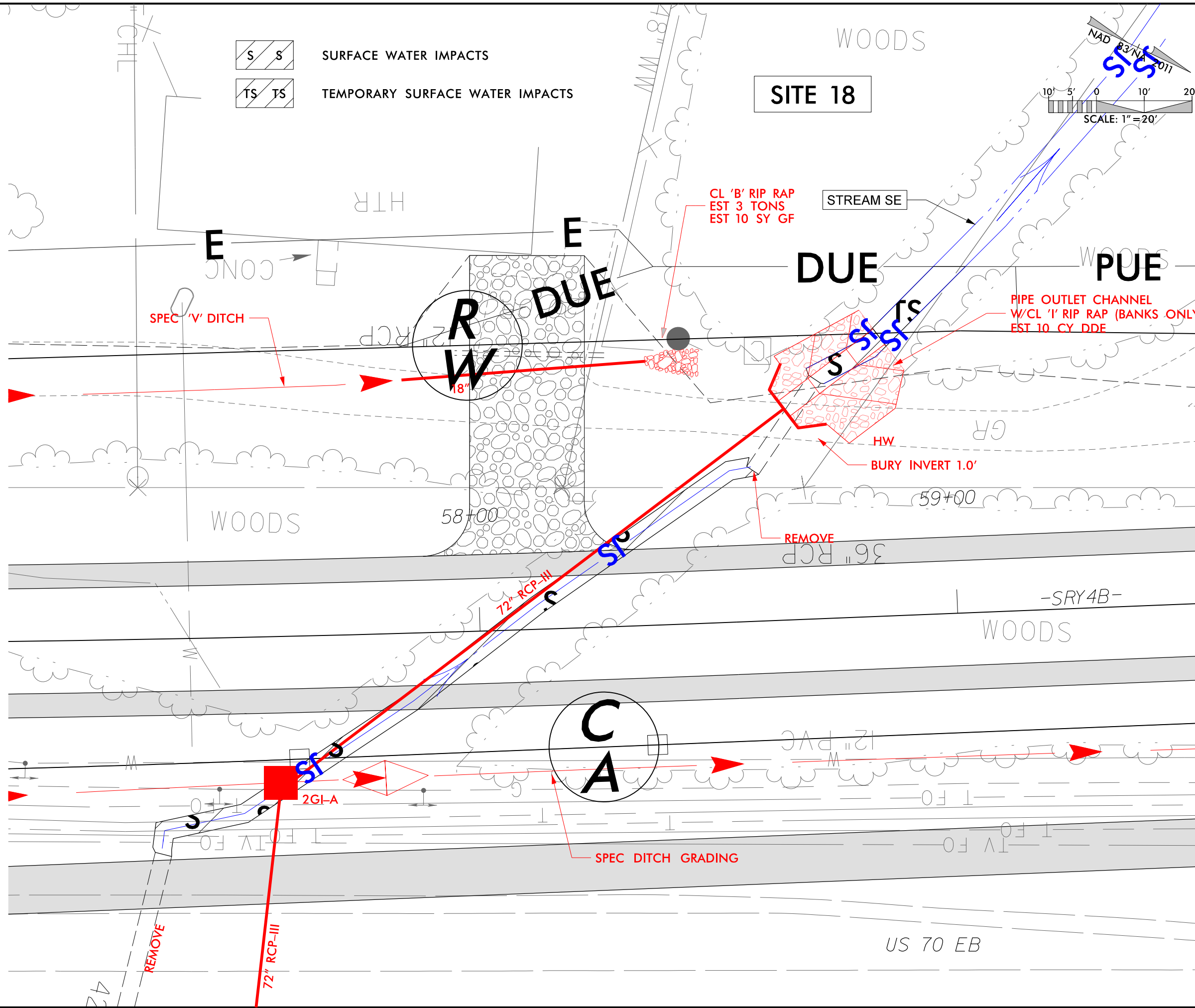
Length= 28 Ft.
Type of Liner= CL 1' Rip-Rap - Keyed-In
Est 26 Tons, Est 55 SY Geotextile
Est 30 CY DDE
STA. 63+69 -SRY3DY4C- RT

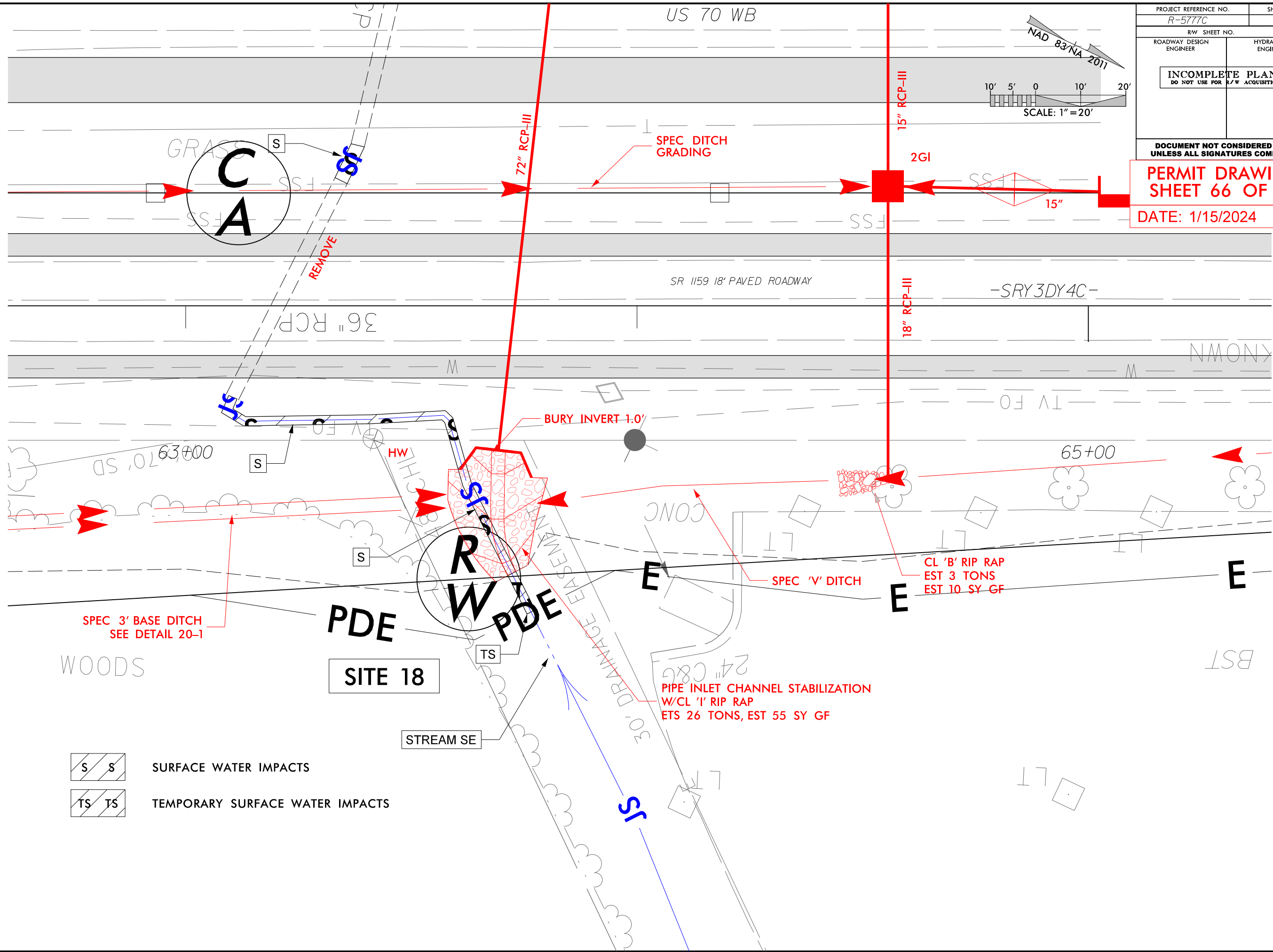
Length= 25 Ft.
Type of Liner= CL 1' Rip-Rap - Keyed-In
Est 37 Tons, Est 65 SY Geotextile
Est 10 CY DDE
STA. 58+70 -SRY4B- LT



FOR -LLT- PROFILE SEE SHEETS 50 & 51
FOR -LRT- PROFILE SEE SHEETS 50 & 51
FOR -Y4RPB- PROFILE SEE SHEET 73
FOR -Y4RPC- PROFILE SEE SHEET 74
FOR -SRY3DY4C- PROFILE SEE SHEETS 91 & 92
FOR -SRY4B- PROFILE SEE SHEETS 98 & 99

PROJECT REFERENCE NO. R-5777C		SHEET NO.
RW SHEET NO.		
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION		
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		
PERMIT DRAWING SHEET 65 OF 89		
DATE: 1/15/2024		





PROJECT REFERENCE NO. R-5777C		SHEET NO.	
RW SHEET NO.		HYDRAULICS ENGINEER	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION			
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			
PERMIT DRAWING SHEET 66 OF 89			
DATE: 1/15/2024			

5/14/99

PROJECT REFERENCE NO.	SHEET NO.
R-5777C	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING
SHEET 67 OF 89

DATE: 1/15/2024

200

100

0

100

200

CL STA 235+26 -L-
1@72" RCP (BURIED 1.0')

SITE 18

CL STA 58+01 -SRY4B-
1@72" RCP (BURIED 1.0')

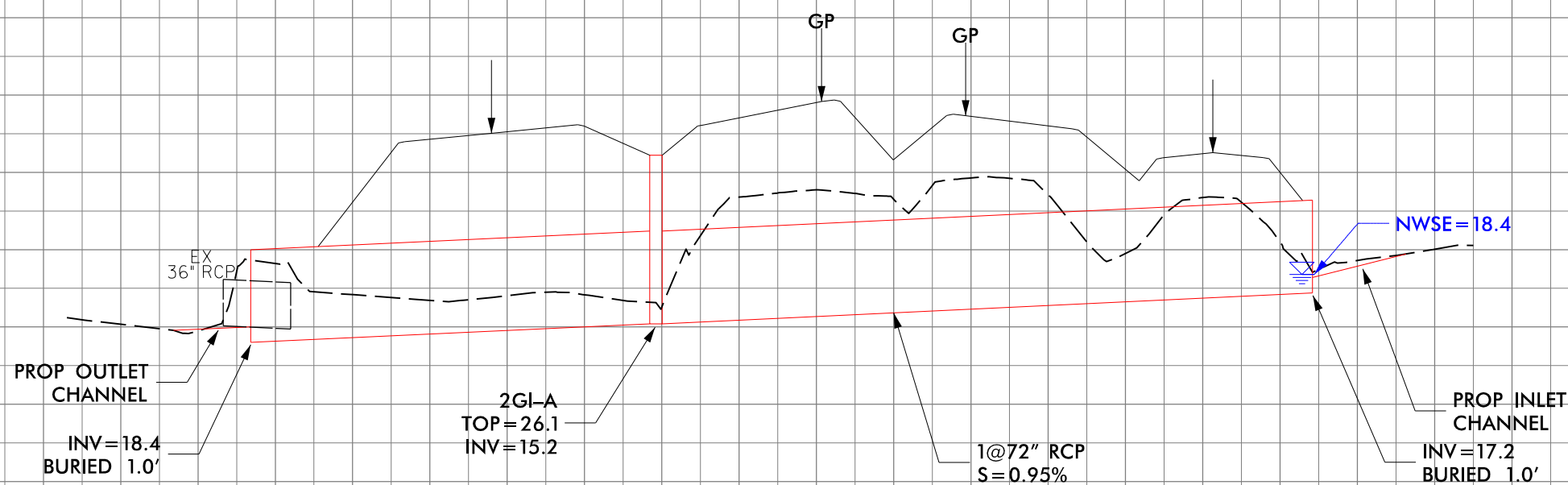
CL STA 63+65 -SRY3DY4C-
1@72" RCP (BURIED 1.0')

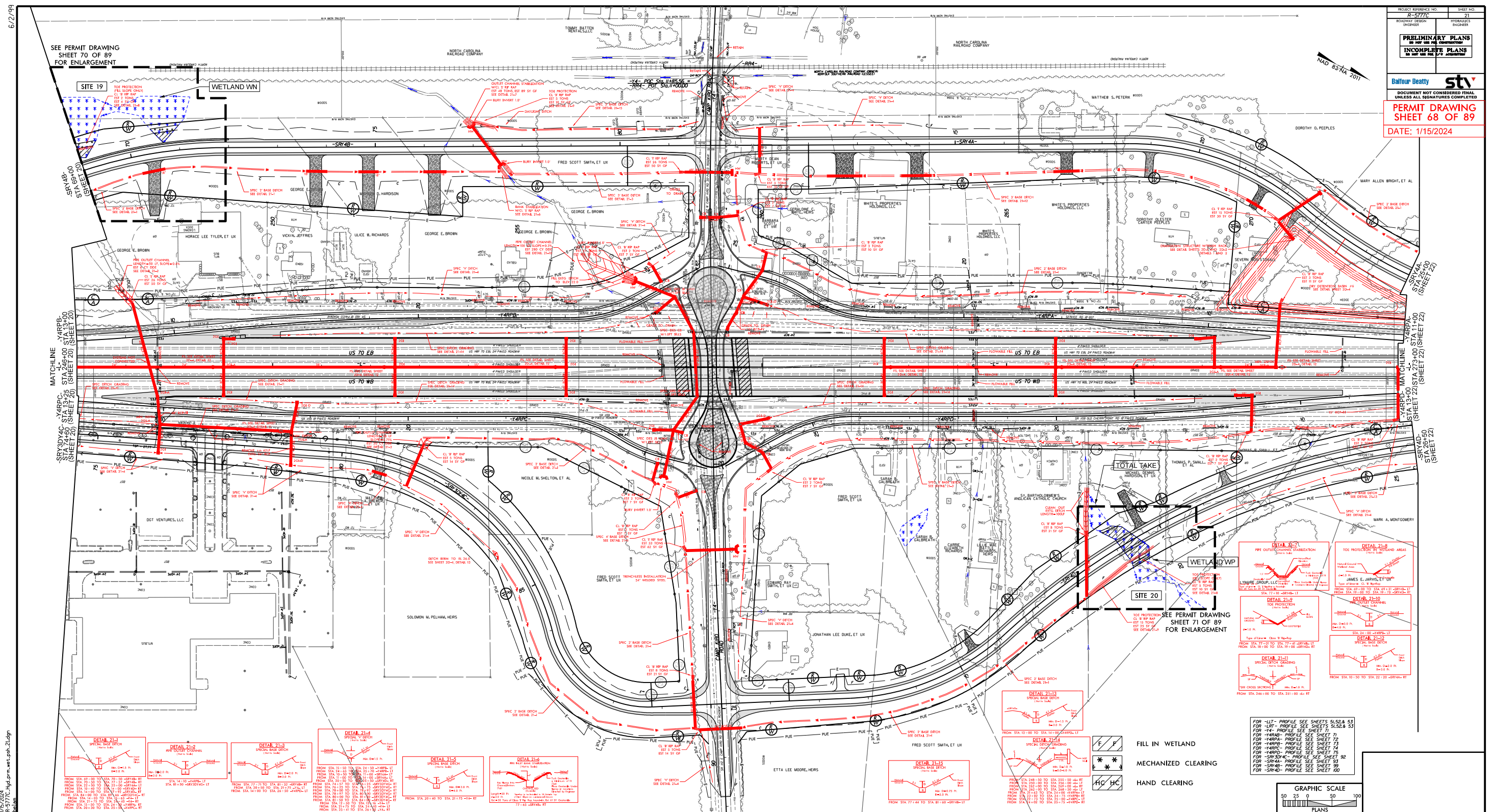
40

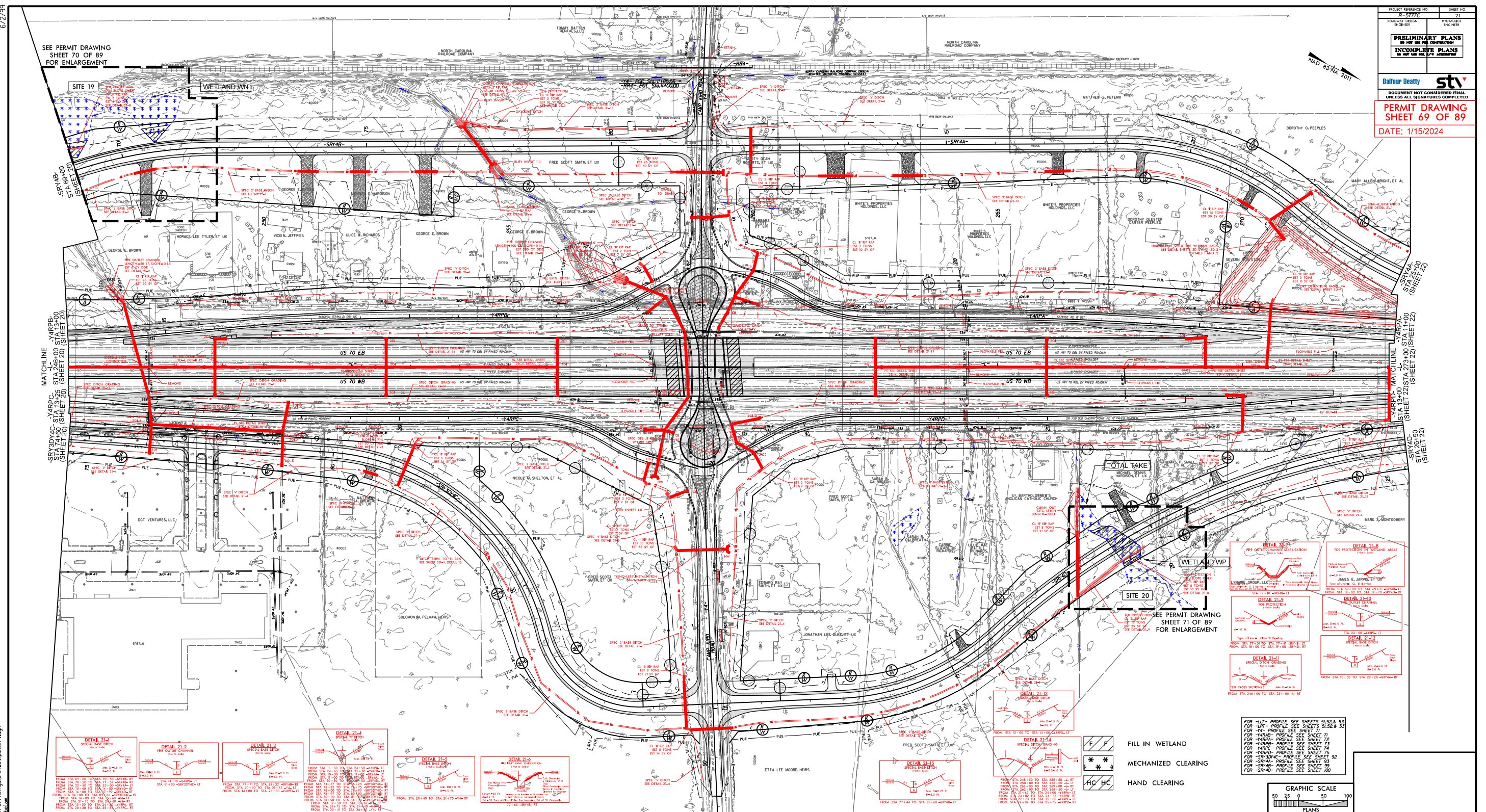
30

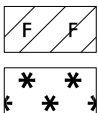
20

10

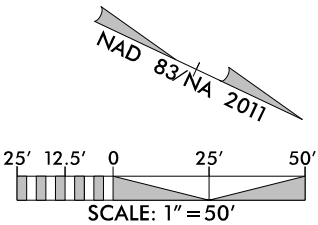








FILL IN WETLAND
MECHANIZED CLEARING

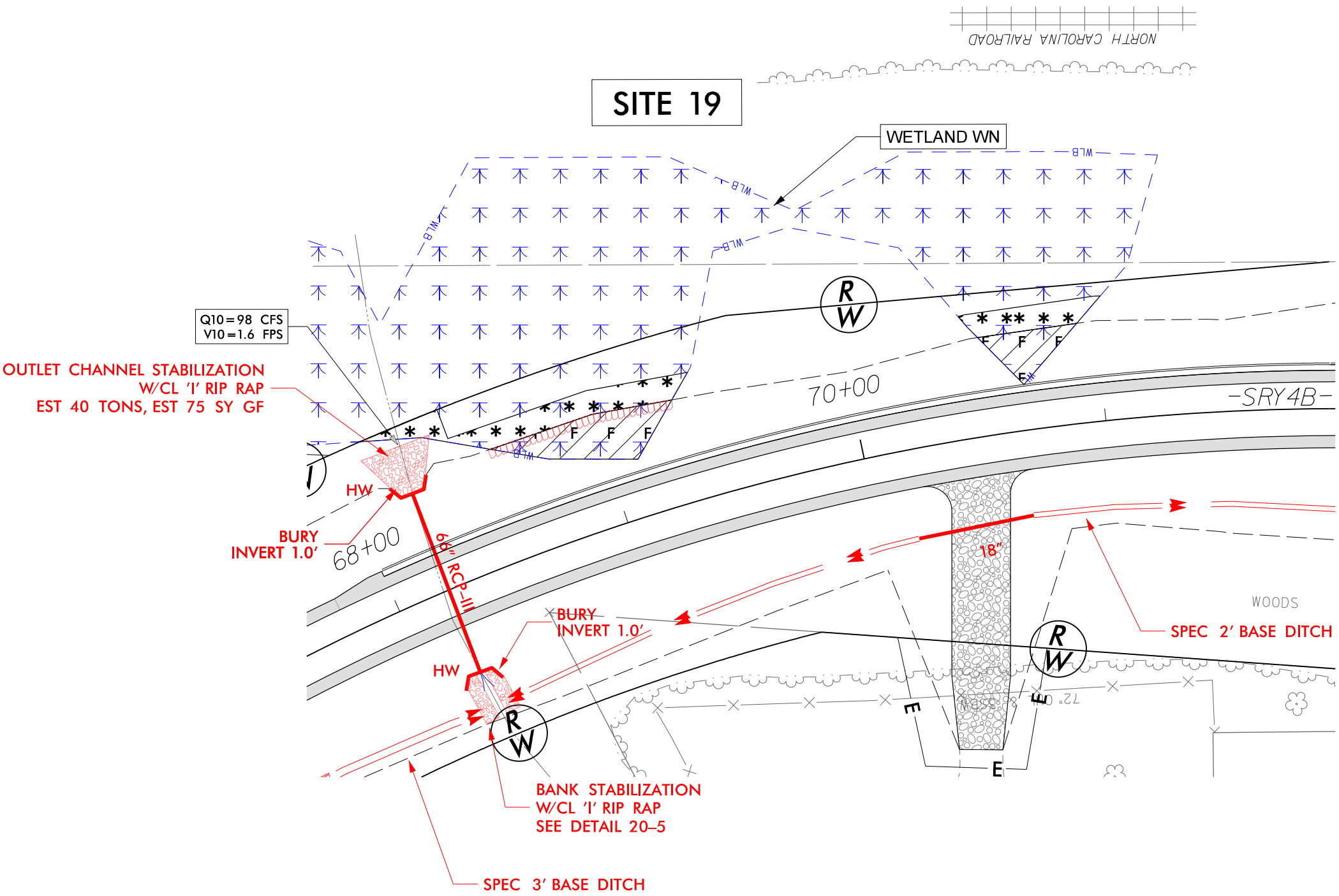


PROJECT REFERENCE NO.		SHEET NO.	
R-5777C			
R/W SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION			

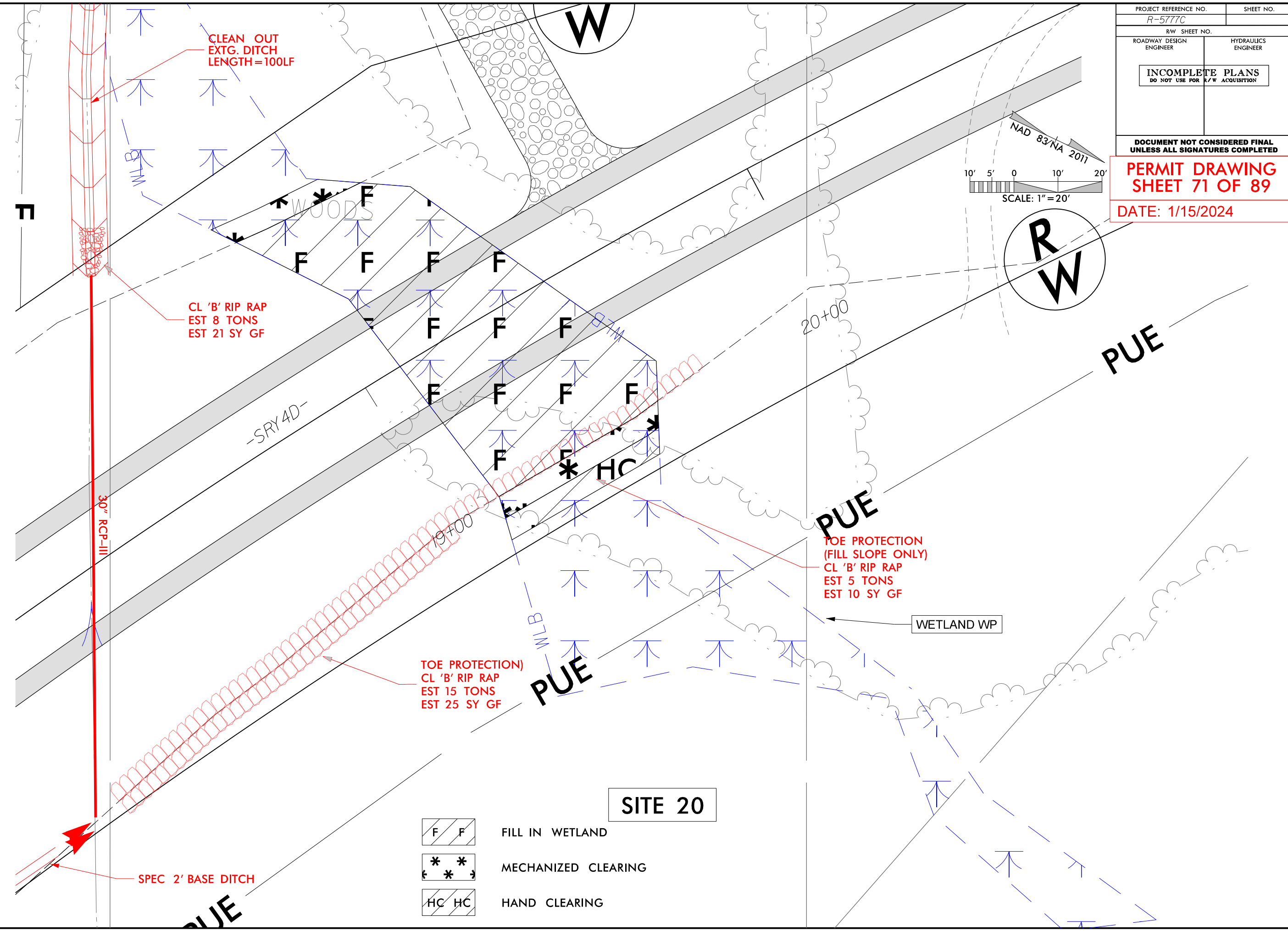
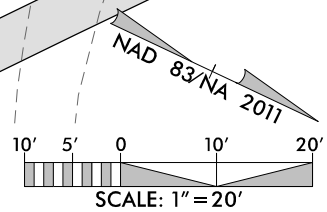
DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

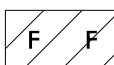
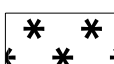
**PERMIT DRAWING
SHEET 70 OF 89**

DATE: 1/15/2024



PROJECT REFERENCE NO. R-5777C		SHEET NO.	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION			
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			
PERMIT DRAWING SHEET 71 OF 89			
DATE: 1/15/2024			

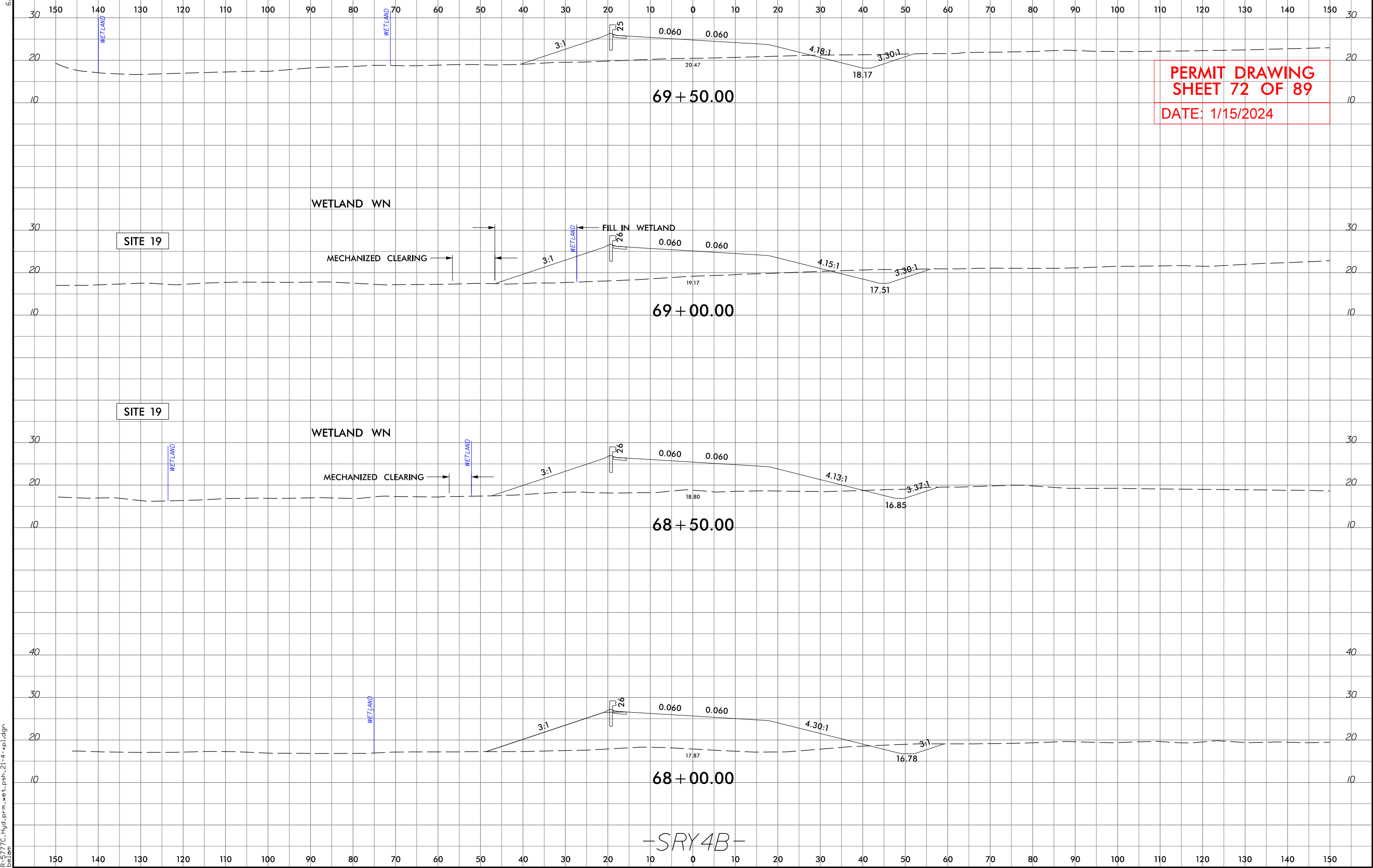


- | | |
|---|---------------------|
|  | FILL IN WETLAND |
|  | MECHANIZED CLEARING |
|  | HAND CLEARING |

SITE 20

6/23/16

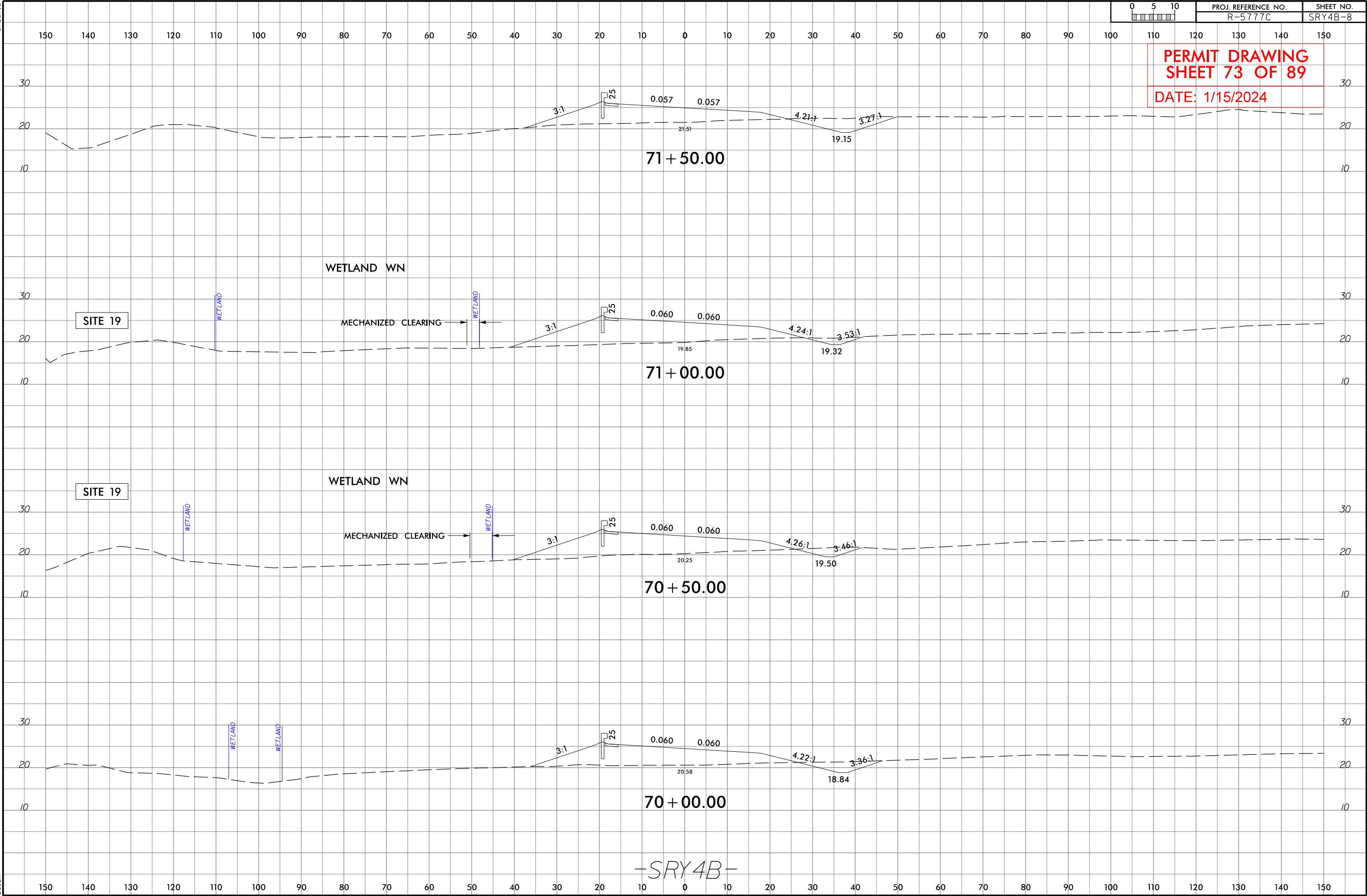
05 0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5777C	SR4B-7



6/23/16

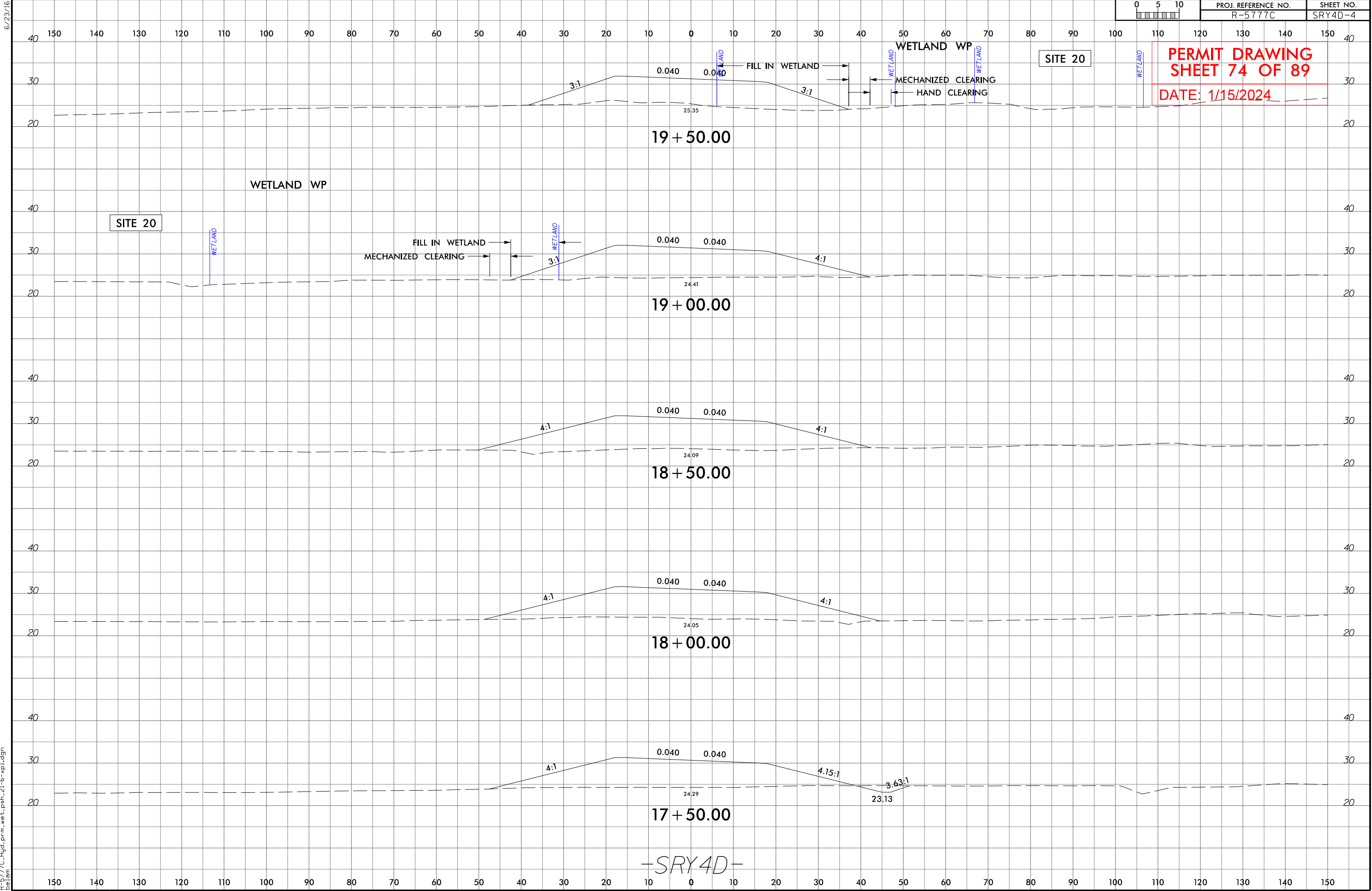
0 5 10 [Scale Bar]	PROJ. REFERENCE NO.	SHEET NO.
	R-5777C	SR4B-8

PERMIT DRAWING
SHEET 73 OF 89
DATE: 1/15/2024

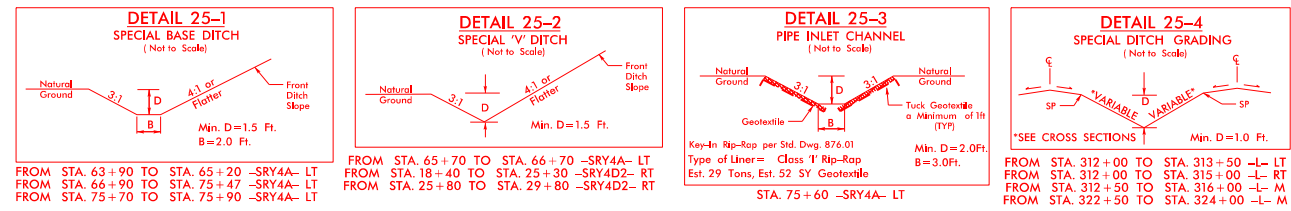


6/23/16

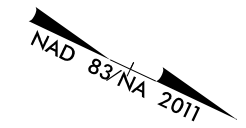
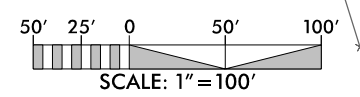
0510	PROJ. REFERENCE NO.	SHEET NO.
	R-5777C	SRY4D-4



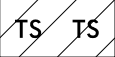
PERMIT DRAWING
SHEET 75 OF 89
DATE: 1/15/2024



15/2024
R-577C-Hyd-prm-wet-psh-25.dgn
dalam



 SURFACE WATER IMPACTS

 TEMPORARY SURFACE WATER IMPACTS

PROJECT REFERENCE NO. <i>R-5777C</i>		SHEET NO. 25
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION		
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION		
Balfour Beatty 		
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		

PERMIT DRAWING
SHEET 76 OF 89

DATE: 1/15/2024

MATCHLINE -SR4A-
STA 63+90 (SHEET 24)

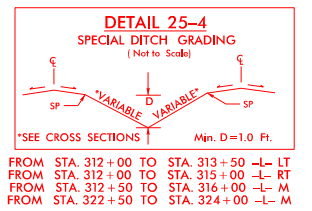
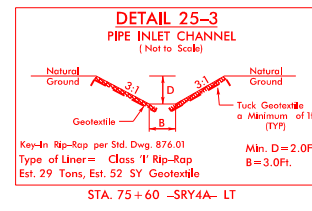
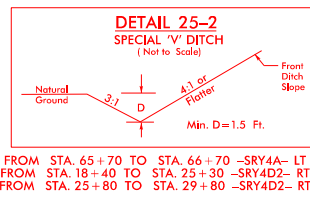
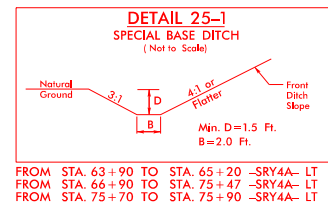
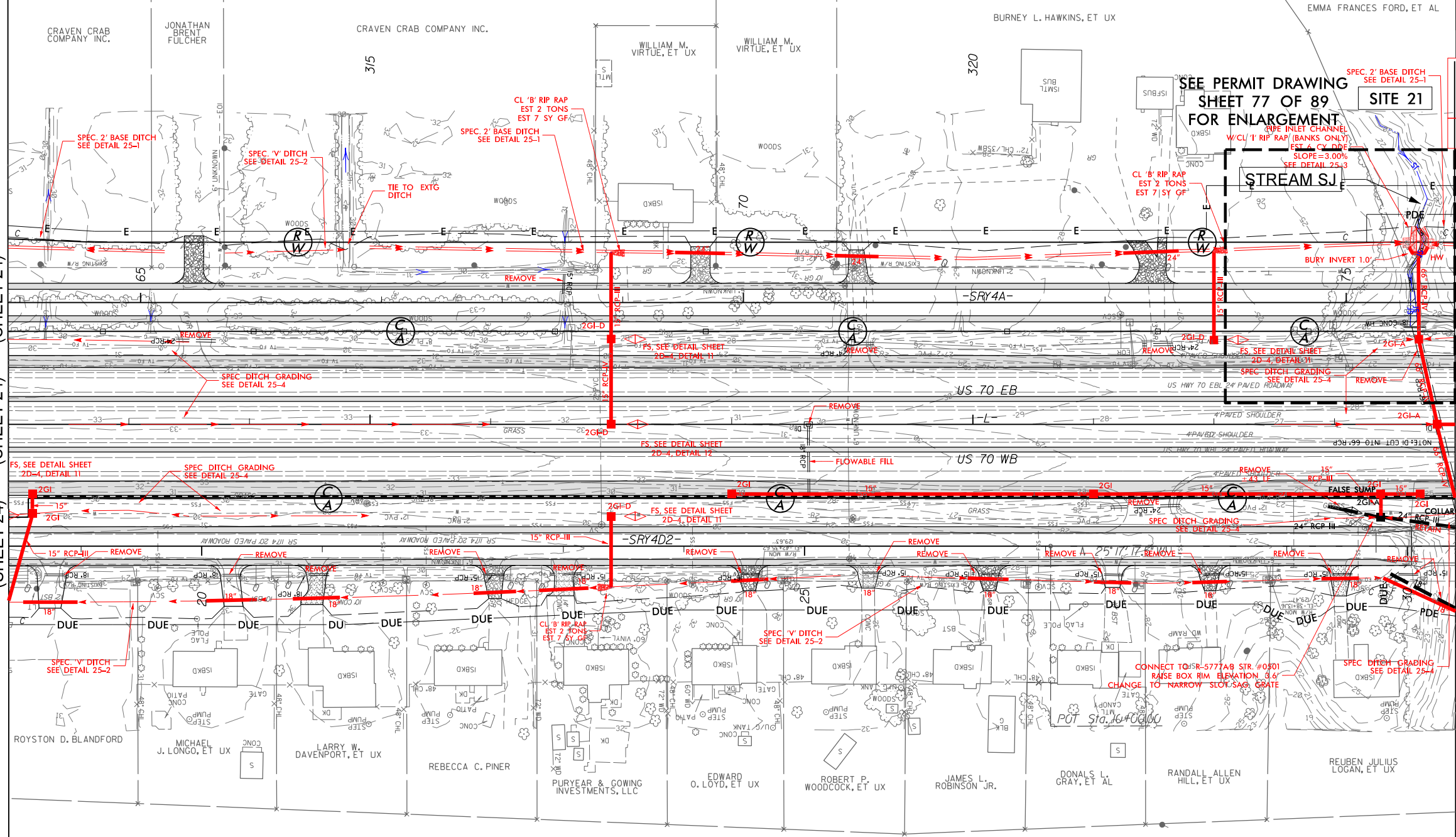
MATCHLINE -L- STA 312+00 (SHEET 24)

MATCHLINE -SR4D2-
STA 18+40 (SHEET 24)

MATCHLINE -SR4A-
STA 75+90 (SHEET 26)

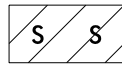
MATCHLINE -L- STA 324+00 (SHEET 26)

MATCHLINE -SR4D2-
STA 30+40 (SHEET 26)



1/15/2024
R-5777C-Hyd.prm-wet.psh_25-1.dgn

8/17/99



SURFACE WATER IMPACTS



TEMPORARY SURFACE WATER IMPACTS

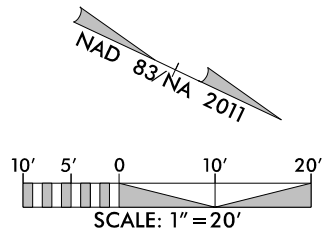
E

E

SITE 21

STREAM SJ

PIPE INLET CHANNEL
W/CL 'I' RIP RAP (BANKS ONLY)
EST __ TONS, EST __ SY GF
SEE DETAIL 25-3



PROJECT REFERENCE NO.		SHEET NO.	
R-5777C			
R/W SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION			

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING
SHEET 77 OF 89

DATE: 1/15/2024

PDE

SPEC. 3' BASE DITCH
SEE DETAIL 26-1

BURY INVERT 1.0'

HW

75+00

76+00

-SRY4A-

WOODS

18' CONC HW

CA

CA

8" PLASTIC

2GI-A

REMOVE

US HWY 70 EBL 24' PAVED ROADWAY

US 70 EB

5/14/99

200

100

0

100

200

PROJECT REFERENCE NO. <i>R-5777C</i>	SHEET NO.
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING
SHEET 78 OF 89

DATE: 1/15/2024

SITE 21

CL STA 323+86 -L-
1@66" RCP (BURIED 1.0')

40

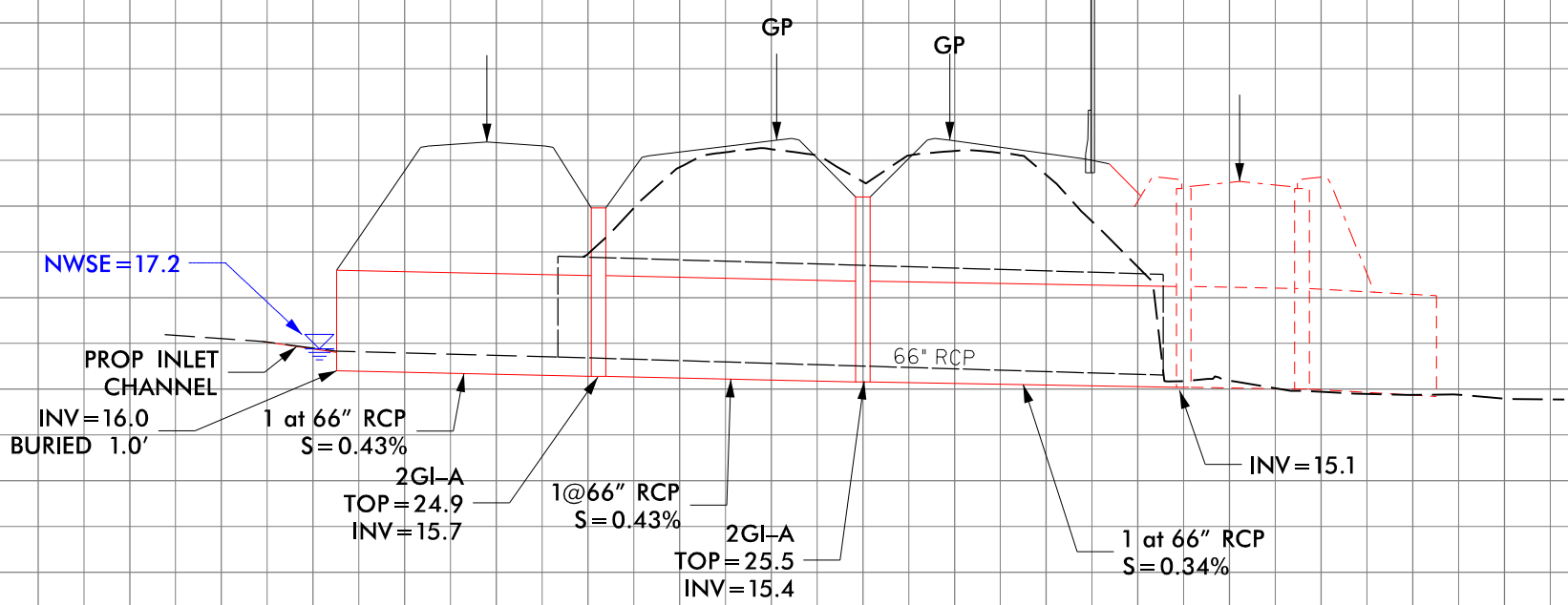
30

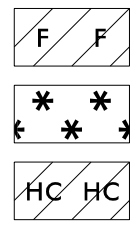
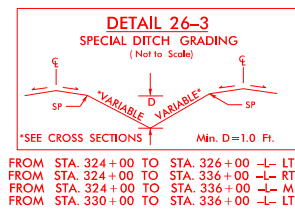
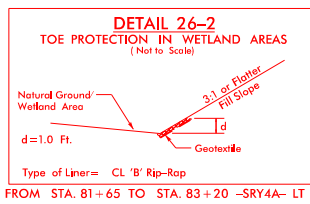
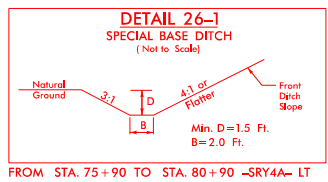
20

10

CL STA 75+60 -SRY4A-
1@66" RCP (BURIED 1.0')

-SRY21C-
U-5713 /R-5777A&B
1@66" RCP (BURIED 1.0')

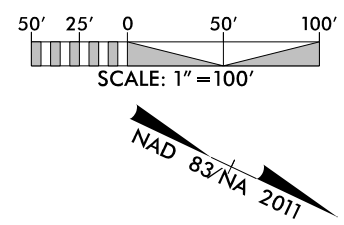




FILL IN WETLAND

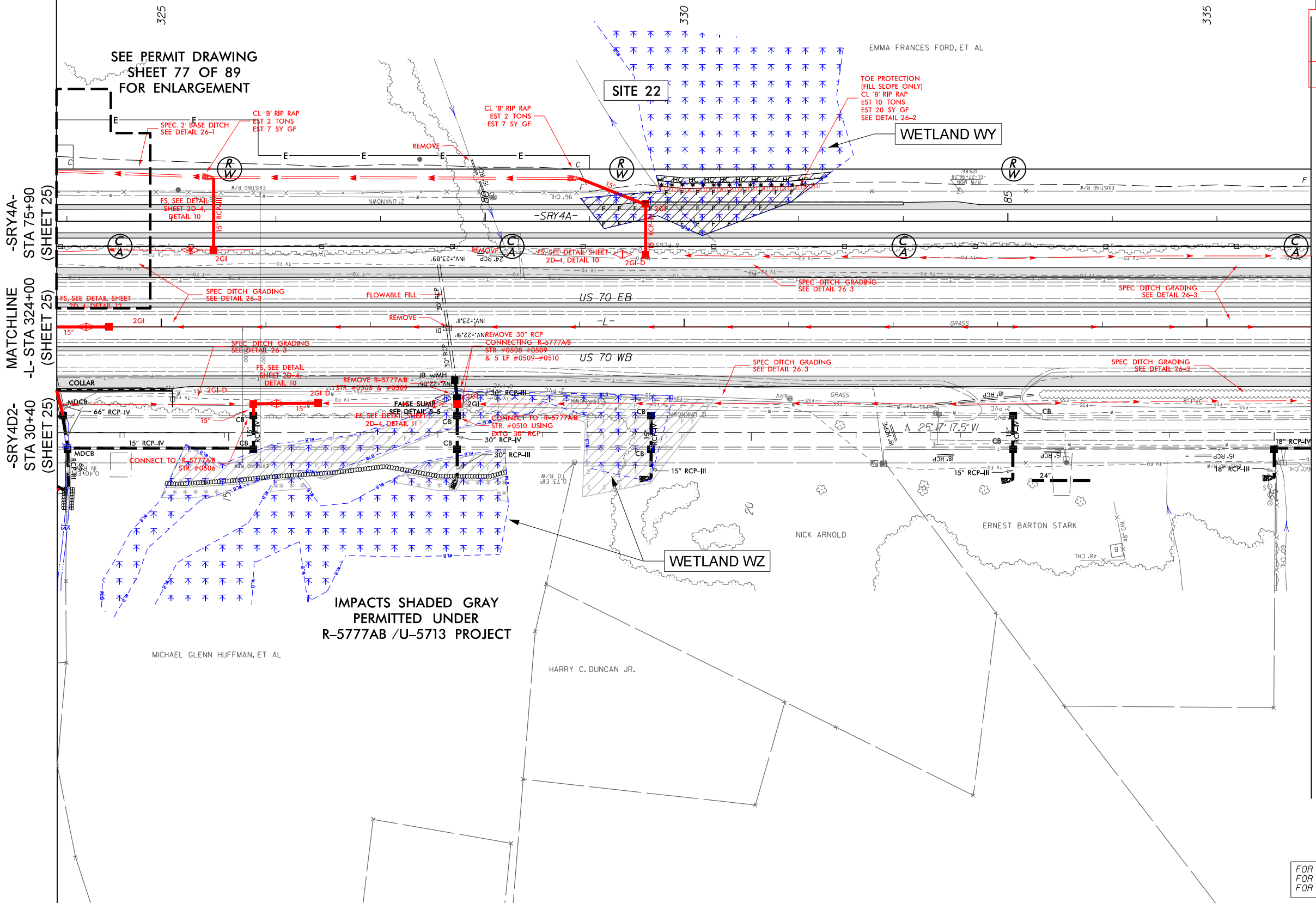
MECHANIZED CLEARING

HAND CLEARING



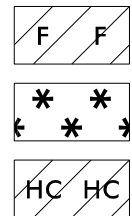
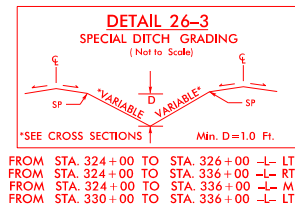
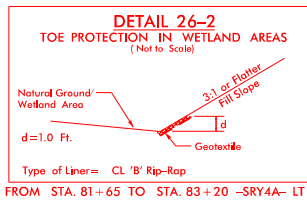
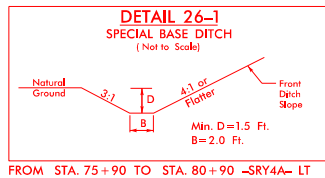
PROJECT REFERENCE NO. R-5777C		SHEET NO. 26	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION			
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION			
Balfour Beatty stv			
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			

PERMIT DRAWING
SHEET 79 OF 89
DATE: 1/15/2024

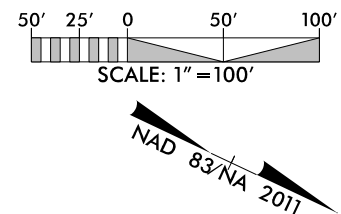


1/15/2024
R-5777C-Hyd.prm-wet.psh_26.dgn
bent

FOR -LLT- PROFILE SEE SHEETS 57 & 58
FOR -LRT- PROFILE SEE SHEETS 57 & 58
FOR -SRY4A- PROFILE SEE SHEET 95



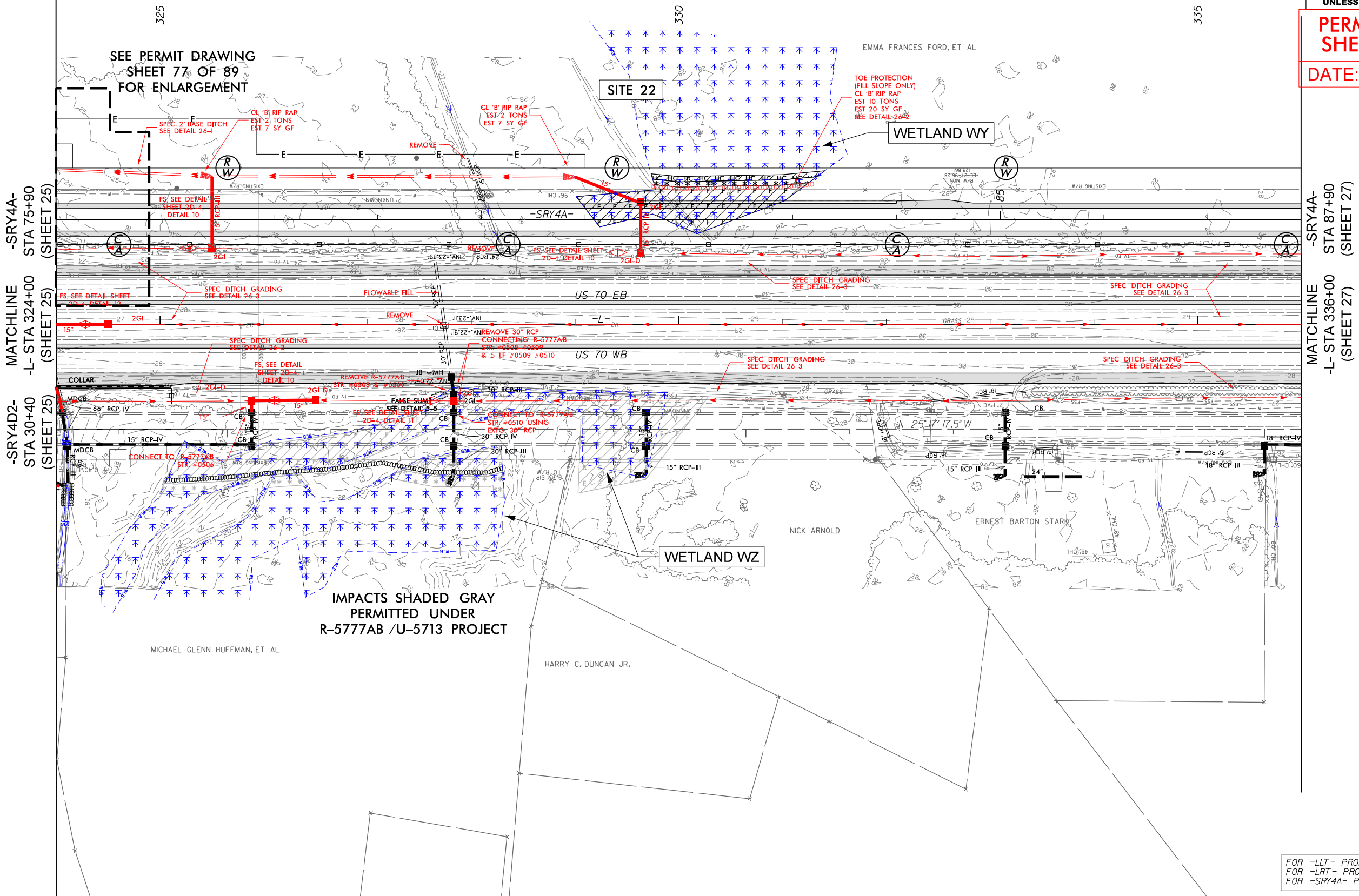
F F FILL IN WETLAND
* * MECHANIZED CLEARING
HC HC HAND CLEARING



PROJECT REFERENCE NO. R-5777C	SHEET NO. 26
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION	
Balfour Beatty st	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

PERMIT DRAWING
SHEET 80 OF 89

DATE: 1/15/2024



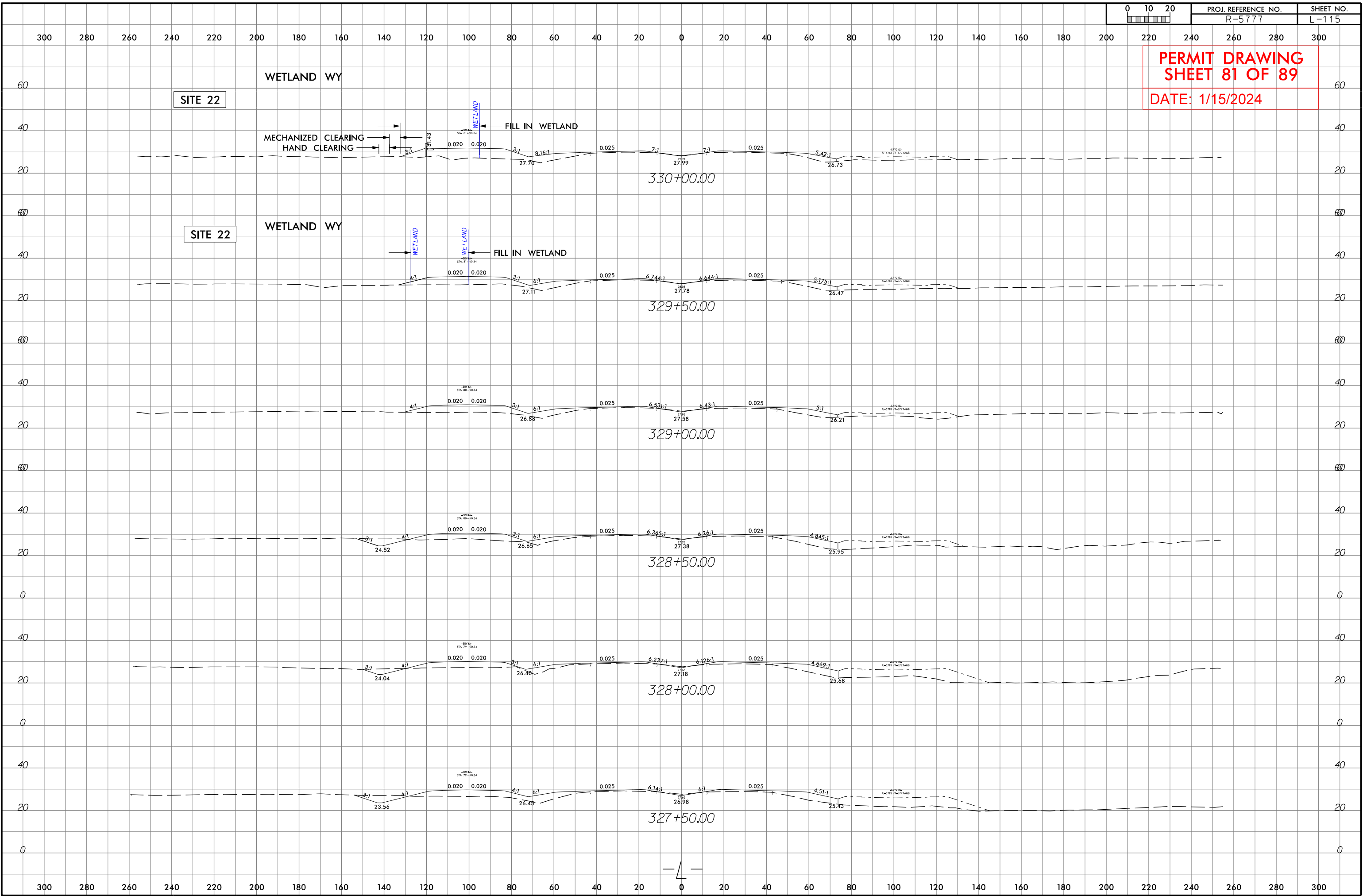
1/15/2024
R-5777C-Hyd.prm-wet.psh-26-1.dgn
Bentley

FOR -LLT- PROFILE SEE SHEETS 57 & 58
FOR -LRT- PROFILE SEE SHEETS 57 & 58
FOR -SRY4A- PROFILE SEE SHEET 95

6/23/16

010	PROJ. REFERENCE NO.	SHEET NO.
0 10 20	R-5777	L-115

PERMIT DRAWING
SHEET 81 OF 89
DATE: 1/15/2024





6/23/16

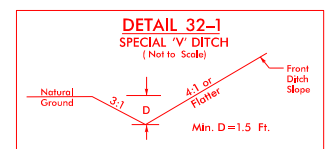
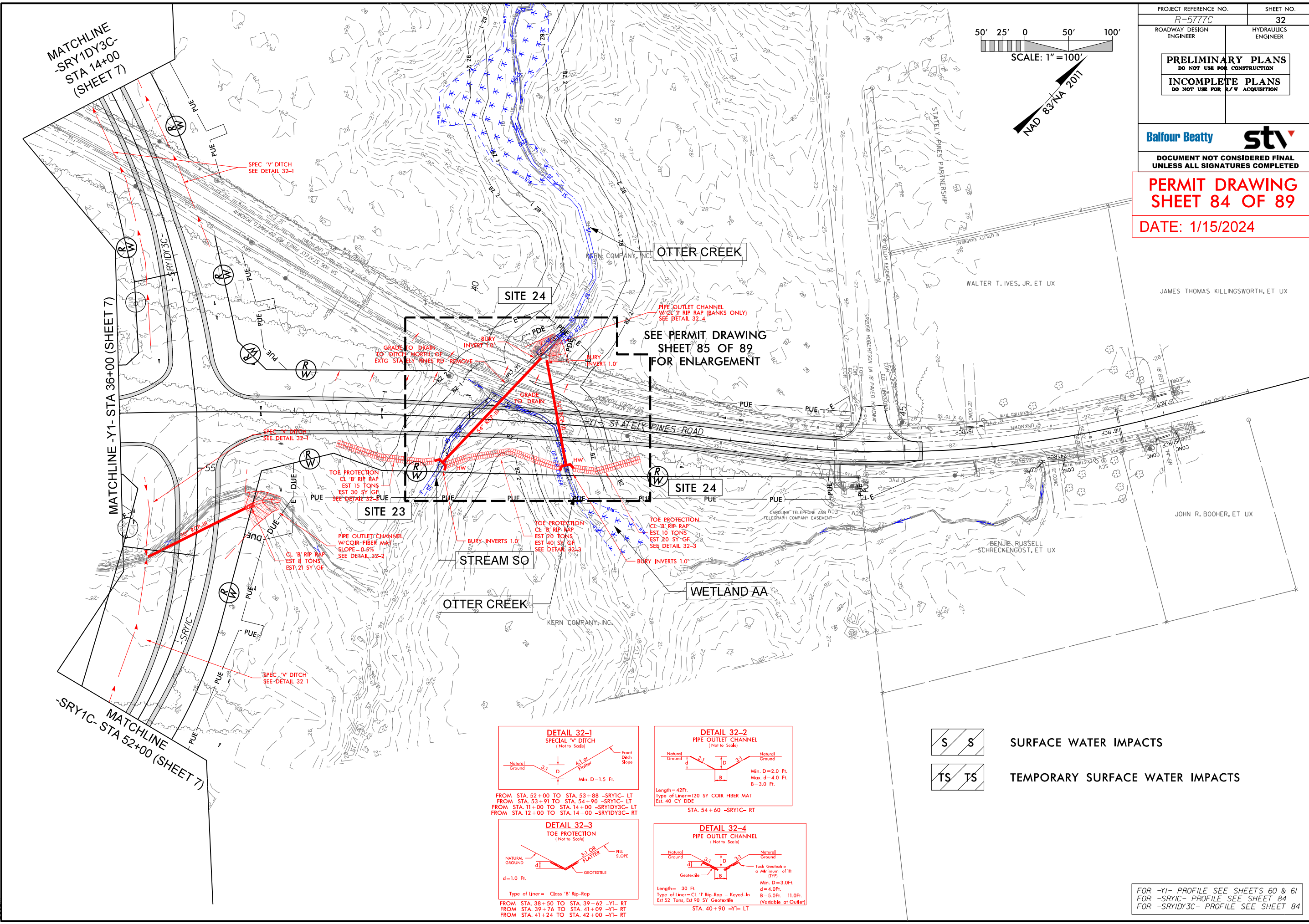
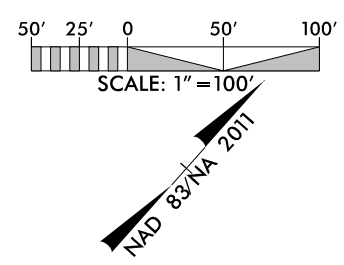




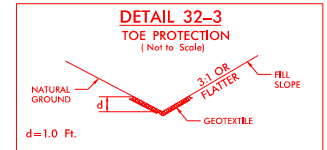
PROJECT REFERENCE NO.	SHEET NO.
R-5777C	32
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION	

Balfour Beatty **st**
DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

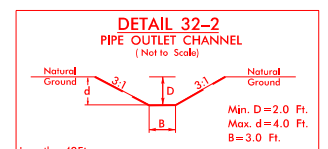
PERMIT DRAWING
SHEET 84 OF 89
DATE: 1/15/2024



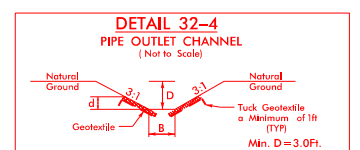
FROM STA. 52+00 TO STA. 53+88 -SR1C- LT
FROM STA. 53+91 TO STA. 54+90 -SR1C- LT
FROM STA. 11+00 TO STA. 14+00 -SR1DY3C- LT
FROM STA. 12+00 TO STA. 14+00 -SR1DY3C- RT



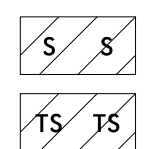
Type of Liner= Class 'B' Rip-Rap
FROM STA. 38+50 TO STA. 39+62 -Y1- RT
FROM STA. 39+76 TO STA. 41+09 -Y1- RT
FROM STA. 41+24 TO STA. 42+00 -Y1- RT



Length= 42Ft.
Type of Liner=120 SY COIR FIBER MAT
Est. 40 CY DDE
STA. 54+60 -SR1C- RT



Length= 30 Ft.
Type of Liner=CL 'T' Rip-Rap - Keyed-In
Est 52 Tons, Est 90 SY Geotextile
STA. 40+90 -Y1- LT

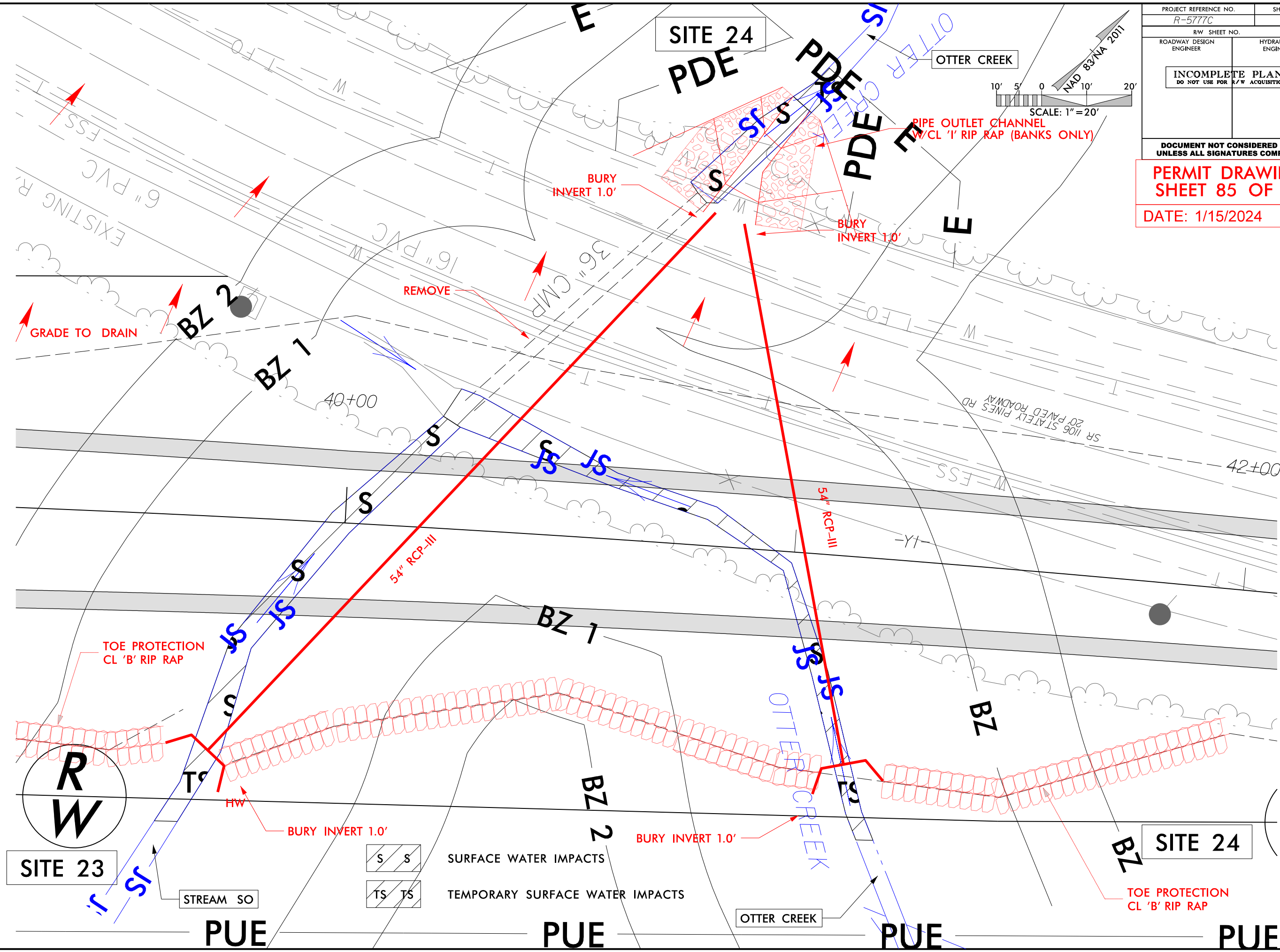


SURFACE WATER IMPACTS
TEMPORARY SURFACE WATER IMPACTS

FOR -Y1- PROFILE SEE SHEETS 60 & 61
FOR -SR1C- PROFILE SEE SHEET 84
FOR -SR1DY3C- PROFILE SEE SHEET 84

8/17/99

I:\5\2024
R-5777C-Hyd.prm_wet_psh_32-2-View1.dgn
celcom



PROJECT REFERENCE NO. R-5777C		SHEET NO.	
RW SHEET NO.		HYDRAULICS ENGINEER	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION			
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			
PERMIT DRAWING SHEET 85 OF 89			
DATE: 1/15/2024			

WETLAND AND SURACE WATER IMPACTS SUMMARY												
			WETLAND IMPACTS					SURFACE WATER IMPACTS				
Site No.	Station (From/To)	Structure Size / Type	Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
1	14+56 to 15+65-L-	1@7'x7' RCBC	0.005			0.006		0.006		40		
	15+16 to 15+65-L-LT	INLET CHANNEL						0.005	0.004	19	19	
	14+56 to 14+87-L-RT	OUTLET CHANNEL						0.015	0.002	54	11	
2	20+07 to 20+70-L-LT	ROADWAY FILL				0.010						
	22+60 to 22+81-L-LT					0.001						
3	29+31 to 29+62-SRY1C-LT	42" RCP	0.007									
4	29+69 to 29+80-SRY1C-RT	42" RCP				0.001						
5	29+70 to 32+33-Y1-	ROADWAY FILL	0.494			0.080	0.001					
	18+37 to 22+01-Y1LPD-											
	26+34-26+38-Y1RPD-LT											
6	14+31 to 16+39-SRY1DY3C-	30" RCP	0.121			0.030	0.032					
7	56+14 to 56+26-L-RT	66" RCP OUTLET CHANNEL						0.001	0.002	6	15	
	18+83 to 19+46 -Y1RPD-	66" RCP						0.010		91		
	18+81 to 18+94-Y1RPD-RT	INLET CHANNEL							0.002		15	
	18+85 to 18+94-Y1RPD-RT	INLET BANK STABILIZATION								20		
	19+20 to 19+46-Y1RPD-LT	OUTLET CHANNEL							0.001		13	
	19+20 to 19+37-Y1RPD-LT	OUTLET BANK STABILIZATION								25		
TOTALS*:			0.627	0.000	0.000	0.128	0.033	0.037	0.011	255	73	0

*Rounded totals are sum of actual impacts
NOTES:

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
1-15-2024
CRAVEN
R-5777C
44648.3.4

WETLAND AND SURACE WATER IMPACTS SUMMARY												
			WETLAND IMPACTS					SURFACE WATER IMPACTS				
Site No.	Station (From/To)	Structure Size / Type	Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
7	20+16 to 21+75-SRY1DY3C-	66" RCP	0.126			0.050	0.043	0.013		156		
	21+38 to 21+56-SRY1DY3C-LT	INLET CHANNEL							0.001		9	
	21+41 to 21+56-SRY1DY3C-LT	INLET BANK STABILIZATION								20		
	20+39 to 20+60-SRY1DY3C-	OUTLET CHANNEL						0.002	0.001	34	17	
8	63+34 to 63+43-L-RT	1@6'x7' RCBC OUTLET CHANNEL						0.004	0.003	23	15	
	29+06 to 29+10-SRY1DY3C-	1@7'x7' RCBC				0.007		0.007		67		
	29+05 to 29+10-SRY1DY3C-LT	INLET CHANNEL							0.002		22	
	29+05 to 29+10-SRY1DY3C-LT	INLET BANK STABILIZATION								30		
	29+15 to 29+33-SRY1DY3C-RT	OUTLET CHANNEL							0.002		28	
	29+15 to 29+29-SRY1DY3C-RT	OUTLET BANK STABILIZATION								30		
9	34+03 to 35+29-SRY1DY3C-RT	ROADWAY FILL	0.062			0.014	0.004					
10	42+04 to 42+30-SRY1DY3C-RT	ROADWAY FILL				0.002	0.002					
	11+24 to 12+95-Y1D2-RT	ROADWAY FILL	0.013		0.010		0.029					
11	49+26 to 49+33-SRY1DY3C-RT	36" RCP						0.001		14		
	49+28 to 49+32-SRY1DY3C-RT	OUTLET CHANNEL						0.001	0.001	12	15	
12	94+40 to 94+99-L-	60" RCP						0.008		105		
	61+06 to 61+14-SRY1DY3C-RT											
	94+40 to 94+53-L-LT	INLET CHANNEL							0.002		20	
	94+47 to 94+53-L-LT	INLET BANK STABILIZATION								16		
TOTALS*:			0.201	0.000	0.010	0.073	0.078	0.036	0.012	507	126	0

*Rounded totals are sum of actual impacts

NOTES:

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
1-15-2024
CRAVEN
R-5777C
44648.3.4

WETLAND AND SURACE WATER IMPACTS SUMMARY												
			WETLAND IMPACTS					SURFACE WATER IMPACTS				
Site No.	Station (From/To)	Structure Size / Type	Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
13	103+70 to 103+91-L-RT	48" RCP						0.003		18		
	103+70 to 103+79-L-RT	OUTLET CHANNEL						0.001	0.001	20	11	
14	25+64 to 25+84-SRY4B-	1@7'x7' RCBC						0.001		7		
	25+68 to 25+83-SRY4B-RT	INLET CHANNEL							0.003		18	
	25+72 to 25+83-SRY4B-RT	INLET BANK STABILIZATION								25		
	25+64 to 25+84-SRY4B-LT	OUTLET CHANNEL							0.001		10	
	25+68 to 25+84-SRY4B-LT	OUTLET BANK STABILIZATION								30		
	202+88 to 203+25-L-LT	1 at 7'x7' RCBC						0.001		11		
	202+95 to 203+14-L-LT	OUTLET CHANNEL						0.004	0.003	31	21	
15	201+66 to 203+45-L-RT	2@7'x7' RCBC	0.099		0.043	0.033	0.089					
16	220+32 to 220+55-L-LT	54" RCP						0.004		33		
	220+43 to 220+55-L-LT	OULET CHANNEL						0.002	0.001	20	7	
17	231+01 to 232+19-L-RT	ROADWAY FILL	0.004		0.019	0.016						
18	234+52 to 236+79-L-	72" RCP						0.017		223		
	235+03 to 235+22-L-RT	INLET CHANNEL						0.001	0.001	26	10	
	236+47 to 236+79-L-LT	OUTLET CHANNEL						0.002	0.002	16	21	
TOTALS*:			0.103	0.000	0.062	0.049	0.089	0.036	0.012	460	98	0

*Rounded totals are sum of actual impacts

NOTES:

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
1-15-2024
CRAVEN
R-5777C
44648.3.4

WETLAND AND SURACE WATER IMPACTS SUMMARY												
			WETLAND IMPACTS					SURFACE WATER IMPACTS				
Site No.	Station (From/To)	Structure Size / Type	Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
19	68+13 to 69+40-SRY4B-LT	ROADWAY FILL	0.022			0.025						
	70+47 to 71+03-SRY4B-LT		0.010			0.012						
20	18+84 to 19+61-SRY4D-	ROADWAY FILL	0.069			0.008	0.005					
21	323+61 to 323+76-L-LT	66" RCP						0.006		64		
	323+61 to 323+69-L-LT	INLET CHANNEL						0.002	0.001	23	12	
22	329+01 to 331+42-L-LT	ROADWAY FILL	0.138			0.018	0.019					
23	39+61 to 40+24-Y1-	54" RCP						0.011	0.002	93	18	
24	40+20 to 41+30-Y1-	54" RCP						0.012	0.001	126	18	
	40+71 to 41+03-Y1-LT	OUTLET CHANNEL						0.005	0.001	30	10	
	TOTAL	SHEET 84 OF 87	0.627	0.000	0.000	0.128	0.033	0.037	0.011	255	73	0
	TOTAL	SHEET 85 OF 87	0.201	0.000	0.010	0.073	0.078	0.036	0.012	507	126	0
	TOTAL	SHEET 86 OF 87	0.103	0.000	0.062	0.049	0.089	0.036	0.012	460	98	0
	TOTAL	SHEET 87 OF 87	0.239	0.000	0.000	0.063	0.024	0.036	0.005	336	58	0
TOTALS*:			1.170	0.000	0.072	0.313	0.224	0.145	0.040	1558	355	0

*Rounded totals are sum of actual impacts

NOTES:

Site 20: Wetland WP Total Take West of -SRY4D- Due to Loss of Function: 0.039 ac (Impacts not included in table above)

Fill Mitigation = 2:1, Total Take Mitigation = 1:1

NC DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 1-15-2024
 CRAVEN
 R-5777C
 44648.3.4

1/16/2024
R-5777C-Hyd.prm_wet_util_psh_01.dgn
Belam

CONTRACT: C204695

TIP PROJECT: R-5777C

See Sheet 1A For Index of Sheets
See Sheet 1B For Standard Symbology Sheet

Submittal February 6, 2024

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PERMIT DRAWING
SHEET 1 OF 14
DATE: 1/15/2024

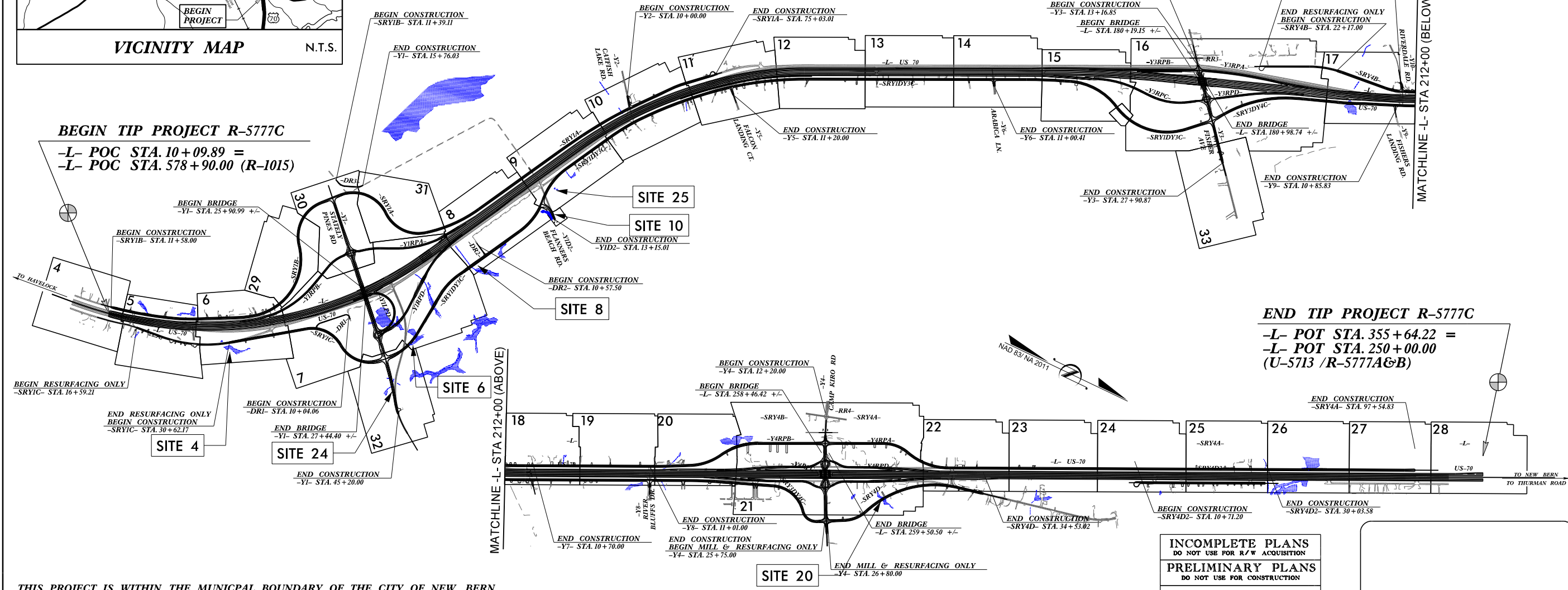
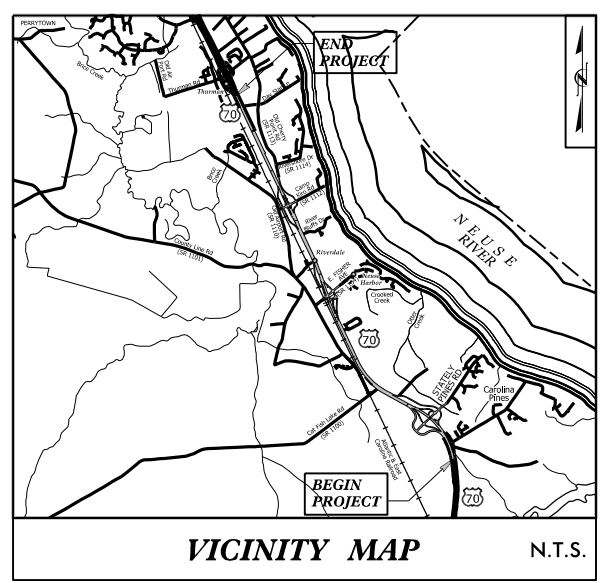
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-5777C	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
44648.3.4	N/A	DESIGN-BUILD	

CRAVEN COUNTY

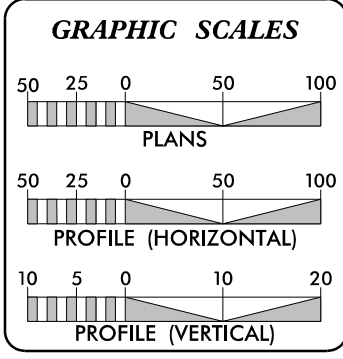
LOCATION: U.S. 70 FROM THE HAVELOCK BYPASS TO EAST OF S.R. 1116 (THURMAN ROAD)

TYPE OF WORK: GRADING, DRAINAGE, PAVING, SIGNING, ITS AND STRUCTURES

UTILITY WETLAND AND SURFACE WATER IMPACTS PERMIT



THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARY OF THE CITY OF NEW BERN
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III.
THIS IS A CONTROLLED ACCESS PROJECT WITH ACCESS BEING LIMITED TO INTERCHANGES.

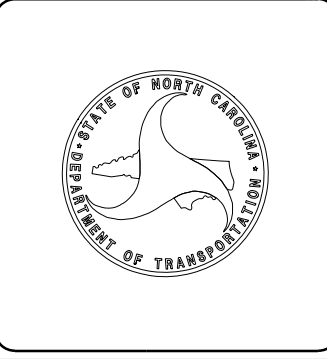


DESIGN DATA	
ADT 2019 =	31,800
ADT 2045 =	41,800
K =	9%
D =	55%
T =	8%*
V =	75 MPH
* (TTST = 3% + DUAL 5%)	
FUNC. CLASSIFICATION =	
INTERSTATE	
STATEWIDE TIER	

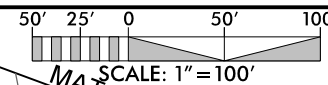
PROJECT LENGTH	
LENGTH ROADWAY TIP PROJECT R-5777C =	6.486 MILES
LENGTH STRUCTURE TIP PROJECT R-5777C =	0.058 MILES
TOTAL LENGTH OF TIP PROJECT R-5777C =	6.544 MILES
NCDOT CONTACT:	BYRON KYLE NCDOT - DESIGN-BUILD UNIT

PLANS PREPARED FOR THE NCDOT BY:	
Balfour Beatty	stv NC LICENSE NUMBER F-0991 900 W TRADE ST STE 715, CHARLOTTE, NC 28202
2018 STANDARD SPECIFICATIONS	
RIGHT OF WAY DATE: JANUARY 17, 2023	J. ADAM FREEMAN, PE PROJECT ENGINEER
LETTING DATE: JANUARY 17, 2023	NARONG PHAL, PE PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER	
SIGNATURE: _____	P.E.
ROADWAY DESIGN ENGINEER	
SIGNATURE: _____	P.E.

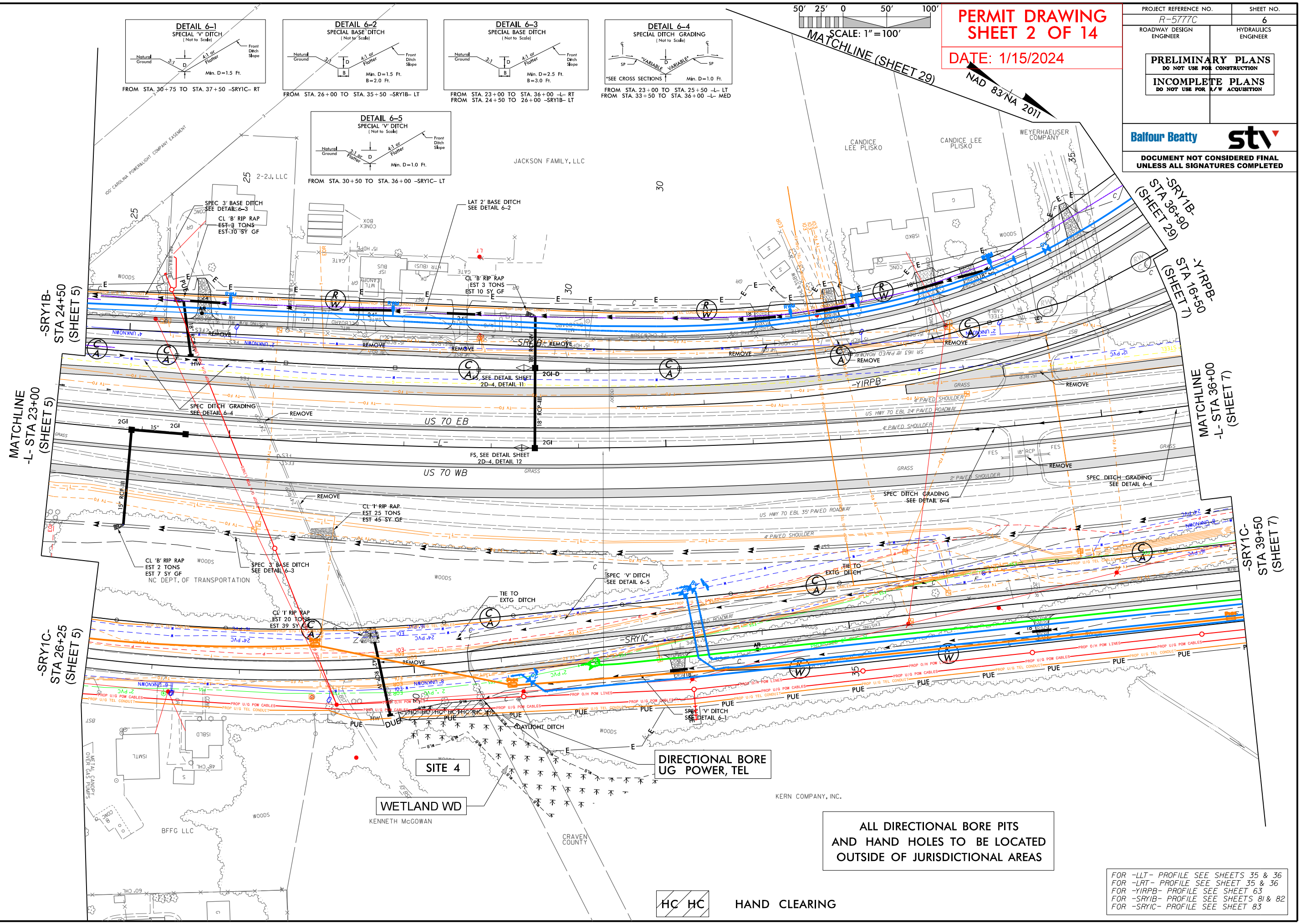


INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED



PERMIT DRAWING
SHEET 2 OF 14
DATE: 1/15/2024

PROJECT REFERENCE NO. <i>R-5777C</i>		SHEET NO. <i>6</i>	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION			
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION			
Balfour Beatty			
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			



ALL DIRECTIONAL BORE PITS
AND HAND HOLES TO BE LOCATED
OUTSIDE OF JURISDICTIONAL AREAS

FOR -LLT- PROFILE SEE SHEETS 35 & 36
FOR -LRT- PROFILE SEE SHEET 35 & 36
FOR -YIRPB- PROFILE SEE SHEET 63
FOR -SRYIB- PROFILE SEE SHEETS 81 & 82
FOR -SRYIC- PROFILE SEE SHEET 83

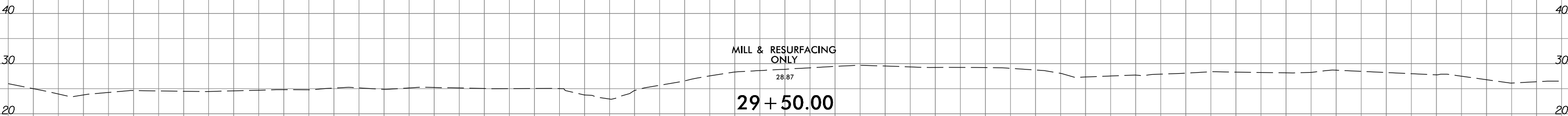
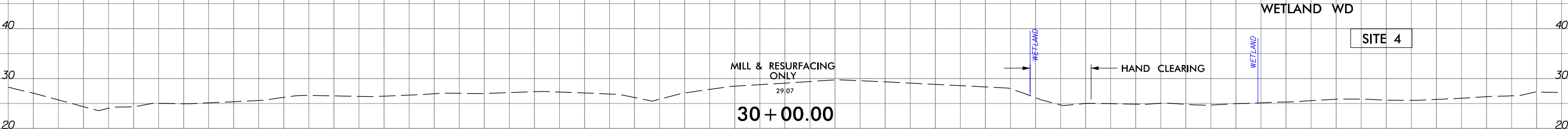
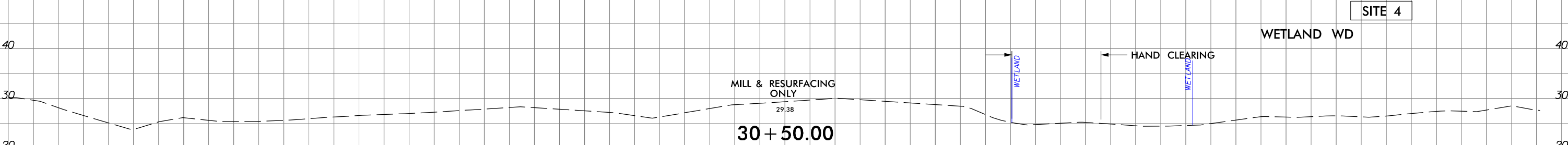
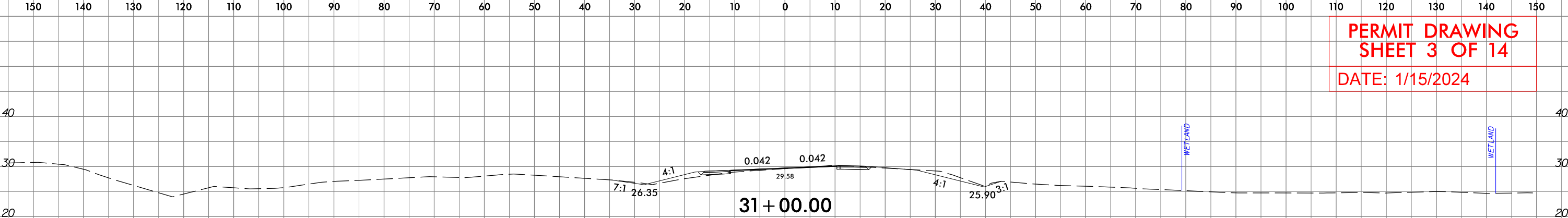
1/15/2024
R-5777C-Hyd.prm-wet.util_psh_06.dgn
Balfour Beatty

6/23/16

0510	PROJ. REFERENCE NO.	SHEET NO.
	R-5777C	SRY1C-8

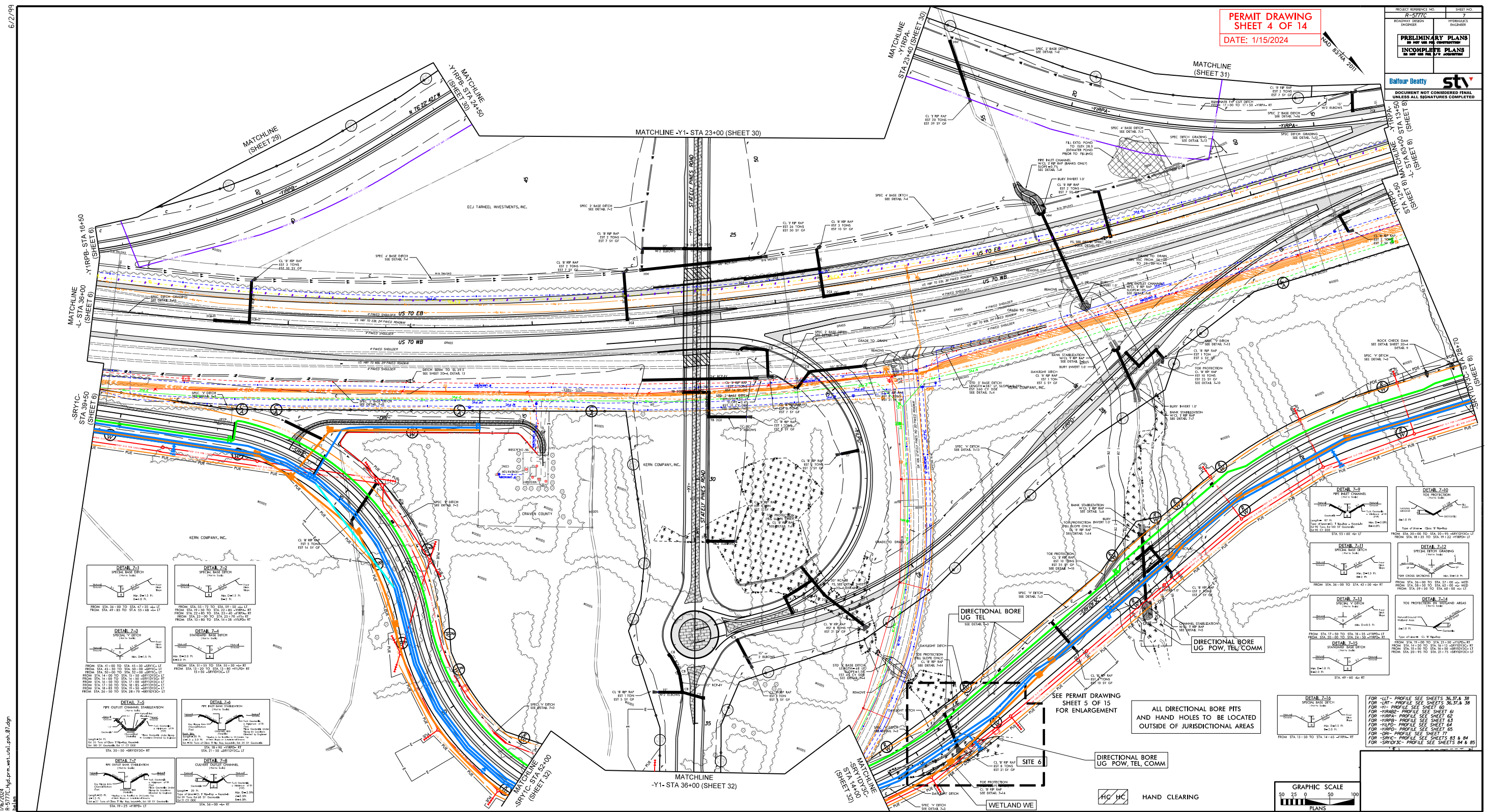
PERMIT DRAWING
 SHEET 3 OF 14

DATE: 1/15/2024



29+50.00

-SRY1C-



8/17/99

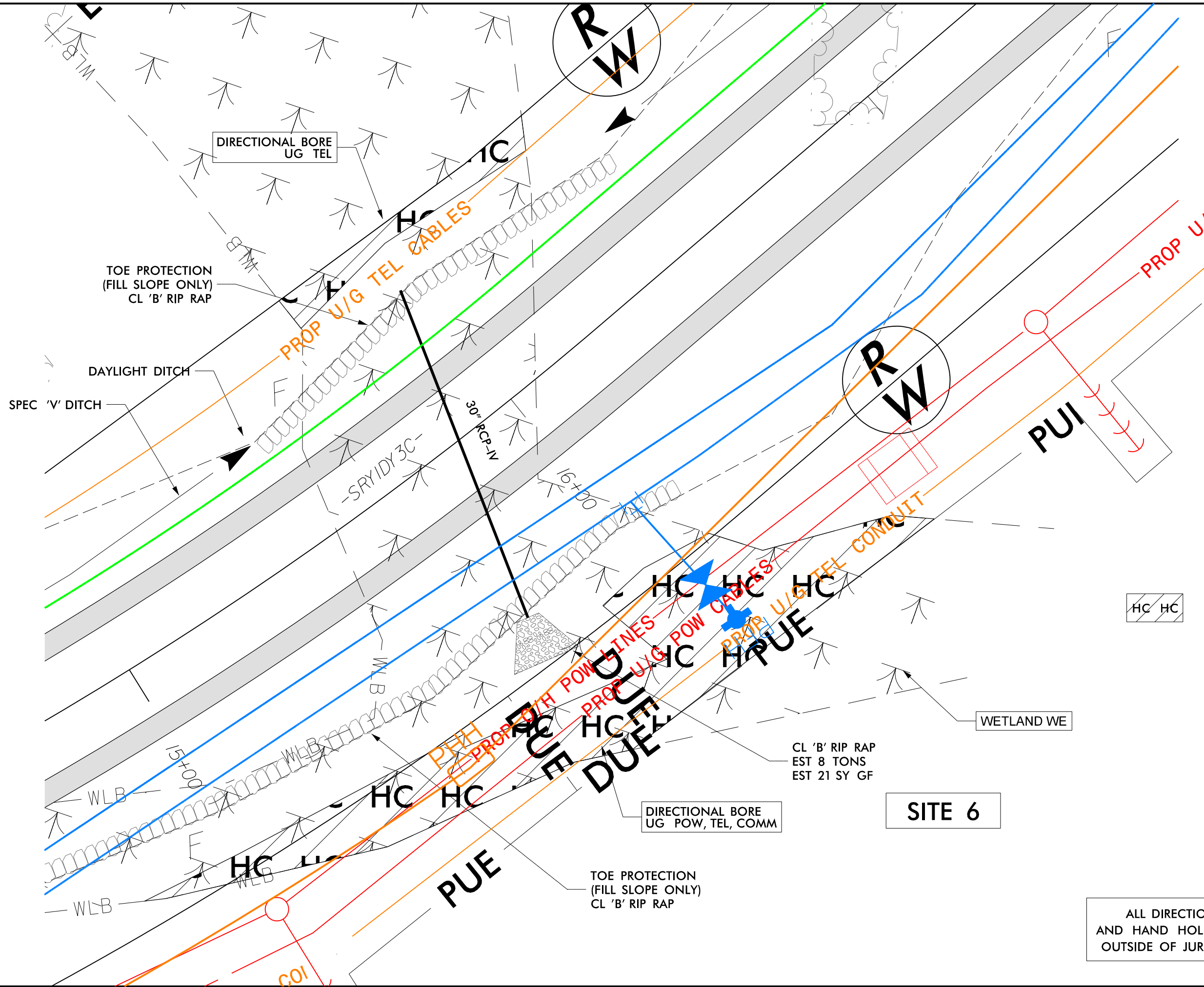
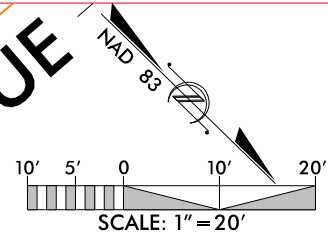
I:\16\2024
R-5777C-Hyd.prm-wet.util_psh-07-1-View1.dgn
02/06/2024

PROJECT REFERENCE NO.	SHEET NO.
R-5777C	
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING
SHEET 5 OF 14

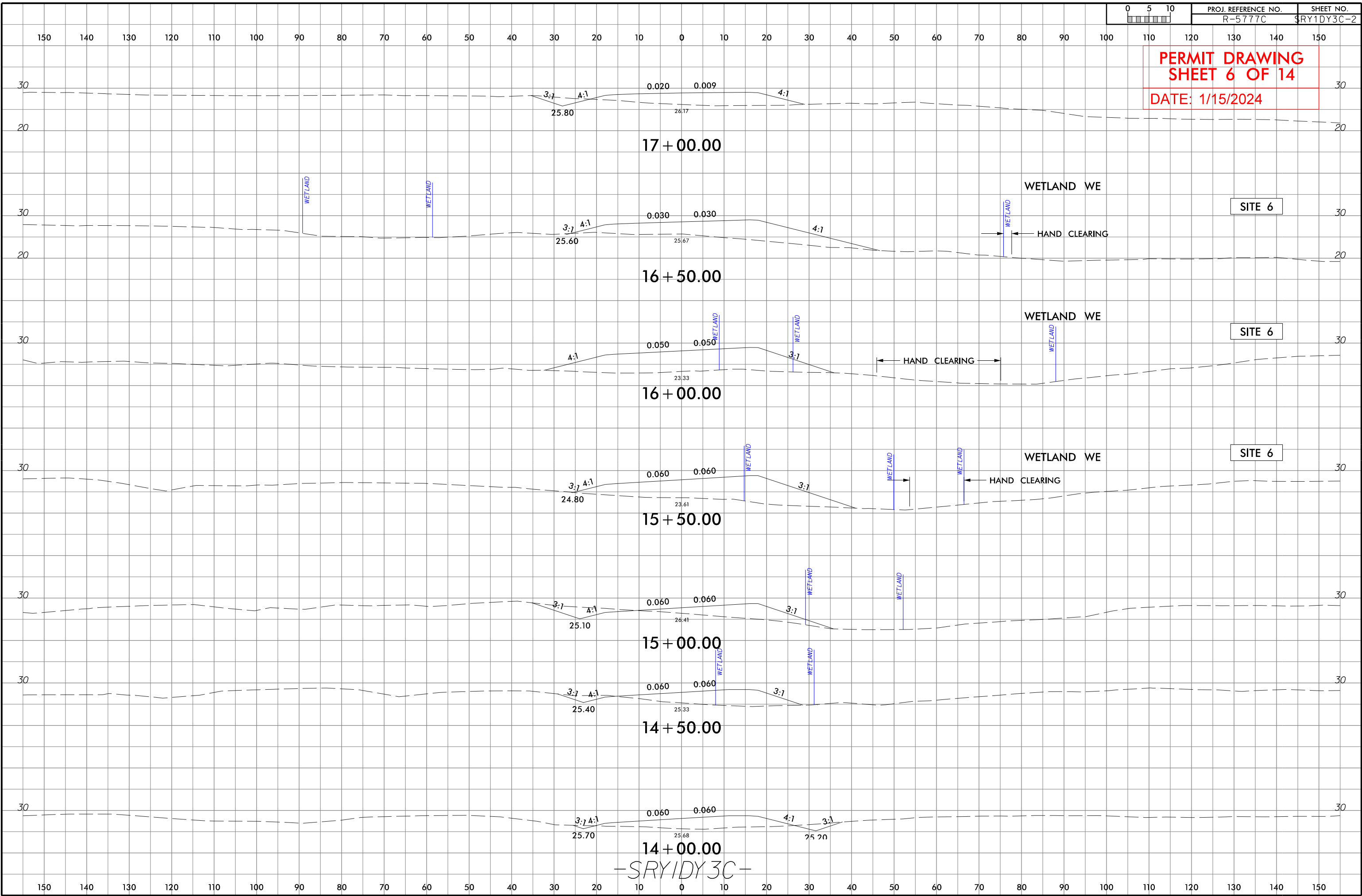
DATE: 1/15/2024

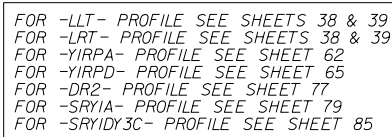


6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5777C	RY1DY3C-2

PERMIT DRAWING
SHEET 6 OF 14
DATE: 1/15/2024

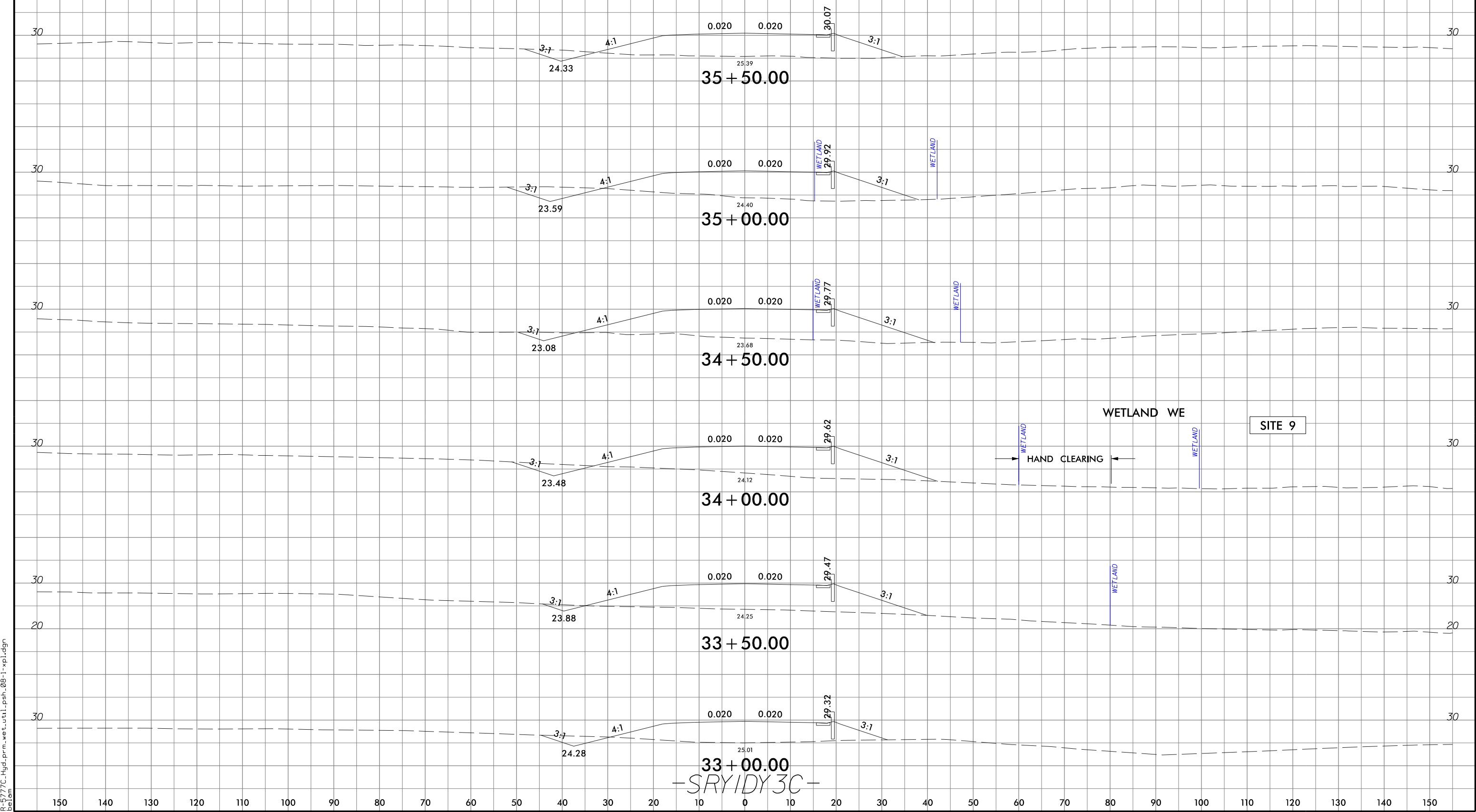




6/23/16

0	5	10	PROJ. REFERENCE NO.	SHEET NO.
			R-5777C	RY1DY3C-8

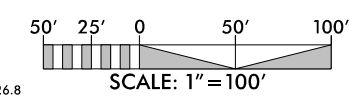
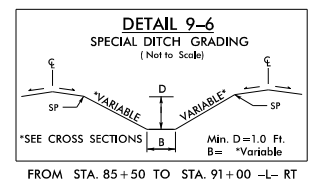
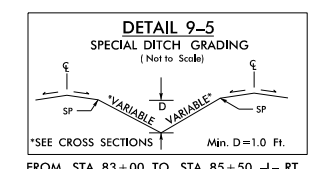
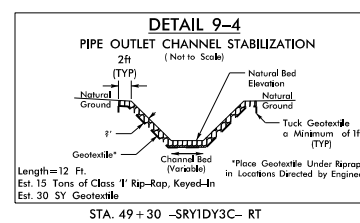
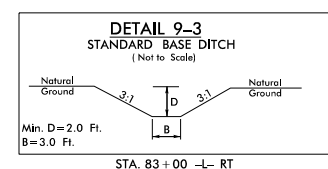
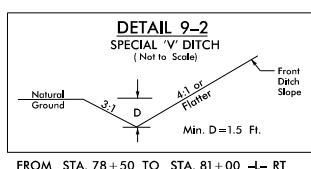
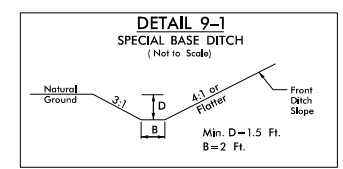
PERMIT DRAWING
SHEET 8 OF 14
DATE: 1/15/2024



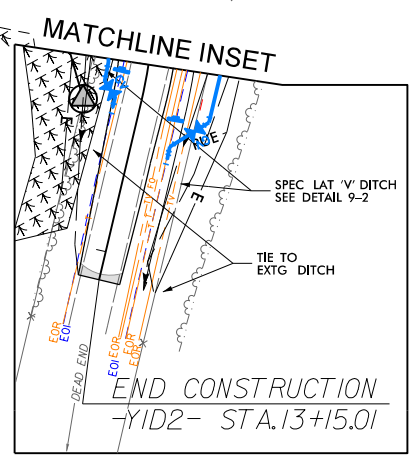
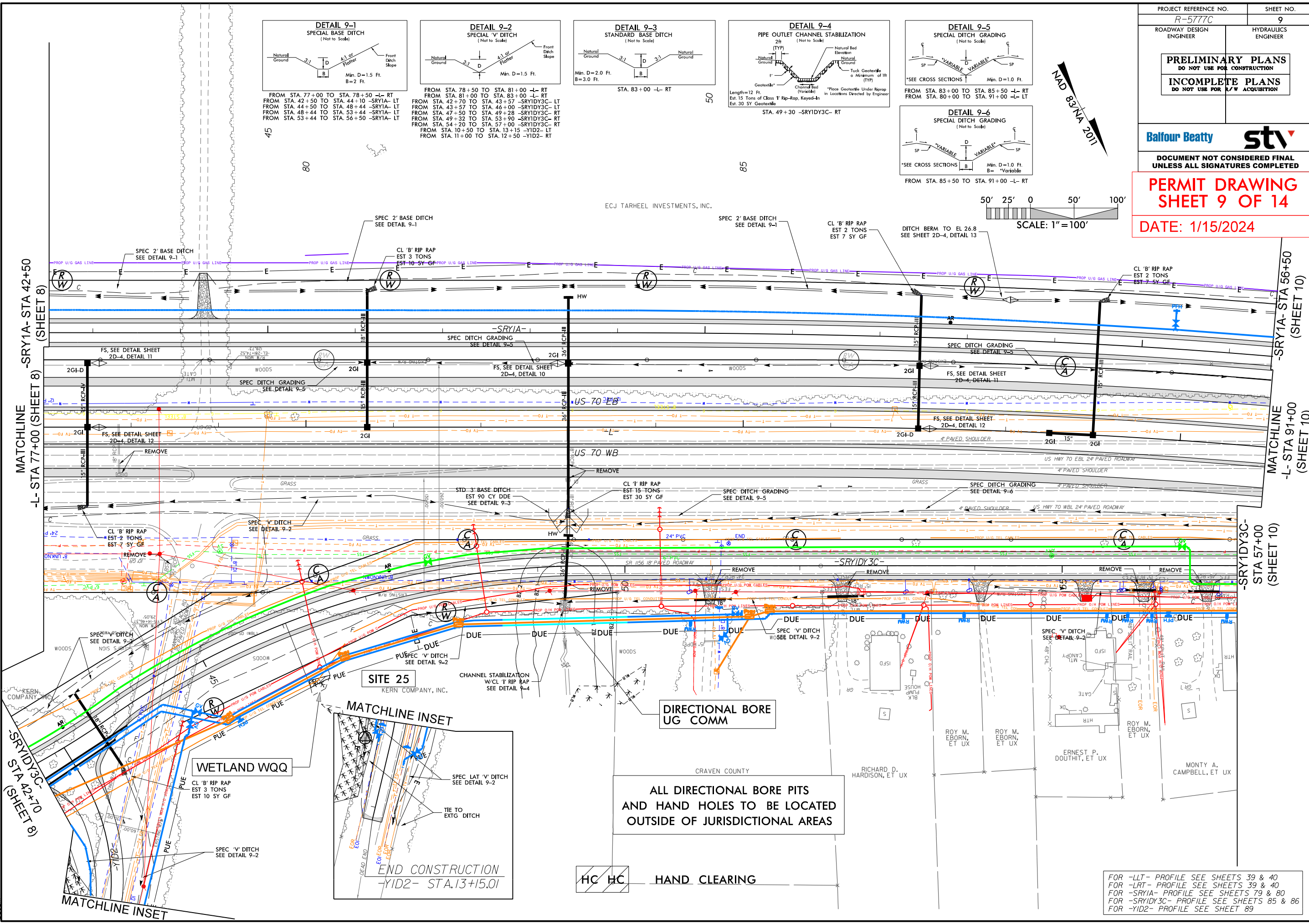
PROJECT REFERENCE NO.	SHEET NO.
R-5777C	9
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION	

Balfour Beatty **st**
DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING
SHEET 9 OF 14
DATE: 1/15/2024

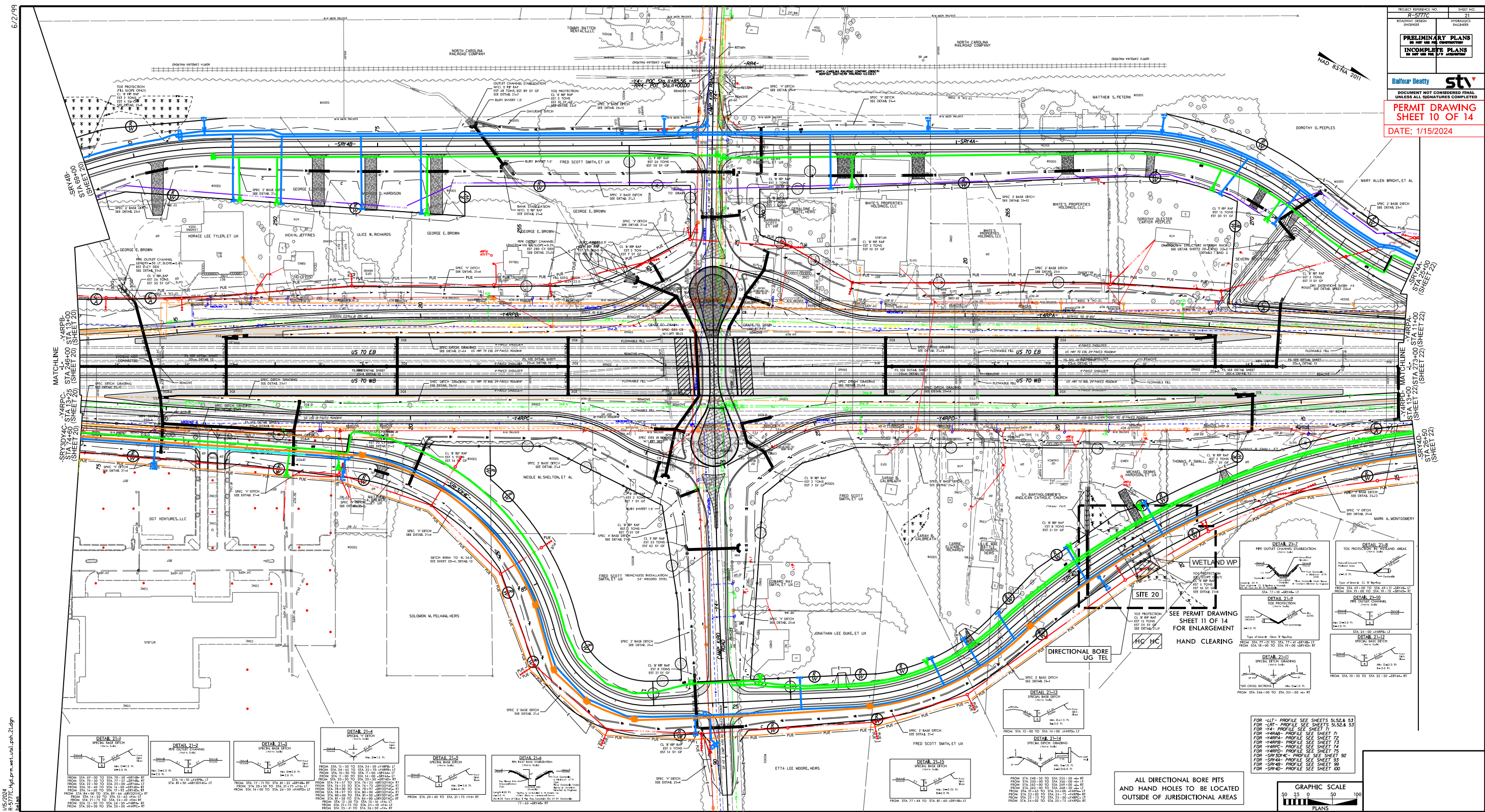


NAD 83/NA 2011



ALL DIRECTIONAL BORE PITS
AND HAND HOLES TO BE LOCATED
OUTSIDE OF JURISDICTIONAL AREAS

FOR -LLT- PROFILE SEE SHEETS 39 & 40
FOR -LRT- PROFILE SEE SHEETS 39 & 40
FOR -SRYIA- PROFILE SEE SHEETS 79 & 80
FOR -SRYIDY3C- PROFILE SEE SHEETS 85 & 86
FOR -YID2- PROFILE SEE SHEET 89

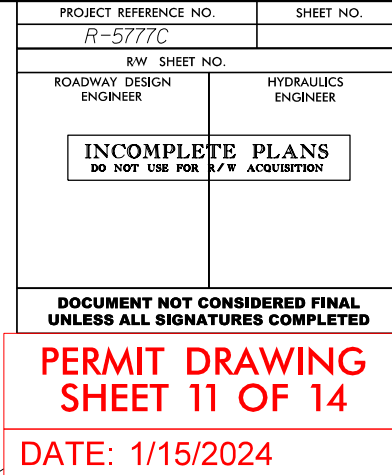


PROJECT REFERENCE NO. R-577C
SHEET NO. 21
PRELIMINARY PLANS
INCOMPLETE PLANS
Balfour Beatty stv
DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED
PERMIT DRAWING
SHEET 10 OF 14
DATE: 1/15/2024

1/5/2024
R-577C-Hd.prm-ws-utl-ash-21.dgn

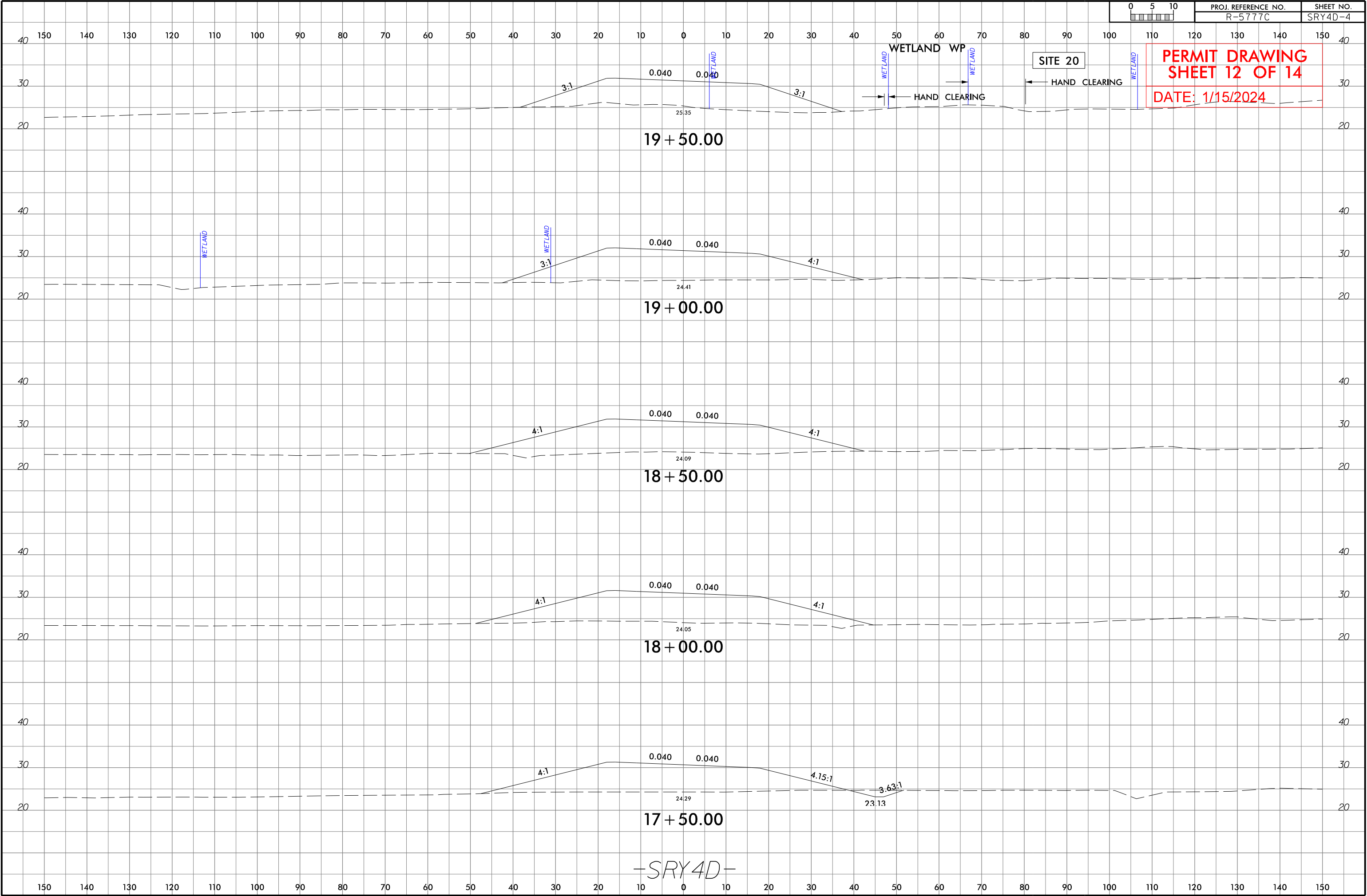
FOR -LIT- PROFILE SEE SHEETS 54.52& 53
FOR -LIT- PROFILE SEE SHEETS 54.52& 53
FOR -LIT- PROFILE SEE SHEET 71
FOR -LIT- PROFILE SEE SHEET 72
FOR -LIT- PROFILE SEE SHEET 73
FOR -LIT- PROFILE SEE SHEET 74
FOR -LIT- PROFILE SEE SHEET 75
FOR -LIT- PROFILE SEE SHEET 76
FOR -LIT- PROFILE SEE SHEET 77
FOR -LIT- PROFILE SEE SHEET 78
FOR -LIT- PROFILE SEE SHEET 79
FOR -LIT- PROFILE SEE SHEET 80
FOR -LIT- PROFILE SEE SHEET 81
FOR -LIT- PROFILE SEE SHEET 82
FOR -LIT- PROFILE SEE SHEET 83
FOR -LIT- PROFILE SEE SHEET 84
FOR -LIT- PROFILE SEE SHEET 85
FOR -LIT- PROFILE SEE SHEET 86
FOR -LIT- PROFILE SEE SHEET 87
FOR -LIT- PROFILE SEE SHEET 88
FOR -LIT- PROFILE SEE SHEET 89
FOR -LIT- PROFILE SEE SHEET 90
FOR -LIT- PROFILE SEE SHEET 91
FOR -LIT- PROFILE SEE SHEET 92
FOR -LIT- PROFILE SEE SHEET 93
FOR -LIT- PROFILE SEE SHEET 94
FOR -LIT- PROFILE SEE SHEET 95
FOR -LIT- PROFILE SEE SHEET 96
FOR -LIT- PROFILE SEE SHEET 97
FOR -LIT- PROFILE SEE SHEET 98
FOR -LIT- PROFILE SEE SHEET 99
FOR -LIT- PROFILE SEE SHEET 100

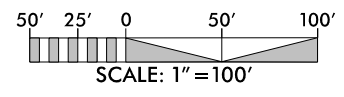
GRAPHIC SCALE
0 25 50 100
PLANS



6/23/16

0510	PROJ. REFERENCE NO.	SHEET NO.
	R-5777C	SRY4D-4

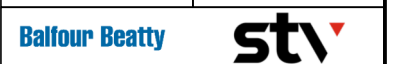




PROJECT REFERENCE NO.	SHEET NO.
R-5777C	32
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

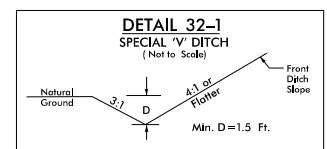
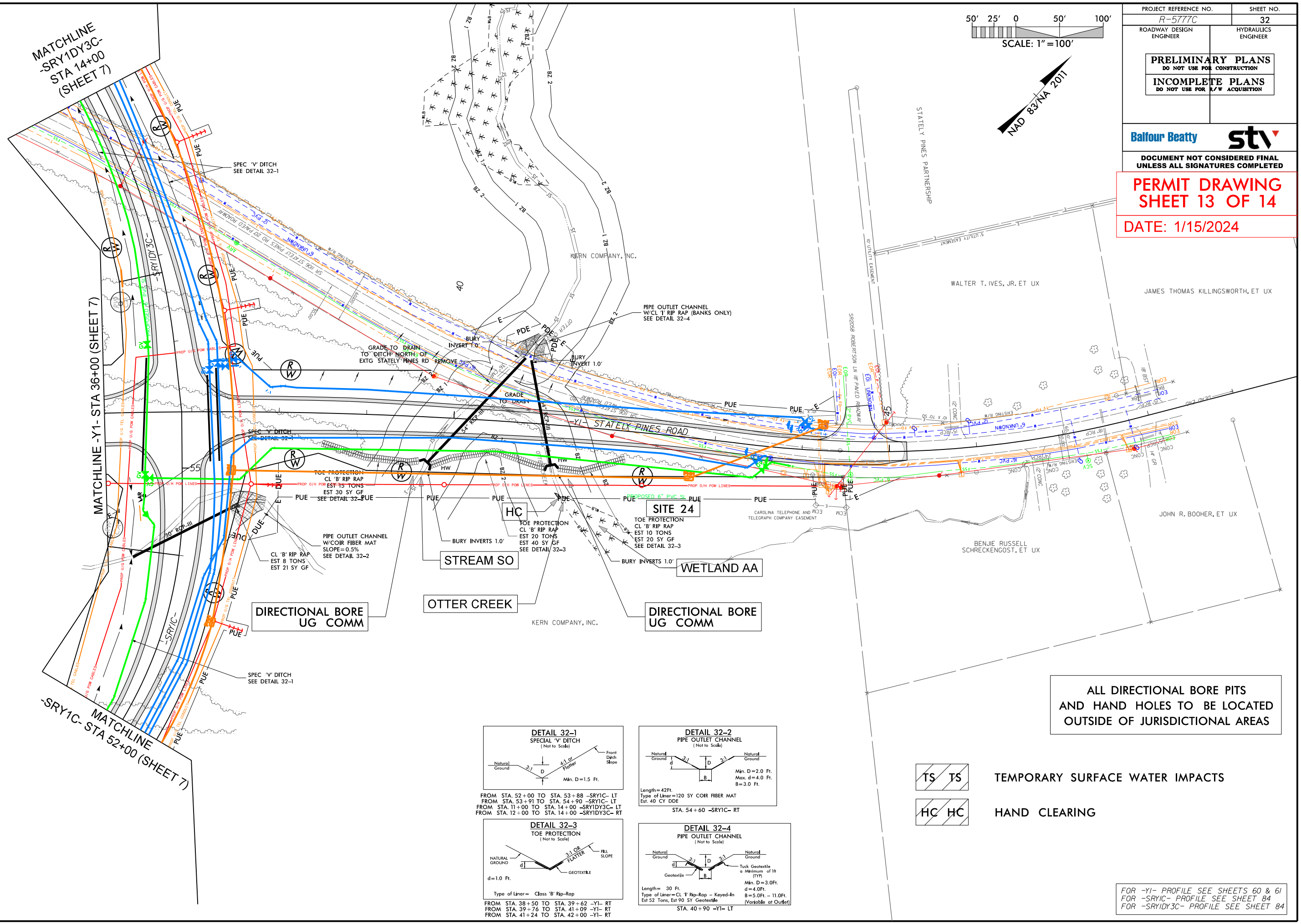
INCOMPLETE PLANS
DO NOT USE FOR A/W ACQUISITION



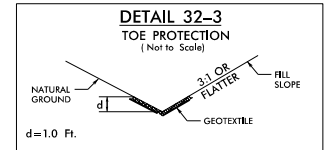
DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING
SHEET 13 OF 14

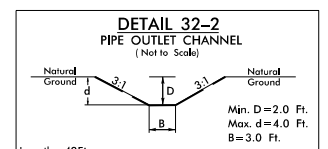
DATE: 1/15/2024



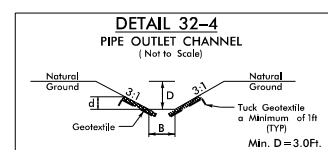
FROM STA. 52+00 TO STA. 53+88 -SR1C- LT
FROM STA. 53+91 TO STA. 54+90 -SR1C- LT
FROM STA. 11+00 TO STA. 14+00 -SR1DY3C- LT
FROM STA. 12+00 TO STA. 14+00 -SR1DY3C- RT



Type of Liner = Class 'B' Rip-Rap
FROM STA. 38+50 TO STA. 39+62 -Y1- RT
FROM STA. 39+76 TO STA. 41+09 -Y1- RT
FROM STA. 41+24 TO STA. 42+00 -Y1- RT



Length = 42 ft.
Type of Liner = 120 SY COIR FIBER MAT
Est. 40 CY DDE
STA. 54+60 -SR1C- RT



Length = 30 ft.
Type of Liner = CL '1' Rip-Rap - Keyed-In
Est 52 Tons, Est 90 SY Geotextile
STA. 40+90 -Y1- LT

TS TS

TEMPORARY SURFACE WATER IMPACTS

HC HC

HAND CLEARING

ALL DIRECTIONAL BORE PITS
AND HAND HOLES TO BE LOCATED
OUTSIDE OF JURISDICTIONAL AREAS

FOR -Y1- PROFILE SEE SHEETS 60 & 61
FOR -SR1C- PROFILE SEE SHEET 84
FOR -SR1DY3C- PROFILE SEE SHEET 84

WETLAND AND SURACE WATER IMPACTS SUMMARY												
			WETLAND IMPACTS					SURFACE WATER IMPACTS				
Site No.	Station (From/To)	Structure Size / Type	Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
4	29+79 to 30+89-SRY1C-RT	UTILITY					0.037					
6	15+01 to 16+52-SRY1DY3C-RT	UTILITY					0.065					
9	33+49 to 34+26-SRY1DY3C-RT	UTILITY					0.018					
10	42+03 to 42+44-SRY1DY3C-RT	UTILITY					0.029					
20	19+01 Tto 19+56-SRY4D-RT	UTILITY					0.032					
24	41+21 to 41+38-Y1-RT	UTILITY					0.001					
25	46+04 to 46+32-SRY1DY3C-RT	UTILITY					0.003					
TOTALS*:			0.000	0.000	0.000	0.000	0.185	0.000	0.000	0.000	0.000	0.000

*Rounded totals are sum of actual impacts
NOTES:
Site 10: Utility Pole Impacts (Fill -18" Diameter Pole) = 20 sf

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
1-15-2024
CRAVEN
R-5777C
44648.3.4

SHEET14OF14

Submittal February 6, 2024

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CRAVEN COUNTY

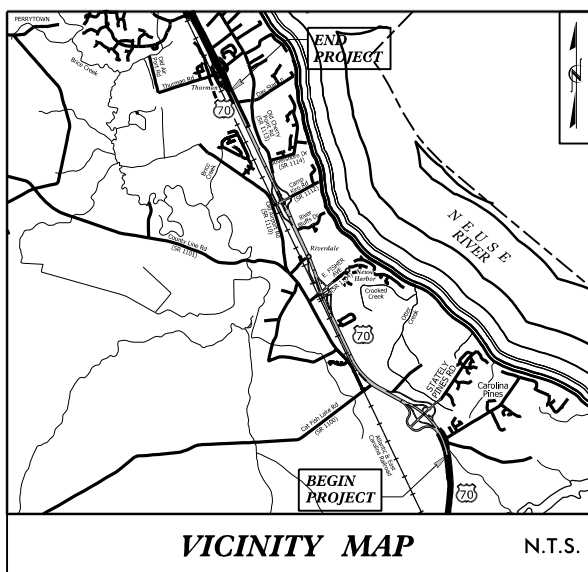
DATE: 1/15/2024

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-5777C	1	
STATE PROJ.NO.	F.A.PROJ.NO.	DESCRIPTION	
44648.3.4	N/A	DESIGN-BUILD	

LOCATION: U.S. 70 FROM THE HAVELOCK BYPASS TO EAST OF S.R. 1116 (THURMAN ROAD)

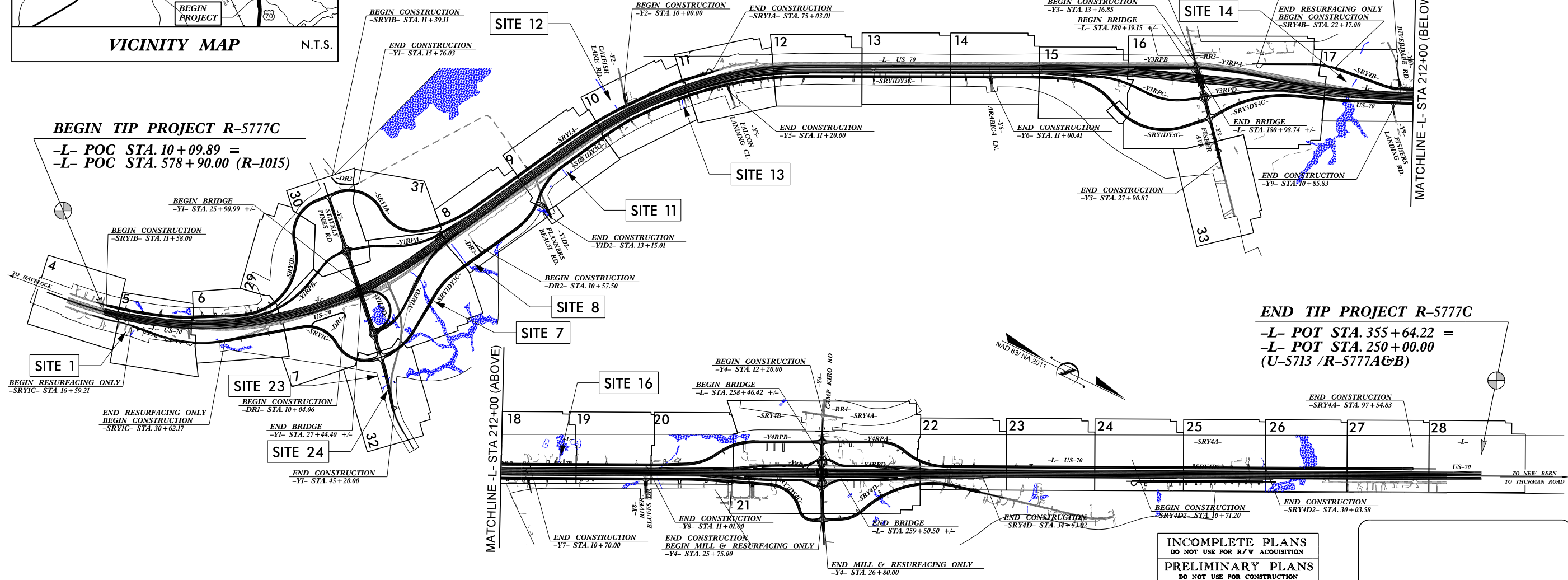
TYPE OF WORK: GRADING, DRAINAGE, PAVING, SIGNING, ITS AND STRUCTURES

BUFFER IMPACTS PERMIT



BEGIN TIP PROJECT R-5777C

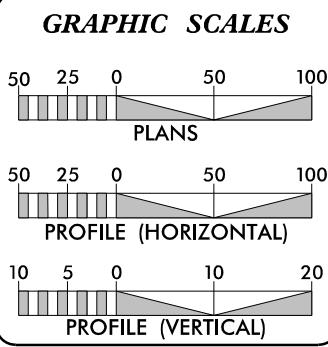
~~-L- POC STA. 10+09.89 =~~
~~-L- POC STA. 578+90.00 (R-1015)~~



END TIP PROJECT R-5777C

-L- POT STA. 355+64.22 =
-L- POT STA. 250+00.00
(U-5713 /R-5777A&B)

THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARY OF THE CITY OF NEW BERN
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III.
THIS IS A CONTROLLED ACCESS PROJECT WITH ACCESS BEING LIMITED TO INTERCHANGES.



DESIGN DATA

ADT 2019 = 31,800
ADT 2045 = 41,800
K = 9%
D = 55%
T = 8%*
V = 75 MPH
* (TTST=3%+DUAL 5%)

FUNC. CLASSIFICATION =
INTERSTATE
STATEWIDE TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT R-5777C = 6.486 MILES

LENGTH STRUCTURE TIP PROJECT R-5777C = 0.058 MILES

TOTAL LENGTH OF TIP PROJECT R-5777C = 6.544 MILES

NCDOT CONTACT: BYRON KYLE
NCDOT - DESIGN-BUILD UNIT

PLANS PREPARED FOR THE NCDOT BY:	 NC LICENSE NUMBER F-0991 900 W TRADE ST STE 715, CHARLOTTE, NC 28202
Balfour Beatty	
<i>2018 STANDARD SPECIFICATIONS</i>	
<u>RIGHT OF WAY DATE:</u> <u>JANUARY 17, 2023</u>	<u>J. ADAM FREEMAN, PE</u> <i>PROJECT ENGINEER</i>
<u>LETTING DATE:</u> <u>JANUARY 17, 2023</u>	<u>NARONG PHAL, PE</u> <i>PROJECT DESIGN ENGINEER</i>

HYDRAULICS ENGINEER

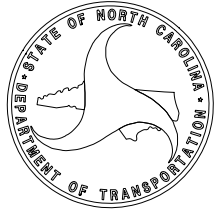
P.E.

SIGNATURE: _____

ROADWAY DESIGN ENGINEER

P.E.

SIGNATURE: _____

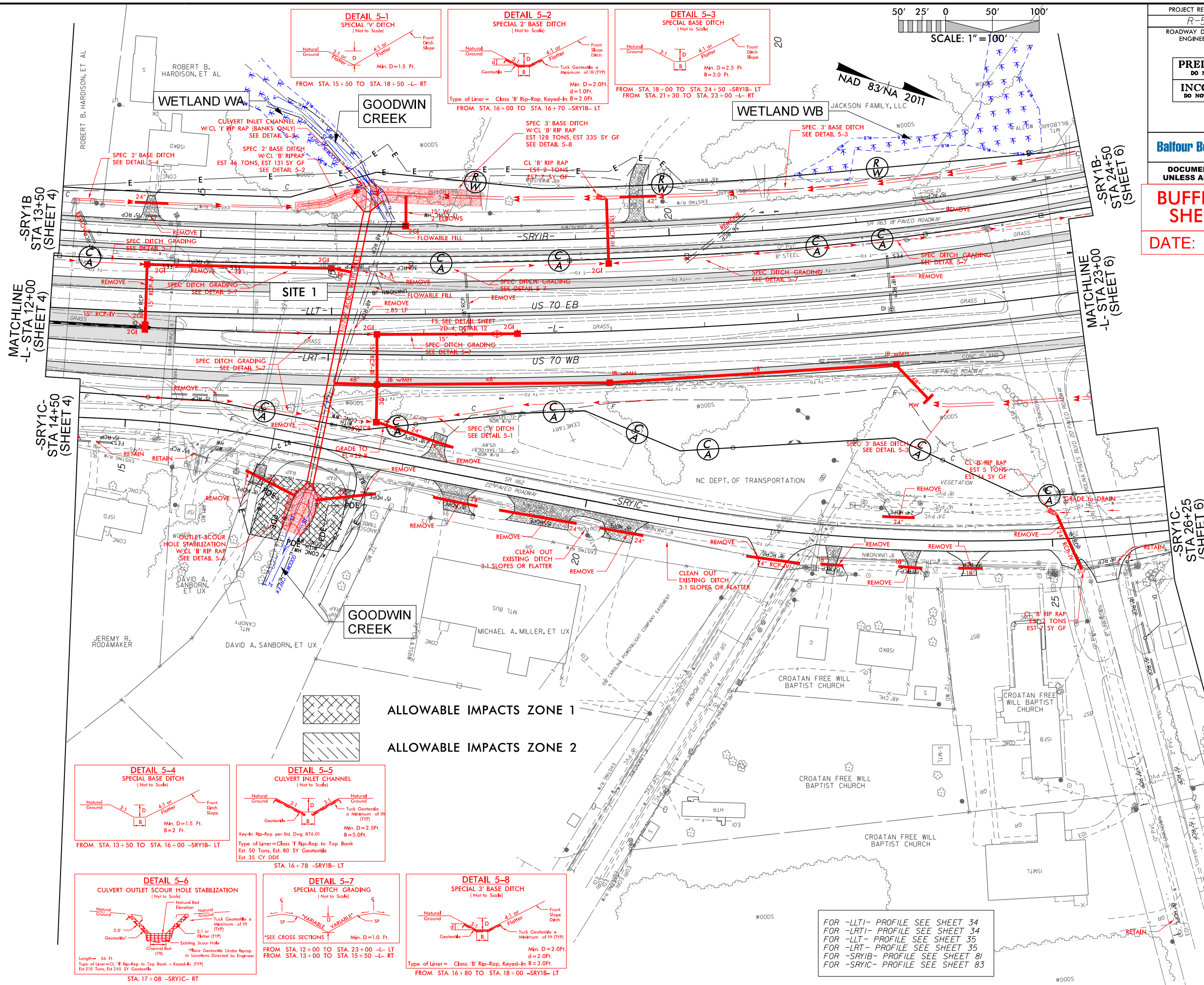


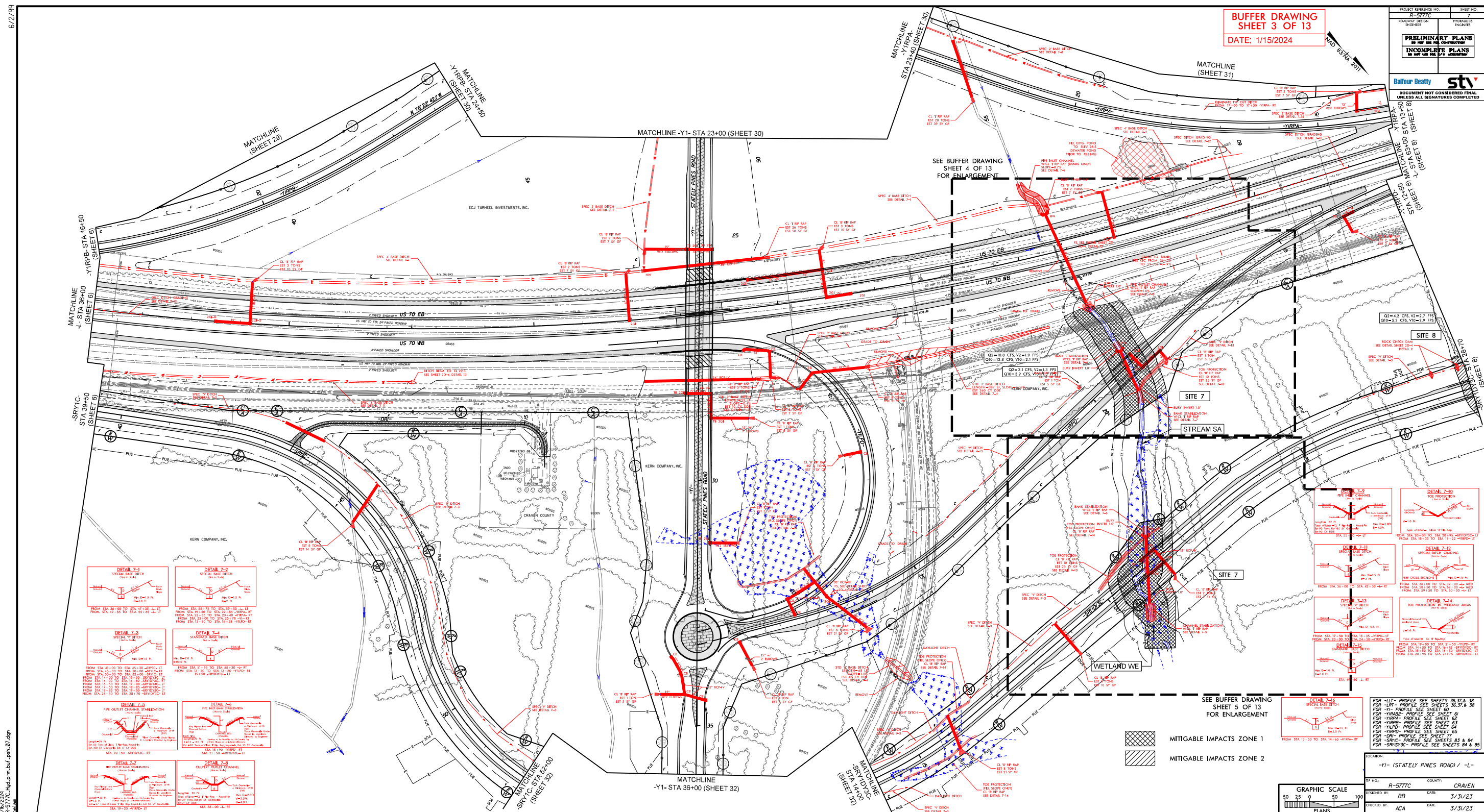
15/2024
R-5777C-Hyd-prm_buf_psh_0l.dgn
belam

TIP PROJECT: R-577C

CONTRACT: C204695

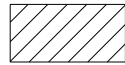
PROJECT REFERENCE NO. R-5777C		SHEET NO. 5
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION		
Balfour Beatty stv DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		
BUFFER DRAWING SHEET 2 OF 13 DATE: 1/15/2024		



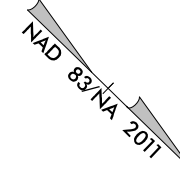
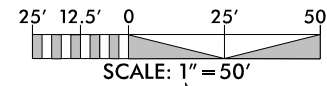




MITIGABLE IMPACTS ZONE 1



MITIGABLE IMPACTS ZONE 2

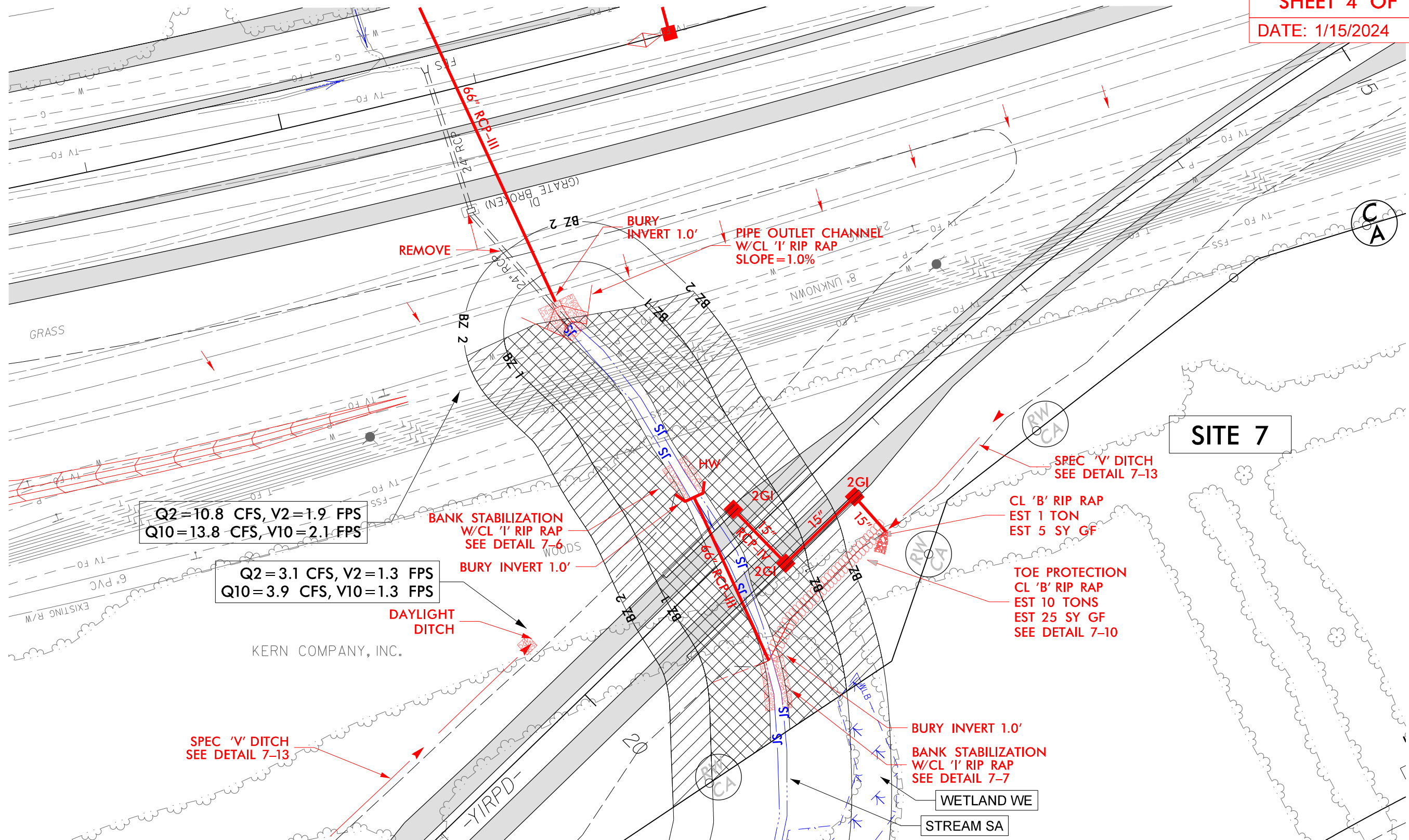


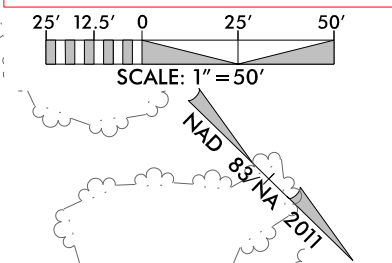
PROJECT REFERENCE NO. R-5777C		SHEET NO.	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION			

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

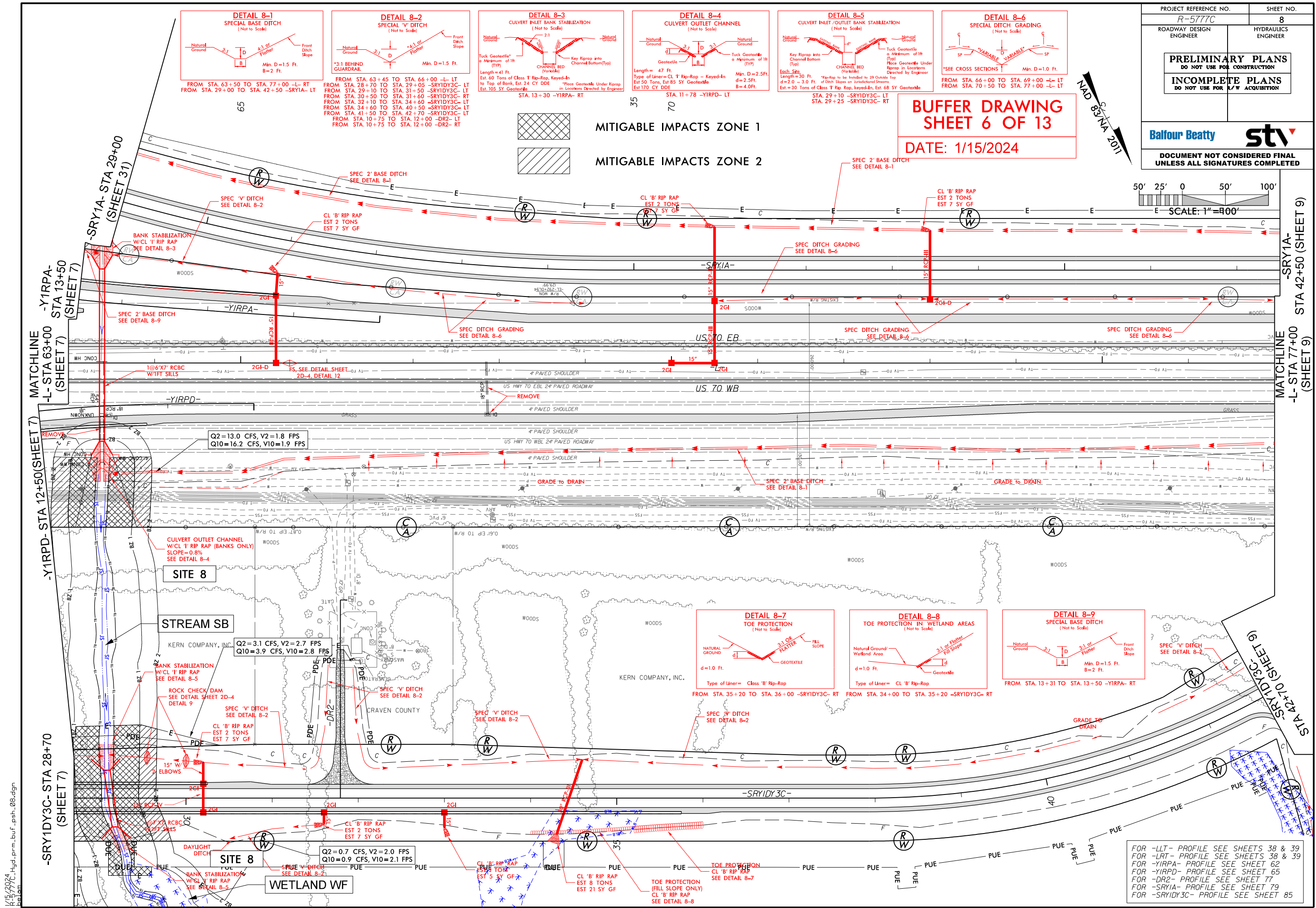
**BUFFER DRAWING
SHEET 4 OF 13**

DATE: 1/15/2024



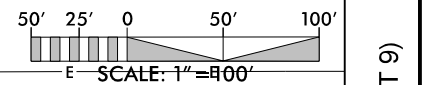


SITE 7



1/15/2024 R-5777C-Hyd.prm-buf_psh_08.dgn

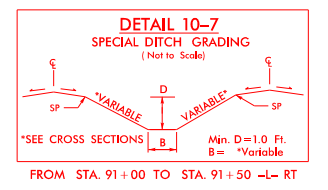
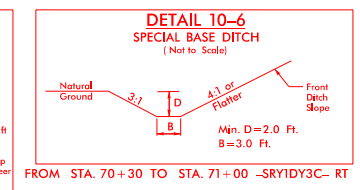
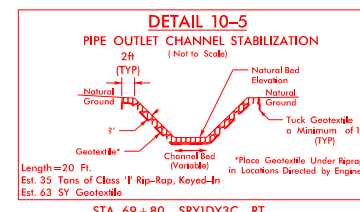
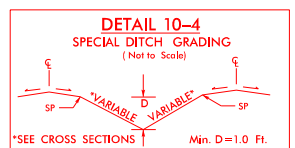
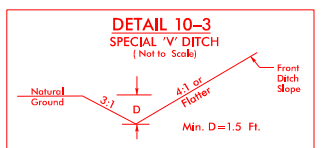
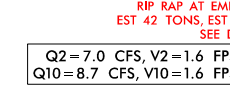
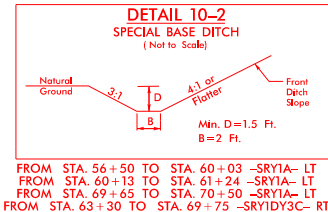
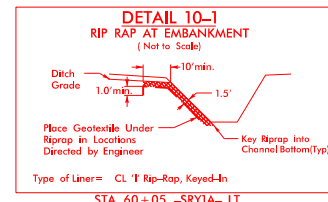
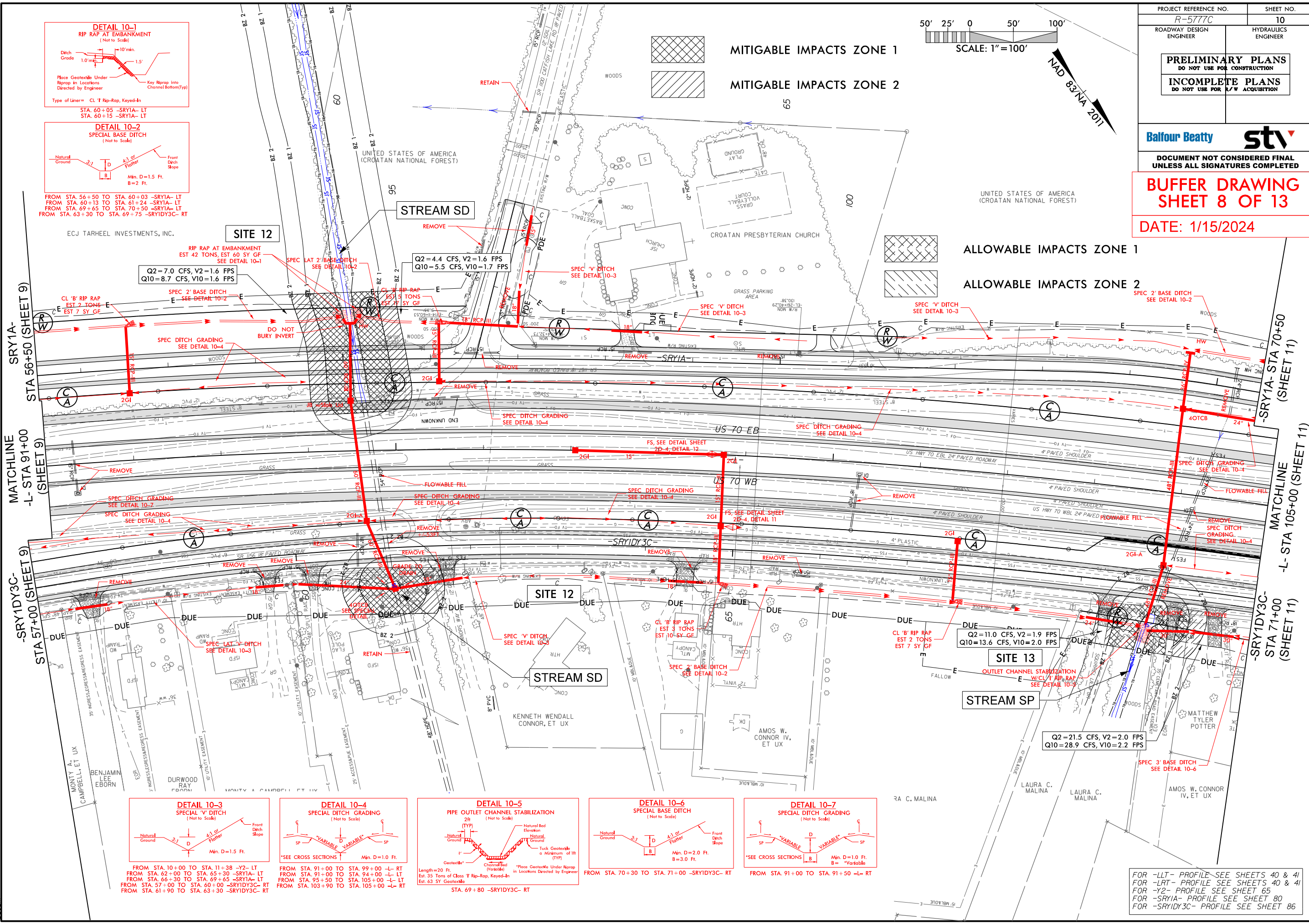
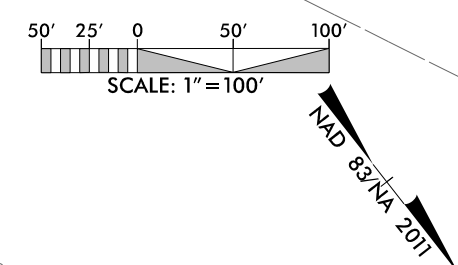
PROJECT REFERENCE NO. R-5777C		SHEET NO. 8	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION			
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION			
Balfour Beatty		st	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			



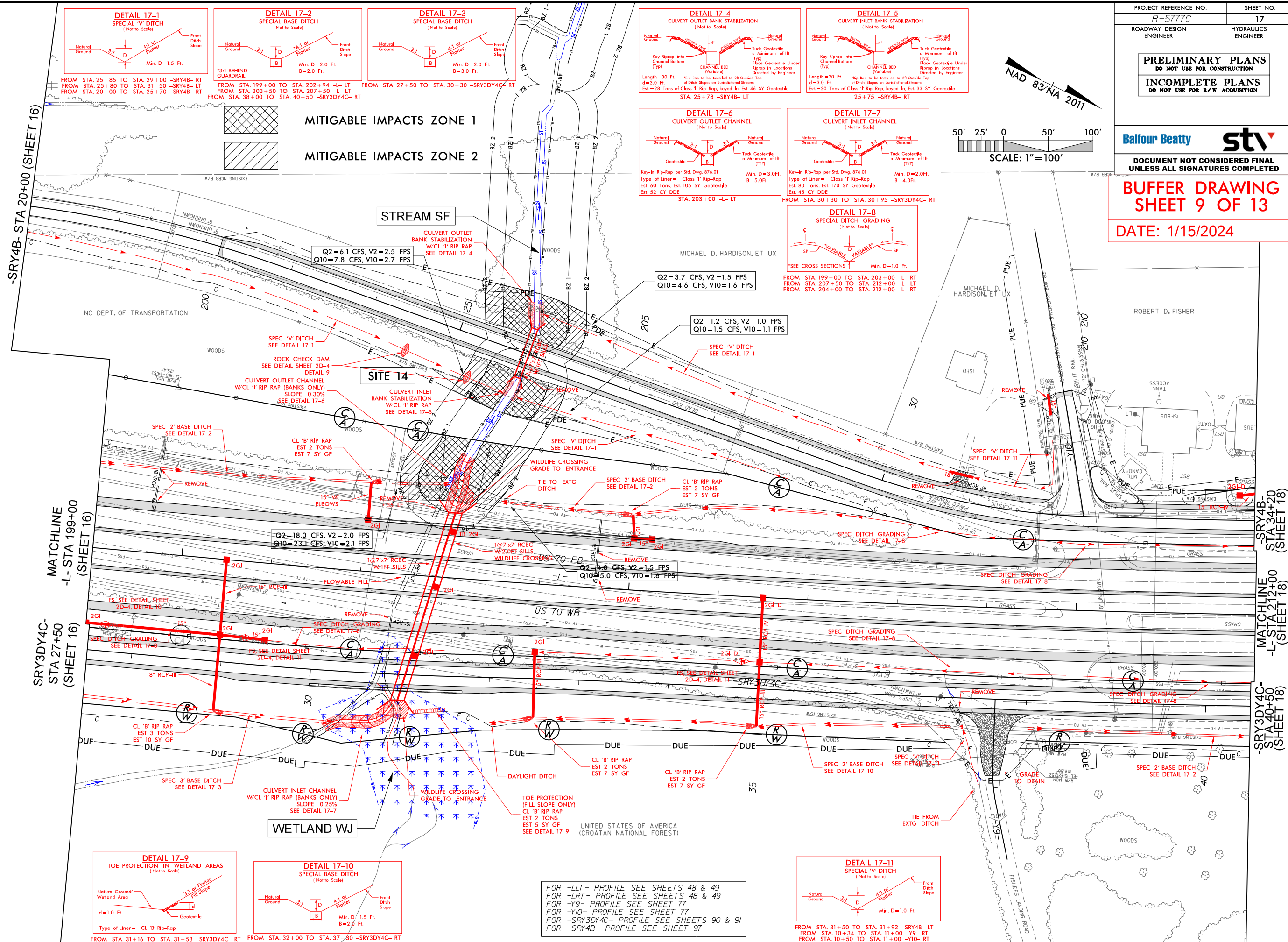
FOR -LLT- PROFILE SEE SHEETS 38 & 39
FOR -LRT- PROFILE SEE SHEETS 38 & 39
FOR -YIRPA- PROFILE SEE SHEET 62
FOR -YIRPD- PROFILE SEE SHEET 65
FOR -DR2- PROFILE SEE SHEET 77
FOR -SR1A- PROFILE SEE SHEET 79
FOR -SR1DY3C- PROFILE SEE SHEET 85

PROJECT REFERENCE NO. R-5777C		SHEET NO. 10	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION			
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION			
Balfour Beatty stv			
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			

BUFFER DRAWING
SHEET 8 OF 13
DATE: 1/15/2024

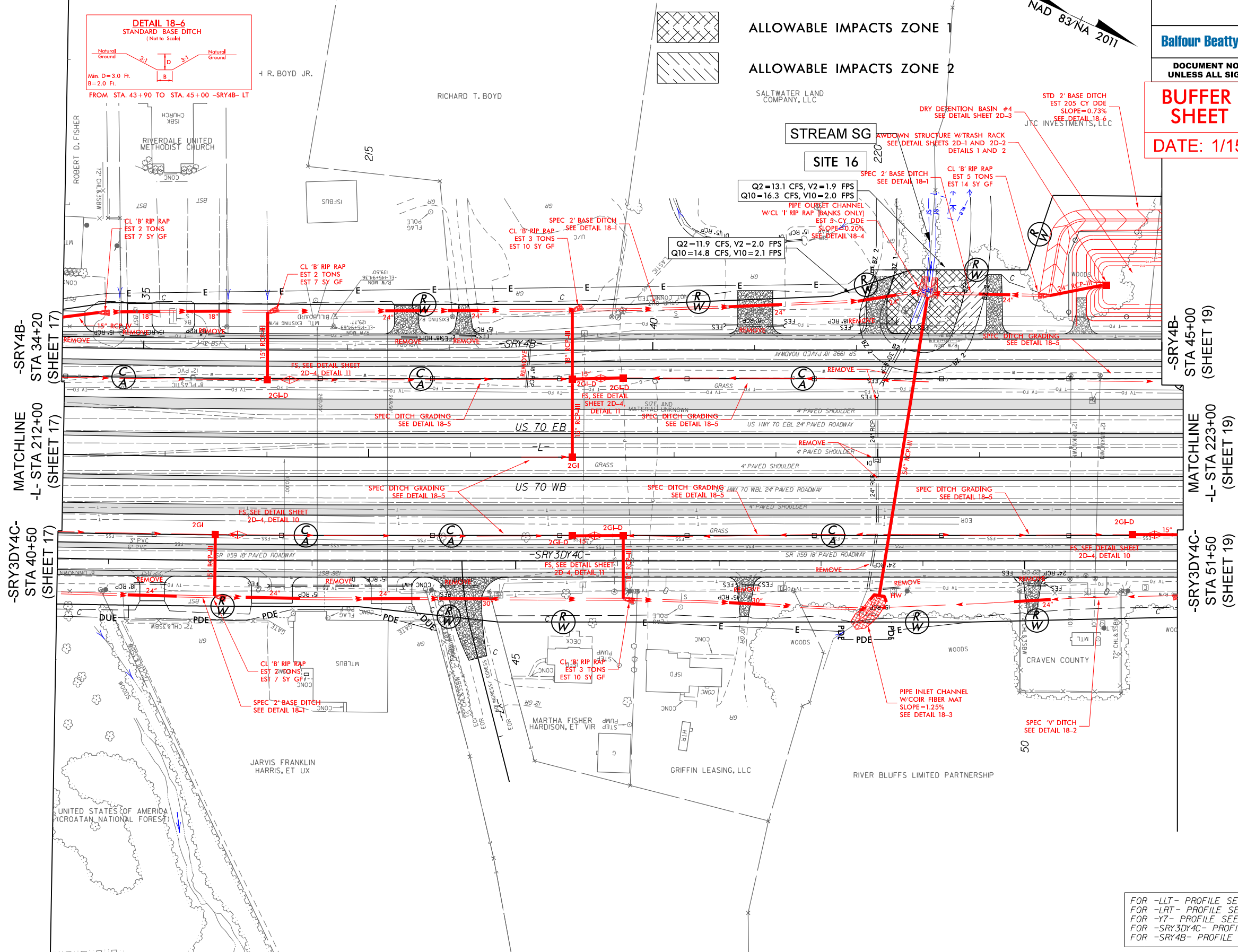
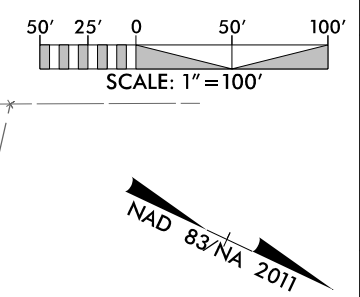
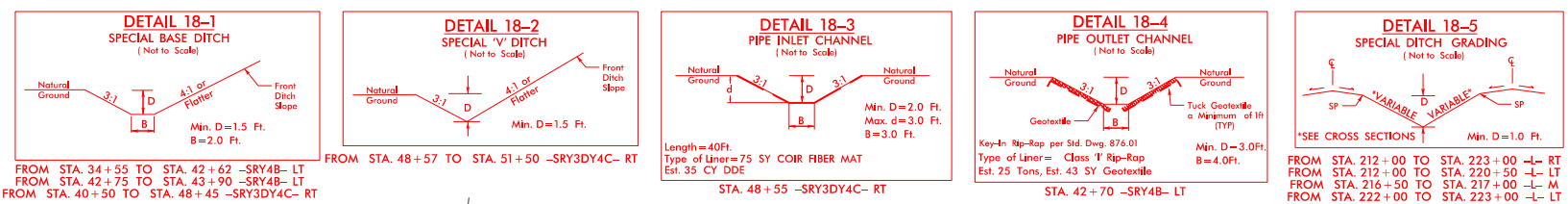


FOR -LLT- PROFILE SEE SHEETS 40 & 41
FOR -LRT- PROFILE SEE SHEETS 40 & 41
FOR -Y2- PROFILE SEE SHEET 65
FOR -SRY1A- PROFILE SEE SHEET 80
FOR -SRYIDY3C- PROFILE SEE SHEET 86



PROJECT REFERENCE NO. R-5777C		SHEET NO. 18	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION			
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION			
Balfour Beatty st			
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			

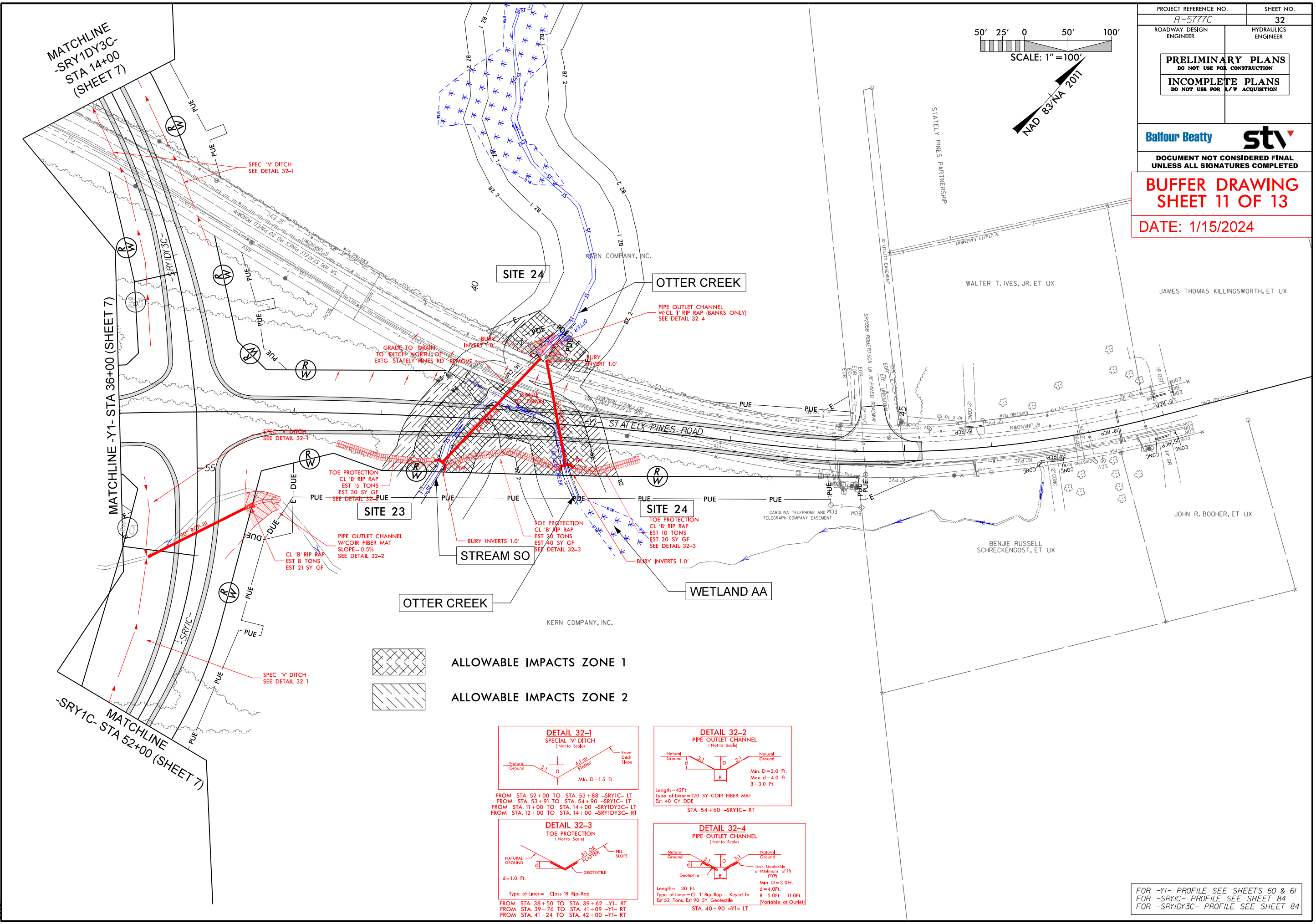
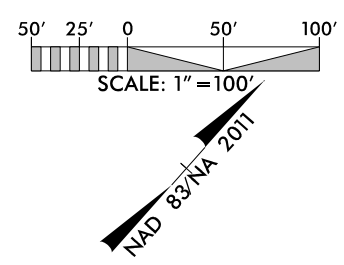
BUFFER DRAWING
SHEET 10 OF 13
DATE: 1/15/2024



FOR -LLT- PROFILE SEE SHEET 49
FOR -LRT- PROFILE SEE SHEET 49
FOR -Y7- PROFILE SEE SHEET 76
FOR -SRY3DY4C- PROFILE SEE SHEET 91
FOR -SRY4B- PROFILE SEE SHEETS 97 & 98

PROJECT REFERENCE NO. R-5777C		SHEET NO. 32	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION			
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION			
Balfour Beatty		stv	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			

BUFFER DRAWING
SHEET 11 OF 13
DATE: 1/15/2024



K:\5777C-Hyd.prm_buf_psh_32.dgn
R-5777C-Hyd.prm_buf_psh_32.dgn
Balfour Beatty

FOR -Y1- PROFILE SEE SHEETS 60 & 61
FOR -SRY1C- PROFILE SEE SHEET 84
FOR -SRY1DY3C- PROFILE SEE SHEET 84

RIPARIAN BUFFER IMPACTS SUMMARY													
Site No.	Station (From/To)	Structure Size / Type	IMPACTS									BUFFER REPLACEMENT	
			TYPE			ALLOWABLE			MITIGABLE			ZONE 1 (ft ²)	ZONE 2 (ft ²)
			ROAD CROSSING	BRIDGE	PARALLEL IMPACT	ZONE 1 (ft ²)	ZONE 2 (ft ²)	TOTAL (ft ²)	ZONE 1 (ft ²)	ZONE 2 (ft ²)	TOTAL (ft ²)		
1	14+10 to 15+38-L-RT	1@7'x7' RCBC	X			4341	1002	5343					
7	18+24 to 20+07-Y1RPD- 19+87 to 22+25-SRY1DY3C-	66" RCP 66" RCP	X X						14348 15634	9430 7634	23778 23268		
8	62+80 to 63+97-L-RT 28+49 to 29+83-SRYIDY3C-	1@6'x7' RCBC 1@7'x7' RCBC	X X						4861 9174	3266 5173	8127 14347		
11	48+69 to 49+86-SRY1DY3C-RT	36" RCP	X			4005	2651	6656					
12	93+83 to 95+19-L-LT 94+34 to 95+54-L-RT	60" RCP 60" RCP	X X						8412 3451	5612 2307	14024 5758		
13	103+16 to 104+48-L-RT	48" RCP	X			3072	1628	4700					
14	25+08 to 26+34-SRY4B- 202+36 to 203+83-L-LT	1@7'x7' RCBC 2@7'x7' RCBC	X X						5968 4729	3782 3323	9750 8052		
16	219+82 to 221+07-L-LT	54" RCP	X			3802	1503	5305					
23	39+00 to 40+40-Y1-	54" RCP	X			5493	3518	9011					
24	39+74 to 41+77-Y1-	54" RCP	X			10307	3839	14146					
TOTALS*:						31020	14141	45161	66577	40527	107104	0	0

NOTES:

NC DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS

1-15-2024

CRAVEN COUNTY

R-5777C

44648.3.4

SHEET

12

OF

13

Revised 2018 Feb

WETLANDS IN BUFFER IMPACTS SUMMARY				
SITE NO.	STATION (FROM/TO)		WETLANDS IN BUFFERS	
			ZONE 1 (ft ²)	ZONE 2 (ft ²)
7	18+24 to 20+07-Y1RPD-		1	23
	19+87 to 22+25-SRY1DY3C-		8046	74
8	28+49 to 29+95-SRYIDY3C-		258	
TOTAL:			8305	97

NC DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS

1-15-2024

CRAVEN COUNTY

R-5777C

44648.3.4

SHEET

13

OF

13

Revised 2018 Feb

I:\6\2024
R-5777C-Hyd-prm_buf_Util_psh_01.dgn
Belam

CONTRACT: C204695

TIP PROJECT: R-5777C

See Sheet 1A For Index of Sheets
See Sheet 1B For Standard Symbology Sheet

Submittal February 6, 2024

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CRAVEN COUNTY

LOCATION: U.S. 70 FROM THE HAVELOCK BYPASS TO EAST OF S.R. 1116 (THURMAN ROAD)

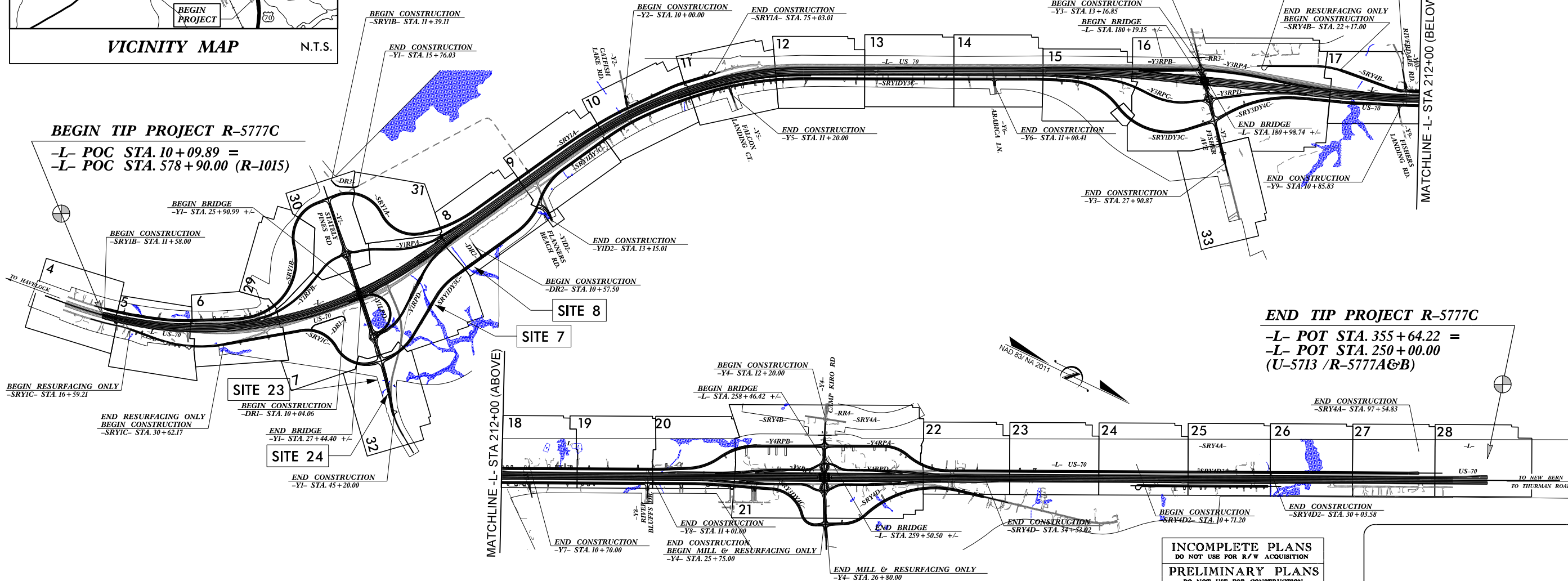
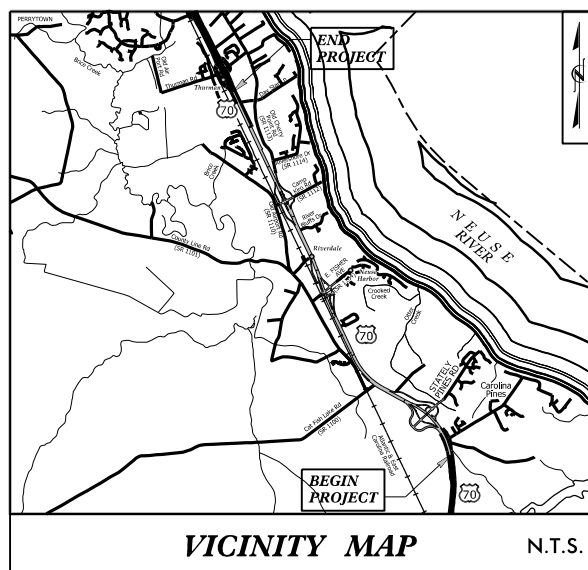
TYPE OF WORK: GRADING, DRAINAGE, PAVING, SIGNING, ITS AND STRUCTURES

UTILITY BUFFER IMPACTS PERMIT

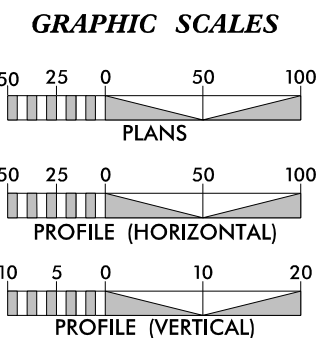
BUFFER DRAWING
SHEET 1 OF 6

DATE: 1/15/2024

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-5777C	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
44648.3.4	N/A	DESIGN-BUILD	



THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARY OF THE CITY OF NEW BERN
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III.
THIS IS A CONTROLLED ACCESS PROJECT WITH ACCESS BEING LIMITED TO INTERCHANGES.

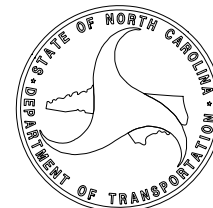


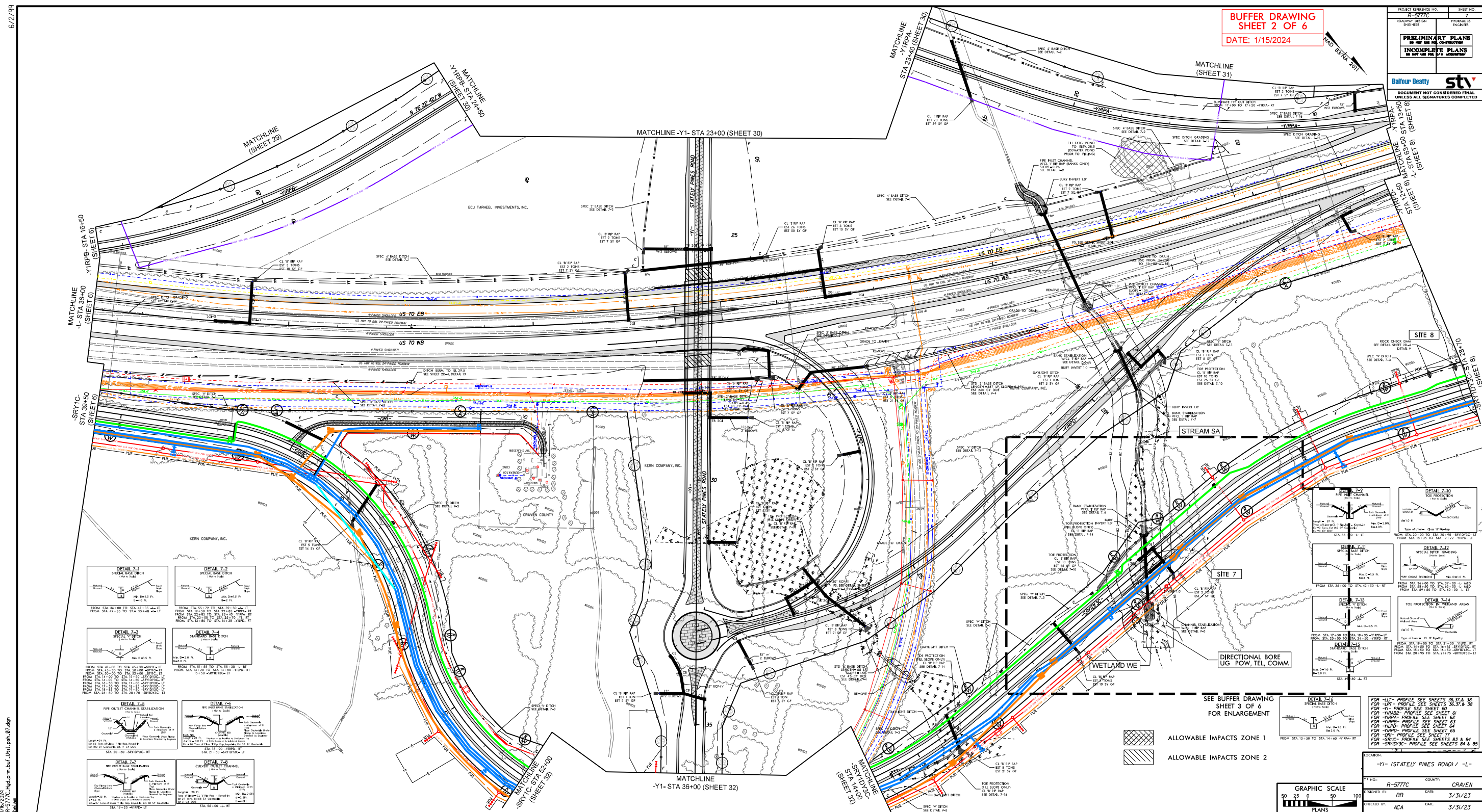
DESIGN DATA	
ADT 2019 =	31,800
ADT 2045 =	41,800
K =	9%
D =	55%
T =	8%*
V =	75 MPH
* (TTST = 3% + DUAL 5%)	
FUNC. CLASSIFICATION =	
INTERSTATE	
STATEWIDE TIER	

PROJECT LENGTH	
LENGTH ROADWAY TIP PROJECT R-5777C =	6.486 MILES
LENGTH STRUCTURE TIP PROJECT R-5777C =	0.058 MILES
TOTAL LENGTH OF TIP PROJECT R-5777C =	6.544 MILES
NCDOT CONTACT:	BYRON KYLE NCDOT - DESIGN-BUILD UNIT

PLANS PREPARED FOR THE NCDOT BY:	
Balfour Beatty	stv NC LICENSE NUMBER F-0991 900 W TRADE ST STE 715, CHARLOTTE, NC 28202
2018 STANDARD SPECIFICATIONS	
RIGHT OF WAY DATE: JANUARY 17, 2023	J. ADAM FREEMAN, PE PROJECT ENGINEER
LETTING DATE: JANUARY 17, 2023	NARONG PHAL, PE PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER	
SIGNATURE: _____	P.E.
ROADWAY DESIGN ENGINEER	
SIGNATURE: _____	P.E.





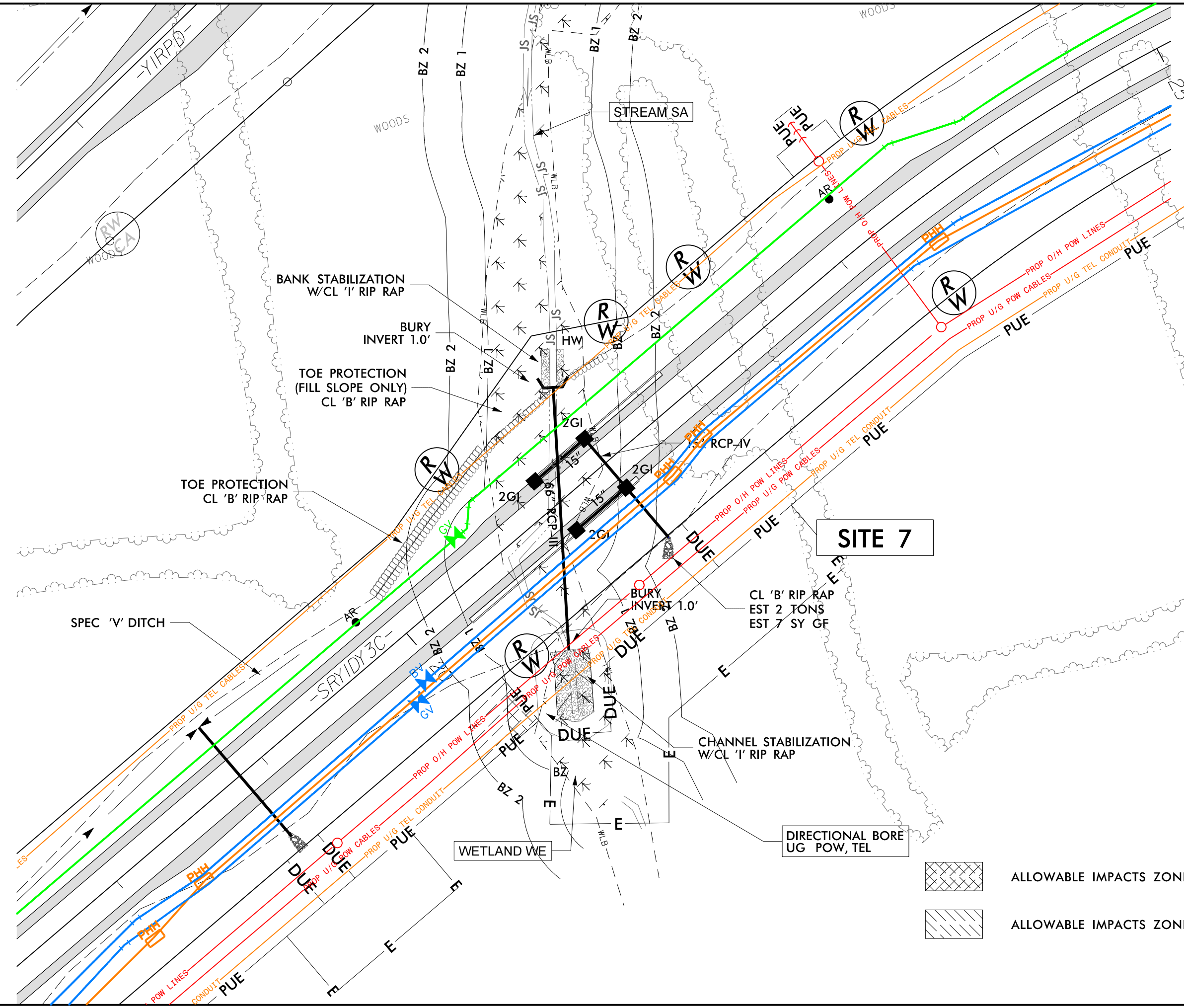
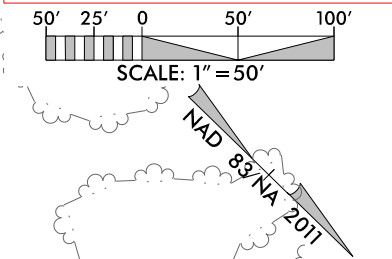
8/17/99

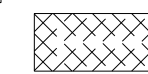
PROJECT REFERENCE NO.	SHEET NO.
R-5777C	
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

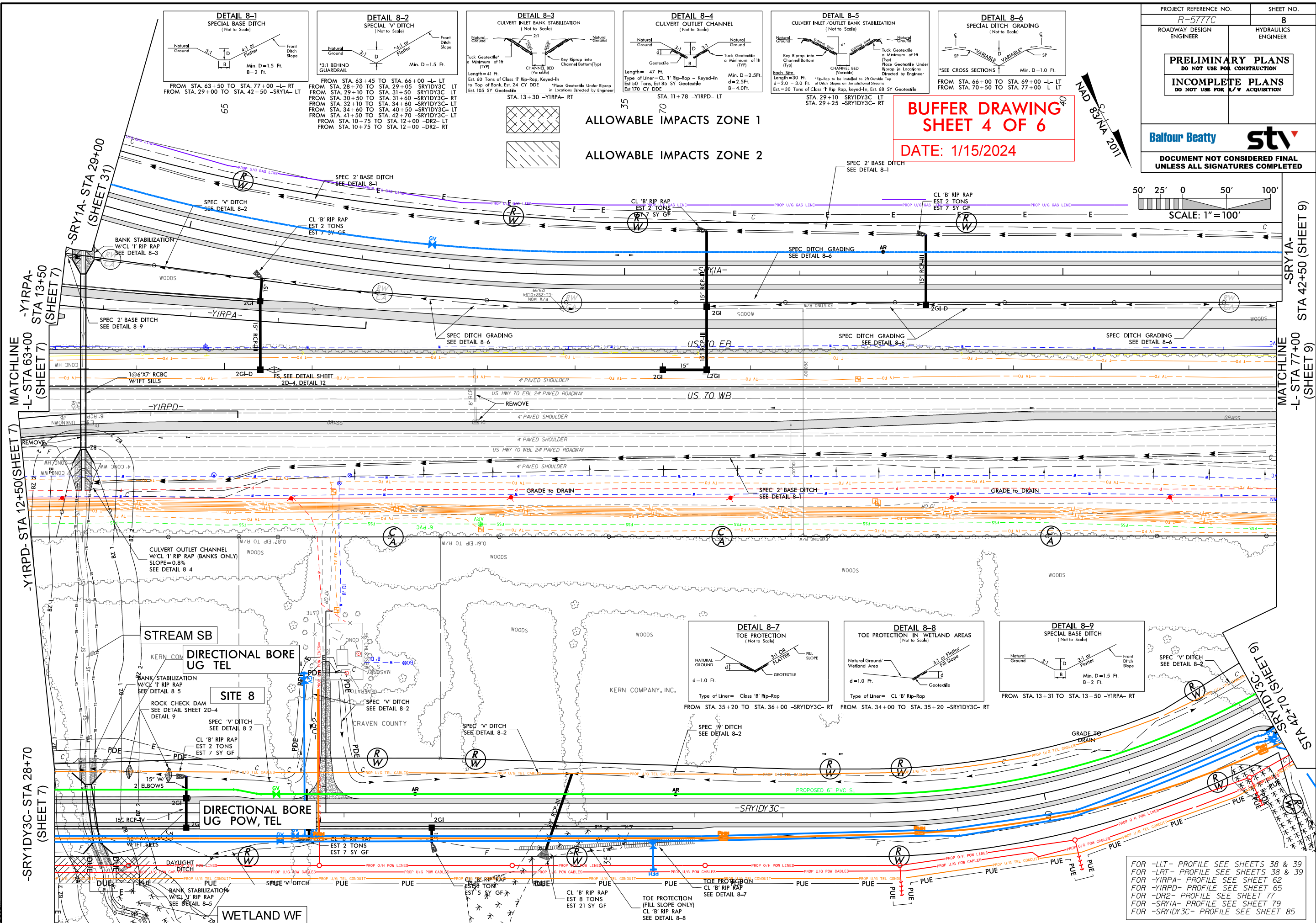
**BUFFER DRAWING
SHEET 3 OF 6**

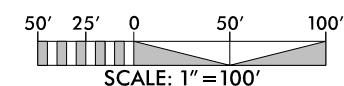
DATE: 1/15/2024



-  ALLOWABLE IMPACTS ZONE 1
-  ALLOWABLE IMPACTS ZONE 2

I:\5777C-Hyd.prm-buf_Utl-psht-07-1-ViewIndgn
R-5777C-Hyd.prm-buf_Utl-psht-07-1-ViewIndgn
8/17/99





PROJECT REFERENCE NO.	SHEET NO.
R-5777C	32
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

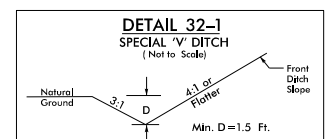
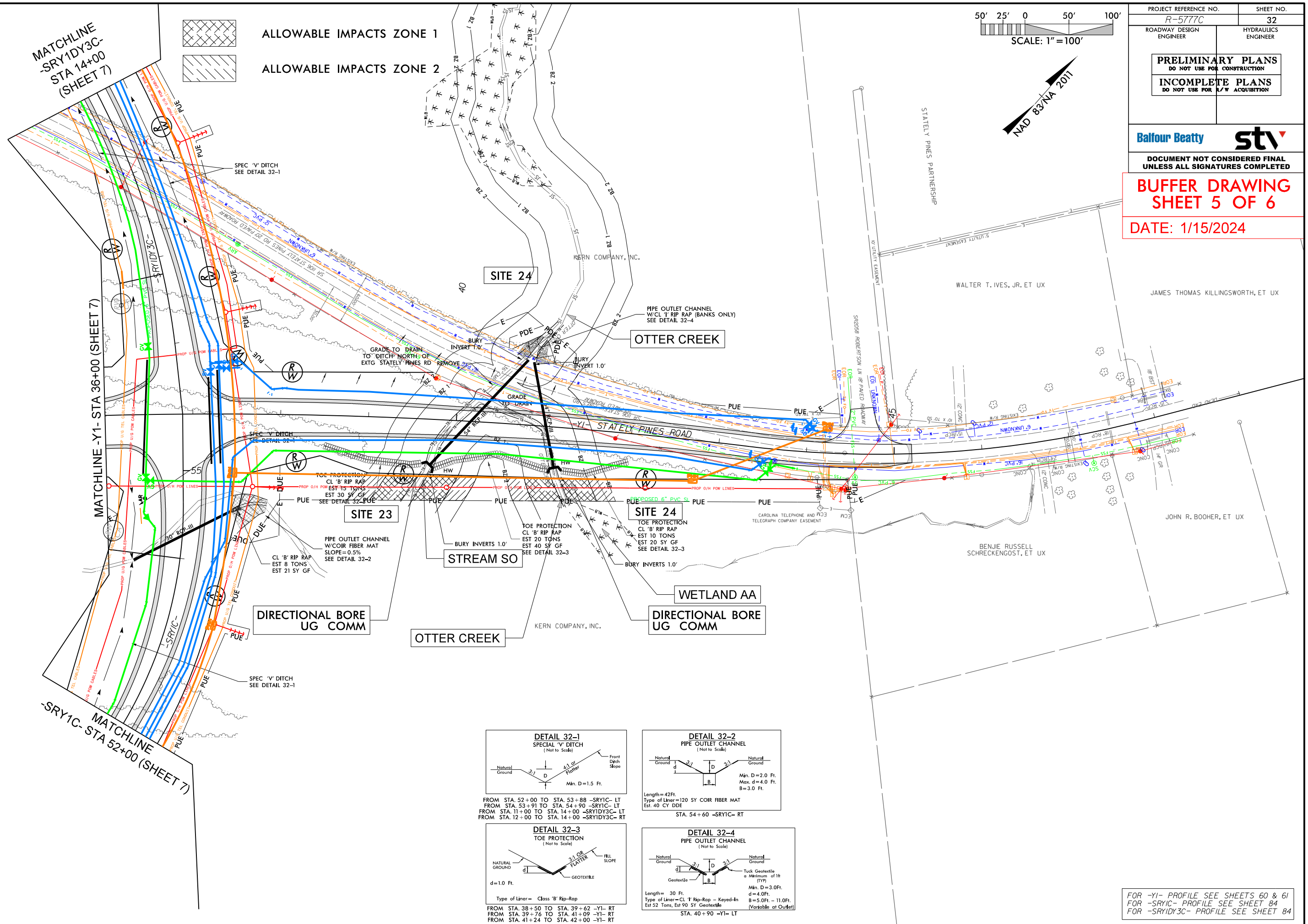
INCOMPLETE PLANS
DO NOT USE FOR A/W ACQUISITION



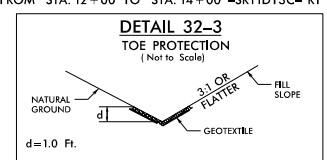
DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

BUFFER DRAWING
SHEET 5 OF 6

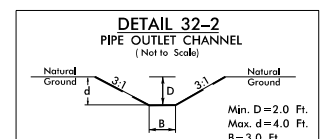
DATE: 1/15/2024



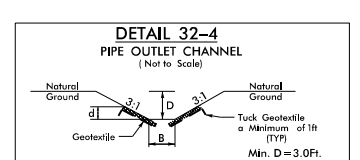
FROM STA. 52+00 TO STA. 53+88 -SR1C- LT
FROM STA. 53+91 TO STA. 54+90 -SR1C- LT
FROM STA. 11+00 TO STA. 14+00 -SR1DY3C- LT
FROM STA. 12+00 TO STA. 14+00 -SR1DY3C- RT



FROM STA. 38+50 TO STA. 39+62 -Y1- RT
FROM STA. 39+76 TO STA. 41+09 -Y1- RT
FROM STA. 41+24 TO STA. 42+00 -Y1- RT



Length=42Ft.
Type of Liner=120 SY COIR FIBER MAT
Est. 40 CY DDE
STA. 54+60 -SR1C- RT



Length= 30 Ft.
Type of Liner=CL 1' Rip-Rap - Keyed-In
Est 52 Tons, Est 90 SY Geotextile
STA. 40+90 -Y1- LT

K:\5777C-Hyd.prm-buf_Utl1_pst_32.dgn
R-5777C-Hyd.prm-buf_Utl1_pst_32.dgn

