### Town of Kittery Planning Board Meeting September 26, 2019

#### ITEM 2 – 76 Dennett Road – Site Preliminary Plan Review

Action: Approve with or without conditions, continue consideration of or deny plan. Owners William J. Cullen and Sail Away, LLC and applicant William Wharff request consideration of a mixed-use residential development on 23.3+- acres of land at 76 Dennett Road (Tax Map 6 Lots 15B & 16A and Tax Map 13, Lot 4) in the Mixed Use - Neighborhood (MU-N) Zone. Agent is Shawn Tobey, P.E. Hoyle, Tanner & Associates, Inc.

#### PROJECT TRACKING

REQ'D	ACTION	COMMENTS	STATUS
YES	Sketch Plan Acceptance/Approval	5/9/2019 Meeting	APPROVED
YES	Site Visit	7/23/2019	HELD
YES	Preliminary Plan Review Completeness/Acceptance	Scheduled for 7/11/2019 Meeting	ACCEPTED
YES	Public Hearing	Scheduled for 8/8/2019 Meeting	HELD
YES	Preliminary Plan Approval	Possible for 9/26/2019 Meeting	
YES	Final Plan Review and Decision		

Applicant: Prior to the signing of the approved Plan any Conditions of Approval related to the Findings of Fact along with waivers and variances (by the BOA) must be placed on the Final Plan and, when applicable, recorded at the York County Registry of Deeds. PLACE THE MAP AND LOT NUMBER IN 1/4" HIGH LETTERS AT LOWER RIGHT BORDER OF ALL PLAN SHEETS. As per Section 16.4.4.L - Grading/Construction Final Plan Required. - Grading or construction of roads, grading of land or lots, or construction of buildings is prohibited until the original copy of the approved final plan endorsed has been duly recorded in the York County registry of deeds when applicable.

#### **Background**

The site consists of three (3) parcels totaling 23.3 +- acres which will be merged for the proposed development. The development proposes one four-story mixed-use residential building with 3,000 sf of mercantile space along Dennett Road, two four-story residential buildings at the rear of the site, a 5,250 sf amenity building, and five covered parking structures in various locations in the parking lot.

The residential buildings will have a mix of studio, one-bedroom and two-bedroom units totaling 303 dwelling units. The design includes the construction of a private roadway, parking lots totaling 401 spaces, landscaping, sidewalks, a pool and outdoor amenity space, a nature trail, supporting utilities and drainage infrastructure.

At the July 11<sup>th</sup> meeting, the Board accepted as complete the site preliminary plan and scheduled a site walk for July 23<sup>rd</sup>. The site walk was conducted and the minutes were approved by the Board. At the August 8<sup>th</sup> meeting, the Board held a public hearing on the site preliminary plan and then voted to continue consideration of the plan for a period not too exceed 90 days.

#### **Staff Review**

#### Mixed-Use Requirements

Page 2 of 6

1. All of the proposed uses are permitted in the newly created MU-N Zone. The residential units comply with the minimum land area per dwelling unit – mixed-use building and multiunit residential requirements.

#### Net Residential Acreage / Density

The MU-N Zone is exempt from Title 16.7.8.2 Net Residential Acreage Calculation but is subject to the minimum land area per dwelling unit as defined in Chapter 2 Definitions except that 50% of all wetlands may be subtracted, rather than 100%. As shown on sheet C5 Overall Site Plan, the proposed development meets the land area per dwelling unit calculations of the MU-N Zone.

#### **Parking Requirements**

2. Per Section 16.3.2.10.F. (4) (d) [1] and [2], Parking for development that includes trails and low intensity recreation: Development that includes the creation of public trails and low intensity recreational opportunities such as wildlife observation stations or boardwalks may apply the pertinent off-street parking standards below. All other off-street parking standards as found in § 16.8.9.4 shall apply.

Multiunit residential buildings and mixed-use buildings that include residential.

- One parking space for studio and one-bedroom dwelling units.
- One and one-half parking spaces for two-bedroom dwelling units plus one guest parking space per every four dwelling units.
- Parking spaces for more-than-two-bedroom dwelling units.
- 3. Parking calculations are listed on sheet C5 of the preliminary plans. The development will provide a total of 401 spaces:
  - a. Front Building = 114 spaces
  - b. Rear Buildings = 287 spaces

The provided parking meets and exceeds the Ordinance requirements.

#### Landscaping, Screening and Buffers

4. The landscaping, screening and buffering details are provided on sheets C17 and C18. Per 16.3.2.10.F (9) (a) a landscape plan prepared by a registered landscape architect is a submission requirement. However, a landscape plan done by other design professionals may be allowed at the Planning Board's discretion. The proposed development will be generously landscaped and appears to meet the requirements of the MU-N zone. CMA Engineers in their initial review of the preliminary plans noted that the ordinance requires that a minimum of 10% of surface parking areas be landscaped with trees and vegetated islands. CMA questioned whether this standard was being met. In reviewing the landscaping plans, the parking lot bump-outs do include one tree and grass plantings. The applicant has indicated that shrubbery was avoided in these areas because of salting and sanding of the parking areas that could damage the plantings. Figures need to be provided for these landscaped areas to determine whether they comply with the 10% requirement and revisions made to the plans if the standard is not met. According to the landscape calculations shown on Sheets C17 & 18 they are providing over triple the number of trees per parking spaces under the Ordinance requirement. The applicant has satisfactorily addressed this requirement by updating the landscaping plans to include calculations that show compliance with 10% requirement. An additional landscaped

island with a tree and vegetation has been added in front of Building 1. Update: A recommended condition of approval that the Town engage a third party review by a registered landscape architect of the proposed landscaping plan is included.

#### Wetlands / Open Space

5. The existing property contains wetlands and a vernal pool. Per the regulations for the MU-N zone, the wetlands and vernal pool were reviewed by Longview Partners, LLC as a third-party reviewer in April 2019. The review found the wetlands delineation to be accurate and within the normal range of best professional judgement and consistent with wetlands delineation standards.

Staff researched the question regarding previously approved wetlands impacts. On February 14, 2002, the Planning Board approved the site plan for a Professional and Business Park proposed by William Cullen which permitted approximately 1600 sf of total wetlands fill, primarily for a road crossing of wetlands. A permit will be required for a modification to the previously approved wetlands crossing and for disturbance to the vernal pool buffer (250'). There will be no disturbance within the vernal pool buffer (100') or the wetlands. The wetlands, vernal pool and property lines shown on the preliminary plan are based on actual survey data. Sheet C5 Overall Site Plan contains Vernal Pool Buffer Calculations, which includes 24,535 sf of buffer restoration. The applicant has submitted a Site Location of Development Act permit application with Maine DEP for the project. The culvert upsizing under the development road and the wetlands buffer impacts will be reviewed under this permit and the State's Permit by Rule (PBR) regulations. A note has been added to the landscape plans stating "The vernal pool buffer restoration areas shall be monitored for one (1) full year to ensure vegetation is established". The vernal pool label has been changed to read "Significant Vernal Pool" with added Maine DEP vernal pool ID number. Update: The State permit application was accepted as complete on August 28th and is currently under review by the State. The applicant is awaiting comments. The additional vernal pool protection concerns are addressed in the Project Design Update provided by HTA, dated September 19, 2019.

6. Open space meeting the requirements of the zone will be provided (73.5% of the parcel) which will include a nature loop trail with wildlife viewing stations for passive recreation for the development. An Amenities building (Building 4) and an outdoor pool are also proposed to provide recreational use for the residents of the property. Notes have been added to the Overall Site Plan, Sheet C5 designating the areas of open space. A dashed line has been added to the plans to graphically delineate the horizontal limits of the Open Space, Reserved.

#### Utilities / Site Improvements

7. The plans show detailed information regarding utilities that will service the site development. Water, gas, electrical and telecommunication lines will be extended from Ranger Drive along Dennett Road to serve the site. They will be constructed underground underneath the proposed private roadway. Existing sewer is located at the rear of the property and will be extended onto and throughout the site underneath the roadway.

The applicant's engineer has met with the Kittery Water District and the Kittery Sewer Department and letters are provided to confirm they both have adequate capacity for the proposed development.

Proposed Fire Department connections are shown and noted on the plans. The Fire Chief has reviewed the plans for fire service during staff technical review and provided his comments in a memorandum dated July 3, 2019 which was provided to the Board at the July 11<sup>th</sup> meeting. The

Page 4 of 6

applicant has revised the plans to address the Fire Chief's comments in his memorandum dated September 3, 2019.

#### Stormwater Management

8. Under Section 16.10.5.2.C, supporting documentation must include a stormwater management plan. The applicant has submitted a Drainage Narrative to comply with Maine Department of Environmental Protection (MEDEP) Stormwater Site Location of Development Law.

According to the narrative, "The drainage design utilizes the existing hydrologic and hydraulic patterns, minimizes impacts to surrounding areas, and uses Maine's Best Management Practices (BMPs) to provide effective pollutant removal, stormwater cooling, channel protection, and flood control for pre-development and post-development peak runoff rates for the proposed site development."

A copy of the narrative has been forwarded to CMA Engineers for their review and comment. The narrative and grading and drainage plans are also being reviewed by the Town's Stormwater Coordinator in coordination with DPW.

Jessa Kellogg, Shoreland Resource Officer/Stormwater Coordinator has provided a memorandum (attached) with her and Public Works Commissioner David Rich's initial comments regarding the stormwater management plans. In the memo, they have also provided comments relative to the proposed sidewalk along Dennett Road. The Response to Review Comments letter from Hoyle, Tanner & Associates is included in the August 8<sup>th</sup> meeting packets. The Stormwater Inspection and Maintenance Plan has been revised to include annual reporting to the Town of Kittery.

#### Roadway - Update

9. CMA Engineers has submitted a review letter (attached) which notes they did not highlight the following provision of Chapter 16.8 of the LUDC (16.8.4.2 paragraph C.) which states "Any development expected to generate average daily traffic of 201 or more trips per day is to have at least two street connections with existing public street(s)". The applicant has submitted a redesigned roadway entrance in a fashion that the Board felt would satisfy this requirement. This redesign, however, does not comply with Section 16.8.4.2, paragraph F "entrances onto existing or proposed arterial highway/secondary arterials may not exceed a frequency of one per 1,000 feet of street frontage. A waiver request from this provision has been submitted for the Board's consideration and action.

In addition, proposed development roadway, which would be classified as a Primary Collector based upon the Average Daily Traffic (ADT) under the Section 16.8.4.3 paragraph B. of the LUDC. CMA Engineers provided a comparison chart of the street standards for Primary Collector and the proposed on-site roadway. CMA has stated that the gravel and pavement sections could be increased to meet the standards Primary Collector. In their opinion, the other dimensional parameters are appropriate for the project. The applicant has revised the roadway design to comply with the gravel and pavement sections.

#### **Building Design Standards**

10. The Code requires that new buildings must meet the general design principals set forth in the Design Handbook except as noted below. In general, buildings should be oriented to the street from which

Page 5 of 6

they derive frontage, with the front of the building facing the street. The front facade must contain the following:

- [1] A front door for pedestrian access.
- [2] Windows.
- (b) Flat roofs, proposed to locate heating, cooling, or other such mechanical or electrical apparatus off the ground, are acceptable provided that such apparatus are screened from view and the screening is designed as an integral part of the building to aid both aesthetics and noise attenuation. Flat roofs proposed for the purpose of solar array installations are also acceptable

Staff has reviewed the Design Handbook for the applicable guidelines to the proposed development with the notion that in the introduction to the Handbook it states that "where the operative word "must" is used, the provisions of the Handbook are mandatory and based upon requirements of the LUDC". Staff has provided the Board with copies of the applicable "must" provisions which have been highlighted for your consideration.

#### Other Reviews

- 11. The Board will find included in the packets for this item a letter from CMA Engineers with their initial review comments on the preliminary plans for conformance with Title 16 and general engineering practices. The Response to Review Comments letter from Hoyle, Tanner & Associates and CMA Engineer's 2<sup>nd</sup> round of review comments were included in the August 8<sup>th</sup> meeting packets.
- 12. Jessa Kellogg, Interim Code Enforcement Officer, has also provided a memorandum regarding her initial building code review conceptual floor plans that have been submitted. The Response to Review Comments letter from Hoyle, Tanner & Associates were included in the August 8<sup>th</sup> meeting packets. All of the studio units have been revised to be a minimum of 650 sf to meet the LUDC. The Conceptual Floor Plans have been revised to indicate that the studio apartments will contain a minimum of 650 sf of habitable space. A legend has been added to the architectural plans and the building elevations revised to show building heights and materials.
- 13. A Maine DOT Traffic Movement Permit (TMP) is required and has been applied for. After an initial review by Maine DOT, the trip generation rates needed to be revised and a new Traffic Movement Permit Application has been submitted to DOT. A copy of the application has also been provided to CMA Engineers and DPW Commissioner Dave Rich for review and comment. Copies of the application were included in the August 8<sup>th</sup> meeting packets. Maine DOT has accepted the TMP application and held a traffic scoping meeting on September 11, 2019. Update: Attached is a memorandum from the applicant's traffic engineer outlining the action items that the applicant will performing as part of the TMP review for the issuance of the TMP.

#### **Recommendation / Action**

Staff feels that Site Preliminary Plan can be approved by the Board with the following action:

Move to approve the waiver requested from Article IV. Streets and Pedestrian Ways/Sidewalks Site Design Standards, 16.8.4.2 paragraph F., which states "F. Entrances onto existing or proposed aterial highways/secondary arterials may not exceed a frequency of one per 1,000 feet of street frontage.

Move to approve the site preliminary plan, dated June 20, 2019, as revised on September 19, 2019 and prepared by Hoyle, Tanner & Associates, Inc., for owners William J. Cullen and Sail Away, LLC and applicant William Wharff for a mixed-use residential development on 23.3+- acres of land at 76

Page 6 of 6

Dennett Road (Tax Map 6 Lots 15B & 16A and Tax Map 13, Lot 4) in the Mixed Use - Neighborhood (MU-N) Zone with the following conditions:

- 1. Receipt of a Maine DOT Traffic Movement Permit;
- 2. Completion of a third party review by a registered landscape architect engaged by the Town of the proposed landscaping plans;
- 3. Provide details of the proposed sidewalk or alternatives for the full length of the property for Final Plan review; and,
- 4. Address to the satisfaction of CMA Engineers any outstanding plan review comments.

September 19, 2019

Jamie Steffen Town Planner Town of Kittery 200 Rogers Road Kittery, Maine 03904 Hoyle, Tanner Associates, Inc.

> Pease International Tradeport 100 International Drive, Suite 360 Portsmouth, New Hampshire 03801 603-431-2520 603-431-8067 fax www.hoyletanner.com

Re: Project Design Update

Proposed Mixed-Use Development at 76 Dennett Road

Lots 6-15B, 6-16A, 13-4, Kittery, Maine

Dear Mr. Steffen,

Hoyle, Tanner and Associates (Hoyle, Tanner) is pleased to submit revised site plans for the above-referenced project. Planning board comments from the September 12, 2019 meeting been incorporated into the project. The following brief narrative serves as an update for progress that has been made for the proposed 76 Dennett Road Mixed-Use Development project.

The Maine Department of Environmental Protection (DEP) Site Location of Development Application (SLODA) was filed on August 7, 2019 and we received formal notice that the application was accepted as complete on August 28, 2019. The application is currently under review and we are awaiting comments.

Hoyle, Tanner, Town Staff and CMA Engineers met with the Maine Department of Transportation (MDOT) and Maine Turnpike Authority for a scoping meeting on September 11<sup>th</sup>, 2019 as part of the Traffic Movement Permit (TMP) application. Comments from the meeting are currently being addressed and the traffic study will be completed when the scoping limits are finalized.

Since the Scoping Meeting and last Planning Board Meeting, Hoyle, Tanner analyzed the feasibility of a proposed sidewalk along Dennett Road and strongly feel due to safety concerns (midblock crossing and on/off ramp crossings) and lack of connection options this is not a viable option. As an alternative, the extensive internal network of nearly 4,900 linear feet of proposed sidewalk will be extended to the property line for a possible future connection to the adjacent property. This possible connection will provide a safe interconnection between properties within the Mixed Use – Neighborhood Zone.

Additional comments and changes have been made to the project documents. Listed below is a summary of all the changes made to the project for this submission:

#### Site Plans:

- The plans were revised to provide two street connections separated by a 10-foot-wide, 50-foot-long island with mountable sloped granite curbing. See waiver request form and memo for additional information.
- A detail for the curbed island was added to the detail sheets.
- A right hand turn lane into the property was added to Dennett Road.
- The pavement thickness for the site access drive was increased to 3.5" to match design standards for a Primary Collector.
- The internal sidewalk network was extended to the property line for a potential future connection near Building 2A and the nature trail.
- An additional crosswalk and tip-down ramp was added to accommodate the sidewalk extension.
- The water main through the site was increased to a 12" pipe.
- Note #7 on the Landscape Plans was revised to guarantee all plant materials for two (2) full years per design standards



- Note #12 on the Landscape Plans was revised to provide two (2) years of vernal pool buffer establishment monitoring.
- Note #13 was added to the Landscape Plans: "During the required annual site inspections, the vernal pool buffer shall be inspected for any areas of disturbances and or deficiencies. Corrective actions shall be taken to restore the areas to the approved post-construction conditions."
- Vernal pool buffer sign/marker locations were added to the site plans. The signs/markers shall read "Vernal Pool Buffer, No Disturbance"

We trust that the revisions and responses have thoroughly addressed all comments and concerns. Please do not hesitate to contact our office with any additional questions or comments regarding this project.

Sincerely,

HOYLE, TANNER & ASSOCIATES, INC.

Shawn M. Tobey, P.E.

**Project Manager** 



From: Sparkowich, Jacob F.

To: Illian, Randy

Cc: rnorwood@maineturnpike.com; pcorbett@cmaengineers.com; Adam Causey; Haas, Stephen B.; Tobey, Shawn

M.; wjwharff@gmail.com; Robert Richter; Jessa Kellogg; David Rich; Jamie Steffen

Subject: 76 Dennett Road - Scoping Meeting Action Items

Date: Monday, September 16, 2019 4:53:05 PM

Hello Randy,

Apologies for the delay in getting these out. Below are the action items for Hoyle, Tanner resulting from last week's Scoping Meeting regarding the mixed use development at 76 Dennett Road.

#### <u>Step 1 – Revise TMP Application based on Scoping Meeting Discussion</u>

- Prepare justification for using ITE 10<sup>th</sup> for commercial land use types, when the commercial tenants are unknown
- Prepare a few different scenarios of commercial build-out to show the potential range in traffic generated
- Revisit trip assignments
  - o Update if trip generation is revised, based on potential commercial uses
  - o Re-evaluate number of trips west of the site driveway (toward Eliot)
    - Consider cut-through traffic on Dennett Ext / Martin Rd to reach ME 236.
  - o Consider cut-through traffic on Ranger / Valles to reach US 1 Bypass NB
- Propose updated study area to MaineDOT and Town based on traffic thresholds and identified concerns

#### <u>Step 2 – Prepare Traffic Study</u>

- Once MaineDOT and Town agree to revised study area scope, prepare Study (TMP Section 7) that includes
  - o Review of left turn lane warrant at I-95 SB on ramp, and both left/right turn lane warrants at site driveway
  - o Comment on capacity of Dennett Road before & after development and potential for traffic to bypass
    - Specifically in regards to congestion that would lead to Dennett Road traffic seeking alternate routes (Abutter concern)
  - o Comment on sidewalk connectivity issues and practicability
    - Continue to discuss with Town potential sidewalk alternatives
  - o Comment on potential future Exit 1 ramp closures for I-95 shoulder travel
  - o Interpolation of traffic volumes for intersections beyond original study area (due to inability to acquire additional representative traffic counts resulting from current Exit 1 ramp closures)

In addition to these steps, Hoyle, Tanner is to provide MaineDOT and Turnpike Authority with a 50-year stormwater analysis.

Please let me know if any corrections to these action items need to be made. Thank you,

Jacob Sparkowich, PE Transportation Engineer Licensed in NH



150 Dow Street | Manchester, NH 03101 (603) 669-5555, ext 138 | Fax: (603) 669-4168



### **TOWN OF KITTERY ~ MAINE**

**PLANNING OFFICE** 

200 Rogers Road, Kittery, Maine 03904 PHONE: (207) 475-1323 Fax: (207) 439-6806 www.kittery.org

#### **APPLICATION: REQUEST FOR WAIVER**

THIS	REVIEW PRO	CESS REG	QUIRES	APPRC	VALF	ROM BOT	H THE TOWN	PLANNER AND THI	E CODE ENFORCE	MENT OFFICER	
	PERTY	Parcel ID	Мар	6 6 13	Lot	15B 16A 4	Zone Base Overlay	MU-N	Total Land Area	23.34 Acres	
DESC	CRIPTION	Physical Address	76 Dei	76 Dennett Road, Kittery, ME 03904							
		Name	Willian	n J Culle	n						
	PERTY	Phone	(207) 2	52-1437			Mailing	12 Roseberry Lane			
	NER'S DRMATION	Fax					Address	Kittery, ME 03904			
		Email	wmjcu	llen@gm	ail.com						
		Name	Shawn	Tobey, I	P.E.		Name of Business	Hoyle, Tanner & Assoc	ciates, Inc.		
APPI	LICANT'S	Phone	(603) 4	31-2520	, ext 29			December of the stand Tr	a da na et		
	RMATION	Fax					Mailing Address	Pease International Tra 100 International Drive Portsmouth, NH 03801	, Suite 360		
		Email	stobey	@hoyleta	ınner.co	m		T Orismouth, NIT 03001			
	Ordinance S	Section	Descr	ibe wh	y this	request is	being made.				
	***EXAMPLE** 16.32.560 (B)- C PARKING.		Request	<i>MPLE***</i> ting a wai property t			ince the proposed	professional offices have a	written agreement with	the abutting Church	
DESCRIPTION	16.8.4.2 Paraç 1,000' Entrand		See	attache	d memo						
DESCR											
	tify that, to th		-	_				application is true an	d correct and will n	ot deviate from	
Appl	licant's ature:	9/19/2019	2				Owner's Signature: Date:	Jun Hu	9/19/2019		

September 19, 2019

Jamie Steffen Town Planner Town of Kittery 200 Rogers Road Kittery, Maine 03904 Hoyle, Tanner Associates, Inc.

> Pease International Tradeport 100 International Drive, Suite 360 Portsmouth, New Hampshire 03801 603-431-2520 603-431-8067 fax www.hovletanner.com

Re: Revised Waiver Request

Proposed Mixed-Use Development at 76 Dennett Road

Lots 6-15B, 6-16A, 13-4, Kittery, Maine

Dear Mr. Steffen,

On behalf of Aztec, LLC, Hoyle, Tanner and Associates is formally submitting this written waiver request from the provision of Chapter 16.8 of the LUDC (Kittery Land Use and Development Code): Article IV. Streets and Pedestrian Ways/Sidewalks Site Design Standards, 16.8.4.2. paragraph F., which states "Entrances onto existing or proposed arterial highways/secondary arterials may not exceed a frequency of one per one thousand (1,000) feet of street frontage."

Chapter 16.7 of the LUDC: Article IV. Waivers, 16.7.4.1 Waiver Authorization states "Where the Planning Board finds, due to special circumstances of a particular plan, certain required improvements do not promote the interest of public health, safety and general welfare, or are inappropriate because of inadequacy or lack of connecting facilities or in proximity to the proposed development, upon written request, it may waive or modify such requirements, subject to appropriate conditions as determined by the Planning Board."

Per LUDC standards, the proposed project requires two street connections to Dennett Road. The LUDC standards also require that proposed entrances onto Dennett Road must be spaced 1,000 feet apart, which is not feasible for this property based on the 641.6 feet of frontage and the limited controlled access per Maine DOT. The issue was discussed at the September 12<sup>th</sup> planning board and it was determined that the best way to proceed is to provide two street connections and request a waiver for the 1,000 feet of separation.

Hoyle, Tanner has redesigned the entrance to provide two street connections separated by a 10-foot-wide 50-foot-long island with mountable sloped granite curbing. The center of the island will be grass and mowed regularly. The first street connection will be a 16 feet wide designated entry only into the site and will feature a right hand turn pocket off Dennett Road. The second street connection will be a 14-foot-wide designated exit only. Both street connections have been designed to accommodate the turning movements of a WB-40 interstate semi-trailer. The proposed divider island is consistent with Maine DOT guidelines for a project of this size.

We trust this letter has thoroughly addressed all requirements for a waiver as detailed in the LUDC Chapter 16.7. Please do not hesitate to contact our office with any questions or comments regarding this project.

Sincerely,

HOYLE, TANNER & ASSOCIATES, INC.

Shawn M. Tobey, P.E.

Shum Tabey

Project Manager



## SITE DEVELOPMENT PLANS

FOR A

# PROPOSED MIXED-USE RESIDENTIAL DEVELOPMENT PROJECT

76 DENNETT ROAD KITTERY, ME 03904

*APPLICANT* 

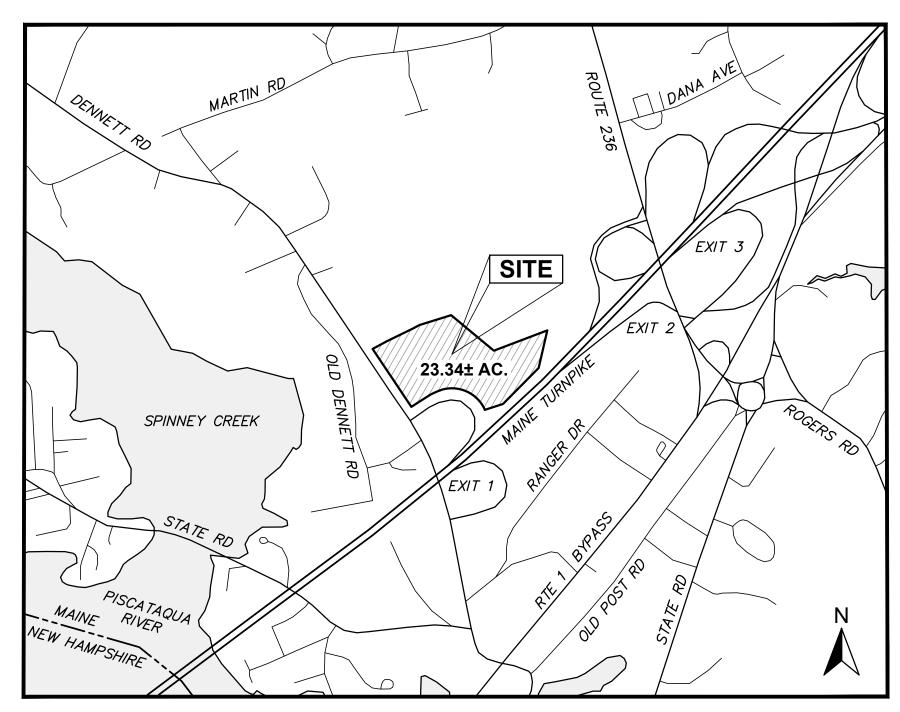
AZTEC, LLC 62 PORTLAND ROAD, SUITE 25 KENNEBUNK, ME 04043

LAST REVISED: SEPTEMBER 19, 2019

# **TOWN OF KITTERY, PLANNING BOARD** DATE

### LIST OF DRAWINGS

LIOI (	JF DRAY	VINGS
DWG#	SHEET#	DWG NAME
C1	1	TITLE SHEET
C2	2	NOTES, ABBREVIATIONS & LEGEND
C3	3	OVERALL EXISTING CONDITIONS PLAN
C4	4	HIGH INTENSITY SOIL MAP
C5	5	OVERALL SITE PLAN
C6	6	E. C. & HOUSEKEEPING PLAN - FRONT
C7	7	E. C. & HOUSEKEEPING PLAN - REAR
C8	8	SITE PLAN - FRONT
C9	9	SITE PLAN - REAR
C10	10	GRADING & DRAINAGE PLAN - FRONT
C11	11	GRADING & DRAINAGE PLAN - REAR
C12	12	ROADWAY PLAN & PROFILE
C13	13	UTILITY PLAN - FRONT
C14	14	UTILITY PLAN - REAR
C15	15	LIGHTING PLAN - FRONT
C16	16	LIGHTING PLAN - REAR
C17	17	LANDSCAPING PLAN - FRONT
C18	18	LANDSCAPING PLAN - REAR
C19	19	CONSTRUCTION DETAILS 1
C20	20	CONSTRUCTION DETAILS 2
C21	21	CONSTRUCTION DETAILS 3
C22	22	CONSTRUCTION DETAILS 4
C23	23	CONSTRUCTION DETAILS 5
C24	24	CONSTRUCTION DETAILS 6
C25	25	CONSTRUCTION DETAILS 7



**LOCUS MAP** 

1" = 1000'

ISSUED FOR PLANNING BOARD APPROVAL NOT FOR CONSTRUCTION

### **UTILITY CONTACTS:**

**WATER SERVICE:** 

KITTERY WATER DISTRICT 17 STATE ROAD

KITTERY, ME 03904 CONTACT: MICHAEL ROGERS (207) 439-1128

### FIRE DEPARTMENT:

KITTERY FIRE DEPARTMENT KITTERY SEWER DEPARTMENT 3 GORGES ROAD 18 DENNETT ROAD ROAD KITTERY, ME 03904 KITTERY, ME 03904 CONTACT: DAVID O'BRIEN CONTACT: TIM BABKIRK (207) 439-2262 (207) 439-4646

### **SEWER SERVICE:**

### STORMWATER / ROW:

KITTERY PUBLIC WORKS 200 ROGERS ROAD KITTERY, ME 03904 CONTACT: JESSA KELLOGG (207) 475-1321

### **ELECTRIC SERVICE:**

CENTRAL MAINE POWER COMPANY 83 EDISON DRIVE AUGUSTA, ME 04330 CONTACT: VAN HOBGOOD (800) 750-4000

**FAIRPOINT COMMUNICATIONS** 1575 GREENLAND ROAD GREENLAND, NH 03840 **CONTACT: JOE CONSIDINE** (603) 427-5525

**TELECOMMUNICATIONS:** 

(603) 926-6049

**OWNER:** 

SAIL AWAY, LLC

**APPLICANT:** 

13.29± ACRES

**76 DENNETT ROAD** 

KITTERY, ME 03904

12 ROSEBERRY LANE

**PROJECT TEAM:** 

PORTSMOUTH, NH 03801

ATTN: SHAWN TOBEY

LAWRENCE, MA 01843

ATTN: NICK GRIFFIN

(603) 431-2520

**ARCHITECT** 

(978) 989-9900

**SURVEYOR** 

206 ELM STREET

(603) 672-5456

MILFORD, NH 03055

VISUAL LIGHT, INC.

HAMPTON, NH 03842

ATTN: SCOTT DROUIN

ATTN: MICHAEL PLOOF

LIGHTING DESIGN

24 STICKNEY TERRACE, SUITE 6

**HOYLE, TANNER & ASSOCIATES** 

100 INTERNATIONAL DRIVE, SUITE 360

370 MERRIMACK STREET, SUITE 337

FIELDSTONE LAND CONSULTANTS, PLLC

**CIVIL ENGINEER** 

SAIL AWAY, LLC

PISCATAQUA REALTY, LLC

62 PORTLAND ROAD, SUITE 25

**PARCEL INFORMATION:** 

TAX MAP LOT 6-15B TAX MAP LOT 6-16A

4.99± ACRES

70 DENNETT ROAD

WILLIAM J CULLEN

12 ROSEBERRY LANE

KITTERY, ME 03904

PISCATAQUA REALTY, LLC

TRAFFIC

(603) 431-2520

5.06± ACRES

HOYLE, TANNER & ASSOCIATES

PORTSMOUTH, NH 03801

TRAFFIC COUNTS

FRAMINGHAM, MA 01702

**46 MORTON STREET** 

ATTN: SCOTT PETTY

(508) 875-0100

135 RIVER ROAD

(207) 837-2199

**JOSEPH NOEL** 

(207) 384-5587

P.O. BOX 174

WOOLWICH, ME 04579

**CONTACT: LISA VICKERS** 

SOUTH BERWICK, ME 03908

**CONTACT: JOSEPH NOEL** 

ATTN: JACOB SPARKOWICH

100 INTERNATIONAL DRIVE, SUITE 360

PRECISION DATA INDUSTRIES, LLC

WETLAND PERMITTING

ATLANTIC ENVIRONMENTAL, LLC

WETLANDS/SOIL MAPPING

DENNETT ROAD

WILLIAM J CULLEN

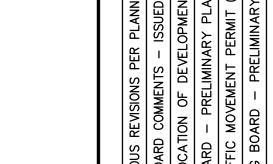
KITTERY, ME 03904

12 ROSEBERRY LANE

**UNITIL ME GAS OPERATIONS** PORTLAND, ME 04103 CONTACT: SCOTT CARPENTER (207) 541-2543

### **GAS SERVICE:**

376 RIVERSIDE INDUSTRIAL PARKWAY



Fanner lates, Inc.

(603) © Cop

TITLE SHEET

PROJECT NO. 569200 SHEET 1 OF 25

CONTACT DIG SAFE 72 HOURS PRIOR TO CONSTRUCTION DIGSAFE.COM **DIAL** 811

### **GENERAL NOTES:**

- 1. THE BOUNDARY, SURFACE FEATURES AND TOPOGRAPHY ARE THE RESULT OF AN ON THE GROUND SURVEY CONDUCTED DURING THE MONTH OF APRIL 2019 BY FIELDSTONE LAND CONSULTANTS, PLLC. SEE DWG C3 FOR ADDITIONAL EXISTING CONDITIONS INFORMATION REGARDING THE WETLANDS, VERNAL POOL AND STREAM.
- THIS PROJECT IS TO BE CONSTRUCTED TO THE TYPICAL SECTIONS AND DETAILS SHOWN ON THE PLANS, AND SHALL MEET THE STANDARDS OF THE TOWN OF KITTERY, MAINE DEP AND MAINE DOT.
- THIS PROJECT SHALL CONFORM TO ALL REQUIREMENTS SET FORTH IN THE MAINE DEP SITE LOCATION OF DEVELOPMENT LAW PERMIT.
- 4. ALL WORK WITHIN THE STATE RIGHT-OF-WAY SHALL CONFORM TO ALL REQUIREMENTS SET FORTH IN THE MAINE DOT TRAFFIC MOVEMENT PERMIT FOR THE PROJECT.
- THE UNDERGROUND UTILITIES SHOWN HAVE BEEN COMPILED IN PART FROM PLANS OF RECORD AND FIELD LOCATION. THE LOCATION OF UNDERGROUND UTILITIES SHOULD BE CONSIDERED APPROXIMATE.
- THE CONTRACTOR SHALL VERIFY AND DETERMINE THE LOCATION, SIZE, AND ELEVATION OF ALL EXISTING UTILITIES, SHOWN OR NOT SHOWN ON THESE PLANS PRIOR TO THE START OF ANY CONSTRUCTION. THE CONTRACTOR SHALL LOCATE THE UTILITIES SHOWN AND THE POSSIBLE EXISTENCE OF OTHER UNDERGROUND UTILITIES BY PROVIDING OBSERVATION TEST PITS. THE ENGINEER SHALL BE NOTIFIED IN WRITING OF ANY UTILITIES FOUND INTERFERING WITH THE PROPOSED CONSTRUCTION AND APPROPRIATE REMEDIAL ACTION SHALL BE AGREED TO BY THE ENGINEER BEFORE PROCEEDING WITH THE WORK. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONTACT "DIGSAFE" (DIAL 811) AND THE TOWN OF KITTERY AT LEAST 72 HOURS BEFORE DIGGING.
- WRITTEN DIMENSIONS HAVE PRECEDENCE OVER SCALED DIMENSIONS. THE CONTRACTOR SHALL USE CAUTION WHEN SCALING REPRODUCED PLANS. IN CASE OF CONFLICT BETWEEN THIS PLAN SET AND ANY OTHER DRAWING AND/OR SPECIFICATION, THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY FOR CLARIFICATIONS.
- WHEN PREPARING THE EXISTING SITE FOR THE PROPOSED DEVELOPMENT, ALL MATERIALS REMOVED SHALL BE DISPOSED OF IN ACCORDANCE WITH ALL GOVERNING AGENCIES.
- 9. THE CONTRACTOR SHALL PERFORM ALL THE CLEARING AND GRUBBING NECESSARY WITHIN THE CONSTRUCTION AREA, LIMITING THE AMOUNT OF CLEARING AND GRUBBING TO THE GREATEST EXTENT POSSIBLE.
- 10. CONTRACTOR SHALL MAKE EVERY ATTEMPT POSSIBLE TO SAVE EXISTING TREES AND MINIMIZE DAMAGE TO TREES ADJACENT TO CONSTRUCTION LIMITS DURING CONSTRUCTION.
- 11. DURING CONSTRUCTION THERE SHALL BE NO DISTURBANCES TO THE EXISTING WETLANDS, VERNAL POOL, CRITICAL TERRESTRIAL HABITAT OR THE 25' STREAM BUFFER EXCEPT FOR APPROVED PERMITTING DISTURBANCES OR AREAS OF HABITAT RESTORATION.
- 12. THE CONSTRACTOR SHALL PROTECT AND MAINTAIN EXISTING BENCHMARKS AND BOUNDS. ALL BENCHMARKS AND BOUNDS DISTURBED BY THE CONTRACTOR SHALL BE RE-ESTABLISHED BY A MAINE REGISTERED LAND SURVEYOR AT NO EXPENSE TO THE OWNER.
- 13. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE ANY EXCAVATION SAFEGUARDS, NECESSARY BARRICADES, POLICE DETAILS, ETC., FOR TRAFFIC CONTROL AND SITE SAFETY. ALL EXCAVATIONS SHALL BE THOROUGHLY SECURED ON A DAILY BASIS BY THE CONTRACTOR AT THE COMPLETION OF CONSTRUCTION OPERATIONS.
- 14. THE CONTRACTOR IS RESPONSIBLE FOR THE MEANS AND METHODS OF CONSTRUCTION AND FOR THE CONDITIONS OF THE SITE.
- 15. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE ALL WORK IS DONE IN ACCORDANCE WITH OSHA REQUIREMENTS.
- 16. ALL DEWATERING MUST BE EXECUTED IN ACCORDANCE WITH MAINE DOT STANDARD SPECIFICATIONS. REGULATIONS PROHIBIT DISCHARGING GROUNDWATER TO A SANITARY OR COMBINED SEWER WITHOUT PERMISSION.
- 17. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF ALL PRODUCTS (PIPE, CASTINGS, STRUCTURES, ETC.) TO THE INSPECTING ENGINEER FOR REVIEW AND APPROVAL PRIOR TO FABRICATION AND INSTALLATION.
- 18. THE CONTRACTOR IS RESPONSIBLE FOR ALL PERMITS, FEES, TEMPORARY UTILITIES AND COORDINATION WITH ALL AGENCIES IN OBTAINING ACCESS TO THE SITE AND PERFORMING ALL WORK REQUIRED FOR THIS PROJECT.
- 19. THE CONTRACTOR SHALL FILE AND OBTAIN A NPDES CONSTRUCTION GENERAL PERMIT PRIOR TO CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR THE PREPARATION OF THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) PRIOR TO CONSTRUCTION.
- 20. COORDINATE ALL WORK ADJACENT TO THE PROPOSED BUILDINGS WITH THE ARCHITECTURAL AND STRUCTURAL DRAWINGS.
- 21. ALL PAVEMENT MARKINGS AND SIGNS SHALL CONFORM TO THE LATEST EDITIONS OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), AMERICANS WITH DISABILITIES (ADA) ACT, AND STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKINGS.
- 22. ALL CURB SHALL BE VERTICAL GRANITE UNLESS OTHERWISE NOTED.
- 23. THE PROPOSED DRIVEWAY AND ACCESS ROAD TO THE REAR OF THE

SITE WILL BE A PRIVATE ROAD AND SHALL BE MAINTAINED BY THE

24. THERE SHALL BE NO ONSITE SALT STORAGE.

PROPERTY OWNER.

- 25. THE PROPOSED NATURE TRAIL SHALL BE FOR ONSITE RESIDENTS ONLY.
- 26. ALL PROPOSED SITE FEATURES SHALL BE LAID OUT IN THE FIELD USING SURVEY EQUIPMENT. AN AUTOCAD FILE OF THE EXISTING AND PROPOSED FEATURES WITH CONTROL POINTS WILL BE PROVIDED TO THE CONTRACTOR FOR CONSTRUCTION LAYOUT. THE LIMIT OF WORK SHALL BE CLEARLY MARKED IN THE FIELD BEFORE ANY WORK IS TO BEGIN ONSITE.
- 27. SYMBOLS AND LINETYPES MAY BE EXAGGERATED FOR CLARITY ON THESE DRAWINGS DUE TO THE SCALE. THE CONTRACTOR SHALL ADJUST ACCORDINGLY DURING CONSTRUCTION LAYOUT.

### **DRAINAGE NOTES:**

- THE STORM DRAINAGE SYSTEM SHALL BE CONSTRUCTED TO LINE AND GRADE AS SHOWN ON THE PLANS. ALL PIPE MATERIALS SHALL BE AS SPECIFIED ON THE PLANS. CONSTRUCTION METHODS SHALL CONFORM TO MAINE DOT STANDARD SPECIFICATIONS. CATCH BASINS AND DRAIN MANHOLES SHALL CONFORM TO SECTION 604.
- ALL CATCH BASIN FRAMES AND GRATES SHALL NEENAH R-3472 OR APPROVED EQUAL.
- PROPOSED RIM ELEVATIONS OF DRAINAGE MANHOLES AND CATCH BASINS ARE APPROXIMATE. FINAL ELEVATIONS ARE TO BE SET FLUSH WITH FINISH GRADES.
- THE CONTRACTOR SHALL CONFIRM THE EXISTING GRADES AT THE OUTLET ELEVATIONS FOR ALL THREE WET PONDS PRIOR TO ANY POND CONSTRUCTION.
- THE CONTRACTOR SHALL CONFIRM THE ELEVATIONS FOR ALL DRAIN PIPE RUNS PRIOR TO ANY INSTALLATION.
- THE CONTRACTOR SHALL PROVIDE FOR THE HANDLING OF EXISTING FLOWS FROM SERVICE CONNECTIONS AND MAINLINE PIPES. THE EXISTING DRAINS MAY HAVE ACTIVE FLOW AND THE CONTRACTOR SHALL MAINTAIN CONTINUOUS FLOW WITHOUT RESTRICTIONS.
- THE CONTRACTOR SHALL STABILIZE ANY AND ALL DITCHES, SWALES AND PONDS PRIOR TO DIRECTING STORMWATER RUN-OFF TO THEM.
- WHEN CONNECTING NEW PIPES TO EXISTING STRUCTURES SUCH AS MANHOLES AND CATCH BASINS, THE STRUCTURE SHALL BE COMPLETELY CLEANED OUT. THE HOLE MADE IN THE STRUCTURE SHALL BE AS SMALL AS NECESSARY. THE STRUCTURE SHALL BE REPAIRED TO MATCH ITS ORIGINAL TYPE OF CONSTRUCTION. THE JOINT BETWEEN THE STRUCTURE AND THE PIPE SHALL BE MADE WATERTIGHT BY FILLING THE JOINT WITH MORTAR.
- THE CONTRACTOR SHALL CLEAN THE ENTIRE STORMWATER SYSTEM OF ALL SEDIMENT AND DEBRIS, WITHIN THE LIMIT OF WORK UPON COMPLETION OF CONSTRUCTION.
- 10. ALL DRAIN PIPES SHALL HAVE A MINIMUM GROUND COVER OF 3'. IF THE REQUIRED COVER CANNOT BE OBTAINED, THE PROPOSED PIPE SHALL BE ADS N-12 DOUBLE WALLED HDPE OR APPROVED EQUAL. INSTALL 4" OF RIGID INSULATION ABOVE THE DRAIN LINE IF 3' COVER CANNOT BE OBTAINED.
- 11. ALL PROPOSED CATCH BASINS SHALL BE DEEP SUMP CATCH BASINS WITH 4' SUMPS.
- 12. THE PROPOSED STORMWATER SYSTEM AND WET PONDS SHALL BE MAINTAINED ACCORDING TO THE STORMWATER INSPECTION AND MAINTENANCE MANUAL PREPARED UNDER THE MAINE DEP SITE LOCATION OF DEVELOPMENT PERMIT. THE SYSTEM SHALL BE INSPECTED AT A MINIMUM IN THE SPRING AND FALL.
- 13. THE CONTRACTOR SHALL INSTALL PERIMETER FOOTING DRAINS AROUND ALL PROPOSED BUILDINGS. THE FOOTING DRAINS SHALL DRAIN TO DAYLIGHT OUTSIDE THE LIMITS OF PAVEMENT. SEE STRUCTURAL PLANS AND GEOTECHNICAL REPORT FOR PIPE SIZE AND INSTALLATION LOCATIONS.

### **EARTHWORK & GRADING NOTES:**

- 1. GRADE AWAY FROM BUILDING WALLS AT 2% MINIMUM (TYPICAL).
- 2. PROVIDE UNIFORM SLOPE BETWEEN CONTOURS AND/OR SPOT
- SPOT GRADES SHOWN ARE PAVEMENT ELEVATIONS AT THE CURBLINE UNLESS OTHERWISE NOTED.
- 4. ALL GRASSED AND LANDSCAPED AREAS INSIDE THE SIDEWALKS SHALL
- EARTH SLOPES SHALL BE NO STEEPER THAN 2:1

BE GRADED TO DRAIN TO THE PROPOSED CATCH BASINS.

- (HORIZONTAL: VERTICAL) AND SHALL BE FLATTER WHERE SHOWN.
- THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL ROOTS AND STUMPS FOR TREES THAT ARE REMOVED.
- GENERAL FILL BEYOND PAVED AREAS SHALL BE FREE OF BRUSH RUBBISH, STUMPS, AND STONES LARGER THAN 8". FILL SHALL BE PLACED IN COMPACTED LAYERS NOT TO EXCEED 8" IN THICKNESS. THE DRY DENSITY AFTER COMPACTION SHALL NOT BE LESS THAN 95% OF THE STANDARD PROCTOR TEST AND DONE IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM D698.
- AFTER THE AREAS TO BE TOPSOILED HAVE BEEN BROUGHT TO GRADE. THE SUBGRADE SHALL BE LOOSENED BY SCARIFYING TO A DEPTH OF AT LEAST 2" TO ENSURE BONDING OF THE TOPSOIL AND SUBSOIL.
- FILL OR TOPSOIL SHALL NEITHER BE PLACED NOR COMPACTED WHILE IN A FROZEN OR MUDDY CONDITION OR WHILE SUBGRADE IS FROZEN.
- 10. FINISH PAVEMENT SURFACES AND LAWN AREAS SHALL BE FREE OF LOW SPOTS AND PONDING AREAS.
- 11. ALL AREAS DISTURBED BY THE CONTRACTOR'S OPERATIONS THAT DO NOT HAVE A SURFACE TREATMENT SPECIFICALLY SPECIFIED SHALL BE RESTORED TO A MINIMUM OF 4" OF SEEDED TOPSOIL, FERTILIZER, AND
- 12. THE CONTRACTOR SHALL COORDINATE ALL LEDGE REMOVAL WITH THE REQUIREMENTS SET FORTH IN THE MAINE DEP SITE LOCATION OF DEVELOPMENT PERMIT FOR THIS PROJECT.
- 13. THE CONTRACTOR SHALL SUBMIT STAMPED RETAINING WALL DESIGN PLANS FROM THE WALL MANUFACTURER TO THE INSPECTING ENGINEER FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION.

### **EXTERIOR LIGHTS:**

- THE UNDERGROUND CONDUIT RUNS FOR THE PROPOSED LIGHT POLES IS NOT SHOWN ON THESE PLANS. THE CONTRACTOR SHALL COORDINATE WITH THE ELECTRICAL DESIGNER FOR THE INSTALLATION LOCATIONS OF THE CONDUIT RUNS AND PULLBOXES.
- OUTSIDE LIGHTS MUST BE MADE UP OF A LIGHT SOURCE AND REFLECTOR SO THAT, ACTING TOGETHER, THE LIGHT BEAM IS CONTROLLED AND NOT DIRECTED ACROSS A PROPERTY LINE SO AS TO CONSTITUTE A NUISANCE.
- 3. ALL PROPOSED LIGHTING SHALL BE DARK SKY FRIENDLY.
- 4. COORDINATE LIGHT POLE BASE LOCATIONS WITH, CONDUIT ROUTING. CONDUIT SIZE AND POWER SUPPLY FOR SITE LIGHTING WITH ARCHITECTURAL AND ELECTRICAL DRAWINGS.

### **UTILITY NOTES:**

THE CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES OWNING UTILITIES, EITHER OVERHEAD OR UNDERGROUND, WITHIN THE CONSTRUCTION AREA AND SHALL COORDINATE WITH THE UTILITY COMPANIES FOR RELOCATING AND/OR SUPPORTING THEIR UTILITIES IN ACCORDANCE WITH THE SPECIFICATIONS.

- THE CONTRACTOR SHALL MAINTAIN UTILITY SERVICES TO EXISTING FACILITIES AT ALL TIMES. IF ANY DISRUPTION MUST OCCUR. CONTRACTOR SHALL NOTIFY AND COORDINATE WITH FACILITY AT LEAST 72 HOURS IN ADVANCE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORATION OF EXISTING UTILITIES AND STRUCTURES DAMAGED OR REMOVED BY THE CONTRACTOR DURING THEIR OPERATIONS.
- THE CONTRACTOR SHALL COORDINATE MATERIALS AND INSTALLATION SPECIFICATIONS WITH THE INDIVIDUAL UTILITY AGENCIES/COMPANIES, AND ARRANGE FOR ALL INSPECTIONS.
- FINAL ELEVATIONS OF UTILITY STRUCTURES ARE TO BE SET FLUSH WITH FINISH GRADES. ADJUST ALL OTHER RIM ELEVATIONS OF MANHOLES, WATER GATES, GAS GATES, AND OTHER UTILITIES TO FINISHED GRADE WITHIN LIMITS OF WORK.
- DURING EXCAVATION. IT IS ANTICIPATED THAT EXISTING UTILITIES AND SEWERS WILL BE EXPOSED. THE CONTRACTOR SHALL PROVIDE PROTECTION AND SUPPORT OF THESE FACILITIES AND REPAIR ANY DAMAGE CAUSED BY THE WORK IN A MANNER SATISFACTORY TO THE OWNER.
- THE SEWER SYSTEM SHALL HAVE A MINIMUM GROUND COVER OF 4' WHEN CROSS COUNTRY AND A MINIMUM GROUND COVER OF 6' WHEN BENEATH PAVEMENT. IF THE REQUIRED MINIMUM AMOUNT OF COVER CANNOT BE OBTAINED, INSTALL 4" OF RIGID INSULATION ABOVE THE SEWER LINE.
- THE PROPOSED SEWER LINE FROM THE EXISTING SMH TO BUILDING WAS SIZED AND DESIGNED FOR A POSSIBLE FUTURE CONNECTION WITH MAP LOT 12-03-1. IF A FUTURE CONNECTION IS NOT ANTICIPATED. THE OWNER MAY REDUCE THE SIZE OF THE PIPE AND RAISE THE PROPOSED SEWER RUN WITH APPROVAL OF THE DESIGN ENGINEER.
- THE CONTRACTOR SHALL CONFIRM THE EXISTING SEWER MANHOLE TIE-IN INVERT AND THE ELEVATIONS FOR ALL SEWER PIPE RUNS PRIOR TO ANY INSTALLATION.
- 10. REFER TO PLANS TITLED "WATER MAIN DESIGN" BY KLEINFELDER DATED APRIL 2016, FOR WATER LINE INSTALLATION FROM RANGER DRIVE UP DENNETT ROAD TO THE ENTRANCE OF THE PROJECT SITE.
- 11. THE PROPOSED WATER LINE CONFIGURATION SHOWN ON THESE PLANS IS BASED ON DUCTILE IRON PIPE WITH 22.5° AND 45° BENDS. THE CONTRACTOR MAY SUBSTITUTE DUCTILE IRON PIPE FOR HDPE.
- 12. ALL ELECTRIC MATERIAL WORKMANSHIP SHALL CONFORM TO THE NATIONAL ELECTRIC CODE AS WELL AS STATE AND LOCAL CODES.
- 13. INSTALL NYLON PULL ROPES IN UNDERGROUND CONDUITS TO FACILITATE PULLING CABLES.
- 14. THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL HANDHOLES FITTINGS, CONNECTORS, COVER PLATES, AND OTHER MISCELLANEOUS ITEMS NOT NECESSARILY DETAILED ON THESE DRAWINGS TO RENDER INSTALLATION OF UTILITIES COMPLETE AND OPERATIONAL
- 15. THE EXACT LOCATION, NUMBER, TYPE, AND SIZE OF NEW UTILITY SERVICES AND CONDUITS SHALL BE DETERMINED BY THE UTILITY
- 16. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH ALL STATE AND LOCAL CODES.
- 20. CONTRACTOR TO COORDINATE UNDERGROUND ELECTRIC, INCLUDING BUT NOT LIMITED TO SIZE, LOCATION, MATERIAL, CONDUIT, AND HAND
- 21. ALL ON-SITE UTILITIES SHALL BE UNDERGROUND.
- 22. BACKFLOW PREVENTORS SHALL BE PROVIDED FOR BOTH FIRE AND DOMESTIC WATER LINES.
- 23. ALL FIRE PROTECTION FOR THE BUILDINGS SHALL BE COORDINATED WITH THE TOWN OF KITTERY FIRE DEPARTMENT AND STATE FIRE MARSHALL. REFER TO UTILITY PLANS FOR ADDITIONAL NOTES.

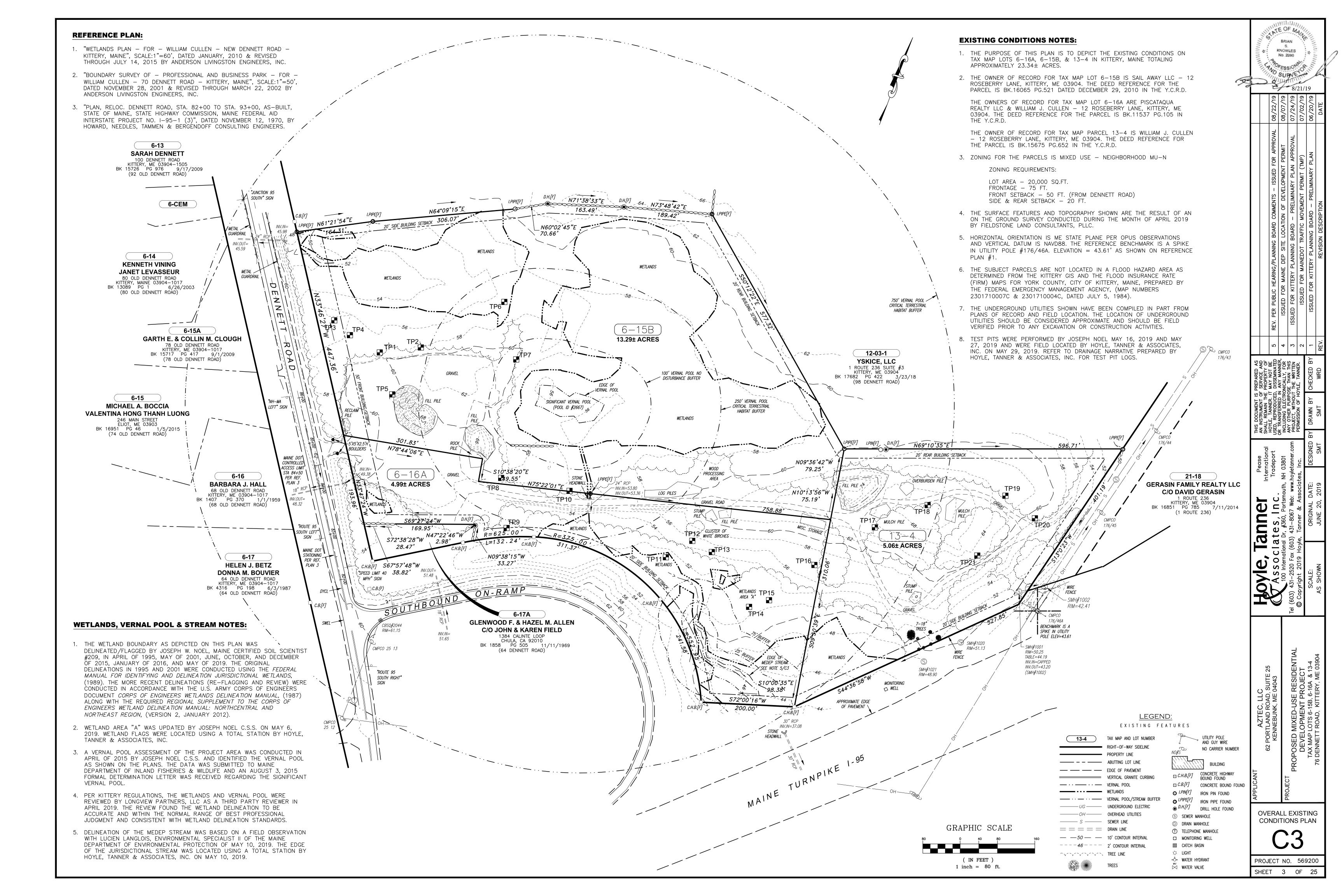
### **CONSTRUCTION SEQUENCE:**

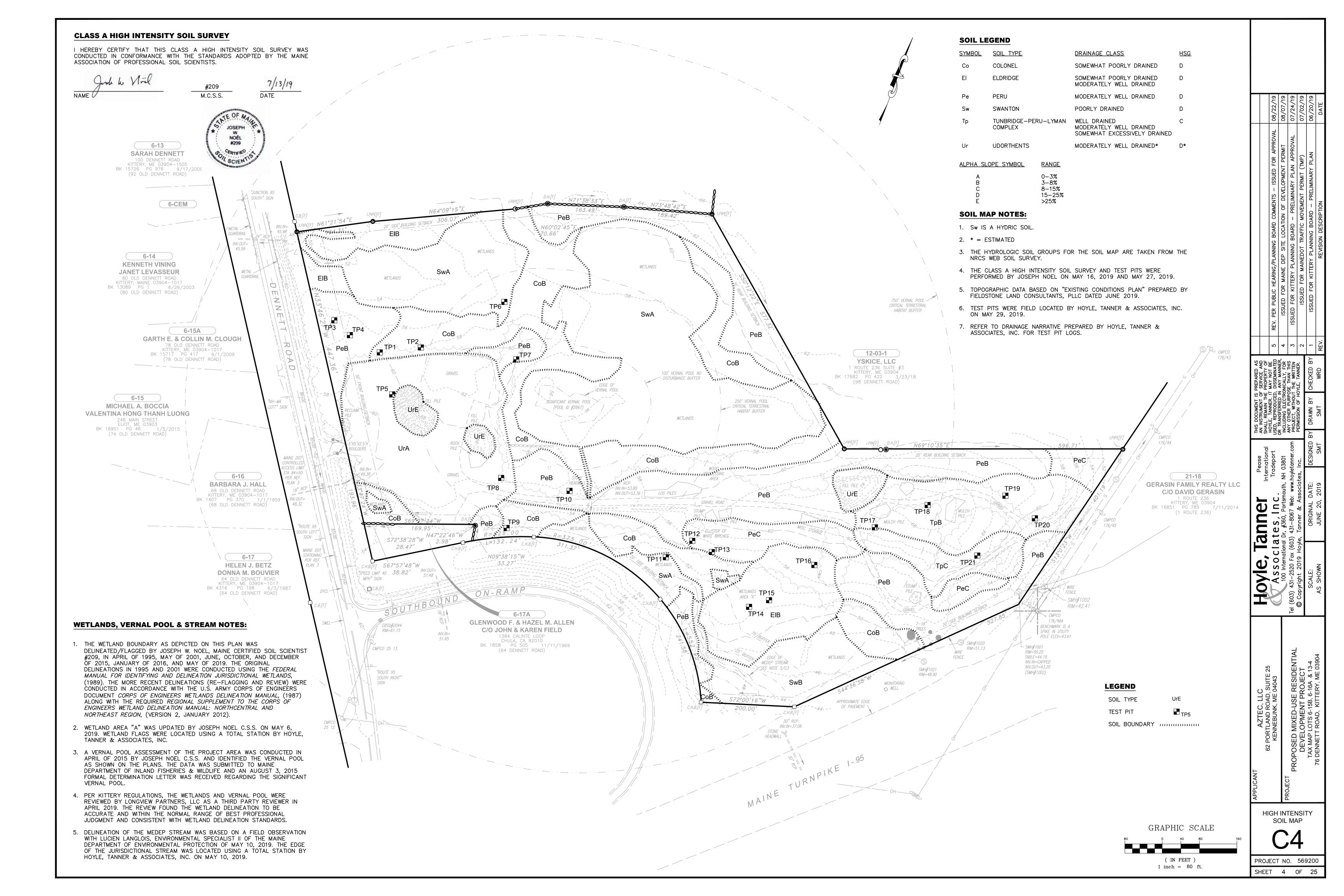
- INSTALL SILT SOCK, MULCH BERMS AND CONSTRUCTION ENTRANCE AS SHOWN, PRIOR TO THE START OF ANY CONSTRUCTION.
- REMOVE AND DISPOSE OF EXISTING VEGETATION AS SHOWN.
- STRIP THE TOPSOIL AND STOCKPILE ONSITE. CONSTRUCT A SILT SOCK PERIMETER AROUND ALL STOCKPILES.
- 4. BLAST AND REMOVE LEDGE AS REQUIRED FOR BUILDING AND UTILITIES.
- 5. CONSTRUCT THE BUILDING FOOTINGS, FOUNDATION WALLS AND PLACE BACKFILL.
- CONSTRUCT AND STABILIZE CUT AND FILL SLOPES. APPLY TEMPORARY (OR PERMANENT) SEED AND MULCH WITHIN 72 HOURS OF THEIR CONSTRUCTION.
- 7. INSTALL ALL DRAINAGE, WATER, SEWER, ELECTRIC, TELECOM AND GAS UTILITIES.
- INSPECT AND MAINTAIN ALL EROSION AND SEDIMENT CONTROL MEASURES. MINIMIZE EXTENT AND DURATION OF EXPOSURE OF DISTURBED AREAS.
- CONSTRUCT THE BUILDINGS.
- 10. PLACE ROADWAY SELECTS AND INSTALL BINDER PAVING COURSE.
- 11. INSTALL VERTICAL GRANITE CURBING AND POUR CONCRETE SIDEWALKS.
- 12. INSTALL LANDSCAPE PLANTINGS.
- 13. INSTALL SCREENED LOAM (4" MIN.) ON ALL DISTURBED SURFACES AND APPLY PERMANENT SEEDING.
- 14. INSTALL FINISH PAVEMENT, PAVEMENT MARKINGS AND SIGNAGE.
- 15. REMOVE TRAPPED SEDIMENTS FROM COLLECTOR DEVICES AS APPROPRIATE AND THEN REMOVE TEMPORARY EROSION CONTROL MEASURES. CLEAN THE ENTIRE STORMWATER SYSTEM OF ALL SEDIMENT AND DEBRIS. WITHIN THE LIMIT OF WORK.

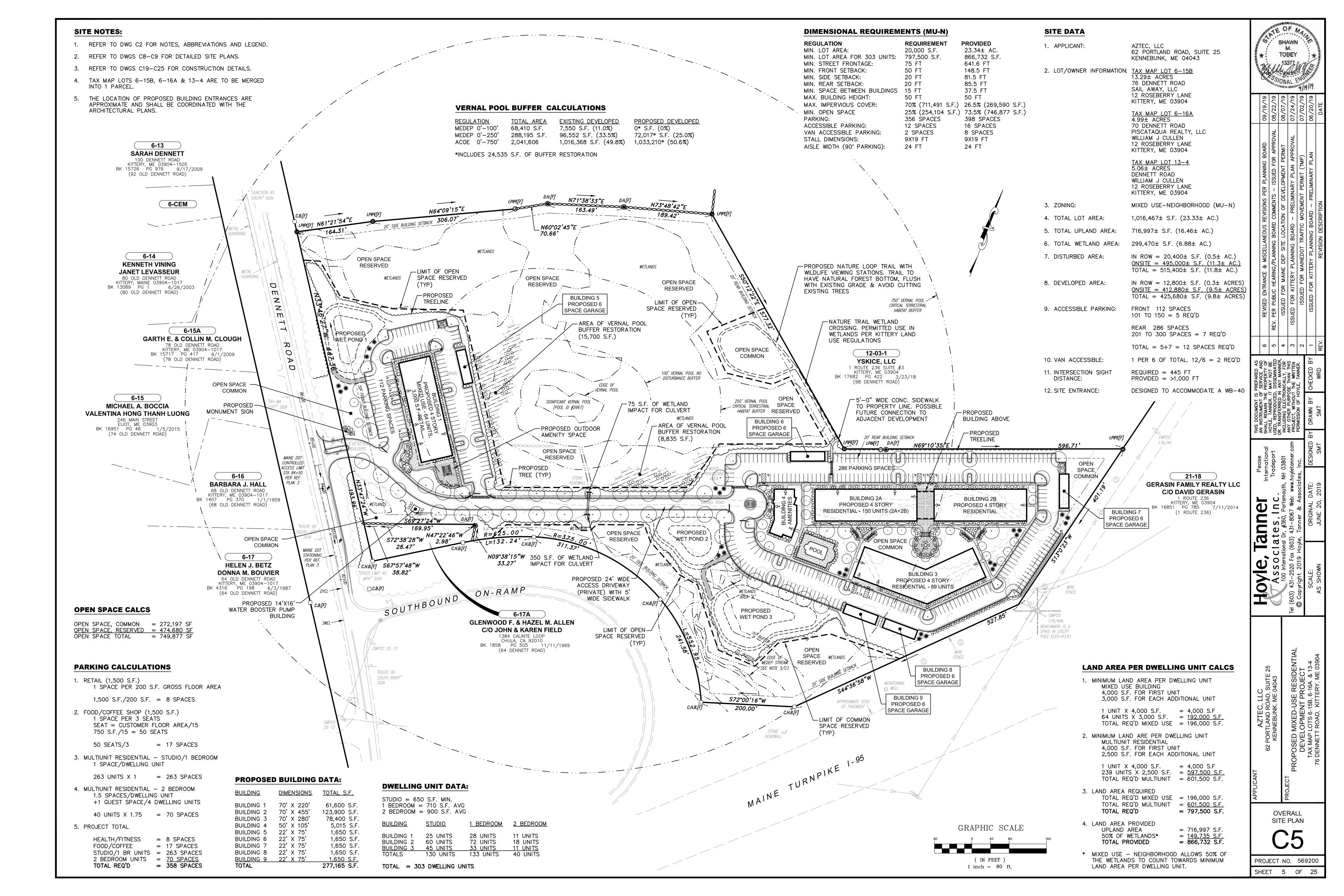
ABBREVIA	TIONS:	EXISTING	PROPOSED	ND DESCRIPTION
ABAN AC	ABANDONED ASBESTOS CONCRETE	EXISTING		PROPERTY LINE
ADJ	ADJUST			RIGHT OF WAY
APPROX B=	APPROXIMATE BOTTOM=			BUILDING SETBACK
BC BERM	BOTTOM OF CURB BITUMINOUS CONCRETE BERM			PARKING SETBACK
BIT CONC	BITUMINOUS CONCRETE		• A •	SURVEY MONUMENT EDGE OF PAVEMENT
BLDG BS	BUILDING BOTTOM OF SLOPE			EDGE OF CONCRETE
BWLL BW	BROKEN WHITE LANE LINE BOTTOM OF WALL	<i>CC</i>	CC	CONCRETE CURB
CB CBRND	CATCH BASIN CATCH BASIN ROUND	SGC	SGC VGC	SLOPED GRANITE CURB
CBSQ	CATCH BASIN SQAURE			VERTICAL GRANITE CURB VERNAL POOL/STREAM
CI CICL	CAST IRON CAST IRON CEMENT LINED			WETLANDS
CIP ©	CAST IN PLACE CENTER LINE		. — — —	VERNAL POOL/STREAM BUFFER
CLF	CHAIN LINK FENCE	V		SAWCUT
CMP CO	CORRUGATED METAL PIPE CLEAN OUT	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	✓EN	BUILDING BUILDING ENTRANCE
COL CONC	COLUMN CONCRETE	0	•	BOLLARD
CP CR	CONCRETE PIPE CONDENSATE RETURN	~~~ ×TX	مريخ ميك <u>-</u>	SIGN
DHW	DESIGN HIGH WATER			TREE FENCE
DI DICL	DUCTILE IRON DUCTILE IRON CEMENT LINED		- <del>-</del>	SILT SOCK
DIA DMH	DIAMETER DRAIN MANHOLE	<b>—</b>	<b>→</b>	DRAINAGE FLOW
DWG DYCL	DRAWING DOUBLE YELLOW CENTER LINE	—>—>—	>>	SWALE
EL, ELEV	ELEVATION	98 	——98—— ——100——	MINOR CONTOUR  MAJOR CONTOUR
ELEC EMH	ELECTRIC ELECTRIC MANHOLE	10	190	PARKING COUNT
EXIST FES	EXISTING FLARED END SECTION	SWL	SWL	SINGLE WHITE LINE
FFE	FINISH FLOOR ELEVATION	DYL	DYL	DOUBLE YELLOW LINE
FM GC	FORCE MAIN GRANITE CURB	111111111		STOP LINE CROSSWALK
GG GM	GAS GATE GAS METER			ACCESSIBLE CURB RAMP
GR	GUARDRAIL			DETECTABLE WARNING PANEL
GW HDPE	GUY WIRE HIGH DENSITY POLYETHYLENE	Ł VAN	<u>گر</u> ۲	ACCESSIBLE PARKING
HH HORIZ	HAND HOLE HORIZONTAL	© VAN × <sup>97.5</sup>	گر VAN × <sup>97.5</sup>	VAN—ACCESSIBLE PARKING SPOT ELEVATION
HR HVAC	HANDRAIL HEAT VENT AIR CONDITIONING	<i>^</i>	$\hat{oldsymbol{e}}$	KSAT TEST LOCATION
HYD	HYDRANT	28		TEST PIT LOCATION
INV I=	INVERT INVERT=			MONITORING WELL
IP LP	IRON PIPE LIGHT POLE	= = = = = = = = = = = = = = = = = = =		DRAIN SEWER
LS LT	LANDSCAPED	OHW	—— ОНW ———	OVERHEAD WIRE
MC	LEFT METAL COVER	——— W ———	w	WATER
MAX MHW	MAXIMUM MEAN HIGH WATER	—— FP ———		FIRE PROTECTION  GAS
MIN NO, #	MINIMUM NUMBER		-	UNDERGROUND ELECTRIC
NTS	NOT TO SCALE	—— ST ———	ST	STEAM
OCS OH	OUTLET CONTROL STRUCTURE OVERHANG	— T —	T	TELEPHONE
PB PERF	PULL BOX PERFORATED	₩	(D)	CATCH BASIN DOUBLE CATCH BASIN
PL PROP	PLASTIC PROPOSED	<u> </u>	<u> </u>	DRAIN MANHOLE
PSI	POUNDS PER SQUARE INCH	<b>3</b>		PLUG OR CAP
PVC PVI	POLYVINYL CHLORIDE POST VALVE INDICATOR	o <sup>co</sup>	°CO	CLEANOUT
R= RCP	RIM= REINFORCED CONCRETE PIPE	<u> </u>	©	HEADWALL SEWER MANHOLE
RD	ROOF DRAIN	o <sup>WSO</sup>	owso	WATER SHUT-OFF
(rec) RET	RECORD RETAINING	W V ⋈ 75 V	WV ⋈ TSV	WATER VALVE & BOX
RT SGC	RIGHT SLOPED GRANITE CURB	TSV O+> HYD	TSV ↔ HYD	TAPPING SLEEVE, VALVE&BOX
SMH	SEWER MANHOLE	\$ 41	<b>-</b>	FIRE HYDRANT THRUST BLOCK
SHWT SS	SEASONAL HIGH WATER TABLE SANITARY SEWER	PIV	oPIV	POST INDICATOR VALVE
ST STA	STEAM STATION	GV ⋈	GV ⋈	GAS GATE
STMH	STEAM MANHOLE	E V	<b>©</b>	ELECTRIC MANHOLE
SW SWEL	SIDEWALK SOLID WHITE EDGE LINE	<b>*</b>	<b>●■</b> <b>I</b>	LIGHT POLE TRANSFORMER PAD
SWLL TC	SOLID WHITE LANE LINE TOP OF CURB		රි	UTILITY POLE
TCB TEL	TRAFFIC CONTROL BOX TELEPHONE	0-	0-	GUY POLE
TL	TRAFFIC LIGHT	(	<u> </u>	GUY WIRE & ANCHOR
TMH TRANS	TELEPHONE MANHOLE TRANSFORMER		① 	TELEPHONE MANHOLE INLET PROTECTION
TS TW	TOP OF SLOPE TOP OF WALL			STONE CHECK DAM
TYP	TYPICAL		×	TREE TO BE REMOVED
UP VC	UTILITY POLE VITRIFIED CLAY		<b>***</b> 	STABILIZED CONSTRUCTION
VERT VGC	VERTICAL VERTICAL GRANITE CURB		<b>ESSE</b>	ENTRANCE
W	WATER			STRUCTURE TO BE REMOVED
WC WF	WYE CONNECTION WETLAND FLAG			PAVEMENT TO BE REMOVED
WG WIP	WATER GATE WROUGHT IRON PIPE			BITUMINOUS CONCRETE PAVING
WM	WATER METER			CONCRETE
				PAVERS

# SHAWN TOBEY

ARED VICE A NOT NOT MANN MANN TAN T ت**ہ** ہے۔ NOTES, **ABBREVIATIONS** & LEGEND PROJECT NO. 569200 SHEET 2 OF 25



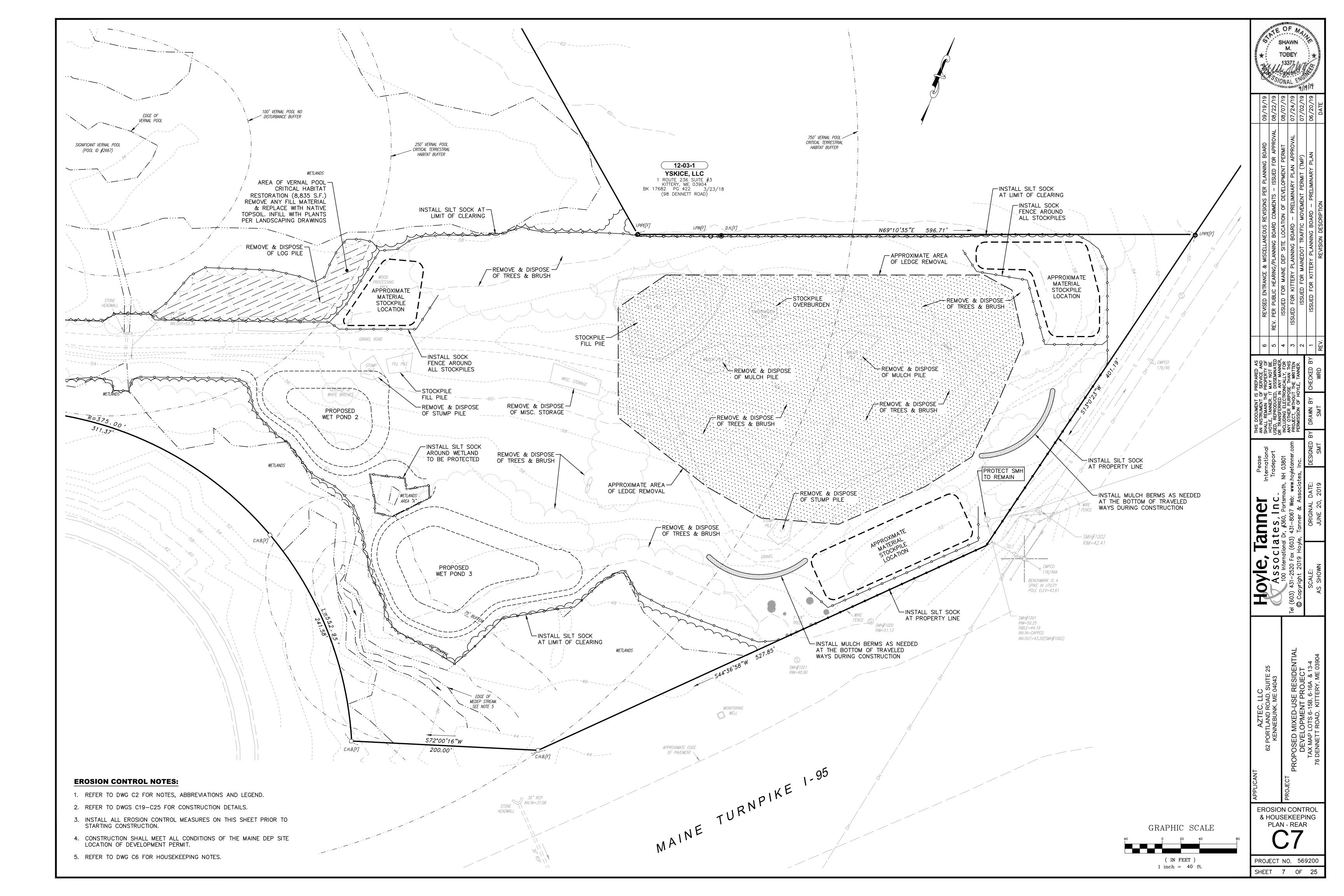


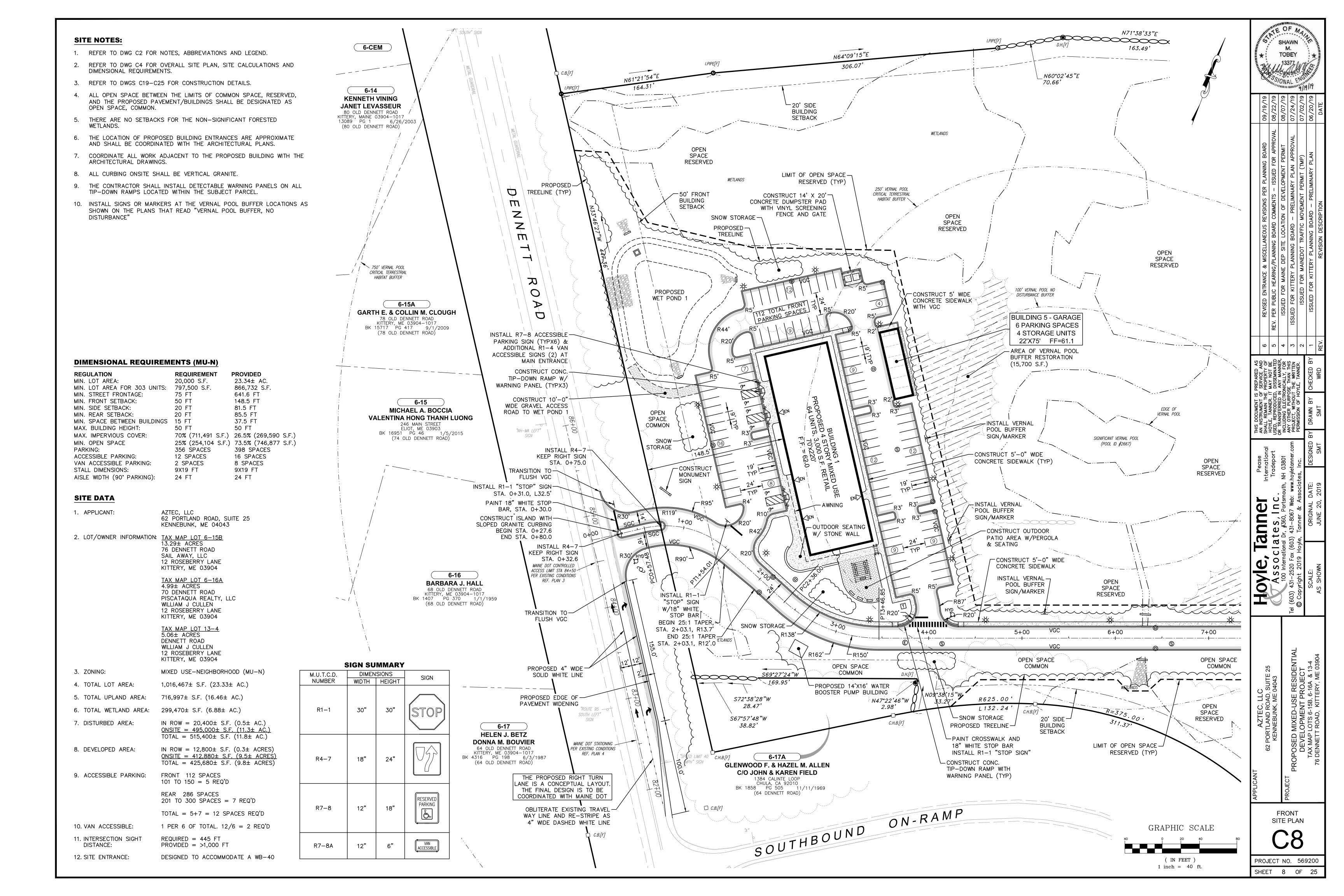


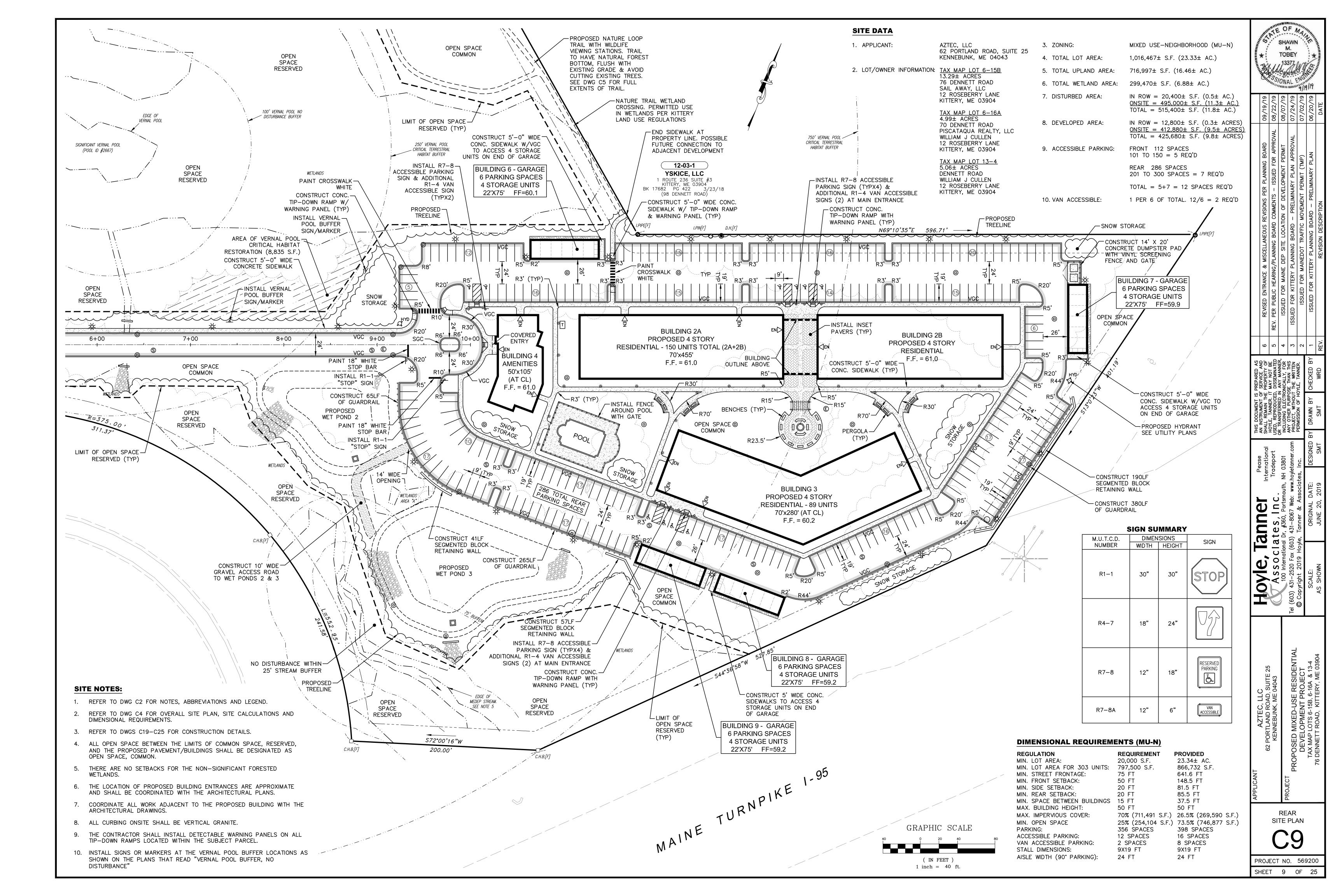
#### N71°38'33"E **EROSION CONTROL NOTES:** SHAWN 6-CEM N64°09'15"E 1. REFER TO DWG C2 FOR NOTES, ABBREVIATIONS AND LEGEND. TOBEY 306.07 2. REFER TO DWGS C19-C25 FOR CONSTRUCTION DETAILS. N60°02'45"E 3. INSTALL ALL EROSION CONTROL MEASURES ON THIS SHEET PRIOR TO 70.66 STARTING CONSTRUCTION. 6-14 4. CONSTRUCTION SHALL MEET ALL CONDITIONS OF THE MAINE DEP SITE **KENNETH VINING** LOCATION OF DEVELOPMENT PERMIT JANET LEVASSEUR 80 OLD DENNETT ROAD ₹ 45.98 INV.OUT= KITTERY, MAINE 03904-1017 13089 PG 1 6/26/2003 45.59 **HOUSEKEEPING NOTES:** (80 OLD DENNETT ROAD) WETLANDS <u>SPILL PREVENTION.</u> CONTROLS MUST BE USED TO PREVENT POLLUTANTS FROM CONSTRUCTION AND WASTE MATERIALS STORED ON SITE TO ENTER STORMWATER, WHICH INCLUDES STORAGE PRACTICES TO MINIMIZE EXPOSURE OF THE MATERIALS TO STORMWATER. THE SITE CONTRACTOR OR OPERATOR MUST DEVELOP, AND IMPLEMENT AS NECESSARY, APPROPRIATE SPILL PREVENTION, CONTAINMENT, AND RESPONSE PLANNING MEASURES. ANY SPILL OR RELEASE OF TOXIC OR HAZARDOUS SUBSTANCES MUST BE REPORTED TO THE DEPARTMENT. FOR OIL SPILLS, CALL 1-800-482-0777 WETLANDS WHICH IS AVAILABLE 24 HOURS A DAY. FOR SPILLS OF TOXIC OR HAZARDOUS MATERIAL, CALL 1-800-452-4664 WHICH IS AVAILABLE 24 250' VERNAL POOL $\mathcal{D}$ HOURS A DAY. FOR MORE INFORMATION, VISIT THE DEPARTMENT'S WEBSITE CRITICAL TERRESTRIAL HABITAT BUFFER AT: HTTP://WWW.MAINE.GOV/DEP/SPILLS/EMERGSPILLRESP/ $\Box$ GROUNDWATER PROTECTION. DURING CONSTRUCTION, LIQUID PETROLEUM PRODUCTS AND OTHER HAZARDOUS MATERIALS WITH THE POTENTIAL TO -PROPOSED TREELINE CONTAMINATE GROUNDWATER MAY NOT BE STORED OR HANDLED IN AREAS -INSTALL SILT OF THE SITE DRAINING TO AN INFILTRATION AREA. AN "INFILTRATION AREA" - AREA OF VERNAL POOL BUFFER SOCK AT LIMIT IS ANY AREA OF THE SITE THAT BY DESIGN OR AS A RESULT OF SOILS, RESTORATION (15,700 S.F.) REMOVE OF CLEARING TOPOGRAPHY AND OTHER RELEVANT FACTORS ACCUMULATES RUNOFF THAT ANY FILL MATERIAL & REPLACE WITH INFILTRATES INTO THE SOIL. DIKES, BERMS, SUMPS, AND OTHER FORMS OF NATIVE TOPSOIL. INFILL WITH PLANTS SECONDARY CONTAINMENT THAT PREVENT DISCHARGE TO GROUNDWATER PER LANDSCAPING DRAWINGS MAY BE USED TO ISOLATE PORTIONS OF THE SITE FOR THE PURPOSES OF STORAGE AND HANDLING OF THESE MATERIALS. ANY PROJECT PROPOSING 750' VERNAL POOL INFILTRATION OF STORMWATER MUST PROVIDE ADEQUATE PRE-TREATMENT CRITICAL TERRESTRIAL OF STORMWATER PRIOR TO DISCHARGE OF STORMWATER TO THE HABITAT BUFFER 仄 INFILTRATION AREA, OR PROVIDE FOR TREATMENT WITHIN THE INFILTRATION AREA, IN ORDER TO PREVENT THE ACCUMULATION OF FINES, REDUCTION IN 00' VERNAL POOL NO 0 **PROPOSED** -REMOVE & DISPOSE -INFILTRATION RATE, AND CONSEQUENT FLOODING AND DESTABILIZATION. DISTURBANCE BUFFER WET POND OF TREES & BRUSH 6-15A FUGITIVE SEDIMENT AND DUST. ACTIONS MUST BE TAKEN TO ENSURE THAT ACTIVITIES DO NOT RESULT IN NOTICEABLE EROSION OF SOILS OR FUGITIVE GARTH E. & COLLIN M. CLOUGH DUST EMISSIONS DURING OR AFTER CONSTRUCTION. OIL MAY NOT BE USED 78 OLD DENNETT ROAD KITTERY, ME 03904-1017 BK 15717 PG 417 9/1/2009 FOR DUST CONTROL, BUT OTHER WATER ADDITIVES MAY BE CONSIDERED AS NEEDED. A STABILIZED CONSTRUCTION ENTRANCE (SCE) SHOULD BE (78 OLD DENNETT ROÁD) INCLUDED TO MINIMIZE TRACKING OF MUD AND SEDIMENT. IF OFF-SITE TRACKING OCCURS, PUBLIC ROADS SHOULD BE SWEPT IMMEDIATELY, NO LESS THAN ONCE A WEEK AND PRIOR TO SIGNIFICANT STORM EVENTS. OPERATIONS DURING DRY MONTHS THAT EXPERIENCE FUGITIVE DUST PROBLEMS SHOULD WET DOWN UNPAVED ACCESS ROADS ONCE A WEEK OR MORE FREQUENTLY AS NEEDED WITH A WATER ADDITIVE TO SUPPRESS FUGITIVE SEDIMENT AND DUST. DEBRIS AND OTHER MATERIALS. MINIMIZE THE EXPOSURE OF CONSTRUCTION -INSTALL SILT EBRIS. BUILDING AND LANDSCAPING MATERIALS. TRASH. FERTILIZERS. SOCK AROUND PESTICIDES, HERBICIDES, DETERGENTS, SANITARY WASTE AND OTHER ALL STOCKPILES MATERIALS TO PRECIPITATION AND STORMWATER RUNOFF. THESE MATERIALS 6-15 MUST BE PREVENTED FROM BECOMING A POLLUTANT SOURCE. **MICHAEL A. BOCCIA** EXCAVATION DE-WATERING. EXCAVATION DE-WATERING IS THE REMOVAL OF **VALENTINA HONG THANH LUONG** THIS DO AN INS' SHALL HOYLE, USED, R, OR TRAP INCLUD ANY O' PROJEC WATER FROM TRENCHES, FOUNDATIONS, COFFER DAMS, PONDS, AND OTHER 246 MAIN STREET ELIOT, ME 03903 BK 16951 PG 46 1 AREAS WITHIN THE CONSTRUCTION AREA THAT RETAIN WATER AFTER "NH-MA LEFT" 1/5/2015 EXCAVATION. IN MOST CASES THE COLLECTED WATER IS HEAVILY SILTED (74 OLD DENNETT ROAD) SIGNIFICANT VERNAL POOL AND HINDERS CORRECT AND SAFE CONSTRUCTION PRACTICES. THE (POOL ID #2667) COLLECTED WATER REMOVED FROM THE PONDED AREA, EITHER THROUGH GRAVITY OR PUMPING, MUST BE SPREAD THROUGH NATURAL WOODED BUFFERS OR REMOVED TO AREAS THAT ARE SPECIFICALLY DESIGNED TO COLLECT THE MAXIMUM AMOUNT OF SEDIMENT POSSIBLE. LIKE A ─INSTALL SILT SOCK AROUND COFFERDAM SEDIMENTATION BASIN. AVOID ALLOWING THE WATER TO FLOW BUFFER RESTORATION UNTIL OVER DISTURBED AREAS OF THE SITE. EQUIVALENT MEASURES MAY BE STABILIZED TAKEN IF APPROVED BY THE DEPARTMENT. REMOVE BOULDERS <u>AUTHORIZED NON-STORMWATER DISCHARGES.</u> IDENTIFY AND PREVENT CONTAMINATION BY NON-STORMWATER DISCHARGES. WHERE ALLOWED STOCKPILE -FILL PILE NON-STORMWATER DISCHARGES EXIST, THEY MUST BE IDENTIFIED AND STOCKPILE -STEPS SHOULD BE TAKEN TO ENSURE THE IMPLEMENTATION OF FILL PILE APPROPRIATE POLLUTION PREVENTION MEASURES FOR THE NON-STORMWATER COMPONENT(S) OF THE DISCHARGE. AUTHORIZED **ates** NON-STORMWATER DISCHARGES ÁRE: A. DISCHARGES FROM FIREFIGHTING ACTIVITY; CONSTRUCT STABILIZED CONSTRUCTION ENTRY B. FIRE HYDRANT FLUSHINGS; C. VEHICLE WASHWATER IF DETERGENTS ARE NOT USED AND WASHING **APPROXIMATE** IS LIMITED TO THE EXTERIOR OF VEHICLES (ENGINE, UNDERCARRIAGE MATERIAL 6-16 AND TRANSMISSION WASHING IS PROHIBITED); STOCKPILE SILT SOCK -REMOVE & DISPOSE BARBARA J. HALL LOCATION OF TREES & BRUSH D. DUST CONTROL RUNOFF IN ACCORDANCE WITH PERMIT CONDITIONS 68 OLD DENNETT ROAD KITTERY, ME 03904-1017 BK 1407 PG 370 1/1/1959 AND APPENDIX (C)(3); (68 OLD DENNETT ROAD) E. ROUTINE EXTERNAL BUILDING WASHDOWN, NOT INCLUDING SURFACE PAINT REMOVAL, THAT DOES NOT INVOLVE DETERGENTS; INSTALL SOCK-F. PAVEMENT WASHWATER (WHERE SPILLS/LEAKS OF TOXIC OR FENCE AROUND HAZARDOUS MATERIALS HAVE NOT OCCURRED, UNLESS ALL SPILLED ALL STOCKPILES MATERIAL HAD BEEN REMOVED) IF DETERGENTS ARE NOT USED; WETLANDS MAINTAIN GRAVEL ROAD-FOR ACCESS TO REAR OF G. UNCONTAMINATED AIR CONDITIONING OR COMPRESSOR CONDENSATE; SITE DURING CONSTRUCTION H. UNCONTAMINATED GROUNDWATER OR SPRING WATER; \$69°27'24"W I. FOUNDATION OR FOOTER DRAIN-WATER WHERE FLOWS ARE NOT CONTAMINATED; ~ 169.95° J. UNCONTAMINATED EXCAVATION DEWATERING (SEE REQUIREMENTS IN N09°38'15"W *S72°38'28"W* R625.00' ₹N47°22'46"W 💭 33.27' 28.47' ´2.98' "ROUTE 95 -K. POTABLE WATER SOURCES INCLUDING WATERLINE FLUSHINGS; AND SOUTH LEFT" S67°57'48"W L. LANDSCAPE IRRIGATION. 38.82' 6-17 <u>UNAUTHORIZED NON-STORMWATER DISCHARGES.</u> THE DEPARTMENT'S APPROVAL UNDER THIS CHAPTER DOES NOT AUTHORIZE A DISCHARGE HELEN J. BETZ **DONNA M. BOUVIER** THAT IS MIXED WITH A SOURCE OF NON-STORMWATER, OTHER THAN THOSE 64 OLD DENNETT ROAD DISCHARGES IN COMPLIANCE WITH APPENDIX C (6). SPECIFICALLY, THE KITTERY, ME 03904-1017 BK 4316 PG 198 6/3/1987 6-17A C.H.B.[F] DEPARTMENT'S APPROVAL DOES NOT AUTHORIZE DISCHARGES OF THE (64 OLD DENNETT ROAD) FOLLOWING: **GLENWOOD F. & HAZEL M. ALLEN** C/O JOHN & KAREN FIELD A. WASTEWATER FROM THE WASHOUT OR CLEANOUT OF CONCRETE, 1384 CALINTE LOOP STUCCO, PAINT, FORM RELEASE OILS, CURING COMPOUNDS OR OTHER CHULA, CA 92010 BK 1858 PG 505 1 CONSTRUCTION MATERIALS; (64 DENNETT ROAD) B. FUELS, OILS OR OTHER POLLUTANTS USED IN VEHICLE AND SOUTHBOUND ON-RAMP EQUIPMENT OPERATION AND MAINTENANCE; $\square$ C.B.[F] **EROSION CONTROL** C. SOAPS, SOLVENTS, OR DETERGENTS USED IN VEHICLE AND & HOUSEKEEPING EQUIPMENT WASHING; AND PLAN - FRONT GRAPHIC SCALE D. TOXIC OR HAZARDOUS SUBSTANCES FROM A SPILL OR OTHER ADDITIONAL REQUIREMENTS. ADDITIONAL REQUIREMENTS MAY BE APPLIED ON A SITE-SPECIFIC BASIS. ( IN FEET ) PROJECT NO. 569200

1 inch = 40 ft.

SHEET 6 OF 25







### **GRADING & DRAINAGE NOTES:**

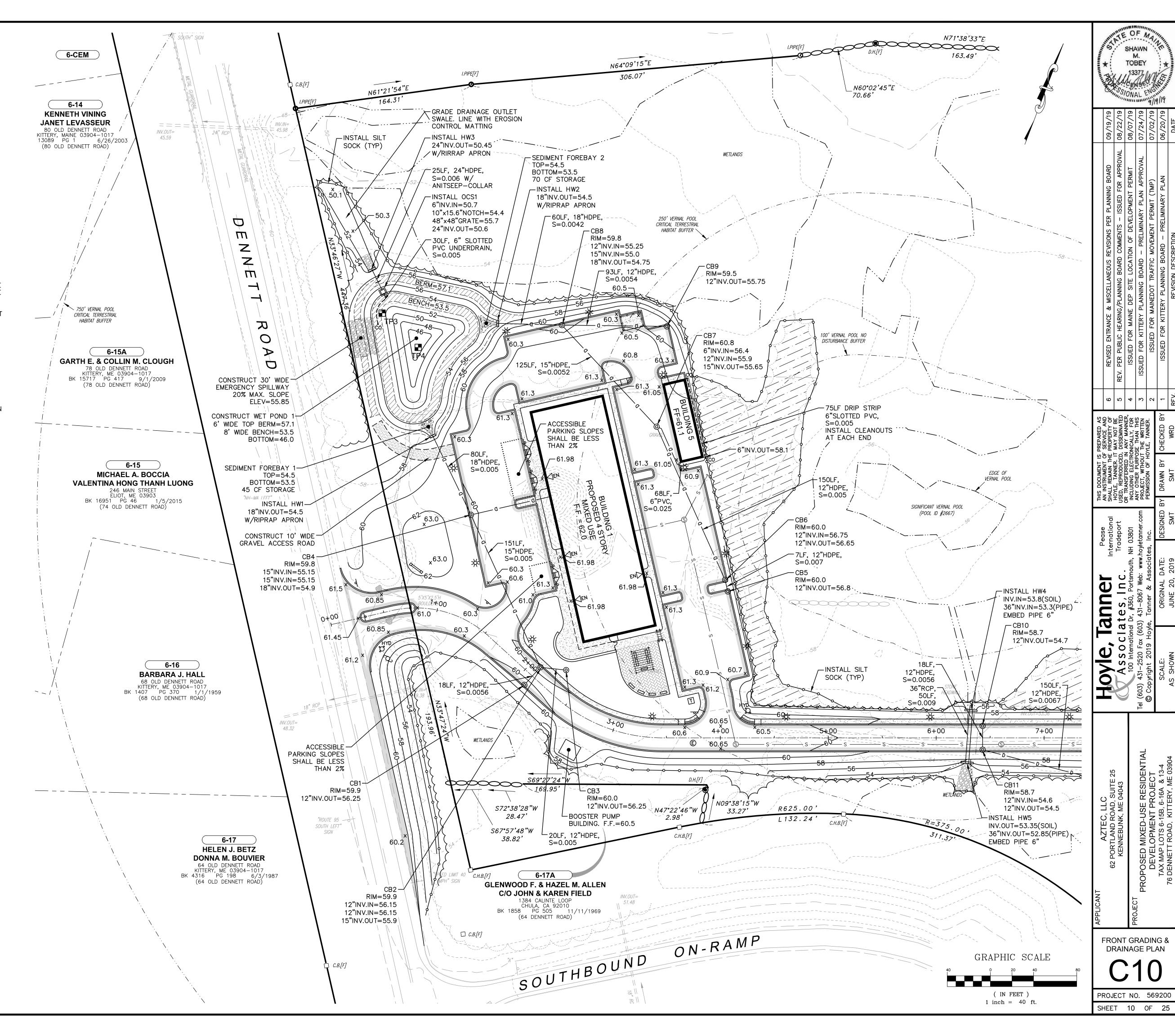
- 1. REFER TO DWG C2 FOR NOTES, ABBREVIATIONS AND LEGEND.
- 2. REFER TO DWG C6-C7 FOR ADDITIONAL EROSION CONTROL MEASURES.
- 3. REFER TO DWGS C19-C25 FOR CONSTRUCTION DETAILS.
- 4. CONSTRUCTION SHALL MEET ALL CONDITIONS OF THE MAINE DEP SITE LOCATION OF DEVELOPMENT PERMIT.
- 5. ALL DRAINAGE STRUCTURES HAVE AN INTERNAL DIAMETER OF 4'-0" UNLESS OTHERWISE SPECIFIED ON THE PLANS.
- 6. INSTALL INLET PROTECTION ON ALL PROPOSED CATCH BASINS AFTER INSTALLATION. REMOVE WHEN CONSTRUCTION IS COMPLETED.
- 7. THE LOCATION OF PROPOSED BUILDING ENTRANCES ARE APPROXIMATE AND SHALL BE COORDINATED WITH THE ARCHITECTURAL PLANS.
- 8. ACCESSIBLE PARKING STALLS HAVE SLOPES LESS THAN 2% IN ALL DIRECTIONS.
- 9. TEST PIT DATA IS BASED ON FIELD OBSERVATIONS FOR LEDGE AND APPROXIMATE SEASONAL HIGH WATER FROM PITS DUG ON MAY 16, 2019 AND MAY 27, 2019.
- 10. REFER TO DRAINAGE NARRATIVE FOR TEST PIT LOGS AND DETAILED WET POND CALCULATIONS.

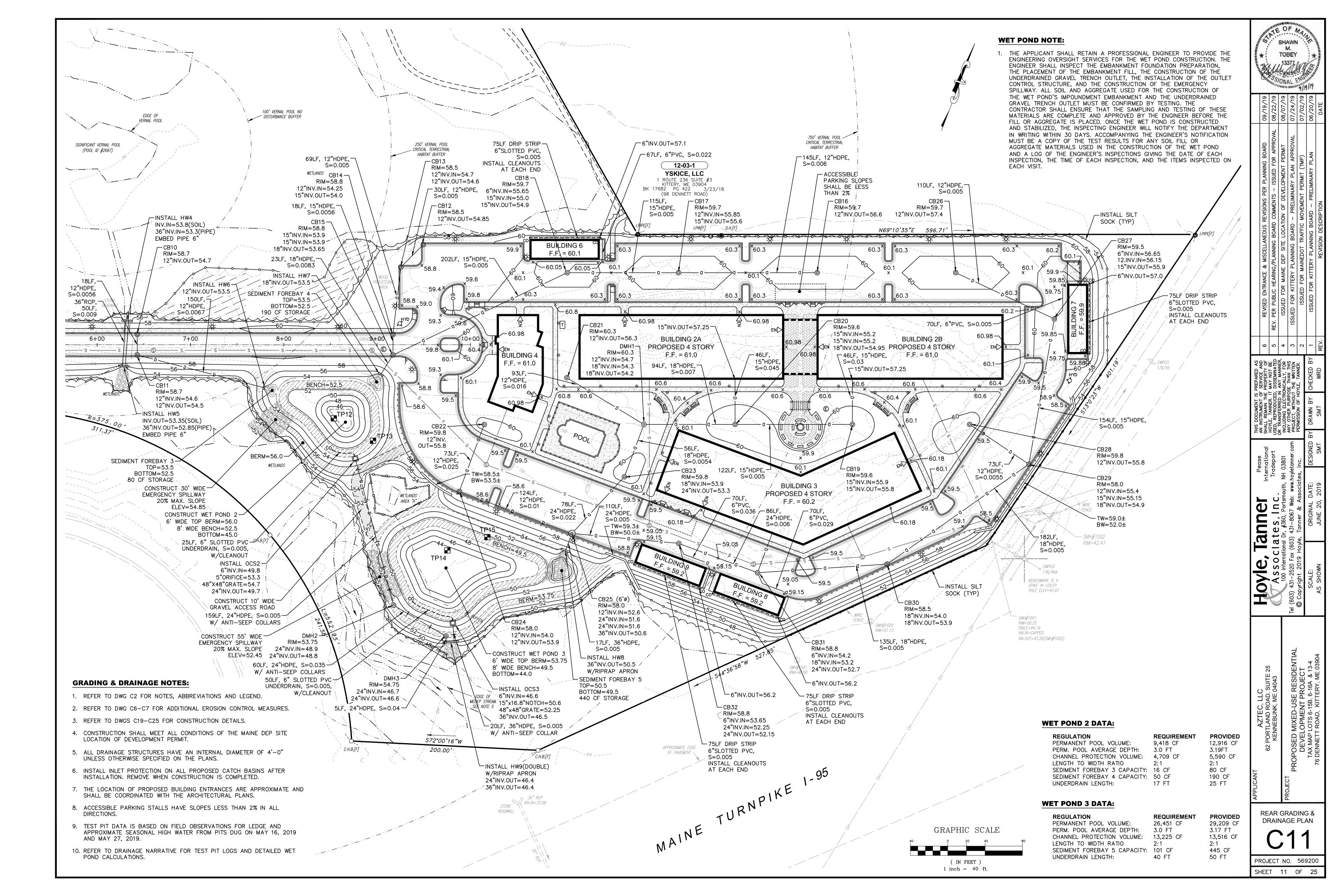
### **WET POND NOTE:**

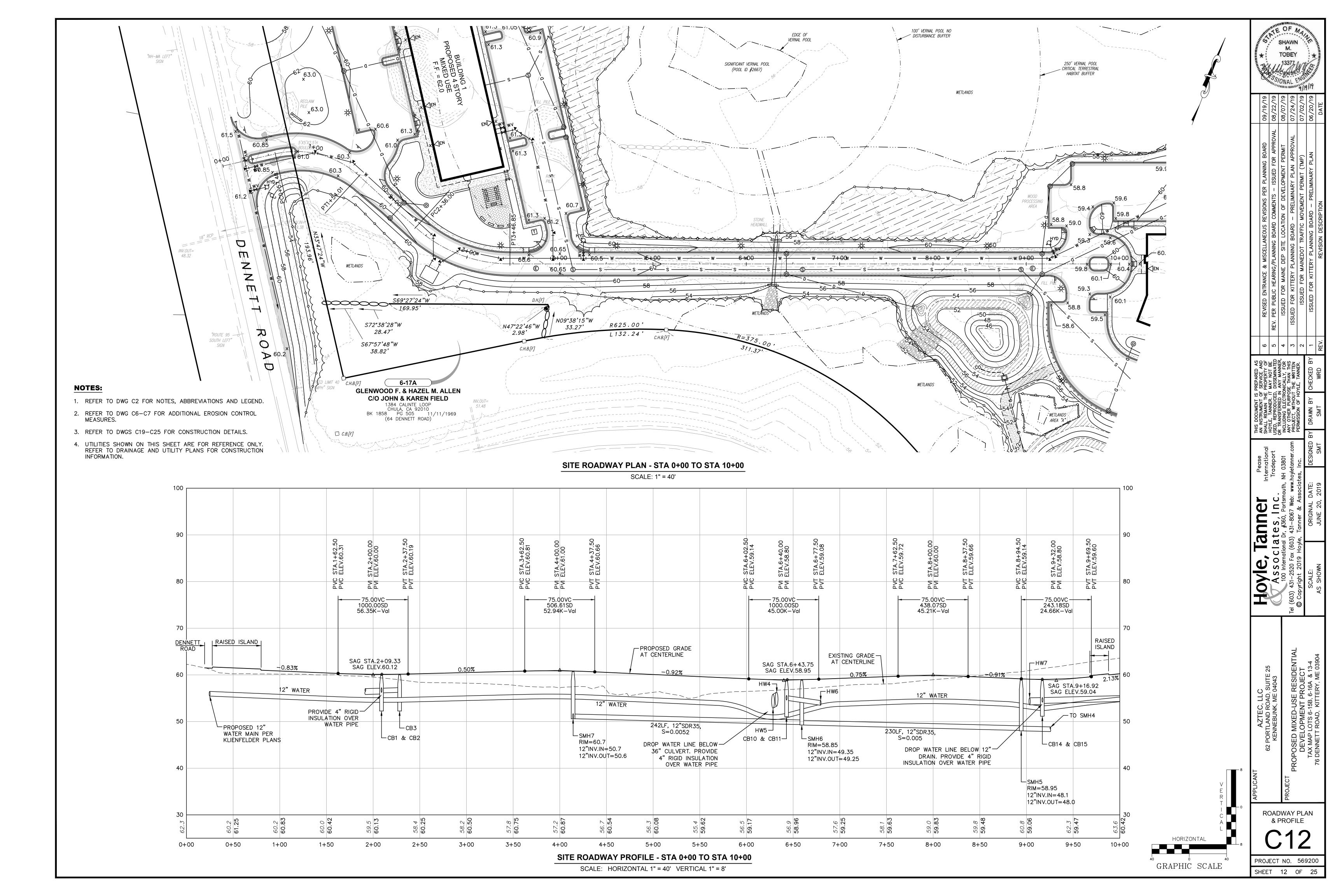
1. THE APPLICANT SHALL RETAIN A PROFESSIONAL ENGINEER TO PROVIDE THE ENGINEERING OVERSIGHT SERVICES FOR THE WET POND CONSTRUCTION. THE ENGINEER SHALL INSPECT THE EMBANKMENT FOUNDATION PREPARATION, THE PLACEMENT OF THE EMBANKMENT FILL, THE CONSTRUCTION OF THE UNDERDRAINED GRAVEL TRENCH OUTLET, THE INSTALLATION OF THE OUTLET CONTROL STRUCTURE, AND THE CONSTRUCTION OF THE EMERGENCY SPILLWAY. ALL SOIL AND AGGREGATE USED FOR THE CONSTRUCTION OF THE WET POND'S IMPOUNDMENT EMBANKMENT AND THE UNDERDRAINED GRAVEL TRENCH OUTLET MUST BE CONFIRMED BY TESTING. THE CONTRACTOR SHALL ENSURE THAT THE SAMPLING AND TESTING OF THESE MATERIALS ARE COMPLETE AND APPROVED BY THE ENGINEER BEFORE THE FILL OR AGGREGATE IS PLACED. ONCE THE WET POND IS CONSTRUCTED AND STABILIZED, THE INSPECTING ENGINEER WILL NOTIFY THE DEPARTMENT IN WRITING WITHIN 30 DAYS. ACCOMPANYING THE ENGINEER'S NOTIFICATION MUST BE A COPY OF THE TEST RESULTS FOR ANY SOIL FILL OR AGGREGATE MATERIALS USED IN THE CONSTRUCTION OF THE WET POND AND A LOG OF THE ENGINEER'S INSPECTIONS GIVING THE DATE OF EACH INSPECTION, THE TIME OF EACH INSPECTION, AND THE ITEMS INSPECTED ON EACH VISIT.

### **WET POND 1 DATA:**

REGULATION	REQUIREMENT	<b>PROVIDED</b>
PERMANENT POOL VOLUME:	13,379 CF	18,313 CF
PERM. POOL AVERAGE DEPTH:	3.0 FT	3.09 FT
CHANNEL PROTECTION VOLUME:	6,689 CF	7,507 CF
LENGTH TO WIDTH RATIO	2:1	2:1
SEDIMENT FOREBAY 1 CAPACITY:	16 CF	45 CF
SEDIMENT FOREBAY 2 CAPACITY:	38 CF	70 CF
UNDERDRAIN LENGTH:	23 FT	30 FT







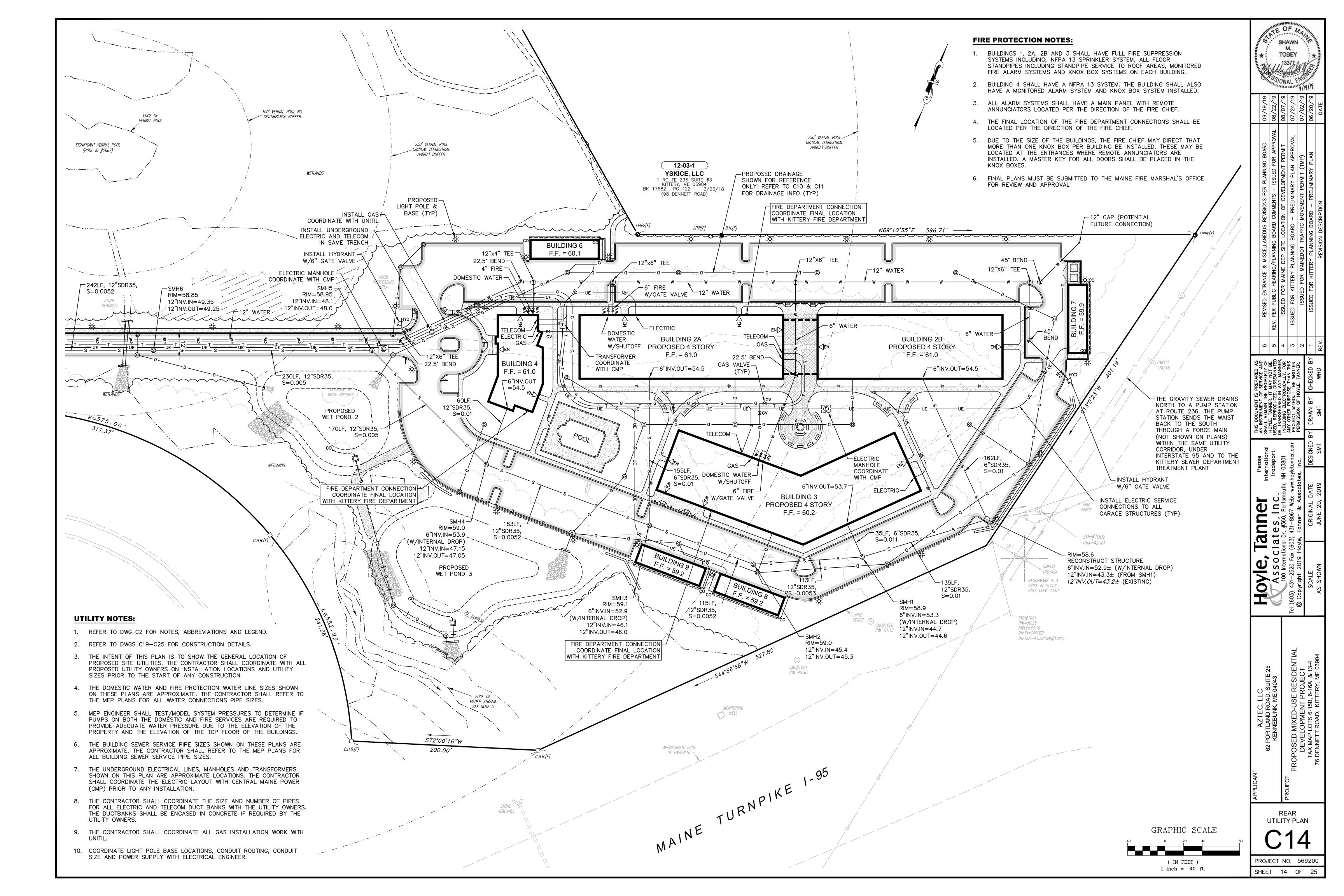
#### N71°38'33"E **UTILITY NOTES:** SHAWN 6-CEM 163.49' 1. REFER TO DWG C2 FOR NOTES, ABBREVIATIONS AND LEGEND. N64°09'15"E TOBEY 2. REFER TO DWGS C19-C25 FOR CONSTRUCTION DETAILS. 306.07 N60°02'45"E 3. THE INTENT OF THIS PLAN IS TO SHOW THE GENERAL LOCATION OF 70.66 PROPOSED SITE UTILITIES. THE CONTRACTOR SHALL COORDINATE WITH ALL PROPOSED UTILITY OWNERS ON INSTALLATION LOCATIONS AND UTILITY 6-14 SIZES PRIOR TO THE START OF ANY CONSTRUCTION. **KENNETH VINING JANET LEVASSEUR** 4. THE DOMESTIC WATER AND FIRE PROTECTION WATER LINE SIZES SHOWN <del>+</del> = = + <del>+</del> = = <del>+</del> = 45.98 80 OLD DENNETT ROAD INV.OUT= ON THESE PLANS ARE APPROXIMATE. THE CONTRACTOR SHALL REFER TO KITTERY, MAINE 03904-1017 13089 PG 1 6/26/2003 45.59 THE MEP PLANS FOR ALL WATER CONNECTIONS PIPE SIZES. (80 OLD DENNETT ROAD) MEP ENGINEER SHALL TEST/MODEL SYSTEM PRESSURES TO DETERMINE IF WETLANDS PUMPS ON BOTH THE DOMESTIC AND FIRE SERVICES ARE REQUIRED TO PROVIDE ADEQUATE WATER PRESSURE DUE TO THE ELEVATION OF THE PROPERTY AND THE ELEVATION OF THE TOP FLOOR OF THE BUILDINGS. THE BUILDING SEWER SERVICE PIPE SIZES SHOWN ON THESE PLANS ARE APPROXIMATE. THE CONTRACTOR SHALL REFER TO THE MEP PLANS FOR ALL BUILDING SEWER SERVICE PIPE SIZES. WETLANDS 250' VERNAL POOL THE UNDERGROUND ELECTRICAL LINES, MANHOLES AND TRANSFORMERS $\mathcal{D}$ CRITICAL TERRESTRIAL SHOWN ON THIS PLAN ARE APPROXIMATE LOCATIONS. THE CONTRACTOR HABITAT BUFFER \ SHALL COORDINATE THE ELECTRIC LAYOUT WITH CENTRAL MAINE POWER $\Box$ (CMP) PRIOR TO ANY INSTALLATION. - PROPOSED DRAINAGE SHOWN FOR REFERENCE 8. THE CONTRACTOR SHALL COORDINATE THE SIZE AND NUMBER OF PIPES ONLY. REFER TO C10 & C11 FOR ALL ELECTRIC AND TELECOM DUCT BANKS WITH THE UTILITY OWNERS. FOR DRAINAGE INFO (TYP) THE DUCTBANKS SHALL BE ENCASED IN CONCRETE IF REQUIRED BY THE INSTALL ELECTRIC SERVICE UTILITY OWNERS. CONNECTIONS TO ALL GARAGE STRUCTURES (TYP) 9. THE CONTRACTOR SHALL COORDINATE ALL GAS INSTALLATION WORK WITH 750' VERNAL POOL 10. COORDINATE LIGHT POLE BASE LOCATIONS, CONDUIT ROUTING, CONDUIT CRITICAL TERRESTRIAL SIZE AND POWER SUPPLY WITH ELECTRICAL ENGINEER. HABITAT BUFFER 仄 100' VERNAL POOL NO 0 PROPOSED FIRE PROTECTION NOTES: DISTURBANCE BUFFER WET POND 6-15A $\nearrow$ BUILDINGS 1, 2A, 2B AND 3 SHALL HAVE FULL FIRE SUPPRESSION GARTH E. & COLLIN M. CLOUGH SYSTEMS INCLUDING; NFPA 13 SPRINKLER SYSTEM, ALL FLOOR STANDPIPES INCLUDING STANDPIPE SERVICE TO ROOF AREAS, MONITORED 78 OLD DENNETT ROAD KITTERY, ME 03904-1017 BK 15717 PG 417 9/1/2009 FIRE ALARM SYSTEMS AND KNOX BOX SYSTEMS ON EACH BUILDING. (78 OLD DENNETT ROAD) 2. BUILDING 4 SHALL HAVE A NFPA 13 SYSTEM. THE BUILDING SHALL ALSO HAVE A MONITORED ALARM SYSTEM AND KNOX BOX SYSTEM INSTALLED. 3. ALL ALARM SYSTEMS SHALL HAVE A MAIN PANEL WITH REMOTE ANNUNCIATORS LOCATED PER THE DIRECTION OF THE FIRE CHIEF. 4. THE FINAL LOCATION OF THE FIRE DEPARTMENT CONNECTIONS SHALL BE LOCATED PER THE DIRECTION OF THE FIRE CHIEF. CAP 12" SEWER FOR FUTURE 5. DUE TO THE SIZE OF THE BUILDINGS, THE FIRE CHIEF MAY DIRECT THAT CONNECTION MORE THAN ONE KNOX BOX PER BUILDING BE INSTALLED. THESE MAY BE 6-15 /INV=52.1 LOCATED AT THE ENTRANCES WHERE REMOTE ANNUNCIATORS ARE MICHAEL A. BOCCIA INSTALLED. A MASTER KEY FOR ALL DOORS SHALL BE PLACED IN THE **VALENTINA HONG THANH LUONG** 45LF, 12"SDR35, 246 MAIN STREET S=0.0056 PROPOSED -ELIOT, ME 03903 BK 16951 PG 46 1 FINAL PLANS MUST BE SUBMITTED TO THE MAINE FIRE MARSHAL'S OFFICE "NH-MA LEFT" SMH8 LIGHT POLE & 1/5/2015 FOR REVIEW AND APPROVAL (74 OLD DENNETT ROAD) SIGNIFICANT VERNAL POOL RIM=60.8 BASE (TYP) (POOL ID #2667) 6"INV.IN=54.3 12"INV.IN=51.85 12"INV.OUT=51.75 CAP GAS (FUTURE CONNECTION) ₹45LF, 6"SDR35, S=0.027 12" CAP-6"INV.OUT=55.5 (FUTURE CONNECTION) DOMESTIC — Fanner lates, Inc. WATER -45° BENDS 22.5° BEND W/SHUTOFF 6" FIRE-FIRE DEPARTMENT CONNECTION COORDINATE FINAL LOCATION W/GATE VALVE WITH KITTERY FIRE DEPARTMENT GAS-TELECOM — —210LF, 12"SDR35, **ELECTRIC** S=0.00512" GATE VALVE ₩ - TRANSFORMER 12"X12" TEE ✓ Oyle, COORDINATE WITH CMP 12" GATE VALVE -GAS VALVE (TYP) 12"X6" TEE -6-16 -242LF, 12"SDR35. -INSTALL HYDRANT INSTALL HYDRANT -BARBARA J. HALL S=0.0052 W/6" GATE VALVE W/6" GATE VALVE RIM = 58.8568 OLD DENNETT ROAD KITTERY, ME 03904-1017 BK 1407 PG 370 1/1/1959 >12"X6" TEE 12"INV.IN=49.35 HEADWALL 12"INV.OUT=49.25 (68 OLD DENNETT ROÁD) 12" WATER \_\_ 45° BEND NSTALL GAS COORDINATE WITH UNITIL 🜾 PROPOSED UTILITY POLE -WETLANDS & OVERHEAD WIRE INSTALL UNDERGROUND — COORDINATE WITH CMP -22.5° BENDS ELECTRIC AND TELECOM <sup>∠</sup>12"X6" IN SAME TRENCH TEE 22.5° BEND -PROPOSED 12" WATER MAIN-RIM=60.7 〔12"WATER ── INSTALLED PER DESIGN PLANS BY \$69°27'24"W 12"INV.IN=50.7 KLEINFELDER DATED APRIL 2016 12"INV.OUT=50.6 `~ 169.95' ELECTRIC MANHOLE -COORDINATE WITH CMP N09°38'15"W *S72°38'28"W* R625.00' N47°22'46"W 💭 33.27' PROPOSED GAS MAIN-28.47' 2.98' COORDINATE WITH UNITIL L132.24' "ROUTE 95 -0 SOUTH LEFT" S67°57'48"W 38.82' 6-17 HELEN J. BETZ -PROPOSED WATER BOOSTER **DONNA M. BOUVIER** PUMP BUILDING. REFER TO MEP 64 OLD DENNETT ROAD KITTERY, ME 03904-1017 BK 4316 PG 198 6/3/1987 PLANS FOR ADDITIONAL DETAILS 6-17A C.H.B.[F] (64 OLD DENNETT ROAD) **GLENWOOD F. & HAZEL M. ALLEN** C/O JOHN & KAREN FIELD 1384 CALINTE LOOP CHULA, CA 92010 BK 1858 PG 505 11/11/1969 (64 DENNETT ROAD) SOUTHBOUND ON-RAMP FRONT UTILITY PLAN GRAPHIC SCALE C.B.[F]

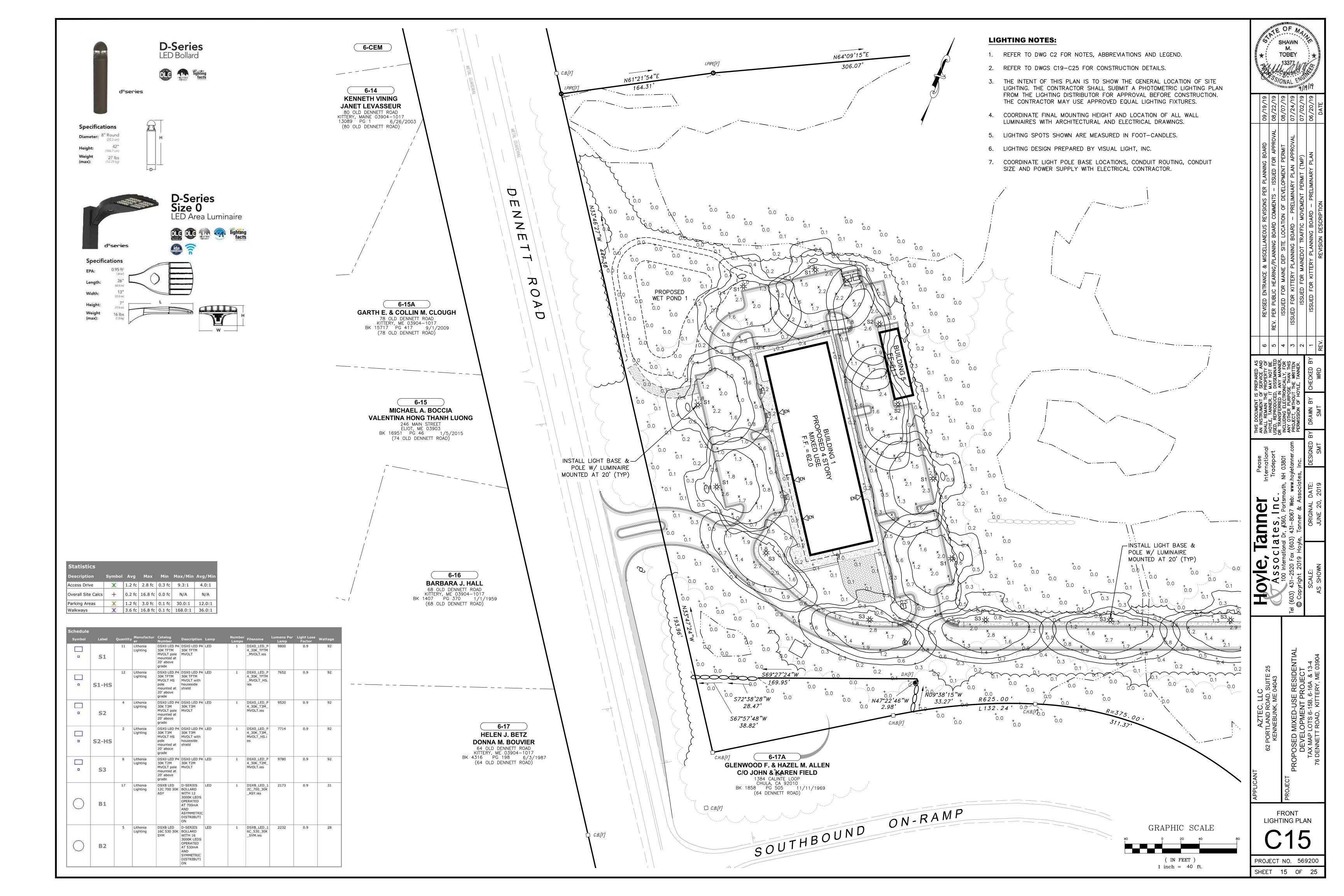
( IN FEET )

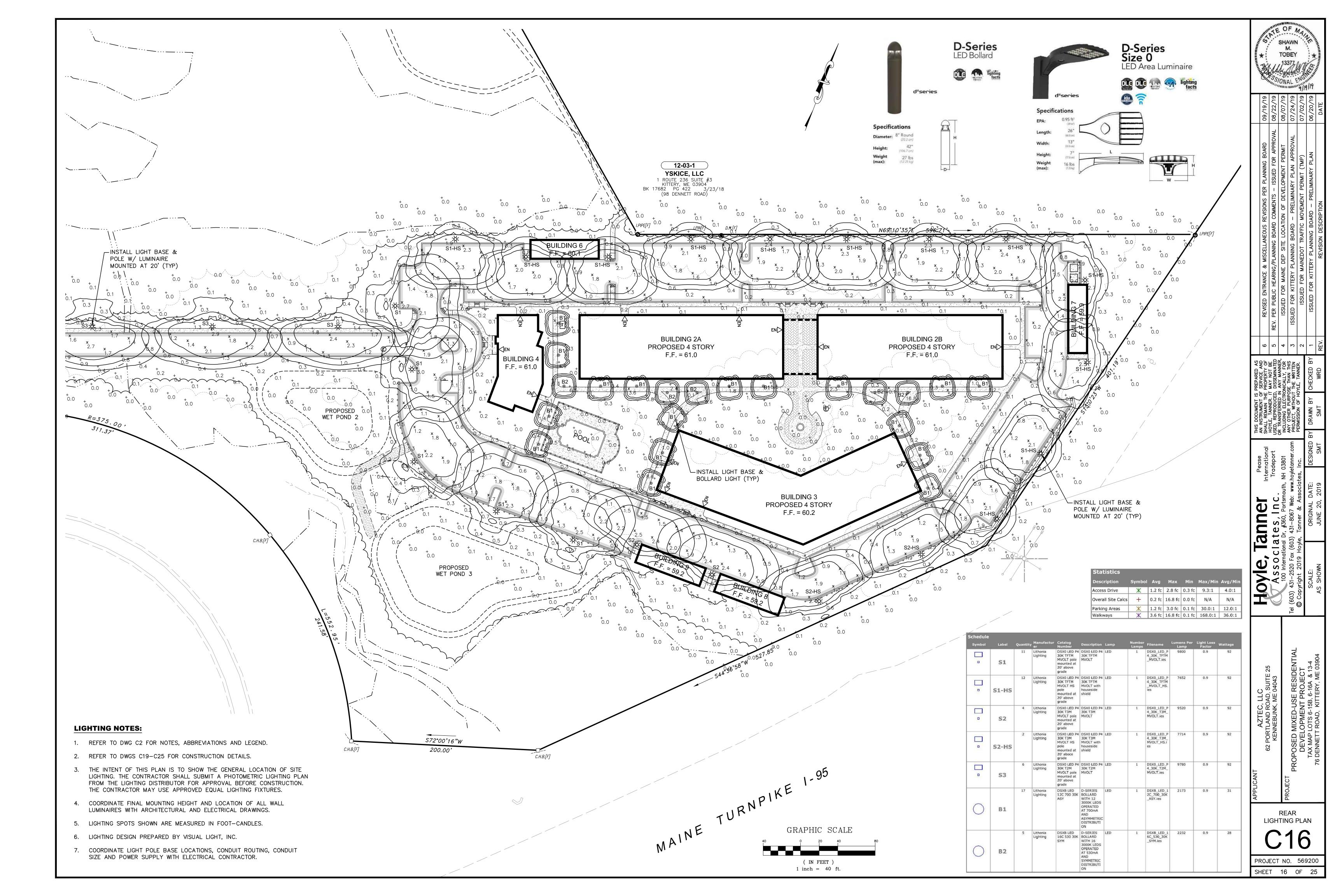
1 inch = 40 ft.

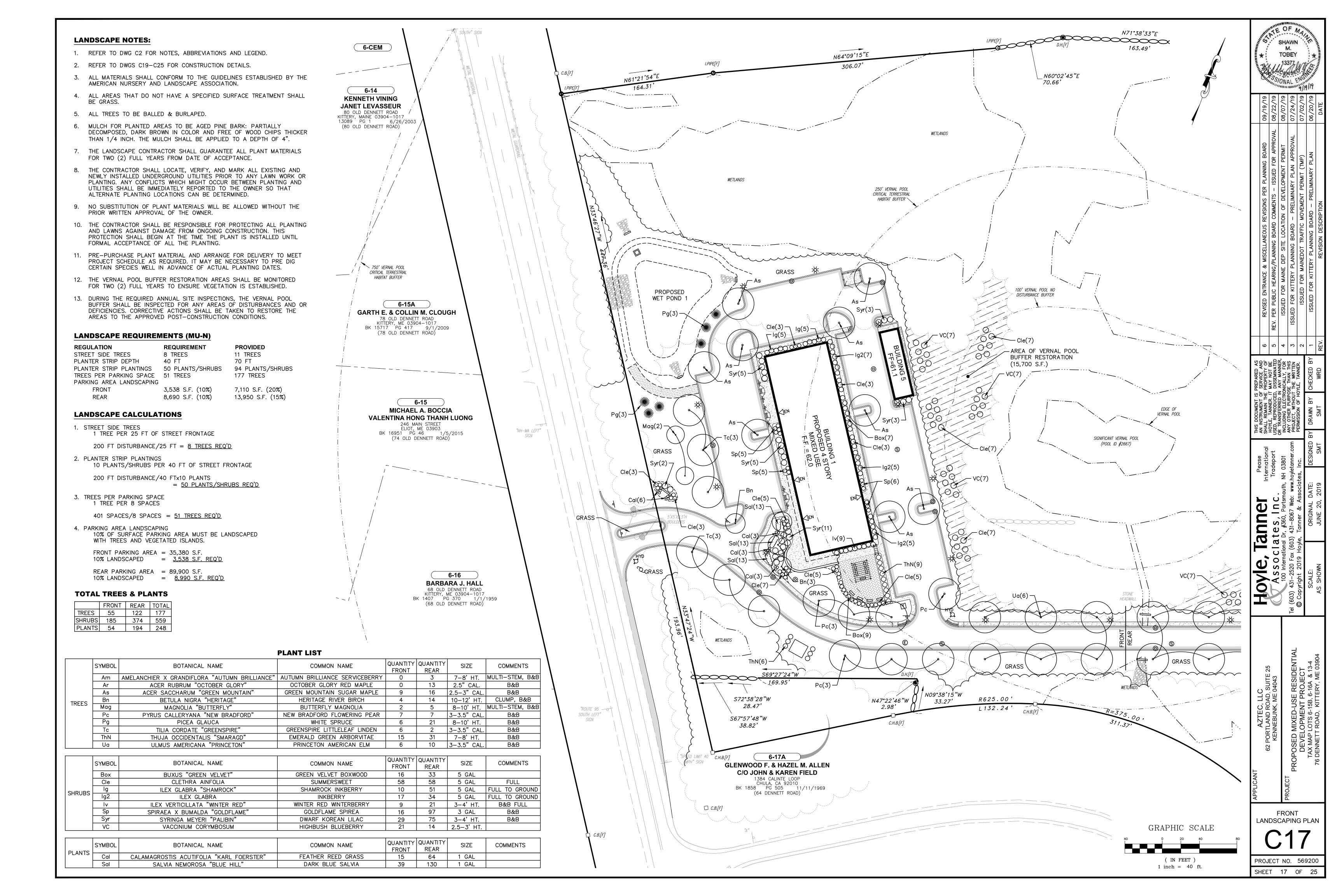
PROJECT NO. 569200

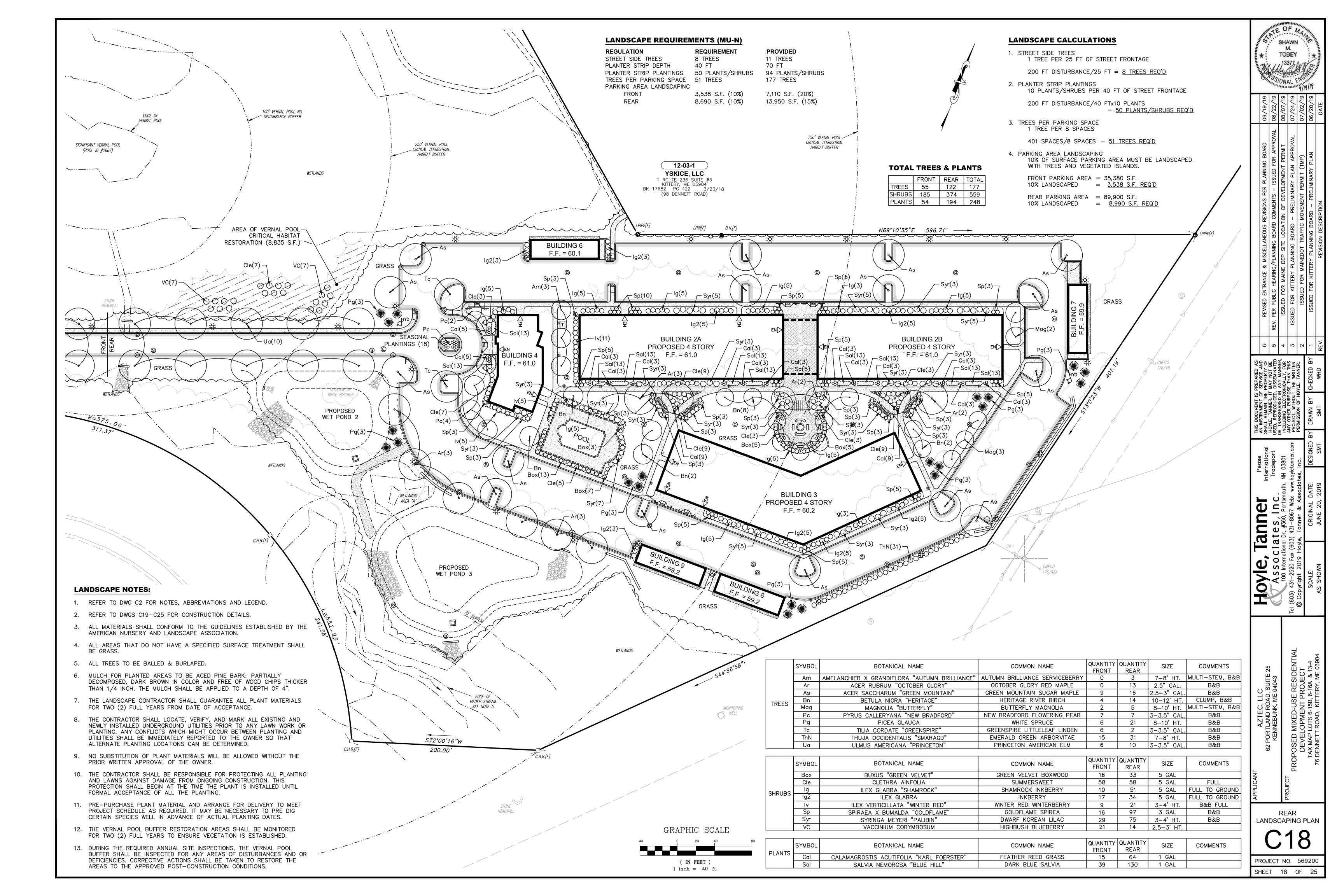
SHEET 13 OF 25







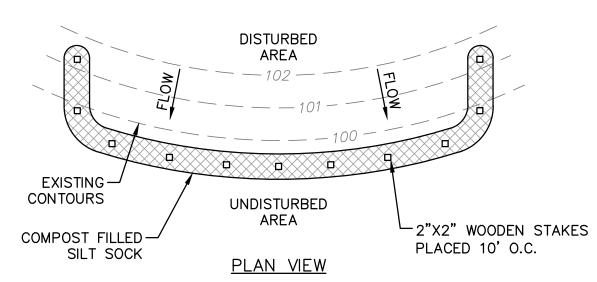


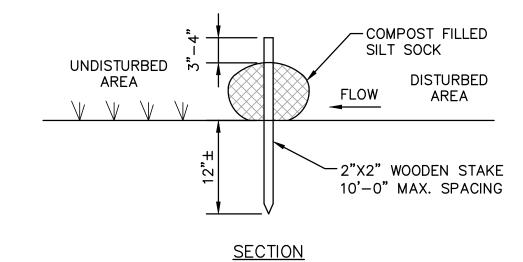


### **EROSION CONTROL NOTES:**

- 1. POLLUTION PREVENTION. MINIMIZE DISTURBED AREAS AND PROTECT NATURAL DOWNGRADIENT BUFFER AREAS TO THE EXTENT PRACTICABLE. CONTROL STORMWATER VOLUME AND VELOCITY WITHIN THE SITE TO MINIMIZE SOIL EROSION. MINIMIZE THE DISTURBANCE OF STEEP SLOPES CONTROL STORMWATER DISCHARGES, INCLUDING BOTH PEAK FLOW RATES AND VOLUME, TO MINIMIZE EROSION AT OUTLETS. THE DISCHARGE MAY NOT RESULT IN EROSION OF ANY OPEN DRAINAGE CHANNELS, SWALES, STREAM CHANNELS OR STREAM BANKS, UPLAND, OR COASTAL OR FRESHWATER WETLANDS OFF THE PROJECT SITE. WHENEVER PRACTICABLE, NO DISTURBANCE ACTIVITIES SHOULD TAKE PLACE WITHIN 50 FEET OF ANY PROTECTED NATURAL RESOURCE. IF DISTURBANCE ACTIVITIES TAKE PLACE BETWEEN 30 FEET AND 50 FEET OF ANY PROTECTED NATURAL RESOURCE, AND STORMWATER DISCHARGES THROUGH THE DISTURBED AREAS TOWARD THE PROTECTED NATURAL RESOURCE, PERIMETER EROSION CONTROLS MUST BE DOUBLED. IF DISTURBANCE ACTIVITIES TAKE PLACE LESS THAN 30 FEET FROM ANY PROTECTED NATURAL RESOURCE, AND STORMWATER DISCHARGES THROUGH THE DISTURBED AREAS TOWARD THE PROTECTED NATURAL RESOURCE, PERIMETER EROSION CONTROLS MUST BE DOUBLED AND DISTURBED AREAS MUST BE TEMPORARILY OR PERMANENTLY STABILIZED WITHIN 7 DAYS.
- 2. <u>SEDIMENT BARRIERS.</u> PRIOR TO CONSTRUCTION, PROPERLY INSTALL SEDIMENT BARRIERS AT THE DOWNGRADIENT EDGE OF ANY AREA TO BE DISTURBED AND ADJACENT TO ANY DRAINAGE CHANNELS WITHIN THE DISTURBED AREA. SEDIMENT BARRIERS SHOULD BE INSTALLED DOWNGRADIENT OF SOIL OR SEDIMENT STOCKPILES AND STORMWATER PREVENTED FROM RUNNING ONTO THE STOCKPILE. MAINTAIN THE SEDIMENT BARRIERS BY REMOVING ACCUMULATED SEDIMENT, OR REMOVING AND REPLACING THE BARRIER, UNTIL THE DISTURBED AREA IS PERMANENTLY STABILIZED. WHERE A DISCHARGE TO A STORM DRAIN INLET OCCURS, IF THE STORM DRAIN CARRIES WATER DIRECTLY TO A SURFACE WATER AND YOU HAVE AUTHORITY TO ACCESS THE STORM DRAIN INLET, YOU MUST INSTALL AND MAINTAIN PROTECTION MEASURES THAT REMOVE SEDIMENT FROM THE DISCHARGE.
- 3. STABILIZED CONSTRUCTION ENTRANCE. PRIOR TO CONSTRUCTION, PROPERLY INSTALL A STABILIZED CONSTRUCTION ENTRANCE (SCE) AT ALL POINTS OF EGRESS FROM THE SITE. THE SCE IS A STABILIZED PAD OF AGGREGATE, UNDERLAIN BY A GEOTEXTILE FILTER FABRIC, USED TO PREVENT TRAFFIC FROM TRACKING MATERIAL AWAY FROM THE SITE ONTO PUBLIC ROWS. MAINTAIN THE SCE UNTIL ALL DISTURBED AREAS ARE STABILIZED.
- 4. TEMPORARY STABILIZATION. WITHIN 7 DAYS OF THE CESSATION OF CONSTRUCTION ACTIVITIES IN AN AREA THAT WILL NOT BE WORKED FOR MORE THAN 7 DAYS, STABILIZE ANY EXPOSED SOIL WITH MULCH, OR OTHER NON-ERODIBLE COVER. STABILIZE AREAS WITHIN 75 FEET OF A WETLAND OR WATERBODY WITHIN 48 HOURS OF THE INITIAL DISTURBANCE OF THE SOIL OR PRIOR TO ANY STORM EVENT, WHICHEVER COMES FIRST.
- 5. REMOVAL OF TEMPORARY MEASURES. REMOVE ANY TEMPORARY CONTROL MEASURES, SUCH AS SILT FENCE, WITHIN 30 DAYS AFTER PERMANENT STABILIZATION IS ATTAINED. REMOVE ANY ACCUMULATED SEDIMENTS AND STABILIZE.
- 6. <u>PERMANENT STABILIZATION.</u> IF THE AREA WILL NOT BE WORKED FOR MORE THAN ONE YEAR OR HAS BEEN BROUGHT TO FINAL GRADE, THEN PERMANENTLY STABILIZE THE AREA WITHIN 7 DAYS BY PLANTING VEGETATION, SEEDING, SOD, OR THROUGH THE USE OF PERMANENT MULCH, OR RIP-RAP, OR ROAD SUB-BASE. IF USING VEGETATION FOR STABILIZATION, SELECT THE PROPER VEGETATION FOR THE LIGHT, MOISTURE, AND SOIL CONDITIONS; AMEND AREAS OF DISTURBED SUBSOILS WITH TOPSOIL, COMPOST, OR FERTILIZERS; PROTECT SEEDED AREAS WITH MULCH OR, IF NECESSARY, EROSION CONTROL BLANKETS: AND SCHEDULE SODDING, PLANTING, AND SEEDING SO TO AVOID DIE-OFF FROM SUMMER DROUGHT AND FALL FROSTS. NEWLY SEEDED OR SODDED AREAS MUST BE PROTECTED FROM VEHICLE TRAFFIC, EXCESSIVE PEDESTRIAN TRAFFIC, AND CONCENTRATED RUNOFF UNTIL THE VEGETATION IS WELL-ESTABLISHED WITH 90% COVER BY HEALTHY VEGETATION. IF NECESSARY, AREAS MUST BE REWORKED AND RESTABILIZED IF GERMINATION IS SPARSE, PLANT COVERAGE IS SPOTTY, OR TOPSOIL EROSION IS EVIDENT. ONE OR MORE OF THE FOLLOWING MAY APPLY TO A PARTICULAR SITE.
- 7. SEEDED AREAS, FOR SEEDED AREAS, PERMANENT STABILIZATION MEANS A 90% COVER OF THE DISTURBED AREA WITH MATURE, HEALTHY PLANTS WITH NO EVIDENCE OF WASHING OR RILLING OF THE TOPSOIL.
  - A. SODDED AREAS. FOR SODDED AREAS, PERMANENT STABILIZATION MEANS THE COMPLETE BINDING OF THE SOD ROOTS INTO THE UNDERLYING SOIL WITH NO SLUMPING OF THE SOD OR DIE-OFF.
  - B. PERMANENT MULCH. FOR MULCHED AREAS, PERMANENT MULCHING MEANS TOTAL COVERAGE OF THE EXPOSED AREA WITH AN APPROVED MULCH MATERIAL. EROSION CONTROL MIX MAY BE USED AS MULCH FOR PERMANENT STABILIZATION ACCORDING TO THE APPROVED APPLICATION RATES AND LIMITATIONS.
  - C. RIP-RAP. FOR AREAS STABILIZED WITH RIP-RAP, PERMANENT STABILIZATION MEANS THAT SLOPES STABILIZED WITH RIP-RAP HAVE AN APPROPRIATE BACKING OF A WELL-GRADED GRAVEL OR APPROVED GEOTEXTILE TO PREVENT SOIL MOVEMENT FROM BEHIND THE RIP-RAP. STONE MUST BE SIZED APPROPRIATELY. IT IS RECOMMENDED THAT ANGULAR STONE BE USED.
  - D. AGRICULTURAL USE. FOR CONSTRUCTION PROJECTS ON LAND USED FOR AGRICULTURAL PURPOSES (E.G., PIPELINES ACROSS CROP LAND), PERMANENT STABILIZATION MAY BE ACCOMPLISHED BY RETURNING THE DISTURBED LAND TO AGRICULTURAL USE.
  - E. PAVED AREAS. FOR PAVED AREAS, PERMANENT STABILIZATION MEANS THE PLACEMENT OF THE COMPACTED GRAVEL SUB-BASE IS COMPLETED, PROVIDED IT IS FREE OF FINE MATERIALS THAT MAY RUNOFF WITH A RAIN EVENT
  - F. DITCHES, CHANNELS, AND SWALES. FOR OPEN CHANNELS, PERMANENT STABILIZATION MEANS THE CHANNEL IS STABILIZED WITH A 90% COVER OF HEALTHY VEGETATION, WITH A WELL-GRADED RIP-RAP LINING, TURF REINFORCEMENT MAT, OR WITH ANOTHER NON-EROSIVE LINING SUCH AS CONCRETE OR ASPHALT PAVEMENT. THERE MUST BE NO EVIDENCE OF SLUMPING OF THE CHANNEL LINING, UNDERCUTTING OF THE CHANNEL BANKS, OR DOWN-CUTTING OF THE CHANNEL.

- 8. WINTER CONSTRUCTION. "WINTER CONSTRUCTION" IS CONSTRUCTION ACTIVITY PERFORMED DURING THE PERIOD FROM NOVEMBER 1 THROUGH APRIL 15. IF DISTURBED AREAS ARE NOT STABILIZED WITH PERMANENT MEASURES BY NOVEMBER 1 OR NEW SOIL DISTURBANCE OCCURS AFTER NOVEMBER 1, BUT BEFORE APRIL 15, THEN THESE AREAS MUST BE PROTECTED AND RUNOFF FROM THEM MUST BE CONTROLLED BY ADDITIONAL MEASURES AND RESTRICTIONS.
  - A. SITE STABILIZATION. FOR WINTER STABILIZATION, HAY MULCH IS APPLIED AT TWICE THE STANDARD TEMPORARY STABILIZATION RATE. AT THE END OF EACH CONSTRUCTION DAY, AREAS THAT HAVE BEEN BROUGHT TO FINAL GRADE MUST BE STABILIZED. MULCH MAY NOT BE SPREAD ON TOP OF SNOW.
  - B. SEDIMENT BARRIERS. ALL AREAS WITHIN 75 FEET OF A PROTECTED NATURAL RESOURCE MUST BE PROTECTED WITH A DOUBLE ROW OF SEDIMENT BARRIERS.
  - C. DITCH. ALL VEGETATED DITCH LINES THAT HAVE NOT BEEN STABILIZED BY NOVEMBER 1. OR WILL BE WORKED DURING THE WINTER CONSTRUCTION PERIOD, MUST BE STABILIZED WITH AN APPROPRIATE STONE LINING BACKED BY AN APPROPRIATE GRAVEL BED OR GEOTEXTILE UNLESS SPECIFICALLY RELEASED FROM THIS STANDARD BY THE DEPARTMENT.
  - D. SLOPES. MULCH NETTING MUST BE USED TO ANCHOR MULCH ON ALL SLOPES GREATER THAN 8% UNLESS EROSION CONTROL BLANKETS OR EROSION CONTROL MIX IS BEING USED ON THESE
- 9. STORMWATER CHANNELS. DITCHES, SWALES, AND OTHER OPEN STORMWATER CHANNELS MUST BE DESIGNED, CONSTRUCTED, AND STABILIZED USING MEASURES THAT ACHIEVE LONG-TERM EROSION CONTROL. DITCHES, SWALES AND OTHER OPEN STORMWATER CHANNELS MUST BE SIZED TO HANDLE, AT A MINIMUM, THE EXPECTED VOLUME RUN-OFF. EACH CHANNEL SHOULD BE CONSTRUCTED IN SECTIONS SO THAT THE SECTION'S GRADING, SHAPING, AND INSTALLATION OF THE PERMANENT LINING CAN BE COMPLETED THE SAME DAY. IF A CHANNEL'S FINAL GRADING OR LINING INSTALLATION MUST BE DELAYED, THEN DIVERSION BERMS MUST BE USED TO DIVERT STORMWATER AWAY FROM THE CHANNEL, PROPERLY-SPACED CHECK DAMS MUST BE INSTALLED IN THE CHANNEL TO SLOW THE WATER VELOCITY, AND A TEMPORARY LINING INSTALLED ALONG THE CHANNEL TO PREVENT SCOURING. PERMANENT STABILIZATION FOR CHANNELS IS ADDRESSED UNDER APPENDIX A(5)(G) ABOVE.
  - A. THE CHANNEL SHOULD RECEIVE ADEQUATE ROUTINE MAINTENANCE TO MAINTAIN CAPACITY AND PREVENT OR CORRECT ANY EROSION OF THE CHANNEL'S BOTTOM OR SIDE SLOPES.
  - B. WHEN THE WATERSHED DRAINING TO A DITCH OR SWALE IS LESS THAN 1 ACRE OF TOTAL DRAINAGE AND LESS THAN 1/4 ACRE OF IMPERVIOUS AREA, DIVERSION OF RUNOFF TO ADJACENT WOODED OR OTHERWISE VEGETATED BUFFER AREAS IS ENCOURAGED WHERE THE OPPORTUNITY EXISTS.
- 10. <u>SEDIMENT BASINS.</u> SEDIMENT BASINS MUST BE DESIGNED TO PROVIDE STORAGE FOR EITHER THE CALCULATED RUNOFF FROM A 2-YEAR, 24-HOUR STORM OR PROVIDE FOR 3,600 CUBIC FEET OF CAPACITY PER ACRE DRAINING TO THE BASIN. OUTLET STRUCTURES MUST DISCHARGE WATER FROM THE SURFACE OF THE BASIN WHENEVER POSSIBLE. EROSION CONTROLS AND VELOCITY DISSIPATION DEVICES MUST BE USED IF THE DISCHARGING WATERS ARE LIKELY TO CREATE EROSION. ACCUMULATED SEDIMENT MUST BE REMOVED AS NEEDED FROM THE BASIN TO MAINTAIN AT LEAST 1/2 OF THE DESIGN CAPACITY OF THE BASIN. THE USE OF CATIONIC TREATMENT CHEMICALS, SUCH AS POLYMERS, FLOCCULANTS, OR OTHER CHEMICALS THAT CONTAIN AN OVERALL POSITIVE CHARGE DESIGNED TO REDUCE TURBIDITY IN STORMWATER MUST RECEIVE PRIOR APPROVAL FROM THE DEPARTMENT. WHEN REQUESTING APPROVAL TO USE CATIONIC TREATMENT CHEMICALS, YOU MUST DESCRIBE APPROPRIATE CONTROLS AND IMPLEMENTATION PROCEDURES TO ENSURE THE USE WILL NOT LEAD TO A VIOLATION OF WATER QUALITY STANDARDS. IN ADDITION. YOU MUST SPECIFY THE TYPE(S) OF SOIL LIKELY TO BE TREATED ON THE SITE, CHEMICALS TO BE USED AND HOW THEY ARE TO BE APPLIED AND IN WHAT QUANTITY, ANY MANUFACTURER'S RECOMMENDATIONS, AND ANY TRAINING HAD BY PERSONNEL WHO WILL HANDLE AND APPLY THE CHEMICALS.
- 11. ROADS. GRAVEL AND PAVED ROADS MUST BE DESIGNED AND CONSTRUCTED WITH CROWNS OR OTHER MEASURES, SUCH AS WATER BARS, TO ENSURE THAT STORMWATER IS DELIVERED IMMEDIATELY TO ADJACENT STABLE DITCHES, VEGETATED BUFFER AREAS, CATCH BASIN INLETS, OR STREET GUTTERS.
- 12. CULVERTS. CULVERTS MUST BE SIZED TO AVOID UNINTENDED FLOODING OF UPSTREAM AREAS OR FREQUENT OVERTOPPING OF ROADWAYS. CULVERT INLETS MUST BE PROTECTED WITH APPROPRIATE MATERIALS FOR THE EXPECTED ENTRANCE VELOCITY, AND PROTECTION MUST EXTEND AT LEAST AS HIGH AS THE EXPECTED MAXIMUM ELEVATION OF STORAGE BEHIND THE CULVERT. CULVERT OUTLET DESIGN MUST INCORPORATE MEASURES, SUCH AS APRONS, TO PREVENT SCOUR OF THE STREAM CHANNEL. OUTLET PROTECTION MEASURES MUST BE DESIGNED TO STAY WITHIN THE CHANNEL LIMITS. THE DESIGN MUST TAKE ACCOUNT OF TAILWATER DEPTH.
- 13. PARKING AREAS. PARKING AREAS MUST BE CONSTRUCTED TO ENSURE RUNOFF IS DELIVERED TO ADJACENT SWALES, CATCH BASINS, CURB GUTTERS, OR BUFFER AREAS WITHOUT ERODING AREAS DOWNSLOPE. THE PARKING AREA'S SUB-BASE COMPACTION AND GRADING MUST BE DONE TO ENSURE RUNOFF IS EVENLY DISTRIBUTED TO ADJACENT BUFFERS OR SIDE SLOPES. CATCH BASINS MUST BE LOCATED AND SET TO PROVIDE ENOUGH STORAGE DEPTH AT THE INLET TO ALLOW INFLOW OF PEAK RUNOFF RATES WITHOUT BY-PASS OF RUNOFF TO OTHER AREAS.
- 14. ADDITIONAL REQUIREMENTS. ADDITIONAL REQUIREMENTS MAY BE APPLIED ON A SITE-SPECIFIC BASIS.





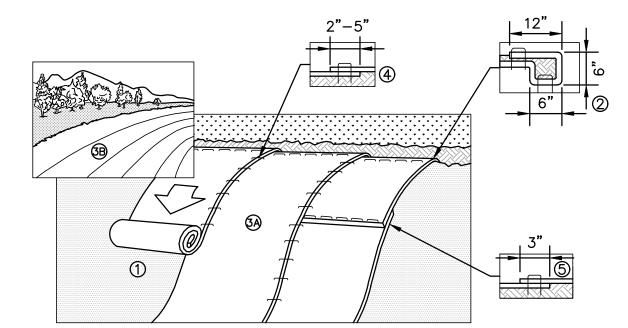
### **SILT SOCK NOTES:**

- 1. SILT SOCK SHALL BE INSTALLED BEFORE ANY EARTH REMOVAL OR EXCAVATION TAKES PLACE.
- 2. INSTALL SILT SOCK AROUND ALL MATERIAL STOCKPILES.
- 3. MAINTENANCE SHALL BE PERFORMED AS NEEDED, AND THE MATERIAL REMOVED WHEN "BULGES" DEVELOP. DO NOT DEPOSIT THE MATERIAL NEAR WETLANDS OR WATERCOURSES.



### SILT SOCK EROSION CONTROL DETAIL

SCALE: NONE



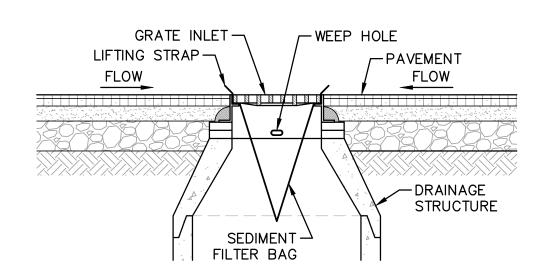
### SLOPE PROTECTION INSTALLATION NOTES:

- PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED. NOTE: WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
- 2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN A 6" DEEP X 6" WIDE TRENCH WITH APPROXIMATELY 12" OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE BLANKET.
- ROLL THE BLANKETS (A.) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE. BLANKETS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING OPTIONAL DOT SYSTEM, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
- 4. THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 2"-5" OVERLAP DEPENDING ON BLANKET TYPE. TO ENSURE PROPER SEAM ALIGNMENT, PLACE THE EDGE OF THE OVERLAPPING BLANKET (BLANKET BEING INSTALLED ON TOP) EVEN WITH THE COLORED SEAM STITCH ON THE PREVIOUSLY INSTALLED BLANKET.
- 5. CONSECUTIVE BLANKETS SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" OVERLAP. STAPLE THROUGH OVERLAPPED AREA. APPROXIMATELY 12"APART ACROSS ENTIRE BLANKET WIDTH.
- 6. IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY SECURE THE BLANKETS.
- 7. INSTALL PRODUCT IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.



### **SLOPE PROTECTION EROSION CONTROL MATTING DETAIL**

SCALE: NONE



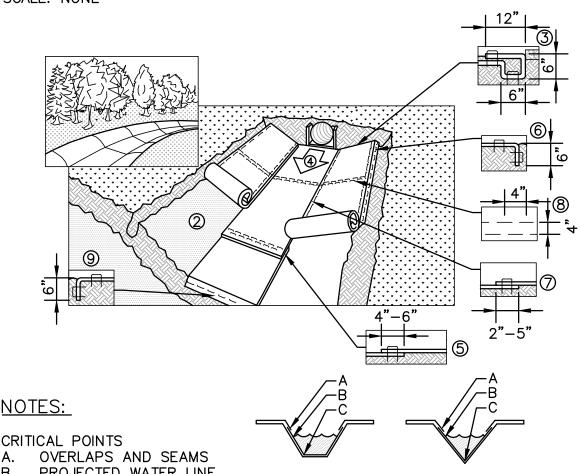
### **INLET PROTECTION NOTES:**

- 1. THE SEDIMENT FILTER BAG SHALL BE DESIGNED FOR CATCH BASIN INLET PROTECTION. FILTER FABRIC IS NOT AN ACCEPTABLE SEDIMENT FILTER BAG.
- 2. REMOVE DRAINAGE INLET GRATE AND PLACE SEDIMENT FILTER BAG AROUND THE FRAME, REPLACE GRATE AND SEDIMENT FILTER BAG IN POSITION OR FOLLOW MANUFACTURER'S RECOMMENDATIONS. LIFTING STRAPS SHALL BE EXPOSED AND READY FOR MAINTENANCE PROCEDURES.
- INSPECT SEDIMENT FILTER BAG WEEKLY AND AFTER EVERY RAINFALL EVENT.
- 4. REPLACE, CLEAN OR REMOVE SEDIMENT FILTER BAG AS DIRECTED.



### INLET PROTECTION DETAIL

SCALE: NONE



- CRITICAL POINTS
- PROJECTED WATER LINE C. CHANNEL BOTTOM/SIDE SLOPE VERTICES
- \*\* HORIZONTAL STAPLE SPACING SHOULD BE ALTERED IF NECESSARY TO ALLOW STAPLES TO SECURE THE CRITICAL POINTS ALONG THE CHANNEL SURFACE.
- \*\* IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15cm) MAY BE NECESSARY TO PROPERLY ANCHOR THE BLANKETS

### CHANNEL INSTALLATION NOTES:

- 1. INSTALL PRODUCT IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS
- 2. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED. NOTE: WHEN USING CELL-O-SEED, DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH THE PAPER SIDE DOWN.
- 3. BEGIN AT THE TOP OF THE CHANNEL BY ANCHORING THE BLANKET IN A 6" DEEP X 6" WIDE TRENCH WITH APPROXIMATELY 12" OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF BLANKET OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE BLANKET.
- 4. ROLL CENTER BLANKET IN DIRECTION OF WATER FLOW IN BOTTOM OF CHANNEL BLANKETS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING OPTIONAL DOT SYSTEM, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
- 5. PLACE CONSECUTIVE BLANKETS END OVER END (SHINGLE STYLE) WITH A 4"-6" OVERLAP. USE A DOUBLE ROW OF STAPLES STAGGERED 4" APART AND 4"(10") ON CENTER TO SECURE BLANKETS.
- 6. FULL-LENGTH EDGE OF BLANKETS AT TOP OF SIDE SLOPES MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN A 6"DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
- 7. ADJACENT BLANKETS MUST BE OVERLAPPED APPROXIMATELY 2"-5" (DEPENDING ON BLANKET TYPE) AND STAPLED TO ENSURE PROPER SEAM ALIGNMENT, PLACE THE EDGE OF THE OVERLAPPING BLANKET (BLANKET BEING INSTALLED ON TOP) EVEN WITH THE COLORED SEAM STITCH ON THE BLANKET BEING OVERLAPPED.
- 8. IN HIGH FLOW CHANNEL APPLICATIONS, A STAPLE CHECK SLOT IS RECOMMENDED AT 30' TO 40' INTERVALS. USE A DOUBLE ROW OF STAPLES STAGGERED 4" APART AND 4" ON CENTER OVER ENTIRE WIDTH OF CHANNEL.
- 9. THE TERMINAL END OF THE BLANKETS MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN A 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.



### CHANNEL EROSION CONTROL MATTING DETAIL

SCALE: NONE

SHAWN TOBEY

ARED AS VICE AND PERTY OF NOT BE SEMINATED X MAY FOR HAN THIS WRITTEN TANNER.

ates

S C ser

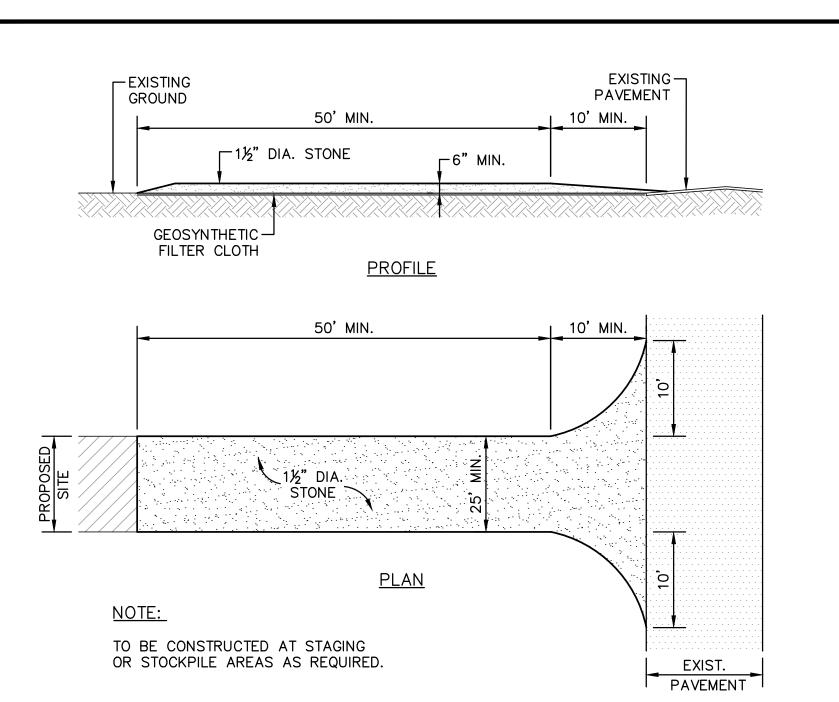
OY As

ပ် မှူ ≚

CONSTRUCTION **DETAILS 1** 

PROJECT NO. 569200

SHEET 19 OF 25



### STABILIZED CONSTRUCTION ENTRY DETAIL

SCALE: NONE

### 1. EACH BALE SHALL BE EMBEDDED IN THE SOIL A MINIMUM OF 4". 2. BALES SHALL BE SECURELY ANCHORED IN PLACE BY STAKES OR REBARS DRIVEN THROUGH THE BALES. THE FIRST STAKE IN EACH BALE SHALL BE ANGLED TOWARDS A PREVIOUSLY LAID BALE TO FORCE BALES TOGETHER. INSPECTION SHALL BE FREQUENT AND REPAIR STAKED STRAW OR REPLACEMENT SHALL BE MADE PROMPTLY BALES AS NEEDED. 4. BALES SHALL BE REMOVED WHEN THEY HAVE FLOW SERVED THEIR USEFUL-NESS SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE. -EXISTING GROUND

STRAW BALE CHECK DAM NOTES:

-OVERLAP BALES

FOR H-20 LOADING.

SHALL BE 0.12 SQ.IN. PER LINEAR FOOT IN ALL SECTIONS AND SHALL

BE IN THE CENTER OF THE WALL.

THE JOINT SHALL CONTAIN ONE

REINFORCEMENT EQUAL TO 0.12

USED TO REACH DESIRED DEPTH.

12" MAXIMUM RISER HEIGHT.

SUPPORT H-20 LOADINGS.

LINE OF CIRCUMFERENTIAL

SQ.IN. PER LINEAR FOOT.

BITUMASTIC SEAL.

STRUCTURE SHALL BE DESIGNED TO

DAYS.

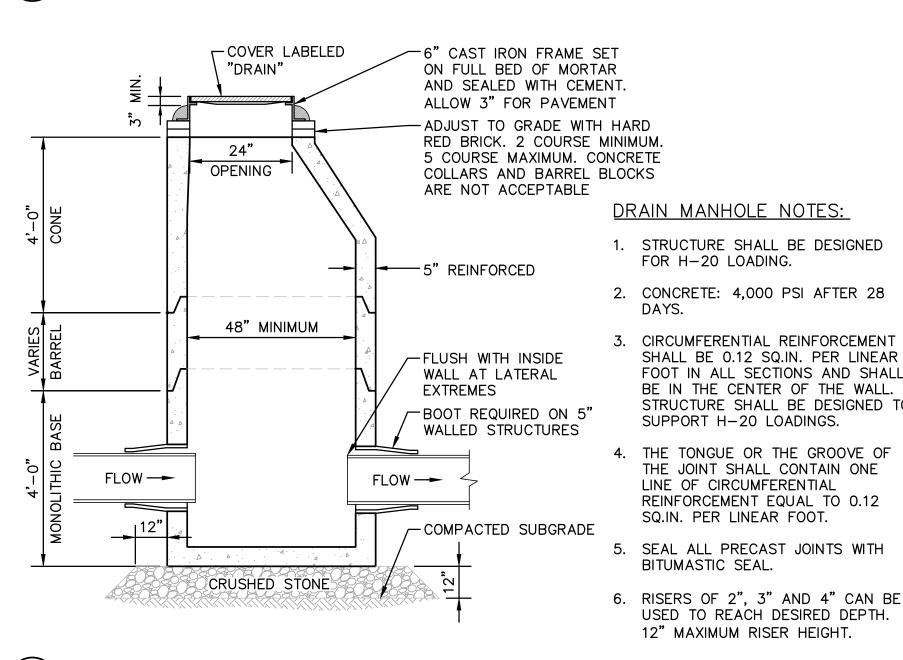
**ELEVATION** 

<u>PLAN</u>

**DRAIN MANHOLE DETAIL** 

SCALE: NONE

SCALE: NONE



STRAW BALE CHECK DAM DETAIL (AS NEEDED)

CENTER OF STONE CHECK DAMS SHALL BE 2"-3"ø CLEAN MIN. 6" BELOW SIDES WASHED STONE DRAINAGE WAY SECTION

-MIRAFI 140N OR EQUAL

### DRAINAGE WAY PROFILE 1. THE CONTRACTOR SHALL USE STONE CHECK DAMS AS NEEDED FOR TEMPORARY EROSION CONTROL L = THE DISTANCE SUCH THAT THE

ELEV. A = ELEV. B.

2. REMOVE CHECK DAMS AFTER SITE IS STABILIZED.

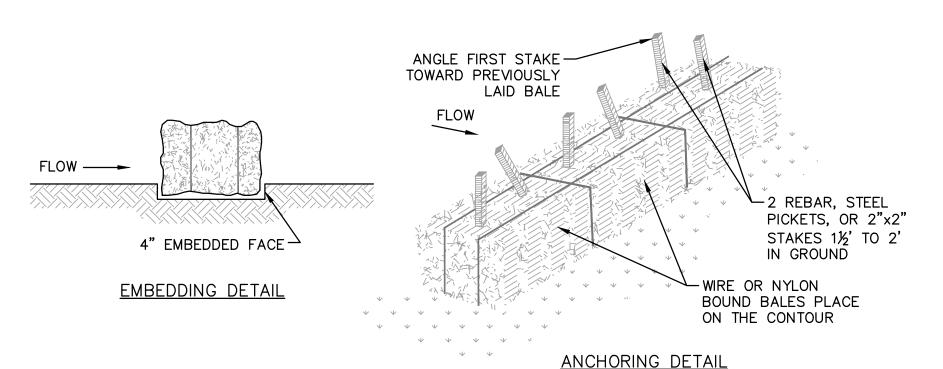
DURING CONSTRUCTION.

CHECK DAM SPACING

NOTES:

### STONE CHECK DAM DETAIL (AS NEEDED)

SCALE: NONE

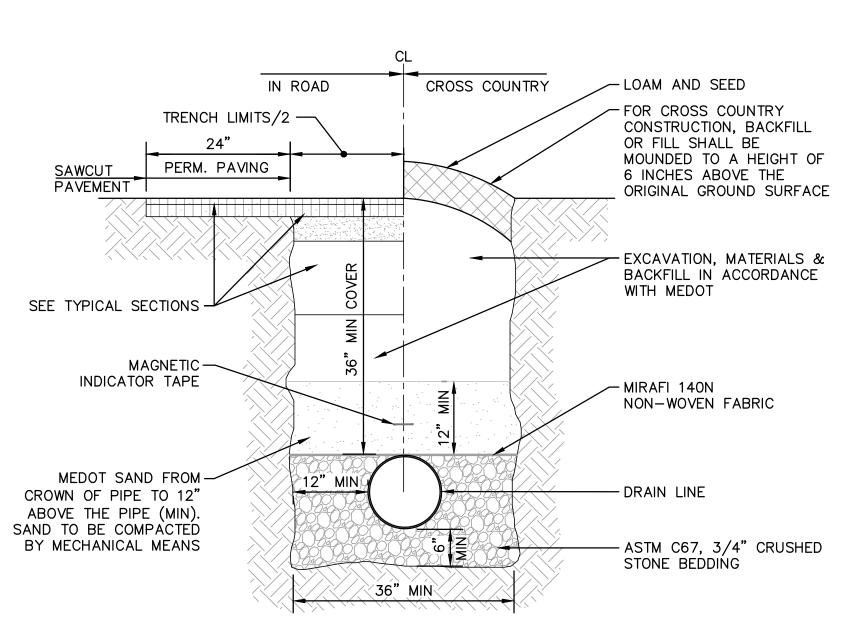


### STRAW BALE NOTES:

- 1. BALES SHALL BE PLACED IN A ROW WITH ENDS TIGHTLY ABUTTING THE ADJACENT BALES.
- 2. BALES SHALL BE SECURELY ANCHORED IN PLACE BY STAKES OR REBARS DRIVEN THROUGH THE BALES. THE FIRST STAKE IN EACH BALE SHALL BE ANGLED TOWARDS A PREVIOUSLY LAID BALE TO FORCE BALES TOGETHER.
- 3. INSPECTION SHALL BE FREQUENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
- 4. BALES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFUL-NESS SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.

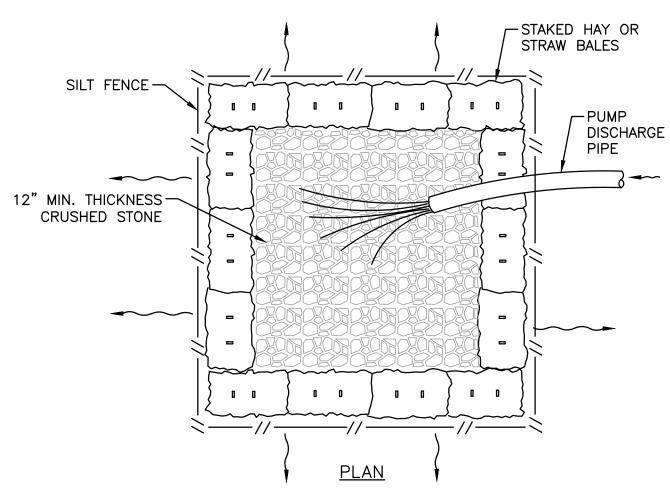
### STRAW BALE DETAIL (AS NEEDED)

SCALE: NONE



### DRAIN TRENCH DETAIL

### SCALE: NONE

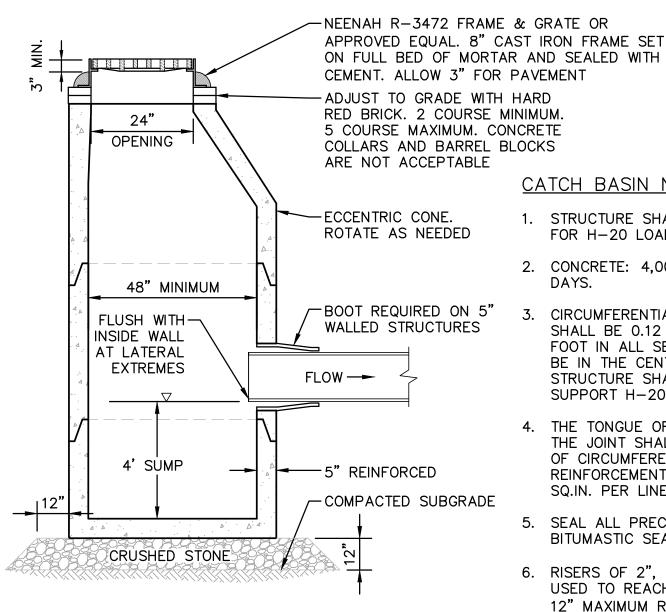


### **DEWATERING PIT NOTES:**

- 1. ADJUST SIZE OF PIT TO MAINTAIN CLEAN NON-EROSIVE WATER DISCHARGE FROM PIT.
- 2. TO BE CONSTRUCTED AT APPROVED UPLAND LOCATIONS.
- 3. TO BE USED FOR PUMPING OPERATIONS DURING DEWATERING,



### **DEWATERING PIT DETAIL**

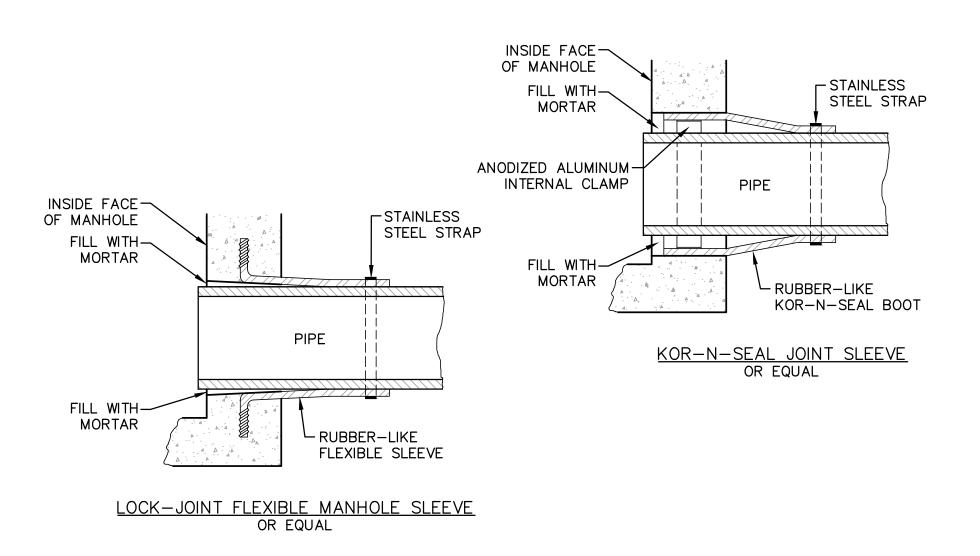


**CATCH BASIN NOTES:** 

- 1. STRUCTURE SHALL BE DESIGNED FOR H-20 LOADING.
- 2. CONCRETE: 4,000 PSI AFTER 28 DAYS.
- . CIRCUMFERENTIAL REINFORCEMENT SHALL BE 0.12 SQ.IN. PER LINEAR FOOT IN ALL SECTIONS AND SHALL BE IN THE CENTER OF THE WALL. STRUCTURE SHALL BE DESIGNED TO SUPPORT H-20 LOADINGS.
- 4. THE TONGUE OR THE GROOVE OF THE JOINT SHALL CONTAIN ONE LINE OF CIRCUMFERENTIAL REINFORCEMENT EQUAL TO 0.12 SQ.IN. PER LINEAR FOOT.
- 5. SEAL ALL PRECAST JOINTS WITH BITUMASTIC SEAL.
- 6. RISERS OF 2", 3" AND 4" CAN BE USED TO REACH DESIRED DEPTH. 12" MAXIMUM RISER HEIGHT.

### **TYPICAL CATCH BASIN DETAIL**

SCALE: NONE





AZTEC, TLAND RO, OSED DEVEL AX MAP CONSTRUCTION

SHAWN

TOBEY

PREPARED AS
SERVICE AND
PROPERTY OF
MAY NOT BE
DISSEMINATED
ANY MANNER,
DNICALLY, FOR
SE THAN THIS
THE WRITTEN

Fannel

Social

Hoyl

**DETAILS 2** 

PROJECT NO. 569200 SHEET 20 OF 25

SCALE: NONE

### WET POND MAINTENANCE NOTES:

- 1. EMBANKMENTS SHOULD BE INSPECTED AT LEAST ANNUALLY BY A QUALIFIED PROFESSIONAL FOR SETTLEMENT, EROSION, SEEPAGE, ANIMAL BURROWS, WOODY VEGETATION, AND OTHER CONDITIONS THAT COULD DEGRADE THE EMBANKMENT AND REDUCE ITS STABILITY FOR IMPOUNDING WATER. IMMEDIATE CORRECTIVE ACTION SHOULD BE IMPLEMENTED IF ANY SUCH CONDITIONS ARE FOUND.
- 2. INLET AND OUTLET PIPES, INLET AND OUTLET STRUCTURES, ENERGY DISSIPATION STRUCTURES OR PRACTICES, AND OTHER STRUCTURAL APPURTENANCES SHOULD BE INSPECTED AT LEAST ANNUALLY BY A QUALIFIED PROFESSIONAL, AND CORRECTIVE ACTION IMPLEMENTED AS INDICATED BY SUCH INSPECTION.
- 3. TRASH AND DEBRIS SHOULD BE REMOVED FROM THE BASIN AND ANY INLET OR OUTLET STRUCTURE WHENEVER OBSERVED BY INSPECTION.
- 4. ACCUMULATED SEDIMENT SHOULD BE REMOVED WHEN IT SIGNIFICANTLY AFFECTS BASIN CAPACITY.
- 5. A MINIMUM SEPARATION OF ONE (1) FOOT IS RECOMMENDED FROM THE BOTTOM OF THE BASIN TO THE TOP OF BEDROCK, OR AN IMPERMEABLE BARRIER (CLAY LAYER OR SYNTHETIC LINER) SHOULD BE PROVIDED.

#### PERMANENT CHANNEL CHANNEL 25-YR SPILLWAY BERM BENCH ELEV. POOL PROTECTION PROTECTION STORM PEAK ELEV. ELEV. ELEV. POND VOLUME VOLUME ELEV. C ELEV. D 7,507 C.F 46.0 53.3 18,313 C.F. 54.4 55.82 55.85 57.1 52.5 12,916 C.F. 53.3 5,590 C.F 54.84 54.85 56.0 45.0 29,209 C.F. 50.6 13,516 C.F. 52.43 52.43 53.75 44.0 49.5

OUTLET CONTROL -

12" COMPACTED

IMPERMEABLE SILTY

CLAY LAYER FROM

**EXISTING MATERIAL** 

LOCATED ONSITE

6' WIDE BERM-

STRUCTURE. SEE DETAIL

8' WIDE BENCH-

UNDERDRAIN GRAVEL

TRENCH. SEE DETAIL

√ 25−YR STORM PEAK=D

PERMANENT

POOL

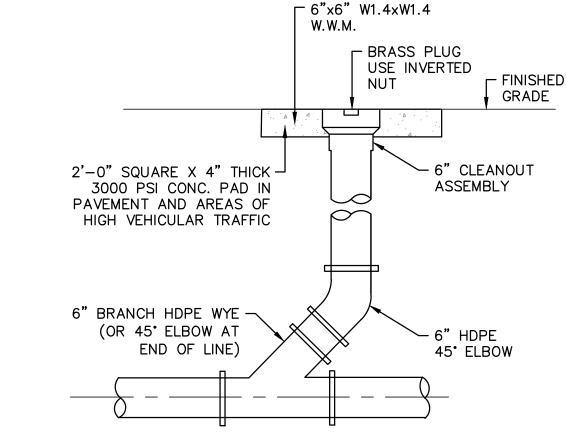
BOTTOM=A

TYPICAL SECTION

8' WIDE BENCH 2'-0' <sub>I</sub> 4'-0' 2'-0' UNDERDRAIN GRAVEL TRENCH SEE POND DETAIL FOR ELEVATION ·CLEAN WELL-DRAINED GRAVEL CONFORMING TO MAINE DOT SPECIFICATION 703.22 TYPE B UNDERDRAIN BACKFILL -NON-WOVEN GEOTEXTILE FABRIC. 6" RIGID PVC SLOTTED-OVERLAP SEAMS A UNDERDRAIN PIPE MINIMUM OF 12"

**UNDERDRAIN GRAVEL TRENCH DETAIL** 

SCALE: NONE



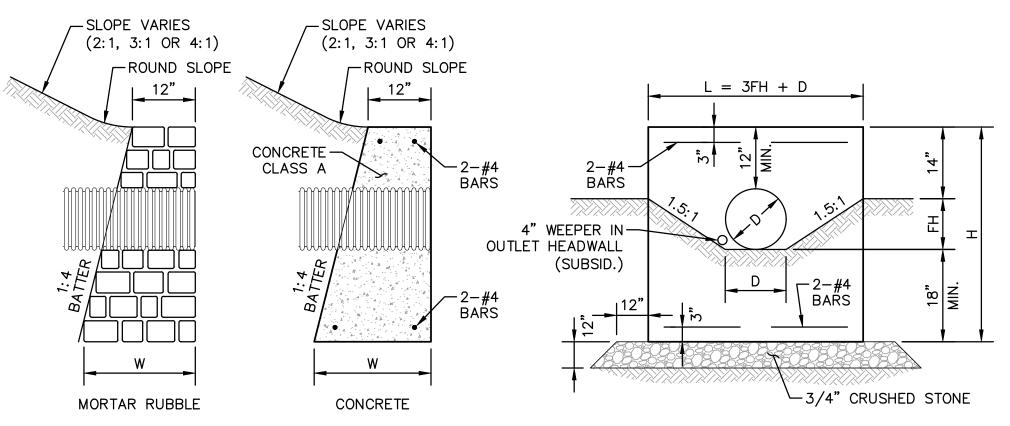
**DRAIN CLEANOUT DETAIL** 

SCALE: NONE

BALLAST FOOTING-

### **WET POND CROSS SECTION**

SCALE: NONE



-4" LOAM

\_

AND SEED

-HEADWALL

-INSTALL UNDERDRAIN ON

THE UPHILL SIDE OF OF

GROUNDWATER. DRAIN TO

DAYLIGHT ON EACH SIDE

PONDS TO INTERCEPT

OF PONDS.

-SEDIMENT

FOREBAY

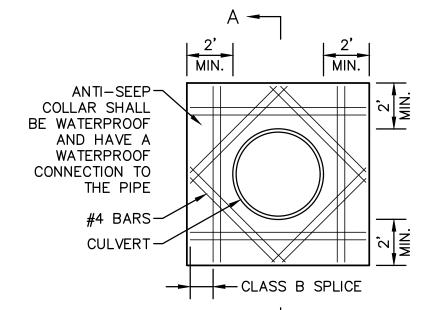
### SECTION ON CENTERLINE

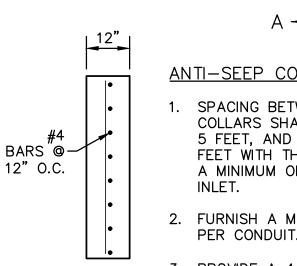
### **ELEVATION VIEW**

DIAMETER D INCHES	MASONRY PER FOOT OF WALL CU. YD	MASONRY PER STANDARD HEADER CU. YD	STEEL PER STANDARD HEADER LB.	LENGTH OF BARS	EXC. FOR 1' DEPTH CU. YD.	HEADER LENGTH L	HEADER HEIGHT H	FILL HEGHT <b>FH</b>	WIDTH AT BOTTOM OF HEADER W
12	0.186	0.61	9	3'-2"	0.789	3'-6"	3'-6"	0'-10"	0'-10½"
15	0.202	0.85	11	3–10	0.947	4-6	3–9	1-1	1-111/4
18	0.222	1.13	14	5-2	1.111	5-6	4-0	1-4	2-0
24	0.260	1.78	20	7–2	1.451	7–6	4-6	1–10	2-11/2
30	0.301	2.58	25	9-2	1.810	9-6	5-0	2-4	2-3
36	0.344	3.53	31	11-2	2.187	11-6	5-6	2-10	2-41/2

### **CONCRETE OR MORTAR RUBBLE HEADWALL DETAILS**

SCALE: NONE





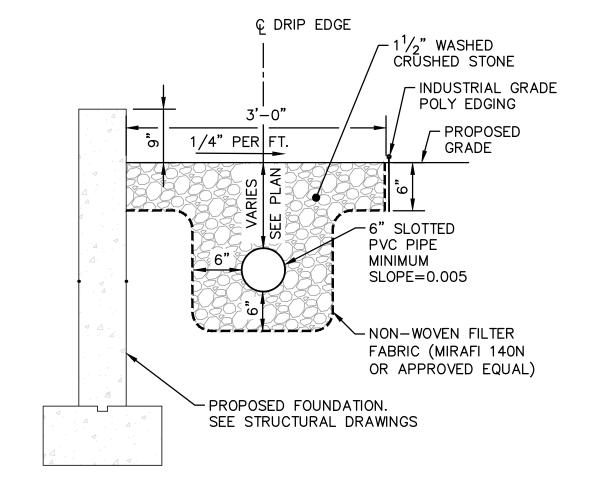
ANTI-SEEP COLLAR NOTES: SPACING BETWEEN ADJACENT COLLARS SHALL BE A MINIMUM OF 5 FEET, AND A MAXIMUM OF 28 FEET WITH THE FIRST COLLAR BEING A MINIMUM OF 5 FEET FROM THE

. FURNISH A MINIMUM OF 2 COLLARS PER CONDUIT.

3. PROVIDE A 4,000 PSI (MIN.) CONCRETE MIX.

### ANTI-SEEP DRAIN COLLAR DETAIL

SCALE: NONE



### TYPICAL DRIP EDGE INFILTRATION DETAIL

SCALE: NONE

#### SPILLWAY OPENING - SPILLWAY POND BERM SIDE SLOPE WIDTH=C ELEV=B — TOP OF EMERGENCY SPILLWAY ELEV=A FILTER FABRIC --6" GRAVEL BASE -RIP-RAP COMPACTED SUBGRADE -SECTION VIEW 6' WIDE BERM TOP OF EMERGENCY-SPILLWAY -TOP OF

BERM=F

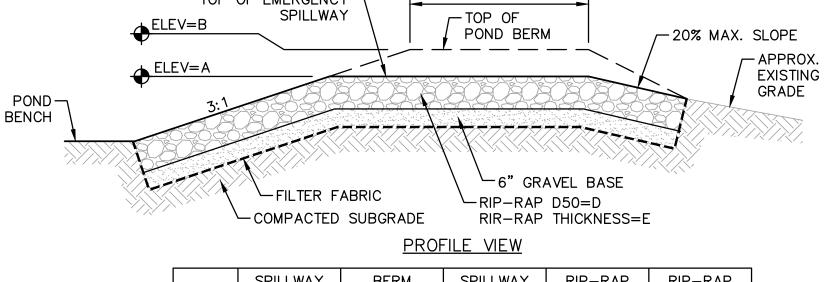
SPILLWAY=E

-EMERGENCY SPILLWAY

SEE DETAIL

−4" LOAM

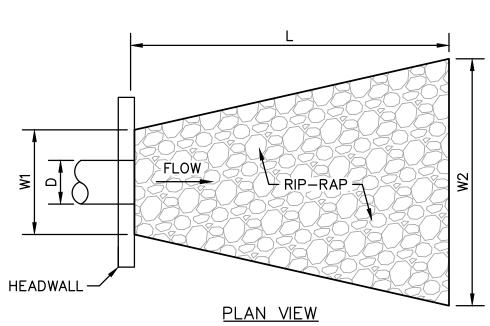
AND SEED



		PROF	TLE VIEW		
WET POND	SPILLWAY ELEV. <b>A</b>	BERM ELEV. <b>B</b>	SPILLWAY WIDTH FT C	RIP-RAP D50 <b>D</b>	RIP-RAP THICKNESS E
1	55.85	57.1	30	6"	12"
2	54.85	56.0	30	6"	12"
3	52.45	53.75	55	8"	16"

### **EMERGENCY SPILLWAY DETAIL**

SCALE: NONE



		TA	BLE	OF	DIM	1ENS	SION	S
		D (IN)	W1 (FT)	L (FT)	W2 (FT)	T (IN)		RIP-RAP VOLUME (C.Y.)
	HW1	18	4.5	17	11	12	6	4.8
	HW2	18	4.5	14	10	12	6	3.8
FLOW	HW3	24	6	16	12	12	6	5.6
) RIP-RAP S	HW5	36	9	27	20	12	6	14.7
	HW6	12	3	10	7	12	6	1.7
	HW7	18	4.5	16	11	12	6	4.5
	HW8	36	9	28	20	12	6	15.2
PLAN VIEW	HW9	24/36	15	22	24	12	6	16.2

#### □ D50 = AVERAGE STONE <sup>∠</sup>EXISTING DIAMETER -OUTLET GROUND T, MIN. STONE FILL SEE PLAN 6" GRAVEL-EXISTING FLOW BEDDING GROUND -MARAFI 140N CROSS SECTION NON-WOVEN

### RIP-RAP NOTE

ALL RIP-RAP SHALL BE PROTECTED FROM RECEIVING SEDIMENT RUNOFF DURING THE CONSTRUCTION PROCESS. THE CONTRACTOR SHALL ENSURE THAT ALL RIP-RAP IS CLEAN AND FREE OF SEDIMENT AT THE COMPLETION OF THE PROJECT.

### GEOTEXTILE FABRIC STONE LINED OUTLET PROTECTION DETAIL SCALE: NONE

-GRATE TOPS SHALL BE FASTENED DOWN TO PRECAST CONCRETE STRUCTURE. FASTENERS SHALL BE GALVANIZED OR STAINLESS STEEL. OPENINGS IN TOP GRATE SHALL BE A MAXIMUM OF 2"X3". 6-0" GALVANIZED -TOP OF POND-TOP GRATE ELEV=C 5'x5' STRUCTURE GALVANIZED -BOLT ON SIDE WALL GRATE ORIFICE/NOTCH ELEV=B POND BENCH-48" SQUARE INTERIOR -6"X4" REDUCER ON END OF PIPE \_\_4" GATE VALVE 6" RIGID PVC SLOTTED -SEE NOTE 5 UNDERDRAIN PIPE FLOW — OUTLET PIPE-ELEV=D FLOW ---6" UNDERDRAIN -SEAL WITH ELEV=ANON-SHRINK GROUT 12" OF ¾"— STONE BEDDING

### **OUTLET STRUCTURE NOTES:**

1. ALL CEMENT CONCRETE TO BE 4,000 PSI (MIN.).

<u>SECTION</u>

- 2. GALVANIZED STEEL GRATE SHALL BE BOLTED TO TOP OF STRUCTURE.
- 3. ALL OPENINGS SHALL BE CAST IN AS REQUIRED.
- PRECAST REINFORCED CONCRETE STRUCTURE TO MEET ASTM C-478 DESIGNATION AND H-20 LOADING.
- THE 4" GATE VALVE CONNECTED TO THE UNDERDRAIN SHALL BE ADJUSTED TO THE PROVIDE THE SQ. IN. OPENING SHOWN IN THE TABLE BELOW TO PROVIDE A CHANNEL PROTECTION VOLUME DRAIN DOWN TIME OF GREATER THAN 24 HOURS.

WET POND	UNDERDRAIN INV.IN <b>A</b>	GATE VALVE OPENING	ORIFICE/ NOTCH INV.IN <b>B</b>	ORIFICE/ NOTCH SIZE	TOP GRATE <b>C</b>	OUTLET PIPE INV.OUT D	OUTLET PIPE SIZE
1	50.7	1.11 SQ. IN.	54.4	10"X15.6"	55.7	50.6	24"
2	49.8	0.76 SQ. IN.	53.3	5"	54.7	49.7	24"
3	46.6	1.9 SQ. IN.	50.6	15"X16.8"	52.25	46.5	36"

OUTLET ST

SCALE: NONE

RUCTURE AT DETENTION POND	

PROJECT NO. 569200 SHEET 21 OF 25

CONSTRUCTION

**DETAILS 3** 

SHAWN

TOBEY

PREPARED AS
SERVICE AND
PROPERTY OF
MAY NOT BE
DISSEMINATED
ANY MANNER,
DNICALLY, FOR
SE THAN THIS
THE WRITTEN

THIS DOCUMENT IS PAN INSTRUMENT OF SHALL REMAIN THE PHOYLE, TANNER. IT NUSED, REPRODUCED, INCLUDING ELECTRON ANY OTHER PURPOSE PROJECT, WITHOUT PERMISSION OF HOYL

Fannel

INSIDE FACE-

FILL WITH-

MORTAR

FILL WITH-

MORTAR

INSIDE FACE-

FILL WITH-

ANODIZED-

**ALUMINUM** 

FILL WITH

MORTAR

INTERNAL CLAMP

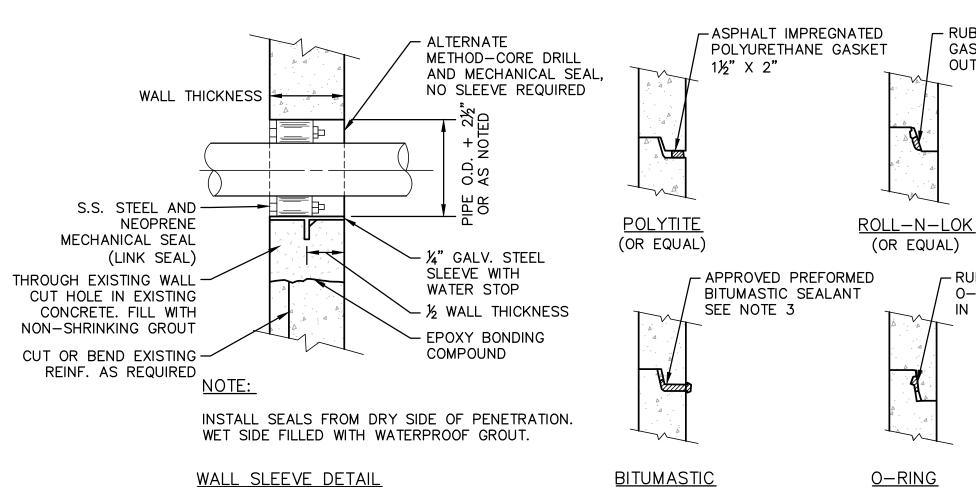
MORTAR

OF MANHOLE

OF MANHOLE

### **SEWER TRENCH DETAIL**

SCALE: NONE



- STAINLESS

STEEL STRAP

- STAINLESS

STEEL STRAP

ALL GASKETS AND SEALANTS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS.

RUBBER—LIKE

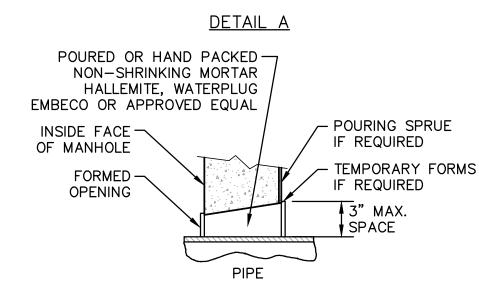
GASKET ROLLS

- RUBBER-LIKE

O-RING SET

IN RECESS

OUT OF RECESS



### SLEEVE AND GASKET NOTES:

NOTE:

HORIZONTAL JOINTS BETWEEN SECTIONS OF PRECAST CONCRETE BARRELS SHALL BE OF A TYPE APPROVED BY THE ENGINEER, WHICH TYPE SHALL, IN GENERAL, DEPEND FOR WATERTIGHTNESS UPON AN ELASTOMERIC OR MASTIC-LIKE GASKET.

NON-SHRINKING MORTAR

(SEE NOTE 4)

- 2. PIPE TO MANHOLE JOINTS SHALL BE ONLY AS APPROVED BY THE ENGINEER AND IN GENERAL, WILL DEPEND FOR WATERTIGHTNESS UPON ELASTOMERIC SEALANT.
- 3. FOR BITUMASTIC TYPE JOINTS THE AMOUNT OF SEALANT SHALL BE SUFFICIENT TO FILL AT LEAST 75% OF THE JOINT CAVITY.
- 4. NON-SHRINKING MORTAR SHALL ONLY BE USED WHERE SPECIFICALLY APPROVED BY THE ENGINEER.

### KOR-N-SEAL JOINT SLEEVE OR EQUAL

PIPE

<u>LOCK-JOINT FLEXIBLE MANHOLE SLEEVE</u>

OR EQUAL

- RUBBER-LIKE

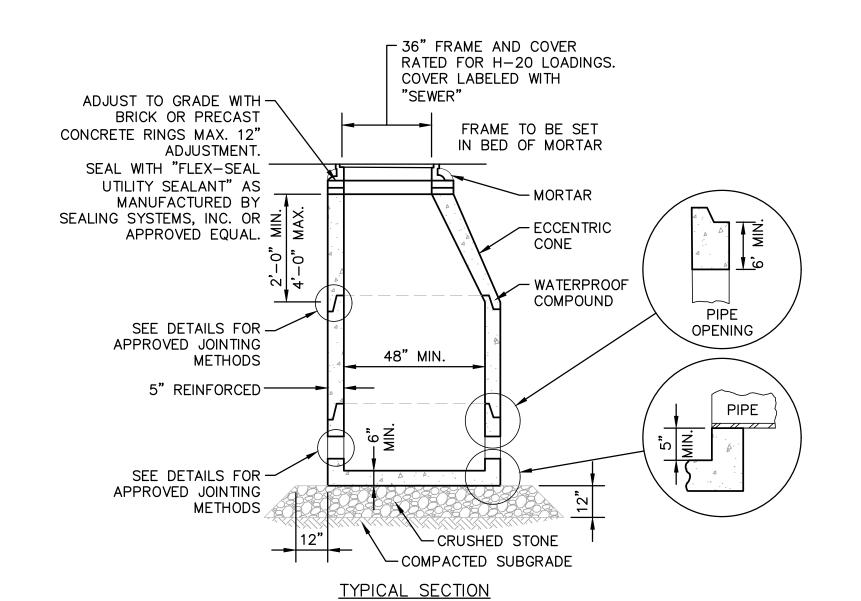
FLEXIBLE SLEEVE

- RUBBER-LIKE

KOR-N-SEAL BOOT

### **SEWER MANHOLE JOINT AND PIPE CONNECTION DETAILS**

SCALE: NONE



### **SEWER NOTES:**

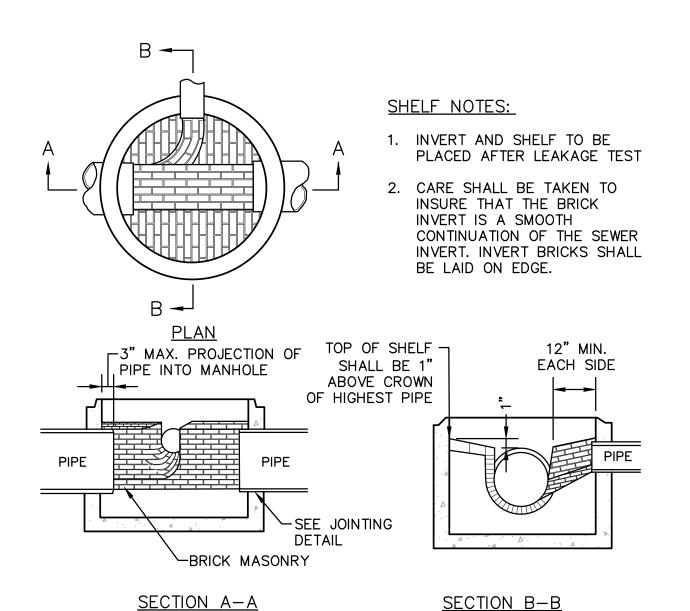
- MANHOLES: THE MANHOLE, INCLUDING ALL COMPONENT PARTS, SHALL HAVE ADEQUATE SPACE, STRENGTH AND LEAKPROOF QUALITIES CONSIDERED NECESSARY FOR THE INTENDED SERVICE SPACE REQUIREMENTS AND CONFIGURATIONS, SHALL BE SHOWN ON THE DRAWING. MANHOLES MAY BE AN ASSEMBLY OF PRECAST SECTIONS WITH STEEL REINFORCEMENT, WITH ADEQUATE JOINTING. IN ANY APPROVED MANHOLE, THE COMPLETE STRUCTURE SHALL BE OF SUCH MATERIAL AND QUALITY AS TO WITHSTAND LOADS OF 8 TONS (H-20 LOADING) WITHOUT FAILURE AND PREVENT LEAKAGE IN EXCESS OF ONE GALLON PER DAY PER VERTICAL FOOT OF MANHOLE, CONTINUOUSLY FOR THE LIFE OF THE STRUCTURE. A PERIOD GENERALLY IN EXCESS OF 25 YEARS IS TO BE UNDERSTOOD IN BOTH CASES.
- 2. INVERTS AND SHELVES: MANHOLES SHALL HAVE A BRICK PAVED SHELF AND INVERT, CONSTRUCTED TO CONFORM TO THE SIZE OF PIPE AND FLOW. AT CHANGES IN DIRECTION, THE INVERTS SHALL BE LAID OUT IN CURVES OF THE LONGEST RADIUS POSSIBLE TANGENT TO THE CENTER LINE OF THE SEWER PIPES. SHELVES SHALL BE CONSTRUCTED TO THE ELEVATION OF THE HIGHEST PIPE CROWN AND SLOPE TO DRAIN TOWARD THE FLOWING THROUGH CHANNEL. UNDERLAYMENT OF INVERT AND SHELF SHALL CONSIST OF BRICK MASONRY.
- 3. SHALLOW MANHOLE: IN LIEU OF A CONE SECTION, WHEN MANHOLE DEPTH IS LESS THAN 6 FEET, A REINFORCED CONCRETE SLAB COVER SHALL BE USED, WHERE INDICATED, HAVING AN ECCENTRIC ENTRANCE OPENING AND CAPABLE OF SUPPORTING H-20 LOADS. SEE DETAILS.
- 4. RISER SECTION: THE RISER SECTION SHALL HAVE THE EXTERIOR WRAPPED WITH WRAPIDSEAL MANHOLE ENCAPSULATION SYSTEM AS MANUFACTURED BY CCI PIPE PROTECTION PRODUCTS OR APPROVED EQUAL.

### MANHOLE NOTES:

- 1. BASE SECTION TO BE FULL WALL THICKNESS AND MONOLITHIC TO A POINT 6" ABOVE THE PIPE CROWN.
- 2. THERE SHALL BE NO STEPS IN ANY OF THE SEWER MANHOLES

### STANDARD SANITARY SEWER MANHOLE DETAIL

### SCALE: NONE



### STANDARD SANITARY SEWER BRICK INVERT DETAILS

SCALE: NONE

#### \_ APPROVED SLEEVE SEAL SEAL WITH -SEE STANDARD TOP TO BE NON-SHRINK MANHOLE LEFT OPEN MORTAR **DETAILS** IF CROSS IS - INLET USED EE OR CROSS SEWER OR OPEN FOR -HOUSE/BLDG ACCESS SERVICE END CAP CUT IN HALF FLOW CALDER STYLE -COUPLING STAINLESS -STEEL ANCHOR STRAPS AND

 $0.8 \times PIPE DIA. (D1)^{2}$ 

SHAWN

TOBEY

PREPARED AS
SERVICE AND
PROPERTY OF
MAY NOT BE
DISSEMINATED
ANY MANNER,
DNICALLY, FOR
SE THAN THIS
THE WRITTEN

ates, Inc

- COF

### INVERT DETAIL AT SIDE DROPS

### **INLET DROP MANHOLE NOTES:**

- 1. DROP DIAMETER (D2) TO MATCH INLET DIAMETER (D2)
- 2. MANHOLES SHALL BE CONSTRUCTED IN ACCORDANCE WITH MEDOT STANDARDS FOR SANITARY MANHOLE CONSTRUCTION.
- 3. INSIDE DROP MANHOLES SHALL HAVE A MINIMUM 5'-0" INSIDE DIAMETER.
- 4. DROP REQUIRED WHEN INVERT DIFFERENTIAL EXCEEDS 2 VERTICAL
- 5. ANCHOR STRAPS AND BOLTS TO BE STAINLESS STEEL AND NOT MORE STONE BEDDING. THAN 2 FEET ON CENTER. SEE STANDARD

### STRAPS - 2 IN. WIDE BOLTS - ½ IN. x 2½ IN. LONG

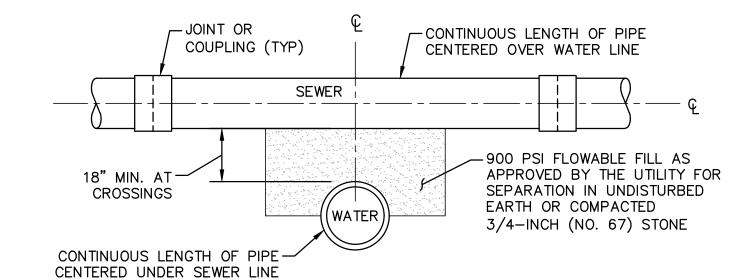


ACCESSORIES

BRICK SHELF

### **INLET DROP SEWER MANHOLE DETAIL**

SCALE: NONE



- 90° ELBOW

IN INVERT

MANHOLE

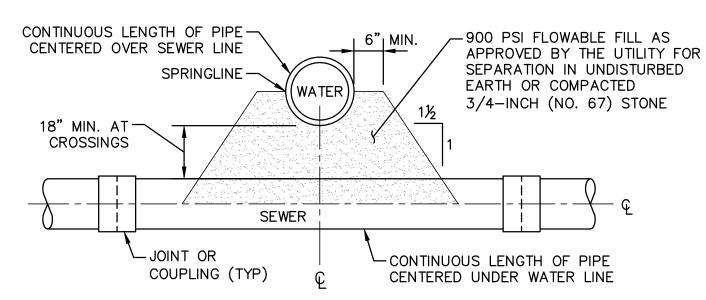
DETAILS

COMPACTED

(WITH BELL

REMOVED) SET

### WATER CROSSING UNDER SEWER



WATER CROSSING OVER SEWER

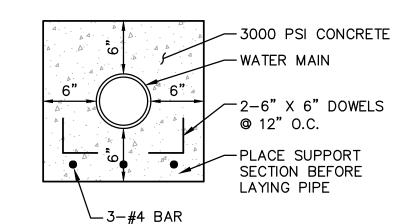
### **CROSSING NOTES:**

- 1. SEE PLAN AND PROFILE FOR CROSSING LOCATIONS,
- 2. IF A CONTINUOUS LENGTH OF PIPE CANNOT BE CENTERED AT THE CROSSING OR IF 18" VERTICAL SEPARATION CANNOT BE ACHIEVED, THE LOWER PIPE SHALL BE INCASED IN CONCRETE 10'-0" IN EACH DIRECTION (SEE DETAIL). THE CONCRETE IS SUBSIDIARY TO THE PIPE INSTALLATION. CONTACT ENGINEER FOR DIRECTION BEFORE PROCEEDING IF THIS SITUATION IS ENCOUNTERED.



### **WATER/SEWER PIPE CROSSING DETAIL**

SCALE: NONE



### **ENCASEMENT NOTES:**

- 1. CONCRETE ENCASEMENT OF UTILITY PIPE WILL BE REQUIRED AS SHOWN ON THE PLANS OR WHEN UTILITY CROSSING REQUIREMENTS CANNOT BE MET.
- 2. CONCRETE ENCASEMENT SHALL EXTEND 10'-0" MIN. ON EACH SIDE OF UTILITY CROSSING



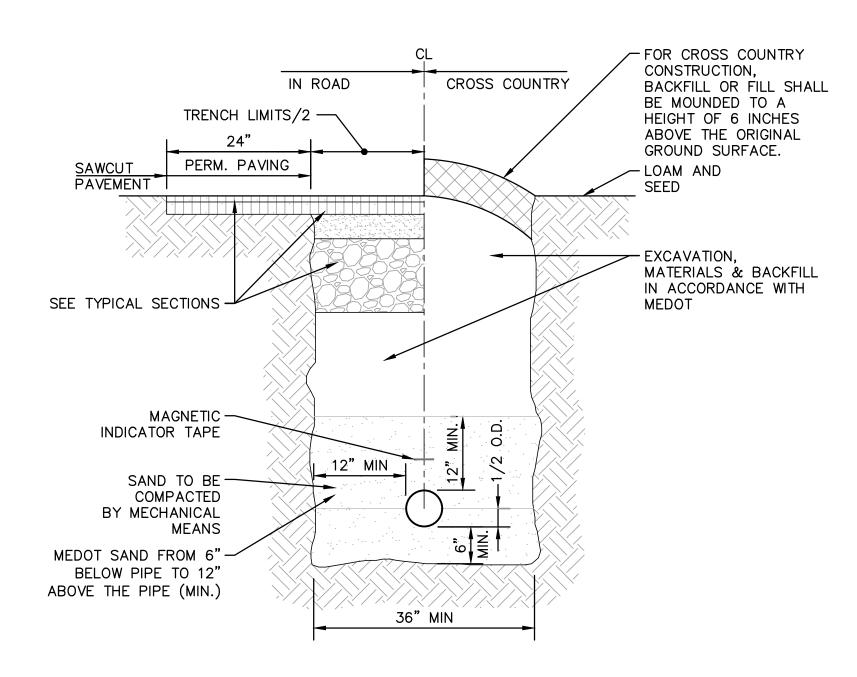
### **CONCRETE ENCASEMENT DETAIL**

SCALE: NONE

CONSTRUCTION **DETAILS 4** 

PROJECT NO. 569200

SHEET 22 OF 25

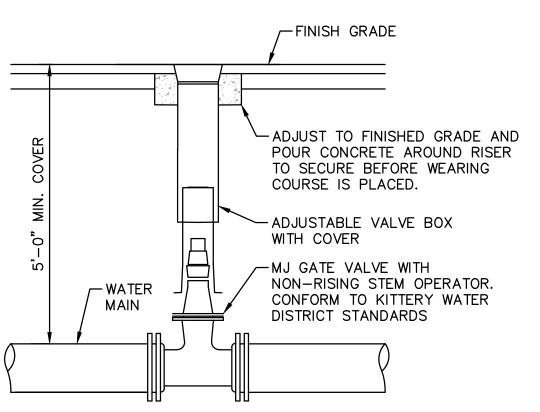


### **WATERLINE TRENCH NOTES:**

- 1. APPROVED MATERIAL: SHALL BE NATURAL MATERIAL EXCAVATED DURING THE COURSE OF CONSTRUCTION, BUT SHALL EXCLUDE DEBRIS, PIECES OF PAVEMENT, ORGANIC MATTER, TOPSOIL, CLUMPS MORE THAN 3" DIA., ALL EXCAVATED LEDGE ROCK, STUMPS OR ANY MATERIAL WHICH, AS DETERMINED BY THE ENGINEER, WILL NOT PROVIDE SUFFICIENT SUPPORT OR MAINTAIN THE COMPLETED CONSTRUCTION IN A STABLE CONDITION.
- 2. SEWER AND WATER PIPING RUNNING APPROXIMATELY PARALLEL MUST BE SEPARATED BY A HORIZONTAL DISTANCE OF TEN FEET MINIMUM.
- 3. WATER MAINS ARE TO HAVE A MINIMUM COVER OF 5'-0" FT.

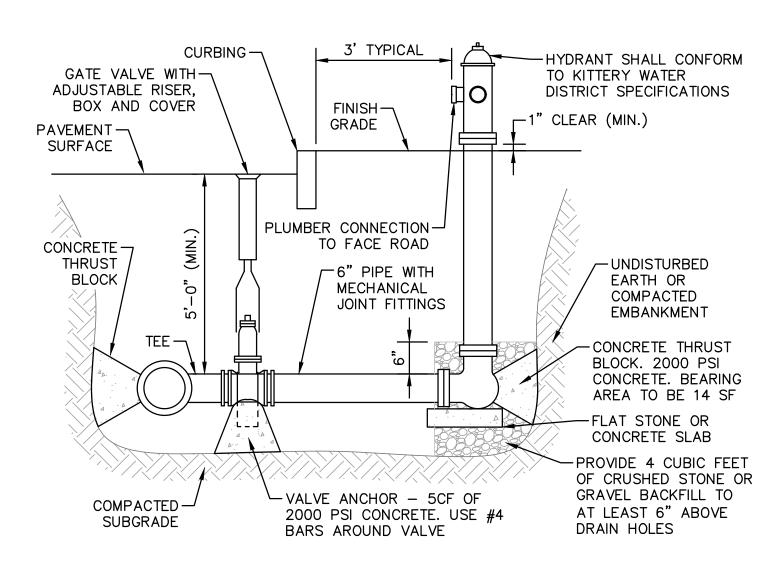
### WATER LINE TRENCH DETAIL

SCALE: NONE



### 4 GATE VALVE DETAIL

C23 SCALE: NONE



### TIRE HYDRANT ASSEMBLY DETAIL

SCALE: NONE



**SECTION VIEW** 

C23 SCALE: NONE

# 7 TYPICAL LIGHT BASE POLE DETAILS C23 SCALE: NONE

-CONCRETE PATIO

POLYURETHANE

PIPE & CAP

HORIZONTAL BEND

STANDARD BEND

SCALE: NONE

LUMINAIRE

-4" STEEL

r 2'-0" IN PAVEMENT OR

WITHIN 5' OF PAVEMENT

WHEN LIGHT POLE BASE IS

REINFORCED CONCRETE

LIGHT POLE BASE

SEE SITE PLAN

FOR PAVEMENT

LOCATIONS

POLE

**WATER LINE THRUST BLOCK DETAILS** 

BLOCK WRAPPED IN

<u>VERTICAL BEND - SECTION</u>

REACTION TYPE

OTHER TEST

PRESSURES

REACTIONS

FOR THE

ABOVE

### THRUST BOCK NOTES:

-UNDISTURBED

MATERIAL

-#5 REBAR

CONCRETE TO BE

DETERMINED BY

- VOLUME OF

ENGINEER

PIPE SIZE

0.89 | 2.19 | 3.92 | 5.57 | 8.62

0.65 | 1.55 | 2.76 | 4.19 | 6.09

0.25 | 0.60 | 1.08 | 1.54 | 2.37

0.13 | 0.30 | 0.54 | 0.77 | 1.19

TEST PRESSURE TO BE 200 PSI

MINIMUM AT LOW END OF THE

SQUARE FEET OF CONCRETE

THRUST BLOCKING FOR OTHER

TEST PRESSURES IS DIRECTLY PROPORTIONAL TO THE ABOVE

0.48 | 1.19 | 2.12 | 3.01

8"

10"

12"

THRUST BLOCK SCHEDULE

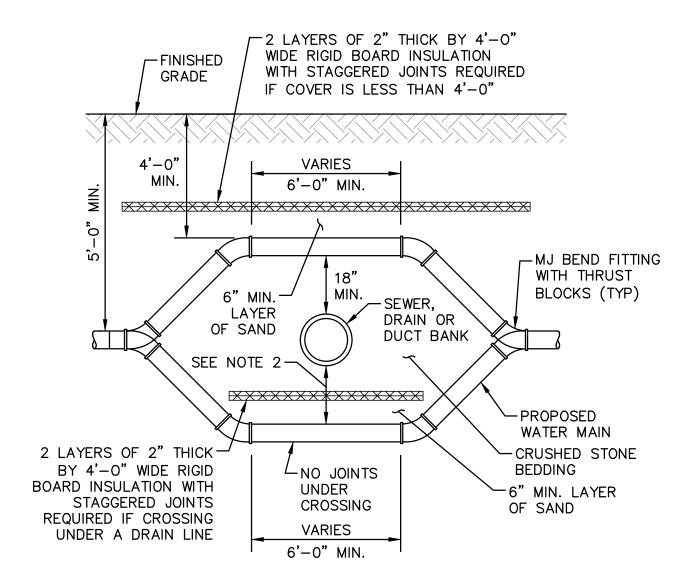
SQUARE FEET OF CONCRETE THRUST

BLOCKING BEARING ON UNDISTURBED MATERIAL

TEST SECTION.

1"-4" | 6"

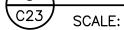
- 1. POUR THRUST BLOCKS AGAINST UNDISTURBED MATERIAL. WHERE TRENCH HAS BEEN DISTURBED, EXCAVATE LOOSE MATERIAL AND EXTEND THRUST BLOCK TO UNDISTURBED MATERIAL. NO JOINTS SHALL BE COVERED WITH CONCRETE.
- 2. ON BENDS AND TEES, EXTEND THRUST BLOCKS FULL LENGTH OF FITTING.
- PLACE CONCRETE PATIO BLOCKS IN FRONT OF ALL PLUGS BEFORE POURING THRUST BLOCK.
- 4. REQUIREMENTS OF THE ABOVE TABLE PRESUME MINIMUM SOIL BEARING OF 1 TON PER SQUARE FOOT AND MAY BE VARIED BY THE ENGINEER TO MEET OTHER CONDITIONS ENCOUNTERED.
- 5. RETAINER GLANDS ARE REQUIRED FOR ALL MECHANICAL JOINTS. THESE GLANDS DO NOT REDUCE THE REQUIREMENTS FOR THRUST RESTRAINT.
- 6. ALL FITTINGS SHALL BE WRAPPED IN POLYETHYLENE OR BUILDING PAPER PRIOR TO INSTALLATION OF CONCRETE RESTRAINT.
- 7. THREADED RODS SHALL BE ANSI
  A242 FY50 PIPE RESTRAINT NUTS TO
  MATCH AIWA C111. THREADED RODS
  AND NUTS TO BE FIELD COATED WITH
  BITUMINOUS PAINT.
- 8. THRUST RESTRAINT IS REQUIRED FOR ALL TEES, BENDS, REDUCERS, CAPS PLUGS, OR CROSSES.
- 9. INSTALL LIFT HOOKS INTO THRUST BLOCKS AT END CAPS AND PLUGS.
- 10. ALL WATERLINE CONSTRUCTION SHALL BE INSTALLED IN ACCORDANCE WITH THE KITTERY WATER DISTRICT SPECIFICATIONS

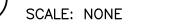


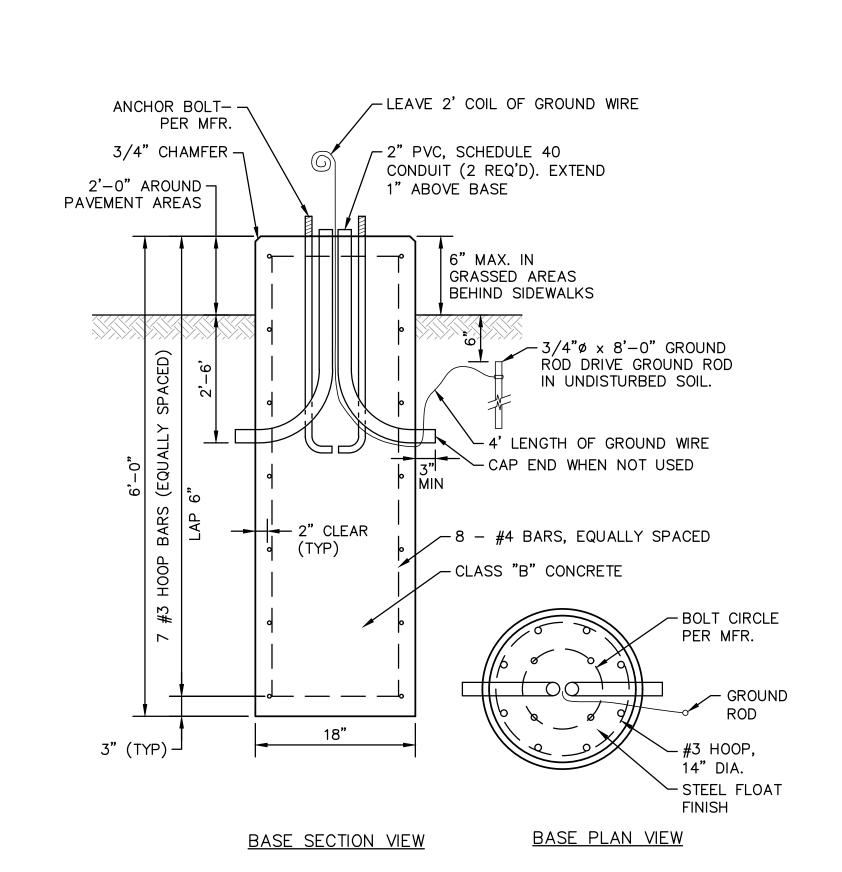
### CROSSING NOTES:

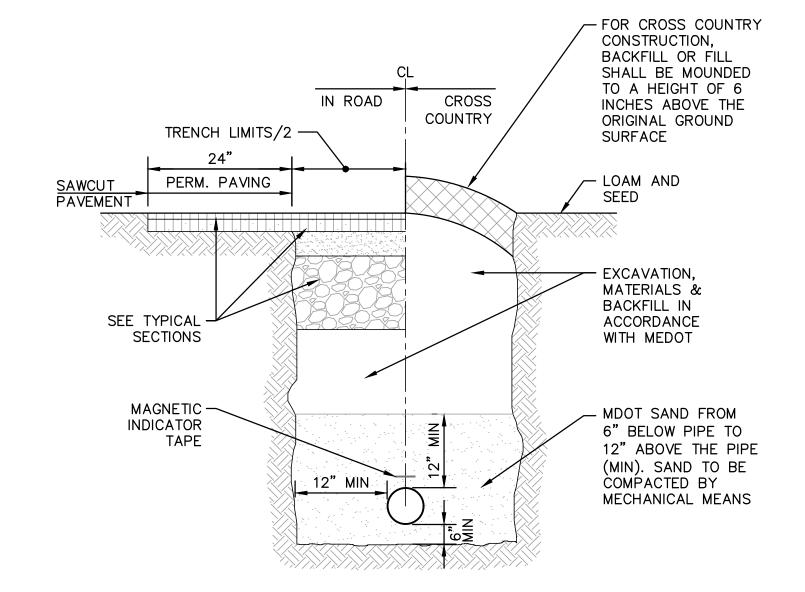
- 1. SEE PLAN AND PROFILE FOR CROSSING LOCATIONS.
- 2. DROP WATER LINE BELOW UTILITY CONFLICT WITH 4 MJ BEND FITTINGS.
- 3. VERTICAL SEPARATION BETWEEN WATER LINES, SEWER LINES AND ALL OTHER UTILITIES SHALL BE A MINIMUM OF 18".

### 3 WATER UTILITY CONFLICT CROSSING DETAIL









### TRENCH NOTES:

- 1. ELECTRICAL CONDUIT SHALL BE SCHEDULE 40 PVC AND SHALL CONFORM TO THE APPLICABLE SECTIONS OF NEMA TC-2-1990 AND BE UL LISTED.
- 2. ALL PVC CONDUIT JOINTS SHALL BE CEMENTED.
- 3. A SUITABLE PULL CABLE, CAPABLE OF 200 POUNDS OF PULL, MUST BE INSTALLED IN THE ELECTRICAL CONDUIT.
- 4. COORDINATE SIZE OF CONDUIT WITH OWNER.
- 5. DEPTH OF CONDUIT SHALL BE 36" TO INVERT.

8 ELECTRICAL/GAS TRENCH DETAIL
C23 SCALE: NONE

I I			± dana	THIS DOCUMENT IS PREPARED AS	PREPARED AS			
			nal	AN INSTRUMENT OF SERVICE AND SHALL REMAIN THE PROPERTY OF	PROPERTY OF	9	REVISED ENTRANCE & MISCELLANEOUS REVISIONS PER PLANNING BOARD	09/19/19
Associates	a)	iates inc. Trac		HOYLE, TANNER. II MAY NOT BE USED, REPRODUCED, DISSEMINATED	I MAY NOT BE DISSEMINATED	5	REV. PER PUBLIC HEARING/PLANNING BOARD COMMENTS - ISSUED FOR APPROVAL	08/22/19
100 International Dr, #360, Portsmouth, NH 03801	)r, #	360, Portsmouth, NH 0		OR TRANSFERRED IN ANY MANNER, INCLUDING ELECTRONICALLY, FOR	N ANY MANNER, ONICALLY, FOR	4	ISSUED FOR MAINE DEP SITE LOCATION OF DEVELOPMENT PERMIT	08/07/19
Tel (603) 431-2520 Fax (603) 431-8067 Web: www.hoyletanner.com	431-	-8067 Web: www.hoylet		ANY OTHER PURPOSE THAN THIS PROJECT, WITHOUT THE WRITTEN	THE WRITTEN	3	ISSUED FOR KITTERY PLANNING BOARD — PRELIMINARY PLAN APPROVAL	07/24/19
© Copyright 2019 Hoyle, Tanner & Associates, Inc.	Tann	er & Associates,		PERMISSION OF HOYLE, TANNER.	OYLE, TANNER.	2	ISSUED FOR MAINEDOT TRAFFIC MOVEMENT PERMIT (TMP)	07/02/19
SCALE: OF	R	ORIGINAL DATE:	DESIGNED BY	DESIGNED BY DRAWN BY CHECKED BY	CHECKED BY	-	ISSUED FOR KITTERY PLANNING BOARD — PRELIMINARY PLAN	06/20/19
AS SHOWN	NOC	JUNE 20, 2019	SMT	SMT	WRD	REV.	REVISION DESCRIPTION	DATE

TOBEY

CONSTRUCTION DETAILS 5

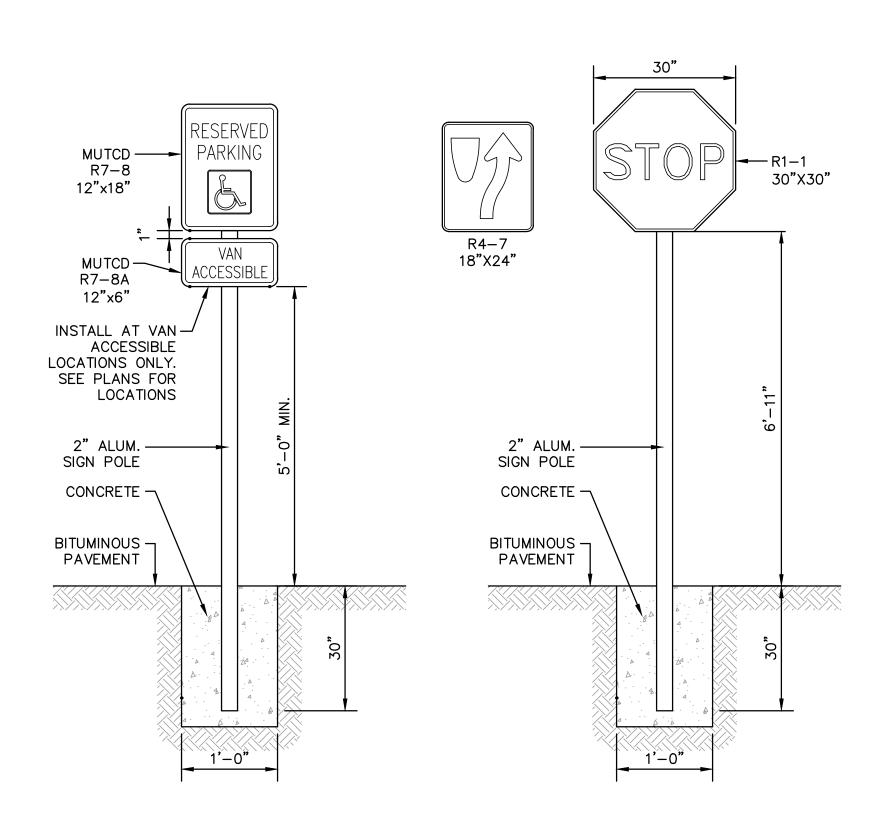
PROJECT NO. 569200 SHEET 23 OF 25

### TRENCH NOTES:

- COORDINATE TRENCH DETAIL WITH ALL UTILITY OWNERS.
- 2. ELECTRICAL CONDUIT SHALL BE SCHEDULE 40 PVC
- 3. ALL PVC CONDUIT JOINTS SHALL BE CEMENTED.
- 4. A SUITABLE PULL CABLE, CAPABLE OF 200 POUNDS OF PULL, MUST BE INSTALLED IN THE ELECTRICAL CONDUIT.
- 5. COORDINATE SIZE AND NUMBER OF CONDUIT WITH UTILITY OWNER.
- 6. DEPTH OF CONDUIT SHALL BE 36" TO INVERT.
- 7. TRENCH WIDTH AS REQUIRED TO MAINTAIN 6" MINIMUM SPACING BETWEEN ALL CONDUITS AND TRENCH SIDEWALLS.

### PRIMARY CIRCUIT W/ TELEPHONE AND/OR CABLE TV ELEC. TRENCH

SCALE: NONE

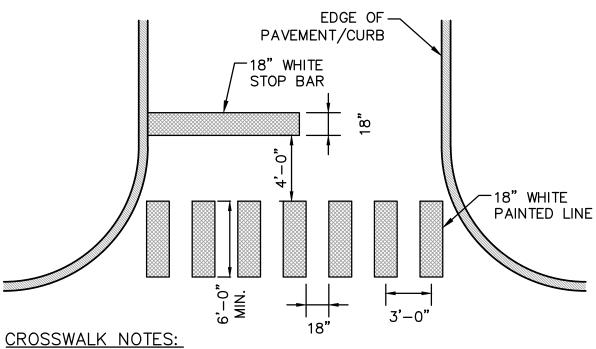


### SIGN NOTES:

- 1. ALL SIGNAGE SHALL BE IN CONFORMANCE WITH THE CURRENT EDITION OF THE M.U.T.C.D.
- 2. ACCESSIBLE PARKING SIGN TO BE INSTALLED AT HEAD OF ALL DESIGNATED PARKING SPACES.
- 3. REFER TO SITE PLANS FOR TYPE OF SIGN AND SIGN INSTALLATION LOCATIONS.

### SCALE: NONE

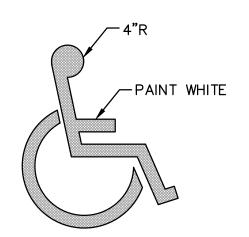
**TYPICAL SIGN MOUNTING DETAILS** 



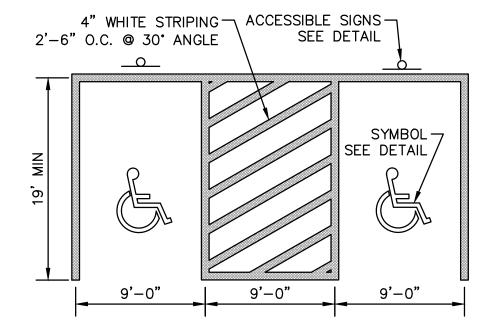
- 1. CROSSWALK LINES SHALL BE CENTERED TO AVOID WHEEL MARKS.
- 2. ALL CROSSWALK LINES TO BE SAME LENGTH AND PROPERLY ALIGNED.
- 3. SEE PLANS FOR THE CROSSWALK LOCATIONS.

### PAINTED CROSSWALK DETAIL

SCALE: NONE



SYMBOL DETAIL

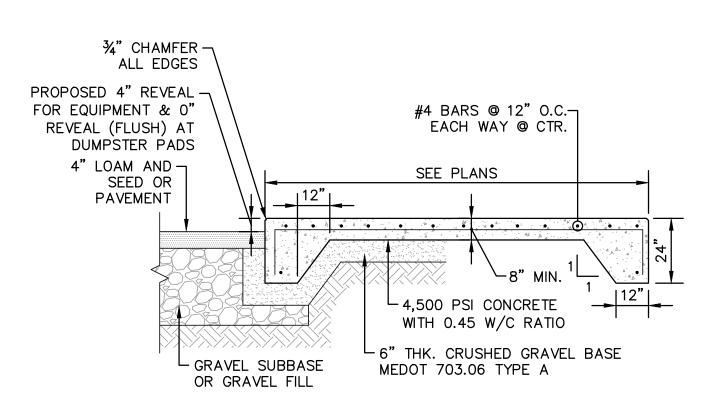


### STALL LAYOUT NOTES:

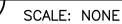
- 1. ALL PAVEMENT MARKINGS SHALL BE IN CONFORMANCE WITH THESE STANDARDS AND THE CURRENT EDITION OF MUTCD.
- 2. WIDTH OF LINES SHALL VARY NO MORE THAN  $\pm$  1/4 INCH FROM THAT SPECIFIED.
- 3. THE WET FILM THICKNESS OF A PAINTED LINE SHALL BE A MINIMUM OF 20 MILS THROUGHOUT THE ENTIRE WIDTH AND LENGTH OF LINE SPECIFIED. OVERSPRAY SHALL BE KEPT TO AN ABSOLUTE MINIMUM.
- 4. BROKEN LINES SHALL BEGIN AND END WITH THE NEAREST FULL CYCLE OF BROKEN LINE.
- 5. SOLID LONGITUDINAL LINES SHALL BEGIN AND END WITHIN  $\pm$  2 INCHES OFF A LAYOUT SYMBOL INDICATING THE END OF THE LINE, OR WITH A FULL CYCLE OF BROKEN LINE (IF APPROPRIATE).

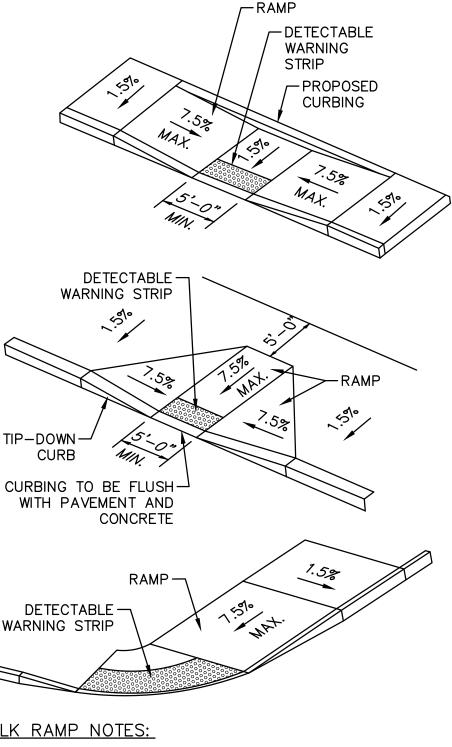
### **ACCESSIBLE PARKING STALL LAYOUT**

SCALE: NONE



### TYPICAL EQUIPMENT PAD & DUMPSTER PAD DETAIL





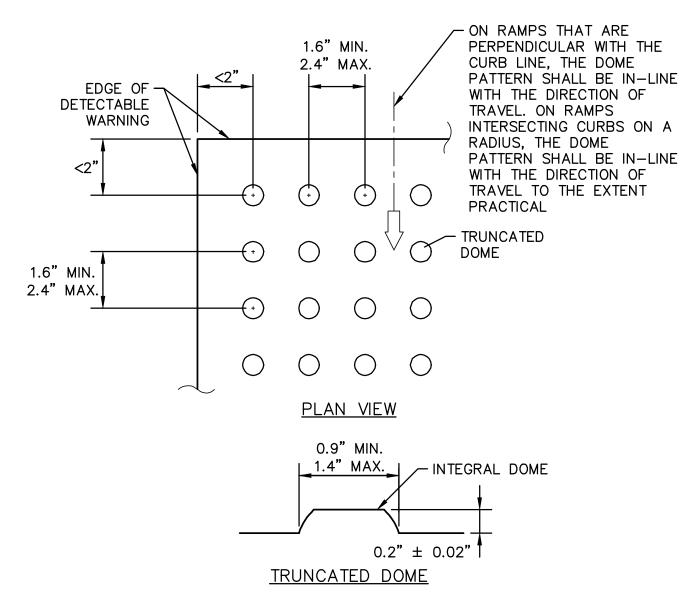
### SIDEWALK RAMP NOTES:

- 1. THE MAXIMUM ALLOWABLE SIDEWALK AND TIP-DOWN RAMP CROSS SLOPE SHALL BE 1.5% (1% MIN.)
- 2. THE MAXIMUM ALLOWABLE SLOPE OF THE ACCESSIBLE ROUTE EXCLUDING TIP-DOWN RAMPS SHALL BE 5%.
- 3. THE MAXIMUM ALLOWABLE SLOPE OF ACCESSIBLE ROUTE AT TIP-DOWN RAMPS SHALL BE 7.5%.
- 4. A MINIMUM OF 3 FEET CLEARANCE SHALL BE PROVIDED BETWEEN ANY PERMANENT OBSTACLE IN ACCESSIBLE ROUTE.
- 5. RAMP, CURB AND ADJACENT PAVEMENTS SHALL BE GRADED TO PREVENT PONDING.
- 6. AN ADA DETECTABLE WARNING TRUNCATED DOME PANEL SHALL FINISH TRANSVERSE THE SLOPE OF THE TIP-DOWN RAMP.DETECTIBLE WARNING PANELS SHALL BE INSTALLED PERPENDICULAR TO THE ACCESSIBLE
- 7. CURBING SHALL BE SET FLUSH WHERE TIP-DOWN RAMP ABUTS PAVEMENT.
- 8. MAINTAIN THE NORMAL GUTTER PROFILE THROUGHOUT THE RAMP AREA. INTERCEPT DRAINAGE ALONG THE CURB IN ADVANCE OF THE RAMP.



### **ACCESSIBLE TIP-DOWN RAMPS**

SCALE: NONE

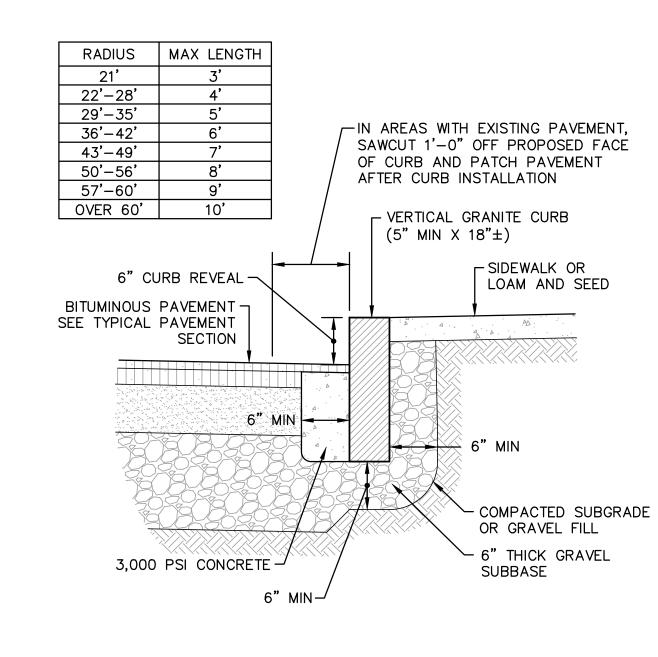


### **DETECTABLE WARNING NOTES:**

- 1. BASE-TO-BASE SPACING SHALL BE 0.65" MINIMUM BETWEEN DOMES.
- 2. ALL SIDEWALK CURB RAMPS SHALL HAVE DETECTABLE WARNING SURFACES THAT EXTEND THE FULL WIDTH OF THE RAMP AND IN THE DIRECTION OF TRAVEL 24 INCHES FROM THE BACK OF CURB.
- 3. THE TOP WIDTH OF THE DOME SHALL BE A MINIMUM OF 50% AND A MAXIMUM OF 65% OF THE BASE DIAMETER.
- 4. WARNING PANELS TO BE CAST IRON AND PAINTED YELLOW.

### TYPICAL DETECTABLE WARNING DETAILS

SCALE: NONE



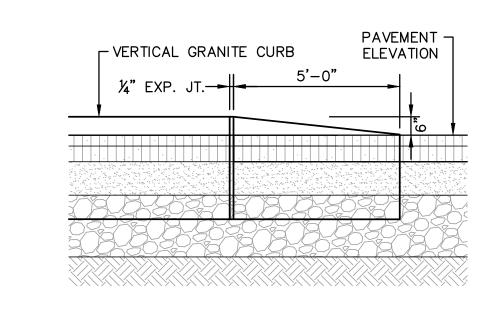
### VERTICAL GRANITE CURB NOTES:

- 1. MINIMUM LENGTH OF CURB STONES 3'
- 2. MAXIMUM LENGTH OF CURB STONES 10'
- 3. MAXIMUM LENGTH OF STRAIGHT CURB STONES LAID ON CURVES SEE CHART.
- 4. ADJOINING STONES SHALL HAVE THE SAME OR APPROXIMATELY THE SAME LENGTH.
- 5. CURB ENDS TO BE TIPPED DOWN.



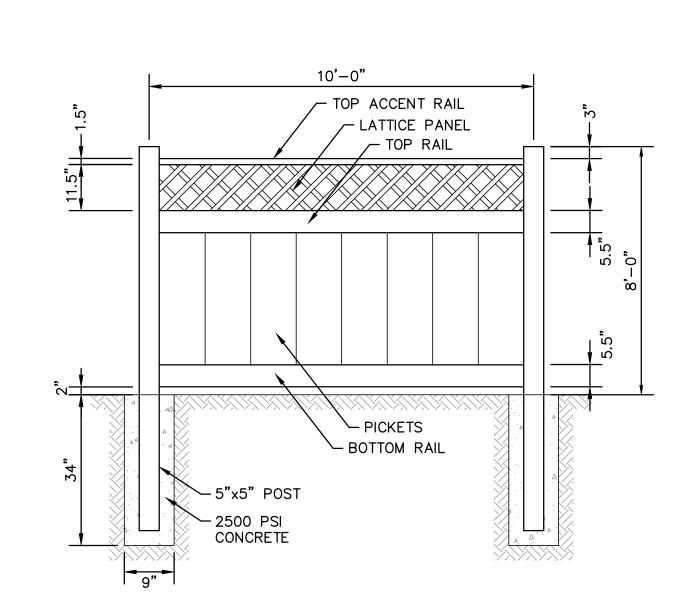
### **VERTICAL GRANITE CURB DETAIL**

SCALE: NONE



### **VERTICAL GRANITE TIP-DOWN DETAIL**

SCALE: NONE



### **DUMPSTER VINYL FENCE DETAIL**

SCALE: NONE

TOBEY

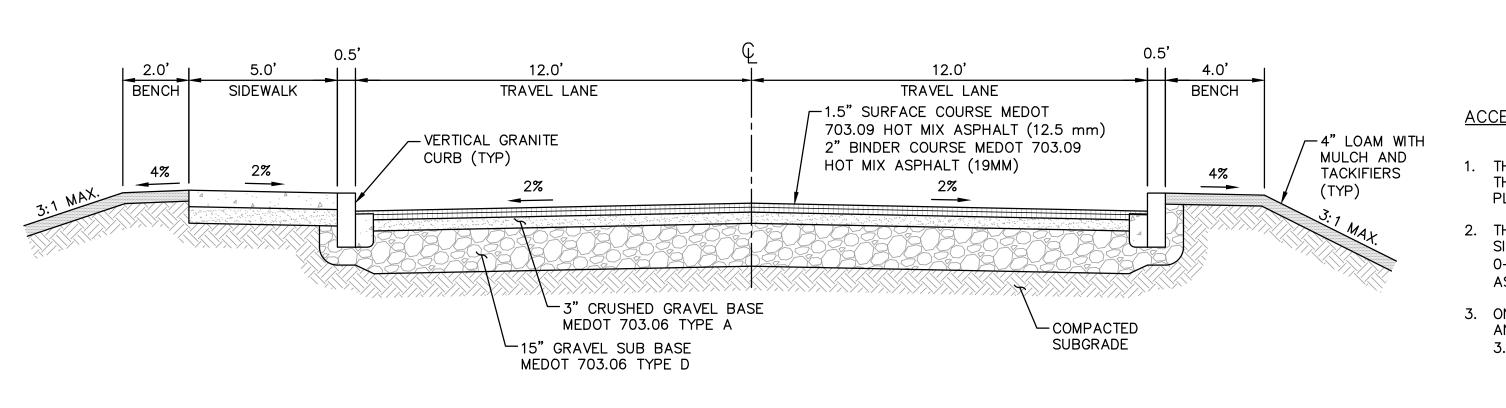
SHAWN

ates, Inc Social

CONSTRUCTION **DETAILS 6** 

PROJECT NO. 569200

SHEET 24 OF 25



### ACCESS DRIVE NOTES:

- THE TRAVEL LANE WIDTHS WIDEN AT THE SIDE ENTRANCE. REFER TO SITE PLANS C8 & C9 FOR DETAILS.
- 2. THE PAVEMENT THICKNESS FOR THE SITE ACCESS DRIVE BETWEEN STATION 0+19.6 AND 9+67.4 SHALL BE 3.5" AS SHOWN IN DETAIL 1/C25.
- 3. ONSITE DRIVE AISLES, TURNAROUND AND PARKING SPACES SHALL BE 3.25" AS SHOWN IN DETAIL 4/C25.

### 14'-0" AT TURNAROUND 3,000 PSI CONCRETE -┌4" LOAM & SEED OR PLANTING. SEE PLANS -MOUNTABLE WEARING COURSE -SLOPED BINDER COURSE -GRANITE CURB (TYP)

6" THICK GRAVEL SUBBASE

COMPACTED SUBGRADE

**SLOPED GRANITE CURB & ISLAND DETAIL** 

OR GRAVEL FILL

WIDTH VARIES, SEE PLANS 10'-0" AT ENTRY

### **SLOPED GRANITE CURB NOTES:**

- 1. MINIMUM LENGTH OF CURB STONES 3'
- 2. MAXIMUM LENGTH OF CURB STONES 10'
- 3. MAXIMUM LENGTH OF STRAIGHT CURB STONES LAID ON CURVES - SEE CHART.
- ADJOINING STONES SHALL HAVE THE SAME OR APPROXIMATELY THE SAME LENGTH.

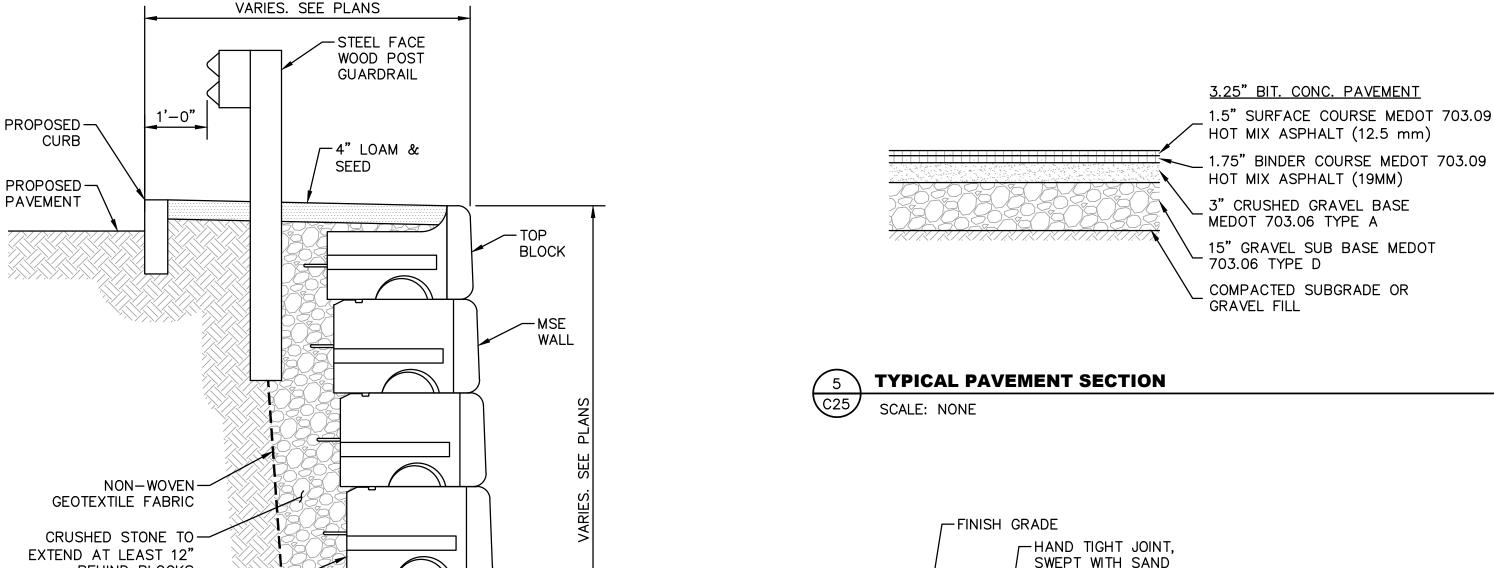
RADIUS	MAX LENGTH
21'	3'
22'-28'	4'
29'-35'	5'
36'-42'	6'
43'-49'	7'
50'-56'	8'
57'-60'	9'
OVER 60'	10'

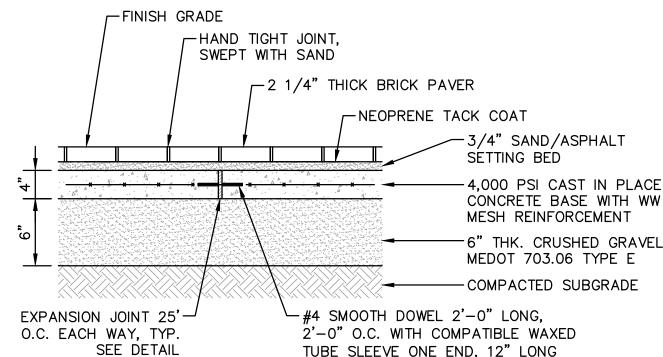
-ROUND CONCRETE TO PREVENT

PONDING WATER

### TYPICAL ACCESS DRIVE SECTION

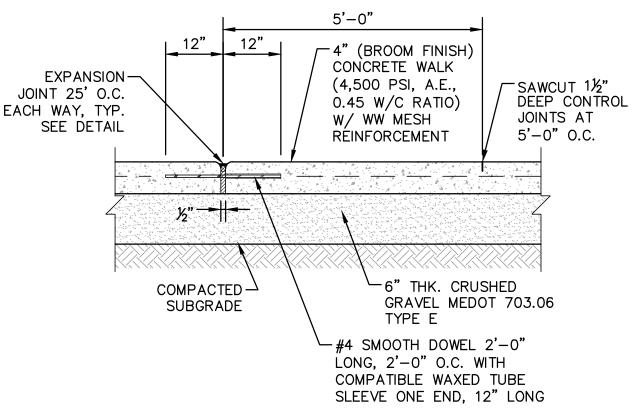
SCALE: NONE





### PEDESTRIAN BRICK PAVEMENT DETAIL

SCALE: NONE

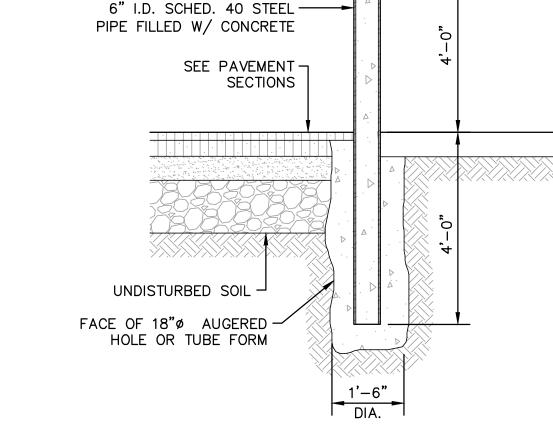


SCALE: NONE

### TYPICAL CONCRETE WALKWAY & JOINT DETAIL

SCALE: NONE

-SHOULDER -POST (TYP) -GUARDRAIL -EDGE OF TRAFFIC PAVEMENT -INSTALL END SECTION PLAN VIEW 2'-0" SHOULDER **GUARDRAIL NOTES:** -EDGE OF 1. ALL MATERIALS AND CONSTRUCTION PAVEMENT REQUIREMENTS SHALL CONFORM TO MEDOT STANDARD SPECIFICATIONS. 2. ALL GUARDRAIL SHALL BE STEEL BEAM GUARD RAIL WITH 6" X 8" WOOD POSTS AND OFFSET BLOCK.



STEEL PIPE BOLLARD DETAIL

SCALE: NONE

SURVEY FLAG

6" TEMPORARY-

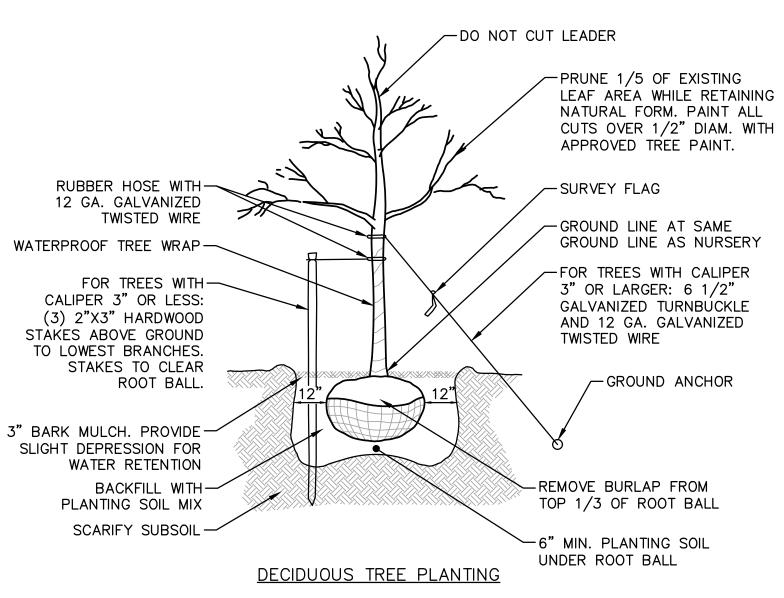
BACKFILL WITH-

SAUCER

### SECTION VIEW

**STEEL FACE WOOD POST GUARDRAIL** 

SCALE: NONE



### DEPRESSION FOR WATER RETENTION -FILTER FABRIC FOR WEED CONTROL. KEEP OUT OF DEPRESSION BACKFILL WITH--REMOVE BURLAP FROM PLANTING SOIL MIX TOP 1/3 OF ROOT BALL SCARIFY SUBSOIL --6" MIN. PLANTING SOIL UNDER ROOT BALL CONIFEROUS TREE PLANTING

# DO NOT CUT LEADER-

IS PRESENT -2" SPACE WITH NO MULCH 3" BARK MULCH

SPRAY WITH WILT PROOF

INSTRUCTIONS IF FOLIAGE

PER MANUFACTURER'S

-12 GA. TWISTED WIRE

AROUND TREE AT 2/3

FROM FINISHED GRADE

IN RUBBER HOSE

HEIGHT OF TREE

-GROUND LINE AT

LINE AS NURSERY

3" BARK MULCH.

PROVIDE SLIGHT

SAME GROUND

PLANTING SOIL MIX SCARIFY SUBSOIL -REMOVE BURLAP FROM TOP 1/3 OF ROOT BALL

> 6" MIN. PLANTING SOIL UNDER ROOT BALL SHRUB PLANTING

SHEET 25 OF 25

### FOR TREES 5' IN HEIGHT OR GREATER:

- 1. PROVIDE (3) 12 GA. GALVANIZED GUY WIRES @ 120 DEGREE SPACING WITH (6) 1/2" GALVANIZED TURNBUCKLE WIRE IN RUBBER HOSE AROUND
- 2. ATTACH TO TREE @ 1/2-2/3 HEIGHT OF TREE ABOVE GRADE.
- 3. ANCHOR WITH 2"X3' HARDWOOD STAKE BURIED BELOW GRADE AND CLEAR OF ROOT BALL.

### FOR TREES LESS THAN 5' IN HEIGHT:

1. PROVIDE (3) 2"X3' HARDWOOD STAKES @ 120 DEGREE SPACING, MIN. 36" IN GROUND AND CLEAR OF ROOT BALL.

### **TYPICAL TREE PLANTING DETAILS**

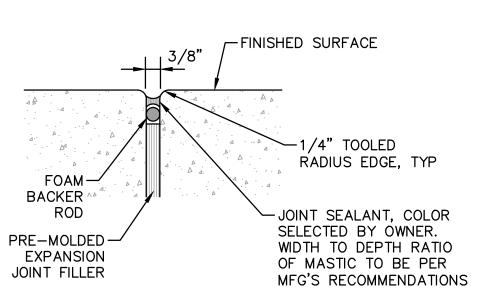
### GEOTEXTILE FABRIC CRUSHED STONE TO EXTEND AT LEAST 12" BEHIND BLOCKS MIDDLE BLOCK (TYP) WIDTHS VARY **─** 4"LOAM W/ DESIGN & SEED RETAINED SOIL-←EXISTING SOLID BOTTOM BLOCK-GRADE BLOCK WIDTHS VARY W/ DESIGN 6"ø DRAIN TO DAYLIGHT

12" LEVELING COURSE -(COMPACTED CRUSHED STONE)

### **WALL NOTES:**

- 1. THIS DETAIL IS FOR REFERENCE ONLY. DETERMINATION OF THE SUITABILITY AND/OR MANNER OF USE OF ANY DETAILS CONTAINED IN THIS DOCUMENT IS THE SOLE RESPONSIBILITY OF THE DESIGN ENGINEER OF RECORD. FINAL WALL DESIGNS, INCLUDING ALL CONSTRUCTION DETAILS, SHALL BE PREPARED BY A LICENSED PROFESSIONAL ENGINEER USING THE ACTUAL CONDITIONS OF THE PROPOSED SITE.
- 2. SHOP DRAWINGS SHALL BE SUBMITTED FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.
- 3. CONTRACTOR SHALL COORDINATE WITH GUARDRAIL MANUFACTURER FOR MINIMUM DISTANCE BETWEEN GUARDRAIL AND RETAINING WALL.

### TYPICAL MSE GRAVITY BLOCK RETAINING WALL SECTION SCALE: NONE



TYPICAL CONC. WALKWAY EXPANSION JOINT DETAIL

SCALE: NONE

SHAWN

Fannel at es, In a la Dr. #360, Ports Social

HOY

AZTEC, FLAND RO

CONSTRUCTION **DETAILS 6** 

PROJECT NO. 569200