



City of Bristol
Conservation Commission/ Inland Wetlands and Watercourses Agency

REGULAR MEETING — MONDAY, JULY 6, 2026
CITY HALL — CITY COUNCIL CHAMBERS — FIRST FLOOR
111 NORTH MAIN STREET
6:30 PM

INFORMATION FOR THE PUBLIC TO ACCESS THIS MEETING

Zoom Meeting link:

<https://bristolct-gov.zoom.us/j/88333452084?pwd=Svmwi0mg4FZjLOYJzHIDbvyiQprVeR.1>

Meeting ID:

883 3345 2084

Meeting Passcode:

123456

Join by phone

1-929-205-6099

AGENDA

REVISION #1

1. Call to Order
2. Pledge of Allegiance
3. Public Participation
4. Approval of Minutes
 - a. Regular Meeting — June 1, 2026
5. Receipt of New Applications
 - a. Application #26-466F-317 — Floodplain Application for the addition to a home at 15 Hardwick Road; Assessor's Map 45, Lot 53; R-15 (Single-Family Residential) zone; Debora Franklin, owner; Guarantee Construction Services, LLC, applicant.
6. Public Hearings
7. Old Business

8. New Business

- a. Application #1908 – Request to extend Wetlands Application for five (5) years from December 2, 2025 to December 20, 2030 to construct office, garage, bulk oil and propane facility; 351 Minor Street; Map 66; Lot 263-2. Christopher Armstrong, applicant.
- b. August 3, 2026 Meeting - Discussion

9. Staff Reports

- a. IWWA Report - June 2026

10. Communications

- a. Continued discussion of remediation work associated with Disc Golf Hole #16 at Page Park, 641 & 649 King Street; Assessor's Map 37, Lots 134 & 135; City of Bristol Parks, Recreation, Youth and Community Services, applicant.

11. Conservation Topics

12. Adjournment

REMINDER: The next Regular Meeting of the Inland Wetlands and Watercourses Agency is Monday, August 3, 2026

**INLAND WETLANDS & WATERCOURSES AGENCY
OF THE CONSERVATION COMMISSION OF THE CITY OF BRISTOL
MINUTES
REGULAR MEETING OF MONDAY June 1, 2026
DRAFT MINUTES - JL**

By: Chairman Rooks

Time: 6:30 P.M.

Place: City Hall
Council Chambers
111 North Main St.
First Floor

ROLL CALL:

MEMBERS	NAME:	PRESENT	ABSENT
REGULAR MEMBERS	David Rooks (Chairman)	X	
	Michael Robinson (Vice Chairman)	X	
	Daniel Massaro, Jr. (Secretary)	X	
	James Carros	X	
	Faye Duquette		X
	Laura Valentino	X	
	Greg Klimek	X	
ALTERNATE MEMBERS	Joseph Longo		X
	Justin Bridges	X	
	Erik Jarboe	X	
STAFF	William Stango, P.E., City Engineer	X	
	Janet Little, Recording Secretary	X	

Chairman Rooks designated regular Commissioners Robinson, Carros, Massaro, Valentino, and Klimek with alternate Commissions Bridges and Jarboe alternating to vote for each application.

1. Call to Order

Per the order of Acting Chairman Rooks, the meeting was called to order at 6:30 P.M.

2. Public Participation

3. Approval of Minutes

a. Regular Meeting – May 4, 2026

MOTION: Move to approve the minutes of the April 6, 2026, regular meeting, as written.

By: Carros

Seconded: Klimek

For: Klimek, Valentino, Bridges, Carros, Massaro, Robinson and Rooks.

Against: None.

Abstained: None.

Motion passed.

4. Public Hearings
There were no public hearings.

MOTION: To move Communications 9a. Discussion of remediation work associated with Disc Golf Hole #16 at Page Park, 641 & 649 King Street; Assessor's Map 37, Lots 134 & 135; City of Bristol Parks, Recreation, Youth and Community Services, applicant. For discussion.

By: Massaro

Seconded: Robinson

For: Klimek, Valentino, Jarboe, Carros, Massaro, Robinson and Rooks.
Against: None.
Abstained: None.

Communication 9a was moved up.

9. Communications
- a. Discussion of remediation work associated with Disc Golf Hole #16 at Page Park, 641 & 649 King Street; Assessor's Map 37, Lots 134 & 135; City of Bristol Parks, Recreation, Youth and Community Services, applicant.

The Commission received the following items in their electronic packets:

- i. Memorandum dated April 30, 2026, from Sarah Larson to Zachary Fisk, Chairman, regarding IWWA Complaint, Page Park Disc Golf, 641 and 649 King St., Assessor's Map 37, Lots 134 & 135
- ii. Photographs (1 Pg.)
- iii. Map of Overall Existing Conditions Plan

The Commission received the following items in their electronic packets **PREVIOUSLY**:

- i. E-mail dated March 31, 2026, from Sarah Larson, regarding Staff Reports
- ii. Memorandum dated March 31, 2026, from Sarah Larson, regarding IWWA Complaint – Page Park Disc Golf
- iii. E-mail dated March 17, 2026, from Robert Flanagan to Sarah Larson, regarding IWWA Complaint referral Page Park Disc Golf
- iv. Complaint page from Katharine Becker, Enforcement, Compliance and Regulatory Assistance

Sarah Larson, 51 High Street, Bristol Parks Recreation, Youth and Community Services, shared an update with the commission. The Sign was created and put up. She provided a photo. She will provide a memo for the July meeting as well. Discussions were had with the City Engineer, William Stango regarding the installation of a bridge. They would have to hire an engineer, but before they go down that path they are looking into other low-impact options in coordination with Public Works and the regulations.

Commission was satisfied.

5. Receipt of New Applications
- a. Application #26-468F-316 — Floodplain Application for the addition of 29 parking spaces at 175 Century Drive; Assessor's Map 4, Lot 15; IP-1 (Industrial Park) zone; 175 Century Drive, LLC, owner; David Nelson, Borghesi Building and Engineering Co. Inc., applicant.

The Commission received the following items in their electronic packets:

- i. Application (5 Pgs.)
- ii. Narrative Letter dated May 14, 2026
- iii. Letter dated May 21, 2026, regarding Floodplain Impact – cuts and fills

- iv. Site Plan Map, SP-2 & SP-3 (Revised date: 05-21-2026)
- v. Map (1 Pg.) City of Bristol
- vi. Various GIS and Aerial Maps

Chairman Rooks asked if the application was complete

William Stango, P.E. City Engineer, stated that it is a complete application

MOTION: Move to receive Application #26-468F-316.

By: Klimek

Seconded: Robinson

For: Klimek, Valentino, Bridges, Carros, Massaro, Robinson and Rooks.

Against: None.

Abstained: None.

The application is received.

Allan Borghesi, Baur, 155 East Main Street, Torrington CT, addressed the commission, The company has grown and has more employees therefore more parking spaces are needed. Five spaces were approved with the original project. To avoid too much disturbance, parking spaces are added to the right coming down along the edge of the parking lot. It will be very minor asphalt being added.

William Stango, P.E., City of Bristol informed the commission the flood zone in question is an A flood zone, comparatively to an AE flood zone. The difference is an AE flood zone is associated with an elevation posted by FEMA while an A flood zone has no elevation associated with it. So, for this gentleman's application, it's within an A zone, we do not have a posted elevation to work off of. Using very conservative estimates of this floodplain elevation, I do believe all proposed work would still be above this floodplain elevation. This isn't based on FEMA's posted elevations, this is based on the site, existing structures, water courses, and using conservative engineering judgment. I do believe they are out of the floodplain, and as the applicant has stated, they are proposing a net cut. They will not be filling.

Commissioner Robinson asked if there was a maintenance plan in place for the oil separator.

William Stango, stated he would have to review the records.

No one else spoke in favor of the application.

No one spoke against the application.

MOTION: Move to declare Application #26-468F-316 a non-significant activity.

By: Robinson

Seconded: Klimek

For: Klimek, Valentino, Bridges, Carros, Massaro, Robinson and Rooks.

Against: None.

Abstained: None.

The application was declared a non-significant activity.

MOTION: Move to approve Floodplain Application for the addition of 29 parking spaces at 175 Century Drive; Assessor's Map 4, Lot 15; IP-1 (Industrial Park) zone; 175 Century Drive, LLC, owner; David Nelson, Borghesi Building and Engineering Co. Inc., applicant with the stipulation that the maintenance plan be reviewed and makes sure there is a robust plan for the water oil separator and the parking lot drainage system.

By: Robinson

Seconded: Massaro

For: Klimek, Valentino, Bridges, Carros, Massaro, Robinson and Rooks.

Against: None.

Abstained: None.

The application is approved.

6. Old Business

None.

7. New Business

None.

8. Staff Reports

a. IWWA Report – May2026 (4 pages)

Zachary Norton, Zoning Enforcement Officer, (Environmental Protection Technician)

- a. Inland Wetlands Enforcement Officer report, dated May 26, 2026, from Zachary Norton, Zoning Enforcement Officer, (Environmental Protection Technician)

MOTION Move to file the report from the Inland Wetlands Zoning Enforcement Officer.

By: Klimek

Seconded: Robinson

For: Klimek, Valentino, Jarboe, Carros, Massaro, Robinson and Rooks.

Against: None.

Abstained: None.

The report is filed.

9. Communications

b. Reappointment of G. Klimek

c. Reappointment of M. Robinson

MOTION Move to file the reappointment letters for Robinson and Klimek.

By: Klimek

Seconded: Robinson

For: Klimek, Valentino, Bridges, Carros, Massaro, Robinson and Rooks.

Against: None.

Abstained: None.

The reports are filed.

10. Conservation Topics
None.

11. Adjournment

MOTION: Move to adjourn at 6:47 P.M.

By:

Seconded:

For: Klimek, Valentino, Bridges, Carros, Massaro, Robinson and Rooks.

Against: None.

Abstained: None.

The meeting adjourned at

This meeting was recorded.

Respectfully submitted,
Janet Little

David Rooks, Chairman
Inland Wetlands & Watercourses Agency
of the Conservation Commission of the City of Bristol

Michael Robinson, Vice-Chair

**BRISTOL FLOOD & EROSION COMMISSION
FLOOD PLAIN APPLICATION
PERMIT FOR FLOOD PLAIN DEVELOPMENT**

APPLICATION NO. 26-466F-317

DATE FILED: 6/16/26

APPROVED: _____

DENIED: _____

1. APPLICANT:

Name: Guarantee Construction Services LLC Signature: 

Address: 88 Obtuse Hill Rd City: Brookfield State: CT Zip: 06804

Telephone No.: 203-546-8795 [] home [] work

2. PROPERTY OWNER(S):

Name: Debora Franklin Signature: 

Address: 15 Hardwick Road City: Bristol State: CT Zip: 06010

Telephone No.: 646-474-7008 ☒ home [] work

3. DESCRIBE THE SUBJECT PROPERTY:

Address or Location: 15 Hardwick Road, Bristol, CT 06010

Assessor's Map No.: 45 Assessor's Lot No.(s): 53

Street of Access: Hardwick Road

Name of Watercourse or Water Body: None

FIRM Panel Number: 09003C0466F Total Area of Lot(s): 0.23

4. PROJECT DESCRIPTION:

Flood Plain use for which the applicant is seeking a permit. (check one)

☒ a. Permitted Use [] b. Regulated Use [] c. Special Exception

Describe the proposed activity and its purpose: Addition to home - new master bathroom, new walk-in closet

Proposed encroachment of Flood fringe area (S.F. or acres): None

Proposed encroachment of Regulated Floodway (S.F. or acres): None

Proposed alteration of Watercourse (L.F., S.F. or acres): None

Flood proofing techniques proposed: NA

Disturbance of designated wetland area: ☒ No [] Yes: Permit Number: B-26-746

Date applied for: 6/10/2026 Disposition: Addition

**BRISTOL FLOOD & EROSION COMMISSION
FLOOD PLAIN APPLICATION
PERMIT FOR FLOOD PLAIN DEVELOPMENT**

Page 2

5. TECHNICAL & PLANNING DATA:

Project Specifics: Provide the following information from official sources or submitted documentation.

All elevations are to be relative to mean sea level.

Existing base flood flow rate: N/A Source: FEMA Flood Insurance Rate Map (FIRM) and
Existing base flood elevation: N/A Source: Not shown on FIRM/to be determined
Lowest floor elevation of existing buildings including garage or basements: Existing lowest floor elevation not
Lowest floor elevation of proposed building including garage or basements: To be determined - will comply with FEMA
Will there be dry access to the structure(s) during the 100 year flood? To be determined - dependent on final grading

Floodplain Alterations Proposed:

Volume of displaced Flood Plain: 0 cu ft
Volume of mitigated Flood Plain: 0

Floodway Alterations Proposed:

Length of reconstructed or altered floodway: 0
Proposed base flood flow rate: no change to existing base flood flow rate
Proposed base flood elevation: no change of existing base flood elevation

6. AUTHORIZATIONS AND CERTIFICATIONS:

- a. I/we hereby authorize the commissioners and agents of the Bristol Flood and Erosion Agency to inspect the subject property at reasonable times, both before and after a final decision has been made regarding this application or request.
- b. I/we hereby certify that I/we am/are familiar with the information included in this application and am/are aware that the law provides that any person who commits, takes part in, or assists in any violation of any provision of the Connecticut General Statutes, including regulations adopted by the Commissioner of Environmental Protection and ordinances and regulations of the City of Bristol through its Flood and Erosion Agency and Inland Wetlands Agency, shall be assessed a civil penalty of not more than one thousand dollars for each offense. I/we further certify that I/we am/are aware that it is a violation of law to obtain a flood plain permit or ruling through deception or through inaccurate or misleading information.
- c. I/we hereby certify that this application shall be considered complete only when all information and documents required by the Administrator have been submitted.

7. SUBMISSION REQUIREMENTS:

The following shall be included as part of this application:

- filing fee – make checks payable to "City of Bristol,"
\$5.00 Permitted Use, \$50.00 for Regulated Use, and \$100.00 for Special Exception
- ten copies of a Site Plan showing existing and proposed conditions in relation to the flood plain, floodway, watercourses, and/or wetlands prepared in accordance with the Regulations,
- any other information as may be required by the Agency

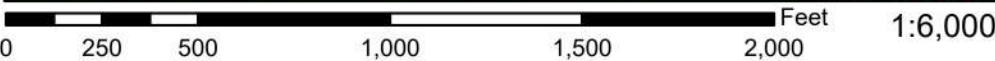
☐ Site Plans ☐ Detail Plans ☐ Construction Specifications
☐ Drainage Computations ☐ Flood Proofing Details ☐ Flood Proofing Certification

BFEC-12/01

National Flood Hazard Layer FIRMMette



72°54'48"W 41°41'17"N



Basemap Imagery Source: USGS National Map 2023

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) Zone A, V, A99
		With BFE or Depth Zone AE, AO, AH, VE, AR
		Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
		Future Conditions 1% Annual Chance Flood Hazard Zone X
		Area with Reduced Flood Risk due to Levee. See Notes. Zone X
		Area with Flood Risk due to Levee Zone D
OTHER AREAS		NO SCREEN Area of Minimal Flood Hazard Zone X
		Effective LOMRs
GENERAL STRUCTURES		Area of Undetermined Flood Hazard Zone D
		Channel, Culvert, or Storm Sewer
OTHER FEATURES		Levee, Dike, or Floodwall
		20.2 Cross Sections with 1% Annual Chance Water Surface Elevation
		17.5 Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
		Jurisdiction Boundary
		Coastal Transect Baseline
		Profile Baseline
		Hydrographic Feature
MAP PANELS		Digital Data Available
		No Digital Data Available
		Unmapped



The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 6/12/2026 at 1:13 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

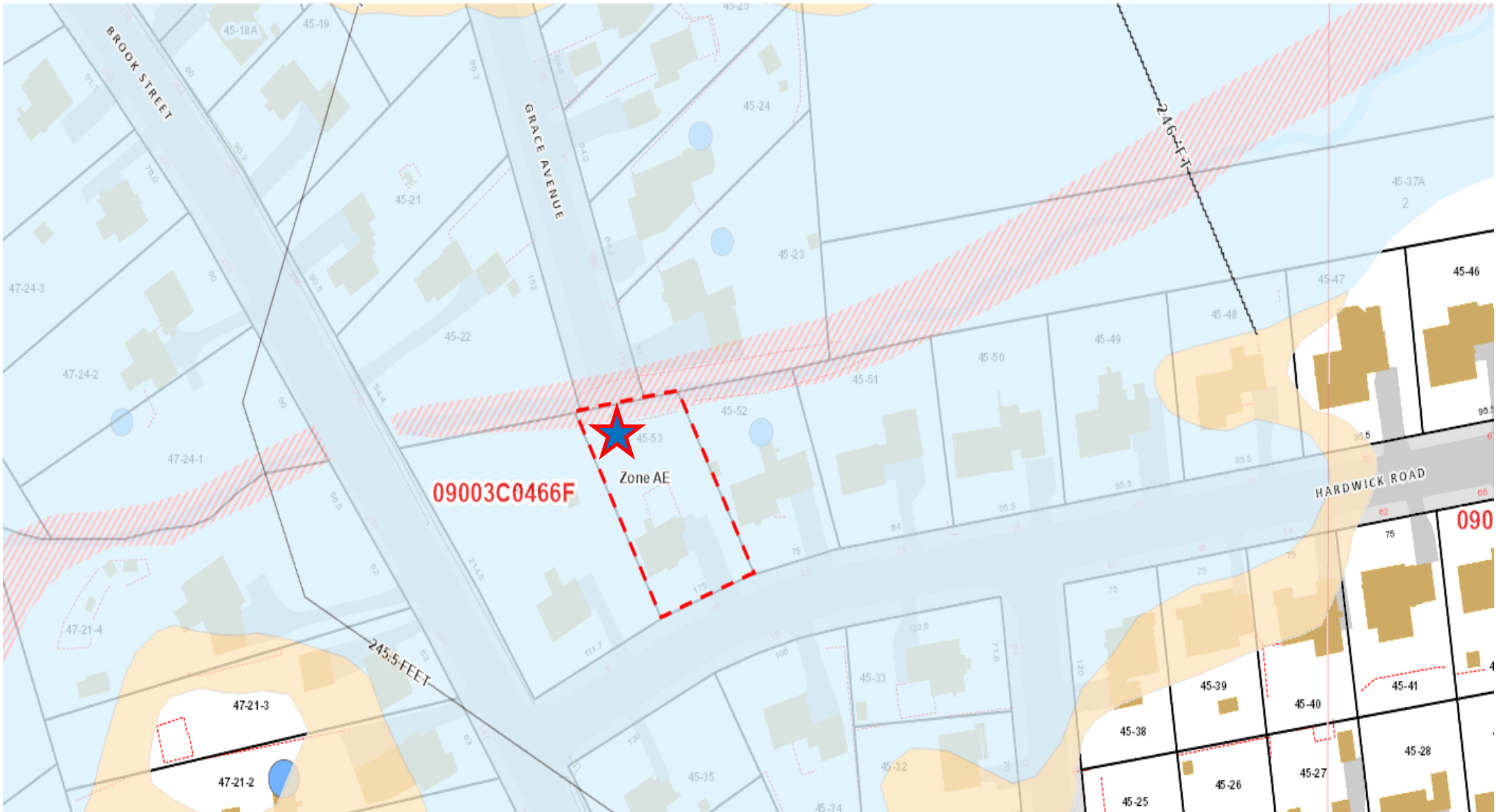
This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.



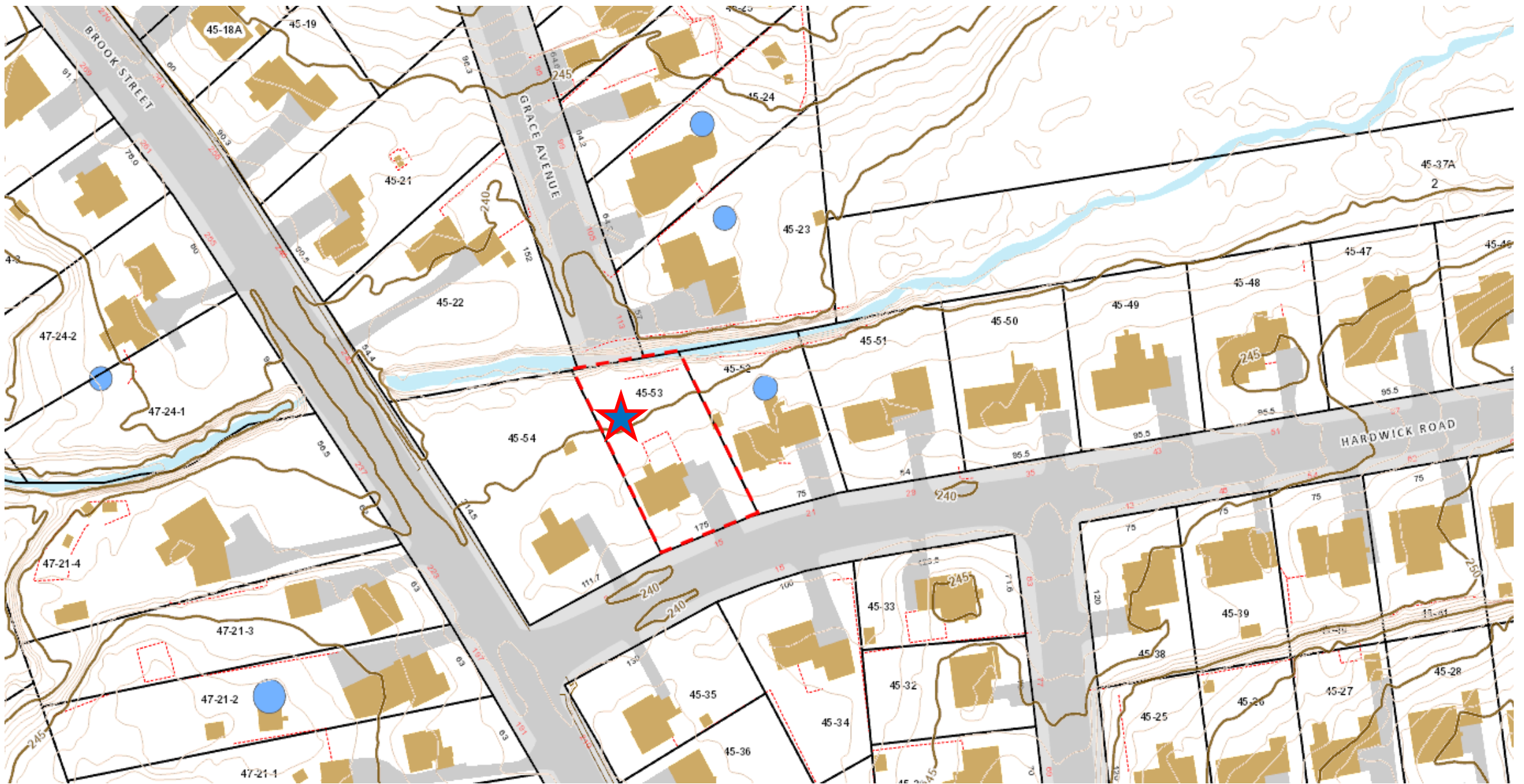
15 Hardwick Rd. – Location
Map 45 Lot 23



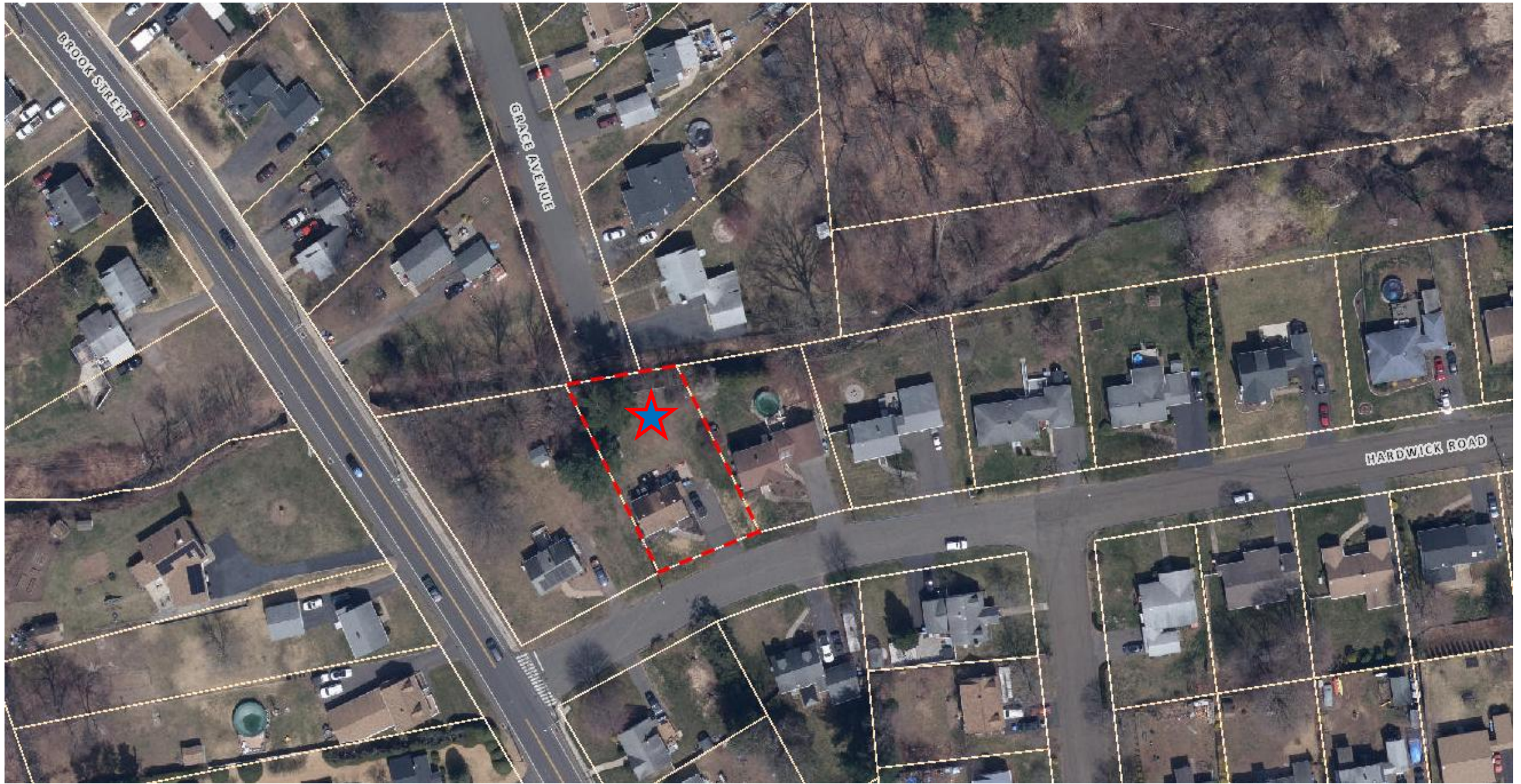
15 Hardwick Rd. – Inland Wetlands and Upland Review
Map 45 Lot 23



15 Hardwick Rd – Floodplain
Map 45 Lot 23



15 Hardwick Rd – Topography
Map 45 Lot 23



15 Hardwick Rd – Aerial 2023
Map 45 Lot 23



15 Hardwick Rd – Topography
Map 45 Lot 23

**JAMES ZIOGAS JR,
ATTORNEY AT LAW, LLC
104 Bellevue Avenue
Bristol, Connecticut 06010**

**TEL (860) 584-2384
FAX (860) 589-8213
E-MAIL: jziogas@ziogaslaw.com**

June 9, 2026

City of Bristol Inlands Wetlands commission
111 North Main Street
Bristol, CT 06010

Re: application 1908 Minor Street

Dear Mr. Chairman;

The above-entitled application requires an extension of the permit. On behalf of my client Chris Armstrong, I am requesting a 5-year extension of his permit.

Please place this on your agenda for the next meeting under old business.

Sincerely

James Ziogas Jr.

James Ziogas, Jr.

**BRISTOL CONSERVATION COMMISSION
INLAND WETLANDS AGENCY
FORM IW-1 (Application for a Wetlands Permit)**

For Office Use Only	
APPLICATION NO.	<u>1908</u>
DATE FILED	<u>9-24-20</u>
DECISION DATE:	_____
DECISION:	_____

1. APPLICANT:

Name: Christopher Armstrong
Address: 113 North Riverside Ave, PO Box 81 City: Terryville State: CT Zip 06786
Telephone No.: (860) 302-5607 ☒ home ☒ work E-Mail: _____
Signature:  Signature - (Printed/Typed) Christopher Armstrong
CHECK ONE: ☒ owner ☐ other (specify): _____

2. PROPERTY OWNER(S):

Name: Christopher Armstrong
Address: 113 North Riverside Ave, PO Box 81 City: Terryville State: CT Zip 06786
Telephone No.: (860) 302-5607 ☒ home ☒ work E-Mail: _____
Signature: _____ Signature - (Printed/Typed) Christopher Armstrong

3. DESCRIBE THE SUBJECT PROPERTY:

Address or Location: 351 Minor Street Bristol, CT 06010
Assessor's Map No.: 66 Assessor's Lot No.(s): 263-2
Description of wetlands (location, approximate area to be disturbed, vegetation, etc.): see attached sheet

4. DESCRIBE THE PROPOSED ACTIVITY AND ITS PURPOSE: Office/ Garage and Bulk Oil & Propane Facility

5. CHECK THE STATEMENT WHICH APPLIES TO THE PROPOSED ACTIVITY:

- ☐ a. The proposed activity is either a use permitted as of right or a non-regulated use, under subsection _____ of Section 4 of the Inland Wetlands Regulations. *See instructions for submission requirements.*
- ☐ b. The proposed activity is not regulated because it is greater than 100 feet from a wetlands or watercourse or will not adversely affect the wetlands or watercourse. *See instructions for submission requirements.*
- ☒ c. The proposed activity is a regulated activity and will occur:
- | | |
|---|------------------------------------|
| ☒ in a wetlands or watercourse | area: <u>0.08 Ac (3342 S.F.)</u> |
| ☒ within the upland review area | area: <u>1.67 Ac (72,758 S.F.)</u> |

6. FLOW CALCULATIONS:

Does a watercourse flow through the subject property?

☐ yes ☒ no

If "yes", see instructions for submission requirements.

**CITY OF BRISTOL, CONNECTICUT
SUPPLEMENTARY INFORMATION**

For Office Use Only
APPLICATION NO. 1908

Address or location of property: 351 Minor Street Bristol, CT 06010

ADDITIONAL INFORMATION/COMMENTS (click inside the box below and begin typing)

3. Description of wetlands: The wetlands are located in the southeast corner of the property and extend approximately 300 feet to the north along the base of the existing railroad embankment. The northerly 40 feet of the wetland encompasses 0.08 acres of disturbance. The wetland soil in this area will be removed and will be replaced with clean gravel fill to support the proposed embankment that will support the building pad for this site. No standing water was observed by the surveyors when they were recording the property features and the wetland boundary flagging. The wetland consists of wetland type soils but not much wetland vegetation.

There is a small pocket of City annotated wetlands within the Minor Street right of way. The Soil Scientist did not consider this area to be a wetland.

ADDITIONAL APPLICANT

Name: _____ CHECK ONE: ☐ owner ☐ other: _____

Address: _____ City: _____ State: _____ Zip: _____

Telephone No.: _____ E-Mail: _____

Signature: _____ Signature – (Printed/Typed) _____

ADDITIONAL OWNER(S) OF RECORD

Name: _____

Address: _____ City: _____ State: _____ Zip: _____

Telephone No.: _____ E-Mail: _____

Signature: _____ Signature – (Printed/Typed) _____

Name: _____

Address: _____ City: _____ State: _____ Zip: _____

Telephone No.: _____ E-Mail: _____

Signature: _____ Signature – (Printed/Typed) _____

(OPTIONAL) SEND COPIES OF ALL CORRESPONDENCE TO:

Name: _____

Address: _____ City: _____ State: _____ Zip: _____

Telephone No.: _____ E-Mail: _____



City of Bristol

BRISTOL, CONNECTICUT 06010

CERTIFIED MAIL

December 4, 2020

Christopher Armstrong
Armstrong Heating Oil, LLC
113 North Riverside Ave., P.O. Box 81
Terryville, CT 06786

RE: Application #1908 –Wetlands Application to construct office, garage, bulk oil and propane facility;
351 Minor Street; Map 66; Lot 263-2; Christopher Armstrong, applicant.

Dear Applicant:

The Inland Wetlands Commission, at its meeting of December 2, 2020, voted to grant final approval to the subject application, with the following stipulations:

- 1-18. Attached.
19. Native vegetation shall be planted on new grading transition slopes to existing wetland.
20. Site specific Operation and Maintenance plan shall be submitted for Engineering review.

Please submit two copies of the updated "Wetland Creation Plan and Planting details, reflecting stipulation 19 details and four copies of the final plan, after which time one copy of the stamped approved plan will be returned to you.

This approval does not relieve you from obtaining applicable local, state or federal permits associated with the proposed activity.

Should you have any further questions or comments, please contact me at 860-584-6111 or the Land Use Office at 860-584-6225.

Sincerely,

A handwritten signature in black ink, appearing to read "Carol Noble".

Carol Noble, P.E.
Environmental Engineer

CN/nk

c: IWEO
Robert Green Associates LLC (via e-mail)
Attorney James Ziogas (via e-mail)
David Lord, C.S.S., Soil Resource Consultants (via e-mail)

THE PERMIT IS ISSUED SUBJECT TO THE FOLLOWING CONDITIONS AND/OR MODIFICATIONS:

1. The Inland Wetlands Enforcement Officer shall be notified at least three days prior to the initiation of any regulated activity under this permit (584-6116) and shall be regularly informed as to the progress of all activities involved in this proposal.
2. The duration of any permit shall be five (5) years unless otherwise approved by the Commission.
3. All work and all regulated activities conducted pursuant to this authorization shall be consistent with the terms and conditions of this permit. Any structures, excavation, fill, obstructions, encroachments or regulated activities not specifically identified and authorized herein shall constitute a violation of this permit and may result in its modification, suspension or revocation. Upon initiation of the activities authorized herein, the permittee thereby accepts and agrees to comply with the terms and conditions of this permit.
4. This authorization is not transferable without the written consent of the Commission.
5. In evaluating this application, the Commission has relied on information provided by the applicant and, if such information subsequently proves to be false, deceptive, incomplete and/or inaccurate, this permit shall be modified, suspended or revoked.
6. This permittee shall employ best management practices, consistent with the terms and conditions of this permit and current state and local guidelines, to control storm water discharges and to prevent erosion and sedimentation and to otherwise prevent pollution of wetlands or watercourses. For information and technical assistance, contact the Land Use Office, 111 North Main St., Bristol, (860) 584-6225.
7. The permittee shall immediately inform the Commission/Engineering Division of any problems involving wetlands or watercourses which have developed in the course of, or which are caused by, the authorized work.
8. No equipment or material including without limitation, fill, construction materials or debris shall be deposited, placed or stored in any wetlands, watercourse or flood plain on or off site unless specifically authorized by this permit or, if applicable, by a Flood Plain Permit.
9. This permit is subject to and does not derogate any present or future property rights or other rights or powers of the City of Bristol and conveys no property rights in real estate of material nor any exclusive privileges, and is further subject to any and all public and private rights and to any federal, state or local laws or regulations pertinent to the property or activity affected hereby.
10. If the activity authorized by this permit also involves activity or a project which requires zoning or subdivision approval, special permit, variance or special exception, no work pursuant to this permit may begin until such approval is obtained.
11. Timely implementation and maintenance of sediment and erosion control measures as outlined in the "Connecticut Guidelines for Soil, Erosion & Sediment Control", dated May 2002 and as revised, shall be a condition of this permit.
12. All siltation and sedimentation control measures shall be removed once all upgrade site construction has been completed and a suitable vegetative ground cover has been established on all previously disturbed non-surfaced areas.
13. If required by the Commission, signs delineating the City of Bristol Inland Wetlands Easement shall be located a minimum of thirty (30) feet apart or at a change of direction unless otherwise approved by the Engineering Division. A minimum of three (3) signs per lot shall be provided. Signs shall be installed on 4" X 4" posts, set below frost, and shall read "City of Bristol Inland Wetlands Easement". Signs shall be installed prior to any activity.
14. The following construction sequence shall be implemented unless otherwise approved by the Commission consist of the following:
 - a. Contact IWEO (584-6116)
 - b. Install conservation easement signs (if required)
 - c. Install erosion control measures
 - d. Install storm drainage
 - e. Construct regulated activity in accordance with approved plan
 - f. Once stabilized, remove erosion control measures
15. All excess fill material shall be disposed of off-site. Off-site disposal areas within an area regulated by the Inland Wetlands Commission shall require approval from the Commission.
16. The applicant shall indicate conditions of approval on the plan along with a signature block for Commission Chairman.
17. All regulated activity associated with this permit shall be completed within one (1) year unless otherwise approved by the Commission.
18. The roof leaders from the proposed construction shall be connected to a water quality/groundwater recharge system, designed for site-specific groundwater and soil conditions, in accordance with CT Stormwater Quality Manual, as approved by the Engineering Department.

Adopted by: Inland Wetlands Commission rev. February 5, 2020

Wetlands Application #1908 – 351 Minor Street
(Office/Garage and Bulk Oil & Propane Facility)

Minutes of on-site visit - Saturday November 2, 2020, 8:00 am

Attendees

- Chris Armstrong, applicant
- Brian Cunningham, P.E., Robert Green Assoc., LLC
- David Lord, Soil Scientist, Soil Resource Consultants
- Michael Robinson, Commissioner
- Zach Fisk, Commissioner
- James Carros, Commissioner
- Carolyn Checovetes, Commissioner
- Chet Reed , Commissioner
- Carol Noble, Bristol Env. Engineer

The site conditions were observed. Commission observed the wetland flags and stakes showing the limits of the proposed pond and garage. Meeting ended at approximately 8:55 am.

2

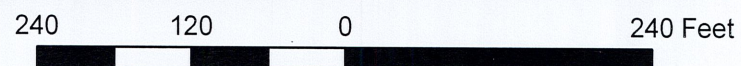
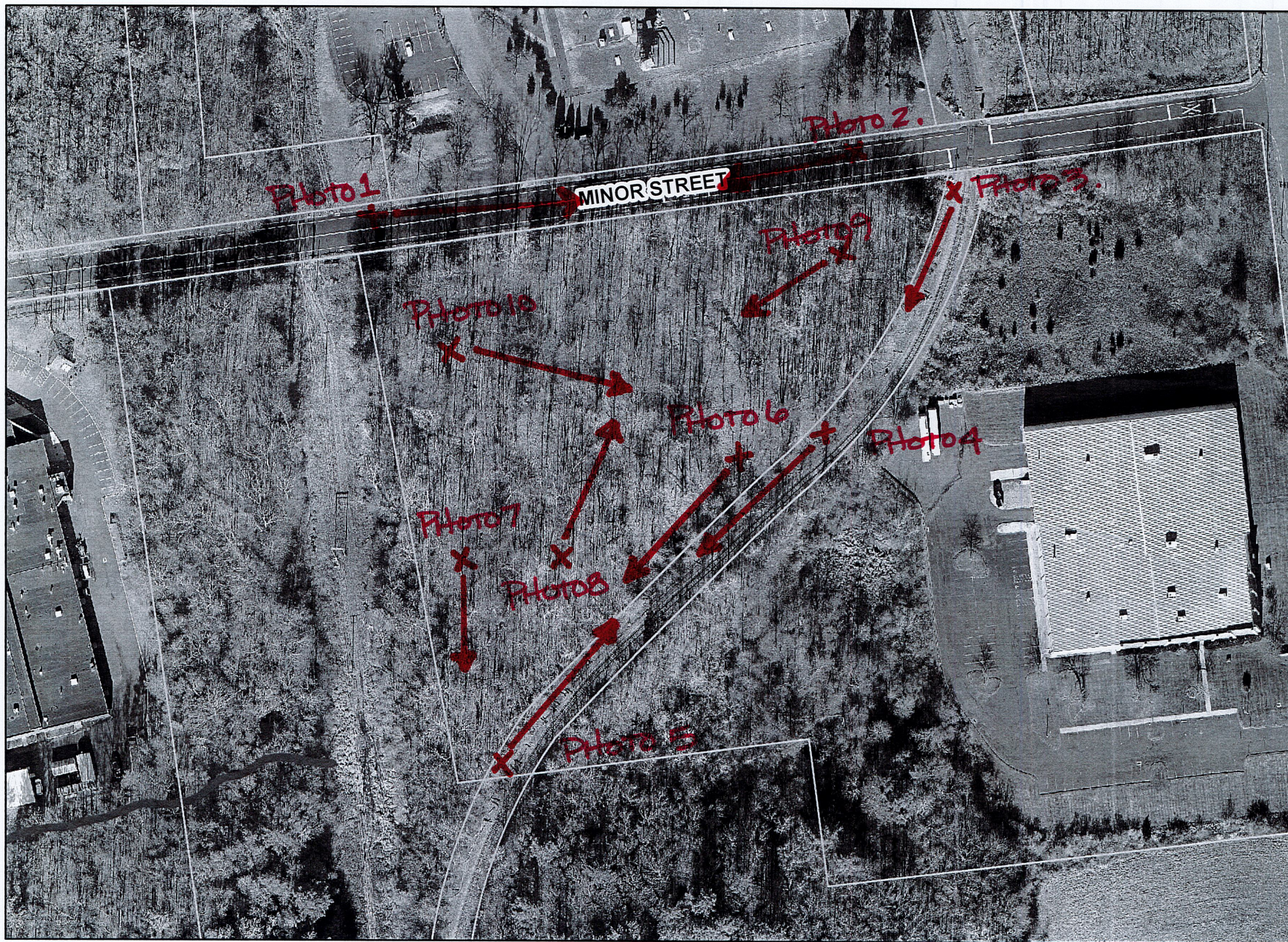


Photo #1



Photo #2



Photo #3



Photo #4





Photo #5



Photo #6



Photo #7

Photo #8



Photo #9



Photo #10



From: Carol Noble
Sent: Tuesday, November 24, 2020 8:39 AM
To: Nancy King
Subject: FW: 351 Minor Street Bristol Plans 1 of 2
Attachments: 2020_11_23_Plan Sheet Submission_Part A.pdf

Good morning, Nancy,
Please include in Minor St application. Thanks!

From: Robert Green Associates [mailto:green@rga-ct.com]
Sent: Monday, November 23, 2020 5:09 PM
To: Carol Noble <CarolNoble@bristolct.gov>
Cc: Chris Armstrong (chriscma5@att.net) <chriscma5@att.net>; jziogas@ziogaslaw.com
Subject: 351 Minor Street Bristol Plans 1 of 2

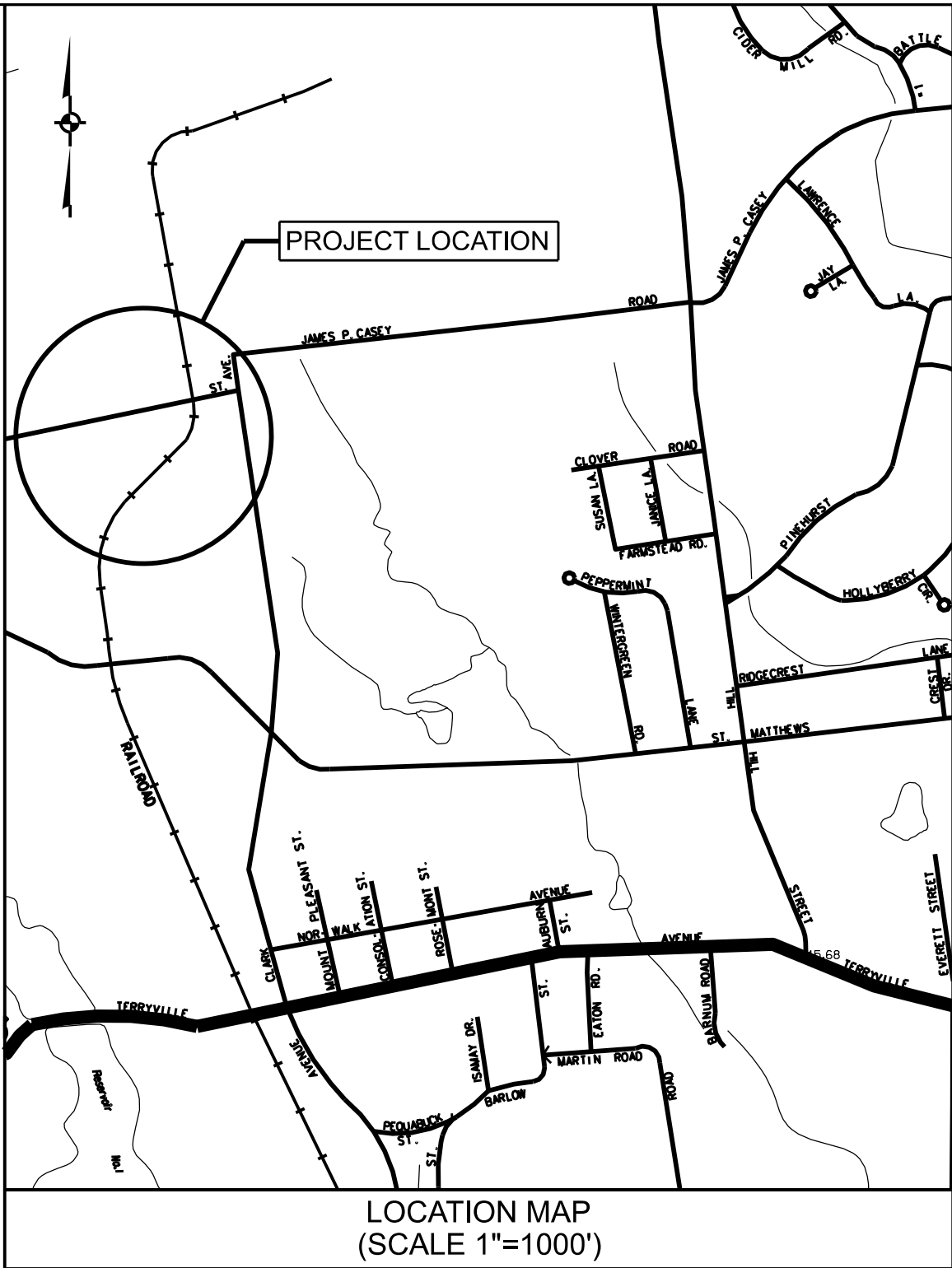
Carol,

Two emails to keep the file size below the 10MB limit. The slopes supporting the rear driveway have been steepened to 2:1 to allow for a mitigation area to be developed between the detention basin and the wetland limits. These plans also captured other issues noted during review and Public Hearings, namely the addition of two Casacade Separators feeding the underground detention system located between the building and the truckport.

Brian T. Cunningham, P.E.
Robert Green Associates, L.L.C.
6 Old Waterbury Road
Terryville, Connecticut 06786
Email: Green@rga-ct.com
860-589-0135

SITE PLAN - FUEL TRANSFER FACILITY

LOT 263-2 351 MINOR STREET BRISTOL, CONNECTICUT AUGUST 17, 2020



LIST OF REVISIONS		
1	11-23-20	REVISED GRADING TO PROVIDE WETLAND WETLAND MITIGATION
REV.	DATE	REVISION DESCRIPTION

LEGEND	
	NORTH ARROW
	UTILITY POLE
	UTILITY POLE W/ LUMINAIRE
	MANHOLE
	CATCH BASIN
	SIGN
	GATE VALVE (TYPE AS NOTED)
	HYDRANT
	DECIDUOUS TREE
	EVERGREEN TREE
	SHRUB / BUSH
	EXISTING SPOT ELEVATION
	PROPOSED SPOT ELEVATION
	ZONING SETBACK LINE
	EXISTING CONTOUR
	PROPOSED CONTOUR
	APPROX. LOCATION EXISTING WATER MAIN
	PROPOSED 2" COPPER WATER SERVICE
	PROPOSED 6" D.I.P. FIRE SERVICE
	APPROX. LOCATION EXISTING SEWER MAIN
	PROPOSED 6" PVC (SDR-35) SEWER LATERAL
	APPROX. LOCATION EXISTING GAS MAIN
	PROPOSED GAS SERVICE
	PROPOSED ELECTRIC SERVICE
	PROPOSED TEL./COMM. SERVICE
	PROPOSED 8" PVC ROOF LEADER CONNECTION
	PROPOSED UNDERDRAIN
	PROPOSED RB 350 RAILING
	EXISTING TREE LINE
	PROPOSED TREE LINE
	CURBING (TYPE AS NOTED)
	SEDIMENTATION AND EROSION CONTROL FENCE
	PAVEMENT ARROW
	APPROXIMATE WETLAND LIMITS
	100' UPLAND REVIEW LINE
	STONEWALL

LIST OF DRAWINGS	
1	COVER SHEET
2 - 3	PROPERTY & TOPOGRAPHIC SURVEY
4	GENERAL NOTES
5 - 6	LAYOUT, SIGNS AND PAVEMENT MARKINGS
7 - 8	GRADING
9 - 10	DRAINAGE AND UTILITIES
11 - 12	EROSION AND SEDIMENTATION CONTROL
13 - 17	MISCELLANEOUS NOTES AND DETAILS
18	LANDSCAPING

APPLICATION NUMBER:
SPECIAL PERMIT FOR
GRANTED:

APPLICATION NUMBER:
PERMIT FOR ACTIVITY IN A WETLAND
AND UPLAND REVIEW AREA
GRANTED:

APPLICATION NUMBER:
SITE PLAN FOR
GRANTED:

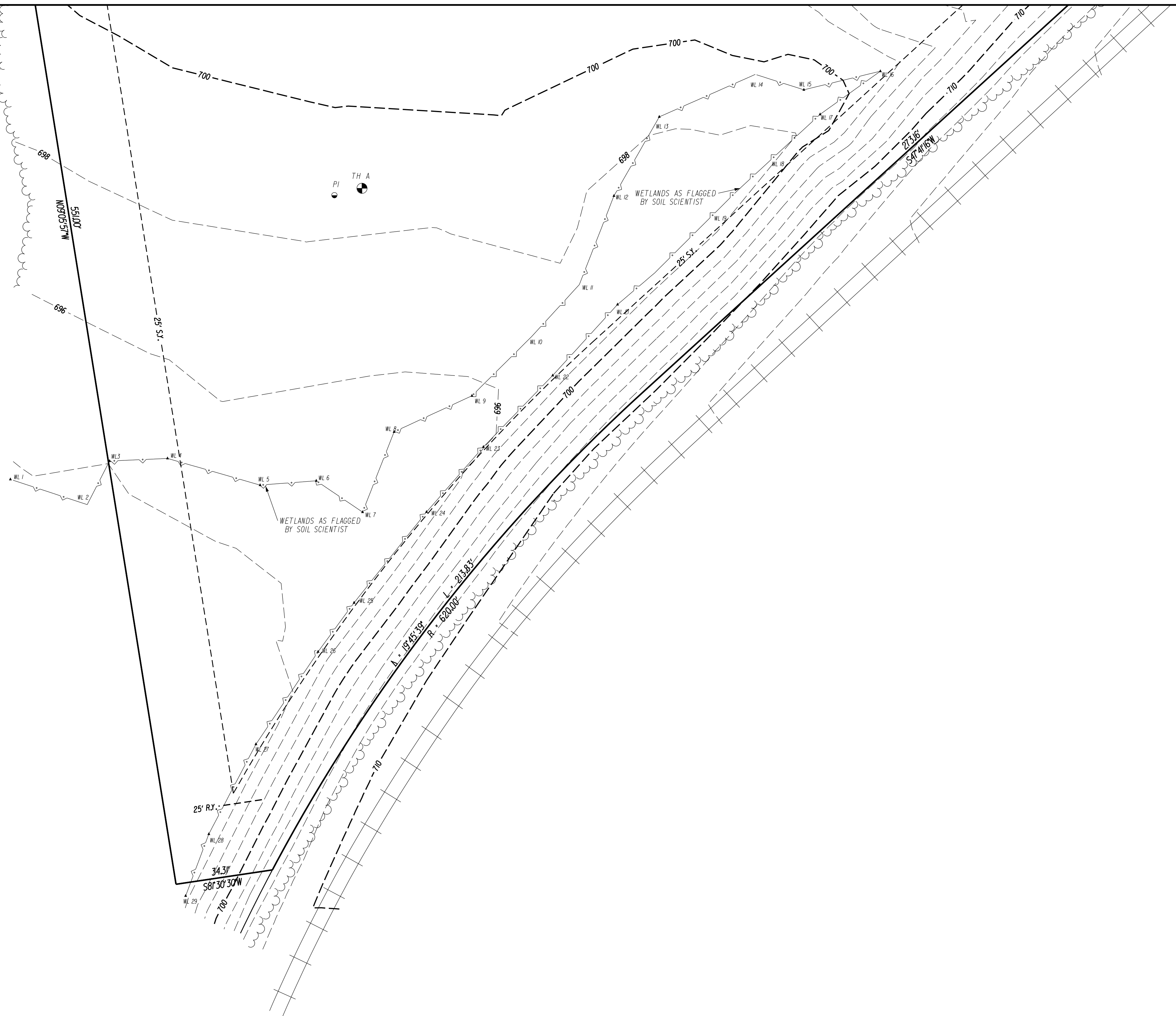
APPLICATION NUMBER:1832
REQUEST WETLAND BOUNDARY CHANGE
GRANTED:November 20, 2017

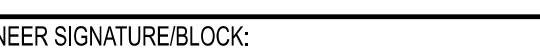
Prepared For:
Christopher Armstrong
PO Box. 81
Terryville, CT 06786

Surveyor/Civil Engineer
Robert Green Associates LLC
6 Old Waterbury Road
Terryville, CT 06786
(860) 589-0135



MATCH MARK TO SHEET V-001



			DATE: AUGUST 17, 2020	SURVEYOR SIGNATURE/BLOCK: TO MY KNOWLEDGE AND BELIEF, THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HERON. 			ENGINEER SIGNATURE/BLOCK: 	PROJECT TITLE: FUEL TRANSFER FACILITY 351 MINOR STREET BRISTOL, CONN.	DRAWING NO. V-002	
1	11-23-20	REVISED GRADING TO PROVIDE WETLAND MITIGATION	SCALE: SCALE IN FEET 0 20 40	SCALE 1"=20'					DRAWING TITLE: PROPERTY & TOPOGRAPHIC SURVEY	SHEET NO. 3

GENERAL NOTES:

- 1J ASSESSORS MAP: 66 LOT: 263-2
- 2J PROPERTY ADDRESS: 351 MINOR STREET
- 3J RECORD OWNER: CHRISTOPHER ARMSTRONG
- 4J PREPARED FOR: CHRISTOPHER ARMSTRONG
- 5J LOT 263-2 AREA = 4.46 ACRES
- 6J TOTAL AREA OF MAPPED WETLANDS/WATERCOURSES ON SITE: 0.296 ACRES
AREA OF WETLANDS/WATERCOURSES TO BE DISTURBED: 0.007 ACRES (735 S.F.)
LINEAR FEET OF STREAM TO BE ALTERED: 0 FT
AREA OF WETLANDS/WATERCOURSES TO BE CREATED: 0 ACRES
AREA OF ACTIVITY WITHIN 100' BUFFER ZONE: 128 ACRES (12758 S.F.)
AREA OF PROPOSED MITIGATION OF DIRECT WETLAND IMPACT 0.034 ACRES (1483 S.F.)
- WETLANDS SHOWN ARE AS FLAGGED IN THE FIELD BY DAVID LORD
SOILS SCIENTIST.
- 7J PROPERTY SERVICED BY PUBLIC WATER AND SEWER.
- 8J EXISTING CONTOURS AT 2' INTERVALS
- 9J THE INDICATED EXISTING UTILITIES ARE BASED ON LIMITED INFORMATION.
THE LOCATIONS ARE APPROXIMATE, ALL UTILITIES MAY NOT BE SHOWN.
THE CONTRACTOR SHALL CONTACT "811" PRIOR TO THE COMMENCEMENT
OF ANY WORK.
- 10J THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, QUANTITIES AND DETAILS PRIOR TO ANY CONSTRUCTION.
ANY DISCREPANCIES SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
- 11J TECHNICAL SPECIFICATIONS ARE THE STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS
FOR ROADS, BRIDGES AND INCIDENTAL CONSTRUCTION (FORM 88) AND ALL LATEST SUPPLEMENTAL SPECIFICATIONS THERETO,
INCLUDING ANY SPECIAL PROVISIONS.
- 12J LANDSCAPE AND LIGHTING PLANS TO BE SUBMITTED BY OTHERS UNDER SEPARATE COVER.

PARKING CALCULATION:

BUILDING No.1

PROPOSED USE: OFFICE/MAINTENANCE GARAGE

PARKING REQUIRED: 1/750 S.F./GA OR 1/125 EMPLOYEES ON LARGEST SHIFT,
WHICHEVER IS GREATER

10,000 S.F. / 750 = 13.3 - SAY 14 SPACES

PARKING PROVIDED: 14 SPACES

BUILDING No.2

PARKING FOR INVENTORY ONLY - N/A

DATA TABLE	ZONE IP - 3	REQUIRED		PROVIDED	
		BUILDING No.1	BUILDING No.2	BUILDING No.1	BUILDING No.2
MINIMUM LOT AREA	3 Ac.	4.46 Ac.	4.46 Ac.		
MINIMUM LOT WIDTH	250'	600'	600'		
MINIMUM FRONT YARD ON A CITY STREET	60'	64'	209.39'		
MINIMUM SIDE YARD	25'	109.9'	87.68'		
MINIMUM REAR YARD	25'	N/A	N/A		
MAXIMUM BUILDING HEIGHT	50'	See Arch.Dwg's	See Arch.Dwg's		
MAXIMUM BUILDING COVERAGE - COMBINED ALL BUILDINGS	30%		7%		
NO. OF PARKING SPACES	14		14		

GENERAL NOTES FOR SITE PLANS (AS APPLICABLE)

1. A SANITARY SEWER LATERAL PERMIT OBTAINED FROM THE PUBLIC WORKS DEPARTMENT, WILL BE REQUIRED PRIOR TO CONNECTING THE INTO THE EXISTING SEWER SYSTEM. THE CONTRACTOR INSTALLING THE SEWERS/LATERALS SHALL NOTIFY THE CITY SEWER INSPECTOR BETWEEN 24 AND 48 HOURS PRIOR TO ANY SUCH INSTALLATION AND/OR CONNECTION TO MAKE ARRANGEMENTS FOR AN INSPECTION OF THE SANITARY SEWER INSTALLATIONS. NO SANITARY SEWER INSTALLATION SHALL BE BACKFILLED PRIOR TO AN INSPECTION OF THE COMPLETE PIPE INSTALLATION BY THE CITY SEWER INSPECTOR. ALL BUILDING SEWERS SHALL HAVE A GRAVITY BACK FLOW PREVENTER. (BUILDING SEWERS AND CONNECTIONS SHALL BE INSTALLED IN ACCORDANCE WITH SEC. 22-19(f) OF THE CODE OF ORDINANCES - CITY OF BRISTOL.)
2. A STORM SEWER CONNECTION PERMIT OBTAINED FROM THE PUBLIC WORKS DEPARTMENT, WILL BE REQUIRED PRIOR TO CONNECTING THE PROPOSED DRAINAGE SYSTEM(S) INTO THE CITY SYSTEM AND/OR INSTALLING STORM DRAINAGE WITHIN THE CITY R.O.W. THE CONTRACTOR MAKING THE STORM SEWER CONNECTION AND/OR INSTALLING STORM DRAINAGE WITHIN THE CITY R.O.W. SHALL NOTIFY THE CITY SEWER INSPECTOR BETWEEN 24 AND 48 HOURS PRIOR TO ANY SUCH INSTALLATION AND/OR CONNECTION TO MAKE ARRANGEMENTS FOR AN INSPECTION OF THE STORM SEWER INSTALLATIONS. NO STORM SEWER SHALL BE BACKFILLED PRIOR TO AN INSPECTION OF THE COMPLETE PIPE INSTALLATION BY THE CITY SEWER INSPECTOR.
3. A DRIVEWAY APRON AND/OR SIDEWALK PERMIT OBTAINED FROM THE PUBLIC WORKS DEPARTMENT, WILL BE REQUIRED PRIOR TO CONSTRUCTING ANY DRIVEWAY APRON AND/OR SIDEWALK WITHIN THE CITY R.O.W. THE CONTRACTOR CONSTRUCTING THE DRIVEWAY APRON AND/OR SIDEWALK WITHIN THE CITY R.O.W. SHALL NOTIFY THE CITY HIGHWAY INSPECTOR BETWEEN 24 AND 48 HOURS PRIOR TO ANY SUCH CONSTRUCTION TO MAKE ARRANGEMENTS FOR AN INSPECTION OF ANY DRIVEWAY APRON AND/OR SIDEWALK INSTALLATIONS. NO CONCRETE (PORTLAND CEMENT AND/OR BITUMINOUS) SHALL BE PLACED PRIOR TO AN INSPECTION BY THE CITY HIGHWAY INSPECTOR.
4. SEDIMENTATION AND SILTATION CONTROLS SHALL BE INSTALLED AS REQUIRED BY THE ENGINEERING DIVISION/MEO.
5. GRADING AROUND THE PROPOSED IMPROVEMENTS SHALL BE PERFORMED IN A MANNER WHICH PREVENTS ALL RUNOFF FROM BEING DIRECTED ONTO ADJACENT PROPERTIES; BOTH DURING AND AFTER CONSTRUCTION.
6. AS-BUILT PLOT PLANS SHALL BE SUBMITTED FOR ENGINEERING DIVISION REVIEW AT LEAST THREE (3) DAYS PRIOR TO THE REQUIRED ENGINEERING SIGN-OFF FOR ISSUANCE OF A CERTIFICATE OF OCCUPANCY (C.O.). AS-BUILT PLANS MUST INCLUDE AS-BUILT GRADING OF THE SITE.
7. ANY EXISTING DAMAGED SECTIONS OF SIDEWALK, IDENTIFIED BY THE CITY ALONG STREETS ABUTTING THE SITE SHALL BE REPLACED AT THE DIRECTION OF THE CITY'S ENGINEERING STAFF.

CONSTRUCTION SEQUENCE

1. FLAG THE LIMITS OF CONSTRUCTION NECESSARY TO FACILITATE THE PRECONSTRUCTION MEETING.
2. HOLD PRECONSTRUCTION MEETING WITH THE OWNER, ENGINEER, CONTRACTOR AND APPROPRIATE CITY STAFF. REVIEW FLAGGED CLEARING LIMITS AND DETERMINE TOPSOIL STOCKPILE AREA. (REMEMBER TO CALL BEFORE YOU DIG @ 811).
3. THE CONTRACTOR IS REQUIRED TO PROVIDE THE SOURCE AND QUALITY OF ALL FILL MATERIAL.
4. FLAG REMAINDER OF THE LIMITS OF CONSTRUCTION AND TREE PROTECTION ZONES IF REQUIRED.
5. INSTALL CONSTRUCTION ENTRANCE PAD.
6. INSTALL PERIMETER EROSION AND SEDIMENT CONTROLS AND TREE PROTECTION DEVICES IN ACCORDANCE WITH THE E&S PLAN.
7. CUT TREES WITHIN THE DEFINED CLEARING LIMITS AND REMOVE CUT WOOD CHIP BRUSH AND SLASH, STOCKPILE CHIPS FOR FUTURE USE OR REMOVE OFF SITE.
8. STRIP AND STOCKPILE ALL TOPSOIL THAT IS WITHIN THE FOOTPRINT OF THE CONSTRUCTION SITE AND REFERENCE STOCKPILE MANAGEMENT FOR EROSION AND SEDIMENT CONTROLS. EITHER REMOVE TREE STUMPS TO AN APPROVED DISPOSAL SITE OR CHIP IN PLACE AS INDICATED ON THE PLANS.
9. MAKE ALL CUTS AND FILLS REQUIRED. ESTABLISH THE SUBGRADE FOR THE TOPSOIL AREA, PARKING AND DRIVEWAY AS REQUIRED AND BENCH THE BUILDING TO A SUBGRADE ALLOW A REASONABLE AMOUNT OF AREA AROUND THE FOOTPRINT OF THE BUILDING FOR THE CONSTRUCTION ACTIVITIES.
10. BEGIN CONSTRUCTION OF THE BUILDINGS.
11. PRIOR TO INSTALLING SURFACE WATER CONTROLS SUCH AS TEMPORARY DIVERSIONS AND STONE DIKES, INSPECT EXISTING CONDITIONS TO ENSURE DISCHARGE LOCATIONS ARE STABLE. IF NOT STABLE, REVIEW DISCHARGE CONDITIONS WITH THE DESIGN ENGINEER AND IMPLEMENT ADDITIONAL STABILIZATION MEASURES PRIOR TO INSTALLING WATER SURFACE CONTROLS.
12. INSTALL ALL UTILITIES AND DRAINAGE SYSTEMS TO WITHIN 5 FEET OF THE BUILDING OR AS OTHERWISE MODIFIED BY THE DESIGN ENGINEER TO ADJUST FOR UNFORESEEN SITE CONDITIONS.
13. PREPARE SUB-BASE, SLOPES, PARKING AREAS, SHOULDER AREAS, ACCESS DRIVES AND ANY OTHER DISTURBANCE FOR FINAL GRADING.
14. INSTALL PROCESS AGGREGATE IN DRIVEWAYS AND PARKING AREAS.
15. PLACE TOPSOIL WHERE REQUIRED. COMPLETE THE PERIMETER LANDSCAPE PLANTINGS.
16. FINE GRADE, RAKE, SEED AND MULCH TO WITHIN 2 FEET OF THE CURBING.
17. UPON SUBSTANTIAL COMPLETION OF THE BUILDING, COMPLETE THE BALANCE OF SITE WORK AND STABILIZATION OF ALL OTHER DISTURBED AREAS. INSTALL FIRST COURSE OF PAVING.
18. WHEN ALL OTHER WORK HAS BEEN COMPLETED, REPAIR AND SWEEP ALL PAVED AREAS FOR THE FINAL COURSE OF PAVING. INSPECT THE DRAINAGE SYSTEM AND CLEAN AS NEEDED.
19. INSTALL FINAL COURSE OF PAVEMENT.
20. REVIEW ALL VEGETATED SURFACES AND RESTABILIZE (TOPSOIL, SEED, AND MULCH) AS NEEDED. ALSO, TOPSOIL, SEED AND MULCH THE AREA BETWEEN THE CURBING AND PREVIOUSLY STABILIZED SURFACES.
21. AFTER THE SITE IS STABILIZED REMOVE TEMPORARY EROSION AND SEDIMENT CONTROLS.

OPERATION AND MAINTENANCE PLAN (POST-CONSTRUCTION)

1. ALL DRAINAGE SHOULD BE INSPECTED TWO TIMES PER YEAR AND SEDIMENT REMOVED WHEN IT EXTENDS TO WITHIN 12 INCHES OF THE OUTLET PIPE INVERT, NOT LESS THAN ONCE PER YEAR. THE SEDIMENT SHALL BE DISPOSED OF IN AN APPROVED LOCATION.
2. ALL PAVED AREAS SHALL BE SWEEPED TWICE ANNUALLY. TYPICALLY, SWEEPING SHOULD OCCUR IN THE SPRING, AFTER WINTER SANDING, AND IN THE FALL, AFTER ALL LEAVES HAVE FALLEN.
3. A VEGETATIVE OR IMPROVED COVER SHALL BE MAINTAINED ON ALL EARTH SURFACES TO MINIMIZE SOIL EROSION. USE OF FERTILIZER SHOULD BE MINIMIZED AND APPLIED USING PRUDENT APPLICATION PROCEDURES (USE ONLY ORGANIC FERTILIZER).
4. DURING CONSTRUCTION AND FOR THREE MONTHS AFTER PROJECT COMPLETION INSPECTION OF SEDIMENT AND EROSION CONTROL MEASURES SHALL BE MADE ON A WEEKLY BASIS AND AFTER RAINFALL EVENTS OF 1/2" OR GREATER. A LOG OF SUCH INSPECTIONS SHALL BE MAINTAINED AT THE SITE.
5. A WRITTEN REPORT WILL BE PREPARED ANNUALLY BY SOIL RESOURCE CONSULTANTS TO DOCUMENT THE MONITORING INSPECTIONS. COPIES OF THE WRITTEN INSPECTION PROTOCOL SHALL BE FORWARDED BY OCTOBER 1 TO THE BRISTOL INLAND WETLAND COMMISSION. THE REPORT SHALL INCLUDE: 1) AN OVERALL ASSESSMENT OF THE WETLAND PLANT COMMUNITY ESTABLISHMENT; 2) THE PERCENT ESTABLISHMENT OF GROUND COVER OR HERBACEOUS VEGETATION; AND 3) THE TYPES AND NUMBERS OF ANY DEAD OR FAILING TREES AND SHRUBS AS WELL AS DOCUMENTING THEIR REPLACEMENT.

INSPECTION AND MAINTENANCE GUIDELINES FOR THE STORMWATER DETENTION BASINS

INSPECTIONS

THE BASIN SHOULD BE INSPECTED TWICE A YEAR (APRIL AND OCTOBER) FOR THE FIRST 3 YEARS, AND AFTER EVERY LARGE STORM. THE FREQUENCY OF THE INSPECTIONS CAN BE ADJUSTED UPWARD OR DOWNWARD BASED ON THE RESULTS OF THESE INITIAL INSPECTIONS. THE INSPECTIONS SHOULD INCLUDE A THOROUGH VISUAL CHECK OF THE FOLLOWING:

1. ACCUMULATION OF SEDIMENT OR DEBRIS
2. ACCUMULATION OF LEAVES AND GRASS CLIPPINGS
3. EROSION, SETTLEMENT, OR SLOPE FAILURE OF THE BASIN SIDES.
4. ALGAE GROWTH, STAGNANT POOLS, OR NOXIOUS ODORS.
5. SEEPAGE AT THE TOE OF THE BASIN.
6. EROSION OF THE INLET SWALE LININGS.
7. EVIDENCE OF VANDALISM.
8. EVIDENCE OF STRUCTURAL DAMAGE DUE TO WILDFIRE, OR INVASIVE PLANT SPECIES.

THE INSPECTIONS SHOULD DOCUMENT ANY INCREASE IN THE ACCUMULATION OF SEDIMENT, EROSION OF THE BASIN FLOOR, HEALTH OF THE BASIN VEGETATION, AND THE CONDITION OF THE SWALE LININGS FOR USE IN SUBSEQUENT INSPECTIONS.

ROUTINE MAINTENANCE:

ROUTINE MAINTENANCE IS TO BE PERFORMED BASED ON THE CONCLUSIONS OF EACH INSPECTION. TYPICAL ROUTINE MAINTENANCE IS EXPECTED TO CONSIST OF THE FOLLOWING:

1. DEBRIS (LEAVES, GRASS CLIPPINGS, ETC.) AND LITTER REMOVAL.
2. SILT AND SEDIMENT REMOVAL
3. BRUSH CUTTING UP TO TWO TIMES PER YEAR.

NON-ROUTINE MAINTENANCE:

NON-ROUTINE MAINTENANCE WILL BE BASED ON THE RESULTS OF THE INSPECTIONS. WORK THAT MAY BE REQUIRED WOULD CONSIST OF:

1. EROSION AND STRUCTURAL REPAIR.
2. SEDIMENT REMOVAL AND DISPOSAL.
3. NUISANCE CONTROL.
4. RE-ESTABLISHMENT OF THE BOTTOM SURFACE FOR INFILTRATION.
5. DEWATERING OF THE BASIN.

REMOVAL NOTES:

1. ANY SITE FEATURE NOT LABELED AS BEING REMOVED, REPLACED, ETC., IS INTENDED TO REMAIN.
2. EXISTING ABOVE AND BELOW GROUND UTILITIES TO REMAIN SHALL BE MAINTAINED AND PROTECTED AT ALL TIMES.
3. DURING THE PRECONSTRUCTION MEETING, THE CONTRACTOR, ENGINEER AND TOWN SHALL DETERMINE A SUITABLE LOCATION FOR THE TOPSOIL STOCKPILE.

SIGNING AND PAVEMENT MARKING NOTES:

1. SIGNS AND PAVEMENT MARKINGS SHALL CONFORM TO MUTCD OR CONDOT STANDARDS AS DEPICTED.
2. SIGNS SHALL BE INSTALLED WITH A BREAKAWAY FEATURE.
3. ALL PAVEMENT MARKINGS SHALL BE EPOXY RESIN.

ACCESSIBILITY NOTES:

1. ALL ACCESSIBLE PARKING SPACES AND LOADING ZONES SHALL NOT EXCEED 2% IN ANY DIRECTION.
2. ALL ACCESSIBLE EGRESSSES SHALL BE FLUSH WITH THE ADJOINING MATERIAL UNLESS OTHERWISE NOTED ON THE PLANS.
3. WALKWAYS ALONG ACCESSIBLE ROUTES ARE NOT TO EXCEED 5% RUNNING SLOPE OR 2% CROSS SLOPE UNLESS OTHERWISE SPECIFICALLY NOTED ON THE PLANS.
4. ALL RAMPS SHALL NOT EXCEED 1:12 OR 2% CROSS PITCH.

UTILITY AND DRAINAGE NOTES:

1. TOP OF FRAME ELEVATIONS SHOWN ON THESE PLANS REFLECT THE 2" STANDARD DEPRESSION FROM GUTTER LINE FOR TYPE 'C' CATCH BASINS.
2. ALL CATCH BASINS SHALL HAVE A 2FT SUMP UNLESS OTHERWISE NOTED ON THE PLANS.
3. DETENTION SYSTEM SHALL HAVE 1 EACH FEED CONNECTOR (3) BETWEEN ROWS.
4. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH ALL APPROPRIATE UTILITY COMPANIES REGARDING A FINAL DESIGN, MEANS OF CONSTRUCTION AND AN EXACT LOCATION AND SIZE OF THE UTILITY PRIOR TO THE START OF CONSTRUCTION.
5. ALL PROPOSED UTILITY SERVICES ARE TO BE UNDERGROUND.
6. SANITARY SEWER CONSTRUCTION SHALL BE IN ACCORDANCE WITH SECTION 22-19(h) OF THE CODE OF ORDINANCES - CITY OF BRISTOL.
7. WATER SERVICE WORK TO BE INSTALLED IN ACCORDANCE WITH THE BRISTOL WATER DEPARTMENT SPECIFICATIONS (CITY OF BRISTOL WATER DEPARTMENT RULES AND REGULATIONS). CONTACT MIKE LYNCH AT THE CITY OF BRISTOL WATER DEPARTMENT AT (860) 582-7431 OR EMAIL TO MLYNCH@BRISTOLCT.GOV PRIOR TO THE START OF CONSTRUCTION.
8. SERVICE TAP TO BE DONE BY THE CITY OF BRISTOL WATER DEPARTMENT.
9. WHEN SEWER AND WATER ARE WITHIN 10" HORIZONTALLY, THE WATER MAIN SHALL BE LOCATED IN A SEPARATE TRENCH OR ON AN UNDISTURBED SHELF AND AT LEAST 12" HORIZONTALLY (18" RECOMMENDED), MEASURED EDGE TO EDGE AND 18" ABOVE THE TOP OF THE SEWER, MEASURED FROM CROWN TO INVERT. FINAL LOCATIONS SHALL BE APPROVED BY THE APPROPRIATE UTILITY COMPANY.
10. IF THE CONTRACTOR ENCOUNTERS UNDERGROUND DRAINAGE AND/OR UTILITIES DURING CONSTRUCTION THAT ARE NOT SHOWN ON THE PLANS, HE/SHE SHALL CONTACT THE ENGINEER FOR EVALUATION AND AS-BUILT.

GENERAL NOTES FOR SITE PLANS 'CITY OF BRISTOL' (AS APPLICABLE)

1. A SANITARY SEWER LATERAL PERMIT OBTAINED FROM THE PUBLIC WORKS DEPARTMENT, WILL BE REQUIRED PRIOR TO CONNECTING INTO THE EXISTING SEWER SYSTEM. THE CONTRACTOR INSTALLING THE SEWERS/LATERALS SHALL NOTIFY THE CITY SEWER INSPECTOR BETWEEN 24 AND 48 HOURS PRIOR TO ANY SUCH INSTALLATION AND/OR CONNECTION TO MAKE ARRANGEMENTS FOR AN INSPECTION OF THE SANITARY SEWER INSTALLATIONS. NO SANITARY SEWER INSTALLATION SHALL BE BACKFILLED PRIOR TO AN INSPECTION OF THE COMPLETE PIPE INSTALLATION BY THE CITY SEWER INSPECTOR. ALL BUILDING SEWERS SHALL HAVE A GRAVITY BACK FLOW PREVENTER. (BUILDING SEWERS AND CONNECTIONS SHALL BE INSTALLED IN ACCORDANCE WITH SEC. 22-19(f) OF THE CODE OF ORDINANCES - CITY OF BRISTOL.)
2. A STORM SEWER CONNECTION PERMIT OBTAINED FROM THE PUBLIC WORKS DEPARTMENT, WILL BE REQUIRED PRIOR TO CONNECTING THE PROPOSED DRAINAGE SYSTEM(S) INTO THE CITY SYSTEM AND/OR INSTALLING STORM DRAINAGE WITHIN THE CITY R.O.W. THE CONTRACTOR MAKING THE STORM SEWER CONNECTION AND/OR INSTALLING STORM DRAINAGE WITHIN THE CITY R.O.W. SHALL NOTIFY THE CITY SEWER INSPECTOR BETWEEN 24 AND 48 HOURS PRIOR TO ANY SUCH INSTALLATION AND/OR CONNECTION TO MAKE ARRANGEMENTS FOR AN INSPECTION OF THE STORM SEWER INSTALLATIONS. NO STORM SEWER SHALL BE BACKFILLED PRIOR TO AN INSPECTION OF THE COMPLETE PIPE INSTALLATION BY THE CITY SEWER INSPECTOR.
3. A DRIVEWAY APRON AND/OR SIDEWALK PERMIT OBTAINED FROM THE PUBLIC WORKS DEPARTMENT, WILL BE REQUIRED PRIOR TO CONSTRUCTING ANY DRIVEWAY APRON AND/OR SIDEWALK WITHIN THE CITY R.O.W. THE CONTRACTOR CONSTRUCTING THE DRIVEWAY APRON AND/OR SIDEWALK WITHIN THE CITY R.O.W. SHALL NOTIFY THE CITY HIGHWAY INSPECTOR BETWEEN 24 AND 48 HOURS PRIOR TO ANY SUCH CONSTRUCTION TO MAKE ARRANGEMENTS FOR AN INSPECTION OF ANY DRIVEWAY APRON AND/OR SIDEWALK INSTALLATIONS. NO CONCRETE (PORTLAND CEMENT AND/OR BITUMINOUS) SHALL BE PLACED PRIOR TO AN INSPECTION BY THE CITY HIGHWAY INSPECTOR.

4. SEDIMENTATION AND SILTATION CONTROLS SHALL BE INSTALLED AS REQUIRED BY THE ENGINEERING DIVISION/MEO.

5. GRADING AROUND THE PROPOSED IMPROVEMENTS SHALL BE PERFORMED IN A MANNER WHICH PREVENTS ALL RUNOFF FROM BEING DIRECTED ONTO ADJACENT PROPERTIES; BOTH DURING AND AFTER CONSTRUCTION.

6. AS-BUILT PLOT PLANS SHALL BE SUBMITTED FOR ENGINEERING DIVISION REVIEW AT LEAST THREE (3) DAYS PRIOR TO THE REQUIRED ENGINEERING SIGN-OFF FOR ISSUANCE OF A CERTIFICATE OF OCCUPANCY (C.O.). AS-BUILT PLANS MUST INCLUDE AS-BUILT GRADING OF THE SITE.

7. ANY EXISTING DAMAGED SECTIONS OF SIDEWALK AND/OR CURBING IDENTIFIED BY THE CITY ALONG STREETS ABUTTING THE SITE SHALL BE REPLACED AT THE DIRECTION OF THE CITY'S ENGINEERING STAFF.

INSPECTION AND MAINTENANCE GUIDELINES FOR THE UNDERGROUND STORMWATER MANAGEMENT SYSTEMS

MAINTENANCE GUIDELINES:

1. THE OWNER SHALL KEEP A MAINTENANCE LOG DETAILING ANY EVENT(S) WHICH WOULD HAVE AN EFFECT ON THE SYSTEM'S OPERATIONAL CAPACITY.
2. THE OPERATION AND MAINTENANCE PROCEDURE SHALL BE REVIEWED PERIODICALLY AND CHANGED TO MEET SITE CONDITIONS.
3. MAINTENANCE OF THE STORMWATER MANAGEMENT SYSTEM SHALL BE PERFORMED BY QUALIFIED WORKERS AND SHALL FOLLOW APPLICABLE OCCUPATIONAL HEALTH AND SAFETY REQUIREMENTS.
4. DEBRIS REMOVED FROM THE STORMWATER MANAGEMENT SYSTEM SHALL BE DISPOSED OF IN ACCORDANCE WITH APPLICABLE LAWS AND REGULATIONS.

MINOR MAINTENANCE FREQUENCY (CHECK INLETS AND OUTLETS FOR CLOGGING AND REMOVE DEBRIS AS REQUIRED):

1. MONTHLY IN THE FIRST YEAR
2. SPRING AND FALL
3. ONE YEAR AFTER COMMISSIONING AND EVERY THIRD YEAR THEREAFTER.

GENERAL NOTES FOR EROSION AND SEDIMENTATION CONTROL

1. THIS PLAN OF DEVELOPMENT PROPOSES EROSION CONTROL MEASURES WHICH WILL PERFORM ONE OR MORE OF THE FOLLOWING FUNCTIONS: MINIMIZATION OF SOIL EXPOSURE, CONTROL OF RUNOFF, SHIELDING OF THE SOILS AND BINDING OF THE SOILS. PROPER EROSION MANAGEMENT WILL MINIMIZE THE NEED FOR EXTENSIVE SEDIMENTATION CONTROLS.
2. ALL SEDIMENTATION AND EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO THE START OF CONSTRUCTION.
3. ALL CONTROL MEASURES SHALL BE MAINTAINED IN EFFECTIVE CONDITION THROUGHOUT THE CONSTRUCTION PERIOD AND FOR A PERIOD THEREAFTER. UNTIL ALL AREAS ARE STABILIZED, THE CONTRACTOR SHALL INSPECT ALL SEDIMENT AND EROSION CONTROL MEASURES AFTER EACH STORM EVENT (1/2" OR MORE) OR ONCE A WEEK AND IMMEDIATELY MAKE ANY CORRECTIVE ACTION REQUIRED.
4. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF THE EROSION AND SEDIMENTATION CONTROL HANDBOOK.
5. RUNOFF SHALL ALSO BE CONTROLLED BY THE STAGING OF CONSTRUCTION ACTIVITY AND THE PRESERVATION OF NATURAL VEGETATION WHENEVER POSSIBLE.
6. LAND DISTURBANCE SHALL BE KEPT TO A MINIMUM AND RESTABILIZATION SHALL BE SCHEDULED AS SOON AS POSSIBLE. THE AREAS WHICH ARE LEFT EXPOSED FOR MORE THAN 30 DAYS, TEMPORARY SEEDING FOR STABILIZATION SHALL BE UTILIZED OR AN APPROVED EQUAL.
- A) SEED BED PREPARATION:
- REMOVE STONES LARGER THAN 2"
 - APPLY LIMESTONE AT 90% / 1000 S.F.
 - WORK LIME AND FERTILIZER INTO SOIL
- B) SEED APPLICATION:
- APPLY GRASS MIXTURE BY HAND OR CYCLONE SEEDER, LIGHTLY DRAG OR ROLL THE SEED SURFACE TO COVER SEED.
 - OPTIMAL SEEDING SEASON IS BETWEEN MARCH 15TH AND JUNE 30TH OR BETWEEN AUGUST 15TH AND OCTOBER 30TH.
 - IF SEEDING CAN NOT BE DONE DURING THESE TIMES, REPEAT MULCHING PROCEDURE STATED BELOW UNTIL SEEDING CAN TAKE PLACE.
- C) SEED MIX: (SEE SITE LANDSCAPE PLAN)
- D) MULCHING:
- IMMEDIATELY FOLLOWING SEEDING, MULCH THE SEEDBED SURFACE WITH STRAW OR HAY AT A RATE OF 1-1/2 TONS / ACRE
 - SPREAD MULCH BY HAND OR MULCH BLOWER.
 - PUNCH MULCH INTO SOIL SURFACE WITH TRACK MACHINE OR DISK HARROW STRAIGHT UP. MULCH MATERIAL SHOULD BE TUCKED APPROXIMATELY 2" - 3" INTO SOIL SURFACE.
- E) TREE PROTECTION:
- LIMIT CONSTRUCTION ACTIVITIES THAT MIGHT CAUSE DAMAGE TO TREES. THE AREA ADJACENT TO, AND TREES THAT ARE TO BE PROTECTED, WILL BE IDENTIFIED AND CLEARLY MARKED. EXCAVATION SHOULD NOT OCCUR WITHIN THE ROOT ZONE OF THE TREES THAT ARE TO REMAIN. IN ADDITION, RAISING OR LOWERING THE GRADE NEAR REMAINING TREES SHOULD NOT OCCUR.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CORRECTING ANY EROSION AND SEDIMENTATION CONTROL MEASURES DUE TO UNFORESEEN FIELD CONDITIONS. ADDITIONAL CONTROL MEASURES MAY ALSO BE INSTALLED DURING THE CONSTRUCTION PERIOD IF DEEMED NECESSARY BY THE ENGINEER, ENVIRONMENTAL SUPERVISOR AND/OR TOWN ENGINEER.
8. ANY CHANGE TO THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN BY THE CONTRACTOR SHALL BE SUBMITTED BY THE CONTRACTOR IN WRITING AND APPROVED BY THE ENGINEER.
9. ANTI-TRACKING PADS SHALL BE INSTALLED WHERE CONSTRUCTION ACCESS MEETS A PAVED ACCESS POINT, OR AS DIRECTED BY THE ENGINEER.
10. STOCKPILE LOCATIONS SHALL BE DETERMINED DURING THE PRECONSTRUCTION MEETING AND PRIOR TO THE START OF CONSTRUCTION AND IF A STOCKPILE IS LOCATED OFF-SITE, THE LOCATION SHALL HAVE EROSION CONTROL MEASURES IN PLACE AND MEET ALL LOCAL REQUIREMENTS.
11. SLOPES SHALL BE RESTRICTED TO 2' HORIZONTAL TO 1' VERTICAL OR FLATTER THROUGH GRADING AND/OR RETAINING WALLS. WHERE LEDGE IS ENCOUNTERED, THE MAXIMUM CUT SLOPE MAY BE INCREASED TO 1 HORIZ.: 1 VERT. A 4FT HIGH PERMANENT SAFETY FENCE (e.g. CHAIN LINK FENCE) SHALL BE ADDED TO ALL ROCK CUTS GREATER THAN 4FT HIGH.
12. ALL SLOPES OR DISTURBED AREAS (EXCEPT PAVED AREAS) ARE TO BE STABILIZED WITH 4" OF TOPSOIL AND TURF MUST BE ESTABLISHED UNLESS OTHERWISE NOTED ON THE PLANS. STABILIZATION SHALL INCLUDE INSTALLATION OF EROSION CONTROL MATTING WHERE SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
13. SEDIMENTATION BARRIERS TO BE FIBRETEX 150 GRADE, OR APPROVED EQUAL. ANY DAMAGED BARRIERS SHALL BE REPLACED AND/OR RESET IMMEDIATELY FOLLOWING DAMAGE.
14. TEMPORARY PEROVIOUS BARRIERS, USING SILT FENCE AND HAYBALES HELD IN PLACE WITH WOODEN STAKES, SHALL BE USED AT ALL AREAS WHERE STORM WATER CONTAINING SUSPENDED SEDIMENT COULD DRAIN OFF-SITE.
15. CHRISTOPHER ARMSTRONG OR HIS DULY AUTHORIZED AGENT (860) 302-5607 IS RESPONSIBLE FOR NOTIFYING THE MUNICIPAL PLANNING AND ENGINEERING DEPARTMENTS AT LEAST 24 HOURS IN ADVANCE TO THE START OF ANY CONSTRUCTION ACTIVITY.
16. CHRISTOPHER ARMSTRONG OR HIS DULY AUTHORIZED AGENT (860) 302-5607 IS ASSIGNED THE RESPONSIBILITY FOR IMPLEMENTING THIS EROSION CONTROL PLAN. THIS RESPONSIBILITY INCLUDES THE INSTALLATION AND MAINTENANCE OF CONTROL MEASURES, NOTIFYING ALL PARTIES ENGAGED ON THE CONSTRUCTION SITE OF THE REQUIREMENTS AND OBJECTIVES OF THE PLAN, NOTIFYING THE PLANNING OFFICE OF ANY TRANSFER OF THIS RESPONSIBILITY AND FOR CONVEYING A COPY OF THE EROSION AND SEDIMENTATION CONTROL PLAN IF THE TITLE OF THE LAND IS TRANSFERRED.
17. THESE PLANS WERE PREPARED IN ACCORDANCE WITH THE 2002 GUIDELINES FOR SOIL EROSION AND SEDIMENTATION CONTROL, AS AMENDED. AN ADDITIONAL REFERENCE IS THE 1994 CONDOT PUBLICATION "ON-SITE MITIGATION FOR CONSTRUCTION ACTIVITIES".

EROSION AND SEDIMENTATION CONTROL MAINTENANCE REQUIREMENTS

TOPSOIL STOCKPILES:

THE SIDE SLOPES SHALL NOT EXCEED A SLOPE GREATER THAN 2:1. STOCKPILES THAT WILL NOT BE USED WITHIN 30 DAYS SHOULD BE SEEDED AND MULCHED. A SEDIMENTATION FENCE SHALL BE INSTALLED APPROX. 10FT FROM THE TOE OF SLOPE.

IF THE TOPSOIL STOCKPILE LOCATION IS RELOCATED, IT SHALL BE LOCATED SO AS NOT TO OBSTRUCT THE NATURAL DRAINAGE PATTERN OF THE SITE. IT SHALL BE LOCATED AS FAR AS PRACTICAL FROM ANY WETLANDS, WATER COURSES, DRAINAGE WAY, AND STEEP SLOPES. IF THE LOCATION IS DOWNGRADIENT FROM A LONG SLOPE, DIVERT RUNOFF AROUND THE STOCKPILE.

CONSTRUCTION ENTRANCE PAD / ANTI-TRACKING PAD:

THE CONSTRUCTION ENTRANCE SHALL BE KEPT CLEAN OF ANY DEBRIS OR CONSTRUCTION MATERIALS. A PERIODIC TOP DRESSING OF STONE SHALL BE ADDED AS MAY BE REQUIRED TO KEEP THE ENTRANCE PAD WORKING EFFECTIVELY. IF A SEDIMENT SPILL OCCURS ON THE ROAD, IT SHALL BE CLEANED UP IMMEDIATELY.

SEDIMENTATION CONTROL FENCE:

THE SEDIMENTATION CONTROL FENCE SHALL BE INSPECTED AT LEAST ONCE A WEEK AND WITHIN 24 HRS OF A RAIN EVENT OF 0.5 INCHES OR MORE. IF A FAILURE OCCURS, REPAIR OR REPLACE THE FENCE WITHIN 24 HRS. ANY SEDIMENT DEPOSITS THAT REACH HALF THE HEIGHT OF THE FENCE SHALL BE REMOVED.

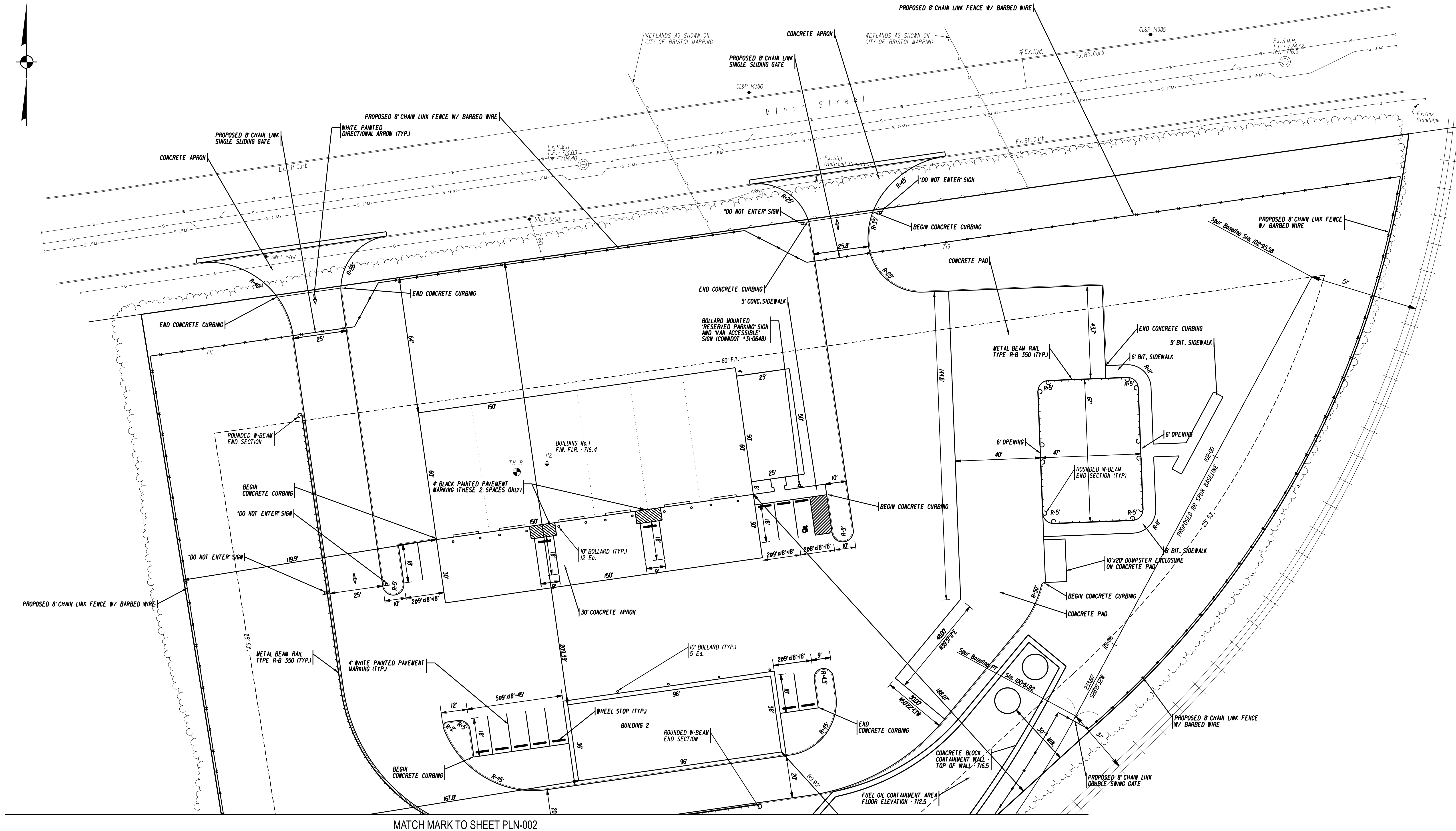
DUST CONTROL:

PERIODICALLY MOISTEN THE EXPOSED SOIL SURFACE TO KEEP TRAVELWAYS DAMP. AFTER THE TRAVELWAY HAS BEEN PAVED, PERIODIC SWEEPING MAY BE REQUIRED TO REMOVE DUST AND FINE MATERIALS ACCUMULATED FROM TRUCK TRAFFIC.

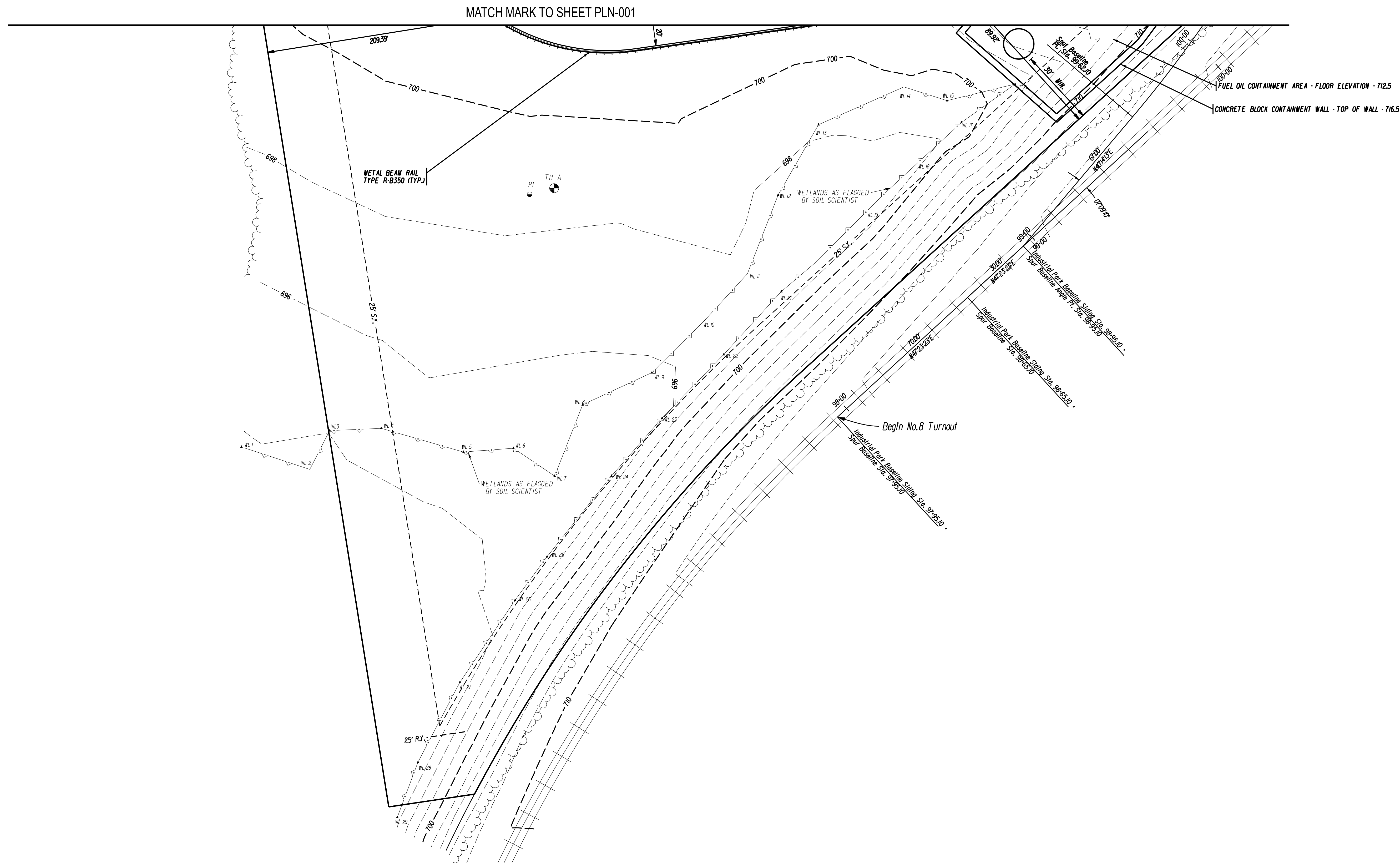
TREE PROTECTION:

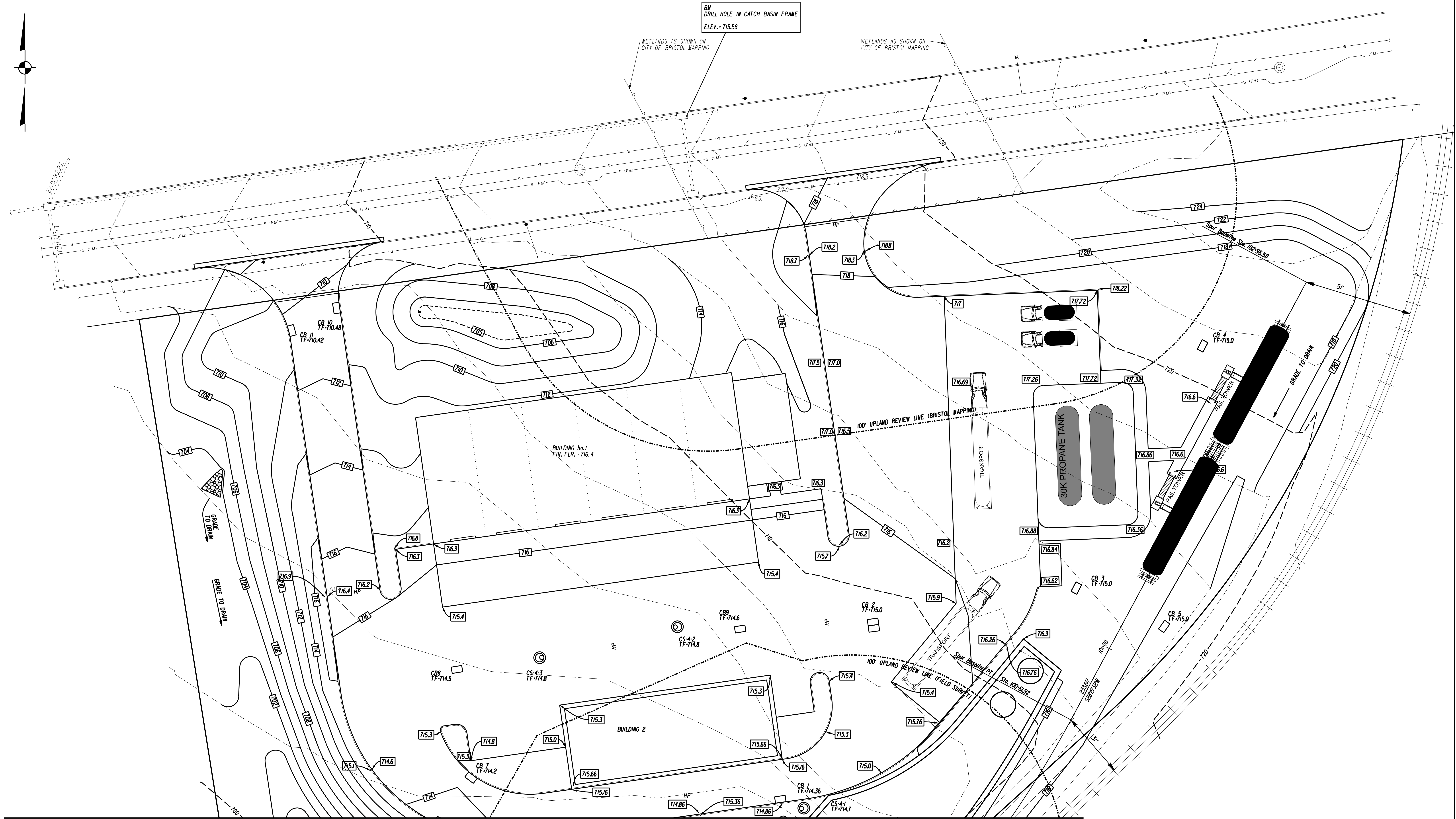
TREES TO BE PROTECTED WILL BE IDENTIFIED AND CLEARLY MARKED. CONSTRUCTION ACTIVITIES WITHIN THE ADJACENT AREA THAT MAY CAUSE DAMAGE TO THE TREE SHALL BE LIMITED AND TRUNK ARMORING PROVIDED.

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				DATE: AUGUST 17, 2020	SURVEYOR SIGNATURE/BLOCK: TO MY KNOWLEDGE AND BELIEF, THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON. <i>Robert Green</i>			ENGINEER SIGNATURE/BLOCK: <i>Joseph M. Green</i>	PROJECT TITLE: FUEL TRANSFER FACILITY 351 MINOR STREET BRISTOL, CONN.	DRAWING TITLE: LAYOUT, SIGNS & PAVEMENT MARKINGS	DRAWING NO. PLN-001 SHEET NO. 5
REV.	DATE	REVISION DESCRIPTION			SCALE: SCALE IN FEET SCALE 1"=20'						
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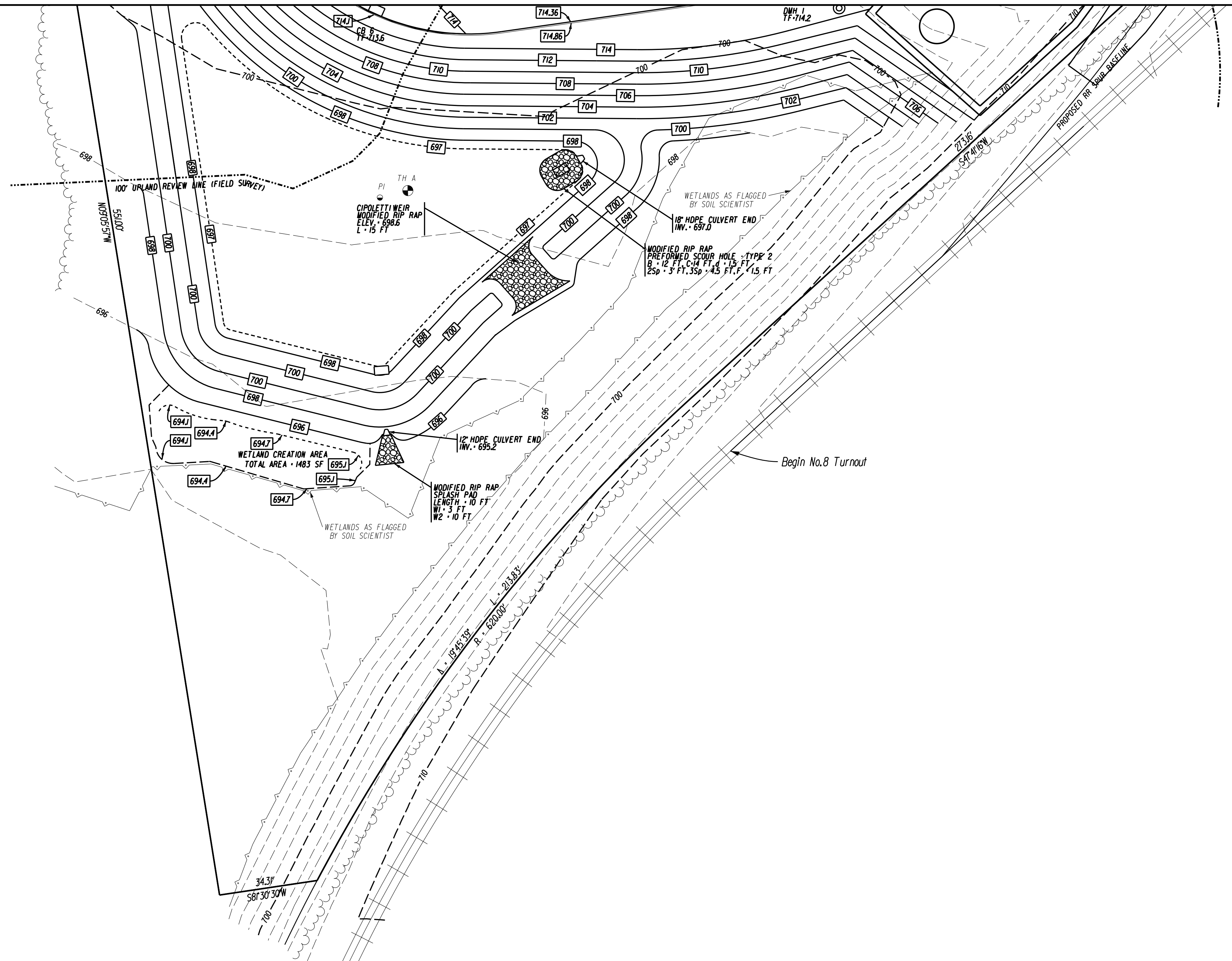
Page 4



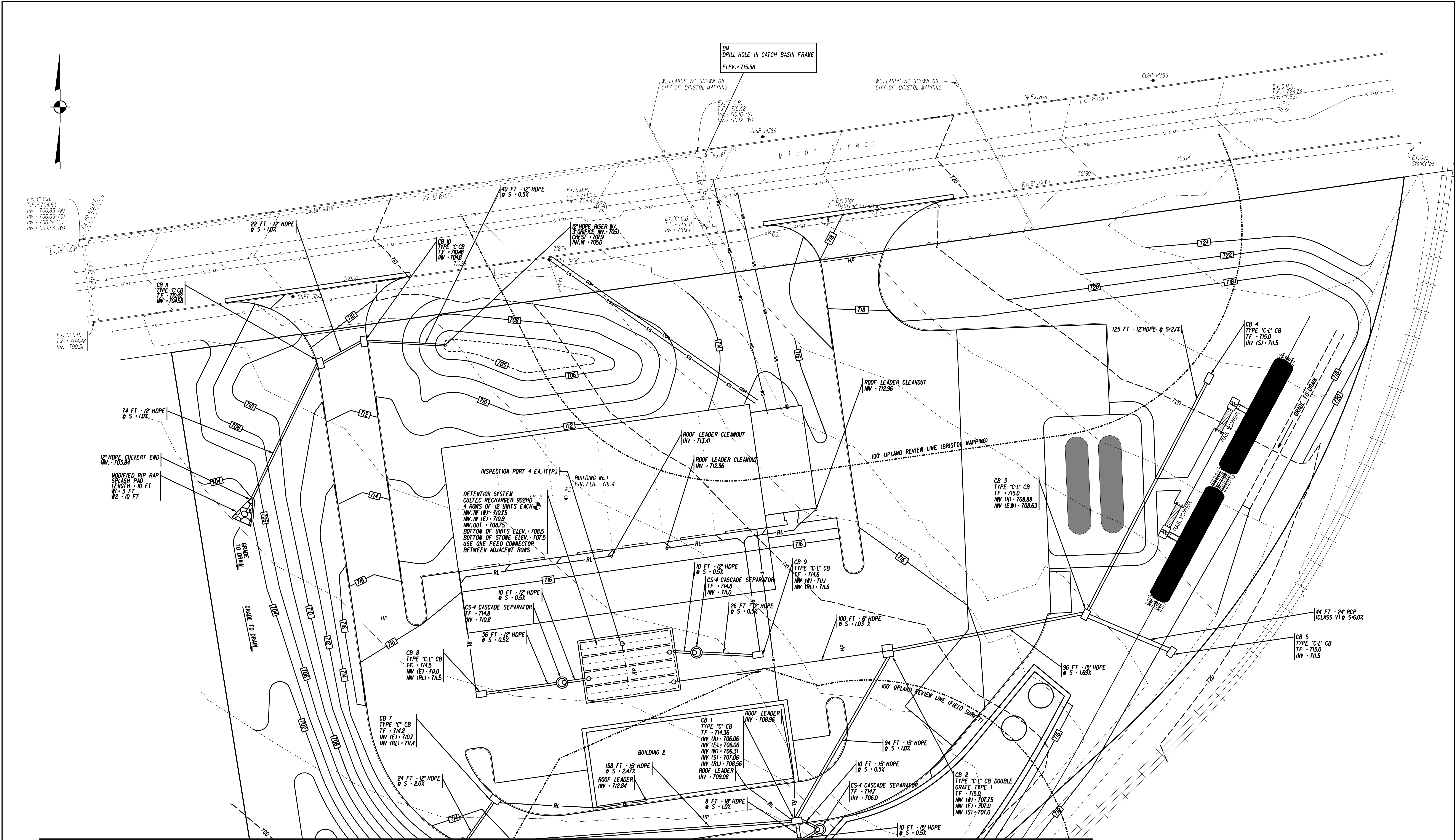
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REV.	DATE	REVISION DESCRIPTION								



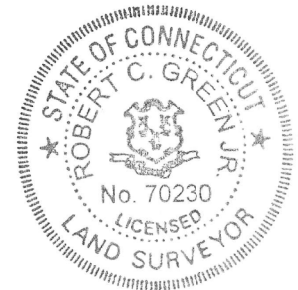
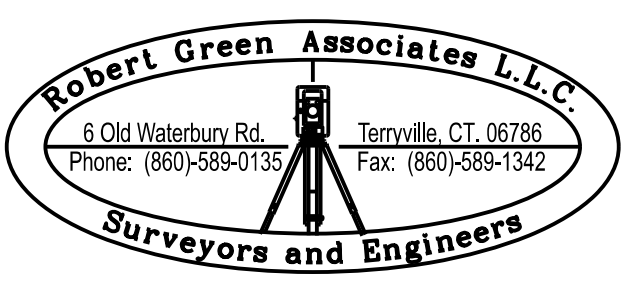
MATCH MARK TO SHEET GRA-001



				DATE: AUGUST 17, 2020	SURVEYOR SIGNATURE/BLOCK: TO MY KNOWLEDGE AND BELIEF, THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HERON. 				ENGINEER SIGNATURE/BLOCK: 	PROJECT TITLE: FUEL TRANSFER FACILITY 351 MINOR STREET BRISTOL, CONN.	DRAWING NO. GRA-002	
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1	11-23-20	REVISED GRADING TO PROVIDE WETLAND MITIGATION										

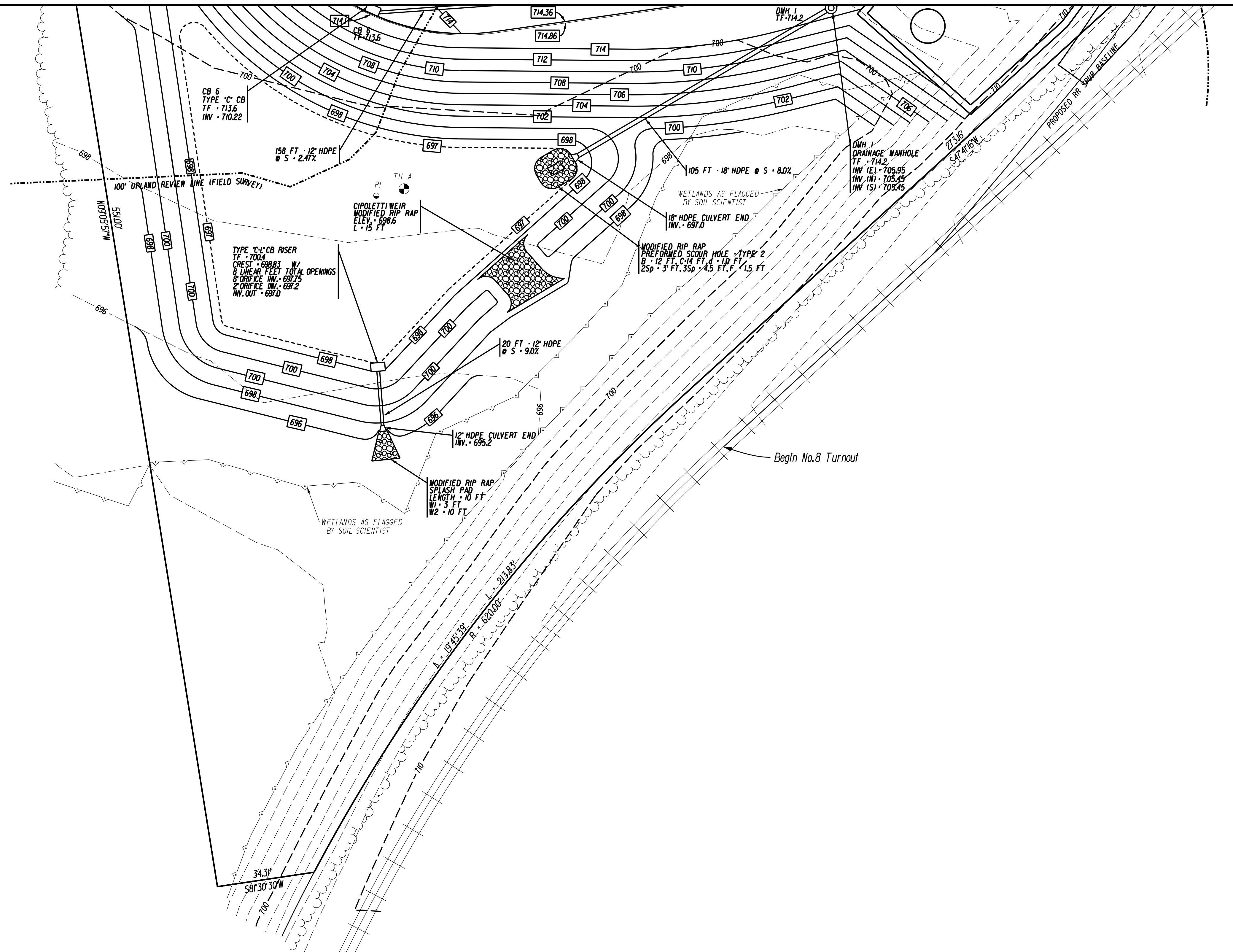


MATCH MARK TO SHEET UTIL-002

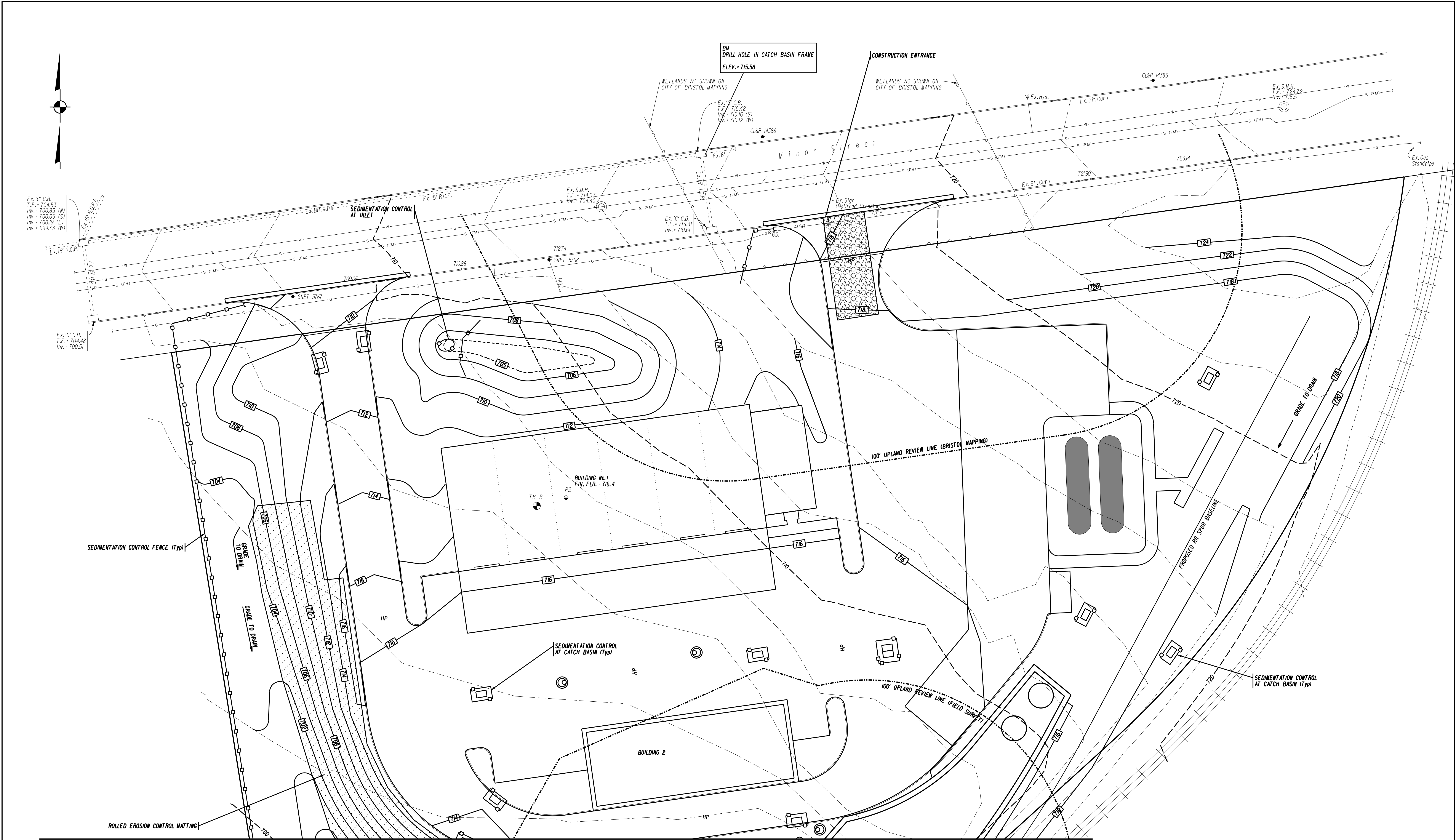
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REV.		DATE		REVISION DESCRIPTION		SCALE: SCALE IN FEET 0 20 40 SCALE 1"=20'								DRAWING TITLE: DRAINAGE & UTILITIES	
I		H-23-20		REVISED GRADING TO PROVIDE WETLAND MITIGATION										SHEET NO. 9	



MATCH MARK TO SHEET UTIL-001



			DATE: AUGUST 17, 2020	SURVEYOR SIGNATURE/BLOCK: TO MY KNOWLEDGE AND BELIEF, THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HERON. 				ENGINEER SIGNATURE/BLOCK: 	PROJECT TITLE: FUEL TRANSFER FACILITY 351 MINOR STREET BRISTOL, CONN.	DRAWING NO. UTIL-002	
1	11-23-20	REVISED GRADING TO PROVIDE WETLAND MITIGATION	SCALE: SCALE IN FEET 0 20 40	SCALE 1"=20'						DRAWING TITLE: DRAINAGE & UTILITIES	SHEET NO. 10
REV.	DATE	REVISION DESCRIPTION									

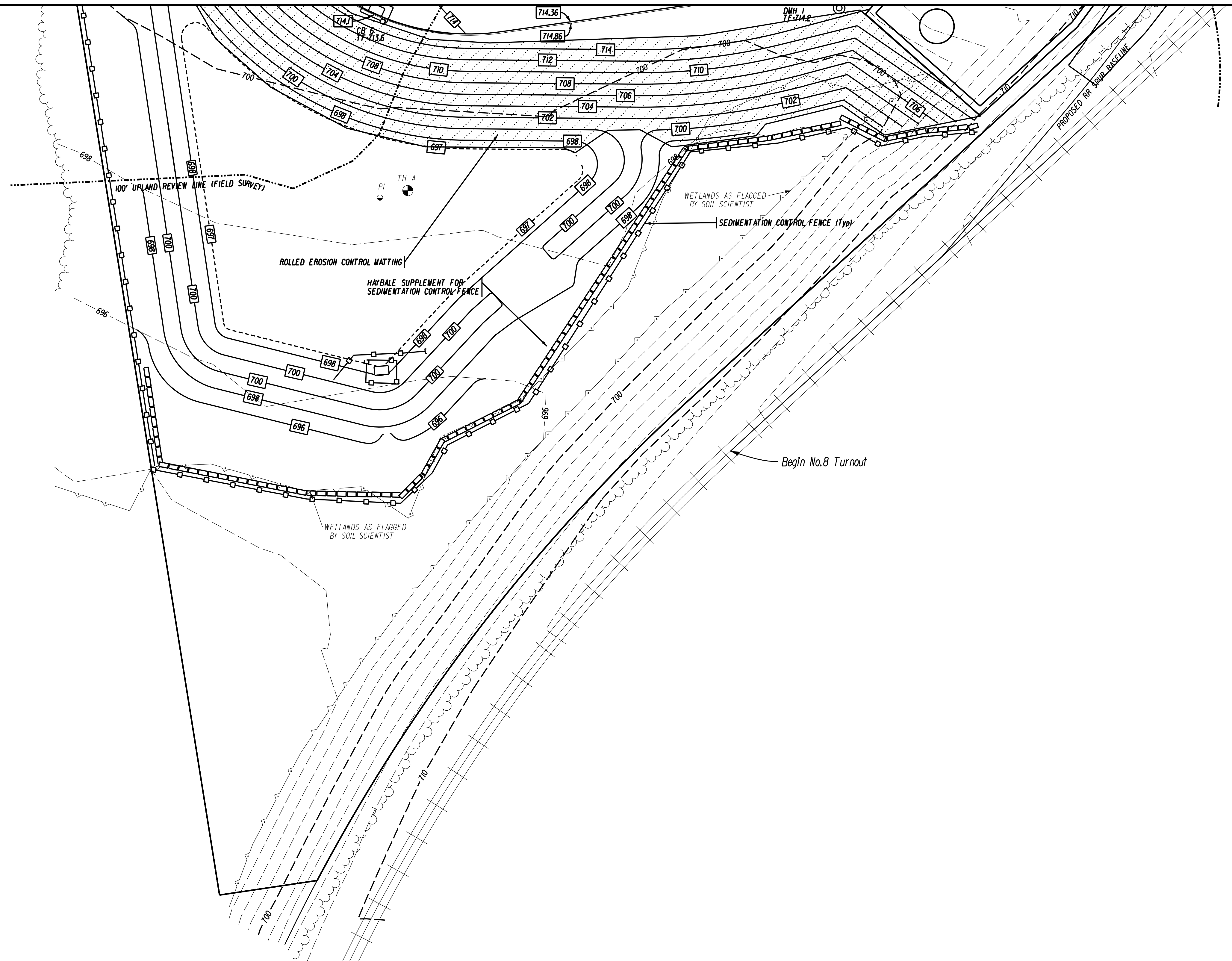


MATCH MARK TO SHEET E & S-002

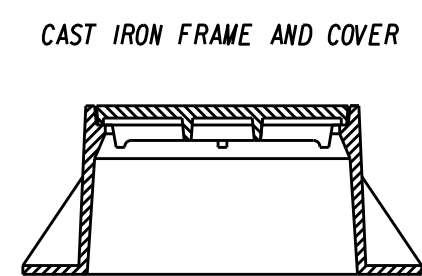
			DATE: AUGUST 17, 2020	SURVEYOR SIGNATURE/BLOCK: TO MY KNOWLEDGE AND BELIEF, THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON.			ENGINEER SIGNATURE/BLOCK: 	PROJECT TITLE: FUEL TRANSFER FACILITY 351 MINOR STREET BRISTOL, CONN.	DRAWING NO. E & S-001
			SCALE: SCALE IN FEET 0 20 40					DRAWING TITLE: EROSION & SEDIMENTATION CONTROL	SHEET NO. 11
1	8-23-20	REVISED GRADING TO PROVIDE WETLAND MITIGATION							
REV.	DATE	REVISION DESCRIPTION							



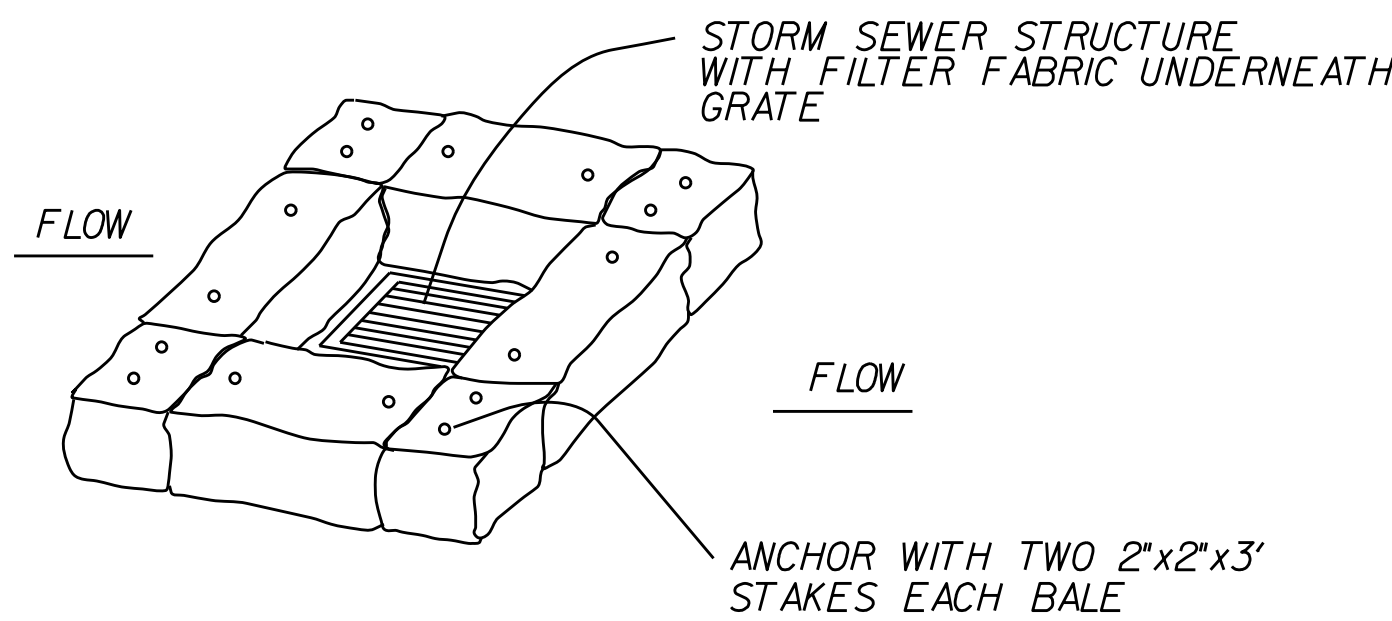
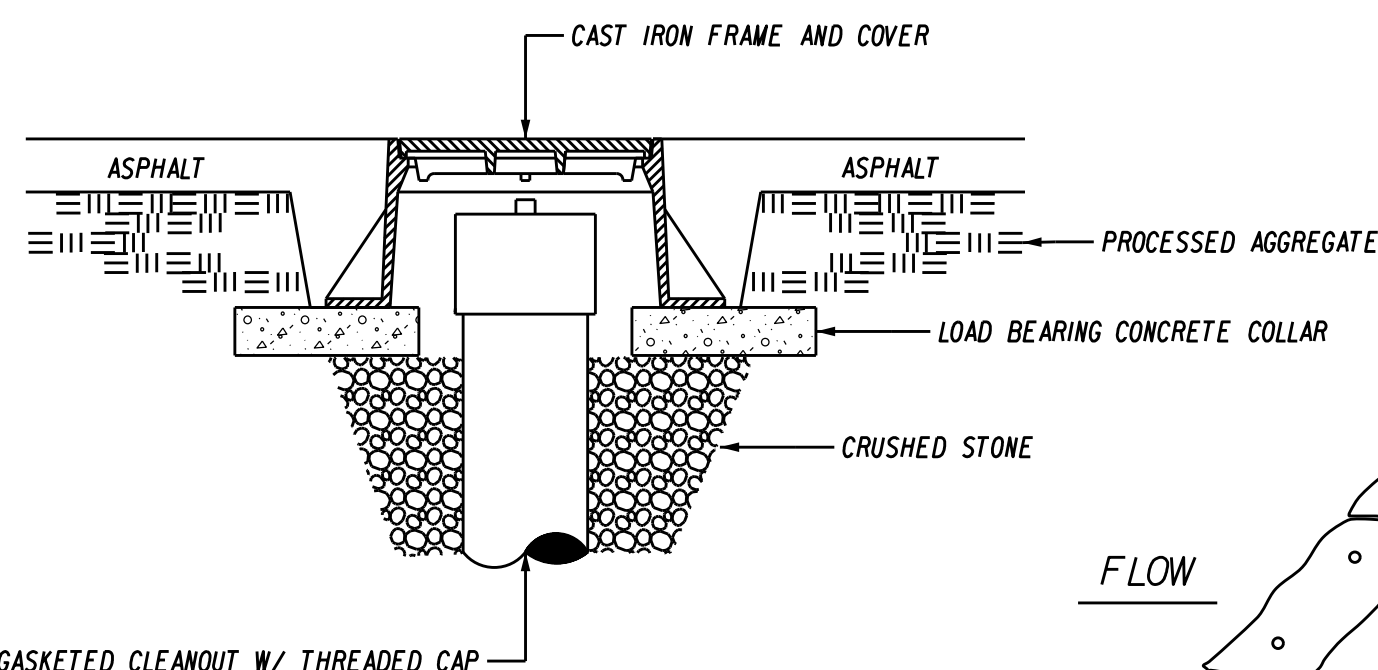
MATCH MARK TO SHEET E & S-001



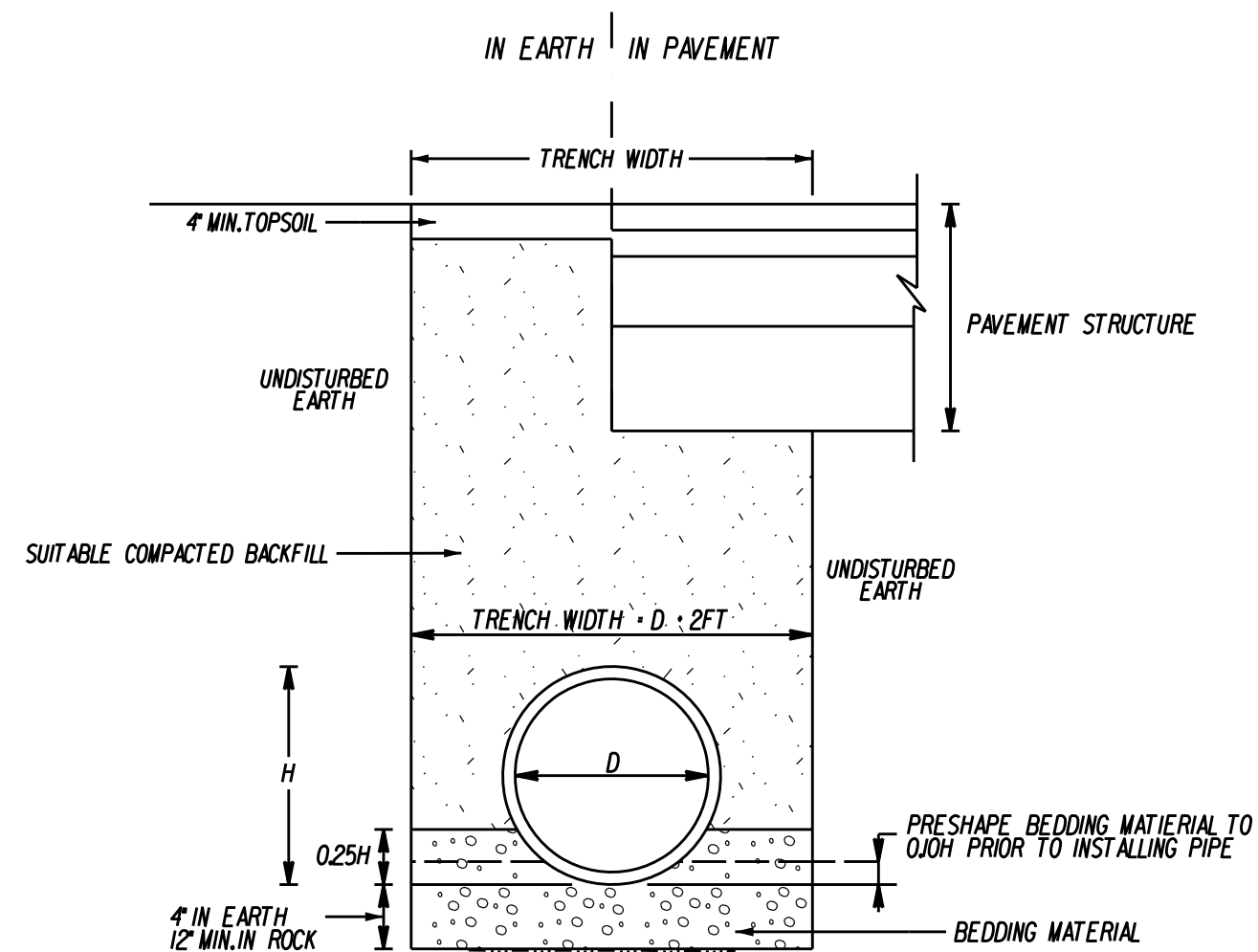
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				SCALE: SCALE IN FEET 0 20 40 SCALE 1"=20'					DRAWING TITLE: EROSION & SEDIMENTATION CONTROL	SHEET NO. 12
REV.	DATE	REVISION DESCRIPTION								
1	11-23-20	REVISED GRADING TO PROVIDE WETLAND MITIGATION								



CAST IRON COVER AND FRAME FOR PVC CLEANOUT IN ASPHALT
NOT TO SCALE



HAY BALE INSTALLATION AT CATCH BASINS



R.C.P. TRENCH SECTION
(NOT TO SCALE)

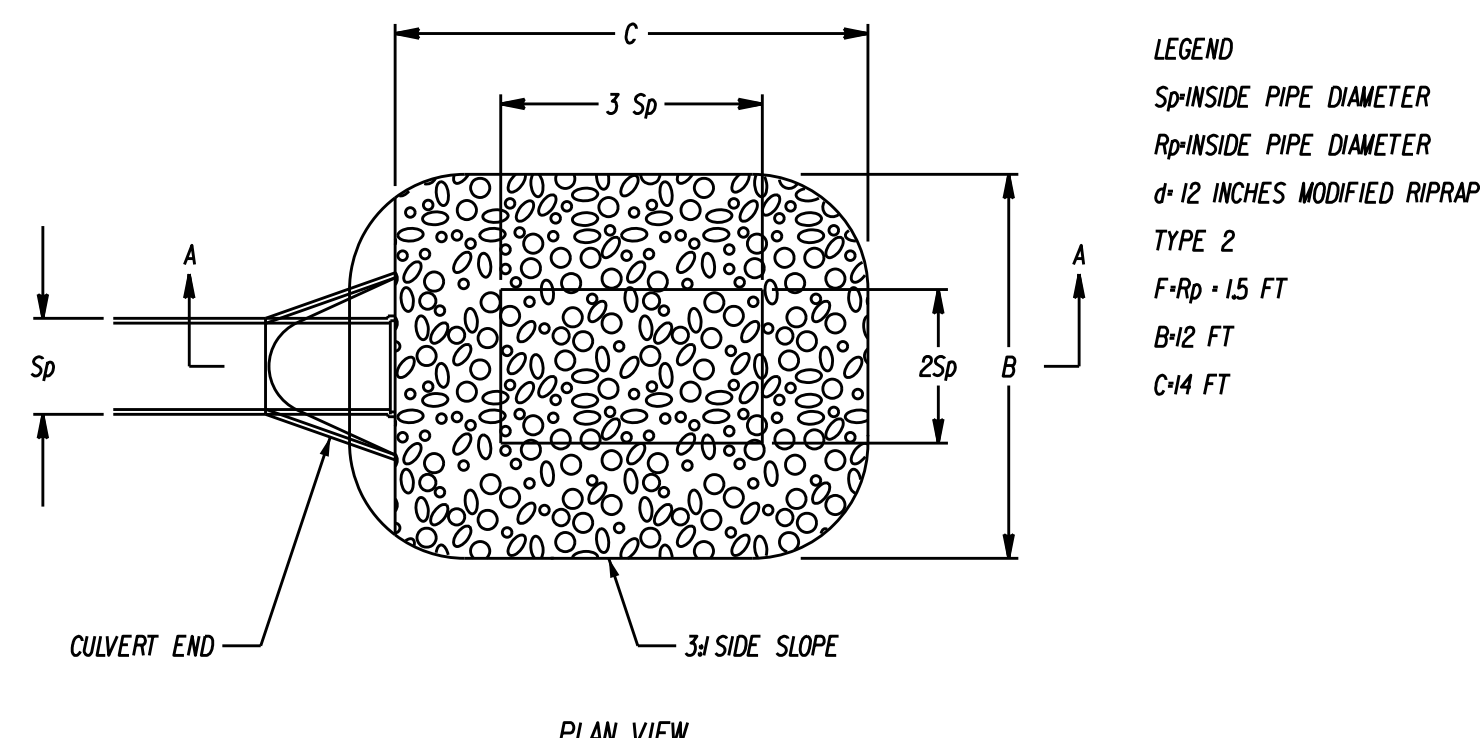
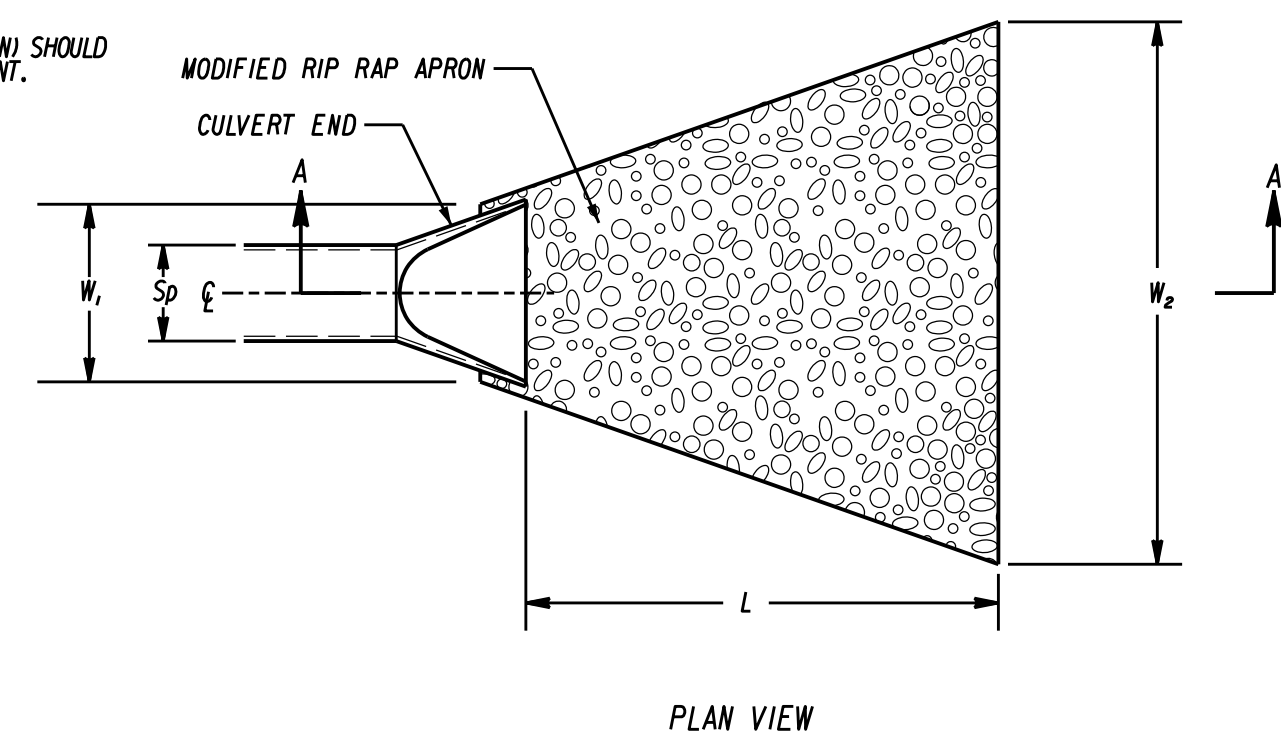
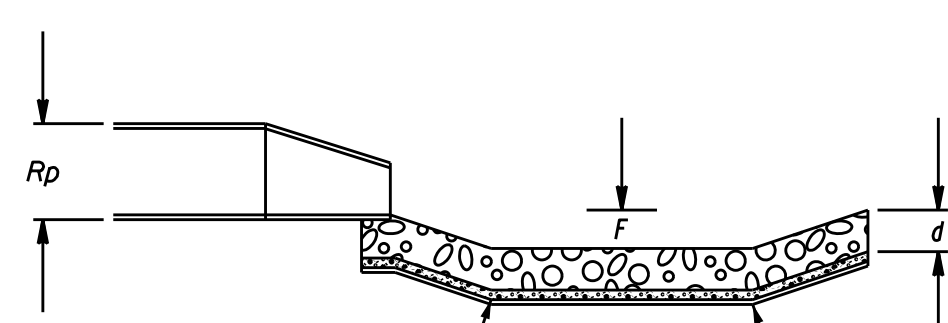


Diagram illustrating a cross-section of a modified/intermediate riprap structure. The structure consists of a sloped embankment on the left, a flat top section, and a riprap layer on the right. The riprap layer is labeled R_p . The underlying layers are labeled "6 INCHES OF GRANULAR FILL FOR MODIFIED/INTERMEDIATE RIPRAP." and "GEOTEXTILE (SEPARATION) SHOULD FIELD CONDITION WARRANT." A downward force F is applied to the flat top section, and another downward force F is applied to the riprap layer. The vertical dimension of the riprap layer is labeled d .

SECTION A-A
CULVERT END
TYPE 2 PREFORMED SCOUR HOLE
(NOT TO SCALE)

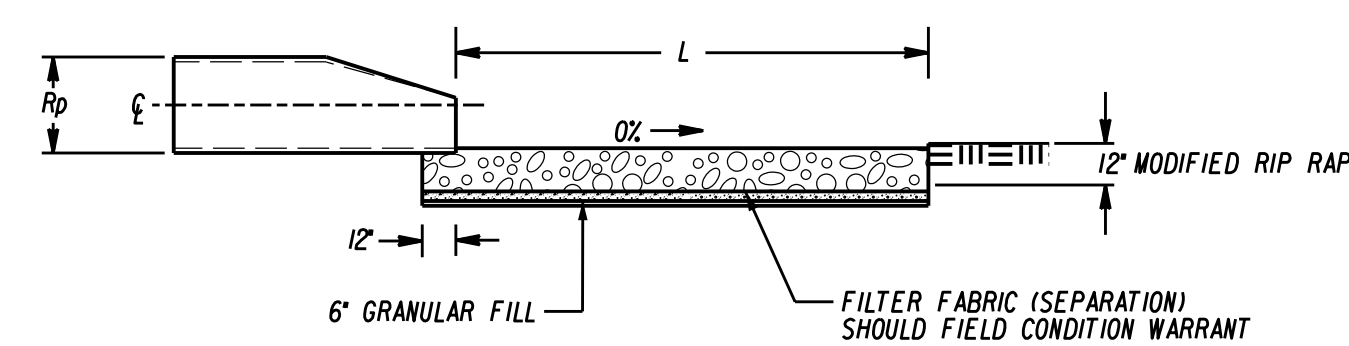


Sp= MAX. INSIDE PIPE SPAN (NON-CIRCULAR SECTIONS)
INSIDE PIPE DIAMETER (CIRCULAR SECTIONS)

Rp= MAX. INSIDE PIPE RISE (NON-CIRCULAR SECTIONS)
INSIDE PIPE DIAMETER (CIRCULAR SECTIONS)

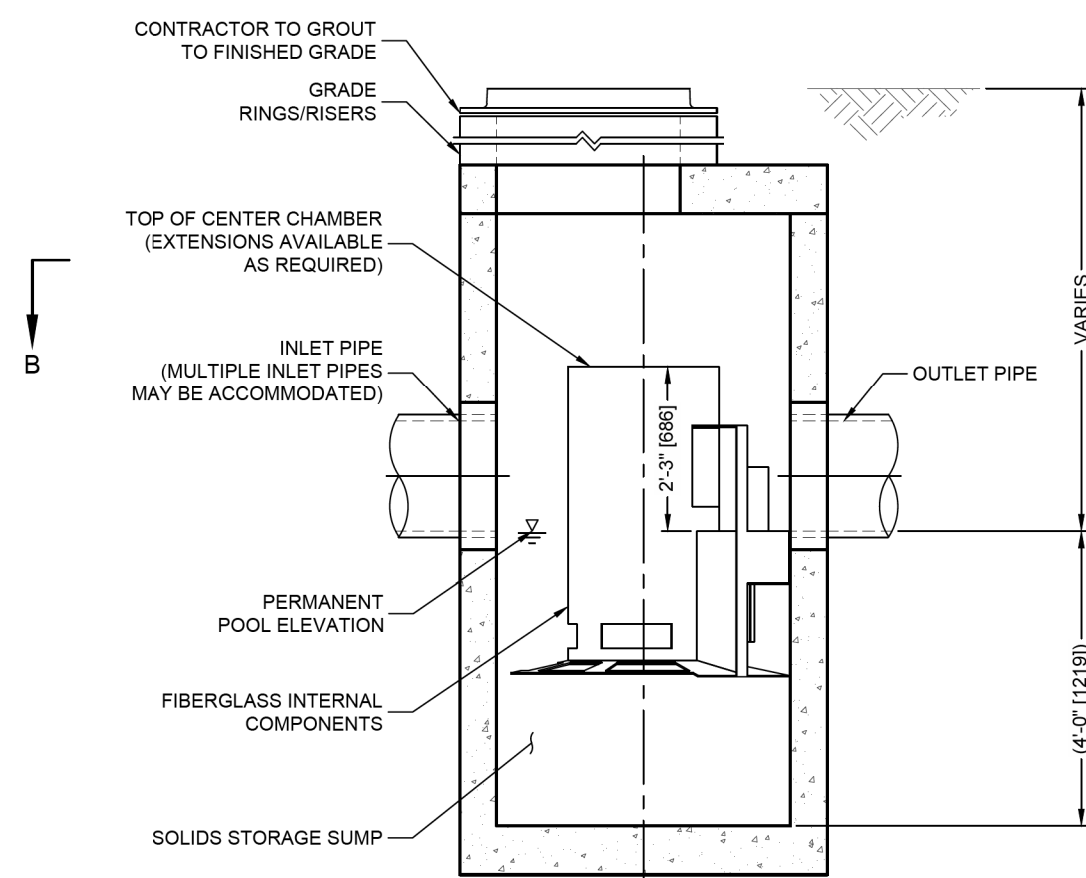
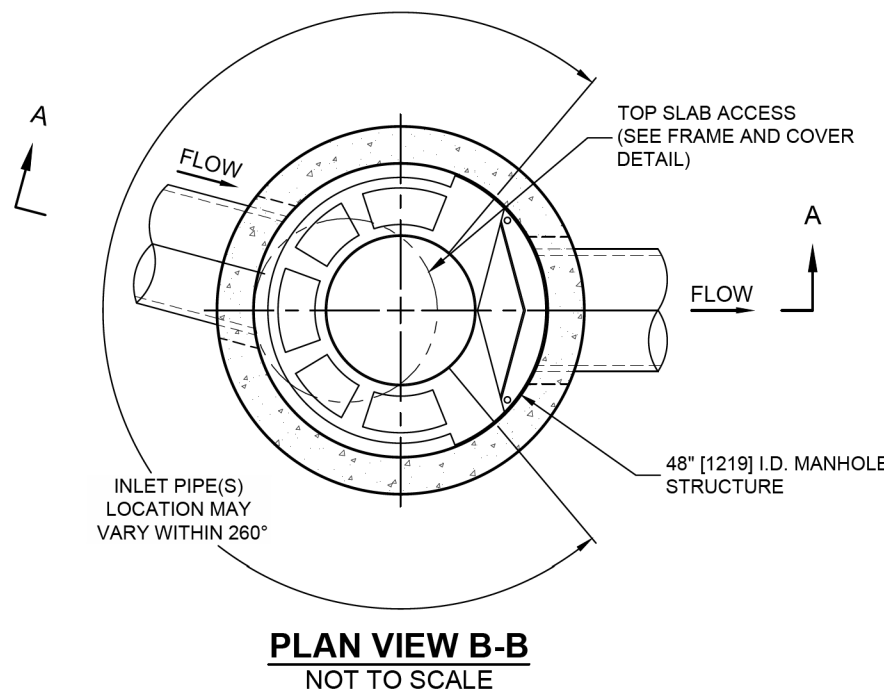
L= LENGTH OF RIPRAP APRON MEASURED FROM END
OF CULVERT END SECTION

d= 12" FOR MODIFIED RIPRAP



SECTION A-A
CULVERT END

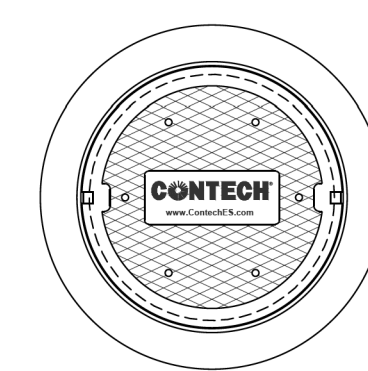
MODIFIED RIP RAP APRON
(NOT TO SCALE)



ELEVATION A-A
NOT TO SCALE

CASCADE

separator™



FRAME AND COVER
(DIAMETER VARIES)
NOT TO SCALE

CASCADE SEPARATOR DESIGN NOTES

CS-4 RATED TREATMENT CAPACITY IS 2.0 CFS, OR PER LOCAL REGULATIONS.
THE STANDARD CS-4 CONFIGURATION IS SHOWN. ALTERNATE CONFIGURATIONS ARE AVAILABLE AND ARE LISTED BELOW. SOME CONFIGURATIONS
MAY BE COMBINED TO SUIT SITE REQUIREMENTS.

CONFIGURATION DESCRIPTION

GRATED INLET ONLY (NO INLET PIPE)
GRATED INLET WITH INLET PIPE OR PIPES
CURB INLET ONLY (NO INLET PIPE)
CURB INLET WITH INLET PIPE OR PIPES

SITE SPECIFIC DATA REQUIREMENTS

STRUCTURE ID			CS 1
WATER QUALITY FLOW RATE (cfs [L/s])			1/4 CFS
PEAK FLOW RATE (cfs [L/s])			6.64 CFS
RETURN PERIOD OF PEAK FLOW (yrs)			25
RIM ELEVATION			214
PIPE DATA:	INVERT	MATERIAL	DIAMETER
INLET PIPE 1	706.0	HDPE	18"
INLET PIPE 2	NA	NA	NA
OUTLET PIPE	706.0	HDPE	18"

NOTES / SPECIAL REQUIREMENTS

GENERAL NOTES

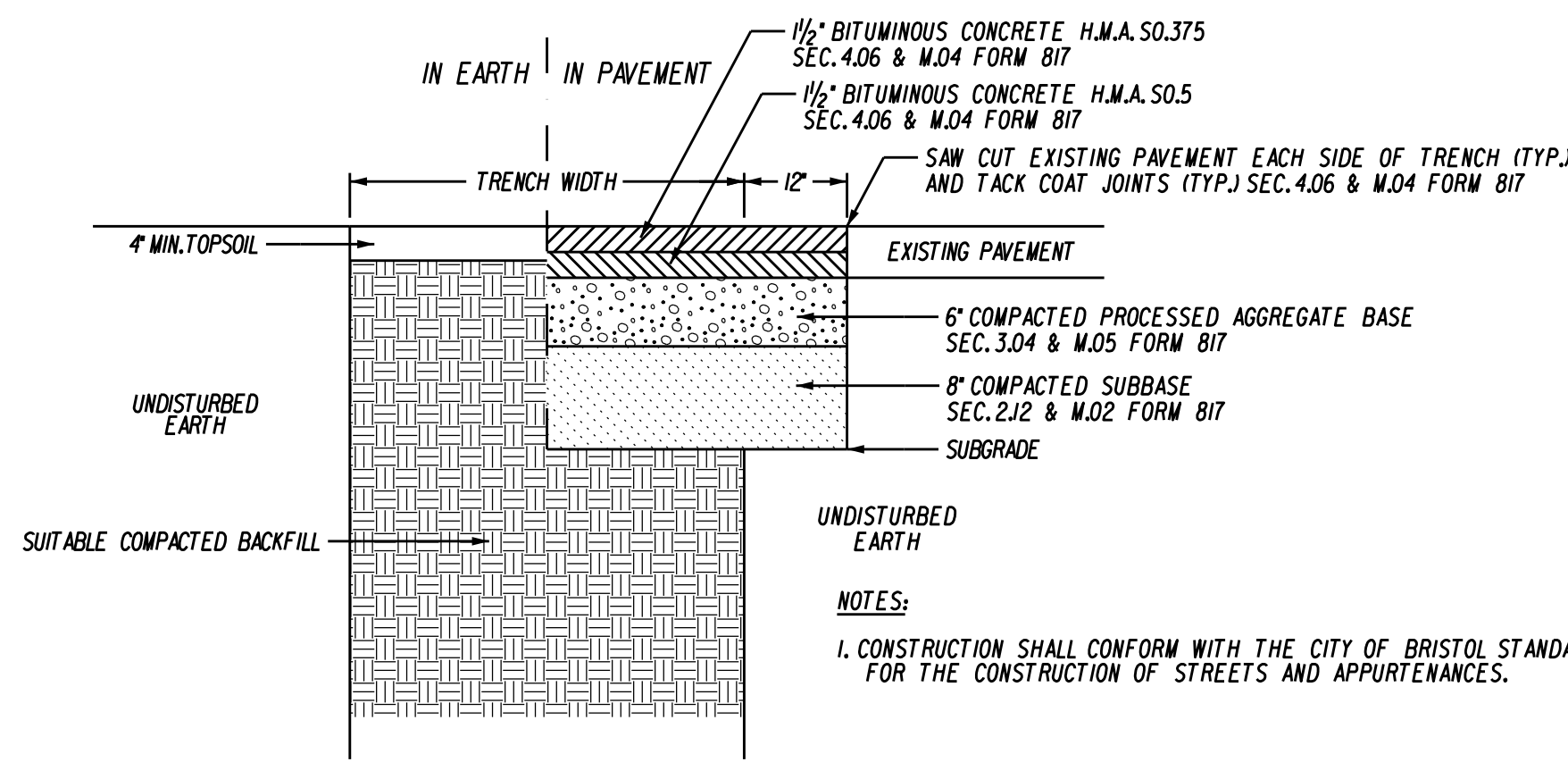
1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. FOR SITE SPECIFIC DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LC REPRESENTATIVE, www.contech-engineered.com
3. CASCADE SEPARATOR WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
4. CASCADE SEPARATOR STRUCTURE SHALL MEET AASTHO H250 LOAD RATING, ASSUMING EARTH COVER OF 0'-2" B101, AND GROUNDWATER ELEVATION OF 40' OR BELOW. THE DESIGN ENGINEER WILL RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION.
5. CASTINGS SHALL MEET AASTHO M306 AND BE CAST WITH THE CONTECH LOGO.
6. CASCADE SEPARATOR STRUCTURE SHALL PREPARE CONCRETE CONFORMING TO ASTM C478 AND AASTHO LOAD FACTOR DESIGN METHOD.
7. ALTERNATE UNITS ARE SHOWN IN MILLIMETERS [mm].

INSTALLATION NOTES

- A ANY SUB-BASE BACKFILL DEPTH, AND/OR ANTI-FLOUTION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
- B CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE CASCADE SEPARATOR MANHOLE STRUCTURE.
- C CONTRACTOR TO INSTALL JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS AND ASSEMBLE STRUCTURE.
- D CONTRACTOR TO PROVIDE ELEVATION SHOWN ON DRAWINGS FOR EACH INVERT WITH ELEVATION SHOWN. ALL PIPE CENTERLINES TO MATCH PIPE OPENING CENTERLINES.
- E ADD WATER TO TANK HOLDING WATER TO LEAKAGE ASSURE UNIT IS WATER TIGHT; HOLDING WATER TO FLOWLINE INVERT MINIMUM. IT IS SUGGESTED THAT ALL JOINTS BELOW PIPE INVERTS ARE GROUTED.



CS-4
CASCADE SEPARATOR
STANDARD DETAIL



NOTES:

1. CONSTRUCTION SHALL CONFORM WITH THE CITY OF BRISTOL STANDARD SPECIFICATIONS FOR THE CONSTRUCTION OF STREETS AND APPURTENANCES.

TRENCH RESTORATION DETAIL
(NOT TO SCALE)

FUEL TRANSFER FACILITY
351 MINOR STREET
BRISTOL, CONN.

The Recharger® 902HD is a 48" (1219 mm) tall, high capacity chamber. Typically when using this model, fewer chambers are required resulting in less labor and a smaller installation area. The Recharger® 902HD has the side portal internal manifold feature. HVLV® FC-48 Feed Connectors are inserted into the side portals to create the internal manifold.

Recharger 902HD Chamber	
Size (L x W x H)	4.25' x 78" x 48"
	1.30 m x 1981 mm x 1219 mm
Installed Length	3.67'
	1.12 m
Length Adjustment per Row - with two end caps installed	1.03'
	0.31 m
Length Adjustment per Row - when not using end caps	0.58'
	0.18 m
Chamber Storage	17.31 ft ³ /ft
	1.61 m ³ /m
	63.47 ft ³ /unit
	1.80 m ³ /unit
Min. Installed Storage	27.06 ft ³ /ft
	2.53 m ³ /m
	99.28 ft ³ /unit
	2.81 m ³ /unit
Min. Area Required	26.58 ft ²
	2.47 m ²
Chamber Weight	83.0 lbs
	37.65 kg
Shipping	15 chambers/skid
	1,370 lbs/skid
	14 skids/48' flatbed
Min. Center-to-Center Spacing	7.25'
	2.21 m
Max. Allowable Cover	8.3'
	2.53 m
Max. Allowable O.D. in Side Panel	10" HDPE, 12" PVC
	250 mm HDPE, 300 mm PVC
Compatible Feed Connector	HLV F-48 Feed Connector

Calculations are based on installed chamber length.
All above values are nominal.
Includes 12" (305 mm) stone above crown of chamber and typical stone surround at 7.25' (2.21 m) center-to-center spacing and stone foundation depth as listed in table.
Stone void calculated at 40%.

	Stone Foundation Depth		
	9"	12"	18"
	229 mm	305 mm	457 mm
Chamber and Stone Storage Per Chamber	99.28 ft ³	101.94 ft ³	107.26 ft ³
	2.81 m ³	2.89 m ³	3.04 m ³
Min. Effective Depth	5.75'	6.00'	6.5'
	1.75 m	1.83 m	1.98 m
Stone Required Per Chamber	3.32 yd ³	3.56 yd ³	4.05 yd ³
	2.54 m ³	2.72 m ³	3.06 m ³



Recharger 902HD End Cap	
Size (L x W x H)	9.7" x 78" x 48.5"
	246 mm x 1982 mm x 1231 mm
	157 mm
Installed Length	6.2"
	5.34 ft/ft
	0.50 m/m
End Cap Storage	2.76 ft/unit
	0.08 m/unit
Min. Installed Storage	19.88 ft/ft
	1.85 m/m
	10.28 ft/unit
End Cap Weight	0.29 m/unit
	52.0 lbs
	23.59 kg
Shipping	7 end caps/skid
	638 lbs/skid
	14 skids/48' flatbed
Max. Inlet Opening in End Cap	30" HDPE, 36" PVC
	750 mm HDPE, 900 mm PVC

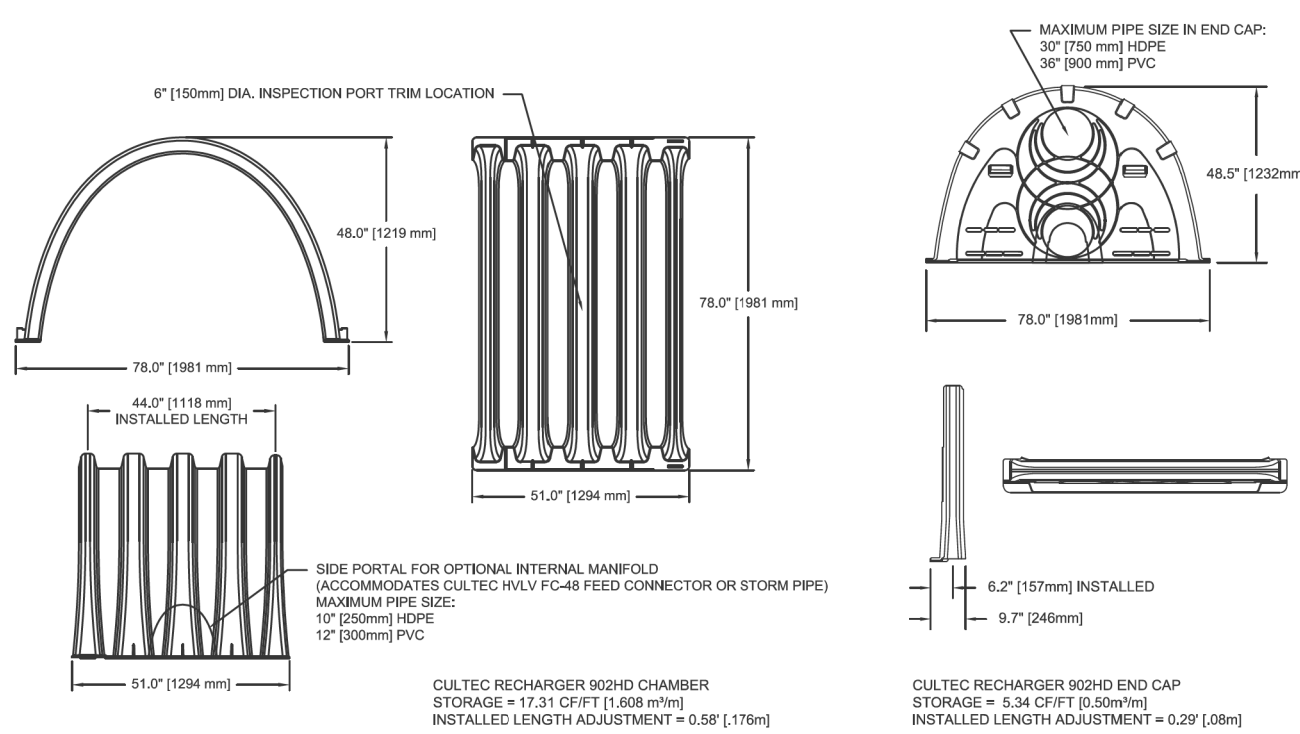
Calculations are based on installed chamber length.
All above values are nominal.
Min. installed storage includes 9" (229 mm) stone base, 12" (305 mm) stone above crown of chamber and typical stone surround at 7.25' (2.21 m) center-to-center spacing.

For more information, contact CULTEC at (203) 775-4416 or visit www.cultec.com.

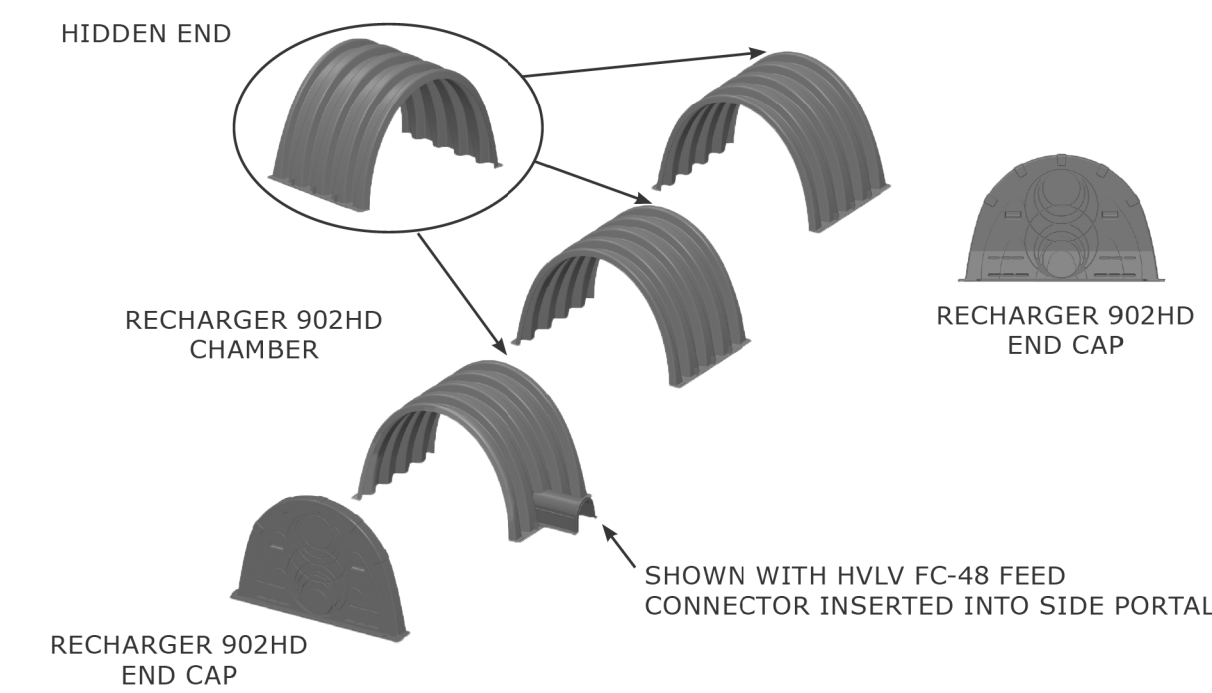
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CULTEC RECHARGER® 902HD STORMWATER CHAMBER

Three View Drawing



Typical Interlock Installation

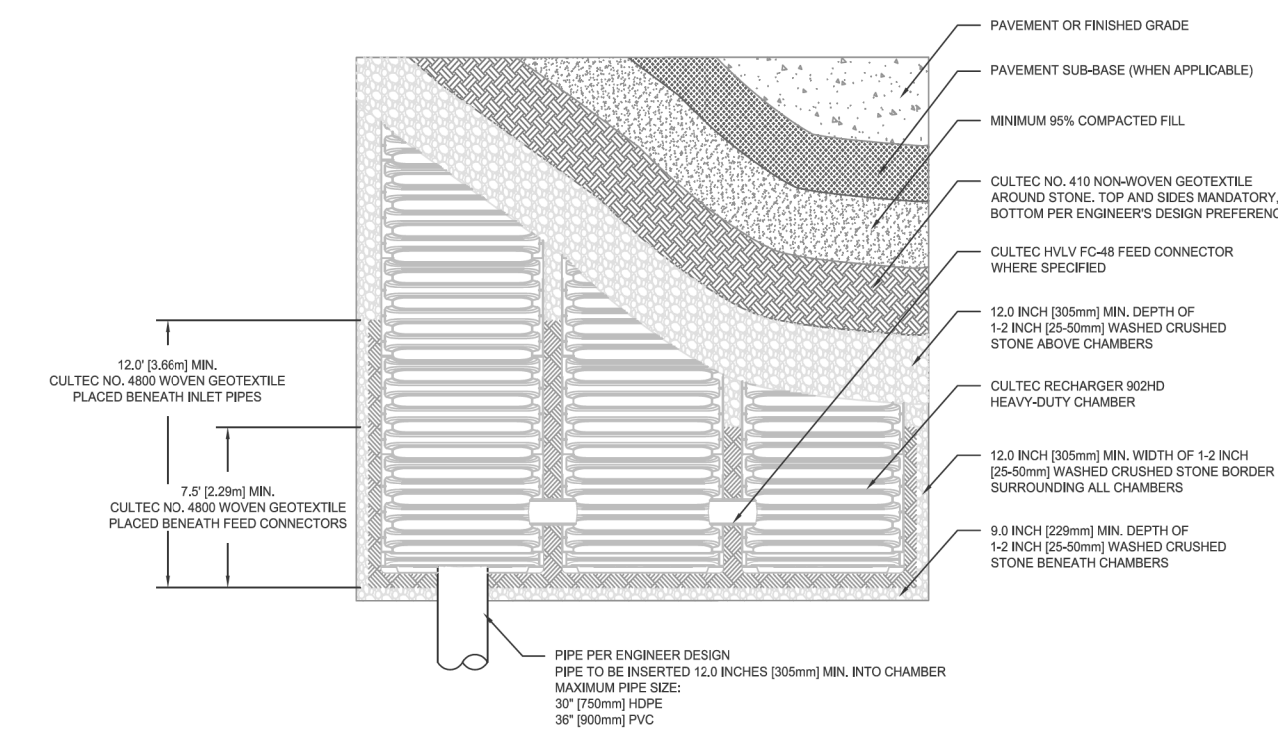


For more information, contact CULTEC at (203) 775-4416 or visit www.cultec.com.

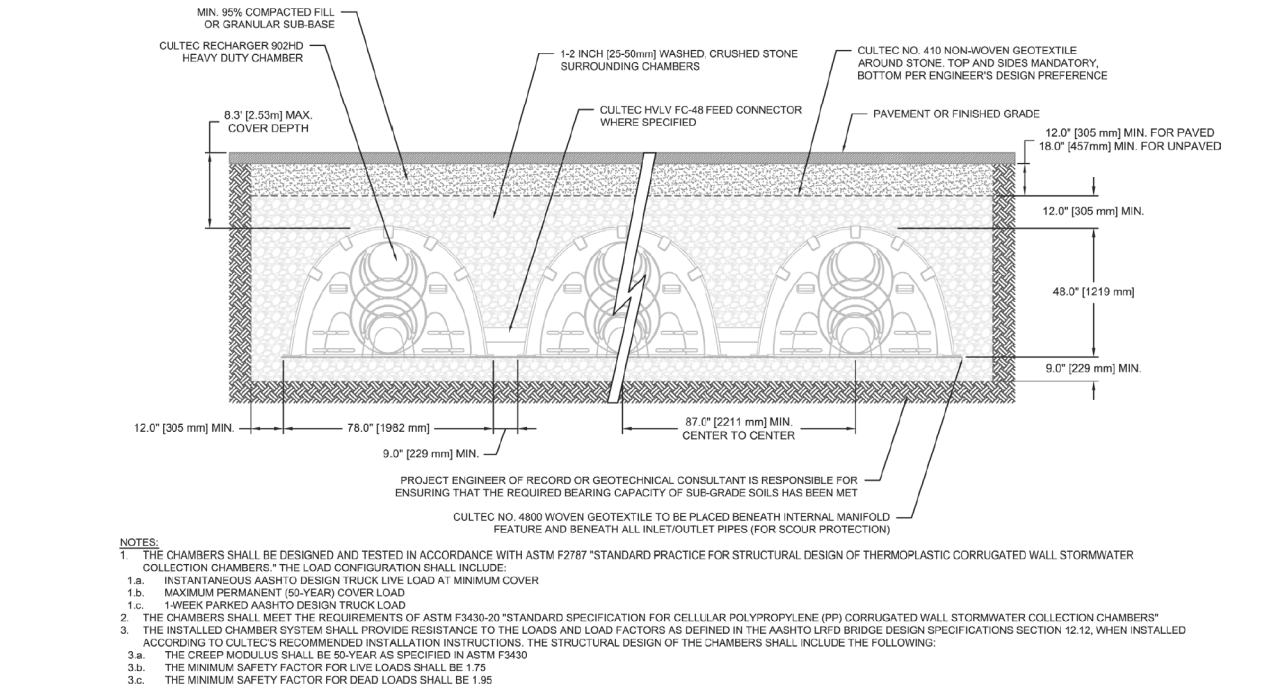
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CULTEC RECHARGER® 902HD STORMWATER CHAMBER

Plan View Drawing



Typical Cross Section for Traffic Application



For more information, contact CULTEC at (203) 775-4416 or visit www.cultec.com

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CULTEC RECHARGER® 902HD STORMWATER CHAMBER

CULTEC Recharger® 902HD Specifications

GENERAL

CULTEC Recharger® 902HD chambers are designed for underground stormwater management. The chambers may be used for retention, recharging, detention or controlling the flow of on-site stormwater runoff.

CHAMBER PARAMETERS

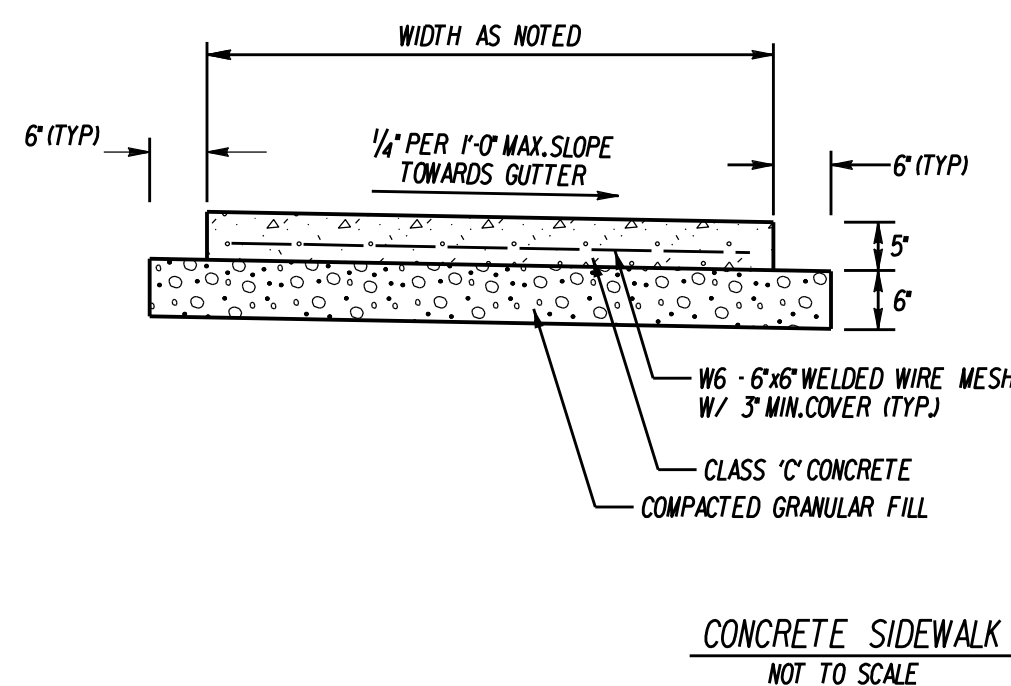
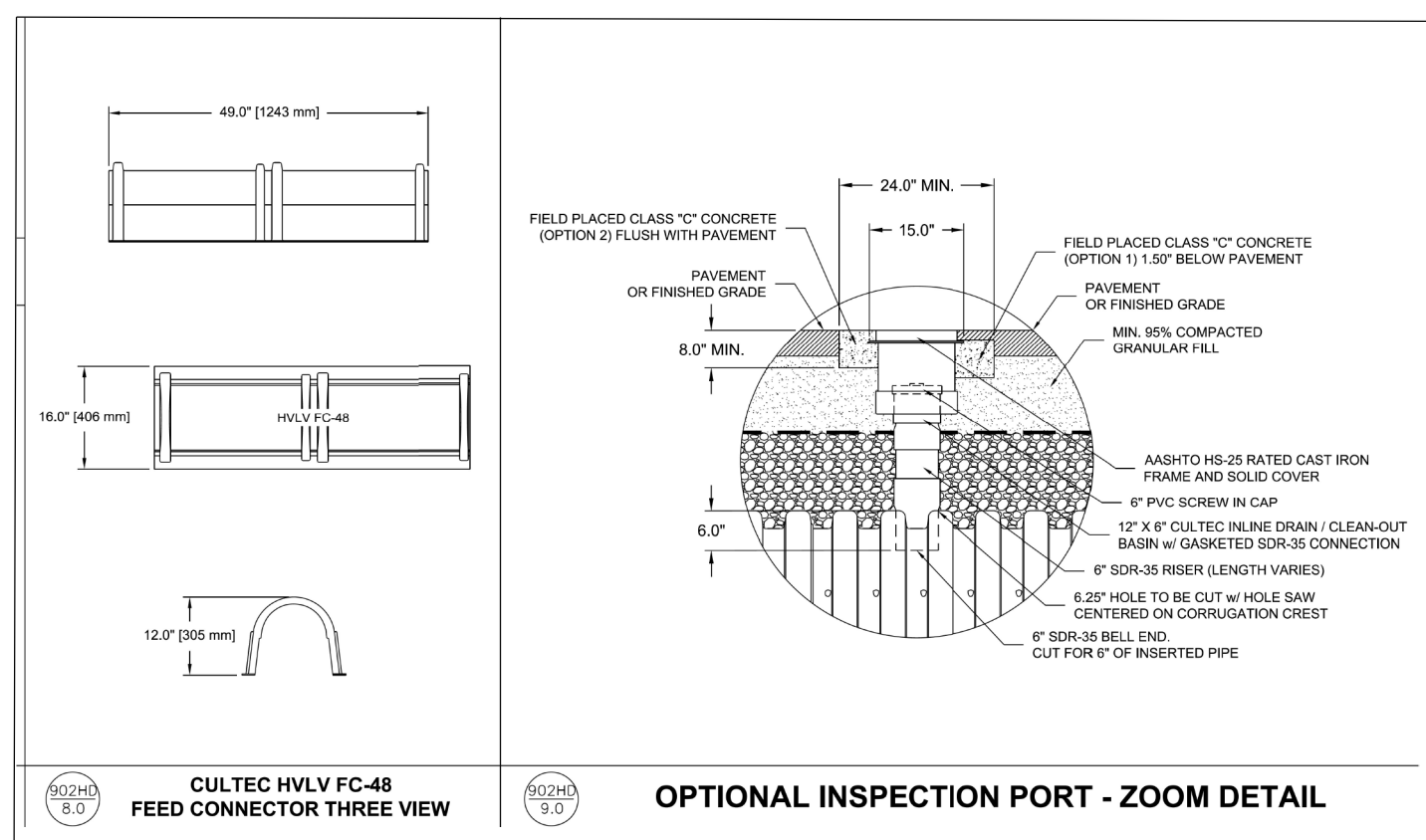
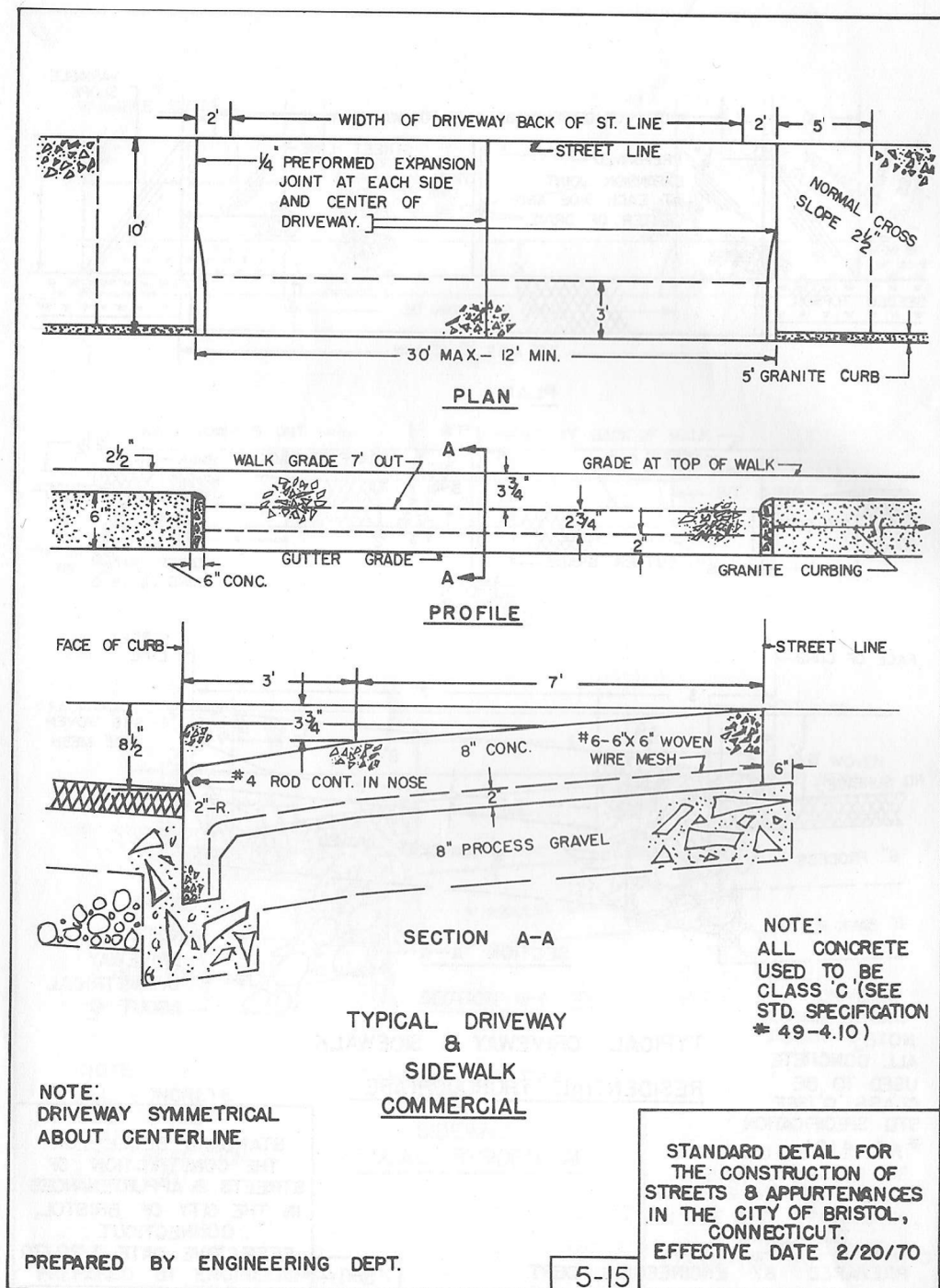
2. The chambers shall be manufactured in accordance in the U.S.A. or Canada by CULTEC, Inc. of Brookfield, CT (cultec.com, 203-775-4146).
3. The chambers shall be designed and tested in accordance with ASTM F2787 "Standard Practice for Structural Design of Thermoplastic Corrugated Wall Stormwater Collection Chambers". The load configuration shall include:
 - a. Instantaneous AASHTO Design Truck live load at minimum cover
 - b. Maximum permanent (50-year) cover load
 - c. 1-week parked AASHTO design truck load
4. The chambers shall meet the requirements of ASTM F3430-20 "Standard Specification for Cellular Polypropylene (PP) Corrugated Wall Stormwater Collection Chambers".
5. The installed chamber system shall provide resistance to the loads and load factors as defined in the AASHTO LRFD Bridge Design Specifications. The manufacturer shall be installed according to CULTEC's recommended installation instructions. The structural design of the chambers shall include the following:
 - a. The Creep Modulus shall be 50-year as specified in ASTM F3430
 - b. The minimum safety factor for live loads shall be 1.75
 - c. The minimum safety factor for dead loads shall be 1.95
5. The chamber shall be structural foam injection molded of blue virgin high molecular weight impact-modified polypropylene.
6. The chamber shall be arched in shape.
7. The chamber shall be open-bottomed.
8. The chamber shall be joined using an interlocking overlapping rib method. Connections must be fully shouldered overlapping ribs, having no separate couplings.
9. The nominal chamber dimensions of the CULTEC RECHARGER® 902HD shall be 48 inches (1219 mm) tall, 78 inches (1981 mm) wide and 49 inches (1230 mm) long. The installed length of a joined RECHARGER 902HD shall be 3.67 feet (1.12 m).
10. Multiple chambers may be connected to form different length runs. Each row shall begin and end with a separately formed CULTEC RECHARGER® End Cap. Maximum inlet opening on the end cap is 30 inches (762 mm) HDPE or 36 inches (900 mm) PVC.
11. The chamber shall have two ports to accept CULTEC HVLV® FC-48 Feed Connectors to create an internal manifold. Maximum all pipe size in the side port is 10 inches (250 mm) HDPE and 12 inches (300 mm) PVC.
12. The nominal chamber dimensions of the CULTEC HVLV® FC-48 Feed Connector shall be 12 inches (305 mm) tall, 16 inches (406 mm) wide and 49 inches (1245 mm) long.
13. The nominal storage volume of the RECHARGER 902HD chamber shall be 17.31 ft^3 / ft (1.61 m^3 / m) - without stone. The nominal storage volume of a joined RECHARGER 902HD shall be 63.47 ft^3 / unit (1.80 m^3 / unit) - without stone.
14. The nominal storage volume of the HVLV® FC-48 Feed Connector shall be 0.913 ft^3 / ft (0.085 m^3 / m) - without stone.
15. The RECHARGER 902HD chamber shall have 4 corrugations.
16. The chamber shall be capable of accepting a 6 inch (150 mm) inspection port opening at the top center of each chamber, centered on the corrugation crest.
17. The units may be trimmed to custom lengths by cutting back any corrugation.
18. The chamber shall be manufactured in a facility employing CULTEC's Quality Control and Assurance Procedures.
19. Maximum allowable cover over the top of the chamber shall be 8.3 feet (2.53 m).

END CAP PARAMETERS

1. The CULTEC Recharger® 9020HD End cap (referred to as 'end cap') shall be manufactured in the USA by CULTEC, Inc. of Brookfield, CT (www.cultec.com, 203-795-4146).
2. The end cap shall be a two-sheet thermoformed of virgin high molecular weight polyethylene.
3. The end cap shall be joined at the beginning and end of each row of chambers using an interlocking overlapping rib method. Connection must be fully soldered overlapping ribs, having no separate couplings.
4. The end cap shall be 24 inches wide and 48 inches tall, 78 inches (1982 mm) wide and 9.7 inches (246 mm) long. The end cap shall be joined with a Recharger 9020HD chamber. The installed length of the end cap shall be 6.2 inches (157 mm).
5. The nominal storage volume of the end cap shall be 5.34 ft³ / ft (0.50 m³ / m) - without stone. The nominal storage volume of an interior end cap shall be 7.75 ft³ / ft (0.68 m³ / m) - without stone.
6. Maximum inlet opening on the end cap is 30 inches (750 mm) HDPE or 36 inches (900 mm) PVC.
7. The end cap shall provide resistance to the loads and load factors as defined in the AASHTO LRFD Bridge Design Specifications, Section 12.2.

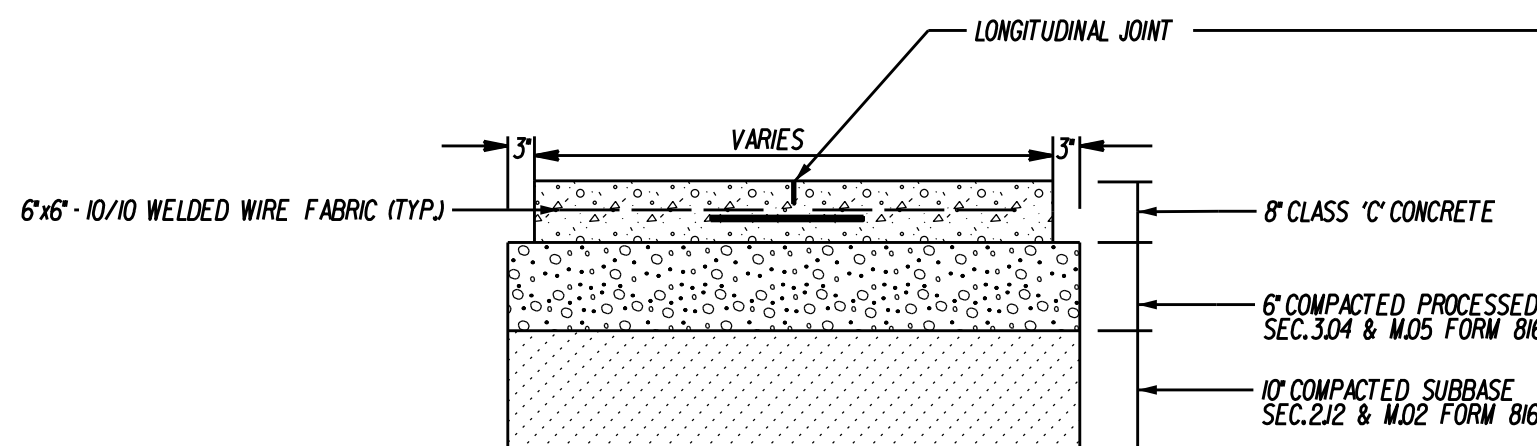
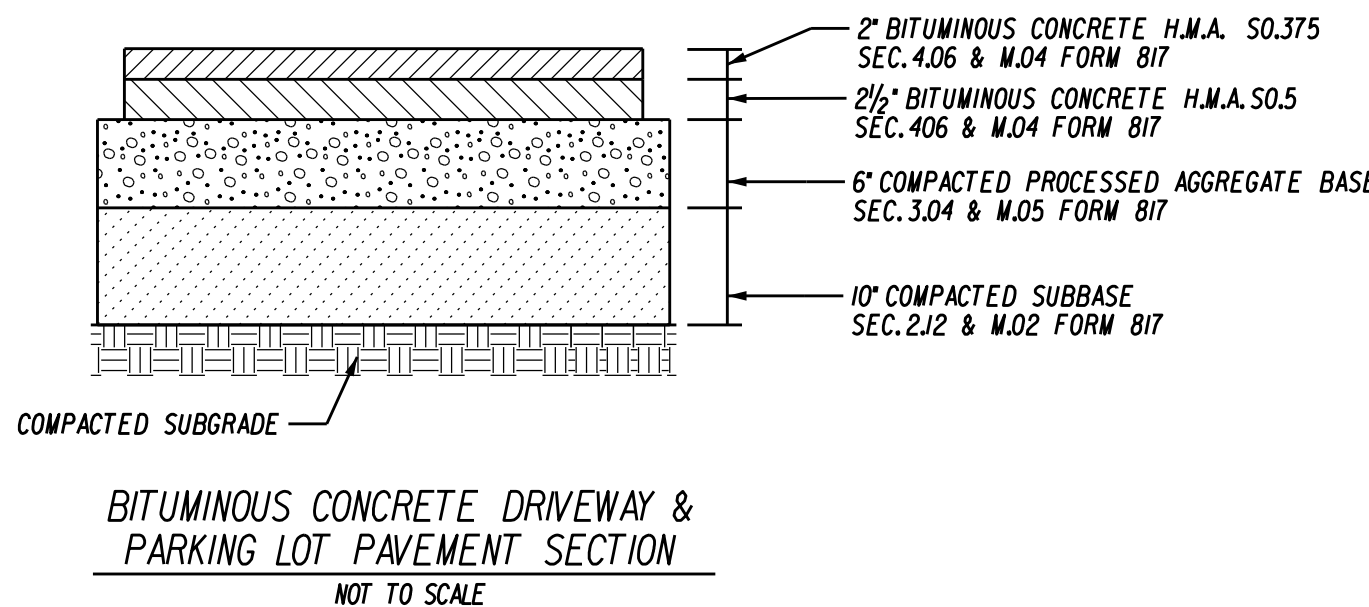
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- NOTES:**

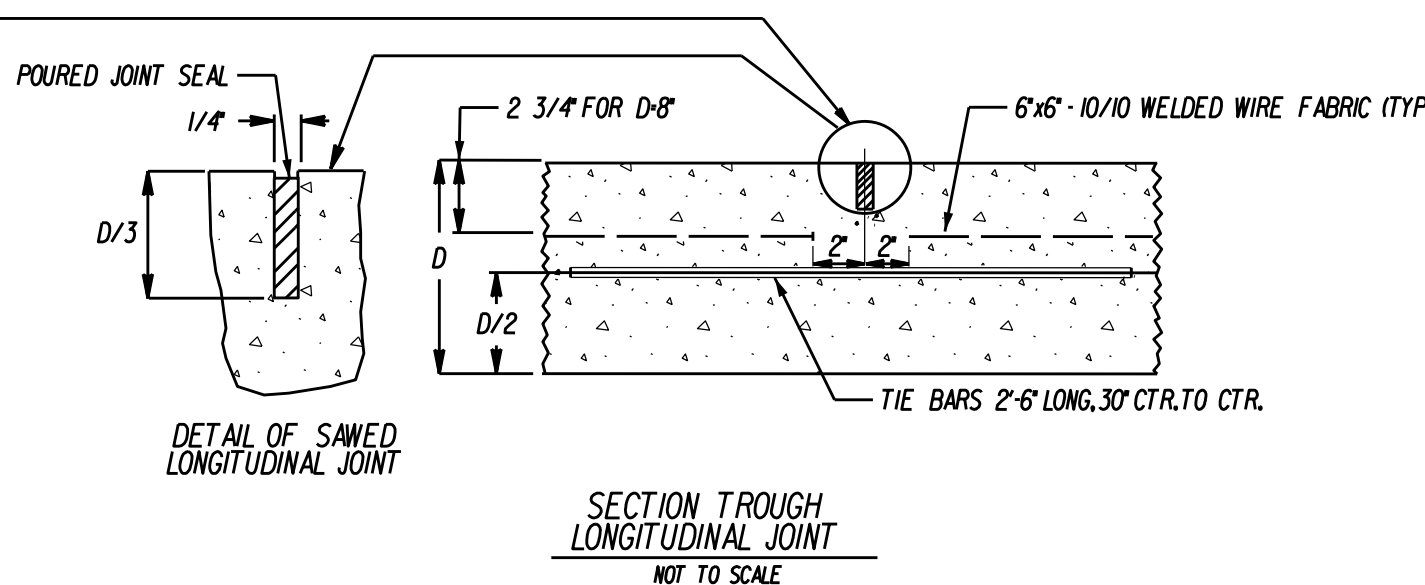
1. PREMOULDED MASTIC EXPANSION JOINTS SHALL BE PLACED AT MATCH JOINTS AND AT 20'-0" INTERVALS FOR CONTINUOUS POURS. JOINTS SHALL BE FULL DEPTH OF POUR AND A 1/2" THICK
2. DUMMY JOINTS SHALL BE INSTALLED USING A JOINTING TOOL AS DIRECTED, PERPENDICULAR TO THE EDGE AT 5'-0" ON CENTER.
3. CONCRETE SURFACE SHALL BE FINISHED WITH A WOOD FLOAT OR BY OTHER APPROVED MEANS AND A NON-SLIP LIGHT BROOM FINISH APPLIED PERPENDICULAR TO THE EDGE OF WALK.
4. OUTSIDE EDGES AND ALL JOINTS SHALL BE EDGED WITH A 1/2" RADIUS EDGING TOOL.



- NOTES:**

1. ALL LONGITUDINAL JOINTS SHALL BE SAWED AND SEALED.
2. SAWED JOINTS SHALL BE AT A 10FT GRID
2. CONCRETE SURFACE SHALL BE FINISHED WITH A WOOD FLOAT OR BY OTHER APPROVED MEANS AND A NON-SLIP BROOM FINISH APPLIED PERPENDICULAR TO THE EDGE OF WALK.
3. OUTSIDE EDGES AND ALL JOINTS SHALL BE EDGED WITH A 1/4" RADIUS EDGING TOOL.

CONCRETE PAD DETAIL
NOT TO SCALE



			AUGUST 17, 2020	SURVEYOR SIGNATURE BLOCK: TO MY KNOWLEDGE AND BELIEF, THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON.			ENGINEER SIGNATURE BLOCK: 	DRAWING NO. MISC-003
I	II-23-20	REVISED GRADING TO PROVIDE WETLAND MITIGATION	NOT TO SCALE				FUEL TRANSFER FACILITY 351 MINOR STREET BRISTOL, CONN.	DRAWING TITLE: MISCELLANEOUS NOTES & DETAILS
REV.	DATE	REVISION DESCRIPTION						SHEET NO. 15

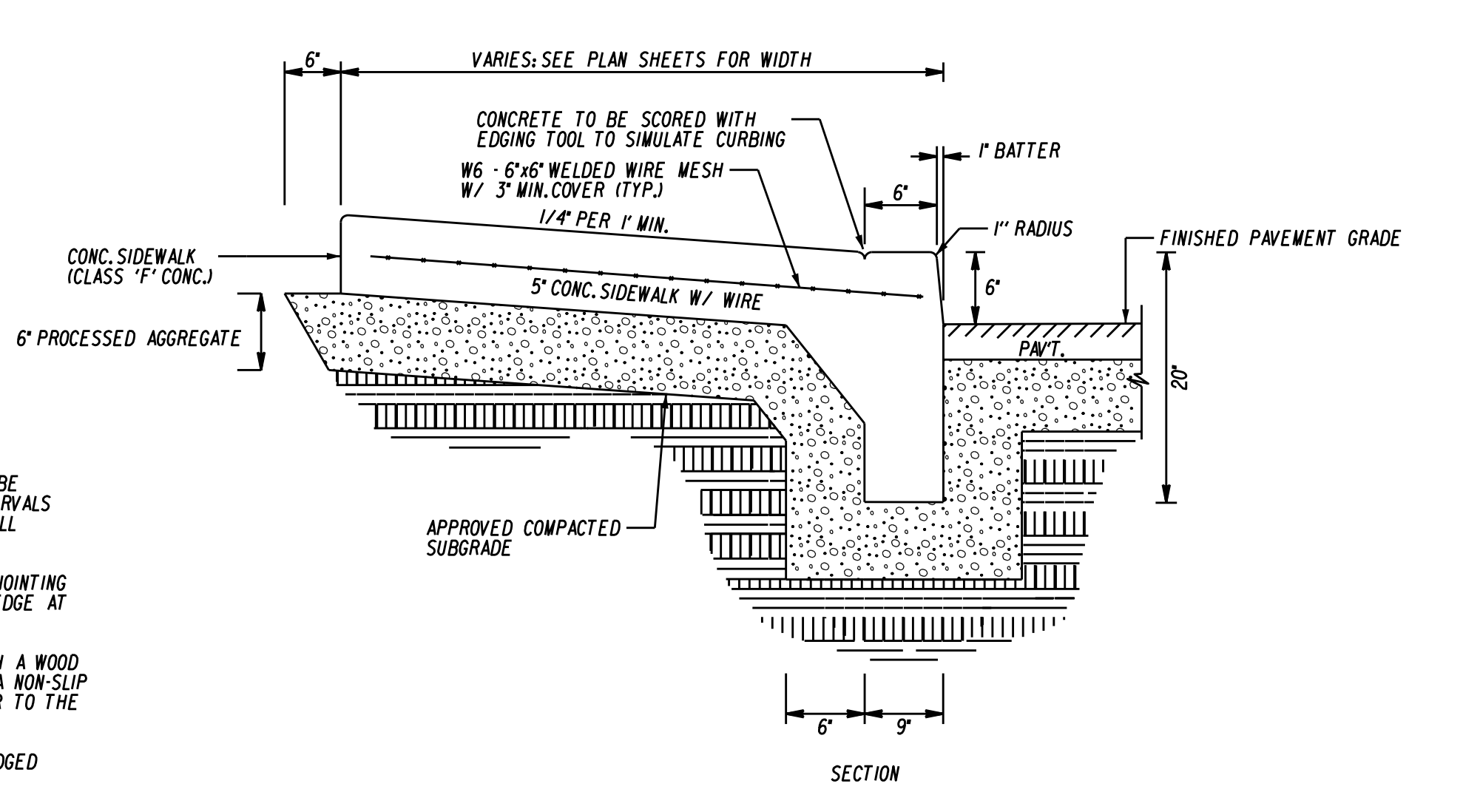
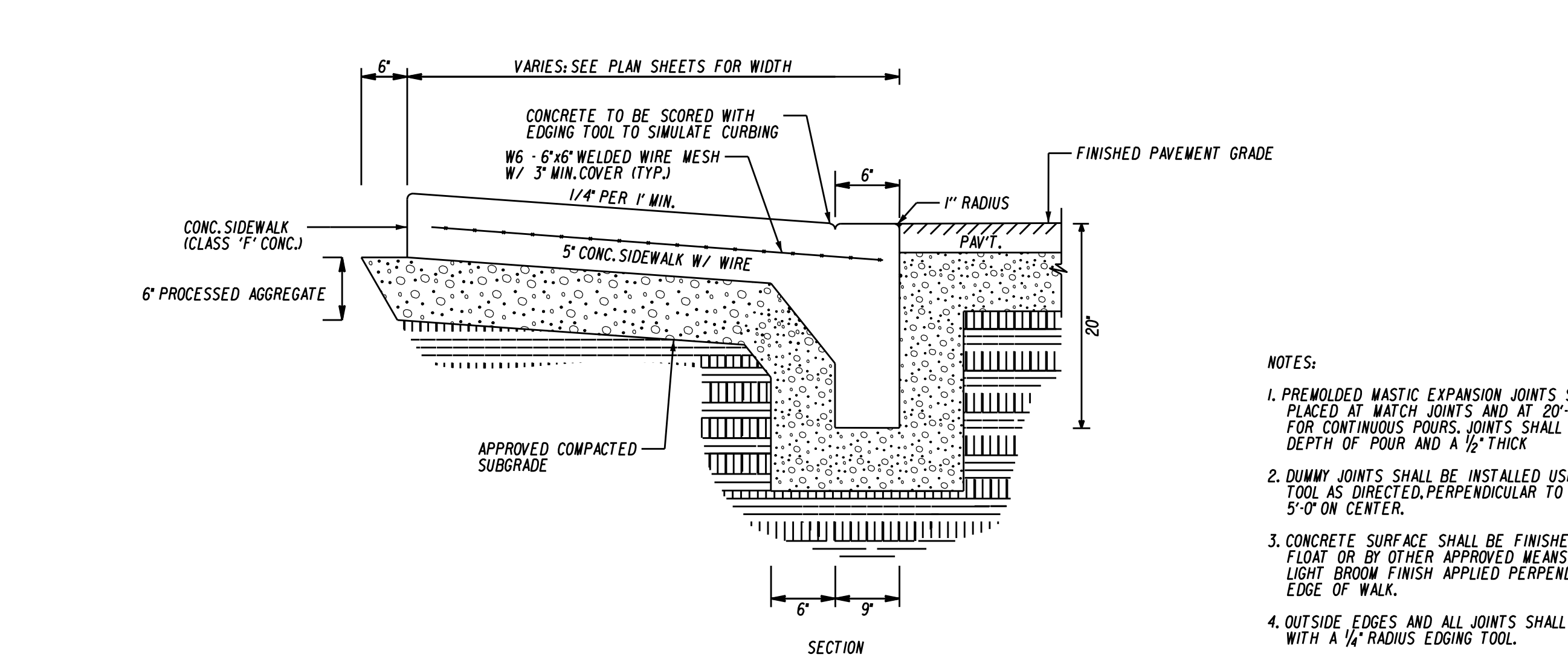
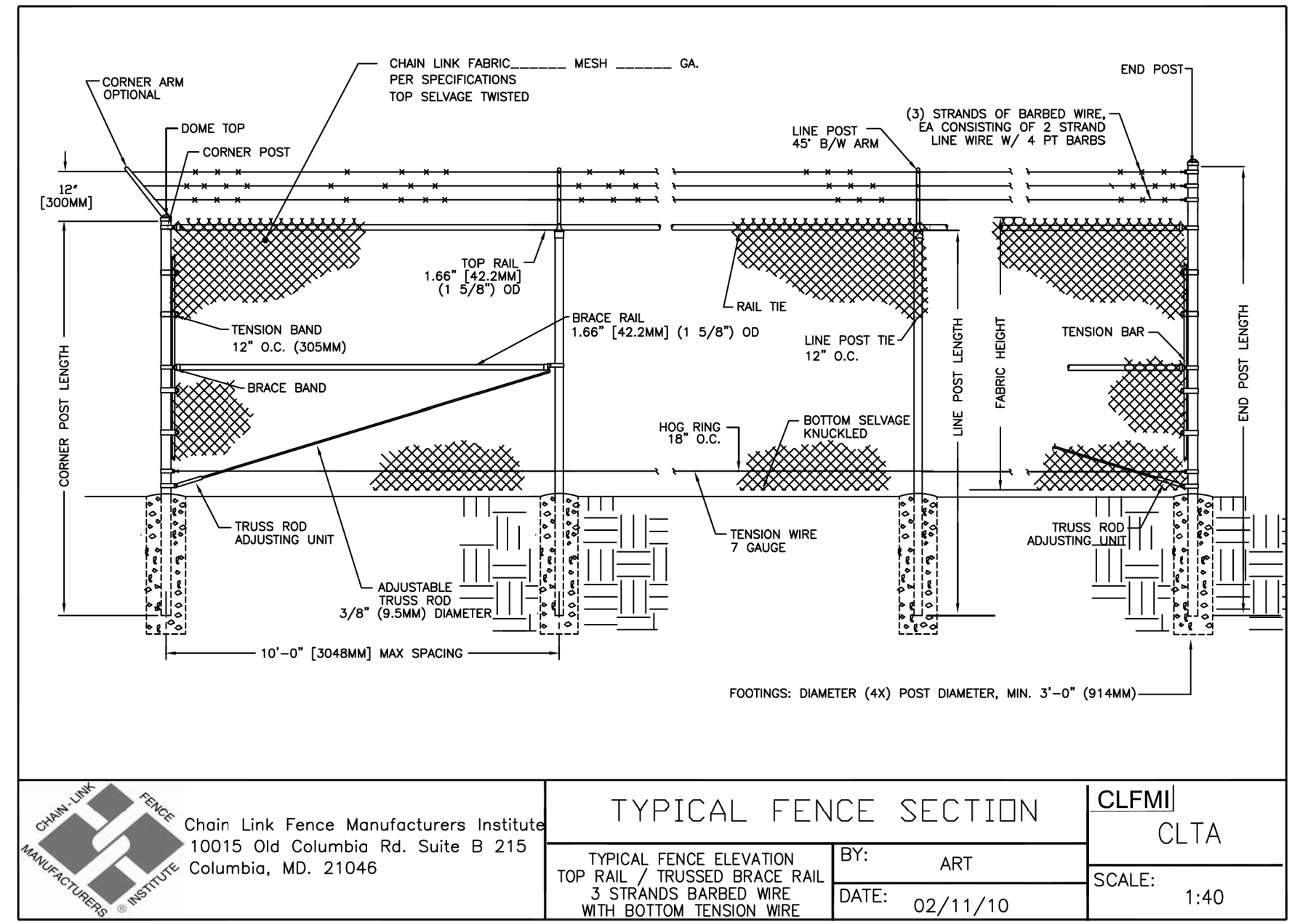
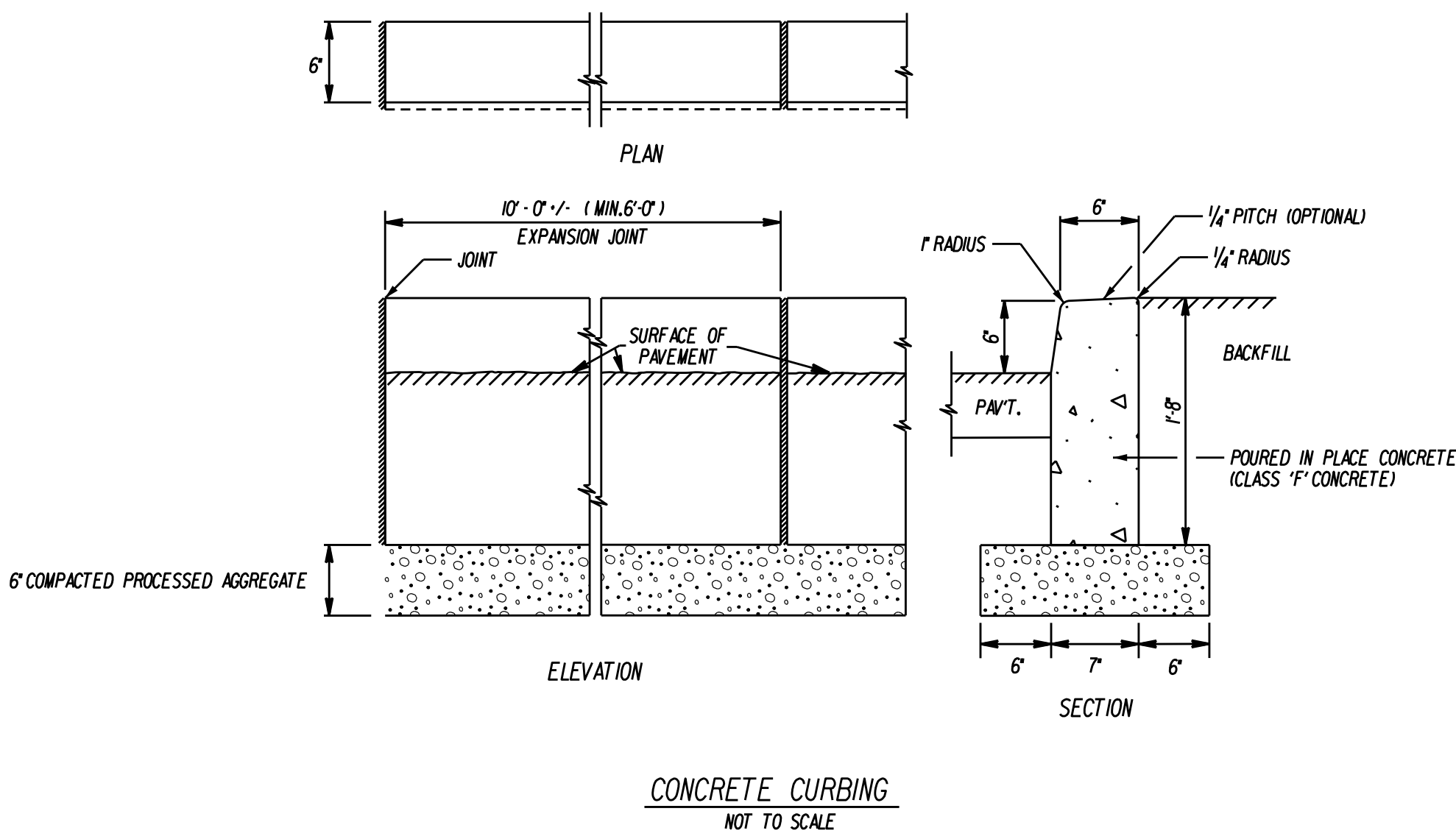
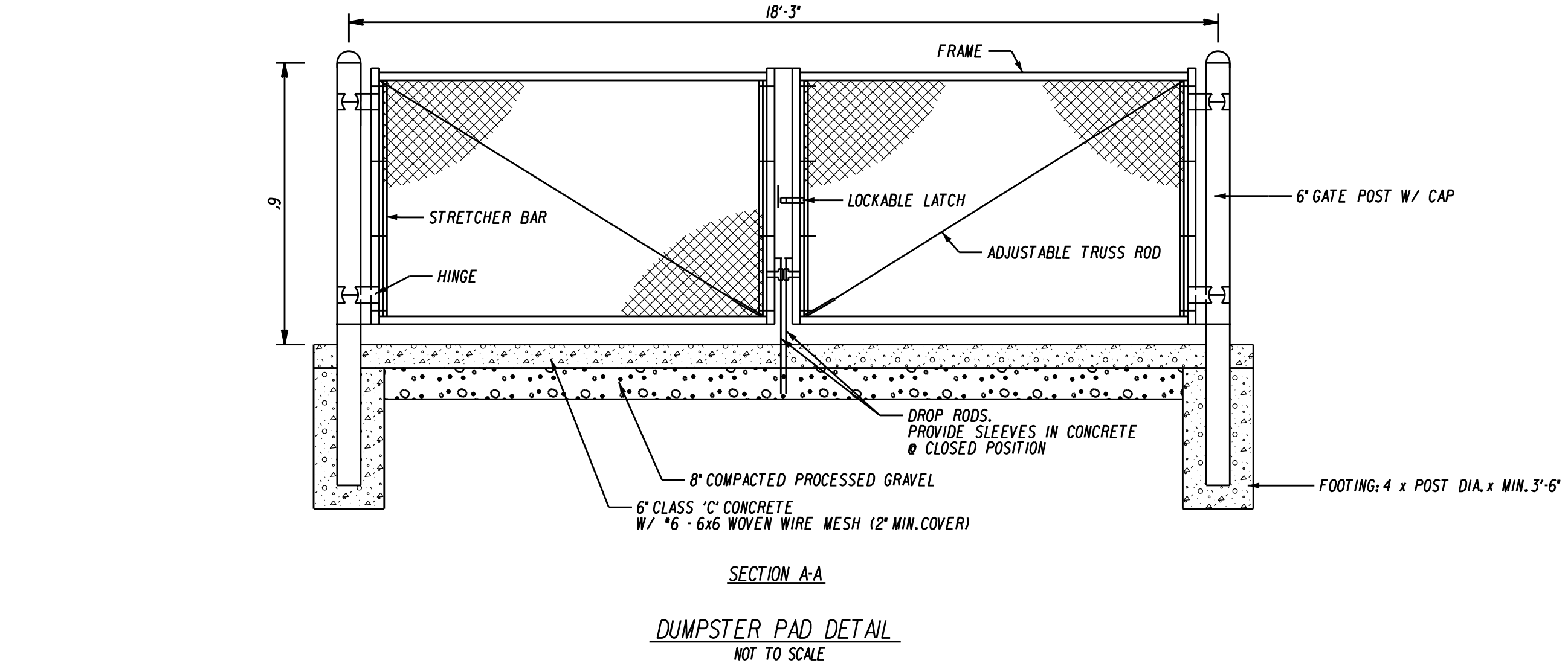
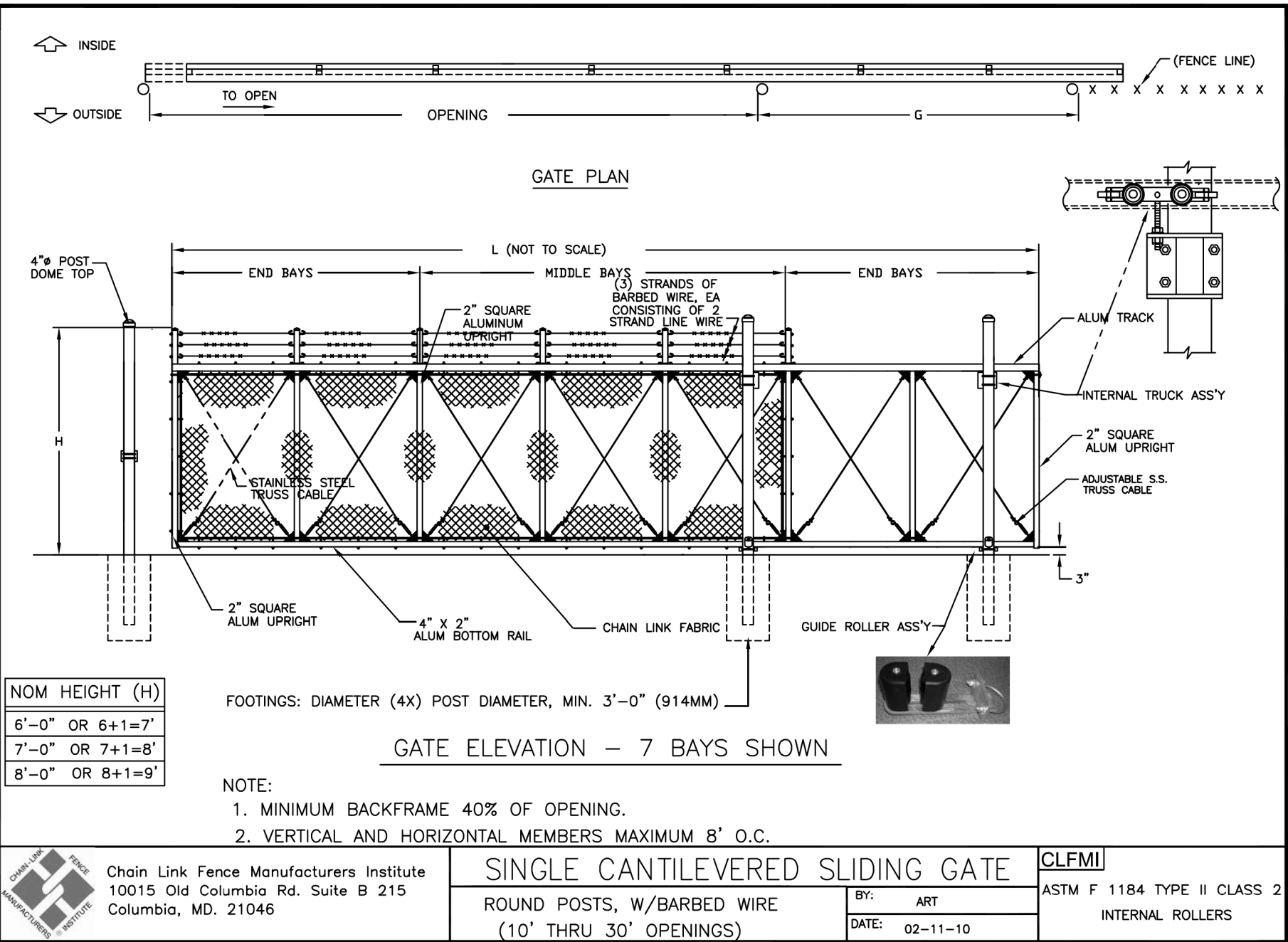
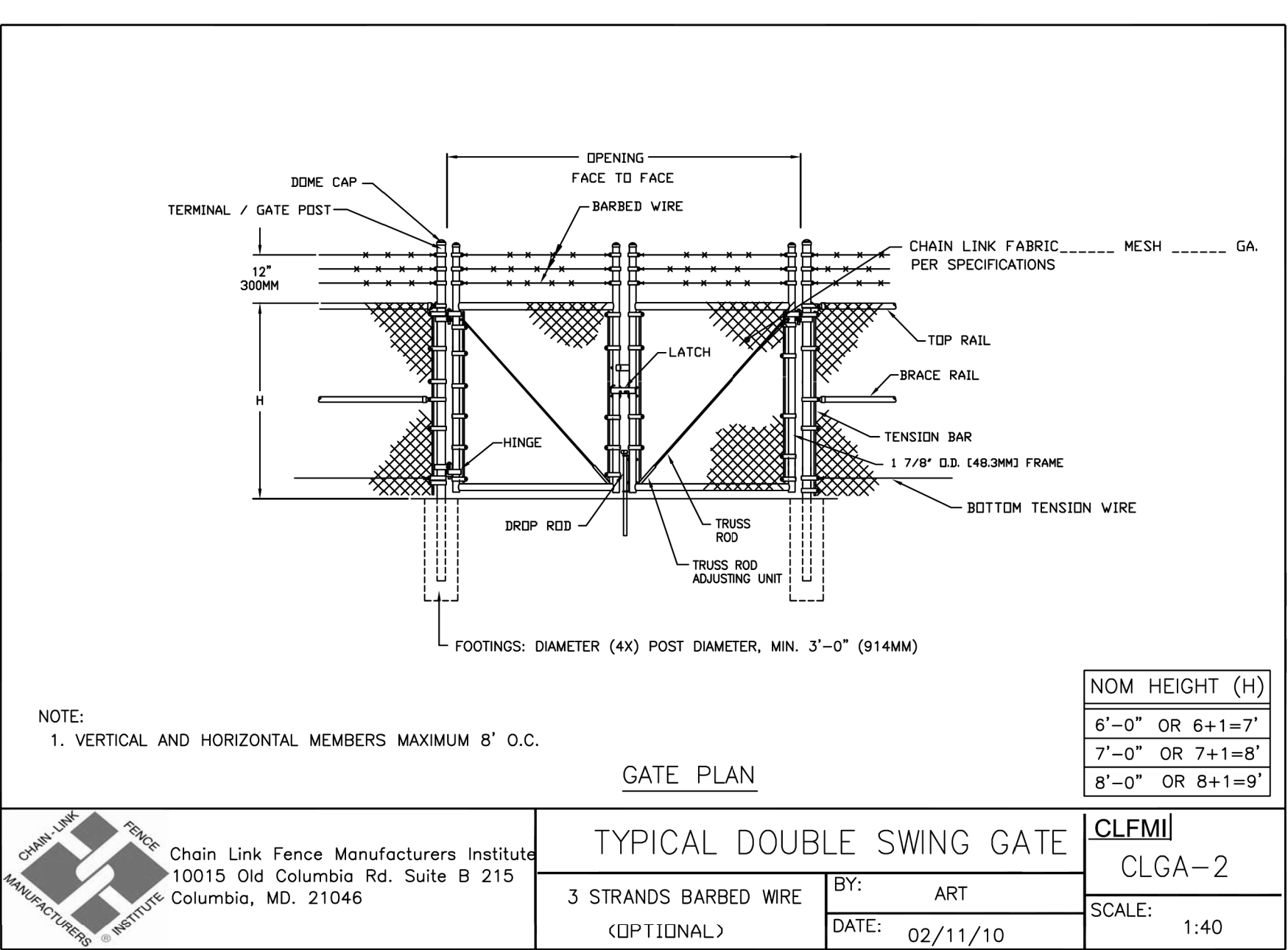
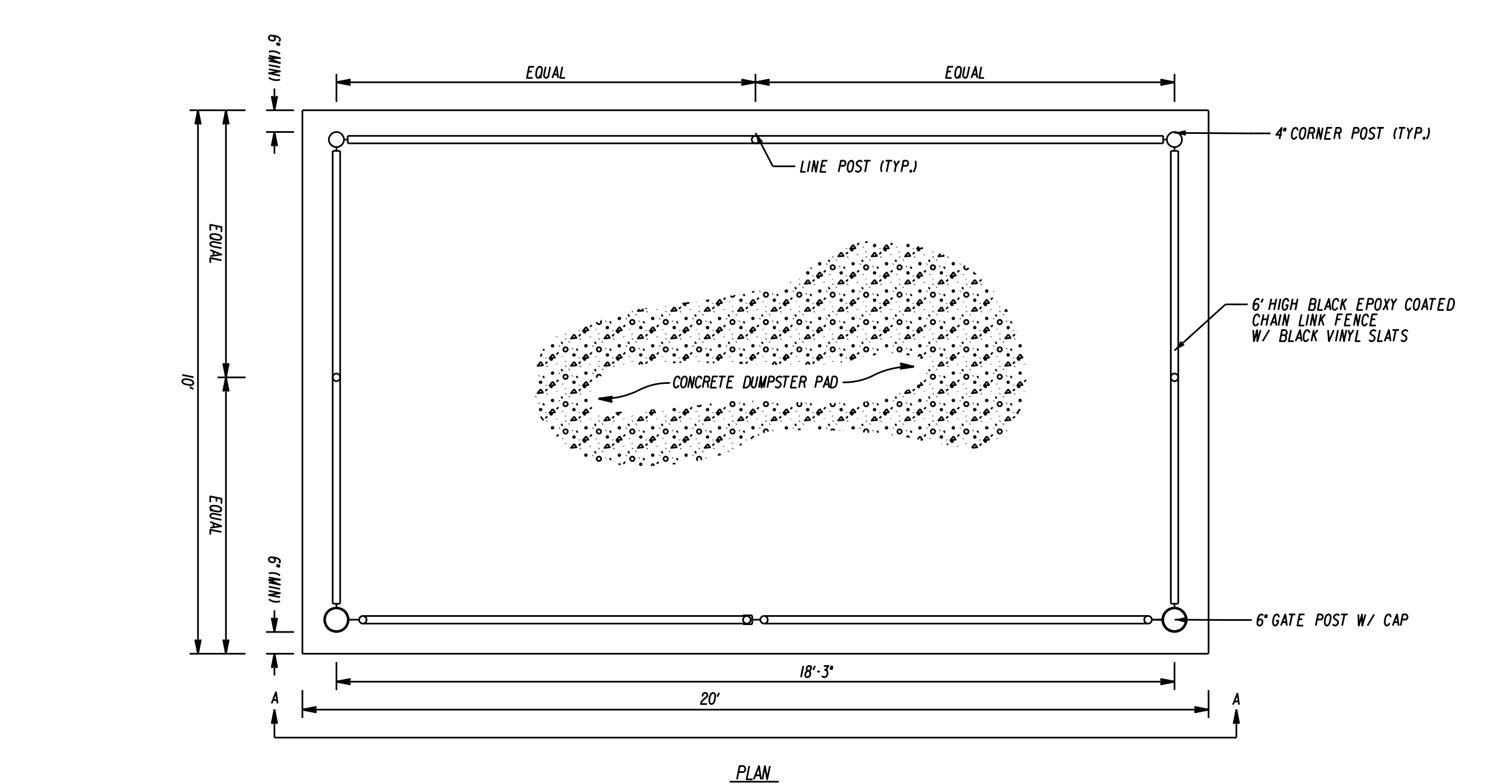


Illustration 4.4

Installation Type	Bedding Thickness	Haunch and Outer Bedding	Lower Side
Type 1	Do/24 minimum, not less than 75 mm (3"). If rock foundation, use Do/12 minimum, not less than 150 mm (6").	95% Category I, 95% Category II, or 100% Category III	90% Category I, 95% Category II, or 100% Category III
Type 2	Do/24 minimum, not less than 75 mm (3"). If rock foundation, use Do/12 minimum, not less than 150 mm (6").	90% Category I, 95% Category II, or 95% Category III	85% Category I, 90% Category II, or 95% Category III
Type 3	Do/24 minimum, not less than 75 mm (3"). If rock foundation, use Do/12 minimum, not less than 150 mm (6").	85% Category I, 90% Category II, or 95% Category III	85% Category I, 90% Category II, or 95% Category III
Type 4	No bedding required, except if rock foundation, use Do/12 minimum, not less than 150 mm (6").	No compaction required, except if Category III, use 85% Category III	No compaction required, except if Category III, use 85% Category III

Illustration 4.5

SIDO Soil	Representative Soil Types		Percent Compaction	
	USCS	Standard AASHTO	Standard Proctor	Modified Proctor
Gravelly Sand (Category I)	SW, SP, GW, GP	A1, A3	100	95
			95	90
			90	85
			85	80
Sandy Silt (Category II)	GM, SM, ML, Also GC, SC, with less than 20% passing #200 sieve	A2, A4	100	95
			95	90
			90	85
			85	80
Silty Clay (Category III)	CL, MH, GC, SC	A5, A6	100	90
			95	85
			90	80
			85	70

MONOLITHIC CONCRETE CURB AND SIDEWALK W/ NO CURB REVEAL (NOT TO SCALE)

MONOLITHIC CONCRETE CURB AND SIDEWALK W/ 6" CURB REVEAL (NOT TO SCALE)

1 11-23-20 REVISED GRADING TO PROVIDE WETLAND MITIGATION		AUGUST 17, 2020		SURVEYOR SIGNATURE BLOCK:		ENGINEER SIGNATURE BLOCK:		PROJECT TITLE:		DRAWING NO.	
REV. DATE REVISION DESCRIPTION		NOT TO SCALE		TO MY KNOWLEDGE AND BELIEF, THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON.		Joseph M. Green		FUEL TRANSFER FACILITY 351 MINOR STREET BRISTOL, CONN.		MISC-004	
										SHEET NO. 16	

(1) GENERAL

All Railroad Track Construction shall be performed under competent supervision of personnel experienced in Railroad construction and shall conform to the standards of Guilford Transportation Industries.

Prior to Construction, the Contractor will submit to the Chief Engineering Officer a listing of material proposed to be used on the project. All material will conform with GTI and/or AREA standards, thereby insuring replacement availability. No work will begin until written authorization is received.

The rails shall be 100# Section or of a heavier rail section in common use on the Gulfport Transportation Industries System, new or relay. Relay rails shall not have more than 1/4" top wear measured vertically along center line of rail. Rails having less than 3/8" side wear and less than horizontally 3/4" below the normal top of rail shall not have base wear that will prevent proper anchorage in tie plates. Rails shall be free from kind of surface application. Rails shall be free from kind of surface rust and excessive head flaking. Rails having line or surface bends shall be rejected. Rails having cracks shall be rejected. Rail lengths of rail shall be used wherever possible. Rails less than 19' shall be rejected.

Cross ties shall conform to AREA specifications, minimum size will be 6"x8"x8'0" and shall be treated with creosote in accordance with AREA specifications. Relay ties will be approved after inspection by Railroad prior to installation and acceptance by industry. All spike holes will be plugged prior to use.

Switch timber shall be new hardwood and conform to AREA specifications 7"x9" and of lengths required by Guilford Transportation Industries' standard connection layouts. All timber shall be creosote treated as specified for cross ties. Relay timber as above.

(2) MATERIALS Continued

Tie plates shall be new or relay at least 7x10-3/4"x4" thick. They may be single or double shoulder and must be canted. Tie plates must conform to ASTM specifications. Bent or cracked plates showing more than 25% reduction in section due to corrosion or wear shall be rejected.

Joint bars shall be new or relay and shall be 100% toeless, 24" long or greater. Joint bars shall conform to ARRA specifications. Relay bars must be free from appreciable wear. Joint bars shall have a minimum of four holes and the holes are to fit the punchings of the rail. Holes to have a clearance of 1/16". Joint bars that cannot be drawn up to give a tight fit will be rejected.

Bolts and nuts shall be new and of a size to fit the rail punchings. They shall conform to ASTM specifications for low carbon steel track bolts and nuts. Washers shall be new, spring type of appropriate size and shall conform to AREA specifications.

Track spikes shall be 6" long, 5/8" square with an oval head and still conform to ASTM specifications for soft steel track spikes. Tangent track will have at least 2 rail holding spikes per tie plate and all curves over 3° will have an additional lag spike per tie plate.

Rail anchors shall be the proper size to fit the base of rail. They may be new or relay, but must fit tightly to restrain rail movement. No shimming of anchors is allowed. Anchors to be installed at the rate of ten anchors per rail, box anchored per AREA standards.

Ballast shall be broken stone - AREA #4 (3' x 14")
clean and free of dirt. There will be a minimum of 6"
ballast under the ties.

(2) MATERIALS. Continued

Bumping posts will be Hayes type, Durable "D" or equal unless otherwise specified.

Type and quality of derail will be specified for each individual sidetrack requirement.

The track will be properly installed with a standard gauge of 4'8 1/2" except on sharp curves. In cases of sharp curves, gauge will be specified.

Ballast will be installed on top of subgrade for a depth of not less than 6" below the bottom of the tie and brought up to the top of the tie at the center and slope off to 1" below top of ties at the ends. It will then extend 1' beyond the end of the tie at that height, at which point it will slope off at a rate of 2:1 to the sub-ballast.

Cross ties will be placed not more than 21" on center. When relay rails are used the unworn side will be placed on the gauge side.

The center of joint should be installed so as to be resting on two ties. (suspended joint)

It will be the responsibility of the builder of that portion of track designated as 'property line to end', to connect to that portion of track designated as 'clearance to property line' and provide the necessary joints or compromise joints with bolts as the weights of rail would dictate.

Where track bonding is necessary, it will be done in accordance with standards set up by Signal Engineer.

Plans of track installation must be approved by the Guilford Transportation Industries before the design of the facility to receive rail service is finalized.

Where possible, curvature should be 8° or less. Maximum curvature will not be greater than 12°-30' without prior written consent of the Chief Engineering Officer. Between reverse curves and between turnouts, there shall be a length of track equivalent to the longest car or unit operated over the track, but not less than 40 feet.



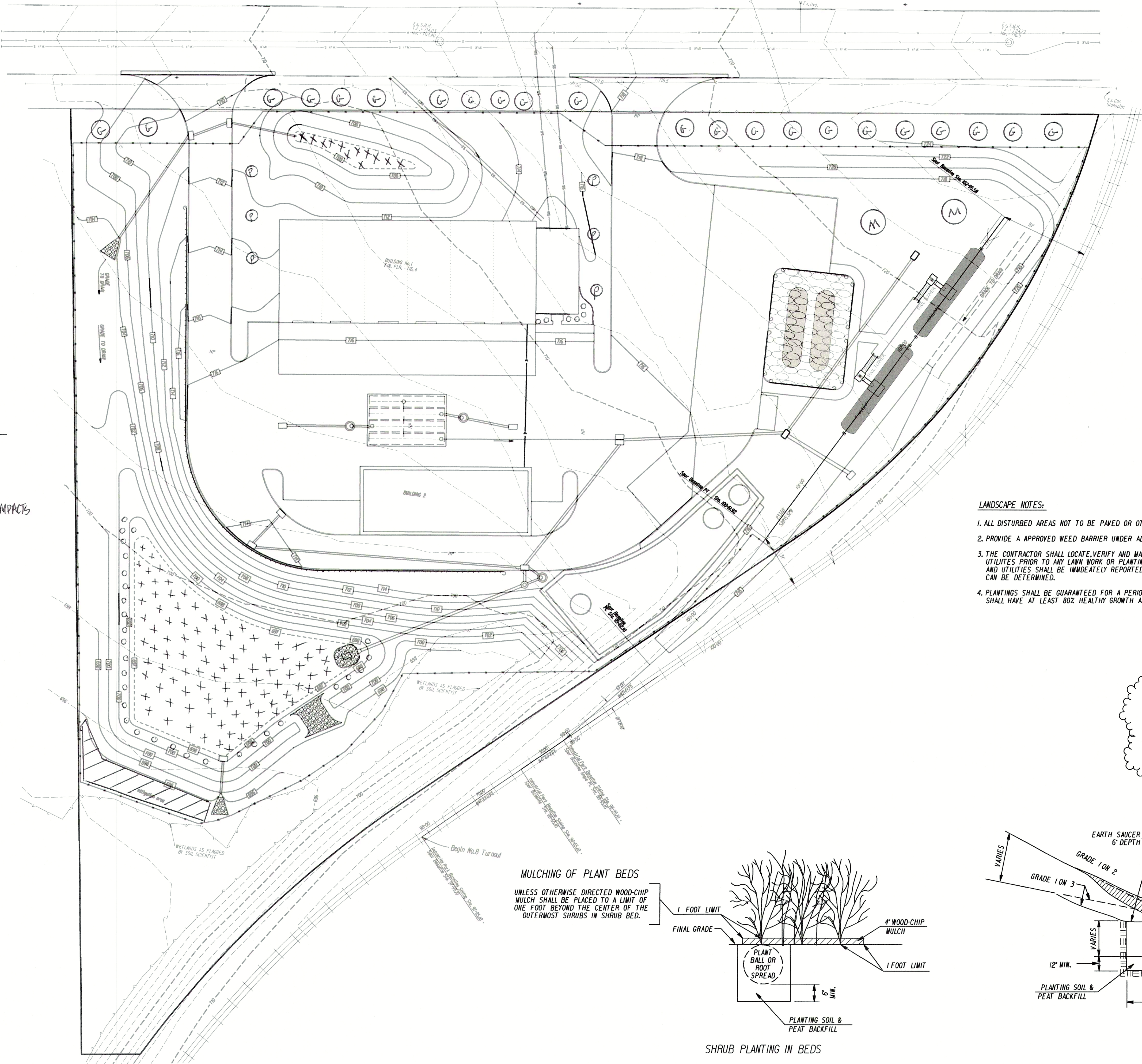
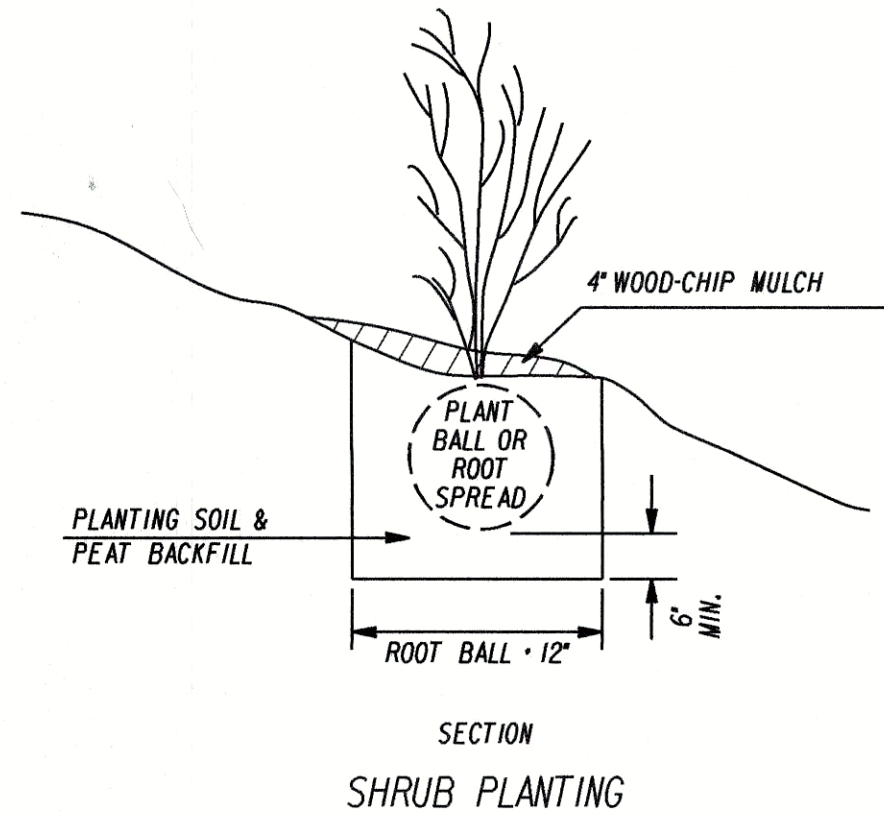
1) ALL COMPONENTS ASSOCIATED WITH THE PROPOSED TRACK SECTION AND CONSTRUCTION SHALL MEET THE REQUIREMENTS OF THE GUILFORD TRANSPORTATION INDUSTRIES - RAIL DIVISION (PAN AM RAILWAYS) SPECIFICATIONS FOR INSTALLATION OF INDUSTRIAL SIDETRACKS.

- 2) PRIOR TO TRACK INSTALLATION, THE OWNER OR CONTRACTOR MUST PROVIDE A TRACK PLAN TO THE PAN AM RAILWAYS FOR APPROVAL.
- 3) SUBGRADE SHALL BE PREPARED TO A GRADE OF 18" 20" BELOW THE PROPOSED TOP OF RAIL AND SHALL BE OF A QUALITY TO ADEQUATELY CARRY TRACKAGE AND EXPECTED TONNAGE.
- 4) THE BALLAST SECTION AND SUBGRADE SHALL BE CONSTRUCTED TO ADEQUATELY DRAIN.
- 5) ALL REQUIREMENTS ASSOCIATED WITH THE LOADING OR UNLOADING OF COMBUSTIBLE AND FLAMMABLE LIQUIDS OR FLAMMABLE GASES, INCLUDING BONDING ARRANGEMENT, SHALL BE DONE IN ACCORDANCE WITH THE STANDARDS OF PAN AM RAILWAYS.
- 6) BEFORE THE TRACK IS PLACED INTO SERVICE TO RECEIVE CARS, IT SHALL BE INSPECTED AND APPROVED BY QUALIFIED PERSONNEL FROM THE MAINTENANCE DISTRICT IN WHOSE JURISDICTION THE SIDETRACK IS LOCATED.

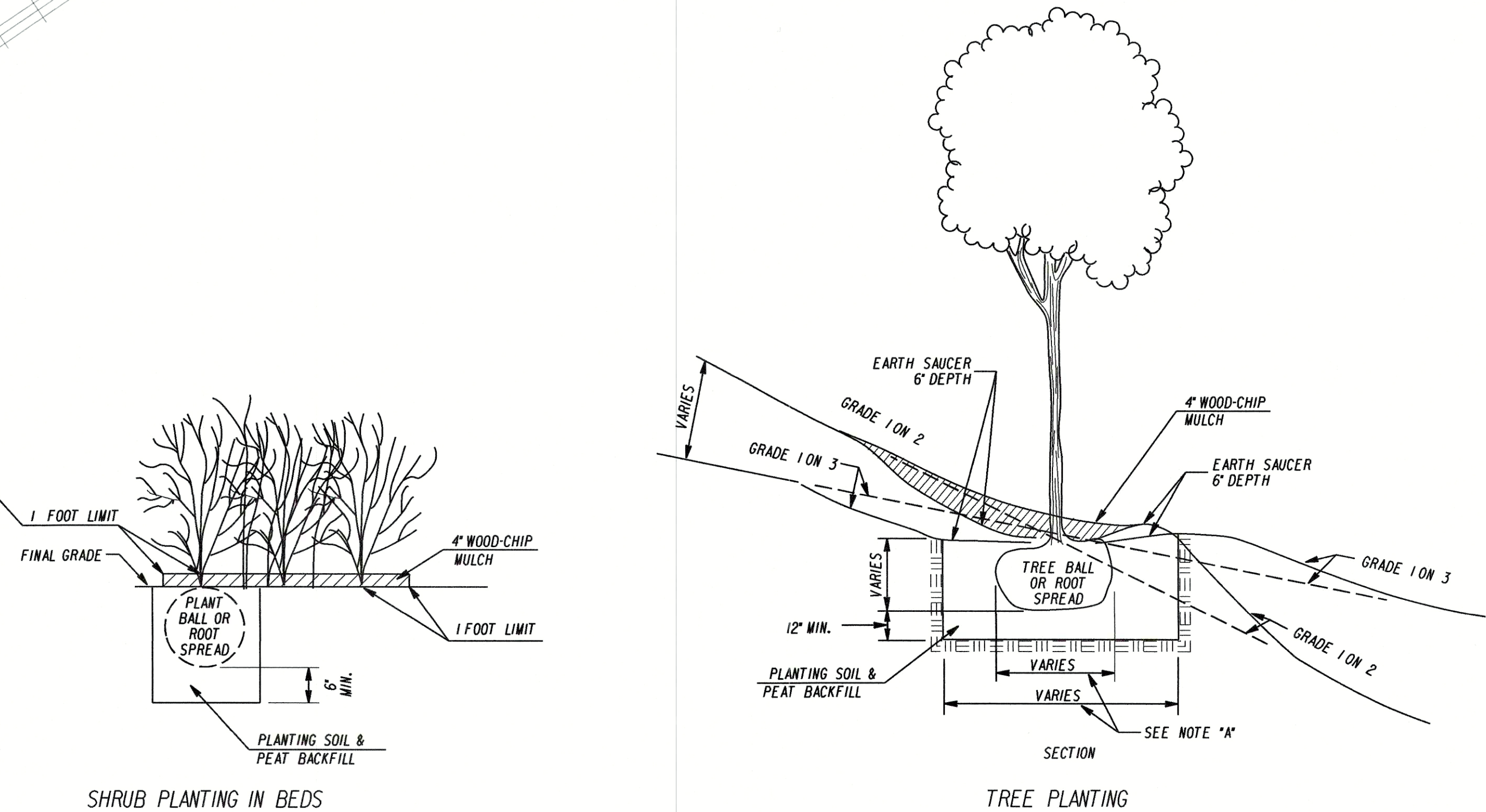
11

PLANTING KEY			
TYPE	SIZE	QTY	SYMBOL
GREEN GIANT ARB	7-8 FT	22	G
RED SUNSET MAPLE	3-3.5 CM	2	M
CLEVELAND SELECT PEAR	2-2.5 CM	6	P
DWARF HAWLEEN GRASS	2 GAL	6	H
WETLANDS PLANTINGS			
ARABIS LAKE VIOLETTUM	1 GAL	10	W
PLAT VERTICILLATA	2 CM	10	W
RED TWIG DOGWOOD	3 GAL	10	W
SEED MIXES			
NORTHERN WETLANDS MIX	4.8 LBS/ACRE	XX	
BY FOUNDRY SEED CO. LLC			
MT GREEN SLOPE + CONSERVATION MIX	4 LBS/1000 SQ FT		
FOR USE ON ALL SLOPES. BY CEN INC.			
MT GREEN TRIVERTINE PERENNIAL RYE BLEND	7 LBS/1000 SQ FT		
FOR USE ON ALL LAWN AREAS THROUGHOUT SITE BY CEN INC.			


 PLANTING PLAN FOR MITIGATION & DIRECT WETLAND IMPACTS BY OTHERS



- LANDSCAPE NOTES:
- ALL DISTURBED AREAS NOT TO BE PAVED OR OTHERWISE TREATED SHALL RECEIVE 4" OF LOAM AN SEED.
 - PROVIDE A APPROVED WEED BARRIER UNDER ALL BARK MULCH
 - THE CONTRACTOR SHALL LOCATE, VERIFY AND MARK ALL EXISTING AND NEWLY INSTALLED UNDERGROUND UTILITIES PRIOR TO ANY LAWN WORK OR PLANTING. ANY CONFLICTS WHICH MAY OCCUR BETWEEN PLANTING AND UTILITIES SHALL BE IMMEDIATELY REPORTED TO THE OWNER SO THAT ALTERNATE PLANTING LOCATIONS CAN BE DETERMINED.
 - PLANTINGS SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR AFTER INSPECTION AND ACCEPTANCE AND SHALL HAVE AT LEAST 80% HEALTHY GROWTH AT THE END OF THE GUARANTEED PERIOD.



			DATE: AUGUST 17, 2020	DESIGN BY ZACK MORIN THREE LANE LLC 13 GEAR DRIVE TOLLANDVILLE CT 06786 860-263-5690					PROJECT TITLE: FUEL TRANSFER FACILITY 351 MINOR STREET BRISTOL, CONN.		DRAWING NO. L-001
			SCALE: SCALE IN FEET 0 30 60	SCALE 1"=30'						DRAWING TITLE: SITE LANDSCAPING PLAN	SHEET NO. 18
1	11-23-20	PROVIDE WETLAND MITIGATION AREA									
REV.	DATE	REVISION DESCRIPTION									



City of Bristol
DEPARTMENT OF PUBLIC WORKS
BRISTOL, CONNECTICUT 06010

Inland Wetlands
Environmental Protection Technician
Monthly Report

June 30, 2026

Approved Applications Inspections

No.	Location	Description	Inspection Dates	Status
#1593	Cedar Hill Lots 12-42	Open space subdivision - Residential building lots (Exp. 20270519)	6/4, 6/11, 6/18	Act
#1567	Allentown Road (Wood shire)	Wetland crossing with residential community (Exp. 20260919)	6/4, 6/11, 6/18	Inact
#1819	Allentown Road (Saddlebrook)	Grading and water lateral installation (Exp. 20270417)	6/4, 6/11, 6/18	Inact
#1827	894 Middle Street	Environmental remediation (Exp. 20270717)	6/3, 6/10, 6/17	Inact
#1904	Huntington Woods	Replace 60" CMP with HDPE (20250805)	6/4, 6/11, 6/18	Act
#1908	351 Minor Street	Construct Oil/Propane facility (20251202)	6/3, 6/10, 6/17	Act
#1915	505-545 Redstone Hill Road	18 Lot Subdivision (20260505)	6/3, 6/10, 6/17	Expired
#1919	258 Brook Street	Demo existing garage, replace with 3 car garage (20260407)	6/3, 6/10, 6/17	Expired
#1922	71 Horizon Drive	Parking lot construction. Modification of #1848 (20260505)	6/3, 6/10, 6/17	Expired
#1925	66 Vermont Avenue	Removal of smaller trees and grading (20260505)	6/3, 6/10, 6/17	Expired
#1933	Lot 2 Business Park Drive	Filling & grading for parking area to new building (20260707)	6/3, 6/10, 6/17	Expired
#1934	Glenn Street	Harding a section to allow passage of woodland machinery (20260707)	6/3, 6/10, 6/17	Inact
#1936	52 Shelia Court	Construct 20 new spaces with related storm water management (20260707)	6/3, 6/10, 6/17	Inact
#1937	Lot 18 Donovan Court	Construct new house (20260901)	6/4, 6/11, 6/18	Inact

No.	Location	Description	Inspection Dates	Status
#1945	Lake Avenue Bridge 017005	Bridge replacement (20261006)	6/3, 6/10, 6/17	Inact
#1946	175 Century Drive	28,875 SF addition to existing facility (20261006)	6/3, 6/10, 6/17	Inact
#1949	23 Columbus Avenue	Install in-ground pool (20261103)	6/3, 6/10, 6/17	Inact
#1950	801 Burlington Avenue	Construct single family home (20261103)	6/3, 6/10, 6/17	Inact
#1951	Lot 7B 1-2 Marsh Road	Construct single family home (20261103)	6/4, 6/11, 6/18	Inact
#1966	183 Foxden Road	Extend sanitary sewer to service two lots (20270202)	6/3, 6/10, 6/17	Inact
#1968	175 Shrub Road	One mile Hiking Trail elevated boardwalks (20270202)	6/3, 6/10, 6/17	Inact
#1970	16 Andrews Street	paved parking lot and area of grading (20270406)	6/3, 6/10, 6/17	Inact
#1972	34 Climbing Street	New deck and in-ground swimming pool (20270406)	6/3, 6/10, 6/17	Inact
#1974	Memorial Blvd	Removal of tennis courts and planting of a new urban garden(20270406)	6/3, 6/10, 6/17	Complete
#1977	Wolcott Street	installation of temporary bypass pipe in culvert for repairs (20270406)	6/4, 6/11, 6/18	Inact
#1983	243 Jacobs Street	Regrade River at Rockwell Park (20270801)	6/4, 6/11, 6/18	Inact
#1986	85 Buckley Ave	Construct Garage Addition (20270711)	6/3, 6/10, 6/17	Inact
#1988	Lot# 7-1 Terryville Road	Commercial Building (20270801)	6/4, 6/11, 6/18	Inact
#1989	177 Corbin Ridge	Retaining Wall, Above Ground Pool, And Deck (20270711)	6/4, 6/11, 6/18	Inact
#1990	29 Woodside Way	Inground Pool (20270711)	6/3, 6/10, 6/17	Inact
#1991	62 Litchfield Lane	Inground Pool (20270711)	6/3, 6/10, 6/17	Inact
#1993	21 Royal Drive	Grading and Drainage in Rear Yard (20270801)	6/3, 6/10, 6/17	Inact
#1998	76 Mountain View Ave	Inground Pool (20270912)	6/3, 6/10, 6/17	Inact
#2000	Shrub Rd/ Jerome Ave	Sidewalk Improvement, and pedestrian Bridge (20280109)	6/3, 6/10, 6/17	Inact
#2002	1261 & 1265 Farmington Ave	Construct Medical Office, Restaurant, and Car Wash (20280109)	6/3, 6/10, 6/17	Act
#2003	50 Terryville Rd	Pond Maintenance (20280109)	6/3, 6/10, 6/17	Inact

No.	Location	Description	Inspection Dates	Status
#2004	Mellen Street Bridge	Bridge replacement (20280206)	6/3, 6/10, 6/17	Complete
#2005	71 Minnesota Lane	Construct a 20x30 Garage (20280306)	6/3, 6/10, 6/17	Inact
#2007	109 Moody Street	Construction Of A Plate Arch Spanning The Watercourse (20280501)	6/3, 6/10, 6/17	Inact
#2008	205 Pennwood Place	Install 20x40 Inground Pool (20280501)	6/3, 6/10, 6/17	Inact
#2010	Clark Ave Lot 271-1A	Mixed use development (20280710)	6/4, 6/11, 6/18	Inact
#2012	812 Redstone Hill Road	New In-Ground Pool (20280710)	6/3, 6/10, 6/17	Inact
#2013	54 Merrill Court	Repair of Septic System (20280710)	6/4, 6/11, 6/18	Inact
#2015	Page Park	Park Renovations and Improvements (20281205)	6/3, 6/10, 6/17	Act
#2016	Downs Street Bridge	Replacement of Bridge (20281205)	6/3, 6/10, 6/17	Inact
#2018	East Street Bridge	Replacement of Bridge	6/3, 6/10, 6/17	Inact
#2033	1001 Stafford Ave	Top Soil And Seed Existing Field	6/3, 6/10, 6/17	Inact
#2020	Maltby Street	Restoration of Whitebridge Waterworks Facility (10/7/2029)	6/3, 6/10, 6/17	Inact
#2022	120 Perkins Street	Piping of Existing Channel (10/7/2029)	6/3, 6/10, 6/17	Inact
#2027	300 Broad Street	Restoration of Rip Rap Along Channel Bed (10/7/2029)	6/3, 6/10, 6/17	Inact
#2029	315-350 Divinity Street	Replacement of Culvert (10/7/2029)	6/4, 6/11, 6/18	Inact
#2032	Minor Street at Hill	Reconstruction of Minor Street (10/7/2029)	6/3, 6/10, 6/17	Inact
#2036	236 Robertson Street	Construction of Garage (10/7/2029)	6/4, 6/11, 6/18	Inact
#2037	Old Wolcott Road	Construct single family home (10/7/2029)	6/4, 6/11, 6/18	Act
#2038	632 Village Street	Pool (10/7/2029)	6/3, 6/10, 6/17	Inact
#2039	36 Anthony Drive	Remove Deck / New Addition (10/7/2029)	6/3, 6/10, 6/17	Inact
#2040	37 Main Street	Construct Commercial Development (10/7/2029)	6/3, 6/10, 6/17	Inact
#1948	225/247 Park Street	Install pavilion, sidewalks, retaining walls, watercourse stabile (20261006)	6/4, 6/11, 6/18	Act
#2042	Memorial Blvd	Construct 5 Ft ADA Sidewalks	6/3, 6/10, 6/17	Inact
#1947	165 Warner Street	Construct single family home (20211006)	6/3, 6/10, 6/17	Act
#2043	Rockwell Park	Construct 5 Ft ADA Sidewalks	6/4, 6/11, 6/18	Inact

No.	Location	Description	Inspection Dates	Status
#2044	Davis Drive	Rehab of Road, Sidewalks, and Buildings	6/3, 6/10, 6/17	Inact
#2051	714 Stevens Street	Demo Existing Structure and remove trees (8/25/2030)	6/3, 6/10, 6/17	Inact
#2049	225 East Main	Demo Existing Structure and remove trees (8/25/2030)	6/3, 6/10, 6/17	Act
#2052	Lots 10 & 11 Business Park Dr	Construct Industrial Building And Parking (8/25/2030)	6/3, 6/10, 6/17	Inact
#2053	275 Silo Road	Construct New House (8/25/2030)	6/3, 6/10, 6/17	Inact
#2058	396 Jerome Ave	Demolish Existing Structure (10/06/2030)	6/3, 6/10, 6/17	Complete
#2059	East Main Street	Install New Drainage (11/03/2030)	6/3, 6/10, 6/17	Inact
#2061	1001 Stafford Ave	Demolish Existing Structure (10/06/2030)	6/3, 6/10, 6/17	Inact
#2062	300 Broad Street	Parking lot (12/1/2030)	6/3, 6/10, 6/17	Inact

SPECIAL INSPECTION:

443 Brook Street - 20260515 - During an inspection of the brook behind 443 Brook Street it was discovered that a tree had fallen across the brook, and was a risk to block the flow of the brook. - **Notice. 20260520** - The property owner contacted the EPT and said that they are in the process of hiring a contractor to remove the tree. **20260609**- Tree was removed from the brook. **Complete.**

C. O. INSPECTIONS:

25 Julia Road

38 Cawley Street

1970 Perkins Street

NOTICE AND NOTICE OF VIOLATION LETTERS:



DATE: June 30, 2026

TO: David Rooks, Chairman
Inland Wetland Commissioners

CC: Zachary Norton, Inland Wetlands Enforcement Officer
William Stango, City Engineer
Josh Medeiros, Superintendent of Parks, Recreation, Youth and Community Services

FROM: Sarah Larson, Deputy Superintendent of Parks, Recreation, Youth and Community Services

RE: IWW Complaint – Page Park Disc Golf, 641 & 649 King Street; Assessor's Map 37, Lots 134 & 135

Please accept this memo and the attached photos as documentation of the work completed by Bristol Parks, Recreation, Youth and Community Services (BPRYCS) to restore the stream bank adjacent to Page Park Disc Golf Course Hole #16 that was modified by a community member.

At the May 4, 2026 meeting of the Inland Wetland and Watercourse Agency, the commission requested BPRYCS install a sign at the Page Park Disc Golf Course advising the public not to modify the disc golf course. On June 2, 2026, BPRYCS staff installed the attached sign at the course's main informational board adjacent to the tee pad for Hole 1.

Additionally, the commission requested the department replace the log adjacent to the basket for Hole 16 with a pedestrian bridge. The log is currently being used as a bridge over the stream. BPRYCS staff discussed the request with City Engineer William Stango. Stango indicated that the department will need to hire an engineer to determine the stream's base flood level so that the pedestrian bridge can be designed to meet the City of Bristol's regulations. BPRYCS is working with Jon Tunsky, Project Manager with Weston & Sampson for the Page Park Revitalization project, to determine the feasibility of a pedestrian bridge based on the base flood elevation. If a pedestrian bridge is not feasible, low impact solutions will be explored. The log remains in place while the base flood elevation is determined in order to minimize the impact to the wetland by people walking the course. BPRYCS will provide the commission with another update at the August Inland Wetland and Watercourse Agency meeting regarding the stream's base flood elevation.

Additionally, enclosed with this memo is the requested map of the location of the disc golf holes at Page Park as they relate to the wetlands.

Enclosure: Photos of signage; Page Park Disc Golf Course Map



Figure 1. Signage installed on Page Park Disc Golf Informational Board



Figure 2. Signage installed on Page Park Disc Golf Informational Board



Bristol
CONNECTICUT
PARKS, RECREATION, YOUTH AND COMMUNITY SERVICES

IN ORDER TO PROTECT THE WATERSHED AT PAGE PARK,

**PLEASE DO NOT
MODIFY THE DISC
GOLF COURSE.**

PARA PROTEGER LA CUENCA EN PAGE PARK,

**POR FAVOR NO
MODIFIQUE EL
CAMPO DE DISC GOLF.**

To report an issue,
please scan the QR code.

Para reportar un problema,
por favor escanee el código QR.



Bristol Parks, Recreation, Youth and Community Services
51 High Street, Bristol, CT 06010 | 860-584-6160 | BristolRec.com

Figure 3. Signage graphic



DATE: April 30, 2026

TO: Zachary Fisk, Chairman
Inland Wetland Commissioners

CC: Zachary Norton, Inland Wetlands Enforcement Officer
William Stango, City Engineer
Josh Medeiros, Superintendent of Parks, Recreation, Youth and Community Services

FROM: Sarah Larson, Deputy Superintendent of Parks, Recreation, Youth and Community Services (S)

RE: IWW Complaint – Page Park Disc Golf, 641 & 649 King Street; Assessor's Map 37, Lots 134 & 135

Please accept this memo and the attached photos as documentation of the work completed by Bristol Parks, Recreation, Youth and Community Services undertook to restore the stream bank adjacent to Page Park Disc Golf Course Hole #16 that was modified by a community member.

On March 17, 2026, the City of Bristol received an Inland Wetland and Watercourse Complaint (see attached) from the Land and Water Resources Division of DEEP regarding an unauthorized modification to the wetland at Page Park along Disc Golf Hole #16. Parks, Recreation, Youth and Community Services (BPRYCS) staff, in conjunction with City Engineer William Stango, conducted a site visit on March 31, 2026 to assess the site and develop a remediation plan. Staff determined that an unauthorized community member applied a skim coat of cement adjacent to the Hole #16 basket impacting approximately 3yd³ of the stream bank.

As recommended by the City Engineer, BPRYCS staff manually removed the cement onsite to return the stream bank to its prior condition. In accordance with best practices and temporary water handling measures, BPRYCS installed straw wattles along the stream during the restoration process in order to mitigate impacts to the water course. Remediation work was started on April 18, 2026 and was completed on April 25, 2026.

Additionally, enclosed with this memo the requested map of the location of the disc golf holes at Page Park as they relate to the wetlands.

Enclosure: Photos of stream bank remediation; Page Park Disc Golf Course Map



Figure 1. Installation of watercourse protection measures.



Figure 2. Installation of watercourse protection measures.



Figure 3. Removed cement from the streambank.



Figure 4. Restored streambank.

