

City of Biddeford
Planning Board
February 21, 2024 6:00 PM City Hall
Council Chambers, & Zoom
<https://biddeford.zoom.us/j/94983531202?pwd=Q3ZyejcyUVpBaUVVMHduYXJhSzB4UT09>
Webinar ID 949 8353 1202; Passcode 223739

STATUS: Planning Board Meeting, Wednesday, February 21, 2024, 6:00 PM, City Council Chambers & Zoom

- 1. PLEDGE OF ALLEGIANCE**
- 2. DECLARATION OF QUORUM/VOTING MEMBERS**
- 3. ADJUSTMENTS TO THE AGENDA**
- 4. PLANNER'S BUSINESS**
- 5. CONSENT AGENDA**
 - 5.A. Approval of Meeting Minutes from February 7, 2024
[2-7-24-Meeting Minutes-DRAFT.pdf](#)
- 6. NEW BUSINESS**
 - 6.A. 2021.17 The Biddeford Planning Board will hold a Public Meeting to discuss and ask questions regarding a request for Site Plan & Subdivision Preliminary & Final Approval for Southern Maine Affordable Housing for 39 residential units at 69 Adam's Street (Tax Map 38, Lot 296) .

[Adams Point Reapproval Request PB MEMO 2-21-2024.pdf](#)
[2-7-24 Plans.pdf](#)
[Supporting Material.pdf](#)
[Adams Point Drawings 02-07-2024-Rotated 8.5 x 11.pdf](#)
 - 6.B. 2023.36 The Biddeford Planning Board will hold a public meeting regarding a Preliminary Review Application submitted by Riverbend Reserve, LLC for Homestead by the River. The request is to erect a 6,000 square foot pole barn, 1,950 square foot lean, and a 2,504 square foot 16-foot-wide gravel drive at Homestead by the River Campground located at 608-610 New County Road further described as Tax Map 6, Lot 35-2 in the Rural Farm District (RF) and Shoreland Overlay.

[608-610 New County Road Garage Preliminary 2-14-24.pdf](#)
[1-17-24 Sketch Plan Package for Garage.pdf](#)
[2-20-24 Updated Site Plan.pdf](#)
- 7. OPEN PUBLIC HEARING**
 - 7.A. 2024.05 Ordinance Amendment-SECOND READING Update Staff Review Committee Membership Composite
[Staff Review Committee Composition 2nd reading DCMG 2-21-24.pdf](#)
 - 7.B. 2024.07 SECOND READING to amend V Attachment 2 Table B Dimensional Requirements to change the side setbacks in the MSRD-2 zone from 10' to 0'
[MSRD2 side and rear yard setback reduction PB MEMO 2-21-2024.pdf](#)

8. CLOSE PUBLIC HEARING

9. ADJOURN

The Board reserves the right to halt official business at 9:30 p.m. Items not heard at tonight's meeting shall be rescheduled to the next meeting of the Board. All materials pertaining to items on the agenda are available for public review at the Biddeford Planning Department, second floor, Biddeford City Hall during normal business hours.



CITY OF BIDDEFORD

Planning and Development Department

205 Main Street
P.O. Box 586
Biddeford, ME 04005
(207) 284-9115

Planning Board Meeting Meeting Minutes

DRAFT

Date: February 7, 2024
Time: 6:00 PM
Location: Council Chambers & Zoom

1. Pledge of Allegiance
2. Declaration of Quorum/Voting Members
Quorum Present: Larry Patoine (Chair), Susan Deschambault, Roch Angers, Alexa Plotkin, & Dylan Doughty (Alternate Member)
Dylan Doughty will be voting for Stephen Beaudette this evening
Staff Present: David Galbraith & Nan Whitten
Chair Patoine opened the meeting at 6:00 PM
3. Adjustments to the Agenda
4. Planner's Business
 - Adam's Point coming to PB 2-21-24
 - One Diamond, Elm Street & Traffic Permits; MDOT would like One Diamond to come in through Main Street, may need an extension of preliminary approval
 - Board is comfortable with Planner Approving extension for One Diamond
5. Consent Agenda
5. A. Approval of Meeting Minutes from 1-17-23
Motion- Plotkin-Motion to approve minutes as presented
Second- Deschambault Motion passed unanimously
Motion passed unanimously
6. Unfinished Business
7. New Business
7A. 2024.03 A review and discussion of a Conditional Use Permit request for Blossom LLC to open an adult-use cannabis retail store at 45 Boulder Way (Map 2, Lot 56) in the I-3 zone.
 - Galbraith introduced project
 - Elizabeth Baldacci represented project via zoom
 - Patoine-letter from fire department has come in
 - Deschambault-Police dept will inspect for the occupancy permit
 - Angers-Who pays for odor inspections-applicant
 - Galbraith have had no complaints regarding this shop

MOTIONS: Waiver for Full Site Plan Review

Motion-Deschambault-To waive Article XI, full site plan review, as no site improvements are being made.

Second-Doughty

Motion passed unanimously

Motion-Deschambault-to approve the Conditional Use Permit and the Findings of Fact and Conclusions of Law for Elizabeth Baldacci CEO for Blossom Cannabis for an adult-use recreational marijuana retail facility at 45 Boulder Way (Tax Map 2, Lot 56).

Second-Doughty

Motion passed 3-1 (Deschambault, Plotkin, Doughty in favor, Angers against)

8. Other Business

9. Open Public Hearing

9.A. 2024.05 Ordinance Amendment-FIRST READING Update Staff Review Committee Membership Composite

- Galbraith explained the proposed changes and why
- Deschambault clarified that any member of the SRC can send a designee
- Plotkin asked if a PB representative should go anytime or just when it pertains to PB, all SRC meetings pertain to PB
- Public Hearings are held at SRC level as well
- Angers would like the group to be more structured, elect a chair, follow Robert's Rules, and members should show up consistently
- Galbraith gave more of an explanation of meeting process
- Plotkin, should have some bi-laws and more formal flushing out of what the committee does
- Patoine more of a formal structure
- Angers-who decides what departments attend these meetings? Galbraith, case by case basis.
- Angers-Planning Board should have a vote on the projects, structure should be added to these meetings, who runs the meeting?Galbraith answered that he runs the meetings.

9.B. 2024.07 FIRST READING to amend V Attachment 2 Table B Dimensional Requirements to change the side setbacks in the MSRD-2 zone from 10' to 5'

- Galbraith gave an explanation of this propped ordinance change
- MSRD 1 & 3 do not have setbacks, we can bring it to 0 but at least 5
- Plotkin, why the difference in setbacks for the zones
- Galbraith the setback was to be lowered years ago but never got done
- Plotkin, zero setback is bringing several properties into conformity
- Doughty are there any structures that did not get built because of setbacks? Galbraith-none that he knows of at this time.
- Plotkin it may help to add additional housing

MOTIONS:

Motion-Plotkin-to APPROVE the proposed Amendments to Code of Ordinances, Part III:

Land Development Regulations, Article V – Establishment of Zones, Amendment to Table B “Dimensional Requirements” to reduce the side and rear yard setback requirements in the City’s MSRD-2 zoning district from ten (10) feet to zero (0) feet.

Second-Doughty Motion passed unanimously

- Galbraith gave an update on the assistant planner search

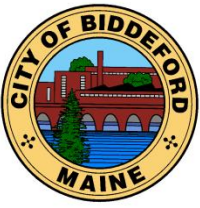
Meeting adjourned at 6:42 PM

Planning Board Chair/Vice Chair

Date

These minutes are summary and are not intended to be verbatim. Archived meetings are viewable on the City’s website: www.biddefordmaine.org.

DRAFT



CITY OF BIDDEFORD

Planning and Development Department

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P.O. Box 586
Biddeford, ME 04005
(207) 284-9115
David.Galbraith@biddefordmaine.org

Planning Board – Staff Report

TO: Chair Patoine and Members of the Biddeford Planning Board

FROM: David C.M. Galbraith, Deputy Director / City Planner

DATE: February 15, 2024

RE: **2021.04 Final Subdivision and Site Plan Re-approval request for Adams Point Housing – Southern Maine Affordable Housing / 69 Adam’s Street (Tax Map 38, Lot 296) for 39 residential units.**

MEETING DATE: February 21, 2024

PROJECT HISTORY / APPLICANT REQUEST:

In mid-January 2023 I was contacted by Guy M. Gagnon, President of the General Partner Adams Point, regarding a letter he had written to Matt Grooms, the City’s former Deputy Director/City Planner, dated September 1, 2022 where he had requested a one (1) year extension to the Planning Board’s Site Plan approval for the above referenced case.

The Conditions of Approval (COA) contained the following statement:

“Following the date of final approval, the site plan approval is valid for one year one year. If a building permit/occupancy permit has not been issued, then said approval shall become automatically null and void”.

Upon the receipt of Mr. Gagnon’s extension request, Mr. Grooms agreed to the extension via email, but had failed to provide the requested extension approval letter. As outlined in his letter to Mr. Grooms, the reason for the extension request was due to the “Low Income Housing Tax Credits often take {ing} additional time to obtain financing and complete the lengthy construction plan design process”. When contacted by Mr. Gagnon I was a private consultant, acting in the capacity Deputy Director/City Planner. Upon reviewing the request with the then Director of Planning (Greg Mitchell), I determined that the extension request should have formally been approved by Mr. Grooms and I officially granted the one (1) year project extension stating “from date of the approved / signed Notice of Decision, dated September 30, 2021. All Findings of Fact (FOF) and Conditions of Approval (COA) as approved by the Planning Board are hereby, reaffirmed”. Following my granting the extension until September 30, 2023 I informed the Planning Board of this approved extension at the next meeting.

In January 2024, I was again contacted by Mr. Gagnon who informed me that the project construction was to commence in the spring and inquired if an additional 1 year extension would be required. As stipulated in my extension approval letter, the postponement of the expiration was granted until September 30, 2023. Therefore, the project expired and could not be extended or retroactively granted as extension requests / approvals need to reviewed / obtained prior to expiration, as has been discussed with the Board on prior occasions.

2021.04 Final Subdivision and Site Plan Re-approval request for Adams Point Housing – Southern Maine Affordable Housing / 69 Adam’s Street (Tax Map 38, Lot 296) for 39 residential units.

MEETING DATE: February 21, 2024

Mr. Gagnon’s re-application includes a cover letter which states:

“It is my understanding that the previous approval of the above referenced project has expired and requires a new application to obtain a building permit. Due to issues related to inflation and obtaining additional project funds, the project could not begin before the previous site plan review approval expired. The project now has funding in place and is ready for construction in March. We respectfully request that this re-application be processed in such a manner that Preliminary and Final approval be granted in one meeting. We are submitting the same plans and supporting material as previously approved. The plan set reflects the changes required by the previous conditions of approval that were submitted to the planning department on January 18, 2021. There are no changes proposed to the previously approved plans”.

PROJECT DESCRIPTION:

The project site, located on an approx. 1.5 AC vacant lot in the MSRD-2 Zone between. The property has access to Adams Street to the north and, via a 15-foot-wide water easement, access to Birch Street to the south. The site is located behind the current Parish Place Apartments, and the St. James School and Ledgewood Apartments (Graham Street). The applicant is seeking re-approval, in conjunction with a previously approved / existing contract zone, for 39 affordable housing units in a new five story building. This project has a lengthy history and detailed project file including the establishment of a Council approved Contract Zone.

Peer Review Comments: We have undertaken a review of the Adams Street Housing submission. We reviewed it in the context of the Notice of Decision COA and the applicant’s September 22, 2021 response letter to Greg Tansley, copy attached.

There seem to be a couple outstanding items from our comments.

September 22, 2021 response letter

A. No clarification of the pole and streetlight found on CU101. The short extension of Adams Drive is not shown on the drawings.

A.4.d. The plan seems to show a 22 ft wide drive, but the typical section has not been updated to reflect a 22 ft width.

A.6.c. The I and M plan should be updated to provide separate inspection forms for each BMP.

NOD COA

1.a.vi. The fire lane markings are not evident.

STAFF RECOMMENDATION:

The City’s Staff Review Committee (SRC) reviewed the requested re-approval request of the project as the plans are unchanged from the Planning Board’s previously reviewed and approved plans. Staff therefore recommends re-approval of case # 2021.04 a Final Subdivision and Site Plan request for Adams Point Housing – Southern Maine Affordable Housing / 69 Adam’s Street (Tax Map 38, Lot 296) for 39 residential units, with the following conditions:

2021.04 Final Subdivision and Site Plan Re-approval request for Adams Point Housing – Southern Maine Affordable Housing / 69 Adam’s Street (Tax Map 38, Lot 296) for 39 residential units.

MEETING DATE: February 21, 2024

1. All previously approved Conditions of Approval / Findings of Fact are hereby re-affirmed and remain in effect unless specifically modified by the Planning Board.
2. The Contract Zone is not being modified and all terms and conditions remain in effect.
3. The peer review comments listed above shall be addressed to the satisfaction of the Staff Review Committee prior to the issuance of building permits for the project.

SAMPLE MOTION #1 – Table A:

- A. Motion to Approve: I motion to REAPPROVE Case # 2021.04 A Final Subdivision and Site Plan Re-approval request for Adams Point Housing – Southern Maine Affordable Housing / 69 Adam’s Street (Tax Map 38, Lot 296) for 39 residential units, with the provided Conditions of Approval as written.
- B. Motion to Deny: I motion to DENY Case # 2021.04 A Final Subdivision and Site Plan Re-approval request for Adams Point Housing – Southern Maine Affordable Housing / 69 Adam’s Street (Tax Map 38, Lot 296) for 39 residential units, with the provided Conditions of Approval for the following reasons:
- 1) _____.
 - 2) _____.
 - 3) _____.
- C. Motion to Table: I motion to TABLE Case # 2021.04 A Final Subdivision and Site Plan Re-approval request for Adams Point Housing – Southern Maine Affordable Housing / 69 Adam’s Street (Tax Map 38, Lot 296) for 39 residential units, for the following reasons:
- 1) _____.
 - 2) _____.
 - 3) _____.

ADAMS POINT HOUSING

69 ADAMS STREET, BIDDEFORD, MAINE, 04005

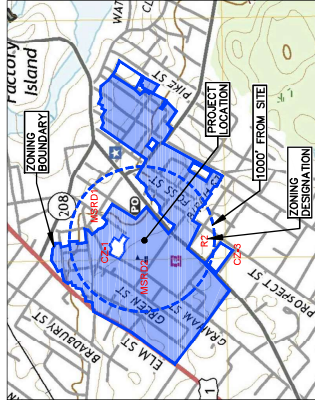
LEGEND

---	EXISTING EDGE OF ASPHALT CONCRETE PAVEMENT
----	SAWOUT (SHEET CD01 ONLY)
----	REMOVALS (SHEET CD01 ONLY)
----	EDGE OF ASPHALT CONCRETE PAVEMENT
----	EXISTING BUILDING LINE
----	BUILDING LINE
----	EXISTING STORM DRAIN LINE (PIPE SIZE IF KNOWN)
----	STORM DRAIN LINE (PIPE SIZE INDICATED)
----	EXISTING SANITARY SEWER LINE (PIPE SIZE IF KNOWN)
----	SANITARY SEWER LINE (PIPE SIZE INDICATED)
----	EXISTING WATER LINE (PIPE SIZE AND IF KNOWN)
----	DOMESTIC WATER LINE (PIPE SIZE INDICATED)
----	EXISTING OVERHEAD ELECTRIC AND COMMUNICATION LINE
----	UNDERGROUND ELECTRIC CONDUIT (SIZE INDICATED).
----	UNDERGROUND ELECTRIC CONDUIT (SIZE INDICATED).
----	UNDERGROUND COMMUNICATIONS CONDUIT (SIZE INDICATED).
----	EXISTING UNDERGROUND NATURAL GAS (PIPE SIZE IF KNOWN).
----	UNDERGROUND NATURAL GAS LINE (SIZE INDICATED).
----	SILT FENCE
----	EXISTING ELEVATION CONTOURS (DECIMAL FEET)
----	FINISH ELEVATION CONTOURS (DECIMAL FEET)
----	UTILITY POINT OF CONNECTION
----	EXISTING PIPE FLOW DIRECTION
----	PIPE FLOW DIRECTION
----	EXISTING SURFACE FLOW
----	EXISTING PAD MOUNTED TRANSFORMER.
----	EXISTING LIGHT POLE WITH CONCRETE FOUNDATION
----	EXISTING WATER SHUT-OFF VALVE
----	WATER SHUT-OFF VALVE
----	FOUNDATION DRAIN CLEAOUT
----	EXISTING TIE LINE
----	REMOVAL TIE LINE
----	TREELINE
----	EXISTING SPOT GRADE
----	FINISH SPOT GRADE
----	EXISTING AND FINISH SPOT GRADES (NO CHANGE IN GRADES)
----	FINISH SPOT GRADE
----	EXISTING SPOT GRADE
----	EXISTING SOIL TEST PIT
----	DETAIL NUMBER
----	SHEET WHERE DETAIL IS DRAWN
----	DEMOLITION KEYNOTE
----	NEW WORK KEYNOTE

NO.	DATE	DESCRIPTION	BY
1.	12/7/21	REVISION FOR CONDITIONS OF APPROVAL	JLG

ABBREVIATIONS

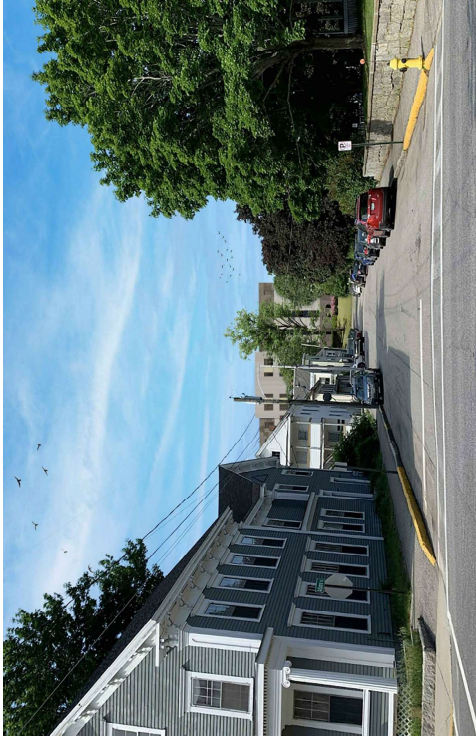
AT	AND
NO	NUMBER
±	PLUS/MINUS
ACT	ACoustical CEILING TILE
ASTM	ASTM TESTING AND MATERIALS
BD	BOARD
CD	CENTERLINE
CONC	CONCRETE
DIA	DIAMETER
EPDM	ETHYLENE PROPYLENE DIENE RUBBER
ELEV	ELEVATION
EMERG	EMERGENCY
EXISTE	EXISTING
FIN	FINISH
FEN	FIRE EXTINGUISHER CABINET
FEC	FINISH FLOOR ELEVATION
FTE	FOOT PER SQUARE INCH
FRT	FOOT PER SQUARE INCH
HDPE	HIGH DENSITY POLYETHYLENE
INCHES	INCHES
INVERT	INVERT
MAX	MAXIMUM
MIN	MINIMUM
MIL	MILLIMETER(S)
N	NORTH
NC	NATURAL GAS
OSHA	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
PLYMD	PLYWOOD
PSF	POUNDS PER SQUARE FOOT
PS	POUNDS PER SQUARE INCH
PTC	PRESSURE TREATED
REINF	REINFORCED
SM	SMALLER
SQ	SQUARE
SS	STAINLESS STEEL
STRUCT	STRUCTURAL
SYS	SYSTEM
TOS	TOP OF STEEL
TYP	TYPICAL
W	WITH
WD	WOOD



VICINITY MAP
SCALE: 1"=800'
GRID NORTH

NOTES

- THESE ARE GENERAL PROJECT NOTES THAT APPLY TO THE ENTIRE PROJECT INCLUDING EACH DISCIPLINE.
- ALL COMPONENTS ARE NEW AND SHALL BE PROVIDED BY THE CONTRACTOR UNLESS NOTED OTHERWISE.
- VERIFY EXISTING CONDITIONS AND DIMENSIONS PRIOR TO COMMENCING WORK. REPORT ANY DISCREPANCIES TO THE ARCHITECT PRIOR TO THE PROJECT PROCEED WITH THE WORK AFTER DISCREPANCIES HAVE BEEN RESOLVED.
- CONFORM TO STATE NATIONAL AND OTHER CODES AND ORDINANCES WHICH ARE APPLICABLE TO THIS PROJECT. KNOWN PERMITS THAT HAVE BEEN OBTAINED BY THE OWNER INCLUDE:
 - CITY OF BIDDEFORD SITE PLAN REVIEW.
 - CITY OF MAINE STORMWATER PERMIT BY RULE.
- WORK FROM GIVEN DIMENSIONS AND LARGE SCALE DETAILS ONLY. DO NOT SCALE DRAWINGS.
- DO NOT ENROUTE NEW BEAMS, GIRDERS, WATERSHEDS OR OTHER STRUCTURAL MEMBERS UNLESS SHOWN OTHERWISE ON THE STRUCTURAL DRAWINGS.
- DURING THE CONTRACT PERIOD, MAINTAIN THE CONSTRUCTION SITE IN A SECURE, WEATHER TIGHT, NEAT, CLEAN AND SAFE CONDITION.
- DISPOSE OF AND/OR RECYCLE CONSTRUCTION DEBRIS FROM THE PROJECT AS REQUIRED. DISPOSE OF CONSTRUCTION DEBRIS FROM THE PROJECT IN A STATE APPROVED LANDFILL.
- COMPLETE WORK IN COMPLIANCE WITH INDUSTRY STANDARDS AND PERFORM WORK IN A WORKMANLIKE PROFESSIONAL MANNER.
- UNLESS NOTED OTHERWISE, DIMENSIONS ARE TO FACE OF FRAMING.
- ELEVATIONS ARE BASED UPON NAVD 88.
- RESTORE SURFACES, SITE FEATURES AND LANDSCAPING THAT ARE DAMAGED BY CONSTRUCTION TO THEIR ORIGINAL CONDITION, AS ACCEPTABLE TO THE OWNER.
- DO NOT DIRECT VEHICLE OR EQUIPMENT EXHAUST TOWARDS THE BUILDINGS.
- HAND EXCAVATE WITHIN 5' OF EXISTING UNDERGROUND UTILITIES AND EXISTING FOUNDATION WALLS.
- CONTACT "DIGSAFE" AT 1-888-344-7233 AND OBTAIN A "DIGSAFE" PERMIT PRIOR TO COMMENCING EXCAVATION OPERATIONS. ADDITIONALLY CONTACT "DODGIE" AT 1-866-668-6344 FOR NON-DIG SAFE MEMBERS WITHIN THE CITY OF BIDDEFORD.



LIST OF DRAWINGS

SHEET NUMBER	DISCIPLINE	TITLE
1 OF 23	G-001	LIST OF DRAWINGS, MAPS, NOTES, LEGEND, AND ABBREVIATIONS
2 OF 23	V-101	BOUNDARY, EXISTING CONDITIONS AND TOPOGRAPHIC SURVEY
3 OF 23	CD01	REMOVALS SITE PLAN
4 OF 23	CD01	EXISTING AND PROPOSED LAYOUT PLAN
5 OF 23	CD01	LAYOUT PLAN
6 OF 23	CD01	FOUNDATION PLAN
7 OF 23	CD01	ENLARGED GRADING PLAN
8 OF 23	CD02	ENLARGED GRADING PLAN
9 OF 23	CD02	ENLARGED GRADING PLAN
10 OF 23	C-301	FOUNDATION PLAN
11 OF 23	C-501	FOUNDATION PLAN
12 OF 23	C-502	FOUNDATION PLAN
13 OF 23	C-503	FOUNDATION PLAN
14 OF 23	C-504	FOUNDATION PLAN
15 OF 23	C-505	FOUNDATION PLAN
16 OF 23	C-506	FOUNDATION PLAN
17 OF 23	L-101	LANDSCAPE PLAN
18 OF 23	L-101	LANDSCAPE PLAN
19 OF 23	A100	GROUND FLOOR PLAN
20 OF 23	A101	FIRST FLOOR - 4TH FLOOR PLAN
21 OF 23	A200	EXTERIOR ELEVATIONS
22 OF 23	E100	EXTERIOR LIGHTING PLAN
23 OF 23	WS101	WATERSHED PLANS

PROJECT TITLE AND LOCATION:
ADAMS POINT HOUSING
Biddeford, Maine, 04005

OWNER:
SOUTHERN MAINE
AFFORDABLE HOUSING
22 South Street
Biddeford, Maine, 04005

DESIGNED BY: JLG
CHECKED BY: JLG
DRAWN BY: DEW
PROJECT: 22104.04



FOR PERMITTING PURPOSES ONLY NOT FOR CONSTRUCTION



PROJECT: 22104.04
DESIGNED BY: JLG
CHECKED BY: JLG
DRAWN BY: DEW

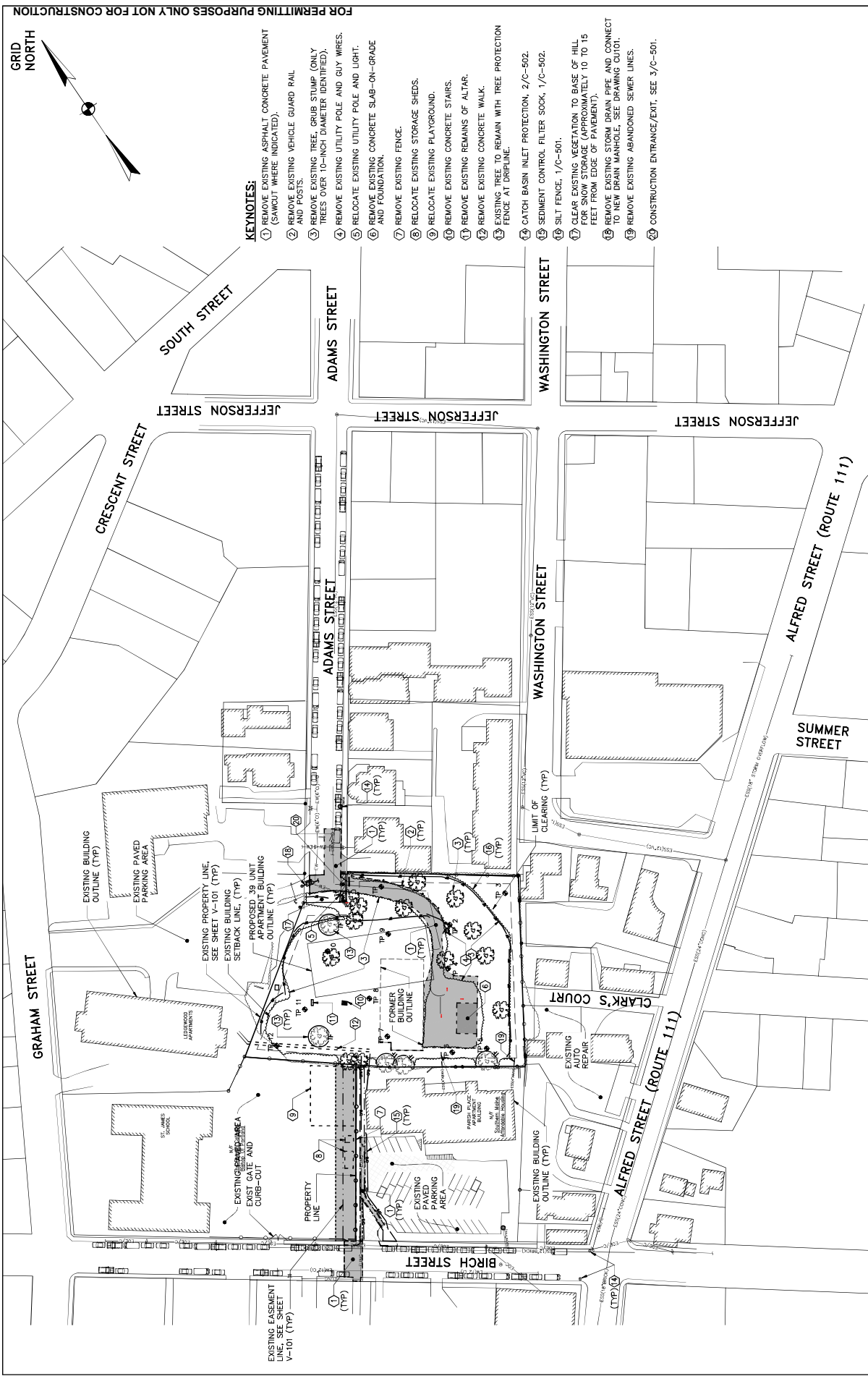
SOUTHERN MAINE
APPROBABLE HOUSING
OWNER:
22 South Street
Biddeford, Maine, 04005

ADAMS POINT HOUSING
PROJECT TITLE AND LOCATION:
69 Adams Street
Biddeford, Maine, 04005

REMOVALS
SITE PLAN

SCALE: AS NOTED
DATE: 08-02-2021

DWG: **CD101**
SHEET: **3** OF **23**



NOTE:
UNLESS NOTED, ADJACENT USES ARE RESIDENTIAL
UNLESS NOTED OTHERWISE.

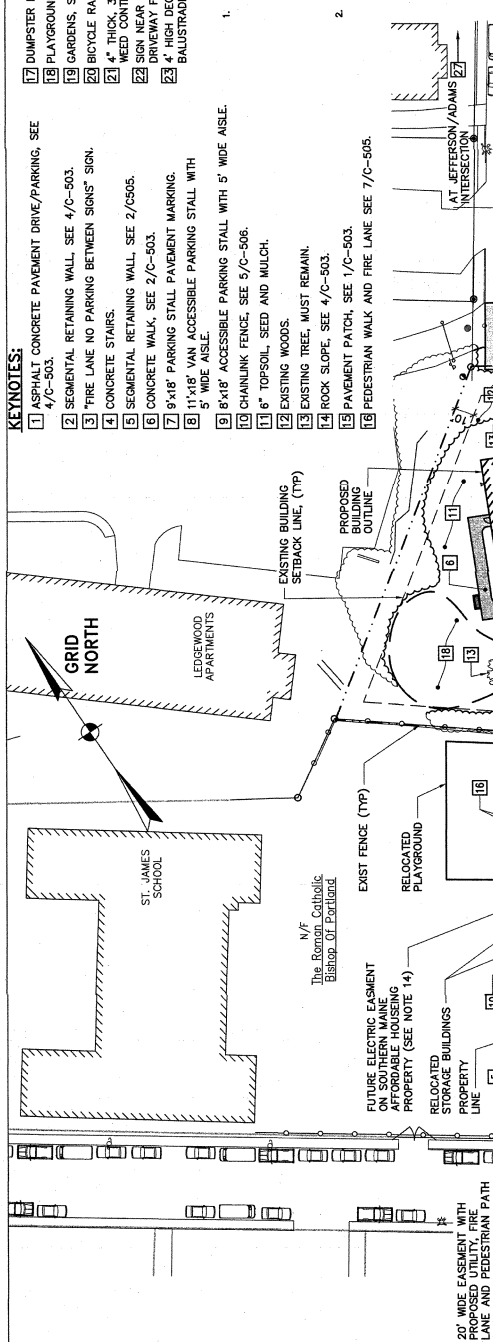
GRAPHIC SCALE
1"=50'
50' 25' 0' 50' 100'

CHECK GRAPHIC SCALE BEFORE USING

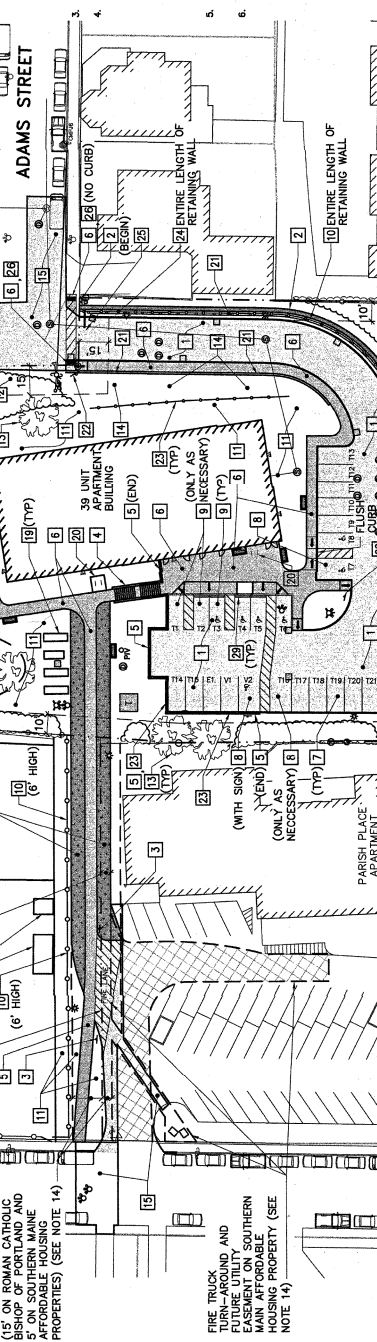
1. REMOVALS SITE PLAN
CD101 SCALE: 1"=50'

NO.	DATE	REVISION	DESCRIPTION	APPROVAL	BY
1	12/7/21		REVISION FOR CONDITIONS OF APPROVAL	J.G.	

- KEYNOTES:**
- 1 ASPHALT CONCRETE PAVEMENT DRIVE/PARKING, SEE 4/C-503.
 - 2 ASPHALT CONCRETE PAVEMENT DRIVE/PARKING, SEE 4/C-503.
 - 3 TACTILE WARNING PANEL, SEE 4/C-505.
 - 4 PROVIDE STOP SIGNS AND STOP BAR AT JEFFERSON AND ADAMS INTERSECTION, SEE 6-C505.
 - 5 WEED CONTROL FABRIC.
 - 6 SIGN NEAR 89 ADAMS STREET, "PRIVATE DRIVEWAY FOR 89 ADAMS STREET".
 - 7 4" HIGH DECORATIVE FENCE (VERTICAL BALUSTRADES WITH BLACK FINISH).
 - 8 8"x18" ACCESSIBLE PARKING STALL WITH 5' WIDE AISLE.
 - 9 CHAINLINK FENCE, SEE 5/C-506.
 - 10 TOPSOIL, SEED AND MULCH.
 - 11 EXISTING WOODS.
 - 12 EXISTING TREE, MUST REMAIN.
 - 13 ROCK SLOPE, SEE 4/C-503.
 - 14 PAVEMENT PATCH, SEE 1/C-503.
 - 15 PEDESTRIAN WALK AND FIRE LANE SEE 7/C-505.
 - 16 20' WIDE EASEMENT WITH PROPOSED UTILITY, FIRE LANE AND PEDESTRIAN PATH
 - 17 DUMPSTER PAD AND ENCLOSURE, SEE 1/C-506.
 - 18 PLAYGROUND, SEE 7/L20.
 - 19 GARDENS, SEE DRAWING L10.
 - 20 BICYCLE RACK, SEE DRAWING L10.
 - 21 4" THICK, 3/4" CRUSHED STONE WITH WEED CONTROL FABRIC.
 - 22 SIGN NEAR 89 ADAMS STREET, "PRIVATE DRIVEWAY FOR 89 ADAMS STREET".
 - 23 4" HIGH DECORATIVE FENCE (VERTICAL BALUSTRADES WITH BLACK FINISH).
 - 24 VEHICLE GUARD RAIL, SEE 4/C-503.
 - 25 1' WIDE WHITE STOP BAR.
 - 26 TACTILE WARNING PANEL, SEE 4/C-505.
 - 27 PROVIDE STOP SIGNS AND STOP BAR AT JEFFERSON AND ADAMS INTERSECTION, SEE 6-C505.
 - 28 LOADING ZONE NO PARKING SIGN AND POST.
 - 29 PARKING STOP.
 - 30 FIRE LANE NO PARKING SIGN.



- NOTES:**
- PROPERTY INFORMATION:
 - 1.a. OWNER: SOUTHERN MAINE AFFORDABLE HOUSING
 - 1.b. SOUTH STREET
 - 1.c. LOT 290
 - 1.d. LOT 291
 - 1.e. LOT 292
 - 1.f. LOT 293
 - 1.g. LOT 294
 - 1.h. LOT 295
 - 1.i. LOT 296
 - 1.j. LOT 297
 - 1.k. LOT 298
 - 1.l. LOT 299
 - 1.m. LOT 300
 - 1.n. LOT 301
 - 1.o. LOT 302
 - 1.p. LOT 303
 - 1.q. LOT 304
 - 1.r. LOT 305
 - 1.s. LOT 306
 - 1.t. LOT 307
 - 1.u. LOT 308
 - 1.v. LOT 309
 - 1.w. LOT 310
 - 1.x. LOT 311
 - 1.y. LOT 312
 - 1.z. LOT 313
 - 1.aa. LOT 314
 - 1.ab. LOT 315
 - 1.ac. LOT 316
 - 1.ad. LOT 317
 - 1.ae. LOT 318
 - 1.af. LOT 319
 - 1.ag. LOT 320
 - 1.ah. LOT 321
 - 1.ai. LOT 322
 - 1.aj. LOT 323
 - 1.ak. LOT 324
 - 1.al. LOT 325
 - 1.am. LOT 326
 - 1.an. LOT 327
 - 1.ao. LOT 328
 - 1.ap. LOT 329
 - 1.aq. LOT 330
 - 1.ar. LOT 331
 - 1.as. LOT 332
 - 1.at. LOT 333
 - 1.au. LOT 334
 - 1.av. LOT 335
 - 1.aw. LOT 336
 - 1.ax. LOT 337
 - 1.ay. LOT 338
 - 1.az. LOT 339
 - 1.ba. LOT 340
 - 1.bb. LOT 341
 - 1.bc. LOT 342
 - 1.bd. LOT 343
 - 1.be. LOT 344
 - 1 bf. LOT 345
 - 1.bg. LOT 346
 - 1.bh. LOT 347
 - 1.bi. LOT 348
 - 1.bj. LOT 349
 - 1.bk. LOT 350
 - 1.bl. LOT 351
 - 1 bm. LOT 352
 - 1.bn. LOT 353
 - 1.bo. LOT 354
 - 1.bp. LOT 355
 - 1.bq. LOT 356
 - 1.br. LOT 357
 - 1.bs. LOT 358
 - 1.bt. LOT 359
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PROJECT: 22 104.04
DESIGNED BY: JLG
CHECKED BY: JLG
DRAWN BY: DEW

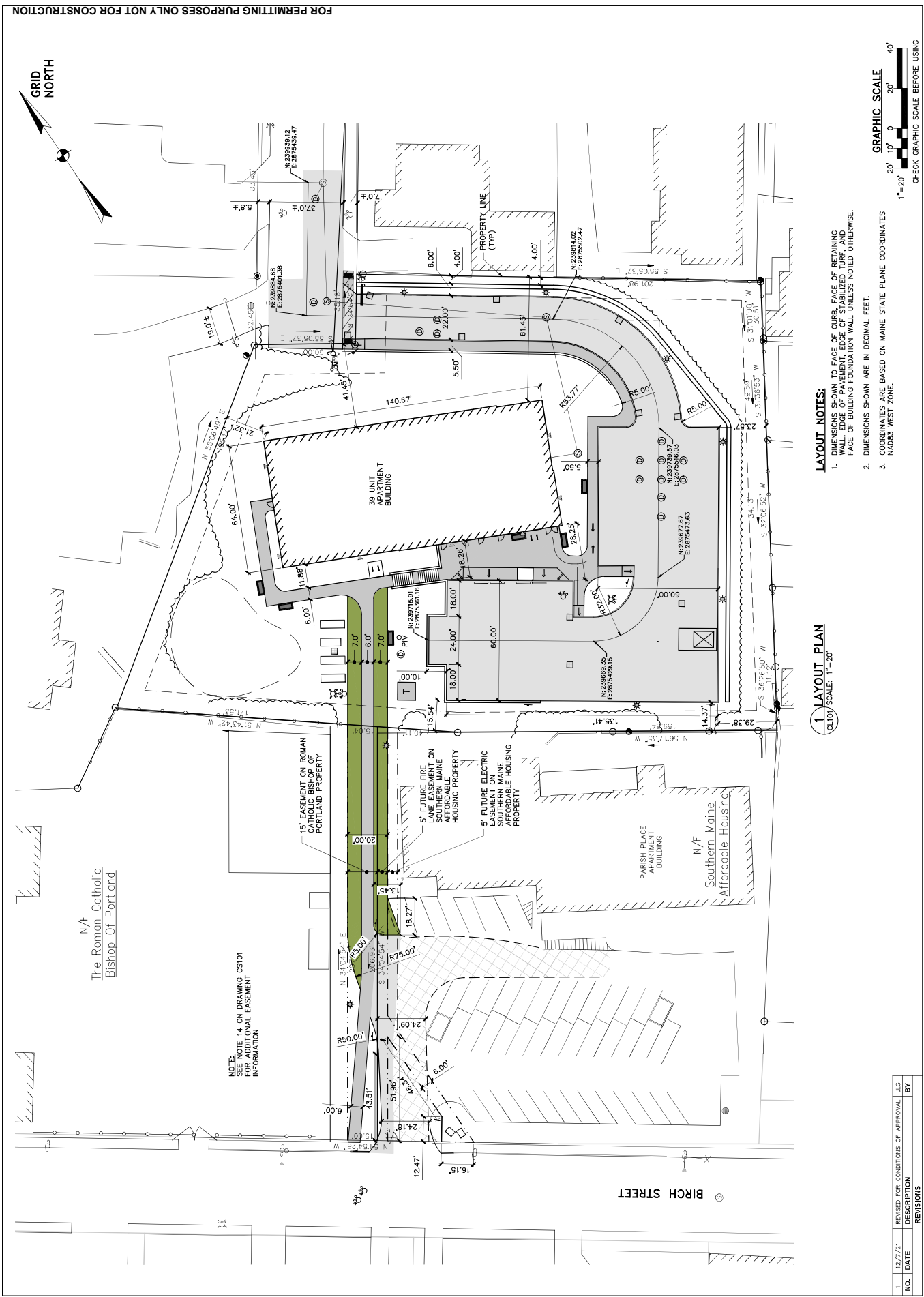
OWNER:
SOUTHERN MAINE
AFFORDABLE HOUSING
22 South Street
Biddeford, Maine, 04005

PROJECT TITLE AND LOCATION:
ADAMS POINT HOUSING
69 Adams Street
Biddeford, Maine, 04005

LAYOUT
PLAN

SCALE: AS NOTED
DATE: 08-03-2021

DWG.: CL101
SHEET: 5 OF 23



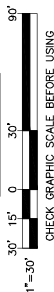
LAYOUT NOTES:
1. DIMENSIONS SHOWN TO FACE OF CURB, FACE OF RETAINING WALL, EDGE OF PAVEMENT, EDGE OF STABILIZED TURF, AND FACE OF BUILDING FOUNDATION WALL UNLESS NOTED OTHERWISE.
2. DIMENSIONS SHOWN ARE IN DECIMAL FEET.
3. COORDINATES ARE BASED ON MAINE STATE PLANE COORDINATES NAD83 WEST ZONE.

GRAPHIC SCALE
20' 10' 0' 20' 40'

1"=20'
CHECK GRAPHIC SCALE BEFORE USING

1. LAYOUT PLAN
CL101 SCALE: 1"=20'

NO.	DATE	DESCRIPTION	REVISIONS	BY
1.	12/7/21	REVISED FOR CONDITIONS OF APPROVAL	JLG	



1	12/7/21	REVISED FOR CONDITIONS OF APPROVAL	JLG
NO.	DATE	DESCRIPTION	BY
REVISIONS			



PROJECT: 22 104.04
DESIGNED BY: JLG
DRAWN BY: JLG
CHECKED BY: DEW

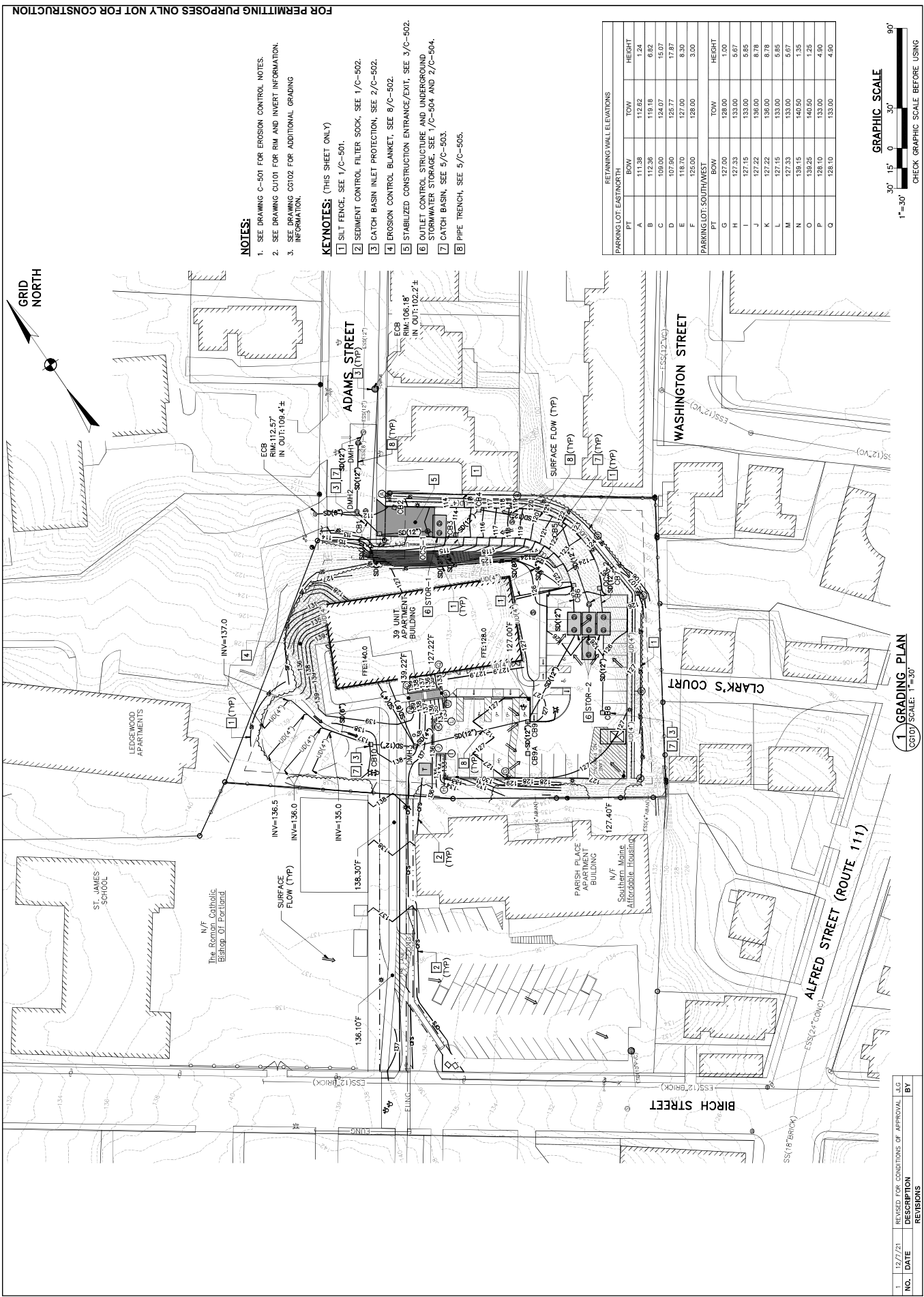
SOUTHERN MAINE AFFORDABLE HOUSING
OWNER:
22 South Street
Biddeford, Maine, 04005

ADAMS POINT HOUSING
PROJECT TITLE AND LOCATION:
69 Adams Street
Biddeford, Maine, 04005

GRADING PLAN

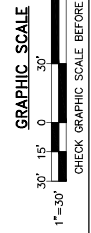
SCALE: AS NOTED
DATE: 08-03-2021

DWG. CG101
SHEET 7 OF 23



- NOTES:**
- SEE DRAWING C-501 FOR EROSION CONTROL NOTES.
 - SEE DRAWING CUI01 FOR RIM AND INVERT INFORMATION.
 - SEE DRAWING CGI02 FOR ADDITIONAL GRADING INFORMATION.
- KEYNOTES: (THIS SHEET ONLY)**
- SILT FENCE, SEE 1/C-501.
 - SEDIMENT CONTROL FILTER SOCK, SEE 1/C-502.
 - CATCH BASIN INLET PROTECTION, SEE 2/C-502.
 - EROSION CONTROL BLANKET, SEE 8/C-502.
 - STABILIZED CONSTRUCTION ENTRANCE/EXIT, SEE 3/C-502.
 - OUTLET CONTROL STRUCTURE AND UNDERGROUND STORMWATER STORAGE, SEE 1/C-504 AND 2/C-504.
 - CATCH BASIN, SEE 5/C-503.
 - PIPE TRENCH, SEE 5/C-505.

RETAINING WALL ELEVATIONS			
PARKING LOT EAST/NORTH		PARKING LOT SOUTH/WEST	
PT	HEIGHT	PT	HEIGHT
A	111.38	G	127.32
B	112.36	H	127.32
C	109.00	I	127.22
D	107.60	J	127.22
E	119.10	K	127.22
	125.00	L	127.15
	128.00	M	127.33
		N	139.15
		O	139.25
		P	128.10
		Q	128.10



1 GRADING PLAN
CGI01 SCALE: 1" = 30'

NO.	DATE	REVISIONS	DESCRIPTION	BY
1	12/7/21		REVISION FOR CONDITIONS OF APPROVAL	JLG



PROJECT: 22 104.04
DESIGNED BY: JLG
CHECKED BY: DEW
DRAWN BY: JLG

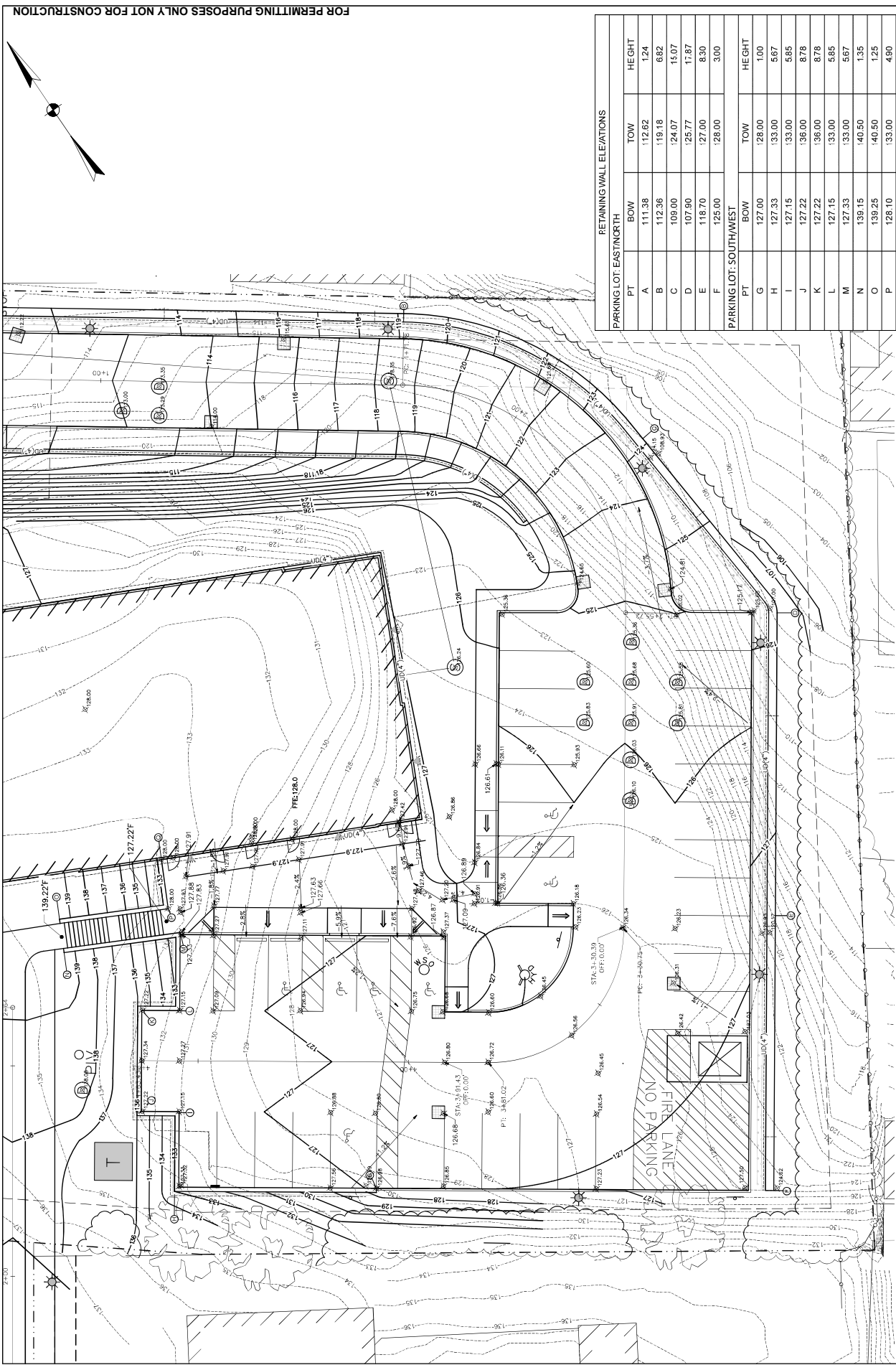
OWNER: SOUTHERN MAINE AFFORDABLE HOUSING
22 South Street
Biddeford, Maine, 04005

PROJECT TITLE AND LOCATION:
ADAMS POINT HOUSING
69 Adams Street
Biddeford, Maine, 04005

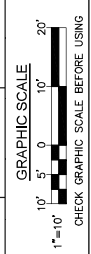
ENLARGED GRADING PLAN

SCALE: AS NOTED
DATE: 08-03-2021

DWG: CG102
SHEET: 8 OF 23



RETAINING WALL ELEVATIONS			
PARKING LOT EAST/NORTH			
PT	BOW	TOW	HEIGHT
A	111.38	112.62	1.24
B	112.36	119.18	6.82
C	109.00	124.07	15.07
D	107.90	125.77	17.87
E	118.70	127.00	8.30
F	125.00	128.00	3.00
PARKING LOT SOUTH/WEST			
PT	BOW	TOW	HEIGHT
G	127.00	128.00	1.00
H	127.33	133.00	5.67
I	127.15	133.00	5.85
J	127.22	136.00	8.78
K	127.22	136.00	8.78
L	127.15	133.00	5.85
M	127.33	133.00	5.67
N	139.15	140.50	1.35
O	139.25	140.50	1.25
P	128.10	133.00	4.90
Q	128.10	133.00	4.90



FOR PERMITTING PURPOSES ONLY NOT FOR CONSTRUCTION

1. ENLARGED GRADING PLAN
C-307 SCALE: 1"=10'

NO.	DATE	DESCRIPTION	REVISIONS	
			BY	JG
1	12/7/21	REISED FOR CONDITIONS OF APPROVAL		



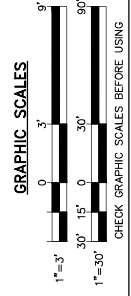
DESIGNED BY: JL.G
CHECKED BY: JL.G
PROJECT: 22 104.04

OWNER:
AFFORDABLE HOUSING
22 South Street
Biddeford, Maine, 04005

PROJECT TITLE AND LOCATION:
ADAMS POINT HOUSING
69 Adams Street
Biddeford, Maine, 04005

ROAD
PROFILE

SCALE: AS NOTED
DATE: 08-03-2021
DWG: C-301
SHEET: 9 OF 23



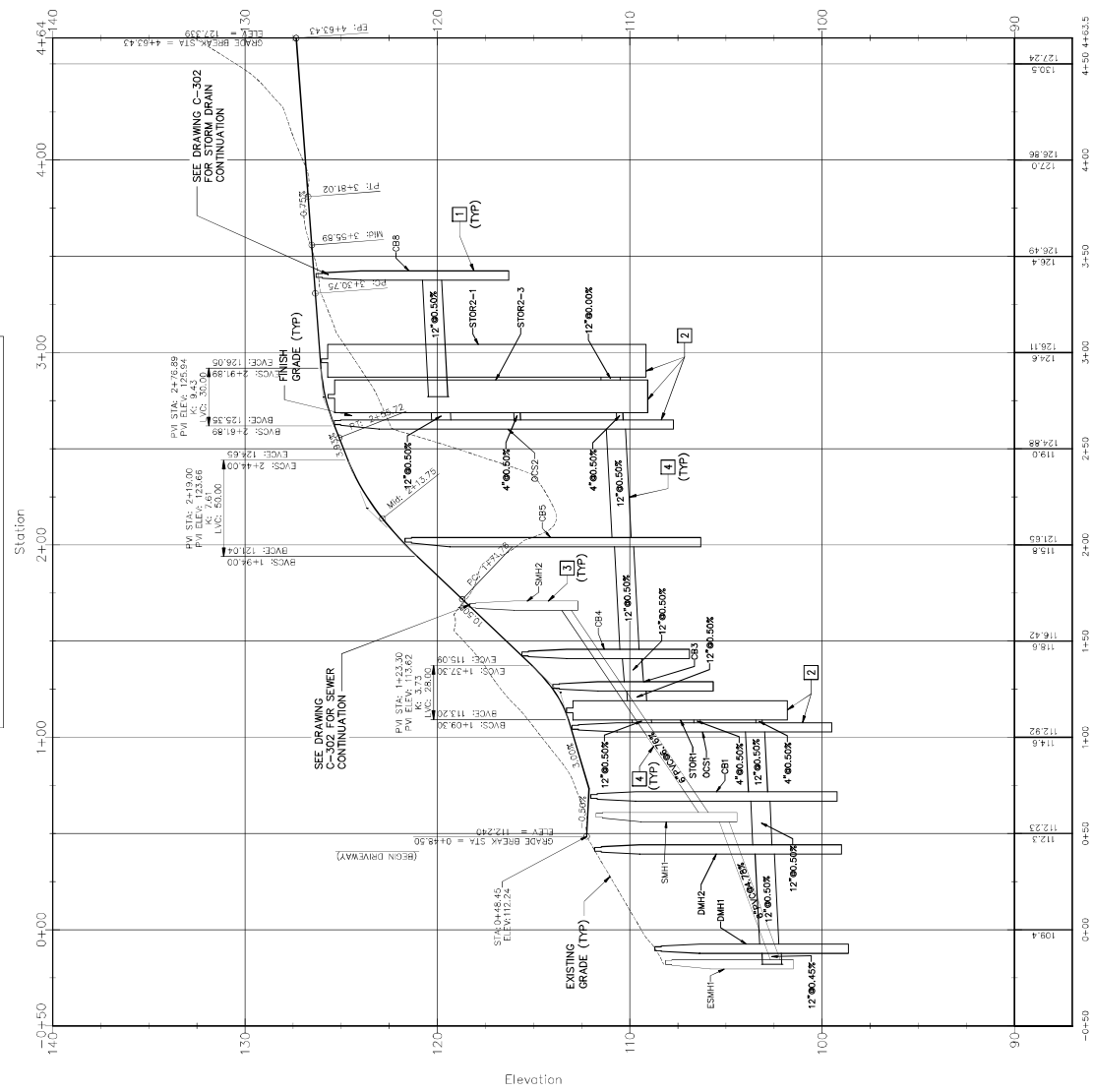
- KEYNOTES**
- 1 CATCH BASIN, SEE 5/C-503.
 - 2 STORAGE TANK AND OUTLET CONTROL STRUCTURE, SEE 1/C-504 AND 2-C504.
 - 3 SANITARY SEWER MANHOLE, SEE 3/C-505.
 - 4 PIPE TRENCH (TYP), SEE 5/C-505.

STRUCTURE NAME	DETAILS
0C51	RM:113.00 INV IN:103.10, SO(4") INV IN:106.22, SO(4") INV OUT:103.00, SO(12")
0C52	RM:125.36 INV IN:110.33, SO(4") INV IN:115.74, SO(4") INV OUT:110.23, SO(12")
STOR1	RM:113.29 INV IN:103.10, SO(12") INV IN:106.22, SO(12") INV OUT:103.14, SO(4")
STOR2-1	RM:126.03 INV OUT:110.50, SO(12")
STOR2-2	RM:126.60 INV IN:118.09, SO(12") INV IN:122.61, SO(12") INV OUT:110.51, SO(12")
STOR2-3	RM:125.68 INV IN:110.50, SO(12") INV IN:115.74, SO(4") INV OUT:110.40, SO(4")
STOR2-4	RM:125.68 INV IN:115.74, SO(12") INV IN:118.09, SO(12") INV OUT:110.51, SO(12")

STRUCTURE NAME	DETAILS
CB1	RM:112.03 INV IN:102.62, SO(12") INV IN:107.14, SO(12") INV OUT:102.72, SO(12")
CB2	RM:112.22 INV OUT:106.88, SO(12")
CB3	RM:114.00 INV IN:109.27, SO(12") INV IN:109.66, SO(12") INV OUT:104.16, SO(12")
CB4	RM:115.61 INV IN:109.50, SO(12") INV OUT:109.45, SO(12")
CB5	RM:121.68 INV IN:109.91, SO(12") INV IN:110.91, SO(12")
CB6	RM:122.61 INV IN:118.82, SO(6") INV IN:119.82, SO(4") INV OUT:119.72, SO(12")
CB7	RM:124.81 INV OUT:119.88, SO(12")
CB8	RM:126.31 INV IN:119.78, SO(12")
CB9	RM:127.70 INV IN:122.61, SO(12") INV OUT:122.74, SO(12")
CB9A	RM:126.68 INV OUT:122.49, SO(12")
CB10	RM:137.16 INV OUT:122.36, SO(12")
SMH1	RM:108.70 INV IN:102.14, SO(12")
DMH2	RM:111.80 INV IN:102.62, SO(12") INV IN:102.75, SO(6") INV IN:103.05, SO(12")
DMH3	RM:122.62 INV IN:122.03, SO(12") INV IN:122.03, SO(4") INV IN:124.05, SO(12") INV OUT:122.88, SO(4")
ECB	RM:110.78 INV OUT:107.78, SO(6")

STRUCTURE NAME	DETAILS
ESM-1	RM:108.15 INV IN:102.00, ESS(6") INV IN:102.10, SS(12") INV IN:102.00, SS(6")
SMH1	RM:111.76 INV IN:105.78, SS(6") INV OUT:104.93, SS(6")
SMH2	RM:118.35 INV IN:113.05, SS(6") INV OUT:113.20, SS(6")
SMH3	RM:128.34 INV IN:121.50, SS(6") INV OUT:118.18, SS(6")

DRIVEWAY PARKING LOT PROFILE



1 DRIVEWAY/PARKING LOT PROFILE
C-301 SCALE: 1"=30' HORIZ, 1"=3' VERT

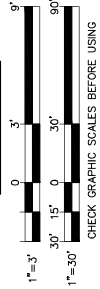
NO.	DATE	REVISIONS	DESCRIPTION	BY
1	12/7/21		REVISION FOR CONDITIONS OF APPROVAL	JLG



STRUCTURE TABLE		DETAILS
STRUCTURE NAME		
CS31		NV 11:13:00
		NV 11:13:01
		NV 11:13:02
		NV 11:13:03
		NV 11:13:04
CS32		NV 11:15:00
		NV 11:15:01
		NV 11:15:02
		NV 11:15:03
		NV 11:15:04
ST01		NV 01:13:00
		NV 01:13:01
		NV 01:13:02
		NV 01:13:03
		NV 01:13:04
ST02-1		NV 01:15:00
		NV 01:15:01
		NV 01:15:02
		NV 01:15:03
		NV 01:15:04
ST02-2		NV 02:13:00
		NV 02:13:01
		NV 02:13:02
		NV 02:13:03
		NV 02:13:04
ST02-3		NV 01:15:00
		NV 01:15:01
		NV 01:15:02
		NV 01:15:03
		NV 01:15:04
ST02-4		NV 02:15:00
		NV 02:15:01
		NV 02:15:02
		NV 02:15:03
		NV 02:15:04

STRUCTURE TABLE	
STRUCTURE NAME	DETAILS:
ESMH1	RMC:108.15
	INV IN:102.10, SS(6°)
	INV IN:102.20, SS(6°)
	INV IN:102.10, SS(12°)
SMH2	RMC:102.06,
	SS(12°)
	RMC:111.76
	INV IN:105.76, SS(6°)
SMH3	INV OUT:104.95, SS(6°)
	RMC:118.35
	INV IN:113.30, SS(6°)
	INV OUT:113.20, SS(6°)
SMH3	RMC:126.24
	INV IN:121.50, SS(6°)
	INV OUT:118.16, SS(6°)

- 1 CATCH BASIN, SEE 5/C-503.
- 2 STORAGE TANK AND OUTLET CONTROL STRUCTURE, SEE 1/C-504 AND 2-C504.
- 3 SANITARY SEWER DROP MANHOLE, SEE 3/C-505.
- 4 PIPE TRENCH (TYP), SEE 5/C-505.





PROJECT: 22 104.04
DESIGNED BY: J.L.G.
CHECKED BY: J.L.G.
DRAWN BY: DEW
DATE: 08-02-2021

SOUTHERN MAINE AFFORDABLE HOUSING
OWNER:
22 South Street
Biddeford, Maine, 04005

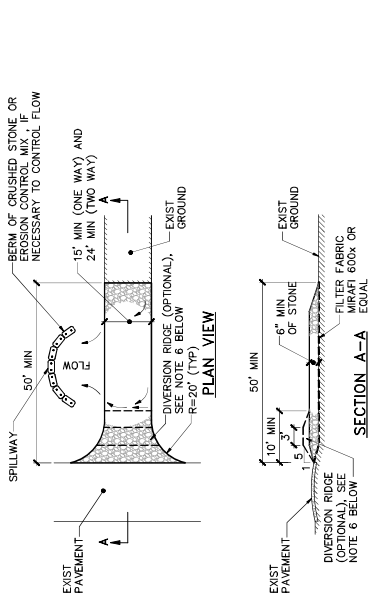
ADAMS POINT HOUSING
PROJECT TITLE AND LOCATION:
69 Adams Street
Biddeford, Maine, 04005

EROSION CONTROL DETAILS

SCALE: AS NOTED
DATE: 08-02-2021

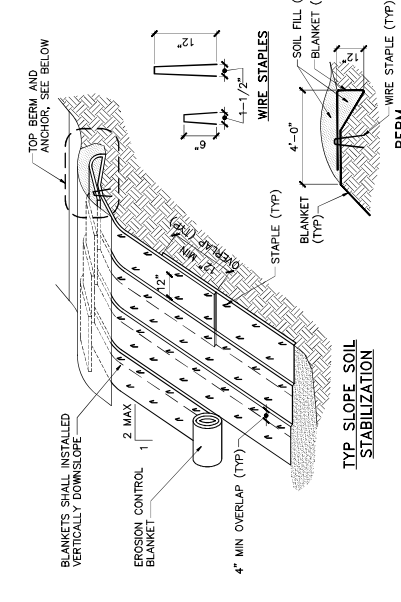
DWG: C-502
SHEET: 11 OF 23

FOR PERMITTING PURPOSES ONLY NOT FOR CONSTRUCTION



STABILIZED CONSTRUCTION ENTRANCE / EXIT NOTES

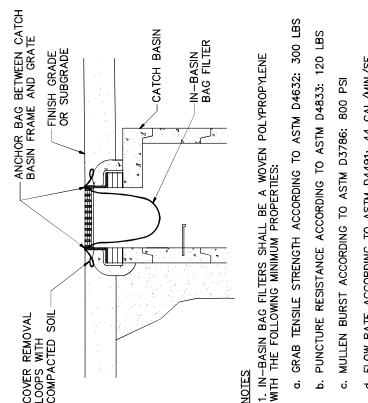
1. FOR STABILIZED CONSTRUCTION ENTRANCE / EXIT SHALL BE ANGULAR 2 TO 3' MIN. STAIRS OR APPROVED CONCRETE MATERIAL.
2. THE LENGTH OF THE STABILIZED ENTRANCE / EXIT SHALL NOT BE LESS THAN 50 FEET.
3. THE THICKNESS OF THE STONE FOR THE STABILIZED ENTRANCE / EXIT SHALL NOT BE LESS THAN THE FULL WIDTH OF THE ENTRANCE WHERE INGRESS OR EGRESS OCCURS OR 20 FEET, WHICHEVER IS GREATER.
4. GEOTEXTILE FILTER FABRIC SHALL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING THE STONE.
5. ALL SURFACE WATER THAT IS FLOWING TO OR DIVERTED TOWARD THE CONSTRUCTION ENTRANCE / EXIT SHALL BE PIPED BENEATH THE ENTRANCE. IF PIPING IS IMPRACTICAL, A DIVERSION RIDGE WITH 4:1 SLOPES THAT CAN BE CROSSED BY VEHICLES MAY BE SUBSTITUTED FOR THE PIPE, IF THE ENTRANCE / EXIT SLOPES 5% OR MORE TOWARD THE EXISTING ROAD A DIVERSION RIDGE IS REQUIRED.
6. THE ENTRANCE / EXIT SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC DRESSING OF THE ENTRANCE / EXIT WITH CRUSHED STONE OR GEOTEXTILE FILTER FABRIC. ANY MEASURES USED TO TRAP SEDIMENT SHALL BE REMOVED IMMEDIATELY.
7. WHEELS SHALL BE CLEANED TO REMOVE MUD PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE PERFORMED ON AN AREA STABILIZED WITH STONE WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.



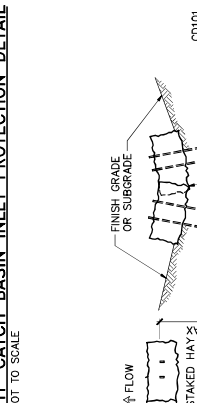
EROSION CONTROL BLANKETS SLOPE INSTALLATION NOTES:

1. INSTALL BLANKETS AND WIRE STAPLES PER MANUFACTURER'S WRITTEN RECOMMENDATIONS. THE NUMBER OF STAPLES PER LINEAL FOOT SHALL BE AS SPECIFIED BY THE CONTROL BLANKET MANUFACTURER'S WRITTEN INSTRUCTIONS.
2. SLOPE SURFACE SHALL BE FREE OF ROCKS, CLODS, STICKS AND GRASS. BLANKETS SHALL HAVE GOOD SOIL CONTACT.
3. APPLY PERMANENT SEEDING BEFORE PLACING BLANKETS.
4. LAY BLANKETS LOOSELY AND WIRE STAPLE TO MAINTAIN DIRECT CONTACT WITH SOIL, DO NOT STRETCH.

8. EROSION CONTROL BLANKETS SLOPE INSTALLATION
C-502 NOT TO SCALE



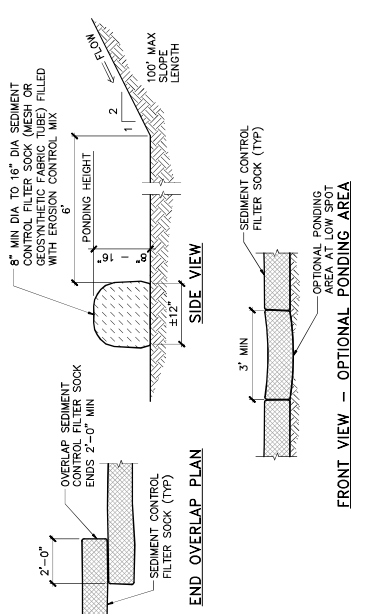
2. TYP CATCH BASIN INLET PROTECTION DETAIL
C-502 NOT TO SCALE



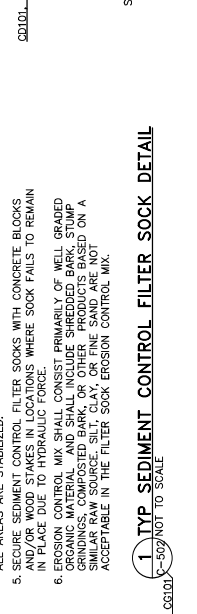
HAY BALE EROSION PROTECTION NOTES:

1. EACH BALE SHALL BE ENTRENCHED IN THE SOIL A MINIMUM OF 4".
2. BALES SHALL BE SECURELY ANCHORED IN PLACE BY A MINIMUM OF 2 STAKES DRIVEN THROUGH THE BALE 1.5' TO 2' INTO THE GROUND. THE FIRST STAKE IN EACH BALE SHALL BE ANGLED TOWARD PREVIOUSLY LAID BALE TO FORCE BALES TOGETHER. THE BINDINGS ON THE BALES SHALL BE PARALLEL WITH THE GROUND.
3. FILL GAPS BETWEEN BALES BY CHINKING / WEDGING WITH HAY OR STRAW TO PREVENT WATER FLOW BETWEEN BALES.
4. INSPECTION SHALL BE FREQUENT AND REPAIR OR REPLACEMENT SHALL BE MADE IMMEDIATELY AS NEEDED.
5. BALES ARE FOR USE AS SEDIMENT BARRIERS FOR SMALL DISTURBED AREAS. THEY ARE NOT SUITABLE FOR EMERGENCY MEASURES FOR CONTROLLING UNEXPECTED SEDIMENTATION.
6. BALES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFULNESS SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.
7. BALES MAY BE USED AS SILT FENCE REINFORCEMENT AS NECESSARY. PLACE THE BALE IN CONTACT (THE LONG SIDE OF THE BALE) AND PARALLEL TO THE SILT FENCE ON THE DOWN SLOPE SIDE.

5. TYP HAY BALE EROSION PROTECTION DETAIL
C-502 NOT TO SCALE



1. TYP SEDIMENT CONTROL FILTER SOCK DETAIL
C-502 NOT TO SCALE



SEDIMENT CONTROL FILTER SOCK NOTES:

1. SEDIMENT CONTROL FILTER SOCKS SHALL BE MANUFACTURED FOR USE WITH GEOTEXTILE FILTER FABRIC (MESH OR NON-WOVEN) FILLED WITH EROSION CONTROL MIX.
2. REMOVE ROOTS, ROCKS, NOW OR FLATTEN GRASS TO MAINTAIN FULL CONTACT WITH GROUND AND FILTER SOCK. ONE HALF THE FILTER SOCK HEIGHT.
3. SEDIMENT CONTROL FILTER SOCKS SHALL REMAIN IN PLACE UNTIL ALL AREAS ARE STABILIZED.
4. SECURE SEDIMENT CONTROL FILTER SOCKS WITH CONCRETE BLOCKS OR STAKES. CONCRETE BLOCKS WHERE SOCK FAILS TO REMAIN IN PLACE DUE TO HYDRAULIC FORCE.
5. EROSION CONTROL MIX SHALL CONSIST PRIMARILY OF WELL GRADED ORGANIC MATERIAL AND SHALL INCLUDE SHREDED BARK, STUMP GRINDINGS, COMPOSTED BARK, OR OTHER PRODUCTS BASED ON A GEOTEXTILE FILTER SOCK MANUFACTURER'S WRITTEN INSTRUCTIONS.

4. TYP GEOTEXTILE FILTER BAG DETAIL
C-502 NOT TO SCALE

NO.	DATE	REVISION	DESCRIPTION	BY
1.	12/7/21		REVISION FOR CONDITIONS OF APPROVAL	J.L.G.



JLG
DEW
JLG
22104.04

DESIGNED BY:
DRAWN BY:
CHECKED BY:
PROJECT:

**SOUTHERN MAINE
AFFORDABLE HOUSING**
22 South Street
Biddeford, Maine, 04005

PROJECT TITLE AND LOCATION:
ADAMS POINT HOUSING
69 Adams Street
Biddeford, Maine, 04005

**SITE
DETAILS - 1**

SCALE: AS NOTED

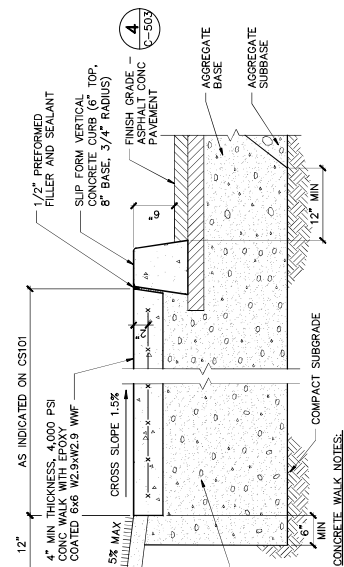
DATE: 08-02-2021

DWG.: **C-503**

SHEET: 13 OF 23



CHECK GRAPHIC SCALE BEFORE USING

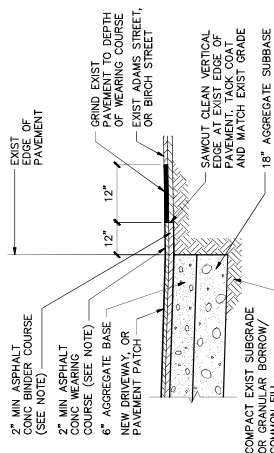


CONCRETE WALK NOTES:

1. MEDIUM BROOM FINISH PERPENDICULAR TO TRAVEL.
2. TOOLED CONTROL JOINTS AS INDICATED ON CS101. SEE DETAIL 3/C-503.
3. EXPANSION JOINTS AS INDICATED ON CS101. SEE DETAIL 3/C-503.
4. PROVIDE CERTI-VEX PENSEAL 244 100% MANUFACTURED BY VEXCON (OR APPROVE EQUIVALENT) TO CONCRETE WALK SURFACES.

2 TYPICAL REINFORCED CONCRETE WALK DETAIL

C-503 NOT TO SCALE

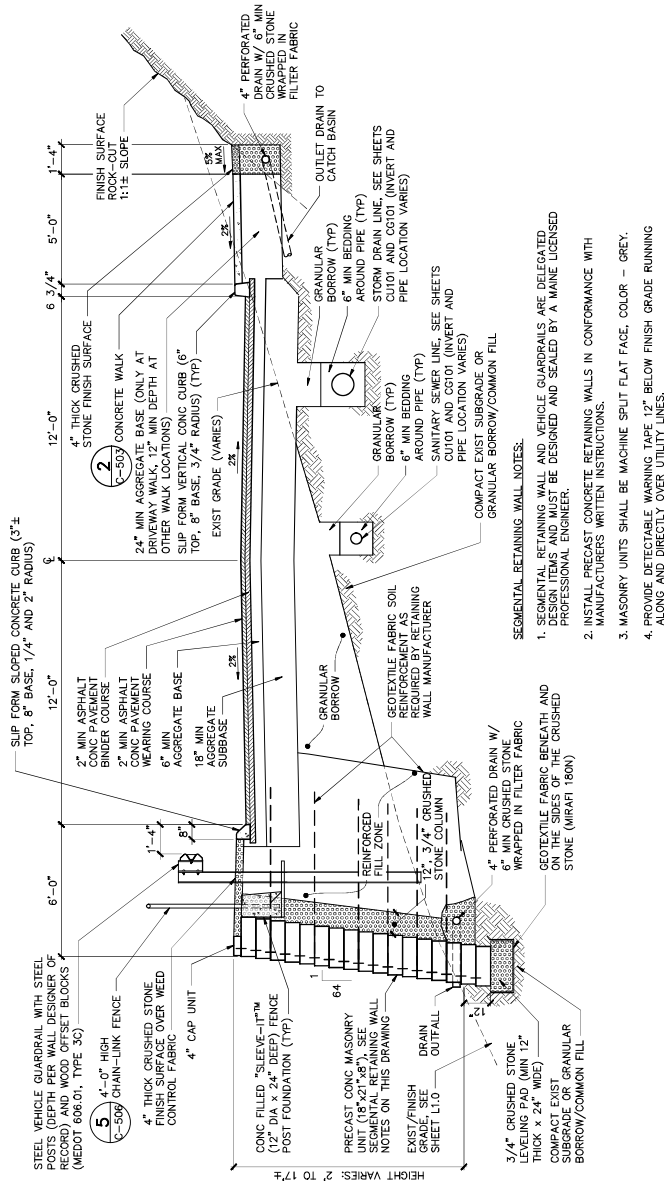


PAVEMENT NOTE:

1. TOTAL PAVEMENT THICKNESS SHALL MATCH EXISTING PAVEMENT THICKNESS IN ADAMS STREET, AND BIRCH STREET, AND SHALL BE 5" THICK MINIMUM (2-3/4" BINDER, 2-1/4" WEARING).

1 TYPICAL PAVED TRENCH PATCH/TRANSITION DETAIL

C-503 NOT TO SCALE



SEGMENTAL RETAINING WALL NOTES:

1. SEGMENTAL RETAINING WALL AND VEHICLE GUARDRAILS ARE DELEGATED DESIGN ITEMS AND MUST BE DESIGNED AND SEALED BY A MAINE LICENSED PROFESSIONAL ENGINEER.
2. INSTALL PRECAST CONCRETE RETAINING WALLS IN CONFORMANCE WITH MANUFACTURERS WRITTEN INSTRUCTIONS.
3. MASONRY UNITS SHALL BE MACHINE SPLIT FLAT FACE, COLOR - GREY.
4. PROVIDE DETECTABLE WARNING TAPE 12" BELOW FINISH GRADE RUNNING ALONG AND DIRECTLY OVER UTILITY LINES.

4 TYPICAL DRIVEWAY/PARKING AREA/WALK/RETAINING WALL SECTION

C-503 SCALE: 3/8"=1'-0"

1	12/7/21	REVISED FOR CONDITIONS OF APPROVAL	J.L.G
NO.	DATE	DESCRIPTION	BY
REVISIONS			

24



JLG
DEM
JLG

DESIGNED BY:
DRAWN BY:
CHECKED BY:
PROJECT:

OWNER:
SOUTHERN MAINE
AFFORDABLE HOUSING

Biddeford, Maine, 04005

ADAMS POINT HOUSING

Biddelford, Maine, 04005

SITE DETAILS - 4

SCALE: AS NOTED

DATE: 08-02-2021

WG.: C-506

HEET: 16 OF 23

5 CHAIN LINK FENCE DOUBLE-LEAF GATE DETAIL

C-506 NOT TO SCALE



CHECK GRAPHIC SCALE BEFORE USING

4 CHAIN LINK FENCE DOUBLE-LEAF GATE DETAIL

C-506/NOT TO SCALE

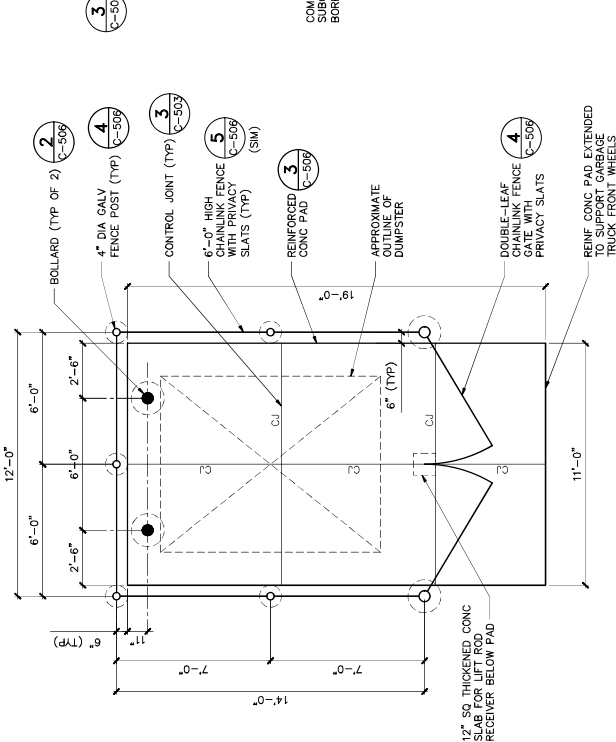
1	12/7/21	REVISED FOR CONDITIONS OF APPROVAL	JLG
NO.	DATE	DESCRIPTION	BY
REVISIONS			

CHAIN LINK FENCE AND GATE NOTES:

1. POSTS, RAILS, FABRIC, TIES AND APPURTENANCES SHALL BE GALVANIZED STEEL WITH BLACK VINYL COATING.
2. FASTENING AND HINGE HARDWARE SHALL BE SECURED IN PLACE BY PEENING OR WELDING TO PREVENT DISASSEMBLY OF FENCING/GATES.
3. WHEN LEDGE IS ENCOUNTERED, STEEL POSTS SHALL BE SET AND GROUTED 12 INCHES DEEP UNLESS THE POSTS ARE DRIVEN TO THE GROUND TO THE DEPTH INDICATED ON THE DRAWINGS.
4. CONNECT BONDING JUMPS BETWEEN GATE POSTS AND FRAMES. BONDING JUMPS SHALL BE MADE OF ELECTROPLATED OR HOT TIN COATED COPPER TO ENSURE HIGH CONDUCTIVITY. MAKE GROUNDING CONNECTIONS AT BARE METAL POINTS OF CONTACT.
5. PIPE SIZES INDICATED ARE OUTSIDE DIAMETER (FENCE INDUSTRY STANDARD).
6. FOR EACH GATE, PROVIDE GATE KEEPERS CONSISTING OF 2" DIA. 4'-0" MIN HIGH POST WITH 2" DIA. 4'-0" MIN LONG GATE PIN. THE FREE END OF THE GATE IN THE FULL OPEN POSITION.
7. PROVIDE PRIVACY SLATS (COLOR: BLACK) WOVEN INTO CHAINING FENCE. FABRIC AT THE DAMPER ENDSURE CHAINING FENCE.

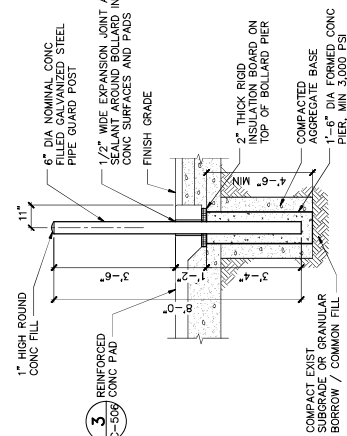
1 DUMPSTER PAD AND ENCLOSURE

C-506/SCALE: 3/8"=1'-0"



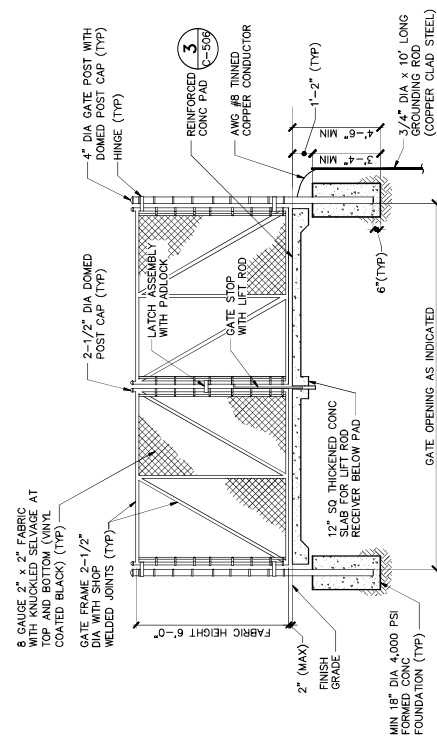
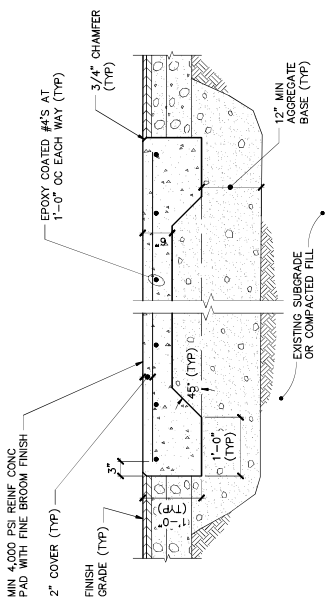
2 TYP BOLLARD DETAIL

C-506/NOT TO SCALE



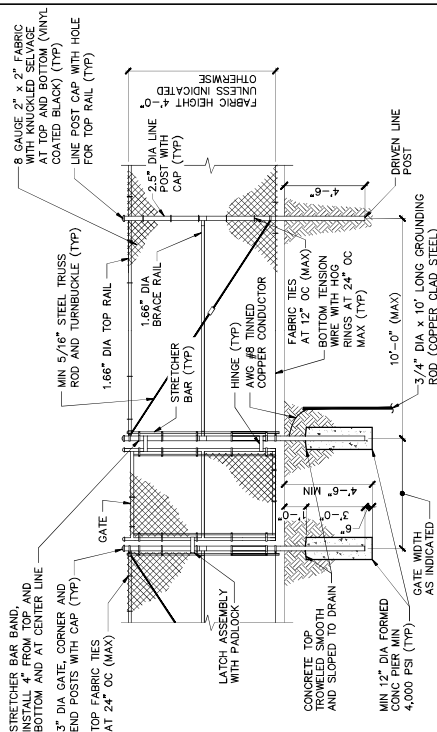
3 REINFORCED CONCRETE PAD DETAIL

C-506



CHAIN LINK FENCE AND GATE NOTES:

1. POSTS, RAILS, FABRIC, TIES AND APPURTENANCES SHALL BE GALVANIZED STEEL WITH BLACK VINYL COATING.
2. FASTENING AND HINGE HARDWARE SHALL BE SECURED IN PLACE BY PEENING OR WELDING TO PREVENT DISASSEMBLY OF FENCING/GATES.
3. WHEN LEDGE IS ENCOUNTERED, STEEL POSTS SHALL BE SET AND GROUTED 12 INCHES DEEP UNLESS THE POSTS ARE DRIVEN TO THE GROUND TO THE DEPTH INDICATED ON THE DRAWINGS.
4. CONNECT BONDING JUMPS BETWEEN GATE POSTS AND FRAMES. BONDING JUMPS SHALL BE MADE OF ELECTROPLATED OR HOT TIN COATED COPPER TO ENSURE HIGH CONDUCTIVITY. MAKE GROUNDING CONNECTIONS AT BARE METAL POINTS OF CONTACT.
5. PIPE SIZES INDICATED ARE OUTSIDE DIAMETER (FENCE INDUSTRY STANDARD).
6. FOR EACH GATE, PROVIDE GATE KEEPERS CONSISTING OF 2" DIA. 4'-0" MIN HIGH POST WITH 2" DIA. 4'-0" MIN LONG GATE PIN. THE FREE END OF THE GATE IN THE FULL OPEN POSITION.
7. PROVIDE PRIVACY SLATS (COLOR: BLACK) WOVEN INTO CHAINING FENCE. FABRIC AT THE DAMPER ENDSURE CHAINING FENCE.





Revision Schedule	No.	Date	Description

JOB NO.
Project Number

DRWN. CHK.
Checker

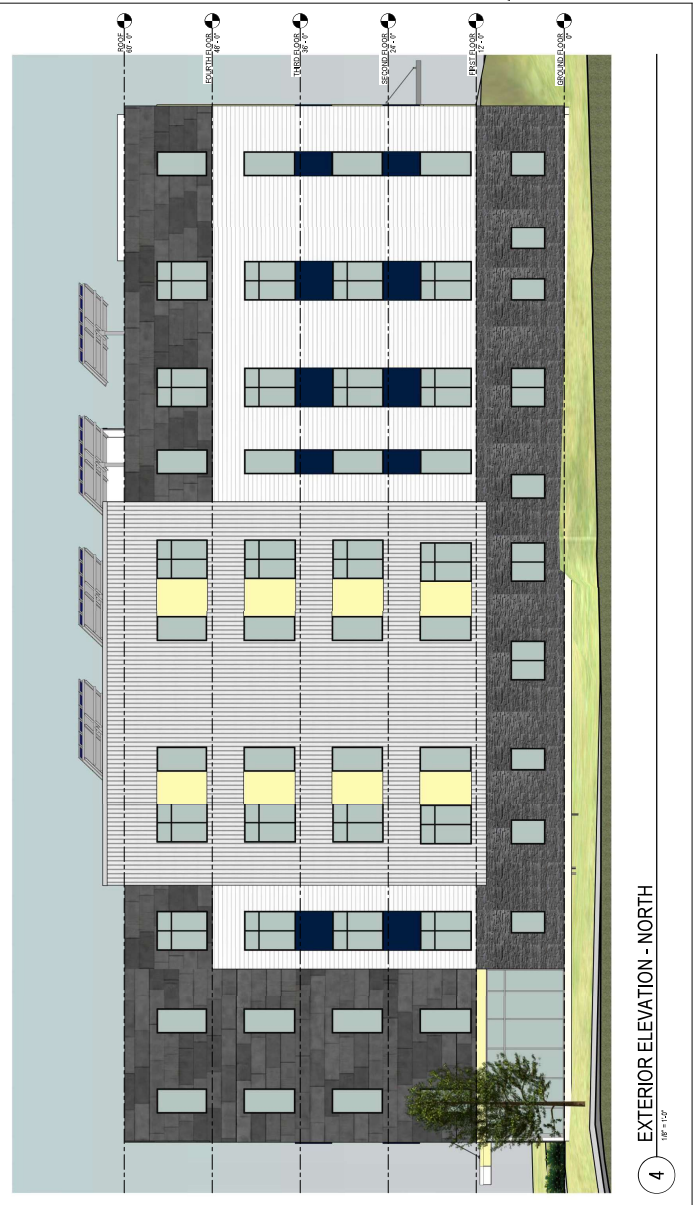
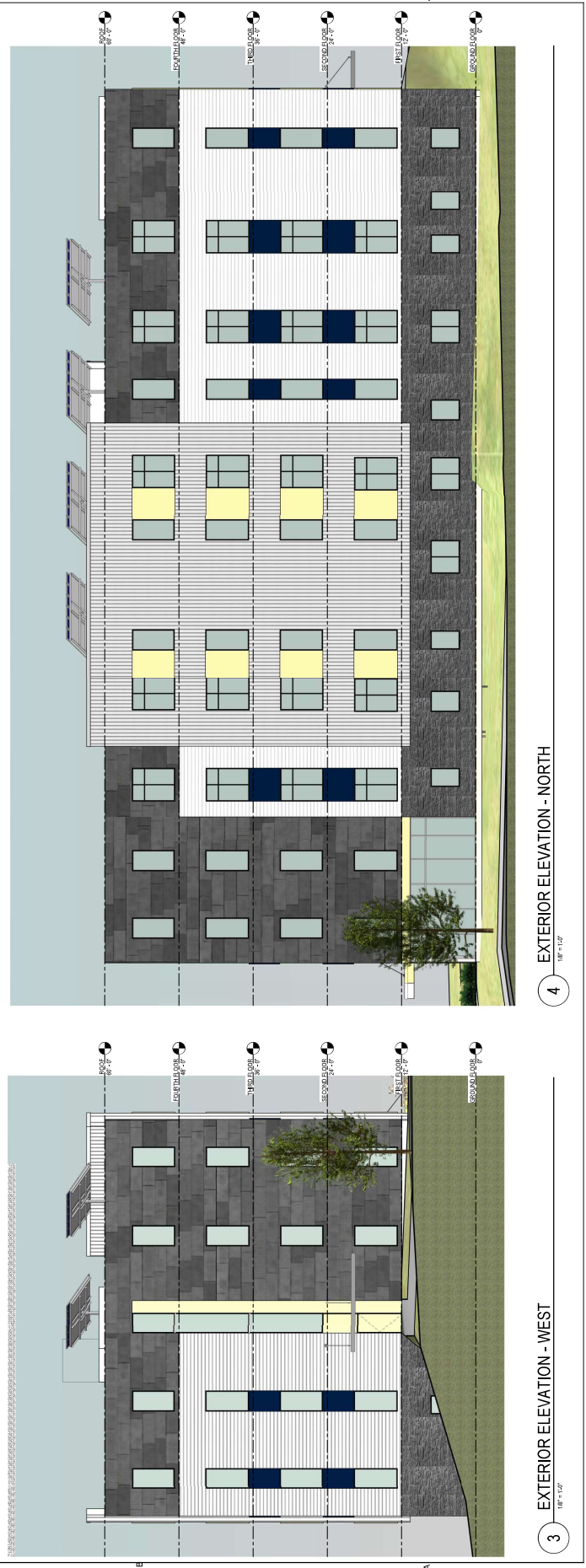
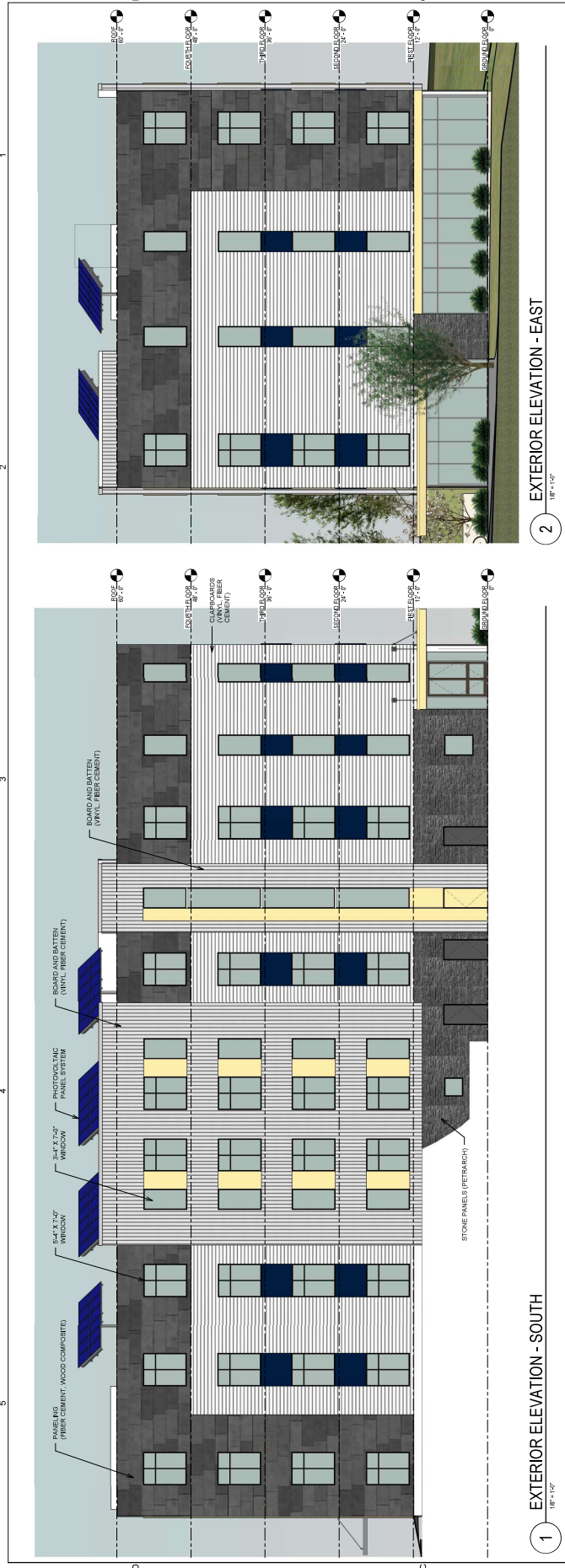
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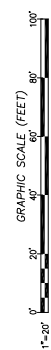
ISSUE
06/08/2021

TITLE
Exterior Elevations

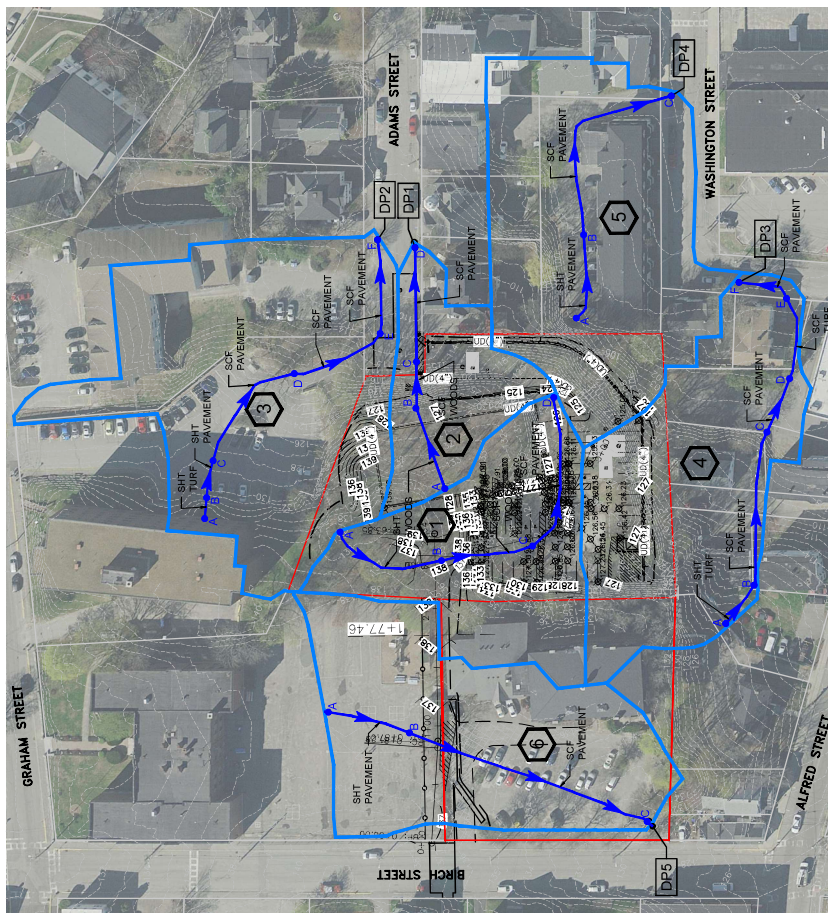
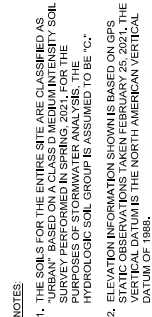
SHEET

A200





Save: 1/14/2022 4:26:37 PM Plotted: 1/17/2022 9:55:09 AM Current User: Anderson, Mark LastSavedBy: 4192



Discharge Point	2-Year Storm		10-Year Storm		25-Year Storm	
	Pre	Post	Pre	Post	Pre	Post
DP1	1.2	1.2	2.4	2.1	3.4	3.3
DP2	3.2	3.2	5.5	5.5	7.4	7.4
DP3	2.1	1.6	3.8	2.8	5.1	3.8
DP4	2.9	2.9	4.9	4.7	6.5	6.1
DP5	3.1	3	4.8	4.8	6.2	6.1

Data 1: Composites			Data 2: Resin Pre			Data 3: Resin Post		
Material	Length	Area	Material	Length	Area	Material	Length	Area
Composite 1	10	100	Composite 1	10	100	Composite 1	10	100
	15	150		15	150		15	150
	20	200		20	200		20	200
	25	250		25	250		25	250
	30	300		30	300		30	300
Composite 2	35	350	Composite 2	35	350	Composite 2	35	350
	40	400		40	400		40	400
	45	450		45	450		45	450
	50	500		50	500		50	500
	55	550		55	550		55	550
Composite 3	60	600	Composite 3	60	600	Composite 3	60	600
	65	650		65	650		65	650
	70	700		70	700		70	700
	75	750		75	750		75	750
	80	800		80	800		80	800
Composite 4	85	850	Composite 4	85	850	Composite 4	85	850
	90	900		90	900		90	900
	95	950		95	950		95	950
	100	1000		100	1000		100	1000
	105	1050		105	1050		105	1050
Composite 5	110	1100	Composite 5	110	1100	Composite 5	110	1100
	115	1150		115	1150		115	1150
	120	1200		120	1200		120	1200
	125	1250		125	1250		125	1250
	130	1300		130	1300		130	1300
Composite 6	135	1350	Composite 6	135	1350	Composite 6	135	1350
	140	1400		140	1400		140	1400
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	150	1500		150	1500		150	1500
	155	1550		155	1550		155	1550
Composite 7	160	1600	Composite 7	160	1600	Composite 7	160	1600
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	175	1750		175	1750		175	1750
	180	1800		180	1800		180	1800
Composite 8	185	1850	Composite 8	185	1850	Composite 8	185	1850
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	195	1950		195	1950		195	1950
	200	2000		200	2000		200	2000
	205	2050		205	2050		205	2050
Composite 9	210	2100	Composite 9	210	2100	Composite 9	210	2100
	215	2150		215	2150		215	2150
	220	2200		220	2200		220	2200
	225	2250		225	2250		225	2250
	230	2300		230	2300		230	2300
Composite 10	235	2350	Composite 10	235	2350	Composite 10	235	2350
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	250	2500		250	2500		250	2500
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Composite 11	260	2600	Composite 11	260	2600	Composite 11	260	2600
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	305	3050		305	3050		305	3050
Composite 13	310	3100	Composite 13	310	3100	Composite 13	310	3100
	315	3150		315	3150		315	3150
	320	3200		320	3200		320	3200
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Composite 14	335	3350	Composite 14	335	3350	Composite 14	335	3350
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	345	3450		345	3450		345	3450
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Composite 15	360	3600	Composite 15	360	3600	Composite 15	360	3600
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Composite 23	560	5600	Composite 23	560	5600	Composite 23	560	5600
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Composite 25	610	6100	Composite 25	610	6100	Composite 25	610	6100
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Composite 26	635	6350	Composite 26	635	6350	Composite 26	635	6350
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Composite 27	660	6600	Composite 27	660	6600	Composite 27	660	6600
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Composite 29	710	7100	Composite 29	710	7100	Composite 29	710	7100
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Composite 30	735	7350	Composite 30	735	7350	Composite 30	735	7350
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Composite 31	760	7600	Composite 31	760	7600	Composite 31	760	7600
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	780	7800		780	7800		780	7800
Composite 32	785	7850	Composite 32	785	7850	Composite 32	785	7850
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Composite 33	810	8100	Composite 33	810	8100	Composite 33	810	8100
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Composite 34	835	8350	Composite 34	835	8350	Composite 34	835	8350
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Composite 36	885	8850	Composite 36	885	8850	Composite 36	885	8850
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	925	9250		925	9250		925	9250
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Composite 38	935	9350	Composite 38	935	9350	Composite 38	935	9350
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Composite 39	960	9600	Composite 39	960	9600	Composite 39	960	9600
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Composite 40	985	9850	Composite 40	985	9850	Composite 40	985	9850
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	1000	10000		1000	10000		1000	10000
	1005	10050						



OAK POINT
ASSOCIATES

architecture
engineering
planning

February 7, 2024

David Galbraith
Biddeford Planning Department
P.O. Box 586
205 Main Street
Biddeford, Maine 04005

Re: Site Plan Review Application Preliminary and Final Plan Re-Submission
Adams Street Housing
69 Adams Street
Biddeford, Maine 04005

Dear David,

It is my understanding that the previous approval of the above referenced project has expired and requires a new application to obtain a building permit. Due to issues related to inflation and obtaining additional project funds, the project could not begin before the previous site plan review approval expired. The project now has funding in place and is ready for construction in March. We respectfully request that this re-application be processed in such a manner that Preliminary and Final approval be granted in one meeting. We are submitting the same plans and supporting material as previously approved. The plan set reflects the changes required by the previous conditions of approval that were submitted to the planning department on January 18, 2021. There are no changes proposed to the previously approved plans.

Please find enclosed the following submission items for the above referenced project:

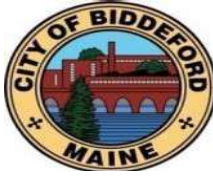
Application Fee of \$75.
Seven (7) Copies of Full-Size Site Plan and Landscape Plan.
Electronic copy of Site Plan Review Application and Supporting Materials (submitted via email).
Electronic copy of Drawings(submitted via email).

Please contact me to let me know if you have any questions or comments.

Jacques L Gagnon Jr., PE, LEED AP
Associate
Encl.

Site Plan Review Application

- 1. Project Description and Photographs**
- 2. Draft Contract Zone Agreement**
- 3. Locus Deed and Draft Fire Lane Easements**
- 4. Winter Management Plan**
- 5. Letter of Approval from Fire Department**
- 6. Ability to Serve Letter from Maine Water Company**
- 7. Ability to Serve Letter from Tom Milligan Regarding Sanitary Sewer Service**
- 8. Traffic Impact Study**
- 9. Geotechnical Report**
- 10. Stormwater Narrative and Calculations**
- 11. Stormwater Maintenance Plan**
- 12. Light Fixture Catalog Cuts**

**City of Biddeford – Planning Department****Planning Board Application**

P.O. Box 586, 205 Main Street Biddeford, Maine 04005
207-284-9115

Type of Application:

☐ Shoreland Zoning Permit ☒ Site Plan Review ☐ Extraction
☐ Conditional Use Permit ☒ Subdivision ☐ Private Way
☐ Other: _____

Applicant Information:

Name: Southern Maine Affordable Housing
Mailing Address: 22 South Street, Biddeford, ME 04005
Telephone: 207-415-2939
Email: ggagnon@bhousing.org
What is your legal interest in the property?
☒ Owner ☐ Potential Buyer with Contract ☐ Lease/Rental Agreement

Owner's Information:

Name: Southern Maine Affordable Housing
Mailing Address: 22 South Street, Biddeford, ME 04005
Telephone: 207-415-2939
Email: ggagnon@bhousing.org

Agent's Information:

Name: Jacques Gagnon, Jr., P.E. LEED AP
Mailing Address: 231 Main Street, Biddeford, ME 04005
Telephone: (207) 283-0193
Email: jgagnon@oakpoint.com

Engineer/Surveyor's Information:

Name: Oak Point Associates
Mailing Address: 231 Main Street, Biddeford, ME 04005
Telephone: (207) 283-0193
Email: jgagnon@oakpoint.com

Project Location and Lot Information:

Street Address: 69 Adams Street Drainage Watershed: Saco River
Tax Map: 38 Lot: 296
Current Zoning: CZ-20 Shoreland Zoning: N/A
Size of Lot: 1.44 (☒) acres (☐) s.f. Lot Frontage: 85.18
Existing Use of Property: Vacant (former convent burned in 1995).

Property currently serviced by:

☒ City Road ☐ Public Sewer ☐ Public Water ☐ Public Trash
☐ Private Road ☐ Septic System ☐ Private Well ☐ Private Hauler

Slope Conditions in Area of Construction (if applicable):

☐ Flat (0-3% slope) ☐ Rolling (3-8% slope) ☒ Hilly (8-15% slope) ☐ Steep (15%+ Slope)

Are there any wetlands or waterbodies on the site? ☐ (Yes) ☒ (No) if yes attach information

Is the project within the 100-year floodplain? ☐ (Yes) ☒ (No) if yes attach information

Do you plan to bring fill onto the lot? ☒ (Yes) ☐ (No) If yes attach information (Approximately 2,000 cy of fill)

Description of proposed use of property:

Project/Proposed Use:

Construct 39 unit family housing.

Property to be Serviced by:

☒ City Road ☒ Public Sewer ☒ Public Water ☐ Public Trash
☐ Private Road ☐ Septic System ☐ Private Well ☒ Private Hauler

Limits of Disturbance: 54,000 () acres (☒) s.f.Net change in impervious cover: 24,588 () acres (☒) s.f.Is this project part of a larger project? ☐ (Yes) ☒ (No)Is the project proposing a new Private or Public Road? ☐ (Yes, Private) ☐ (Yes, Public) ☒ (No)Is this project within the Urbanized Area/MS4 (see [City Drainage Map](#)) ☒ (Yes) ☐ (No)Is the project proposing any Stormwater facilities/BMPs? ☐ (Yes) ☐ (No)Will a Traffic Movement Permit (TMP) be required?: ☐ (Yes) ☒ (No)**N/A If in a Shoreland Zone:**Percent of residential lot coverage (Max 20%): N/APercent of structure expansion (Max 30%): N/A**☒ If Subdivision Review, number of lots proposed:** 39 Dwelling Units**N/A If a Private Way is proposed, number of lots served:** N/A**If Site Plan Review, you must provide the following information:**Total new square feet footprint of structure: 9,050 SFTotal new square feet paving/parking: 24,050 SF**Waiver Requests (attach details):**

1. See draft contract zone agreement – Article XI, Section 5.B.4.i.3 Parking and Paving,
2. from 30% to 38%. Paving and parking has been minimized, and the unique nature of
3. this site (large elevation rise) requires a waiver of this standard in order to accommodate
4. this development.
5. _____

Required Submittal Attachments:

- A. Letters of Approval
 - ☒ Fire Department – Contact Chief or Deputy Chief – 282-9986
 - ☒ Ability to Serve for Water Service – Maine Water – 282-1543
 - ☒ Ability to Serve for Sewer Service – Engineering Department – Tom Milligan 284-9118
 - ☒ Police Department – e-911 Road Name Designation – Contact Joanne Fisk 282-5127
- B. Letter to Planning Board describing project, Waiver requests, proposed improvements, addressing permit requirements, etc.
- C. Photographs of Site.
- D. Architectural renderings/drawings of proposed buildings, as required.
- E. Engineering Plans, as required.
- F. Stormwater Management Report, as required.

Fees (Due at time of Submission):

- \$75 Nonrefundable Administration Fee is required for every application.
- Refer to “Attachment A Fees and Charges” of the Land Development Regulations for more information. Consult with Planning Staff if you have questions.

Required Signatures:

By signing this application, as the foresaid applicant or authorized agent:

- I certify that I have read and completely understand the application;
- I certify that the information contained in this application and its attachments are true and correct;
- I understand that all information provided on this form and all other documents submitted as part of my proposal is a matter of public record;
- I understand that copies of this information may be supplied upon request to an interested party.
- I understand that additional funds may be required through the course of the review for special studies, legal review costs, and/or engineering review.
- I understand that by submitting an application I am not guaranteed a place on any particular agenda. I further understand that the City Planner will place me on an agenda for review when the application is deemed substantially complete.

Will the proposed project cause 1 acre or more of site disturbance?: X (Yes) (No)

- **If Yes, applicant is responsible for any required Maine Construction General Permits and shall comply with the requirements of DEP Chapter 500 Stormwater Regulations, as they apply.**

Signature of Applicant: Guy Gagnon **Date** 2/7/2024

Signature of Property Owner: Guy Gagnon **Date** 2/7/2024

DIGITAL SUBMITTAL REQUIREMENTS FOR ALL SUBMITTALS:

- A) PDF OF SIGNED APPLICATION
- B) PDFs OF ALL DRAWING SETS AND OTHER REQUIRED SUBMITTAL ATTACHMENTS NOTED ABOVE

HARD-COPY SUBMITTAL REQUIREMENTS FOR PLANNING BOARD APPLICATIONS:

- A) SEVEN (7) FULL-SIZE PAPER COPIES OF DRAWING SETS

DIGITAL SUBMITTAL REQUIREMENTS FOR FINAL APPROVAL:

- A) INDIVIDUALLY NAMED PDFs OF EACH DRAWING (NOT A COMBINED PDF SET)
 - *Individual Drawing PDF Naming Format: 'PROJECT/SHEETSET NAME_INDIVIDUAL DRAWING NAME.pdf'*
- B) PDF COPIES OF ALL PERMIT APPROVALS, APPLICATIONS, REPORTS, NARRATIVES, LETTERS, ETC.
- C) FINAL CAD REFERENCE FILES IN DWG FORMAT (SURVEY & PROPOSED DESIGN LINEWORK)
 - *All drawings & CAD reference files must be to-scale and within the following coordinate systems:*
 - *MAINE STATE PLANE WEST NAD83 (Horizontal Datum) & NAVD88 (Vertical Datum)*

HARD-COPY SUBMITTAL REQUIREMENTS FOR FINAL APPROVAL:

- A) THREE (3) FULL-SIZE PAPER COPIES OF INDIVIDUAL DRAWINGS REQUIRING BOARD SIGNATURE
- B) ONE (1) FULL-SIZE PAPER COPY OF ENTIRE DRAWING SET FOR ENGINEERING RECORDS

PLEASE CONFIRM WITH PLANNING STAFF FOR CLARIFICATION

CITY OF BIDDEFORD - SITE PLAN APPLICATION DRAWING CHECKLIST

CHECKLIST DIRECTIONS:

- The following checklist must be completely filled out by the applicant for any Site Plan submitted to the Planning Department.
- Applicant to confirm all of the items listed are included within the submittal. Any missing items must have adequate reasoning to justify their absence.
- City to review applicant's submittal and checklist responses. Projects missing submittal information with non-acceptable reasoning will be rejected.
- Items in **BLUE** are required for "Preliminary Site Plan" approval & "Final Site Plan" approval.
- Items in **BLACK** are only required for "Final Site Plan" approval.

SUBMITTAL INFORMATION - TO BE FILLED OUT BY APPLICANT	
Project Name:	Adams Point
Planning Board # (if available):	2021.17
Applicant Name/Info:	Southern Maine Affordable Housing
Submittal #/Type (Prelim/Final):	Preliminary & Final
Submittal Date:	12/7/2024

SUBMITTAL REQUIREMENT		APPLICANT RESPONSE		CITY REVIEW RESPONSE	
ITEM NUMBER	DESCRIPTION	INFORMATION PROVIDED (YES/NO)	REASON NOT PROVIDED/COMMENT	ACCEPTABLE (YES/NO-REVISE & RESUBMIT)	COMMENT
1 GENERAL PLAN REQUIREMENTS					
A	Drawing specific legends (linetypes, hatchies, etc.)	Yes			
B	Individual drawing layer control should be utilized: freeze/thawing, changing lineweights, and screening (i.e. screen existing layers on a proposed plan, freeze topography and underground utilities on a proposed site plan)	Yes			
C	North arrows, standard engineering scale viewpoints, dated revision blocks	Yes			
D	All drawings and surveys must be in the following coordinate systems: NAD83 Maine State Plane West (Horizontal) and NAVD83 (Vertical)	Yes			
E	Drawings need to be designed, signed & sealed by a Maine licensed professional engineer (PE); all boundary survey data needs to be performed by a licensed professional land surveyor (PLS)	Yes			
2 COVER SHEET					
A	Project Name & Property Address	Yes			
B	Project Team Contact Information (Owner, Engineer, Contractor, etc.)	No	2021 Approval did not require this information (shown on CS101)		
C	Site Location Map	Yes			
D	Sheet Set List of Drawings	Yes			
E	Tax Map and Lot ID	No	2021 Approval did not require this information (shown on CS101)		
F	Zone and Shoreland Zone Information	No	2021 Approval did not require this information (shown on CS101)		
G	Existing Use Description	No	2021 Approval did not require this information (shown on CS101)		
H	Proposed Use Description	No	2021 Approval did not require this information (shown on CS101)		
I	Required Waiver/Variations (Yes/No); if yes, plan must clearly list waivers/variances requesting	No	2021 Approval did not require this information (shown on CS101)		
J	Name of Drainage Watershed	No	2021 Approval did not require this information (on application form)		
K	Within the M54 Urbanized Area (Yes/No)	No	2021 Approval did not require this information		
L	Natural resources (streams, wetlands, etc.) located on-site or adjacent to the property (Yes/No)	N/A			
M	Within the 100-year Flood Zone (Yes/No)	N/A			
N	Public Road Proposed (Yes/No)	N/A	Driveway, No Road		
O	Private Road Proposed (Yes/No)	N/A			
P	Public Sewer Connection (Yes/No); if yes, need to include a proposed sewer flow calculation per Maine's Subsurface Wastewater Disposal Rules, Chapter 241, Section 4 (Tables 4A & 4C)	No	2021 Approval did not require this information		
Q	Public Storm Drain Connection (Yes/No)	No	2021 Approval did not require this information		
R	Limits of Disturbance in acres	No	2021 Approval did not require this information		
S	Previous Land Cover square footage, existing and proposed	No	2021 Approval did not require this information		
T	Impervious Land Cover square footage (Pavement/Gravel), existing and proposed	No	2021 Approval did not require this information		
U	Building Footprint square footage, existing and proposed	No	2021 Approval did not require this information		
V	Assigned Planning Board Number	No	2021 Approval did not require this information		
W	Estimated cut/fill earthwork volumes; if disturbing within Flood Zone, separate set of earthwork volumes required (site vs. within flood zone)	No	2021 Approval did not require this information		
3 EXISTING CONDITIONS PLAN					
A	Horizontal & Vertical Datums annotated (NAD83 & NAVD88)	Yes			
B	Survey Benchmark Locations (with XYZ Coordinates annotated)	No	2021 Approval did not require this information		
C	Property & Right-of-Way Lines	Yes			
D	Boundary line information (bearings, distances, etc.)	Yes			
E	Property pin and monumentation locations	Yes			
F	Existing easements with proper ownership identified	Yes			
G	Road Names & Individual Lot Labels (Map, Lot, Owner, Acreage)	Yes			
H	Location of any Natural Resources and their respective buffers (wetlands, streams, etc.)	N/A			
I	100-year Flood Zone Limits & Elevation	No	2021 Approval did not require this information (geotechnical report included)		
J	USDA-NRCS Soil Boundaries and Labels	No			
K	Existing contours with adequate contour labelling, minimum 1' contour interval	Yes			
L	Existing building footprints and annotations	N/A			
M	Spot elevations for existing building corners, door entrances, accessible parking/walkways, road centerlines, and bottom/top of curbs	N/A			
N	Existing buildings & structures	Yes			
O	Existing pavement areas & number of parking spaces	Yes	No Spaces Delineated Vacant Lot		
P	Existing ADA ramp geometry, detectable warning plates, and ADA parking spaces	N/A			
Q	Existing site features (sidewalks, retaining walls, curbing, lightpoles, guide rails, dumpsters, fencing)	Yes			
R	Existing signage and striping	N/A			
S	Existing underground utility locations (storm, sewer, force main, water, gas, etc, tele)	Yes			
T	Existing above-ground utility locations (manholes, catch basins, utility poles, hydrants, transformers, etc.)	Yes			
U	Right of Way, invert, inner, outer, pipe size, cardinal direction (N, E, S, W) information for any existing utility infrastructure being tied into (upstream/downstream/outfalls)	Yes			
V	Existing tree lines, street trees, free-standing trees (12" or larger diameter at breast height), and vegetation	Yes			
W	Location of any borings, drinking wells, and monitoring wells	No	Information shown on CD101		
4 SITE DEMOLITION & EROSION CONTROL (E&SC) PLAN					
A	Limits-of-disturbance outlined and acreage annotated	Yes	Acreage not shown, 2021 Approval did not require this information (on application form)		
B	Location of any Natural Resources and their respective buffers (wetlands, streams, etc.)	N/A			
C	100-year Flood Zone Limits	N/A			
D	Colour existing site features to be demolished/removed/replaced	Yes			
E	Colour existing structures to be demolished/removed/abandoned/in-place	Yes			
F	Colour existing structures to be demolished/removed/abandoned/in-place	Yes			
G	Construction Entrance locations	Yes			
H	Perimeter E&SC control locations (i.e. silt fence, erosion berm mix)	No	2021 Approval did not require this information (existing parking lot can be used)		
I	Stockpile and staging area(s) identified (with proper perimeter control)	Yes			

J	Proposed & existing site features shown that could conflict with proposed utilities (trees, signs, techniques, bollards, foundations, eulderals)	Yes			
K	All storm drains must be sized to convey the 25-year storm	Yes			
L	Sewer force main sizes and invert elevations	N/A			
M	Sewer pump station locations, model, rim, inverts, pipe sizes, cardinal directions (N, E, S, W)	N/A			
N	Grease trap & oil-water separator locations, sizes, elevations	N/A			
O	Storm/sewer pipe labels must include: linear footage, pipe size, material, slope directions (N, E, S, W)	Yes			Residential uses do not require grease traps
P	Utility profiles	Yes			
Q	Utility profiles for all gravity storm drains and sewer pipes, including all laterals, catch basins, culverts, and outfalls; profiles preferred to be aligned on the pipe centerline (not superimposed on the road centerline)	Yes			
R	Existing surface, dashed and screened	Yes			
S	Proposed surface, continuous and bold	Yes			
T	Storm/sewer structure labels must include: rim, inverts, in, inverts out, pipe sizes, cardinal directions (N, E, S, W)	Yes			No cardinal directions, 2021 Approval did not require this information
U	Existing and proposed gravity pipe crossings shown; sizes labeled and depths/clearance annotated	Yes			No material stated, CSO1 requires City to approve materials, 2021 Approval did not require this information
V	Existing and proposed electric/water/telecom/gas crossings shown at approximate depths, sizes, and locations	Yes			
W	Knowledge for groundwater elevations	No			2021 Approval did not require this information (Geotechnical report includes this information)
X	For all storm drains, 25-year HGI, must be shown on profiles with starting tailwater condition identified	No			2021 Approval did not require this information (Stormwater report includes this information)
Y	For storm outfalls, include upsizing and grading extents	N/A			
Z	Horizontal and vertical scale bars	Yes			
10	DETAILS				
A	Road section detail, including pavement & gravel depths	Yes			
B	Side walk, paver, crosswalk, and any other pavement section details	Yes			
C	Clavement sawcut detail	Yes			
D	Utility trench backfill detail	Yes			
E	Utility trench depth detail	Yes			
F	Utility trench depth detail	Yes			
G	Storm/sewer pipe details only show 100' detail	Yes			On CSO1
H	Storm/sewer pipe details only show applicable/proposed measures	Yes			
I	Utility structure details (manholes, cleanouts, fittings, handholes, transformer pads, hydrants)	Yes			
J	Storm outfall & urtrap details	N/A			All subsurface connections
K	Drainage ditch cross section identifying minimum depth, minimum bed width, and maximum side slopes	N/A			
L	Pump station, grease trap, and oil-water separator details	N/A			
M	Conduit section details	Yes			
N	Manhole details (to be loaded)	Yes			
11	LANDSCAPING, LIGHTING & PHOTOMETRIC PLANS				
A	As required by ordinance, at a minimum, locations, counts, and species/models must be	Yes			
B	Landscaping & lighting details	Yes			Landscaping details provided, lighting catalog outs included in supporting information book
12	DOCUMENTS/REPORTS/CALCULATIONS				
A	On initial preliminary submittal applications, applicant must submit a development review and inspection fee. Applicant to coordinate fee amount with City Planner prior to submittal. This fee will be drawn against to cover the following type of services throughout the project life cycle (and may require replenishing): i. 3rd Party City Peer-Review ii. Site Inspections during the permitting process iii. Erosion & Sediment Control Inspections during construction iv. Right-of-Way Inspections during construction	Yes			
B	Redevelopment & Post development Drainage Area Maps, including: i. Subdrainage areas delineated and labeled ii. Points of Interest/Analysis shown and labeled iii. Hatching for different land cover areas (impervious, pervious, gravel) iv. Time of concentration (Tc) paths & durations	Yes			
C	An approved 'Sewer Ability-to-Serve Letter' from the Engineering Department: i. Applicant to submit proposed sewer flow calculations per Maine's Subsurface Wastewater Disposal Rules, Chapter 241, Section 4 (Tables 4A & 4C)	Yes			Submitted as part of building permit
D	Performance guarantee Cost Estimate, utilizing Planning's template	Yes			
E	25-year hydrologic calculations for all storm conveyance piping (rational method), including 15-year hydrologic calculations for all storm conveyance piping (rational method), including 15-year hydrologic calculations for all storm conveyance piping (rational method), including 15-year hydrologic calculations for all storm conveyance piping (rational method)	Yes			
F	Stormwater condition assessment report, including facility is proposed, hydrologic model reports/hydrographs must be submitted for the 2, 10, 25, & 100-year storm frequencies	Yes			
G	Stormwater calculations for any SSM water quality BMP or detention facility	Yes			
H	Stormwater maintenance manual for any proposed SSM water quality BMP or detention facility, including: i. Annual maintenance requirements ii. Annual inspection requirements by a licensed PE, noting that all inspection reports/logs need to be submitted to the Engineering Department by March 1st each following year, identifying what on-going maintenance has occurred and what remedial repairs are needed iii. Signed Property Owner Agreement: including the current property owner's contact information and signature; it must be noted that all stormwater BMP maintenance requirements are linked to the property for perpetuity and transfer to any new ownership	Yes			
I	Soil Management Plan	Yes			
J	Sewer pump station sizing calculations	N/A			No pump station
K	Sewer pump station maintenance plan	N/A			No pump station
L	Grease trap sizing calculations	N/A			Residential use does not require grease trap
M	Homeowner Association (HOA) agreement for any private road serving two (2) lots or more	N/A			No HOA
N	Summary list & copy of any required DOT/DEP/USACE permits & approvals	Yes			DEP Stormwater Permit by Rule obtained (see stormwater report)

1. Project Description and Photographs



Project Description
Site Plan/Subdivision Review Application
Adams Point
69 Adams Street
Biddeford, Maine 04005

August 2, 2021
Revised September 21, 2021

The purpose of this project is to construct a 39-unit apartment building with a footprint of 9,024 square feet. The building will be partially four stories and partially 5-stories. A 200-foot long, 22-foot-wide road with a 5-foot-wide sidewalk will be constructed to access the site. Pedestrian access will be provided from Adams Street and Birch Street. The pedestrian access will allow for residents to walk to work in the downtown area, utilize on-street parking on Adams and Birch Streets and access to bus services on Alfred Street. Parking for 35 vehicles, a drop off area and a firetruck turn around will be provided at the building site. Of the 35 parking spaces, three will be for visitors and employees one of the visitor parking spaces will be can accessible. The remaining 32 spaces will be available for tenants to provide a parking ratio of 0.82 spaces per unit. There are 11 accessible units, and the same parking ratio is provided for these units resulting in 9 accessible spaces. In order provide as much parking as possible for tenants (25 spaces), 6 of the required 9 accessible spaces will be marked as accessible and the 3 other accessible spaces will be converted and marked as accessible parking upon request. A 20- wide fire lane will be constructed from Birch Street to the site though an easement on Parish Place and St James School properties.

The project is located at the dead-end portion of Adams Street. The site was formerly used as a convent and then housing for the mentally ill until it burned down in 1996. The driveway, parking lot and old carriage house foundation remains on the site.

A boundary and topographic survey have been completed and it has been determined that there are two easements that exist on the site, one that reserves an area for a "Religious Grotto" to benefit the Roman Catholic Bishop of Portland, and the other is an "Area Reserved for a Street" to benefit the Roman Catholic Bishop of Portland. A 12' wide portion of this "Area Reserved for a Street" also benefits the Servantes du Coeur Immacule De Marie. These easements will be extinguished as part of the negotiations with the Roman Catholic Bishop of Portland. The site also has the benefit of a 15-foot-wide water line easement on the St James School property. This easement is in the process of being revised to allow a fire lane and pedestrian walk and approval by the Roman Catholic Bishop of Portland and will be finalized as a condition of approval. Parish Place (also owned by Southern Maine Affordable Housing) will grant an easement for fire truck turn around/fire lane, and a utility easement to benefit this new project site should ownership of 69 Adams Street change. The new fire lane/utility easement will be a 5-foot strip of land (adjacent to the abutting 15-foot-wide easement) to create a 20-foot fire lane. The proposed easement also includes a 6-foot-wide utility easement to the existing utility pole and an area for fire truck turn around within existing parking lot travel lanes.

No wetlands were observed on or adjacent to the site. Trees larger than 20" in diameter were survey located and are depicted on the plans. Large trees that will be saved are show on the removals and site plans.

Utilities will consist of domestic and fire suppression water, natural gas, electric, communications, sewer and storm drains. All utilities except sewer and storm drain will be connected to existing utilities on Birch Street. Sewer and storm drain will connect to the existing combined sewer on Adams Street. Exterior lighting will consist of a combination of free-standing pole mounted light fixtures and building mounted light fixtures.

Stormwater will be controlled by use of catch basins and subsurface piping that is directed to a underground storage tanks. The outlet of the storage tanks have controlled outlets to throttle flows to not exceed predevelopment rates. Two drain manholes with a stub for future stormwater separation will be constructed in Adams Street.



Photo 1 – View from Adams Street



Photo 2 – Former building location near Parish Place.



Photo 3 – Existing Access Drive with Guardrail



Photo 4 – St James School Playground (right) and Parish Place (left)

2. Draft Contract Zone Agreement

DRAFT – FOR CITY COUNCIL CONSIDERATION

CONTRACT ZONE AGREEMENT

AGREEMENT made as of _____, 2021, by and between Adams Point, LP, a Maine limited partnership and Southern Maine Affordable Housing, a Maine corporation with an established place of business in Biddeford, Maine (hereinafter, jointly and severally called the “Owner”) and THE CITY OF BIDDEFORD, a body politic and corporate located in Biddeford, Maine, (hereinafter called “Biddeford”).

WHEREAS, the Owner (or one of them) is the owner of certain real estate (the “Property”) situated at 69 Adams Street, so-called, in Biddeford, the Property is currently designated as Tax Map 38, Lot 296, and contains approximately 1.54 acres. Owner desires to transfer to Adams Point, LP (the “Developer”) who intends to develop the Property as a 39 unit affordable housing building for families on the Property. The description of the Property is shown on the plan entitled “Adams Point Housing – Biddeford, ME; Existing Conditions” prepared by Oak Point Associates as revised though [DATE TBD], attached hereto as EXHIBIT A; and

WHEREAS, Owner has applied for and obtained approval to re-zone the Property pursuant to the Contract Zoning provisions of the Zoning Ordinance of the City of Biddeford to create Contract Zone 19; and

WHEREAS, the parties are entering into this Agreement to provide written contractual evidence of the agreement of the parties and the terms and conditions of the Contract Zone.

NOW, THEREFORE,

in consideration of the mutual agreements hereinafter set forth and in consideration of the granting of the zoning ordinance change, the parties agree as follows:

1. **Development of the Property.** Owner agrees that in the event it shall transfer title to Developer, it shall require as a condition of sale that the Developer or its assignee approved by the Biddeford Planning Board or such other municipal board or committee having jurisdiction (the “Approved Assignee”) shall develop the Property in accordance with the following provisions and conditions:
 - A. Findings of Fact and Recommendations of the City of Biddeford Planning Board attached hereto as EXHIBIT B; and
 - B. Materials and plans entitled “Adams Point Housing”, prepared by Oak Point Associates and consisting of 10 pages attached hereto as [SIGNATURE SHEET OF SITE PLAN APPLICATION] of which contains the signatures of the Biddeford Planning Board members and will be duly recorded in the York Registry of Deeds.
2. **Failure to Complete Development.** In the event the Developer, or its Approved Assignee, shall fail to commence significant construction of the improvements within four (4) years of the effective date of the Contract Zone and shall complete construction within seven (7) years of the effective date of the Contract Zone, the Contract Zone granted hereby shall automatically

be void and the Property shall revert to the zoning classification of the abutting properties. Significant commencement of construction shall mean the installation of all infrastructure improvements and grading within the limits of the Project.

In the event that the zones have changed, each portion of the Property shall revert to the zoning classifications of the abutting properties. In the event the changed abutting properties shall have more than one zoning classification, the Property shall become part of the more restrictive abutting zone.

3. **Construction and Effect.** This agreement shall be construed in accordance with the laws of the State of Maine and shall be binding upon and inure to the benefit of the successors and assigns of the parties hereto.

IN WITNESS WHEREOF, the parties have caused this instrument to be signed all as of the day and date above written.

Witness:

ADAMS POINT, LP

By: _____
Guy M. Gagnon, Member

SOUTHERN MAINE AFFORDABLE HOUSING

By: _____
Guy M. Gagnon, President

CITY OF BIDDEFORD

By: _____
James Bennett, Its Manager

Findings of Fact and Recommendations of the City of Biddeford Planning Board

To: Mayor Alan Casavant
Members of the Biddeford City Council

The Planning Board of the City of Biddeford has met and reviewed the Request for Contract Zone submitted by Adams Point, LP and Southern Maine Affordable Housing, with respect to property located at 69 Adams Street in Biddeford. The property is composed of the property currently designated as Tax Map 38, Lot 296 and contains approximately 67,082 square feet (1.54 acres). The Project will involve the construction of 39 total family housing units. In addition to the creation of a Contract Zone, it was necessary for the Project to be further reviewed under the site plan review procedures of the Biddeford Zoning Ordinance.

Upon review, the Planning Board of the City of Biddeford makes the following findings of fact:

- A. The proposed contract zone as hereinafter set forth is consistent with the Comprehensive Plan of the City of Biddeford in that the area to be developed is located in a section of the City of Biddeford which is currently developed for large scale uses such as municipal offices, medical offices, office buildings, higher-density residential housing, and elderly care support facilities; and
- B. The proposed residential use is consistent with the existing or permitted uses within the original zone that is, the existing MSRD2 zone which provides for areas of medium density residential development; and
- C. The proposed zone change shall meet all of the area, front yard, side yard, rear yard and height requirements of the proposed contract zone; and
- D. The proposed zone will not create unreasonable traffic congestion on contiguous or adjacent streets, provided anticipated improvements required by various governmental approvals are constructed; and
- E. The proposed zone change and use authorized includes provisions for providing and maintaining adequate:
 - 1. Utility services; and
 - 2. Sewage disposal; and
 - 3. Drainage; and
 - 4. Solid waste disposal; and
 - 5. Access; and
 - 6. Parking and loading; and
 - 7. All other necessary site improvements; and

- F. The proposed use will conform to the general character of the neighborhood in that the materials to be used, style of buildings, fences, plantings and the like are compatible with the character of the neighborhood; and
- G. Insofar as practicable, the landscaping will be preserved in its natural state; and
- H. There will be sufficient setbacks of structures and screening to provide an adequate visual and sound barrier; and
- I. Off-street parking facilities are sufficiently screened from view of surrounding properties; and
- J. There will be no significant adverse effect resulting from the proposed use and the proposed zone change upon the public health, safety and general welfare of the neighborhood.

The Planning Board of the City of Biddeford specifically finds there is a demonstrated need for the type of housing to be constructed which is intended to be for families of personnel employed by businesses located in the neighborhood. While Biddeford does have an existing rental housing stock, the units in this building will be affordable units specifically for families in the community.

The Planning Board of the City of Biddeford therefore recommends that the Request for Zone Change be affirmatively acted upon by the City Council.

The Board recommends that the real estate depicted on the Materials and plans entitled "Adams Point Housing-Biddeford, ME; Site Plan", prepared by Oak Point Associates and attached hereto as Exhibit A, be rezoned pursuant to the provisions of Article XVII, Section 3 of the Zoning Ordinance of the City of Biddeford to a zone which is labelled Contract Zone 20 (CZ-20).

CZ-20 shall provide for the following:

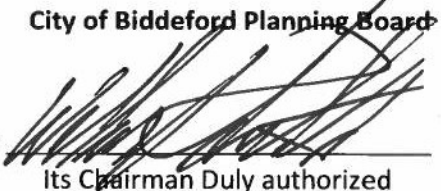
1. The permitted uses in the zone shall include the multifamily apartment building containing no more than 39 units of housing on the property.
2. The minimum lot size for each unit shall be 1,900 square feet. All buildings shall be located as ultimately approved by the Biddeford Planning Board as a part of its separate review under the Site Plan Review standards of the City of Biddeford Zoning Ordinance.
3. No building or structure as located and constructed shall exceed 60 feet in height or a maximum of five (5) stories. Height shall be as defined as the vertical distance from grade to top of the highest roof beams of a flat roof, excluding any parapets for elevators, roof access, or the screening of mechanical equipment.
4. The minimum required parking in the zone shall be 0.75 parking spaces per dwelling unit.

In consideration of such Contract Zone Change the Applicant agrees to use Applicant's (or the Developer's) best efforts to:

1. Construct thereon a maximum of 39 units of multifamily residential housing, all in accordance with the aforesaid Plan.
2. It shall be a condition of this Contract Zone Change that the Applicant shall undertake significant commencement of construction within 4 years of the effective date of the Zone Change and shall complete construction within 7 years of the effective date of the Zone Change. Significant commencement of construction shall mean the installation of all infrastructure improvements and grading within the limits of the Project.

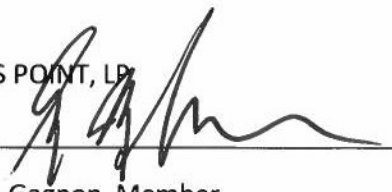
In the event Applicant shall not comply with the provisions of this paragraph, the Zone Change granted hereby shall automatically be void and the property shall revert to the zoning classification that the Property was in of the date of the Contract Zone Agreement. In the event that the zones have changed, the property shall revert to the zoning classifications of the abutting properties. In the event the abutting properties shall have more than one zoning classification, the property shall become part of the most restrictive abutting zone.

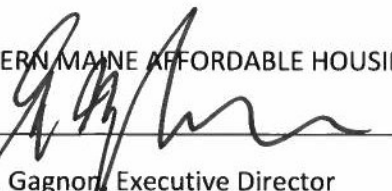
9/30, 2021

City of Biddeford Planning Board
By: 
Its Chairman Duly authorized

The undersigned Applicant agrees with the City of Biddeford to be bound by the terms, conditions and provisions of this Approval, if the zone change is enacted

9/30, 2021

ADAMS POINT, LP
By: 
Guy M. Gagnon, Member

SOUTHERN MAINE AFFORDABLE HOUSING
By: 
Guy M. Gagnon, Executive Director

3. Locus Deed and Draft Fire Lane Easements

Milda A. Castner
Scott M. Edmunds
William J. Gallitto, III
Britten R. Garon
Michael W. Macleod-Ball
James S. Mundy
Sarah B. Neault



Durward W. Parkinson
Enn E. Sherman
Of Counsel
Jonathan Bangs
Barbara I. Bell
Christon L. Bener
In Memoriam
Wayne T. Adams

February 16, 2021

Guy M. Gagnon, President
Southern Maine Affordable Housing
22 South Street
Biddeford, ME 04005

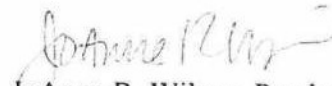
RE: 69 Adams Street, Biddeford, Maine

Dear Mr. Gagnon:

Enclosed is the original Quitclaim Deed that was electronically recorded with the York County Registry of Deeds.

If you should have any questions, please feel free to contact me.

Sincerely yours,


JoAnne R. Wilson, Paralegal

Enclosure

DLN 1002040123593

QUITCLAIM DEED

DIANE MORENCY of Wells, Maine and RAYMOND A. MORENCY of Lyman, Maine

for consideration paid, grants to

SOUTHERN MAINE AFFORDABLE HOUSING (SMAH), a Maine nonprofit corporation

with a place of business located at 22 South Street, Biddeford, Maine 04005, without Covenants, the following described real property in the City of Biddeford, County of York and State of Maine:

See Exhibit A attached hereto and made a part hereof

Also hereby conveying all rights, easements, privileges, and appurtenances, belonging to the premises hereinabove described.

WITNESS our hands and seals this 30th day of November, 2020.

WITNESS


DIANE MORENCY


RAYMOND A. MORENCY

State of Maine
County of York, ss.

Personally appeared before me DIANE MORENCY and RAYMOND A. MORENCY, and acknowledged the foregoing instrument to be their free act and deed on November 30, 2020.

Before me,


Notary Public / Attorney-at-Law
Print Name: William S. Kay
My commission expires: _____

Maine R.E. Transfer Tax Paid

DLN 1002040123593

QUITCLAIM DEED

DIANE MORENCY of Wells, Maine and **RAYMOND A. MORENCY** of Lyman, Maine

for consideration paid, grants to

SOUTHERN MAINE AFFORDABLE HOUSING (SMAH), a Maine nonprofit corporation

with a place of business located at 22 South Street, Biddeford, Maine 04005, without Covenants, the following described real property in the City of Biddeford, County of York and State of Maine:

See Exhibit A attached hereto and made a part hereof

Also hereby conveying all rights, easements, privileges, and appurtenances, belonging to the premises hereinabove described.

WITNESS our hands and seals this 30th day of November, 2020.

WITNESS



DIANE MORENCY



RAYMOND A. MORENCY

State of Maine
County of York, ss.

Personally appeared before me **DIANE MORENCY** and **RAYMOND A. MORENCY**, and acknowledged the foregoing instrument to be their free act and deed on November 30, 2020.

Before me,



Notary Public / Attorney-at-Law

Print Name: William S. Kay

My commission expires: _____

EXHIBIT A
(69 Adams Street, Biddeford)

A certain lot or parcel of land with the buildings thereon, located off Adams Street in the City of Biddeford, County of York and State of Maine, being bounded and described as follows:

BEGINNING at an iron pipe set on the southerly side of Adams street at the northwest corner of land now or formerly of Harvey, thence southeast $40^{\circ}05'11''$ a distance of 202.5 feet along said land of Harvey to an iron fence post; thence $S46^{\circ}32'16''W$ a distance of 225.08 feet to an iron fence post and land of Parish Place Association; thence $N41^{\circ}13'52''W$ a distance of 160.96 feet along said land of Parish Place Association to an iron pipe and land of St. Joseph School; thence $N36^{\circ}48'14''W$ a distance of 171.52 feet along said land of St. Joseph School to an iron fence post and land of C.M. Cimino Realty Inc.; thence $N70^{\circ}07'26''E$ a distance of 194.27 feet along said land of Cimino Realty to an iron pipe set at the northwest end of Adams Street, thence $S40^{\circ}30''E$ a distance of 50 feet along the end of Adams Street to an iron pipe set at the southwesterly end of Adams Street; thence $N49^{\circ}30'E$ a distance of 35.41 feet along said Adams Street to the point of beginning.

TOGETHER WITH that certain easement set forth in the deed from Raymond A. Morency and Diane Morency and the Roman Catholic Bishop of Portland, dated December 24, 2001 and recorded in the York County Registry of Deeds at Book 11252, Page 66

For title reference see Deed given by Diane Morency and Raymond A. Morency as tenants-in-common to Diane Morency and Raymond A. Morency as Joint Tenants, which deed was recorded in the York County Registry of Deeds in Book 17897, Page 243 on February 20, 2019.

28592

KNOW ALL MEN BY THESE PRESENTS, that it, the Roman Catholic Bishop of Portland, a body politic and corporation sole, created and existing under the laws of the State of Maine, and having its chancery in Portland, County of Cumberland and State of Maine, being the owner in fee simple of certain lands located in the City of Biddeford, County of York and State of Maine, and described as follows, viz:

Being a portion of the premises conveyed to the Grantor herein on June 20, 1929, and recorded in the York County Registry of Deeds in Book 2025, at Page 383 of the York County Registry of Deeds.

Said property is primarily used as a playground for school children and is situated on Birch Street in Biddeford and consists of an area approximately 15' wide and 205' in length along and adjacent to the property known as Parish Place and runs from said Birch Street to the property of Raymond A. Morency and Diane Morency along the property line of the said Roman Catholic Bishop of Portland at St. Joseph's Parish, Biddeford.

In consideration of One Dollar (\$1.00) and other valuable considerations paid by Raymond A. Morency and Diane Morency, both of Wells, said County and State, the receipt whereof is hereby acknowledged does hereby give, grant, sell and quit-claim to said Raymond A. Morency and Diane Morency, their heirs and assigns, the rights and easements hereinafter set forth which are to be exercised over the above described 15 x 250' strip parcel of land as follows: To enter upon, excavate, lay, relay, remove, repair and maintain, an underground water pipe and main and all appurtenances thereto belonging for the purpose of installing, connecting and operating a water line across and along the boundary line of property owned by the Grantor in Biddeford, Maine.

This conveyance is subject to the Grantee's agreement and covenant to promptly restore the surface of the Grantor's land to its prior condition after an excavation or disturbance to said surface in connection with the exercise of the rights, privileges and easements herein granted, such restoration to include, without limitation, regrading, regrass-seeding, and reasphalting of said surface as the Grantor shall direct.

Provided further, anything herein to the contrary notwithstanding, the Grantor, its successors and assigns, does hereby reserve the right of ingress and egress at all times to and from the subject premises and nothing herein granted by the Grantor to the Grantee is intended or in fact shall authorize a foreclosure, impediment or barrier to free passage of Grantor, its successors and assigns, to and from, over and upon the subject premises.

MAINE REAL ESTATE TRANSFER TAX PAID

12

TO HAVE AND TO HOLD the said rights, privileges and easements to said Raymond A. Morency and Diane Morency, their heirs and assigns forever.

IN WITNESS WHEREOF, it, the said Roman Catholic Bishop of Portland, has caused this easement to be executed this 13th day of July, A.D. 1988.

SIGNED, SEALED AND DELIVERED
IN THE PRESENCE OF

ROMAN CATHOLIC BISHOP OF PORTLAND

Joseph Ford
Witness

By: Edward C. O'Leary
Edward C. O'Leary, Roman Catholic
Bishop of Portland

STATE OF MAINE
Cumberland, ss.

Personally appeared the above-named Edward C. O'Leary, Roman Catholic Bishop of Portland, and acknowledged the foregoing instrument to be his free act and deed and the free act and deed of the said corporation sole.

Before me,

Ann P. Foley
Notary Public
Ann P. Foley

MY COMMISSION EXPIRES
JULY 31, 1989

RECEIVED YORK, SS.

1988 JUL 13 AM 10:03

RECORDED REGISTRY OF DEEDS

ATTEST: Ann M. Ponzetta
REGISTER

QUITCLAIM WITH COVENANT DEED

KNOW ALL MEN BY THESE PRESENTS,

THAT, we, **Raymond A. Morency** and **Diane Morency**, of Wells, County of York and State of Maine, in consideration of One Dollar (\$1.00) and other valuable considerations, paid by the **Roman Catholic Bishop of Portland**, a corporation sole and body politic with a Chancery at 500 Ocean Avenue, Portland, Maine, the receipt whereof we do hereby acknowledge, do hereby give, grant, and convey unto the said Roman Catholic Bishop of Portland, its successors and assigns forever, the following described premises:

See Exhibit A.

The Roman Catholic Bishop of Portland, a corporation sole, hereby enters into a COVENANT with Raymond A. Morency and Diane Morency that during any period of its ownership and control of the premises, it will reserve an area 800 square feet on the premises to be used for location of a religious grotto, to be accessible for veneration and prayer by the Roman Catholic faithful. The Roman Catholic Bishop of Portland in its discretion may from time to time relocate the said 800 square foot area for a grotto onto another portion of the premises. The premises are conveyed SUBJECT TO A FURTHER COVENANT INTENDED TO RUN WITH THE LAND that if the Roman Catholic Bishop of Portland transfers the premises, a 800 square foot grotto area shall remain on the premises, accessible for veneration and prayer, in such location as the Roman Catholic Bishop of Portland, at the time of such transfer, directs, or if no direction is provided at the time of such transfer, in such location as the grotto is then located.

The premises are conveyed SUBJECT TO THE RESTRICTION, intended to last for so long as the Roman Catholic Bishop of Portland owns and operates a school on adjoining property, that the Roman Catholic Bishop of Portland, shall not transfer ownership of the premises. This restriction shall automatically terminate of its own accord at such time as the Roman Catholic Bishop of Portland may cease to own and operate the said school, after which time any transfer of the premises shall be free of this restriction.

TO HAVE AND TO HOLD, the aforegranted and bargained premises, with all the privileges and appurtenances thereof, to the said Roman Catholic Bishop of Portland, its successors and assigns, to its and their use and behoof forever.

MAINE R.E. TRANSFER TAX PAID

EXHIBIT A

A certain lot or parcel of land with the buildings thereon, located off Adams Street in the City of Biddeford, County of York and State of Maine, being bounded and described as follows:

BEGINNING at an iron pipe set on the southerly side of Adams Street at the northwest corner of land now or formerly of Harvey, thence southeast $40^{\circ}05'11''$ a distance of 202.5 feet along said land of Harvey to an iron fence post; thence $S46^{\circ}32'16''W$ a distance of 225.08 feet to an iron fence post and land of Parish Place Association; thence $N41^{\circ}13'52''W$ a distance of 160.96 feet along said land of Parish Place Association to an iron pipe and land of St. Joseph School; thence $N36^{\circ}48'14''W$ a distance of 171.52 feet along said land of St. Joseph School to an iron fence post and land of C.M. Cimino Realty Inc.; thence $N70^{\circ}07'26''E$ a distance of 194.27 feet along said land of Cimino Realty to an iron pipe set at the northwest end of Adams Street, thence $S40^{\circ}30''E$ a distance of 50 feet along the end of Adams Street to an iron pipe set at the southwesterly end of Adams Street; thence $N49^{\circ}30'E$ a distance of 35.41 feet along said Adams Street to the point of beginning.

FOR SOURCE OF TITLE reference may be had to deed from the Servants of the Immaculate Heart of Mary, aka Les Servantes du Coeur Immacule de Marie, to Raymond A. Morency and Diane Morency, dated July 1, 1987, and recorded in the York County Registry of Deeds at Book 4365, Page 263.

ALSO conveying all right, title and interest in the easement set forth in the deed from the Roman Catholic Bishop of Portland to Raymond A. Morency and Diane Morency, dated July 8, 1988, and recorded in the York County Registry of Deeds at Book 4771, Page 317.

And we do covenant with the said Grantee, its successors and assigns, that we shall and will Warrant and Forever Defend the same to the said Grantee, its successors and assigns against the lawful claims and demands of all persons claiming by, through or under us.

IN WITNESS WHEREOF, we, the said Raymond A. Morency and Diane Morency, have hereunto set our hand and seal this 24th day of December, 2001.

SIGNED, SEALED AND DELIVERED
IN PRESENCE OF

John R. Kelly

Raymond A. Morency
Raymond A. Morency

Diane Morency

Diane Morency

STATE OF MAINE

Cumberland County, SS. Dec 24, 2001

Then personally appeared the above named Diane Morency and acknowledged the above instrument to be her free act and deed.

Before me,

Thomas R. Kelly

Notary Public Attorney At Law Bar Roll No. 7555
Thomas R Kelly

STATE OF MAINE

Cumberland County, SS. Dec 24, 2001

Then personally appeared the above named Raymond A. Morency and acknowledged the above instrument to be his free act and deed.

Before me,

Thomas R. Kelly

Notary Public Attorney At Law, Bar Roll No. 7555

RECEIVED YORK S.S. Thomas R Kelly

2001 DEC 31 AM 10:00

ATTEST: *John M. Mace*
REGISTER OF DEEDS

*Robinson Haysen + M
PO Box 568
Pitts, Me 04112-0568
JP*

KNOW ALL MEN BY THESE PRESENTS,

THAT, the **Roman Catholic Bishop of Portland**, a body politic and corporation sole, created and existing under the laws of the State of Maine, and having its chancery in Portland, County of Cumberland and State of Maine, in consideration of One Dollar (\$1.00) and other valuable considerations paid by Diane Morency, of Wells, Maine, and Raymond A. Morency of Alfred, Maine, the receipt of which consideration it does hereby acknowledge, does hereby remise, release, and convey, and forever quit-claim unto the said **Diane Morency and Raymond A. Morency**, as tenants-in-common, their successors and assigns, the following described real estate:

See attached Exhibit A.

To have and to hold the same, together with all the privileges and appurtenances thereunto belonging to the said Grantees, their successors and assigns forever.

The Grantor covenants with the Grantees, their heirs and assigns that it will warrant and forever defend the premises to the said Grantees, their heirs and assigns forever, against the lawful claims and demands of all persons claiming by, through or under the Grantor.

In Witness Whereof, the said Roman Catholic Bishop of Portland, a body politic and corporation sole, has caused this instrument to be sealed with its corporate seal and signed in its corporate name by Richard Malone, Roman Catholic Bishop of Portland, thereunto duly authorized, according to the discipline and government of the Roman Catholic Church and the

397 Robinson, Kriger & McCallum
P.O. Box 568
E. Portland ME 04112
MAINE R.E. TRANSFER TAX PAID

laws of the State of Maine, this 11th day of January, in the year of our Lord
Two Thousand and Seven.

SIGNED, SEALED AND DELIVERED
IN PRESENCE OF

ROMAN CATHOLIC BISHOP OF PORTLAND

Arthur J. Buscetta

By: Richard Malone
Richard Malone, Roman Catholic
Bishop of Portland

STATE OF MAINE
Cumberland, ss.

January, 11, 2007

Personally appeared the above named Richard Malone, Roman Catholic Bishop of
Portland, and acknowledged the above instrument to be his free act and deed in his said capacity,
and the free act and deed of said corporation sole.

Before me,

Carol A. Connolly
Notary Public

CAROL A. CONNOLLY
Notary Public, Maine
My Commission Expires November 1, 2012

SEAL

Exhibit A

A certain lot or parcel of land with the buildings thereon, located off Adams Street in the City of Biddeford, County of York and State of Maine, being bounded and described as follows:

BEGINNING at an iron pipe set on the southerly side of Adams Street at the northwest corner of land now or formerly of Harvey, thence southeast $40^{\circ}05'11''$ a distance of 202.5 feet along said land of Harvey to an iron fence post; thence $S46^{\circ}32'16''W$ a distance of 225.08 feet to an iron fence post and land of Parish Place Association; thence $N41^{\circ}13'52''W$ a distance of 160.96 feet along said land of Parish Place Association to an iron pipe and land of St. Joseph School; thence $N36^{\circ}48'14''W$ a distance of 171.52 feet along said land of St. Joseph School to an iron fence post and land of C.M. Cimino Realty Inc.; thence $N70^{\circ}07'26''E$ a distance of 194.27 feet along said land of Cimino Realty to an iron pipe set at the northwest end of Adams Street, thence $S40^{\circ}30''E$ a distance of 50 feet along the end of Adams Street to an iron pipe set at the southwesterly end of Adams Street; thence $N49^{\circ}30'E$ a distance of 35.41 feet along said Adams Street to the point of beginning.

TOGETHER WITH that certain easement set forth in the deed from Raymond A.

Morency and Diane Morency and the Roman Catholic Bishop of Portland, dated December 24, 2001 and recorded in the York County Registry of Deeds at Book 11252, Page 66.

FOR SOURCE OF TITLE, reference may be had to a certain deed from Raymond A.

Morency and Diane Morency, dated December 24, 2001 and recorded in the York County Registry of Deeds at Book 11252, Page 66. With respect to any and all covenants, obligations or restrictions previously established by and between the Grantees on the one side and the Grantor on the other side, whether personal or running with the land hereby conveyed, including all such matters set forth in the deed referenced next above, the Grantor and Grantees acknowledge by delivery and acceptance of this deed, their discharge, termination and as applicable, merger by deed.

END OF DOCUMENT

SOUTHERN MAINE AFFORDABLE HOUSING

22 SOUTH STREET
BIDDEFORD, MAINE 04005

July 27, 2021

Roman Catholic Bishop of Portland
510 Ocean Avenue
Portland, ME 04103
Attn.: Denis Lafreniere, Jr.
Director - Office of Property Management

RE: Grant of easement

Dear Denis:

This letter confirms our mutual understanding concerning the grant of a permanent and perpetual easement by the Roman Catholic Bishop of Portland, a corporation sole ("RCBP") to Southern Maine Affordable Housing, a Maine nonprofit corporation, or its designated successor (collectively "SMAH") for underground utilities, pedestrian access and limited emergency access over a 20foot strip of land shown on the plan attached hereto as Exhibit A. The easement shall run with and benefit as an appurtenant easement the abutting land of SMAH, which land SMAH expects to develop as affordable rental housing.

We have agreed upon the following terms:

1. SMAH will pay RCBP the sum of \$40,000 at the time the easement, in the form agreed upon by SMAH and RCBP, is executed and delivered by RCBP to SMAH.
2. All of the following work within the easement area shall be done at the sole expense of SMAH, during the summer months when RCBP's school is not in regular session:
 - construction of 15foot wide pathway within 20foot easement, with appropriate underlayment and impervious surface.
 - Installation of a new fence along the pathway in the easement area to match the existing black chain link fence recently installed at school yard.
 - Moving of sheds and shifting over of school's play equipment.
 - Addition of new site lighting along the pathway, using lighting satisfactory to the RCBP.

- Removal of existing brush, etc. and planting new trees and shrubbery within easement area.
- Repair of any pavement damage to schoolyard, to the sole satisfaction of the RCB.

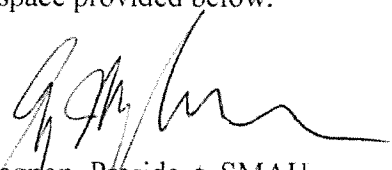
All terms of the easement shall be consistent with the terms expressed herein and otherwise mutually acceptable to both parties and shall contain a commercially reasonable indemnity provision in favor of RCBP for negligent acts or omissions by SMAH, its residents and guests. The easement shall be conveyed with good and marketable title free and clear of liens, claims or encumbrances. SMAH shall be obligated to maintain the easement area, including without limitation, fence maintenance, tree maintenance, winter maintenance, maintenance of the pathway, and lighting maintenance and repair. SMAH shall be obligated to pay on an ongoing basis for the cost of electrical service for the lighting of the path. SMAH may assign its rights and obligation in this letter, and the easement and associated obligations may be assigned to and in such case shall be assumed by, an affiliate of SMAH, provided that the affiliate is the party owning the land to be benefitted by the easement.

SMAH is proceeding with development plans for an affordable rental housing project to be built on land that will have the benefit of the easement and expects to begin and substantially complete construction on the above improvements in the easement area in the summer of 2023. The improvements in the easement area shall be completed to the reasonable satisfaction of the RCBP.

RCBP's obligation to convey the easement is conditional upon RCBP's satisfaction with the final design of the easement improvements and with the terms of affordable housing development approval by the City of Biddeford.

If this letter is satisfactory, please have it signed in the space provided below.

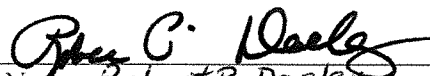
Sincerely,


Guy M. Gagnon, President, SMAH

SEEN AND AGREED TO:

ROMAN CATHOLIC BISHOP OF PORTLAND

By:


Name: Robert P. Deeley
Title: Bishop of Portland

EASEMENT AGREEMENT

KNOW ALL PERSONS BY THESE PRESENTS, that SOUTHERN MAINE AFFORDABLE HOUSING, a Maine nonprofit corporation with a place of business in Biddeford, Maine (the "Grantor"), FOR VALUABLE CONSIDERATION, hereby GRANTS to ADAMS POINT LP, a Maine limited partnership with a place of business and mailing address of 22 South Street, Biddeford Maine 04005, and its successors and assigns (collectively the "Grantee") a perpetual, nonexclusive easement over, under and across a portion of Grantor's land in Biddeford, York County, Maine, described in a deed to Grantor recorded in the York County Registry of Deeds in Book 16555, Page 44 ("Grantor's Land"), said portion of Grantor's Land being a strip of land abutting the northwesterly sideline of Grantor's Land running from the northerly corner of Grantor's Land and southerly boundary of Grantee's Land to the southerly boundary of Grantor's Land and the northerly boundary of Birch Street (the "Easement Area"). The Easement Area varies in width from approximately 5 to 20 feet wide and is shown on the site plan attached as Exhibit A. This easement is for the benefit of land of the Grantee as described in a deed from Southern Maine Affordable Housing to Grantee of near date recorded in the York County Registry of Deeds in Book _____, Page _____ ("Grantee's Land").

The easement granted herein is a perpetual easement and right of way in common with Grantor and Grantor's tenants, invitees, and successors and assigns, for ingress and egress by foot and emergency motor vehicle over the Easement Area to Grantee's Land from Birch Street, and for the installation, maintenance, repair and replacement of all utilities, at Grantee's expense, necessary for the use of Grantee's Land. In addition, Grantee shall have the right, at Grantee's sole cost and expense, to construct a sidewalk, plant trees, delineate emergency access areas and add shoulders along the Easement Area. The easement granted herein is to be shared with Grantor and Grantor's tenants, invitees, and successors and assigns, who may use the easement area in common with Grantee and Grantee's tenants and invitees, for pedestrian and emergency vehicle ingress and egress from Birch Street onto Grantor's Land. Neither party shall park motor vehicles within the Easement Area or otherwise obstruct or impede the other's use of the Easement Area.

Grantee shall have primary responsibility for maintaining the Easement Area (including the sidewalk to be built by Grantee and utilities installed by Grantee) in good condition, including, without limitation, plowing, sanding and salting, repair and replacement of pavement and striping, maintenance, repair and replacement of all utilities and the like.

The parties agree that: (i) during all times that either party is performing maintenance or work in the Easement Area, the parties shall carry, and shall cause their respective contractors to carry, liability insurance in commercially reasonable amounts, and (ii) each of Grantor and Grantee shall indemnify, defend and hold harmless the other and the other's partners, tenants and secured lenders, from and against any and all loss, costs, damage, liability and claims for personal injury (including death) or property damage arising from or relating to the exercise of their respective rights under this Agreement, such indemnity to include reasonable enforcement costs, including reasonable attorneys' fees.

TO HAVE AND TO HOLD the aforegranted and bargained easement, with all privileges and appurtenances thereof, to the Grantee and its successors and assigns, to its and their use and behoof, forever.

IN WITNESS WHEREOF, Grantor has caused this Easement Agreement to be signed and sealed as of the _____ day of _____, 2021.

WITNESS:

SOUTHERN MAINE AFFORDABLE
HOUSING, Grantor

By: _____
Guy M. Gagnon, its President

STATE OF MAINE
CUMBERLAND, ss.

_____, 2021

PERSONALLY APPEARED the above named Guy M. Gagnon, President of Southern Maine Affordable Housing as aforesaid, and acknowledged the foregoing instrument to be his free act and deed in his said capacity and the free act and deed of said nonprofit corporation.

Before me,

Attorney-at-Law/Notary Public

Printed Name: _____

Commission expires: _____

[remainder of page left blank intentionally—signatures continue on next page]

IN WITNESS WHEREOF, Grantee has caused this Easement Agreement to be signed and sealed as of the ____ day of _____, 2021.

WITNESS:

ADAMS POINT LP, Grantee

BY: ADAMS POINT GP LLC, its
General Partner

By: _____
Guy M. Gagnon, its Manager

STATE OF MAINE
CUMBERLAND, SS.

_____, 2021

Personally appeared the above-named Guy M. Gagnon, Manager of Adams Point GP LLC, General Partner of Adams Point LP, as aforesaid, and acknowledged the foregoing instrument to be his free act and deed in his said capacity and the free act and deed of said limited liability company and limited partnership.

Before me,

Attorney-at-Law/Notary Public

Printed Name: _____

Commission expires: _____

4. Winter Management Plan

Winter Management Plan
Site Plan/Subdivision Review Application
Adams Point
69 Adams Street
Biddeford, Maine 04005

August 2, 2021

Introduction:

A comprehensive winter management plan the Adams Point Apartments for the harsh Maine winters. Keeping the property at safe when the Maine winters set in is important to maintaining the safety of the residents and public.

Traffic & Pedestrian area:

The areas of vehicular traffic exist at the driveway from Adams Street and the parking area. There is an emergency fire access lane from Birch Street to the site that will also require all weather access. A pedestrian walk will be constructed from Adams Street to the building. Another walkway will be constructed from Birch Street to the Building. Interior walkways on the site will connect various doors at the building to the main pedestrian walkways.

Proactive Measures:

To assist in ice and snow removal we take the most proactive approach possible. Removing snow and ice as soon as possible manually with shovels or snow truck plows to keep the ice and snow at bay. The owner also shovels and plows frequently to minimize buildup or vehicle compaction. Taking these actions allows the owner to minimize our use of sand & salt on the traffic, access drives and building entrances.

Ice or Sand:

Both sand and salt will have some type of effect on the environment and assets, we use these “tools” in moderation to maintain the safety of the residents and the general public. Maine winters and activities around or during the storms will require a tailored solution. While an ice storm would require the ice-busting salt to maintain safe travel-way and walkways. Sand would be best for assisting in traction for hard-packed snow.

Ice Removal & Management:

For ice management, the owner uses both salt & sand depending on the “tool” needed for the specific situation. The access drive is sanded or salted a local subcontractor that’s familiar with the local ice management needs, specifics of our property and understands the owners’ interest in minimizing any impact on the environment or assets. The building entrances and sidewalks are maintained by personnel using the same tools and mindset as our subcontractor. Ice-melt is stored in bags at the facilities building.

Snow Removal & Management:

Storm meetings and communication are performed for each potential storm event. Maine winter storms come in a wide range of precipitation types and the team performing the snow removal must adjust a bit to achieve a positive outcome for each type of event. Examples of adjustment could be starting removal operations very early in the morning and plowing periodically through the storm and working late. Due to limited space on site, it is anticipated that removal of snow will be required when snow storage limits are reached.

5. Letter of Approval from Fire Department

jgagnon@oakpoint.com

From: Tansley, Greg <Greg.Tansley@Biddefordmaine.org>
Sent: Tuesday, September 14, 2021 1:02 PM
To: jgagnon@oakpoint.com
Cc: Brooks More; ggagnonbha@maine.rr.com; Eddy, Mathew; cdimatteo@longmeadowpla.com
Subject: FW: Adams Point

Hi Jack,

Following up on our Zoom Meeting from this morning, it appears Kevin is comfortable with the layout you had sent him. See below.

Please let me know if there is anything else I can help with.

Greg

Greg Tansley, AICP
City Planner
PO Box 586
Biddeford, ME 04005
207-284-9115
Greg.Tansley@Biddefordmaine.org

From: Duross, Kevin <kevin.duross@biddefordmaine.org>
Sent: Tuesday, September 14, 2021 11:29 AM
To: Tansley, Greg <Greg.Tansley@Biddefordmaine.org>
Subject: RE: Adams Point

Hi Greg,

I do not see any issue with the alternate layout. Access and turnaround is acceptable for our largest vehicle.

Thank you,

Kevin





From: Tansley, Greg <Greg.Tansley@Biddefordmaine.org>

Sent: Tuesday, September 14, 2021 11:24 AM

To: Duross, Kevin <kevin.duross@biddefordmaine.org>

Subject: FW: Adams Point

Importance: High

Hi Kevin,

We are trying to button up this project in advance of a September 29 Planning Board Meeting.

Our engineers have reviewed these plans and are comfortable with a slightly higher slope to the driveway (slightly over 10%) with a 3% slope for 50 feet at the landing as it comes into Adam's Street.

I was wondering if you have had a chance to review this? They have confirmed fire and emergency apparatus can access the site (see the turning template on the plan). This layout results in additional separation of the development sight from neighbors and reduces the amount of pavement which is good for stormwater.

Perhaps we can meet to discuss it if that helps? We want to make sure you are comfortable with the layout and design moving forward.

Please let me know.

Thanks,

Greg

Greg Tansley, AICP
City Planner
PO Box 586
Biddeford, ME 04005
207-284-9115
Greg.Tansley@Biddefordmaine.org

From: jgagnon@oakpoint.com <jgagnon@oakpoint.com>

Sent: Tuesday, September 14, 2021 11:15 AM

To: Tansley, Greg <Greg.Tansley@Biddefordmaine.org>

Cc: 'Brooks More' <BMore@spha.net>; ggagnonbha@maine.rr.com

Subject: FW: Adams Point

Importance: High

Jacques L Gagnon Jr. | Associate
TEL 207.283.0193 | CELL 207.216.2836 | FAX 207.283.4283
www.oakpoint.com | jgagnon@oakpoint.com



From: ggagnonbha@maine.rr.com <ggagnonbha@maine.rr.com>
Sent: Wednesday, September 1, 2021 11:46 AM
To: kevin.duross@biddefordmaine.org
Cc: Jacques Gagnon <jgagnon@oakpoint.com>
Subject: Adams Point
Importance: High

Kevin:

Short notice, but the city engineers threw us a curveball late last week asking for a change to the entry drive and parking lot layout with the focus being less impact on neighbors and more controlled entry into the site. It has some benefits and most importantly, still meets all the turning requirements for your equipment.

As you recall, Jack, from Oakpoint, and I had discussed the potential for a change with you recently and I believe you had endorsed our previous plan, not this exact one. We have planning board approval being requested tonight and were hoping to at least get your unofficial thoughts on the attached plan from the FD perspective. Our thought was that we could get a formal letter from you at some point in the future as a condition of approval or if you wanted to produce one now, we could present it tonight.

Again, sorry for short notice but we are under a very tight and important time line in order to get this affordable housing application submitted, with Planning Board approval, to Maine Housing by Sept 9th. Any assistance you can provide would be great.

Feel free to contact me with questions

Guy M. Gagnon
Biddeford Housing, Exec. Dir.
207-415-2939
bhousing.org

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Under Maine law, documents - including e-mails - in the possession of public officials or city employees about government business may be classified as public records. There are very few exceptions. As a result, please be advised that what is written in an e-mail could be released to the public and/or the media if requested.

6. Ability to Serve Letter from Maine Water Company



June 11th, 2021

Oak Point Associates
ATTN: Jacques Gagnon Jr., P.E., LEED AP
231 Main St
Biddeford, ME 04005

Re: Ability to Serve – Adam's Point – Southern Maine Affordable Housing

Dear Mr. Gagnon,

The Maine Water Company (MWC) has received your request for an Ability to Serve Determination on behalf of your client, Southern Maine Affordable Housing, for the property located 69 Adams Street, Biddeford, Maine for the above referenced project. The request indicates a plan at, Map 38 / Lot 296 to build a 39-unit family housing building. The expected domestic demand has been presented as 8,640 gallons per day (gpd) with a peak demand of 200 gallons per minute (gpm). The estimated fire demand is between 750 to 1000gpm. The complex is proposed to be served with public water and accessed from Birch Street through an existing waterline easement across an abutting parcel. The static pressure in the area is approximately **45 psi**. Based on the criteria that has been presented, MWC does have sufficient capacity in the area from the existing 12-inch main on Birch Street to serve this project. Additional infrastructure improvements are required at the expense of the developer to meet the overall needs of this project.

Conditions of Service

- A hydrant flow test must be conducted at the expense of the developer at the nearest hydrant to ensure adequate flows are available in the event of a fire.
- Documentation of the existing waterline easement must be provided before final approval.
- An easement for access and operation of all water service valves on this property must be signed, notarized and registered with the county registry before activation. MWC will draft and supply this document to be executed by the owner.
- Additional coordination with MWC is required before construction. Maine Water requires upfront payment for inspection and paperwork to be fully completed before any construction on waterworks materials.

Should a Customer Agreement for service not be executed within one year of the date of this letter, MWC reserves the right to reevaluate its ability to serve this project.

All work must be completed in accordance with MWC Terms and Conditions as well as material specifications. All appropriate paperwork must be completed and deposit paid prior to the start of construction. Please forward all design plan revisions as the project develops to prevent construction delays. Water service will be provided in accordance with Maine Public Utility Commission rules. If you have any additional questions, please do not hesitate to contact our office at 1-800-287-1643 or by email at Marcus.Knipp@mainewater.com. We look forward to working with you throughout design and construction.

Sincerely,
The Maine Water Company

A handwritten signature in black ink, appearing to read "M. Knipp".

Marcus Knipp, E.I.T.
Engineer

From: [Marcus Knipp](#)
To: jgagnon@oakpoint.com
Subject: RE: 69 Adams St - Biddeford - Request for Ability to Serve Letter
Date: Friday, June 11, 2021 2:37:25 PM
Attachments: [image001.png](#)
[image002.png](#)
[image003.png](#)
[image004.png](#)
[image005.png](#)
[Ability to Serve - 69 Adams St - Adams Point.pdf](#)

Hi Jack,

Attached is an ability to serve determination for your review. Also some screenshots showing approximate waterline location around the proposed Birch Street connection. (Locations of waterline infrastructure are only approximate and must be field verified prior to construction)





Let me know once a utility plan is proposed and I'll provide comments before moving to our final approval process.

Thanks,
Have a good weekend.

Marcus

Marcus Knipp, E.I.T.
Engineer



93 Industrial Park Road
Saco, ME 04072
Office: 207-294-6943
Cell: 207-468-2089

From: jgagnon@oakpoint.com <jgagnon@oakpoint.com>
Sent: Friday, June 11, 2021 9:58 AM
To: Marcus Knipp <Marcus.Knipp@MaineWater.com>
Subject: RE: 69 Adams St - Biddeford - Request for Ability to Serve Letter

Please note: THIS EMAIL ORIGINATED FROM AN EXTERNAL SOURCE.

Thanks!

7. Ability to Serve Letter from Tom Milligan Regarding Sanitary Sewer Service



City of Biddeford, Maine

City of Biddeford

Public Works Department / Engineering Division
P.O. Box 586 • 205 Main Street, Suite 301
Biddeford, ME 04005
Phone: (207) 284-9118 • Fax: (207) 571-0662

City of Biddeford, Maine
Wastewater Department
205 Main Street • PO Box 586 • Biddeford, Maine 04005-0586
Telephone 207 284-9118

Letter of Wastewater Treatment Plant Capacity to Serve

49 Adams Street Adams Point

Jacques Gagnon, PE
Oak Point Engineers
Main Street
Biddeford, Maine 04005

June 9, 2021

Brief description of project: **39 apartment units Adams Point Project**- Estimated flows: 8640 gpd.

Determination

You are proposing to build 39 apartment units on the subject parcel. You have indicated that previously there was a 32-34 rooming house in a single structure located on this lot.

The City of Biddeford Wastewater Department has reviewed the request to serve the above-described project. It has been determined that at this time the City has sufficient capacity at the City's Wastewater Treatment Facilities to serve the above described project. It is estimated that 8640 gpd of flow will be generated from the project. Changes to the project from that presented to this department may require a new review of the request for ability to serve. This determination will be effective for a period of one year from the date above.

Upon approval of the Planning Board the applicant must make application for sewer service. Flow amounts for the project will be determined at the time application is made and may or may not be the amount stated above. The applicant will be required to pay all fees including all impact fees based on the flow amount calculated at the time application is made and prior to the issuance of any building permits.

This Capacity to Serve Letter is intended only to state that the City of Biddeford Wastewater Treatment Plant Facility's ability to treat the flow from the above stated project once it is received at the treatment facility. The Planning Department, Engineering Department or other persons from the Wastewater Department may require further studies or documentation regarding the impact on the City's sewer collection system or its components.

205 Main Street, Biddeford, ME 04005 P: 207.284.9313 F: 207.571.0678 www.biddefordmaine.org

*The City of Biddeford is an equal opportunity provider. To file a complaint, write to
Human Resource Director, 205 Main Street Biddeford, ME 04005, or call (207) 286-0593.*

Thomas Milligan, PE
City Engineer
City of Biddeford Engineering Department
Tom.milligan@biddefordmaine.org
207-284-9118

CC: Jeff Demers, Public Works/Wastewater Director
Roby Fecteau, Code Enforcement
Greg Tansley, City Planner
Alex Buechner, Superintendent

8. Traffic Impact Study

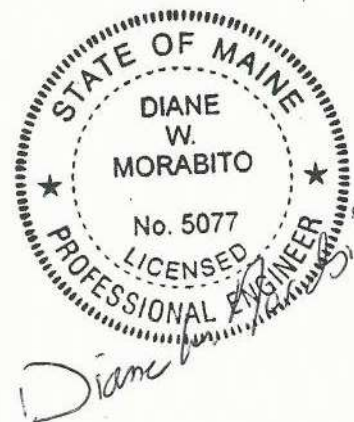
**UPDATED TRAFFIC IMPACT STUDY
ADAMS POINT APARTMENTS
BIDDEFORD, MAINE**

July 30, 2021

Prepared For:

**Southern Maine Affordable Housing
22 South Street
Biddeford, Maine 04005**

Prepared by:



INTRODUCTION

The purpose of this report is to summarize a traffic impact study performed by James W. Sewall Company (Sewall) for the proposed Adams Point apartments in Biddeford, Maine. The site location, at the end of Adams Street, is shown on the map in Figure 1. There will be thirty-nine (39) affordable apartments in a five (5) story building. This report updates a previous study conducted by Sewall for thirty-three (33) units, dated April 19, 2021 to account for the increased units.

This report details the traffic analysis which determines the expected number of trips to be generated by the residential units and any off-site impacts on level of service or safety for local City of Biddeford approval purposes.

It is understood that construction of the apartments is expected to begin in 2022 with occupancy expected to be completed in the spring of 2023. Hence, 2023 was selected as the study year for traffic analysis purposes.

TRIP GENERATION ANALYSIS

The number of trips to be generated by the proposed apartments was estimated utilizing the latest Institute of Transportation Engineers (ITE) "Trip Generation, 10th edition". Land use code (LUC) 221 – Multifamily Housing (mid-rise) was utilized on the basis of 39 dwelling units. The results are summarized below:

<u>Time Period</u>	ITE TRIP GENERATION
	<u>One-way Trips</u>
Weekday	212
Weekday AM Peak Hour	14
Entering	4
Exiting	10
Weekday PM Peak Hour	17
Entering	10
Exiting	7

The above results show that Adams Point apartments are expected to generate 212 one-way trips (106 roundtrips) on a daily basis (weekday). Fourteen (14) one-way trips will be generated in the AM peak hour with seventeen (17) during the PM peak hour. This level of traffic would not be expected to have a significant impact off-site on traffic operations beyond the site drive.

However, to assess level of service to meet the requirements of the Biddeford ordinances and to assure no capacity concerns, traffic analysis was conducted for the intersection of Adams Street and Jefferson Street. Given the residential use, with similar AM and PM volumes, both the weekday AM and PM peak hours were initially selected as analysis periods.

TRAFFIC VOLUMES

Turning movement/classification counts were conducted by Sewall during the weekday AM (7:00 – 9:00) and PM (3:00 – 6:00) peak hour periods at the intersection of Adams Street and Jefferson Street to determine existing volumes. The AM peak hour occurred from 7:45 to 8:45 while the PM peak hour occurred from 4:00 to 5:00 PM. The count records are included in the appendix. The counts were factored to 30th highest hour conditions using Maine Department of Transportation (MaineDOT) urban group mean factors. These volumes typically occur under peak summer conditions in July and August in Maine. The resulting 2021 summer volumes are shown in Figure 2. The results show that the PM peak hour volumes are approximately 55 % greater than the AM volumes. Given this and the limited trips expected to be generated by the apartments, the PM peak hour was selected as the analysis period.

The trip assignments for Adams Point were based upon the travel patterns recorded during the counts. The resulting trip assignments are shown in Figure 3. Based upon the trip assignments the new residential apartments are expected to have a minimal impact on off-site traffic operations. Generally, a project won't have an impact on traffic operations unless it generates in excess of 25 lane hour trips. Based upon the trip assignments, Adams point will generate a maximum of seven lane hour trips in the PM peak hour. Given these trip assignments the study area would typically only extend through the site drive intersection, but it was extended through the intersection of Jefferson Street to evaluate impact on nearby intersections.

Existing average annual daily traffic (AADT) data for the area was obtained from "Traffic Volume Counts, 2019 and 2014 Annual Reports", published by MaineDOT. This data is summarized below:

<u>Location Description</u>	Average Annual Daily Traffic				
	<u>2010</u>	<u>2013</u>	<u>2016</u>	<u>2018</u>	<u>2019</u>
Adams Street, south of Main Street	---	3410	3580	3990	3690
Jefferson Street, se of Washington St	---	5650	5680	---	5520
Alfred Street, sw of Pool Street	11770	---	11030	---	10440

<u>Location Description</u>	<u>2010</u>	<u>2013</u>	<u>2016</u>	<u>2018</u>	<u>2019</u>
Alfred Street, north of Union Street	---	11090	11030	---	11190
South Street, east of Route 1	---	3700	3540	---	---
South Street, west of Adams Street	---	930	870	---	710

As seen above, most locations showed declining or steady volumes during the longer-term nine-year period. Most locations also showed declining volumes for the most recent short-term period. Based upon this historical data, a conservative 1 % growth rate was utilized to project existing 2021 volumes to base 2023 conditions.

The City of Biddeford Planner was contacted to determine what other approved (but unbuilt) developments are expected to significantly impact Jefferson Street or Adams Street volumes, which need to be considered in the 2023 traffic analysis. The Planner identified The Riverdam and Draft Room project as the most recent. The Traffic Impact Study for the project was prepared by William Bray. Other development trips from previously approved projects, as well as the Riverdam project, were obtained from that study. These other development volumes are shown in Figure 4. The projected 2023 No Build volumes, based upon a 1 % traffic growth rate, with consideration of the other development projects, are shown in Figure 5. Lastly, the projected Build 2023 volumes for the PM peak hour analysis period are shown in Figure 6.

CAPACITY ANALYSIS

Traffic operations are evaluated in terms of level of service (LOS). Level of service is a qualitative measure that describes operations by letter designation. The levels range from A - very little delay to F - extreme delays. Level of service "D" is generally considered acceptable in urban locations while LOS "E" is generally considered the capacity of a facility and the minimum tolerable level. The level of service for unsignalized intersections is based upon average control delay per vehicle for each minor, opposed movement, as defined in the following table excerpted from the 2010 "Highway Capacity Manual":

Unsignalized Intersection Level of Service

<u>LOS</u>	<u>Delay Range</u>
A	< = 10.0 seconds
B	> 10.0 and <= 15.0
C	> 15.0 and <= 25.0
D	> 25.0 and <= 35.0
E	> 35.0 and <= 50.0
F	> 50.0

UNSIGNALIZED INTERSECTION ANALYSIS

The level of service (LOS) was determined for the unsignalized intersection of Adams and Jefferson Streets for existing 2021 and projected 2023 No Build and Build conditions using Synchro 10 and SimTraffic, the average of five (5) simulation runs. The results are provided in the appendix and are summarized below:

<u>Approach</u>	Adams Street & Jefferson Street PM Peak Hour Level of Service		
	<u>Existing 2021</u>	<u>No Build 2023</u>	<u>Build 2023</u>
Jefferson Street Eastbound	A (0.2)	A (0.3)	A (0.2)
Jefferson Street Westbound	A (0.6)	A (0.8)	A (0.8)
Adams Street Northbound	A (5.9)	A (7.0)	A (7.0)
Adams Street Southbound	A (7.3)	A (8.3)	A (8.5)
Overall Intersection	A (3.4)	A (4.1)	A (4.2)

As seen above, Adams Street currently operates at a good LOS “A” during the PM peak hour with all approaches also at LOS “A”. The same level of service “A” is expected for all approaches under 2023 build volumes showing no significant delay. These results demonstrate the negligible impact off-site on traffic operations due to the new residential units, a 0.3 second increase in delay due to the increased volumes.

SAFETY ANALYSIS

ACCIDENT REVIEW

The Maine Department of Transportation uses two criteria to determine high crash locations (HCLs). The first is the critical rate factor (CRF), which is a measure of the accident rate. A CRF greater than one indicates a location which has a higher than expected crash rate. The expected rate is calculated as a statewide average of similar facilities.

The second criterion, which must also be met, is based upon the number of accidents that occur at a particular location. Eight or more accidents must occur over the three-year study period for the location to be considered a high crash location. The

MaineDOT Map Viewer was reviewed for any high crash locations within the vicinity of the site. Two high crash locations were identified for the three-year period (2017 – 2019) as noted below:

<u>Location Description</u>	<u># of Acc.</u>	<u>CRF</u>
Intersection of Adams and Jefferson Streets	8	2.67
Intersection of Jefferson and Washington Streets	11	3.69

Collision diagrams were obtained from MaineDOT for both intersections to determine if there are any accident patterns or trends, which could indicate a potentially correctable safety deficiency. The diagrams are evaluated as follows:

Intersection of Adams Street and Jefferson Street

There were four accidents in 2017, three in 2018 and one in 2019. Three were angle collisions exiting Adams Street northbound while one was an angle involving a southbound Adams Street vehicle. All angle collisions were attributed to failure to yield. Two of the accidents involved pedestrians being struck in two of the crosswalks. One vehicle lost control turning and struck an oncoming vehicle. The last collision was a single vehicle that struck a pole while turning.

A field review was conducted to determine if there were any physical deficiencies or sight distance restrictions contributing to the angle collisions exiting Adams Street. Assuming the 25-mph urban unposted speed limit, a minimum of 250' of sight distance is recommended. Sight distance from both Adams Street approaches exceeds 300' to the southeast. To the northwest the sight distance is approximately 200', to the intersection of South and Crescent Streets. Given that vehicles are turning onto Adams Street at a slower rate of speed this sight distance is likely adequate. To improve overall safety, especially for pedestrians, given this densely developed urban area, Sewall recommends that All-way stop control be implemented at this intersection.

The capacity analysis was repeated for the 2023 build volumes under all-way stop control. Those results are presented in the following table contrasted with the two-way stop results:

Adams Street & Jefferson Street		
Build PM Peak Hour Level of Service		
<u>Approach</u>	<u>Two-Way Stop</u>	<u>All-Way Stop</u>
Jefferson Street Eastbound	A (0.2)	A (5.9)
Jefferson Street Westbound	A (0.8)	A (6.3)
Adams Street Northbound	A (7.0)	A (5.0)
Adams Street Southbound	A (8.5)	A (6.2)
Overall Intersection	A (4.2)	A (6.1)

As seen above, all approaches and the intersection would remain at LOS “A” under all-way stop control. Queue lengths were also evaluated for 2023 Build volumes for both stop control options to assure that the change to all-way stop would not result in excessive queues. The results are summarized with the link lengths below:

Adams Street & Jefferson Street			
Build 2023 PM Peak Hour 95th Percentile Queues (Feet)			
<u>Approach</u>	<u>Link Length</u>	<u>Two-Way Stop</u>	<u>All-Way Stop</u>
Jefferson Street Eastbound	165	14	66
Jefferson Street Westbound	200	16	90
Adams Street Northbound	300+	44	42
Adams Street Southbound	140	120	92

As seen above, all projected queue lengths are contained within the existing link lengths creating no adjacent intersection interference concerns. The only approach where queue lengths are approaching the link length is southbound Adams Street. Under the all-way stop control option this queue length is reduced from 121 to 92 feet. Given these capacity and queue results, all-way stop control is recommended for the Adams Street and Jefferson Street intersection to improve safety and reduce crashes.

Intersection of Jefferson Street and Washington Street

There were five accidents in 2017 and six in 2018. No accidents were reported at the intersection in 2019. The intersection is equipped with an existing flashing beacon. Six of the collisions were angles exiting Washington Street northbound while the remaining five were angle collisions involving southbound Washington Street vehicles. Contributing causes were cited as failure to yield, excessive speed, and stop sign running.

A field review was also conducted of this intersection to see if any physical deficiencies are contributing to the accidents. The field review found generally adequate sight distances but noted that from the Washington Street approaches, there are some partial obstructions to sight lines, such as the flashing beacon pole and controller box combination and the fence line.

The recommended provision of all-way stop control at the adjacent Adams Street intersection may help to slow speeds on Jefferson Street and improve safety at this intersection as well given that these two intersections are just 250' apart. Given the provision of an existing flashing beacon and the proposed all-way stop at Adams Street, no other action is recommended at this intersection.

Updated accident data was obtained from MaineDOT for the more recent 2018 – 2020 3-year period. Based upon this most recent data, both of these locations are no longer HCLs. However, Sewall still recommends All-Way Stop control for the intersection of Adams Street and Jefferson Street given the pedestrian accidents that occurred there and since queue lengths are shown by the analysis to be reduced on southbound Adams Street.

SUMMARY AND RECOMMENDATIONS

The Adams Point apartments are expected to generate 14 to 17 one-way trips during peak hours. Given the traffic count results and the limited trip generation, the weekday PM peak hour was selected for the traffic analysis. Based upon the limited trip assignments, the study area was defined as extending from the site through the intersection of Jefferson Street to evaluate off-site impact on nearby intersections.

In terms of capacity, the unsignalized intersection of Adams Street and Jefferson Street currently operates at LOS "A" with all approaches also at LOS "A". LOS "A" is projected for all approaches and overall, under projected 2023 Build volumes showing no significant impact.

In terms of safety, there were two high crash locations within the study area at the time of the original study. Based upon a review of collision diagrams and a field review, Sewall recommends that the intersection of Adams Street and Jefferson Street be converted to All-way stop control. The intersection of Jefferson Street and Washington Street is equipped with a flashing beacon. The implementation of all-way stop control at Adams Street will likely also slow travel speeds at Washington Street improving safety there given that there is just 250' between these intersections. It is important to note that based

upon the most recent accident data, both locations are no longer classified as HCLs. However, Sewall still recommends All-Way Stop control for the intersection of Adams Street and Jefferson Street to improve pedestrian safety and reduce southbound queues on Adams Street.



Figure 1

Site Location Map

Adams Point Apartments

Biddeford, Maine



-- AM
(--) PM

AM Peak Hour: 7:45-8:45
PM Peak Hour: 4:00-5:00

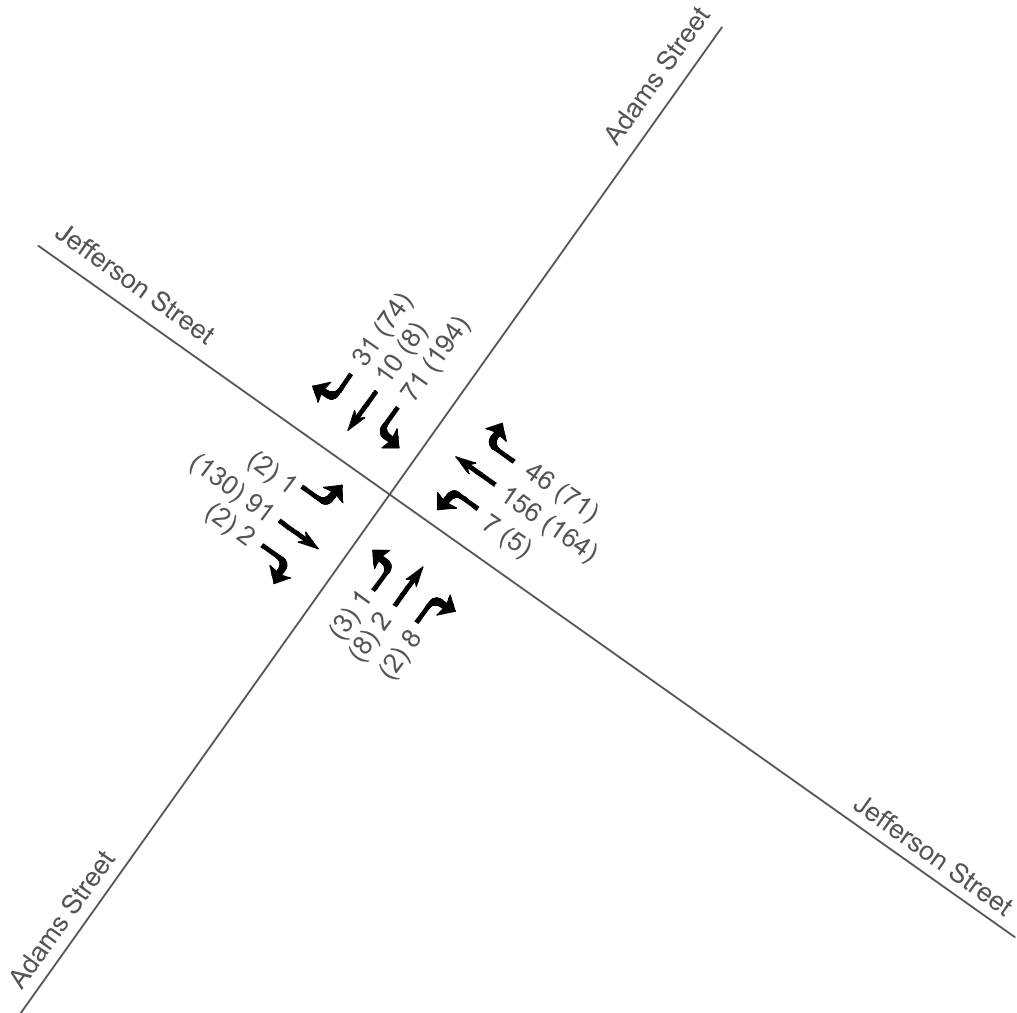


Figure 2

Existing 2021 Peak Hr Volumes

Adam's Point Apartments

Biddeford, Maine



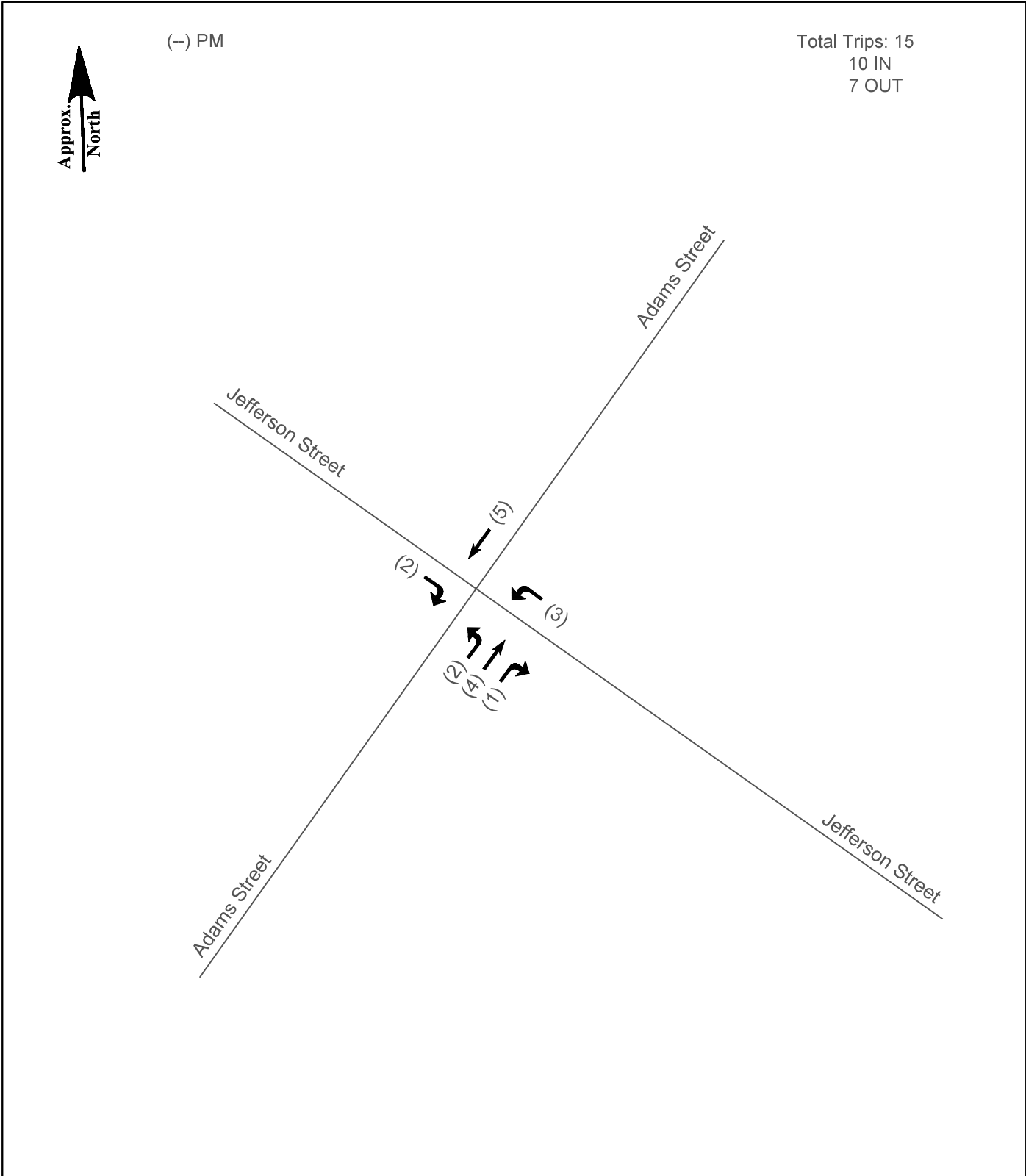


Figure 3

Trip Assignments - PM Peak Hr	
Adam's Point Apartments	
Biddeford, Maine	



(-- PM

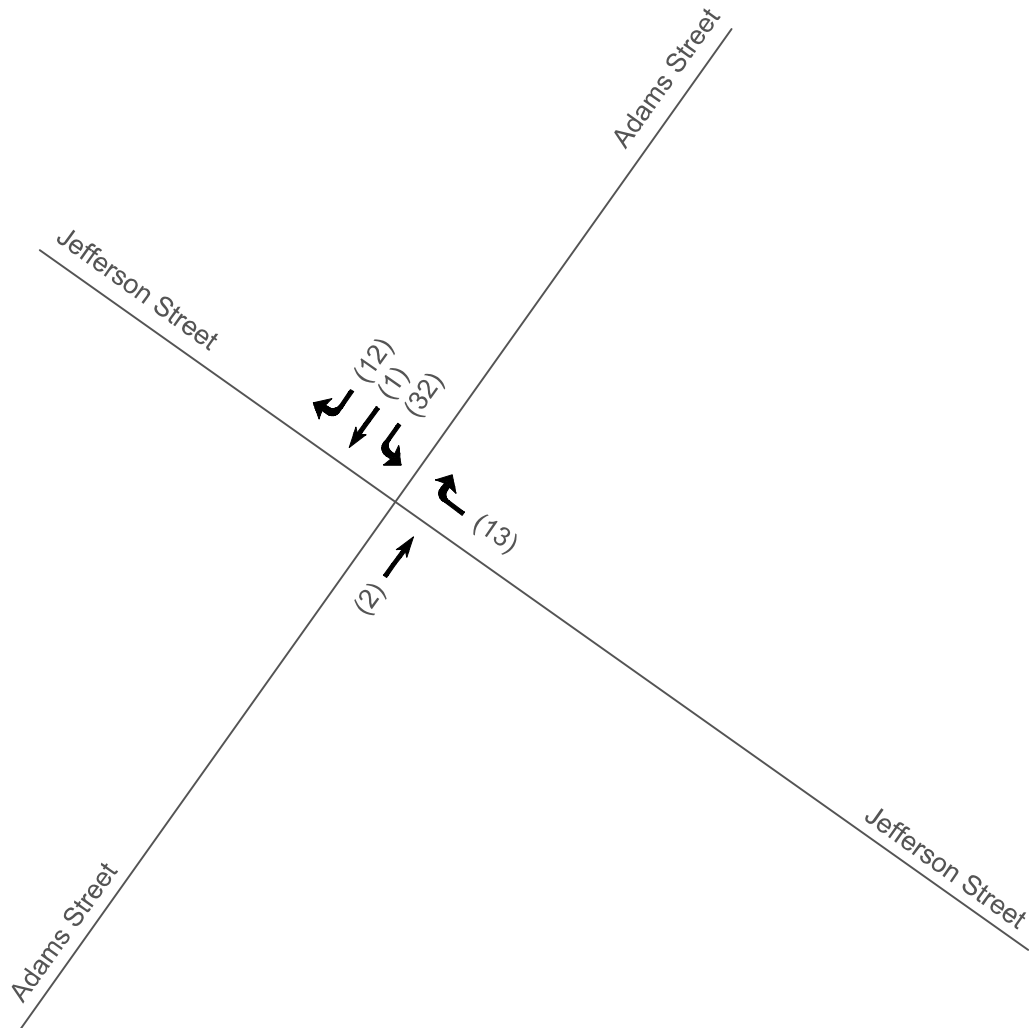


Figure 4

Other Developments - PM Peak Hr
Adam's Point Apartments
Biddeford, Maine





(--) PM

PM Peak Hour: 4:00-5:00

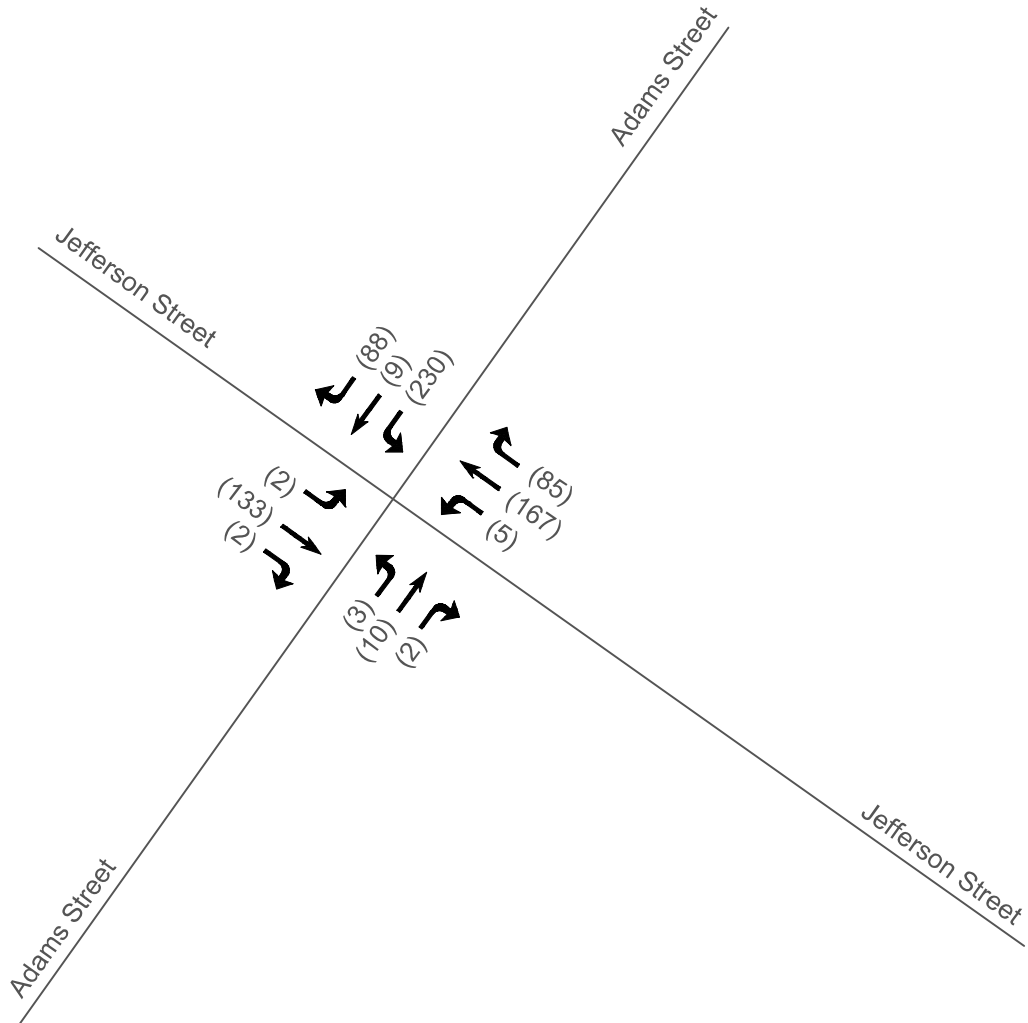


Figure 5

No Build 2023 PM Peak Hr Volumes
Adam's Point Apartments
Biddeford, Maine





(--) PM

PM Peak Hour: 4:00-5:00

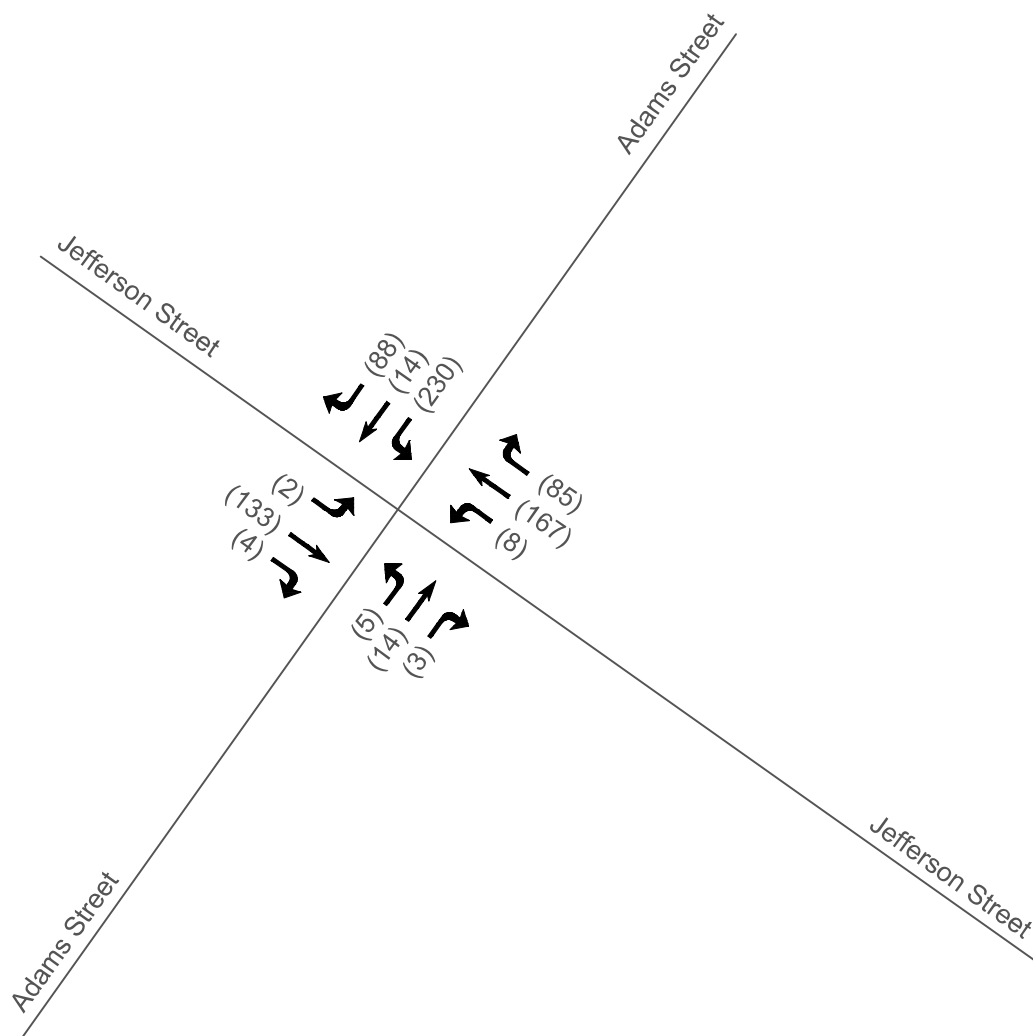


Figure 6

Build 2023 Peak PM Hr Volumes
Adam's Point Apartments
Biddeford, Maine



APPENDIX

Turning Movement Counts

Capacity Analysis

Collision Diagrams

TITLE: Adams & Jefferson AM
TOWN: Biddeford
COUNTER: NAB
WEATHER: Clear

File Name : Adams&Jefferson AM
Site Code : 999999999
Start Date : 4/6/2021
Page No : 1

Groups Printed- PV - LV - HV

	Adams Street From North					Jefferson Street From East					Adams Street From South					Jefferson Street From West					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	14	1	4	1	20	0	12	13	0	25	1	1	0	0	2	1	5	0	2	8	55
07:15 AM	12	2	4	0	18	1	20	6	1	28	2	1	2	1	6	0	11	1	1	13	65
07:30 AM	24	2	13	0	39	0	23	10	0	33	0	1	2	1	4	2	26	1	0	29	105
07:45 AM	20	4	11	0	35	2	29	12	1	44	0	1	1	0	2	0	28	1	0	29	110
Total	70	9	32	1	112	3	84	41	2	130	3	4	5	2	14	3	70	3	3	79	335
08:00 AM	8	3	5	0	16	1	28	8	0	37	0	0	2	2	4	1	12	0	0	13	70
08:15 AM	16	1	5	1	23	1	25	13	0	39	1	1	2	1	5	0	16	1	1	18	85
08:30 AM	20	1	7	1	29	2	58	8	1	69	0	0	2	1	3	0	32	0	0	32	133
08:45 AM	19	1	7	1	28	0	38	13	0	51	0	1	0	5	6	0	18	0	0	18	103
Total	63	6	24	3	96	4	149	42	1	196	1	2	6	9	18	1	78	1	1	81	391
Grand Total	133	15	56	4	208	7	233	83	3	326	4	6	11	11	32	4	148	4	4	160	726
Apprch %	63.9	7.2	26.9	1.9		2.1	71.5	25.5	0.9		12.5	18.8	34.4	34.4		2.5	92.5	2.5	2.5		
Total %	18.3	2.1	7.7	0.6	28.7	1	32.1	11.4	0.4	44.9	0.6	0.8	1.5	1.5	4.4	0.6	20.4	0.6	0.6	22	
PV	131	15	55	3	204	7	226	82	3	318	4	6	11	10	31	4	141	4	4	153	706
% PV	98.5	100	98.2	75	98.1	100	97	98.8	100	97.5	100	100	100	90.9	96.9	100	95.3	100	100	95.6	97.2
LV	2	0	0	1	3	0	7	1	0	8	0	0	0	1	1	0	7	0	0	7	19
% LV	1.5	0	0	25	1.4	0	3	1.2	0	2.5	0	0	0	9.1	3.1	0	4.7	0	0	4.4	2.6
HV	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
% HV	0	0	1.8	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1

TITLE: Adams & Jefferson AM
TOWN: Biddeford
COUNTER: NAB
WEATHER: Clear

File Name : Adams&Jefferson AM
Site Code : 99999999
Start Date : 4/6/2021
Page No : 2

	Adams Street From North					Jefferson Street From East					Adams Street From South					Jefferson Street From West					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
07:45 AM	20	4	11	0	35	2	29	12	1	44	0	1	1	0	2	0	28	1	0	29	110
08:00 AM	8	3	5	0	16	1	28	8	0	37	0	0	2	2	4	1	12	0	0	13	70
08:15 AM	16	1	5	1	23	1	25	13	0	39	1	1	2	1	5	0	16	1	1	18	85
08:30 AM	20	1	7	1	29	2	58	8	1	69	0	0	2	1	3	0	32	0	0	32	133
Total Volume	64	9	28	2	103	6	140	41	2	189	1	2	7	4	14	1	88	2	1	92	398
% App. Total	62.1	8.7	27.2	1.9		3.2	74.1	21.7	1.1		7.1	14.3	50	28.6		1.1	95.7	2.2	1.1		
PHF	.800	.563	.636	.500	.736	.750	.603	.788	.500	.685	.250	.500	.875	.500	.700	.250	.688	.500	.250	.719	.748
PV	63	9	27	2	101	6	136	41	2	185	1	2	7	4	14	1	82	2	1	86	386
% PV	98.4	100	96.4	100	98.1	100	97.1	100	100	97.9	100	100	100	100	100	100	93.2	100	100	93.5	97.0
LV	1	0	0	0	1	0	4	0	0	4	0	0	0	0	0	0	6	0	0	6	11
% LV	1.6	0	0	0	1.0	0	2.9	0	0	2.1	0	0	0	0	0	0	6.8	0	0	6.5	2.8
HV	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
% HV	0	0	3.6	0	1.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3
	71	10	31			7	156	46			1	2	8			1	91	2			

Gr. I = 0.97/0.87 = 1.115

TITLE: Adams & Jefferson PM
TOWN: Biddeford
COUNTER: NAB
WEATHER: Clear

File Name : ADAMS&JEFFERSON PM
Site Code : 99999999
Start Date : 3/24/2021
Page No : 1

Groups Printed- PV - LV - HV

	Adams Street From North					Jefferson Street From East					Adams Street From South					Jefferson Street From West					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
03:00 PM	31	1	10	0	42	3	36	15	2	56	1	2	1	2	6	4	26	0	0	30	134
03:15 PM	23	2	9	1	35	1	43	18	2	64	1	1	1	2	5	1	21	0	0	22	126
03:30 PM	34	6	14	2	56	1	34	14	0	49	2	2	1	4	9	2	28	4	1	35	149
03:45 PM	22	1	10	0	33	0	44	13	0	57	1	4	1	2	8	2	24	1	0	27	125
Total	110	10	43	3	166	5	157	60	4	226	5	9	4	10	28	9	99	5	1	114	534
04:00 PM	43	4	17	1	65	1	44	15	1	61	1	1	1	1	4	0	26	1	0	27	157
04:15 PM	49	1	22	1	73	0	35	10	0	45	1	4	0	1	6	0	32	1	0	33	157
04:30 PM	35	2	16	0	53	2	42	16	0	60	0	2	1	1	4	0	34	0	0	34	151
04:45 PM	43	0	10	0	53	1	23	21	0	45	1	0	0	4	5	2	22	0	1	25	128
Total	170	7	65	2	244	4	144	62	1	211	3	7	2	7	19	2	114	2	1	119	593
05:00 PM	41	1	14	6	62	1	48	21	0	70	1	3	0	2	6	1	15	1	0	17	155
05:15 PM	39	2	8	6	55	0	30	9	0	39	1	1	0	2	4	0	23	3	0	26	124
05:30 PM	29	2	12	5	48	3	26	9	0	38	0	1	2	2	5	2	27	2	0	31	122
05:45 PM	27	3	9	0	39	0	21	11	0	32	1	0	0	6	7	1	23	1	0	25	103
Total	136	8	43	17	204	4	125	50	0	179	3	5	2	12	22	4	88	7	0	99	504
Grand Total	416	25	151	22	614	13	426	172	5	616	11	21	8	29	69	15	301	14	2	332	1631
Apprch %	67.8	4.1	24.6	3.6		2.1	69.2	27.9	0.8		15.9	30.4	11.6	42		4.5	90.7	4.2	0.6		
Total %	25.5	1.5	9.3	1.3	37.6	0.8	26.1	10.5	0.3	37.8	0.7	1.3	0.5	1.8	4.2	0.9	18.5	0.9	0.1	20.4	
PV	416	25	149	19	609	13	426	172	5	616	11	21	7	27	66	15	300	14	1	330	1621
% PV	100	100	98.7	86.4	99.2	100	100	100	100	100	100	100	87.5	93.1	95.7	100	99.7	100	50	99.4	99.4
LV	0	0	0	3	3	0	0	0	0	0	0	0	1	2	3	0	1	0	1	2	8
% LV	0	0	0	13.6	0.5	0	0	0	0	0	0	0	12.5	6.9	4.3	0	0.3	0	50	0.6	0.5
HV	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
% HV	0	0	1.3	0	0.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1

TITLE: Adams & Jefferson PM
TOWN: Biddeford
COUNTER: NAB
WEATHER: Clear

File Name : ADAMS&JEFFERSON PM
Site Code : 99999999
Start Date : 3/24/2021
Page No : 2

	Adams Street From North					Jefferson Street From East					Adams Street From South					Jefferson Street From West					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	43	4	17	1	65	1	44	15	1	61	1	1	1	1	4	0	26	1	0	27	157
04:15 PM	49	1	22	1	73	0	35	10	0	45	1	4	0	1	6	0	32	1	0	33	157
04:30 PM	35	2	16	0	53	2	42	16	0	60	0	2	1	1	4	0	34	0	0	34	151
04:45 PM	43	0	10	0	53	1	23	21	0	45	1	0	0	4	5	2	22	0	1	25	128
Total Volume	170	7	65	2	244	4	144	62	1	211	3	7	2	7	19	2	114	2	1	119	593
% App. Total	69.7	2.9	26.6	0.8		1.9	68.2	29.4	0.5		15.8	36.8	10.5	36.8		1.7	95.8	1.7	0.8		
PHF	.867	.438	.739	.500	.836	.500	.818	.738	.250	.865	.750	.438	.500	.438	.792	.250	.838	.500	.250	.875	.944
PV	170	7	64	2	243	4	144	62	1	211	3	7	2	7	19	2	113	2	0	117	590
% PV	100	100	98.5	100	99.6	100	100	100	100	100	100	100	100	100	100	100	99.1	100	0	98.3	99.5
LV	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2	2
% LV	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.9	0	100	1.7	0.3
HV	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
% HV	0	0	1.5	0	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2
	194	8	74			5	164	71			3	8	2			2	130	2			

Gr. I factor = 0.99/.87 = 1.138

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	3:57	3:57	3:57	3:57	3:57	3:57
End Time	5:00	5:00	5:00	5:00	5:00	5:00
Total Time (min)	63	63	63	63	63	63
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	660	640	672	671	633	657
Vehs Exited	661	645	673	676	630	657
Starting Vehs	5	9	6	8	2	5
Ending Vehs	4	4	5	3	5	4
Travel Distance (mi)	126	121	127	128	119	124
Travel Time (hr)	5.9	5.6	5.9	5.8	5.5	5.7
Total Delay (hr)	0.8	0.8	0.8	0.7	0.7	0.8
Total Stops	300	307	291	269	267	287
Fuel Used (gal)	5.1	5.0	5.1	5.2	4.7	5.0

Interval #0 Information Seeding

Start Time	3:57
End Time	4:00
Total Time (min)	3
Volumes adjusted by Growth Factors.	
No data recorded this interval.	

Interval #1 Information Recording

Start Time	4:00
End Time	5:00
Total Time (min)	60
Volumes adjusted by Growth Factors.	

Run Number	1	2	3	4	5	Avg
Vehs Entered	660	640	672	671	633	657
Vehs Exited	661	645	673	676	630	657
Starting Vehs	5	9	6	8	2	5
Ending Vehs	4	4	5	3	5	4
Travel Distance (mi)	126	121	127	128	119	124
Travel Time (hr)	5.9	5.6	5.9	5.8	5.5	5.7
Total Delay (hr)	0.8	0.8	0.8	0.7	0.7	0.8
Total Stops	300	307	291	269	267	287
Fuel Used (gal)	5.1	5.0	5.1	5.2	4.7	5.0

3: Adams Street & Jefferson Street Performance by approach

Approach	SE	NW	NE	SW	All
Denied Del/Veh (s)	0.2	0.2	0.1	0.3	0.2
Total Del/Veh (s)	0.2	0.6	5.9	7.3	3.4

Total Network Performance

Denied Del/Veh (s)	0.2
Total Del/Veh (s)	3.9

Intersection: 3: Adams Street & Jefferson Street

Movement	SE	NW	NE	SW
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	19	23	31	126
Average Queue (ft)	1	1	12	62
95th Queue (ft)	8	10	36	99
Link Distance (ft)	261	625	506	455
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 0

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	3:57	3:57	3:57	3:57	3:57	3:57
End Time	5:00	5:00	5:00	5:00	5:00	5:00
Total Time (min)	63	63	63	63	63	63
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	697	714	737	728	735	721
Vehs Exited	698	719	728	734	737	723
Starting Vehs	5	9	0	10	7	7
Ending Vehs	4	4	9	4	5	4
Travel Distance (mi)	131	136	140	140	139	137
Travel Time (hr)	6.2	6.6	6.5	6.8	6.6	6.5
Total Delay (hr)	0.9	1.0	0.9	1.1	1.0	1.0
Total Stops	321	345	324	347	353	338
Fuel Used (gal)	5.3	5.7	5.7	5.8	5.7	5.6

Interval #0 Information Seeding

Start Time	3:57
End Time	4:00
Total Time (min)	3
Volumes adjusted by Growth Factors.	
No data recorded this interval.	

Interval #1 Information Recording

Start Time	4:00
End Time	5:00
Total Time (min)	60
Volumes adjusted by Growth Factors.	

Run Number	1	2	3	4	5	Avg
Vehs Entered	697	714	737	728	735	721
Vehs Exited	698	719	728	734	737	723
Starting Vehs	5	9	0	10	7	7
Ending Vehs	4	4	9	4	5	4
Travel Distance (mi)	131	136	140	140	139	137
Travel Time (hr)	6.2	6.6	6.5	6.8	6.6	6.5
Total Delay (hr)	0.9	1.0	0.9	1.1	1.0	1.0
Total Stops	321	345	324	347	353	338
Fuel Used (gal)	5.3	5.7	5.7	5.8	5.7	5.6

3: Adams Street & Jefferson Street Performance by approach

Approach	SE	NW	NE	SW	All
Denied Del/Veh (s)	0.2	0.2	0.1	0.3	0.2
Total Del/Veh (s)	0.3	0.8	7.0	8.3	4.1

Total Network Performance

Denied Del/Veh (s)	0.2
Total Del/Veh (s)	4.6

Intersection: 3: Adams Street & Jefferson Street

Movement	SE	NW	NE	SW
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	40	43	35	150
Average Queue (ft)	2	2	14	72
95th Queue (ft)	16	20	39	120
Link Distance (ft)	261	625	506	455
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 0

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	3:57	3:57	3:57	3:57	3:57	3:57
End Time	5:00	5:00	5:00	5:00	5:00	5:00
Total Time (min)	63	63	63	63	63	63
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	726	730	752	741	745	739
Vehs Exited	727	732	744	746	747	739
Starting Vehs	5	9	0	10	7	7
Ending Vehs	4	7	8	5	5	5
Travel Distance (mi)	138	139	142	142	141	140
Travel Time (hr)	6.5	6.7	6.7	6.9	6.8	6.7
Total Delay (hr)	0.9	1.1	0.9	1.1	1.1	1.0
Total Stops	335	365	330	358	354	349
Fuel Used (gal)	5.6	5.8	5.8	5.9	5.8	5.8

Interval #0 Information Seeding

Start Time	3:57
End Time	4:00
Total Time (min)	3
Volumes adjusted by Growth Factors.	
No data recorded this interval.	

Interval #1 Information Recording

Start Time	4:00
End Time	5:00
Total Time (min)	60
Volumes adjusted by Growth Factors.	

Run Number	1	2	3	4	5	Avg
Vehs Entered	726	730	752	741	745	739
Vehs Exited	727	732	744	746	747	739
Starting Vehs	5	9	0	10	7	7
Ending Vehs	4	7	8	5	5	5
Travel Distance (mi)	138	139	142	142	141	140
Travel Time (hr)	6.5	6.7	6.7	6.9	6.8	6.7
Total Delay (hr)	0.9	1.1	0.9	1.1	1.1	1.0
Total Stops	335	365	330	358	354	349
Fuel Used (gal)	5.6	5.8	5.8	5.9	5.8	5.8

3: Adams Street & Jefferson Street Performance by approach

Approach	SE	NW	NE	SW	All
Denied Del/Veh (s)	0.2	0.2	0.1	0.3	0.2
Total Del/Veh (s)	0.2	0.8	7.0	8.5	4.2

Total Network Performance

Denied Del/Veh (s)	0.2
Total Del/Veh (s)	4.8

Intersection: 3: Adams Street & Jefferson Street

Movement	SE	NW	NE	SW
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	36	34	48	155
Average Queue (ft)	2	2	18	73
95th Queue (ft)	14	16	44	120
Link Distance (ft)	261	625	506	455
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 0

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	3:57	3:57	3:57	3:57	3:57	3:57
End Time	5:00	5:00	5:00	5:00	5:00	5:00
Total Time (min)	63	63	63	63	63	63
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	718	726	767	722	754	737
Vehs Exited	719	730	760	725	756	738
Starting Vehs	5	10	1	10	7	7
Ending Vehs	4	6	8	7	5	6
Travel Distance (mi)	136	138	145	138	143	140
Travel Time (hr)	7.0	7.2	7.5	7.1	7.5	7.2
Total Delay (hr)	1.5	1.6	1.6	1.6	1.7	1.6
Total Stops	718	729	763	720	756	739
Fuel Used (gal)	6.1	6.2	6.4	6.2	6.4	6.3

Interval #0 Information Seeding

Start Time	3:57
End Time	4:00
Total Time (min)	3
Volumes adjusted by Growth Factors.	
No data recorded this interval.	

Interval #1 Information Recording

Start Time	4:00
End Time	5:00
Total Time (min)	60
Volumes adjusted by Growth Factors.	

Run Number	1	2	3	4	5	Avg
Vehs Entered	718	726	767	722	754	737
Vehs Exited	719	730	760	725	756	738
Starting Vehs	5	10	1	10	7	7
Ending Vehs	4	6	8	7	5	6
Travel Distance (mi)	136	138	145	138	143	140
Travel Time (hr)	7.0	7.2	7.5	7.1	7.5	7.2
Total Delay (hr)	1.5	1.6	1.6	1.6	1.7	1.6
Total Stops	718	729	763	720	756	739
Fuel Used (gal)	6.1	6.2	6.4	6.2	6.4	6.3

3: Adams Street & Jefferson Street Performance by approach

Approach	SE	NW	NE	SW	All
Denied Del/Veh (s)	0.2	0.2	0.1	0.3	0.3
Total Del/Veh (s)	5.9	6.3	5.0	6.2	6.1

Total Network Performance

Denied Del/Veh (s)	0.3
Total Del/Veh (s)	7.4

Intersection: 3: Adams Street & Jefferson Street

Movement	SE	NW	NE	SW
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	79	111	31	106
Average Queue (ft)	41	56	18	62
95th Queue (ft)	66	90	42	92
Link Distance (ft)	261	625	506	455
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 0

H. C. L. CRASH COLLISION DIAGRAM DATA PACKAGE

COUNTY: **YORK**

TOWN: **BIDDEFORD**

LOW NODE: **58701** HIGH NODE: **0000**

REGION: **1**

U/R: **URBAN**

DESCRIPTION: **Jct of Adams St & Jefferson St**

RTE # / RD #: **3110002** DATE DRAWN: **8/27/2020** DRAWN BY: **Michelle**

STUDY FROM: **1/1/2017**

STUDY TO: **12/31/2019**

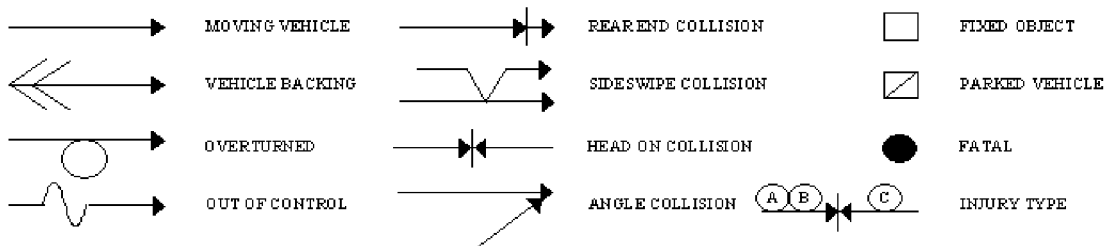
CRASH RATE: **1.24**

CRF: **2.66**

% INJURY: **25**

TOTAL CRASHES: **8**

LEGEND



--- PATH OF: ☐ P PEDESTRIAN ☐ B BICYCLE ☐ A ANIMAL ☐ S SLED

PAVEMENT: D - DRY, I - ICY, W - WET, S - SNOW

WEATHER: C - CLEAR, F - FOG, R - RAIN, SL - SLEET, S - SNOW, CL - CLOUDY

TIME: A - AM, P - PM



H. C. L. CRASH COLLISION DIAGRAM DATA PACKAGE

COUNTY: **YORK**

TOWN: **BERWICK**

LOW NODE: **58702** HIGH NODE: **0000**

REGION: **1**

U/R: **URBAN**

DESCRIPTION: **Jct of Jefferson St & Washington St**

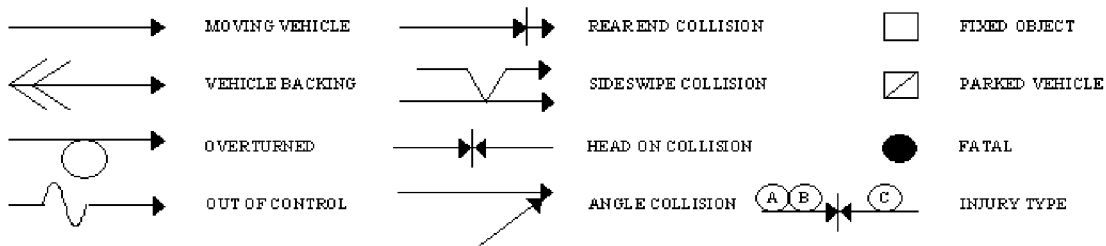
RTE # / RD #: **3110086** DATE DRAWN: **8/27/2020** DRAWN BY: **Michelle**

STUDY FROM: **1/1/2017**

STUDY TO: **12/31/2019**

CRASH RATE: **1.72** CRF: **3.69** % INJURY: **45.5** TOTAL CRASHES: **11**

LEGEND

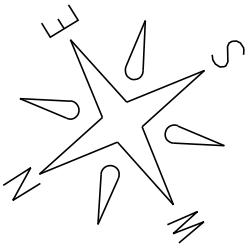


--- PATH OF: ☐ P PEDESTRIAN ☐ B BICYCLE ☐ A ANIMAL ☐ S SLED

PAVEMENT: D - DRY, I - ICY, W - WET, S - SNOW

WEATHER: C - CLEAR, F - FOG, R - RAIN, SL - SLEET, S - SNOW, CL - CLOUDY

TIME: A - AM, P - PM



STOP

Jefferson St.

Washington St.

Biddeford

Node: 58702

Study Period: 2017-2019

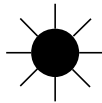
of Crashes: 11 / CRF 3.69

Prepared by Office of Safety (MP 8/27/20)



17718 6-26-18 10:35A D/C Fail To Yield

25215 9-4-18 8:10A D/C Ran Stop Sign
15958 6-4-18 4:50P W/R Fail To Yield
25215 9-4-18 8:10A D/C Ran Stop Sign
(B) 19146 7-10-18 12:05P D/C Fail To Yield moped



29238 9-19-17 4:00P D/C Fail To Yield (C)
33328 10-29-18 12:20P W/R Fail To Yield
39006 12-10-17 12:35P SL/CL Fail To Yield
33872 11-10-17 4:30P D/C Ran Red Light

5446 2-9-17 12:25P S/S Speed

3688 2-3-17 2:45P D/CL Fail To Yield

Jefferson St.



 = Overhead Flasher

Washington St.

9. Geotechnical Report

The key to success starts with a solid foundation.
ENGINEERING | EXPLORATION | EXPERIENCE

Geotechnical Report

*Proposed Apartment Complex
Adams Street, Biddeford, ME*



Client

Southern Maine Affordable Housing
22 South Street
Biddeford, ME 04005

Project #: 21070
Date: 4/30/2021
REVISED: 8/2/2021

Geotechnical Report

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Appendix A – Exploration Location Plan

Appendix B – Exploration Logs

Appendix C – Bedrock Recommendations

April, 30, 2021 (REVISED 8/2/2021)
SGS Project #: 21070

Southern Maine Affordable Housing
22 South Street
Biddeford, ME 04005
Attn: Guy Gagnon

Reference: Geotechnical Report – Proposed Apartment Complex
Adams Street, Biddeford, ME

Dear Guy;

Summit Geoengineering Services, Inc. (SGS) has completed a geotechnical investigation for the construction of the proposed site development referenced above. Our scope of services included the observation of twelve test pits and the preparation of this geotechnical report summarizing our findings and providing geotechnical recommendations.

Our scope of services for this project did not include an environmental site assessment or further investigation for the presence or absence of hazardous or toxic material on, below, or around the site. Any statements in this report, or on the exploration logs, regarding odors or unusual and suspicious conditions observed are for informational purposes and are not intended to constitute an environmental assessment.

1.0 Project Description

1.1 Proposed Construction

The project consists of a new 39-unit apartment complex. The building will have a footprint area of approximately 9100 square feet. The finished floor of the East side of the building is Elevation 128 feet and Elevation 140 feet on the West side of the building. A large parking lot will append the building and will connect to an access road that will outlet to the end of Adams street. A large cast in place retaining wall will be placed to the East of the site to construct the proposed access road and parking lot.

1.2 Existing Conditions

The existing site is moderately wooded with an old access road and two existing building foundations. These existing foundations and slabs will be removed before the construction of the new building. The existing grades within the site boundaries range from Elevation 98 feet near the East portion to 138 feet near the West portion. Based on the existing grades and the finished floor elevation of the East side (FFE 128 feet) of the building, up to 6 feet of fill and 6 feet of cut will be necessary. For the West side of the building (FFE 140 feet), up to 8 feet of fill will be necessary, if no basement or other area is proposed underneath the finished floor elevation.

The site grades were referenced from a plan entitled *Adams Point Housing* by Oak Point Associates, dated March 2021.

2.0 Explorations

2.1 Test Pits

Summit Geoengineering Services (SGS) observed the subsurface conditions on March, 12, 2021 with the excavation of 12 test pits. The explorations were completed by SGS using a Kubota mini tracked excavator. Each test pit was backfilled after completion.

Test pits were excavated to depths ranging from 1 foot to 8.5 feet (Elevations 104 feet to 136.5 feet). Soils were visually classified (*ASTM D2488*) and layering was determined from the ground surface using a measuring tape.

The test pit locations were determined by others and marked out by SGS prior to the excavation of the test pits. A test pit location plan and the test pit logs are included in *Appendix A* and *Appendix B*, respectively.

3.0 Subsurface Conditions

3.1 Soil

According to the *Surficial Geology Map* from the Maine Geological Survey, the soil around Adams Street in Biddeford, ME is classified as both Marine Regressive and Marine Shoreline. These formations are a mixture of sands and gravel.

From the explorations, the soil at this site generally consists of **topsoil** over **fill** over **marine shoreline** over bedrock.

The **topsoil** is generally described as dark brown fine sand silt with trace rootlets. It is generally loose to compact and moist. It is generally 0.5 feet to 1.5 feet thick. It is visually classified as ML, in accordance with the USCS system.

The existing **fill** is generally described as brown silty fine sand with gravel, some cobbles and boulders, and few pieces of rubble and occasional plastic wrappers and metal pieces. It is generally loose to compact and moist. Some portions of the existing fill extended to bedrock across the site. The fill is visually classified as SM, in accordance with the USCS system. The following table summarizes the description and thickness of fill for each test pit across the site:

FILL DESCRIPTION		
Location	Thickness (ft)	Description
TP-1	5.5	Silty fine-medium SAND. Some Gravel, angular Cobbles, & Boulders. Few roots and brick.
TP-2	6.5	Fine-medium SAND. Some Silt, Gravel, & Cobbles. Few small metal pieces, plastic wrappers, roots, & brick. Food wrapper found from 2011.
TP-3	2.5	Silty fine SAND. With Gravel. Some Cobbles. Bricks layered at the bottom of the test pit.
TP-4	7	Sandy SILT. With Gravel. Some Cobbles, shredded cloth, brick, rubble, one metal pipe, & rootlets. Trace Clay.
TP-5	6.5	Gravelly fine-medium SAND. Some plastic wrappers. Few Cobbles and rubble. Trace Silt.
TP-6	5.5	Gravelly medium-coarse SAND. Some porcelain & brick. Trace Silt & small metal pieces.
TP-7	3	Silty fine SAND. With rootlets. Some Gravel & Cobbles. Few brick & small metal pieces.
TP-8	---	No fill encountered. Bedrock very shallow.
TP-9	2	Fine Sandy SILT. Trace Gravel & angular Cobbles.
TP-10	5	Clayey SILT. Some Gravel.
TP-11	2.5	Fine Sandy SILT. With Gravel & large Boulders.
TP-12	---	No fill encountered. Bedrock very shallow

The **marine shoreline** is generally described as brown coarse sand with gravel and some cobbles and boulders. It is generally compact and moist. Where encountered, this layer extended to refusal on bedrock at depths ranging from 6 feet to 8.5 feet (Elevations 114 feet to 125 feet). The marine shoreline is visually classified as SP, in accordance with the USCS system.

In Test Pit 5 (TP-5) and TP-6, the upper layer of marine shoreline had a layer of red brown fine sandy silt that was soft to firm and moist. This layer was generally 0.5 feet to 1 foot thick and was visually classified as ML, in accordance with the USCS system.

Detailed descriptions of the soil can be found in the exploration logs in *Appendix B*.

3.2 Groundwater

Groundwater was only encountered in TP-10 at a depth of 3 feet where rapid seepage occurred. The surface of the forest floor near TP-10 was saturated before excavation occurred. TP-10 also had a different fill material than the other test pits, consisting primarily of gray clayey silt with sand and gravel. No other test pit had any sort of seepage. Based on this, SGS believes that during excavation, a trapped pocket of water was likely struck, causing this rapid seepage. This pocket of water is usually an indicator of an old foundation being present. We recommend that SGS be notified to observe this area of the building footprint during construction to provide further recommendations.

3.3 Bedrock

Probable bedrock was encountered at all of the test pits on the site except for TP-1. The probable bedrock was encountered at depths ranging from 1 foot to 8.5 feet (Elevations 104 feet to 136.5 feet) when the excavator struck refusal.

The following table summarizes the depths and elevations of the probable bedrock around the development:

PROBABLE BEDROCK DEPTHS AND ELEVATIONS			
Location	Depth (ft)	Elevation (ft +/-)	Reference
TP-2	8	114	Excavator refusal
TP-3	3	104	Excavator refusal
TP-4	7	118	Excavator refusal
TP-5	8.5	117.5	Excavator refusal
TP-6	8	120	Excavator refusal
TP-7	3.5	131.5	Excavator refusal
TP-8	1	134	Excavator refusal
TP-9	2.5	129.5	Excavator refusal
TP-10	6	125	Excavator refusal
TP-11	3.5	133.5	Excavator refusal
TP-12	1.5	136.5	Excavator refusal

According to the *Bedrock Geology Map* from the Maine Geological Survey, the bedrock around Adams Street in Biddeford, ME is classified as a granite in the Biddeford Pluton.

4.0 Geotechnical Evaluations

The soils at the site are suitable to support conventional spread footings. The key geotechnical challenges are the potential large amounts of cut and fill necessary at the site and the potential removal of bedrock and construction on bedrock.

The fill material primarily consisted of coarse-grained soils. Most portions of the fill had occasional landfill-like materials (metal pieces, plastic wrappers, etc.) and former rubble materials (brick, porcelain, etc.); we will call these unconformities. The ratio between the coarse-grained soil and these unconformities will not affect our recommendations when dealing with the existing fill layer. During construction, if large amounts of unconformities are present, remove them before continuing with our recommendations.

5.0 Geotechnical Recommendations

5.1 Bearing Pressure

Spread footings resting on the native soil should be proportioned using an allowable bearing pressure of **3,000 psf**. This value is based on the friction angle of the bearing soil, the soil unit

weight, and the required frost protection depth. Spread footings resting on bedrock should be proportioned using an allowable bearing pressure of **10,000 psf**.

5.2 Subgrade Preparation

Foundations at the required frost depth should have the following steps to prepare the footing subgrade:

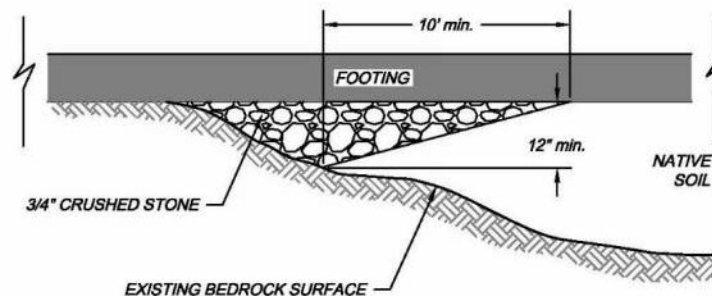
Footings on soil:

- After grubbing, excavate to the footing subgrade and proofroll the exposed soil by making a minimum of 4 passes in each of two perpendicular directions using a vibratory compactor. The footings can be constructed directly on the proofrolled native soil. Voids left at the base of the excavation from the removal of boulders should be filled with $\frac{3}{4}$ inch crushed stone (CS) or Structural Fill (SF).
- Soft, wet, and unstable areas should be removed and replaced with CS or SF.

Footings on bedrock:

- Footings should bear on hard bedrock when possible. Hard and intact bedrock is created by the removal of loose and weathered bedrock fragments down to a competent bedrock surface. Any large gaps or voids created by removing loose pieces of bedrock are filled with CS, flowable fill, or lean concrete.
- Footings on intact bedrock do not need the full frost protection since intact bedrock is non-frost susceptible.
- In the event that bedrock is sloping there are two options: cutting into the bedrock to make a shelf or placing a lean concrete or grout levelling pad directly on the intact bedrock surface. In the case of cutting to make the footing bearing area, dowelling into bedrock is optional unless required for uplift loadings. The level cut surface should extend a minimum of 1 foot beyond the edge of the footing. Where the footing construction surface is created by filling, dowelling into bedrock is strongly recommended.

The following figure covers the conditions where a portion of the foundation is on bedrock and a portion is on soil:



The CS transition is intended to reduce the differential settlement between footings supported on bedrock and footings supported on soil. Where bedrock is cut, it should be sloped to prevent ponding of groundwater.

5.3 Frost Protection

The design air freezing index for the Biddeford, Maine area is approximately 1,190-degree F days (10-year, 90% probability). Based on this, exterior footings and other footings exposed to freezing temperatures should be placed at a minimum depth of **4 feet** in order to provide adequate frost protection. We recommend that all foundations exposed to freezing temperatures be backfilled with Granular Borrow (GB). Specifications for GB are included in *Section 6.2* of this report.

Footings cast on bedrock, if clean, non-weathered, and hard, do not need to be at frost depth. The concrete should be placed directly on the bedrock to provide a water tight seal.

5.4 Seismic Design

Based on the discovered soils and their properties, this site can be classified as **Seismic Site Class D** in accordance with ASCE 7-10 and ASCE 7-16. The following seismic design coefficients should be used:

SUBGRADE SITE SEISMIC DESIGN COEFFICIENTS – ASCE 7-10 & ASCE 7-16		
Seismic Coefficient	ASCE 7-10 (Class D)	ASCE 7-16 (Class D)
Short period spectral response (S_S)	0.251	0.290
1 second spectral response (S_1)	0.079	0.072
Maximum short period spectral response (S_{MS})	0.402	0.455
Maximum 1 second spectral response (S_{M1})	0.190	0.173
Design short period spectral response (S_{DS})	0.268	0.303
Design 1 second spectral response (S_{D1})	0.127	0.115

5.5 Groundwater Control

Permanent groundwater is anticipated to be below the footings and excavations required to construct the footings. To account for any changes in the permanent groundwater table or seasonal precipitation, we recommend exterior perimeter foundation underdrains be installed. Underdrains should consist of 4" rigid PVC or flexible ADS pipe surrounded by 6" of CS, which is then surrounded by Mirafi 140N or equivalent. Underdrains should be outlet to a free draining location. Where exposed at the ground surface, a screen or other device should be placed over the outlet to prevent the migration of animals into the underdrain system.

Sub-slab foundation drains are not necessary.

5.6 Slabs-on-Grade

To provide a uniform support condition for slabs-on-grade, we recommend that slabs-on-grade be constructed on a minimum of 12 inches of SF or 8 inches of CS placed directly on the proofrolled native soil. Any soft or wet pockets should be removed and replaced with CS. Fill required to raise the grade to the base of the SF or CS can consist of the existing fill, the existing marine shoreline, GB or SF. The maximum particle size for these materials should be limited to 6 inches.

If bedrock prevents a level slab-on-grade, we recommend that the bedrock be removed (see *Section 6.1*) to a minimum of 6 inches below the bottom of the slab, while still allowing for a level surface. CS or SF should be placed between the bedrock and the bottom of the slab and compacted properly.

All fill should be compacted to 95% of ASTM D1557.

The gradation requirements for GB, CS, and SF can be found in *Section 6.2*.

5.7 Pavement Section Recommendations

The mean annual freezing index for the Biddeford, Maine area is estimated at 890-degree F days (2-year, 50% probability). Based on the subgrade and mean annual freezing index, the anticipated mean annual frost penetration depth is 36 inches.

For the proposed roadway and parking lots, we recommend a minimum total section thickness of **18 inches**. We further recommend that the pavement section consist of the following materials:

PAVEMENT SECTION MATERIALS AND THICKNESSES		
Material	Thickness (in)	Specifications
Asphalt Surface Course	3/4	MDOT 703.09 Type 12.5 mm
Asphalt Binder Course	2 1/4	MDOT 703.09 Type 12.5 mm
Base Soil	3	MDOT 703.06 Type A
Subbase Soil	12	MDOT 703.06 Type D

Reference: MDOT Standard Specifications (2014)

If bedrock is encountered in the construction of the paved areas, the guidelines for removing bedrock should be followed as noted in *Section 6.1*. We recommend a minimum of 6 inches of Type A Gravel be placed between the bedrock and the bottom of the asphalt layer.

Fill beneath the subbase soil can consist of the existing fill, the existing marine shoreline or GB, placed and compacted to a minimum of 95% of ASTM D1557.

Based on the depth to groundwater, underdrains will not be necessary beneath paved areas. Adequate side ditching should be provided to shed surface water away from the base and subbase soil.

5.8 Cast-in-Place Retaining Wall

The following table provides design recommendations for equivalent fluid pressures (EFP) for cast-in-place retaining walls:

EFP'S FOR CAST-IN-PLACE RETAINING WALLS			
Condition	γ_t (pcf)	ϕ (deg)	EFP (psf/ft)
At-Rest	130	36	55
Active	130	36	35
Passive	130	33	305

The above EFP's assume that the retaining wall is backfilled with GB and an underdrain is installed at the base of the walls.

The at-rest condition assumes that structural support at the top of the walls is provided prior to backfilling.

The active condition assumes the walls are free to rotate at the top.

Underdrains for the walls should consist of a 4" rigid perforated PVC surrounded by a minimum of 6 inches of CS and filter fabric to prevent clogging from the migration of the fine soil particles in the backfill soils. Underdrains should outlet at the end of the walls or through the face at a maximum spacing of 50 feet.

We recommend that the walls be designed using a minimum live load surcharge of **250 psf** for construction, transportation, and firefighting loads behind the wall, as applicable.

5.9 Segmental Block Walls

We recommend that segmental block walls be designed by a Maine Licensed Professional Engineer.

We recommend that a ¾" crushed stone column with a minimum thickness of 12" be installed behind the entire wall, between the back of the blocks and the wall backfill, to prevent infiltrated water behind the wall from creating a hydrostatic load on the wall. An underdrain system should be provided continuously behind the retaining wall near its base to prevent the buildup of hydrostatic pressures.

Underdrains for the walls should consist of a 4" rigid perforated PVC surrounded by a minimum of 6 inches of CS and filter fabric to prevent clogging from the migration of the fine soil particles

in the foundation backfill soils. Underdrains should outlet at the end of the walls or through the face at a maximum spacing of 50 feet.

We anticipate that the segmental block walls will be constructed on the existing fill materials, the marine nearshore, imported fill, or bedrock. We recommend that the wall be constructed on a leveling pad consisting of a minimum 12" thick layer of CS. A geotextile fabric (such as Mirafi 180N) should be placed on the native soil beneath the wall leveling pad. We recommend that the exposed soil beneath the leveling pad be proofrolled prior to placing the geotextile and CS.

For leveling pads on bedrock, we recommend the subgrade preparation outlined in *Section 5.2* be followed. Where the wall base consists of bedrock, the geotextile layer between the bedrock and crushed stone levelling pad can be eliminated.

The walls can be designed using the allowable bearing pressure stated in *Section 5.1*.

The segmental block walls should be designed in accordance with the *National Concrete Masonry Association (NCMA), 3rd Edition*, design manual. Retaining wall backfill for gravity retaining walls and reinforced soil for geogrid reinforced retaining walls should consist of SF compacted to a minimum of 90% of its maximum dry density in accordance with ASTM D1557. The maximum particle size should be limited to 4 inches. Soil properties presented in the table below can be used in the wall design:

DESIGN PARAMETERS – SEGMENTAL BLOCK WALLS				
Soil Location	Soil Description	γ_t (pcf)	Shear Strength	
			ϕ'	c' (psf)
Foundation	Existing Fill/Marine Shoreline	128	32°	100
	CS over Weathered or Intact Bedrock	140	40°	0
Retained and Reinforced	Structural Fill (SF)	135	34°	0

We recommend that the walls be designed using a minimum live load surcharge of **250 psf** for construction, pedestrian, and firefighting loads behind the wall, if applicable.

Since modular blocks are tolerable to some shifting, the blocks do not need to be placed down to full frost depth. We recommend the following minimum embedment depths:

MINIMUM SEGMENTAL RETAINING WALL EMBEDMENT DEPTH	
Slope in Front of Wall	Minimum Embedment to Top of CS
Horizontal	H/20
3H:1V	H/10
2H:1V	H/7
Minimum Embedment	6 inches

Passive resistance of embedded portions of the wall should be ignored.

6.0 Earthwork Considerations

6.1 Earthwork for Construction

The marine shoreline can be used as fill beneath the SF or CS under slabs and in areas outside of the building footprint where fill is needed.

The marine shoreline and existing fill are classified as OSHA Type C classification. Based on this, any excavation deeper than 5 feet and below the groundwater should have side slopes which do not exceed 1.5H:1V.

Adequate proof rolling of the subgrade soil as mentioned in *Section 5.2* is important to the success of the frost protection material as a uniform bearing material, especially if the subgrade soil is loose in isolated areas.

Cuts may be required for the desired finished floor elevations, the proposed paved areas, and the proposed cast-in-place retaining wall. If bedrock prevents the desired elevation, excavation of the bedrock, mechanically or by controlled blasting, may be necessary. If controlled blasting is necessary, we recommend it be performed in general accordance with the guidelines presented in *Appendix C*. We recommend that the guidelines outlined in *Section 5.2* be followed for the CS transition of footings resting on both bedrock and soil.

6.2 Materials

The gradation requirements reflect the portion of soil passing the 3-inch sieve size. The following table presents the recommended grain sizes for the materials to be used at the site:

GRADATION REQUIREMENTS FOR SITE MATERIALS			
Sieve Size	¹ Structural Fill	² Crushed Stone	³ Granular Borrow
3 Inch	100	---	100
2 Inch	---	---	---
1 Inch	---	100	---
¾ Inch	---	90 - 100	---
½ Inch	35 – 80	20 - 55	---
⅜ Inch	---	0 - 15	---
¼ Inch	25 – 60	---	---
No. 4	---	0 – 5	---
No. 40	0 – 30	---	0 – 70
No. 200	0 – 7	---	0 – 7
Maximum Particle Size	6"	1"	8"
⁴ Minimum Compaction Requirement	95%	---	⁵ 95%

¹Maine DOT Specification 703.06, Type D (2014)

² Maine DOT Specification 703.13, Crushed Stone ¾-Inch

³ Maine DOT Specification 703.19, Granular Borrow for Embankment Construction

⁴ Per ASTM D1557

⁵ Compaction requirement for GB can be reduced to 90%, where in landscaping areas.

CS should be placed in 12-inch maximum lifts and compacted with a minimum of 4 passes with a vibratory compactor.

GB should consist of a free draining, granular soil.

7.0 Closure

Our recommendations are based on professional judgment, generally accepted principles of geotechnical engineering and project information provided by others. Some changes in subsurface conditions from those presented in this report may occur. Should the subsurface conditions, finish grades, or foundation loadings differ materially from those described in this report, SGS should be notified so that we can re-evaluate our recommendations.

We recommend that a qualified third-party testing agency be retained to provide QA/QC services during construction.

SGS should be contacted to provide subgrade inspections prior to construction of the foundations.

We appreciate the opportunity to serve you during this phase of your project. If there are any questions or if additional information is required, please do not hesitate to call.

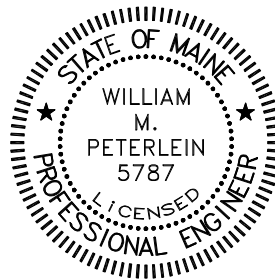
Sincerely,
Summit Geoengineering Services, Inc.



Colin M. Plante, E.I.
Geotechnical Engineer



William M. Peterlein, P.E.
President & Principal Engineer



Appendix A

Exploration Location Plan

LEGEND

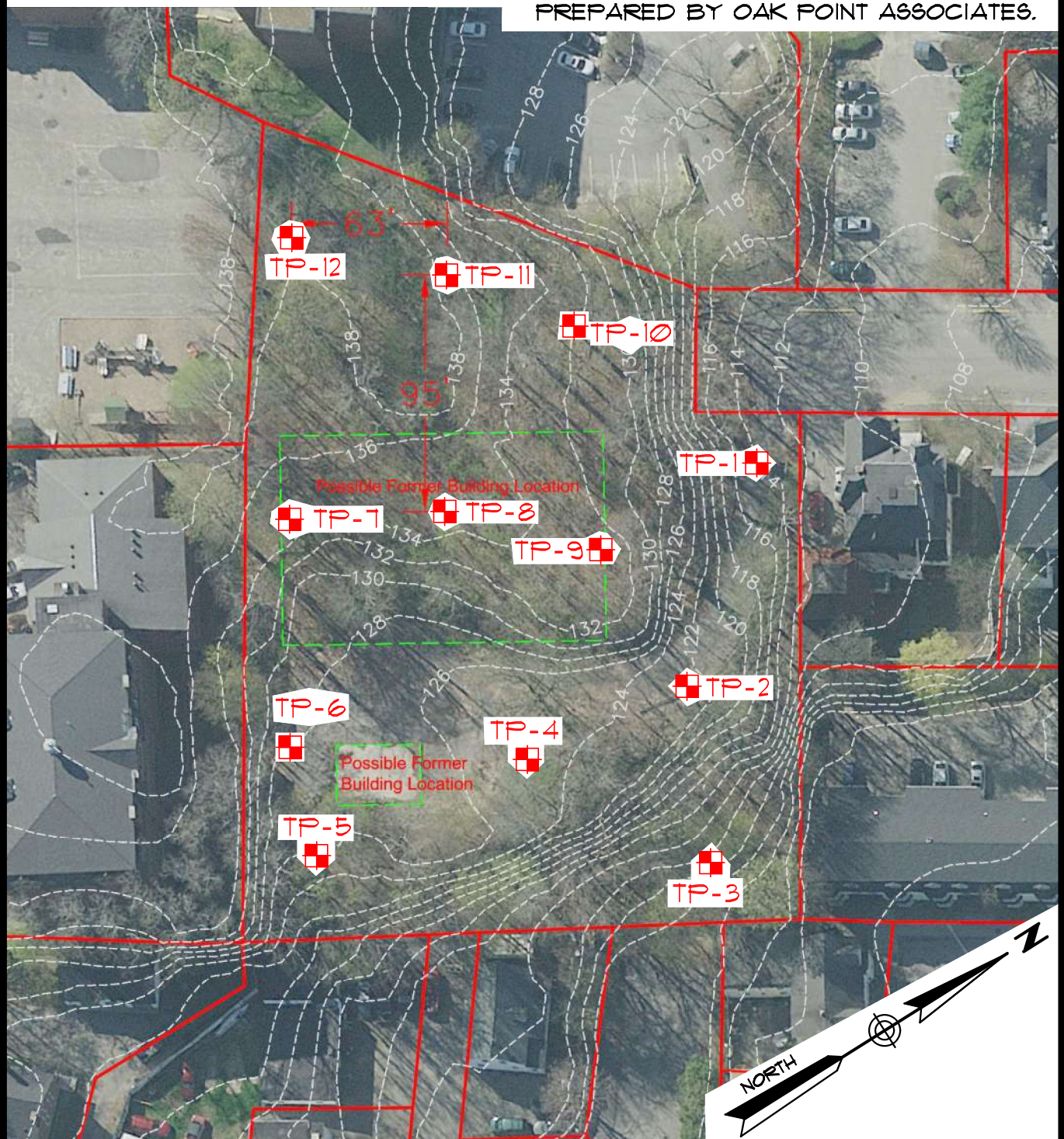


TP-1

SUMMIT TEST PIT
(MARCH 12, 2021)

PLAN REFERENCE

"ADAMS POINT HOUSING - EXISTING
CONDITIONS", DATED FEBRUARY 2021,
PREPARED BY OAK POINT ASSOCIATES.



TEST PIT LOCATION PLAN PROPOSED APARTMENTS

ADAMS STREET - BIDDEFORD, MAINE

PREPARED FOR

SOUTHERN MAINE AFFORDABLE HOUSING

145 LISBON ST. - SUITE 101
LEWISTON, ME 04240
Tel.: (207) 576-3313

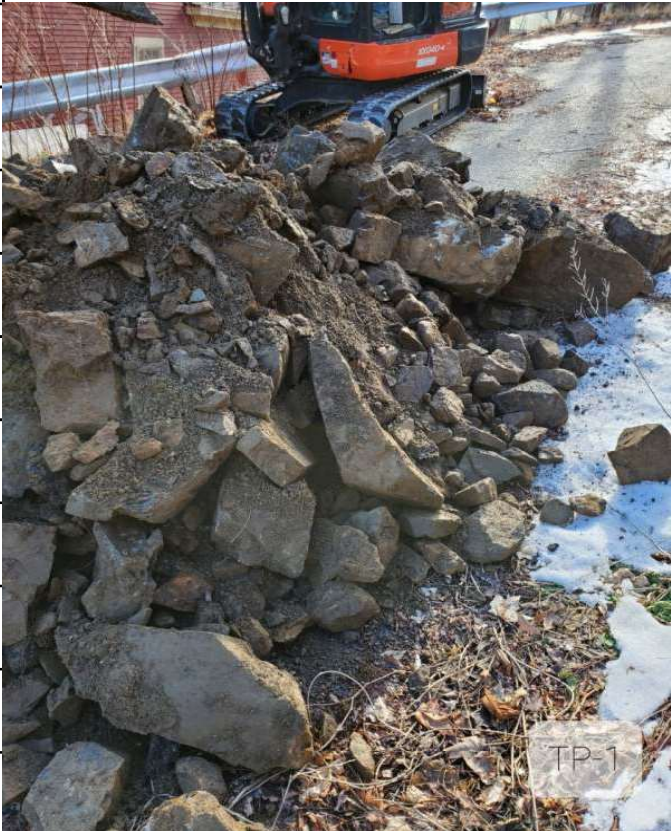
173 PLEASANT STREET
ROCKLAND, ME 04841
Tel.: (207) 318-1161

SUMMIT
GEOENGINEERING SERVICES
www.summitgeoeng.com

DATE: 3-15-2021	DRAWN BY: KRF	CHECKED BY: WMP
JOB: 21070	SCALE: 1" = 60'	FILE: 21070 TP

Appendix B

Exploration Logs

		TEST PIT LOG		Test Pit # TP-1
		Project: Proposed Apartment Complex Adams Street Biddeford, ME		Project #: 21070 Groundwater: None observed
Contractor: Summit Geoengineering Services, Inc.		Ground Surface Elevation: 114 ft +/-		
Equipment: Kubota Mini Tracked Excavator		Reference: Adams Point Housing, Existing Conditions, 02/2021		
Summit Staff: C. Plante, E.I.		Date: 3/12/2021	Weather: Sunny	
Depth (ft)	DESCRIPTION			
	ENGINEERING		GEOLOGIC/GENERAL	
	D brn Gravelly SILT, sm f Sand, tr roots, loose, moist, ML		TOPSOIL	
1	Brown Silty fine to medium SAND, some Gravel, compact, moist, SM		FILL	
2				
3	Brick fragments seen throughout			
4	Angular Cobbles with some Boulders and roots at 3.5 ft More Gravelly at 4 ft			
5	Brick fragments and very large boulder at 5 ft			
6	Hole caved-in frequently			
	End of Test Pit at 6 ft - No refusal			
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17			TP-1	

		TEST PIT LOG		Test Pit # TP-2
		Project: Proposed Apartment Complex Adams Street Biddeford, ME		Project #: 21070 Groundwater: None observed
Contractor: Summit Geoengineering Services, Inc.		Ground Surface Elevation: 122 ft +/-		
Equipment: Kubota Mini Tracked Excavator		Reference: Adams Point Housing, Existing Conditions, 02/2021		
Summit Staff: C. Plante, E.I.		Date: 3/12/2021	Weather: Sunny	
Depth (ft)	DESCRIPTION			
	ENGINEERING	GEOLOGIC/GENERAL		
	D brn Silty f SAND, tr Grav and roots, compact, moist, SM	TOPSOIL		
1	Brown fine to medium SAND, some Silt and Gravel, loose, moist, SP Metal pipe, trash, and brick fragments at 3 ft Food wrapper found, dated 2011 1" gray Clayey SILT balls and some Cobbles at 5 ft Roots to 6 ft	FILL		
2				
3				
4				
5				
6				
7				
8	Brown coarse SAND, with Gravel, few Boulders, compact, moist, SP	MARINE SHORELINE		
9	End of Test Pit at 8 ft - Refusal on a dense stratum	PROBABLE BEDROCK		
10				
11				
12				
13				
14				
15				
16				
17				

		TEST PIT LOG		Test Pit # TP-3
		Project: Proposed Apartment Complex Adams Street Biddeford, ME		Project #: 21070 Groundwater: None observed
Contractor: Summit Geoengineering Services, Inc.		Ground Surface Elevation: 107 ft +/-		
Equipment: Kubota Mini Tracked Excavator		Reference: Adams Point Housing, Existing Conditions, 02/2021		
Summit Staff: C. Plante, E.I.		Date: 3/12/2021	Weather: Sunny	
Depth (ft)	DESCRIPTION			
	ENGINEERING	GEOLOGIC/GENERAL		
	Forest Duff with many rootlets	TOPSOIL		
1	Brown Silty fine SAND, with Gravel, loose, moist, SM Cobbles at 1 ft	FILL		
2				
3	Many bricks, layered at 2.5 ft	PROBABLE BEDROCK		
4	End of Test Pit at 3 ft - Refusal on a dense stratum			
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				

		TEST PIT LOG		Test Pit # TP-4
		Project: Proposed Apartment Complex Adams Street Biddeford, ME		Project #: 21070 Groundwater: None observed
Contractor: Summit Geoengineering Services, Inc.		Ground Surface Elevation: 125 ft +/-		
Equipment: Kubota Mini Tracked Excavator		Reference: Adams Point Housing, Existing Conditions, 02/2021		
Summit Staff: C. Plante, E.I.		Date: 3/12/2021	Weather: Sunny	
Depth (ft)	DESCRIPTION			
	ENGINEERING	GEOLOGIC/GENERAL		
1	Dark brown fine Sandy SILT, with Gravel, firm, moist, ML	FILL		
2	Cobbles and shredded cloth at 2 ft			
3	Brick fragments from 2 ft to 4 ft			
	Sandy SILT becomes more Gravelly from 2 ft to 4 ft			
4	Rubble from 2 ft to 4 ft			
5	Brown fine Sandy SILT, some Gravel, trace Clay, firm, moist, ML			
6				
7	Metal pipe, Cobbles, and rootlets at 6.5 ft			
8	End of Test Pit at 7 ft - Refusal on a dense stratum	PROBABLE BEDROCK		
9				
10				
11				
12				
13				
14				
15				
16				
17				



		TEST PIT LOG		Test Pit # TP-5
		Project: Proposed Apartment Complex Adams Street Biddeford, ME		Project #: 21070
Contractor: Summit Geoengineering Services, Inc.		Ground Surface Elevation: 126 ft +/-		Groundwater: None observed
Equipment: Kubota Mini Tracked Excavator		Reference: Adams Point Housing, Existing Conditions, 02/2021		
Summit Staff: C. Plante, E.I.		Date: 3/12/2021	Weather: Sunny	
Depth (ft)	DESCRIPTION			
	ENGINEERING		GEOLOGIC/GENERAL	
	D brn f Sandy SILT, tr roots and trash, compact, moist, ML		TOPSOIL	
1	Brown Gravelly fine to medium SAND, trace Silt, some brick fragments, loose, moist, SW		FILL	
2				
3				
4	Larger Gravel, few Cobbles, and rubble at 3 ft			
5				
6	Brown medium Sandy GRAVEL, trace Silt, loose, moist, GP		MARINE SHORELINE	
7	Roots to 7 ft			
8	Red brn f Sandy SILT, with Gravel, compact, moist, ML Brn co SAND, w/ Gravel and Cobbles, compact, moist, SP			
9	End of Test Pit at 8.5 ft - Refusal on a dense stratum		PROBABLE BEDROCK	
10				
11				
12				
13				
14				
15				
16				
17				

		TEST PIT LOG		Test Pit # TP-6
		Project: Proposed Apartment Complex Adams Street Biddeford, ME		Project #: 21070 Groundwater: None observed
Contractor: Summit Geoengineering Services, Inc.		Ground Surface Elevation: 128 ft +/-		
Equipment: Kubota Mini Tracked Excavator		Reference: Adams Point Housing, Existing Conditions, 02/2021		
Summit Staff: C. Plante, E.I.		Date: 3/12/2021	Weather: Sunny	
Depth (ft)	DESCRIPTION			
	ENGINEERING		GEOLOGIC/GENERAL	
	Forest Duff		TOPSOIL	
1	Brown Gravelly medium SAND, trace Silt, compact, moist, SP		FILL	
2	-----			
	White Gravelly coarse SAND, loose, moist, SP			
3	Metal pipe at 3 ft			
4	-----		MARINE SHORELINE	
	Brown Gravelly medium SAND, trace Silt, some porcelain and brick, compact, moist, SP			
5	-----			
6	Light reddish brown fine Sandy SILT, soft, moist, ML			
7	-----		PROBABLE BEDROCK	
	Brown Gravelly coarse SAND, compact, moist, SP			
8	-----			
	End of Test Pit at 8 ft - Refusal on a dense stratum			
9				
10				
11				
12				
13				
14				
15				
16				
17				

		TEST PIT LOG		Test Pit # TP-7
		Project: Proposed Apartment Complex Adams Street Biddeford, ME		Project #: 21070 Groundwater: None observed
Contractor: Summit Geoengineering Services, Inc.		Ground Surface Elevation: 135 ft +/-		
Equipment: Kubota Mini Tracked Excavator		Reference: Adams Point Housing, Existing Conditions, 02/2021		
Summit Staff: C. Plante, E.I.		Date: 3/12/2021	Weather: Sunny	
Depth (ft)	DESCRIPTION			
	ENGINEERING	GEOLOGIC/GENERAL		
	Forest Duff	TOPSOIL		
1	Brown Silty fine SAND, some Gravel, with Rootlets, loose, moist, SM	FILL		
2	Larger Gravel and Cobbles at 1 ft			
3	Brick fragments and large metal piece at 3 ft			
4	End of Test Pit at 3.5 ft - Refusal on probable bedrock	PROBABLE BEDROCK		
5	Test pit was lengthened to observe the tendencies of the probable bedrock			
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				

		TEST PIT LOG		Test Pit # TP-8
		Project: Proposed Apartment Complex Adams Street Biddeford, ME		Project #: 21070 Groundwater: None observed
Contractor: Summit Geoengineering Services, Inc.		Ground Surface Elevation: 135 ft +/-		
Equipment: Kubota Mini Tracked Excavator		Reference: Adams Point Housing, Existing Conditions, 02/2021		
Summit Staff: C. Plante, E.I.		Date: 3/12/2021	Weather: Sunny	
Depth (ft)	DESCRIPTION			
	ENGINEERING	GEOLOGIC/GENERAL		
1	Dark/light brown Sandy SILT, trace Rootlets, loose, moist, ML	TOPSOIL		
2	End of Test Pit at 1 ft - Refusal on probable bedrock	PROBABLE BEDROCK		
3				
4				
5				
6				
7				
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11				
12				
13				
14				
15				
16				
17				



		TEST PIT LOG		Test Pit # TP-9
		Project: Proposed Apartment Complex Adams Street Biddeford, ME		Project #: 21070 Groundwater: None observed
Contractor: Summit Geoengineering Services, Inc.		Ground Surface Elevation: 132 ft +/-		
Equipment: Kubota Mini Tracked Excavator		Reference: Adams Point Housing, Existing Conditions, 02/2021		
Summit Staff: C. Plante, E.I.		Date: 3/12/2021	Weather: Sunny	
Depth (ft)	DESCRIPTION			
	ENGINEERING		GEOLOGIC/GENERAL	
	Forest Duff with Rootlets		TOPSOIL	
1	Brown fine Sandy SILT, trace Gravel, loose, moist, ML		FILL	
2	Large Gravel and angular Cobbles at 2 ft			
3	End of Test Pit at 2.5 ft - Refusal on probable bedrock		PROBABLE BEDROCK	
4	Refusal on bedrock ranged from 2.5 ft to 3.5 ft (East to West)			
5				
6				
7				
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10				
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12				
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14				
15				
16				
17				

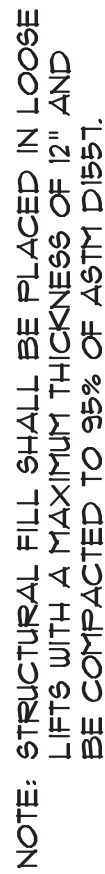
		TEST PIT LOG		Test Pit # TP-10
		Project: Proposed Apartment Complex Adams Street Biddeford, ME		Project #: 21070 Groundwater: Rapid seepage at 3 ft
Contractor: Summit Geoengineering Services, Inc.		Ground Surface Elevation: 131 ft +/-		
Equipment: Kubota Mini Tracked Excavator		Reference: Adams Point Housing, Existing Conditions, 02/2021		
Summit Staff: C. Plante, E.I.		Date: 3/12/2021	Weather: Sunny	
Depth (ft)	DESCRIPTION			
	ENGINEERING		GEOLOGIC/GENERAL	
1	Gray Clayey SILT, some Gravel, firm, moist, ML		FILL	
2				
3				
4	Brown fine Sandy SILT, soft, wet, ML		MARINE SHORELINE	
5	Brown Gravelly medium SAND, compact, wet, SP			
6	Roots to 5 ft			
7	End of Test Pit at 6 ft - Refusal on a dense stratum			
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				

		TEST PIT LOG		Test Pit # TP-11
		Project: Proposed Apartment Complex Adams Street Biddeford, ME		Project #: 21070
Contractor: Summit Geoengineering Services, Inc.		Ground Surface Elevation: 137 ft +/-		Groundwater: None observed
Equipment: Kubota Mini Tracked Excavator		Reference: Adams Point Housing, Existing Conditions, 02/2021		
Summit Staff: C. Plante, E.I.		Date: 3/12/2021	Weather: Sunny	
Depth (ft)	DESCRIPTION			
	ENGINEERING		GEOLOGIC/GENERAL	
1	Dark brown fine Sandy SILT, with rootlets, loose, moist, ML		TOPSOIL	
2	Light brown fine Sandy SILT, with Gravel, soft, moist, ML Large Boulders at 1.5 ft		FILL	
3				
4	End of Test Pit at 3.5 ft - Refusal on probable bedrock			
5	Refusal on bedrock ranged from 0.5 ft to 3.5 ft (South to North)		PROBABLE BEDROCK	
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				

		TEST PIT LOG		Test Pit # TP-12
		Project: Proposed Apartment Complex Adams Street Biddeford, ME		Project #: 21070 Groundwater: None observed
Contractor: Summit Geoengineering Services, Inc.		Ground Surface Elevation: 138 ft +/-		
Equipment: Kubota Mini Tracked Excavator		Reference: Adams Point Housing, Existing Conditions, 02/2021		
Summit Staff: C. Plante, E.I.		Date: 3/12/2021	Weather: Sunny	
Depth (ft)	DESCRIPTION			
	ENGINEERING	GEOLOGIC/GENERAL		
1	Dark brown fine Sandy SILT, with Rootlets, loose, moist, ML	TOPSOIL		
2	End of Test Pit at 1.5 ft - Refusal on probable bedrock			
3	Refusal on bedrock ranged from 0.5 ft to 1.5 ft (South to North)			
4				
5				
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7				
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12				
13				
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15				
16				
17				

Appendix C

Bedrock References



CONTINUOUS FOOTING ON BEDROCK & SOIL

SUMMIT
GEOENGINEERING SERVICES
www.summitgeoeng.com

GENERAL BLASTING RECOMMENDATIONS

Introduction

Blasting operations will be performed in general accordance with the applicable Maine Revised Statute Title 125 and Title 38, U.S. Department of the Interior Rules, the recommendations provided below, and a normal standard of care.

Blast Design

The blasting contractor shall submit a blasting plan to the Owner for approval prior to blasting operations. The blasting plan shall include a schedule, sketches of the drill patterns (hole spacing and depth), type and amount of explosives, number and sequence of delays, methods for minimizing flyrock, and any other information pertinent to demonstrating compliance with the applicable U.S. Department of the Interior Rules and the requirements of the applicable Statute requirements of 38 MRSA.

Notification

Oral notification to the abutters within one-half mile of the blast area shall be provided prior to blasting. Warning and all clear signals of different character or pattern that are audible within one-half mile from the point of the blast shall be given. The meaning of the signals shall be conveyed to the abutters at the time they are notified.

Pre-blast Surveys

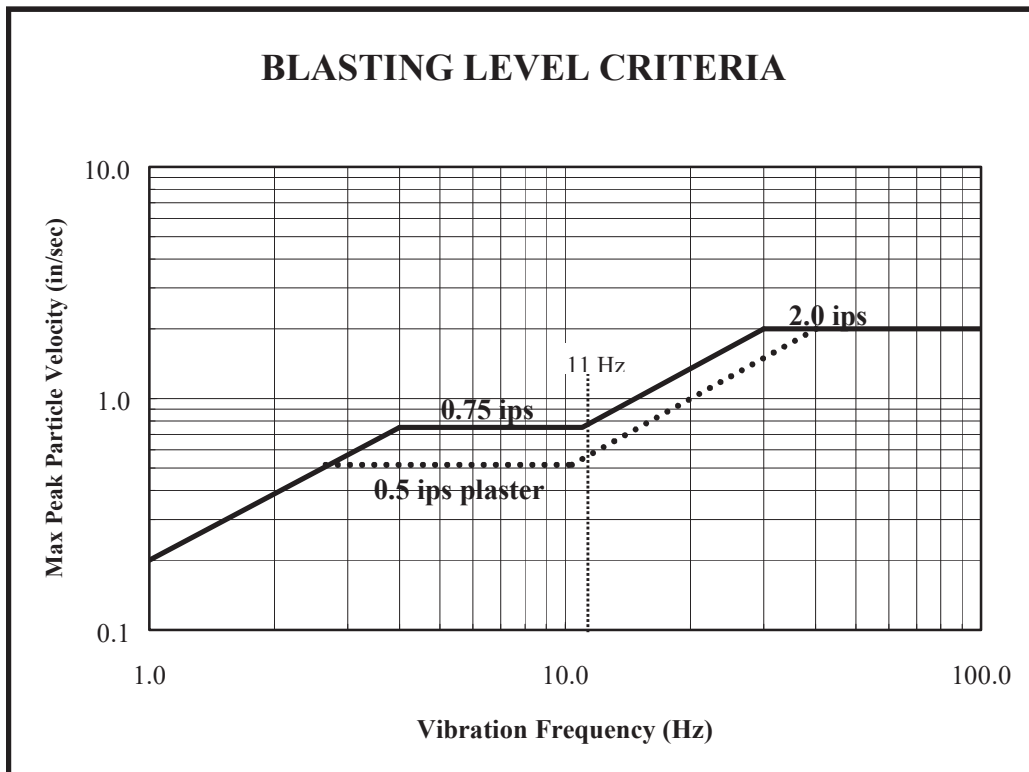
All blasting operations are the direct responsibility of the Blasting Contractor. Reports of damage to structures caused by blasting operations are the sole responsibility of the Blasting Contractor. Therefore, it is incumbent upon the Blasting Contractor to perform pre-blast surveys as they deem necessary.

Airblast Limits

Airblast overpressure shall not exceed the limits stipulated in 38 MRSA 490-Z(14)(H) at the nearest structure. This currently requires sound from blasting to not exceed 129 decibels peak at inhabited structures and 140 decibels peak at uninhabited structures.

Ground Vibration Limits

The maximum ground vibration at any structure shall not exceed the limits presented in the following chart:



REFERENCE: OSM alternative blasting criteria (Modified from figure B-1, Bureau of Mines, RI 8507)

The Blasting Contractor shall provide a seismographic record to the Owner for each blast event at the nearest off-site structure. The record shall include the date and time of the blast, peak and resultant particle velocities and associated frequencies, and the airblast overpressure.

Flyrock

Sufficient stemming, matting, or natural protective cover shall be provided to prevent flyrock from leaving property owned or under control of the operator or from entering protected natural resources or natural buffer strips.

Records

Records of blasts shall be recorded in accordance with Maine Statute 38 MRSA 490-Z(14)(L). The current requirements are as follows.

- Name of blasting company or blasting contractor
- Location, date and time of blast
- Name, signature and social security number of blaster
- Type of material blasted
- Number and spacing of holes and depth of burden or stemming
- Diameter and depth of holes
- Type of explosives used
- Total amount of explosives used
- Maximum amount of explosives used per delay period of 8 milliseconds or greater
- Maximum number of holes per delay period of 8 milliseconds or greater
- Method of firing and type of circuit
- Direction and distance in feet to the nearest dwelling, public building, school, church or commercial or institutional building neither owned nor controlled by the developer
- Weather conditions, including factors such as wind direction and cloud cover
- Height or length of stemming
- Amount of mats or other protection used
- Type of detonators used and delay periods used
- The exact location of each seismograph and the distance of each seismograph from the blast
- Seismographic readings
- Name and signature of the person operating each seismograph
- Names of the person and the firm analyzing the seismographic data

**MAXIMUM PARTICLE VELOCITY/DISTANCE CRITERIA
FOR BLASTING NEAR UNCURED CONCRETE**

Time From Batching (hr)	Non-Structural Concrete	Structural Concrete
0 – 4	4D	2D
4 – 24	1D	0.25D
24 – 72	1.5D	1D
72 – 168	3D	2D
168 – 240	8D	5D
Over 240	15D	10D

Distance (ft)	D (in/sec)
0 to 50	1.0
50 to 150	0.8
150 to 250	0.7
Over 250	0.6

NOTE: Allowable vibration levels are reduced with increasing distance since concrete can withstand higher vibration levels at higher frequencies. Vibration frequencies decrease as the distance from the blast increases because there is an attenuation of frequency with distance.

Reference: Wyllie, Duncan C. Foundations on Rock, 1st Ed, Chapman & Hall, London, 1992

10.Stormwater Narrative and Calculations

Stormwater Narrative
Site Plan/Subdivision Review Application
Adams Point
69 Adams Street
Biddeford, Maine 04005

August 2, 2021
Revised September 21, 2021

Stormwater flows for this project are required meet the requirements of the City of Biddeford Ordinance, and the post development flow rates must not exceed pre-development flow rates for the 25-year storm. Since this project is connected to an existing combined system, the 2-year and 10-year storms must not exceed pre-development flow rates.

Stormwater erosion and sedimentation controls are required to meet the State of Maine Chapter 500 Stormwater Management Rules (permit by rule with basic standards). The permit by rule application process is a notification to the department and a two-week waiting period at which time the department will contact the owner to request more information. The DEP permit by rule application was submitted on August 11, 2021 and there was no response from the DEP which indicates the permit was accepted by the department.

Stormwater quantity controls are achieved by use of underground storage tanks with controlled outlets.

The site is located at 69 Adams Street in Biddeford, Maine. The development work associated with this project will take place on property currently owned by Southern Maine Affordable Housing and is adjacent to another property (Parish Place) that is also under the same ownership. The property totals approximately 1.44 acres in size and was previously developed with a large rooming house, driveway, parking area and the foundation of a carriage house. The rooming house was lost in a fire in 1995. Most of the site is now wooded, and the pavement and carriage house foundation remain. This project is in the Saco River Watershed and drainage is conveyed via a subsurface stormwater/combined sewer system. This development includes of the following:

Existing Developed Area:	0.22 AC
Proposed Total Developed Area:	<u>1.02 AC</u>
<i>Net increase in Developed Area:</i>	<i>0.80 AC</i>

Existing Impervious Area:	0.22 AC
Proposed Impervious Area:	<u>0.76AC</u>
<i>Net Increase in Impervious Area:</i>	<i>0.56AC</i>

The site is situated within an urban area and generally bounded on the north and south by residential development. The site itself is mostly wooded. The site is generally sloping to the north and east at slopes ranging from 2 to 33 percent.

Topography on this site is generally steeply sloping from a high point at the north-northwest portion of the site which generally flows to the east and southeast towards Adams and Washington Streets.

The drainage areas affected by this project are indicated on drawing WS101 ("Watershed Plans"), included in the plan set. As indicated on this drawing, there are five different discharge points within the project area:

DP1 consists of runoff primarily from project area that drains into an existing catch basin on the south side of Adams Street. The existing driveway and paved area as well as a portion of the roof from Parish Place drain into this analysis point. This catch basin has a 12-inch outlet and is connected to the combined 12-inch sewer line in the center of Adams Street.

DP2 consists of runoff from a small portion of the proposed site and a larger area from the adjacent parking and roof areas associated with existing multi-family developments to the north of Adams Street. The run-off from this sub catchment follows the curb line to a catch basin on the north side of Adams Street.

DP3 consists of runoff from a wooded and sloped portion at the southwest area of the site and off-site roofs and parking at Parish Place and the rear of developed properties on Alfred and Washington Streets. Stormwater from this area flows into the curb line of Washington Street and into an existing catch basin.

DP4 consists of runoff from a wooded and sloped portion at the southeast area of the site and off-site roofs and parking of adjacent housing developments at the rear of Adams and Washington Streets. Stormwater from this area flows into the curb line of Washington Street and into an existing catch basin.

DP5 consists of runoff from the paved area at St James School to the north and the paved area at Parish Place on the east side of Birch Street. Stormwater from this area flows into an existing catch basin at parish place that discharges into a 10-inch pipe connected to the combined sewer on Birch Street.

In accordance with the Maine Stormwater Management Rules (Chapter 500), the project requires compliance with the Basic Standards. This will be achieved using Maine Erosion and Sedimentation Control Best Management Practices. The methods that will be used are shown in detail on the included drawings. They include the following:

- Sediment barriers placed on the down gradient of exposed soils
- Inlet protection on downstream structures
- Mulch or temporary seeding for temporary stabilization
- Erosion control blankets, netting, or riprap in erosion-prone areas (e.g. steep slopes and vegetated ditches)
- Excavation dewatering (silt bags or sediment ponds) for excavations below the groundwater elevation

Pre- and post-development runoff from the site has been modeled using the HydroCAD Stormwater Modeling System. The HydroCAD program is based largely on hydrology techniques developed by the Soil Conservation Service, primarily TR-55. In the HydroCAD Stormwater Model, it was assumed that all land cover types were in "good" condition as defined in U.S. Department of Agriculture Soil Conservation Services (SCS) publications.

A summary of pre and post runoff conditions are as follows:

Curve Numbers:

<u>Pre-Development Areas</u>					<u>Post-Development Areas</u>				
	Total	Imp	Woods	Land		Total	Imp	Woods	Land
1	31923	9348	21811	764	10	32145	16482	10017	5646
2	17060	5366	10277	1417	11	7244	655	0	6589
					20	9031	9031	0	0
					21	11110	6606	42	2386
					22	6408	3615	1758	1035
3	59081	31821	10196	17064	30	57888	31627	5016	21245
4	41667	20716	11331	9620	40	30666	15998	2290	11678
5	50046	31877	10115	8054	50	45225	31877	4600	8748
6	44117	36602	0	7515	60	44117	35651	0	8466

Time to Concentration:

Flow Path Data - Pre

Subcatchment 1					
		start	end		
item	length	elev	elev	slope	surface
sheet	100	139.4	135.17	0.042	woods
scf	115	135.17	127.37	0.068	woods
scf	134	127.37	122.5	0.036	pavement

Subcatchment 2					
		start	end		
item	length	elev	elev	slope	surface
sheet	74	134.2	129	0.070	woods
scf	39	129	113	0.410	woods
scf	100	113	107.5	0.055	pavement

Flow Path Data - Post

Subcatchment 10					
		start	end		
item	length	elev	elev	slope	surface
sheet	36	139.25	128	0.313	turf
scf	62	128	126.87	0.018	pavement

Subcatchment 11					
		start	end		
item	length	elev	elev	slope	surface
sheet	100	139.1	136.6	0.025	turf

Subcatchment 20					
		start	end		
item	length	elev	elev	slope	surface
sheet	32	-	-	0.010	Roof

Subcatchment 21					
		start	end		
item	length	elev	elev	slope	surface
sheet	62	126.5	124.7	0.0278	turf
scf	7	119	118.86	0.020	pavement

Subcatchment 22					
		start	end		
item	length	elev	elev	slope	surface
sheet	61	130.5	112	0.303	turf
scf	97	112	108.1	0.040	pavement

Subcatchment 3					
		start	end		
item	length	elev	elev	slope	surface
sheet	20	134.75	131.47	0.164	turf
sheet	30	131.47	128.52	0.098	pavement
scf	110	128.52	118.7	0.089	pavement
scf	85	118.7	111.33	0.087	pavement
scf	85	111.33	107.71	0.043	pavement

Subcatchment 30					
		start	end		
item	length	elev	elev	slope	surface
sheet	20	134.75	131.47	0.164	turf
sheet	30	131.47	128.52	0.098	pavement
scf	110	128.52	118.7	0.089	pavement
scf	85	118.7	111.33	0.087	pavement
scf	85	111.33	107.71	0.043	pavement

Subcatchment 4					
		start	end		
item	length	elev	elev	slope	surface
sheet	40	122.46	117.53	0.123	turf
sheet	10	117.53	116.7	0.083	pavement
scf	125	117.53	103.88	0.109	pavement
scf	50	103.88	102.04	0.037	pavement
scf	75	102.04	96.31	0.076	turf
scf	45	96.31	95.77	0.012	pavement

Subcatchment 40					
		start	end		
item	length	elev	elev	slope	surface
sheet	40	122.46	117.53	0.123	turf
sheet	10	117.53	116.7	0.083	pavement
scf	125	117.53	103.88	0.109	pavement
scf	50	103.88	102.04	0.037	pavement
scf	75	102.04	96.31	0.076	turf
scf	45	96.31	95.77	0.012	pavement

Subcatchment 5					
		start	end		
item	length	elev	elev	slope	surface
sheet	75	98.94	97.15	0.024	pavement
scf	180	97.15	93.11	0.022	pavement

Subcatchment 50					
		start	end		
item	length	elev	elev	slope	surface
sheet	75	98.94	97.15	0.024	pavement
scf	180	97.15	93.11	0.022	pavement

Subcatchment 6					
		start	end		
item	length	elev	elev	slope	surface
sheet	75	137.36	136.57	0.011	pavement
scf	225	136.57	131.12	0.024	pavement

Subcatchment 60					
		start	end		
item	length	elev	elev	slope	surface
sheet	75	137.36	136.57	0.011	pavement
scf	225	136.57	131.12	0.024	pavement

Runoff Rates:

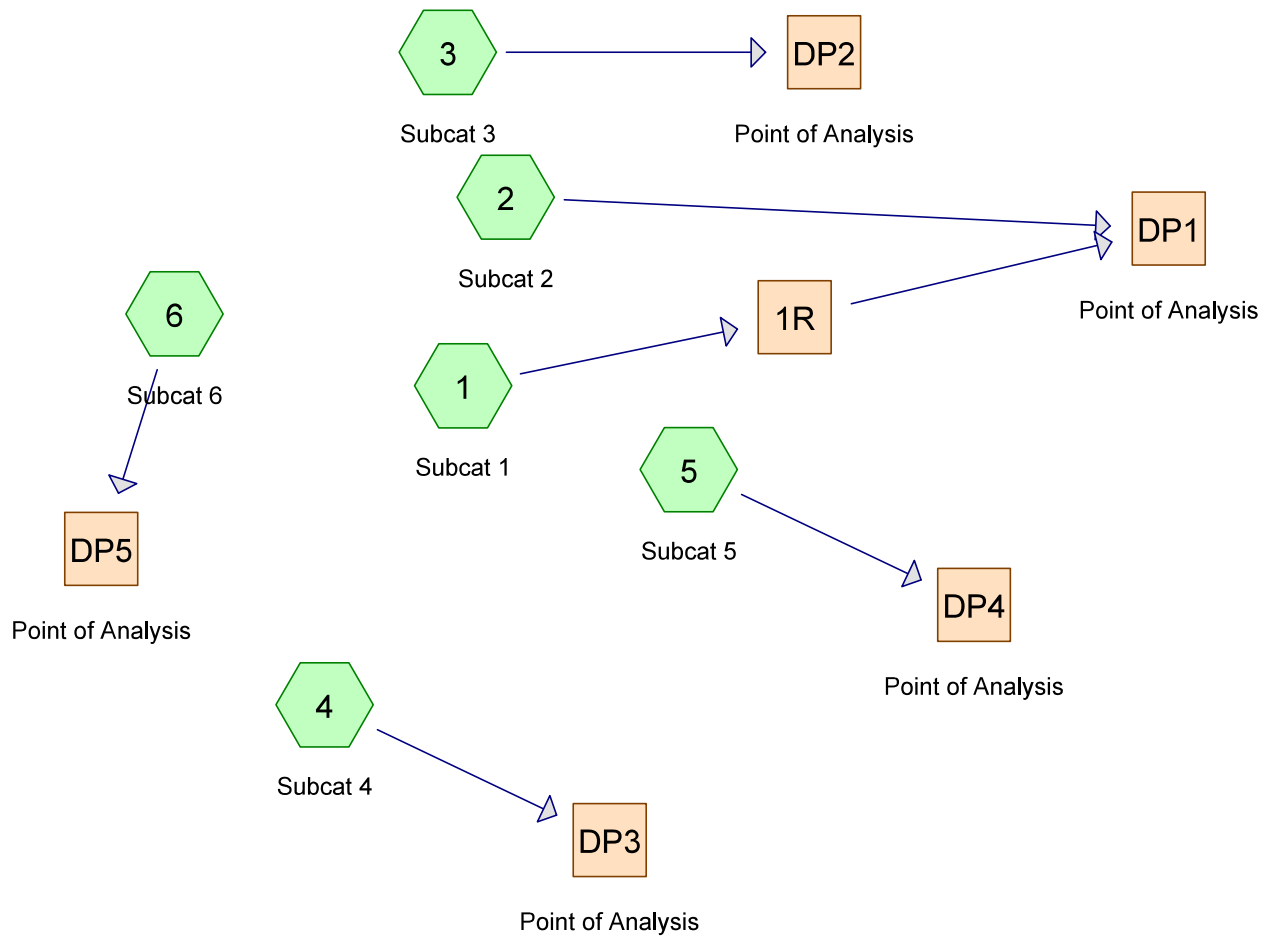
Pre- and Post-Development Peak Runoff Rates (ft³/s)

Discharge Point	2-Year Storm		10-Year Storm		25-Year Storm	
	Pre	Post	Pre	Post	Pre	Post
DP1	1.2	1.2	2.4	2.1	3.4	3.3
DP2	3.2	3.2	5.5	5.5	7.4	7.4
DP3	2.1	1.6	3.8	2.8	5.1	3.8
DP4	2.9	2.9	4.9	4.7	6.5	6.1
DP5	3.1	3.0	4.8	4.8	6.2	6.1
Sum	12.5	11.9	21.4	19.9	28.6	26.7

As indicated on the above table, post-development peak runoff rates for the sum of the discharge points are less than the pre-development rates for all storm events analyzed.

10. Stormwater Narrative and Calculations

a. Watershed Plans (Included in plan set)



Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points x 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN

Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1: Subcat 1Runoff Area=31,923 sf 29.28% Impervious Runoff Depth>1.34"
Flow Length=349' Tc=19.5 min CN=78 Runoff=0.77 cfs 3,567 cf**Subcatchment2: Subcat 2**Runoff Area=17,060 sf 31.45% Impervious Runoff Depth>1.41"
Flow Length=213' Tc=11.7 min CN=79 Runoff=0.53 cfs 2,002 cf**Subcatchment3: Subcat 3**Runoff Area=59,081 sf 53.86% Impervious Runoff Depth>1.92"
Flow Length=330' Tc=5.0 min CN=86 Runoff=3.17 cfs 9,456 cf**Subcatchment4: Subcat 4**Runoff Area=41,667 sf 49.72% Impervious Runoff Depth>1.84"
Flow Length=345' Tc=5.1 min CN=85 Runoff=2.14 cfs 6,394 cf**Subcatchment5: Subcat 5**Runoff Area=50,046 sf 63.70% Impervious Runoff Depth>2.09"
Flow Length=255' Tc=5.0 min CN=88 Runoff=2.90 cfs 8,697 cf**Subcatchment6: Subcat 6**Runoff Area=44,117 sf 82.97% Impervious Runoff Depth>2.64"
Flow Length=300' Tc=5.0 min CN=94 Runoff=3.11 cfs 9,702 cf**Reach 1R:**Inflow=0.77 cfs 3,567 cf
Outflow=0.77 cfs 3,567 cf**Reach DP1: Point of Analysis**Inflow=1.21 cfs 5,569 cf
Outflow=1.21 cfs 5,569 cf**Reach DP2: Point of Analysis**Inflow=3.17 cfs 9,456 cf
Outflow=3.17 cfs 9,456 cf**Reach DP3: Point of Analysis**Inflow=2.14 cfs 6,394 cf
Outflow=2.14 cfs 6,394 cf**Reach DP4: Point of Analysis**Inflow=2.90 cfs 8,697 cf
Outflow=2.90 cfs 8,697 cf**Reach DP5: Point of Analysis**Inflow=3.11 cfs 9,702 cf
Outflow=3.11 cfs 9,702 cf

Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points x 3
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1: Subcat 1	Runoff Area=31,923 sf 29.28% Impervious Runoff Depth>2.62" Flow Length=349' Tc=19.5 min CN=78 Runoff=1.54 cfs 6,960 cf
Subcatchment2: Subcat 2	Runoff Area=17,060 sf 31.45% Impervious Runoff Depth>2.71" Flow Length=213' Tc=11.7 min CN=79 Runoff=1.03 cfs 3,852 cf
Subcatchment3: Subcat 3	Runoff Area=59,081 sf 53.86% Impervious Runoff Depth>3.37" Flow Length=330' Tc=5.0 min CN=86 Runoff=5.49 cfs 16,597 cf
Subcatchment4: Subcat 4	Runoff Area=41,667 sf 49.72% Impervious Runoff Depth>3.27" Flow Length=345' Tc=5.1 min CN=85 Runoff=3.76 cfs 11,364 cf
Subcatchment5: Subcat 5	Runoff Area=50,046 sf 63.70% Impervious Runoff Depth>3.57" Flow Length=255' Tc=5.0 min CN=88 Runoff=4.88 cfs 14,893 cf
Subcatchment6: Subcat 6	Runoff Area=44,117 sf 82.97% Impervious Runoff Depth>4.21" Flow Length=300' Tc=5.0 min CN=94 Runoff=4.82 cfs 15,464 cf
Reach 1R:	Inflow=1.54 cfs 6,960 cf Outflow=1.54 cfs 6,960 cf
Reach DP1: Point of Analysis	Inflow=2.41 cfs 10,812 cf Outflow=2.41 cfs 10,812 cf
Reach DP2: Point of Analysis	Inflow=5.49 cfs 16,597 cf Outflow=5.49 cfs 16,597 cf
Reach DP3: Point of Analysis	Inflow=3.76 cfs 11,364 cf Outflow=3.76 cfs 11,364 cf
Reach DP4: Point of Analysis	Inflow=4.88 cfs 14,893 cf Outflow=4.88 cfs 14,893 cf
Reach DP5: Point of Analysis	Inflow=4.82 cfs 15,464 cf Outflow=4.82 cfs 15,464 cf

Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points x 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN

Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1: Subcat 1Runoff Area=31,923 sf 29.28% Impervious Runoff Depth>3.74"
Flow Length=349' Tc=19.5 min CN=78 Runoff=2.20 cfs 9,954 cf**Subcatchment2: Subcat 2**Runoff Area=17,060 sf 31.45% Impervious Runoff Depth>3.85"
Flow Length=213' Tc=11.7 min CN=79 Runoff=1.47 cfs 5,474 cf**Subcatchment3: Subcat 3**Runoff Area=59,081 sf 53.86% Impervious Runoff Depth>4.60"
Flow Length=330' Tc=5.0 min CN=86 Runoff=7.39 cfs 22,628 cf**Subcatchment4: Subcat 4**Runoff Area=41,667 sf 49.72% Impervious Runoff Depth>4.49"
Flow Length=345' Tc=5.1 min CN=85 Runoff=5.09 cfs 15,583 cf**Subcatchment5: Subcat 5**Runoff Area=50,046 sf 63.70% Impervious Runoff Depth>4.81"
Flow Length=255' Tc=5.0 min CN=88 Runoff=6.48 cfs 20,081 cf**Subcatchment6: Subcat 6**Runoff Area=44,117 sf 82.97% Impervious Runoff Depth>5.49"
Flow Length=300' Tc=5.0 min CN=94 Runoff=6.20 cfs 20,187 cf**Reach 1R:**Inflow=2.20 cfs 9,954 cf
Outflow=2.20 cfs 9,954 cf**Reach DP1: Point of Analysis**Inflow=3.44 cfs 15,428 cf
Outflow=3.44 cfs 15,428 cf**Reach DP2: Point of Analysis**Inflow=7.39 cfs 22,628 cf
Outflow=7.39 cfs 22,628 cf**Reach DP3: Point of Analysis**Inflow=5.09 cfs 15,583 cf
Outflow=5.09 cfs 15,583 cf**Reach DP4: Point of Analysis**Inflow=6.48 cfs 20,081 cf
Outflow=6.48 cfs 20,081 cf**Reach DP5: Point of Analysis**Inflow=6.20 cfs 20,187 cf
Outflow=6.20 cfs 20,187 cf

Summary for Subcatchment 1: Subcat 1

Runoff = 2.20 cfs @ 12.27 hrs, Volume= 9,954 cf, Depth> 3.74"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Rainfall=6.20"

	Area (sf)	CN	Description
*	9,348	98	Paved parking and Roofs, HSG C
*	764	74	Lawn Areas, HSG C
*	21,811	70	Woods, HSG C
	31,923	78	Weighted Average
	22,575		70.72% Pervious Area
	9,348		29.28% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.4	100	0.0420	0.10		Sheet Flow, A-B
					Woods: Light underbrush n= 0.400 P2= 2.70"
1.5	115	0.0680	1.30		Shallow Concentrated Flow, B-C
					Woodland Kv= 5.0 fps
0.6	134	0.0360	3.85		Shallow Concentrated Flow, C-D
					Paved Kv= 20.3 fps
19.5	349	Total			

Summary for Subcatchment 2: Subcat 2

Runoff = 1.47 cfs @ 12.16 hrs, Volume= 5,474 cf, Depth> 3.85"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Rainfall=6.20"

	Area (sf)	CN	Description
*	5,366	98	Paved parking and Roofs, HSG C
*	1,417	74	Lawn Areas, HSG C
*	10,277	70	Woods, HSG C
	17,060	79	Weighted Average
	11,694		68.55% Pervious Area
	5,366		31.45% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.1	74	0.0700	0.11		Sheet Flow, A-B
					Woods: Light underbrush n= 0.400 P2= 2.70"
0.2	39	0.4100	3.20		Shallow Concentrated Flow, B-C
					Woodland Kv= 5.0 fps
0.4	100	0.0550	4.76		Shallow Concentrated Flow, C-D
					Paved Kv= 20.3 fps
11.7	213	Total			

Summary for Subcatchment 3: Subcat 3

Runoff = 7.39 cfs @ 12.07 hrs, Volume= 22,628 cf, Depth> 4.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Rainfall=6.20"

	Area (sf)	CN	Description
*	31,821	98	Paved parking and Roofs, HSG C
*	17,064	74	Lawn Areas, HSG C
*	10,196	70	Woods, HSG C
	59,081	86	Weighted Average
	27,260		46.14% Pervious Area
	31,821		53.86% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	20	0.1640	0.18		Sheet Flow, A-B Grass: Dense n= 0.240 P2= 2.70"
0.3	30	0.0980	1.88		Sheet Flow, B-C Smooth surfaces n= 0.011 P2= 2.70"
0.3	110	0.0890	6.06		Shallow Concentrated Flow, C-D Paved Kv= 20.3 fps
0.2	85	0.0870	5.99		Shallow Concentrated Flow, D-E Paved Kv= 20.3 fps
0.3	85	0.0430	4.21		Shallow Concentrated Flow, E-F Paved Kv= 20.3 fps
2.9	330	Total, Increased to minimum Tc = 5.0 min			

Summary for Subcatchment 4: Subcat 4

Runoff = 5.09 cfs @ 12.07 hrs, Volume= 15,583 cf, Depth> 4.49"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Rainfall=6.20"

	Area (sf)	CN	Description
*	20,716	98	Paved parking and Roofs, HSG C
*	9,620	74	Lawn Areas, HSG C
*	11,331	70	Woods, HSG C
	41,667	85	Weighted Average
	20,951		50.28% Pervious Area
	20,716		49.72% Impervious Area

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Type III 24-hr 25-Year Rainfall=6.20"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.6	40	0.1230	0.18		Sheet Flow, A-B Grass: Dense n= 0.240 P2= 2.70"
0.1	10	0.0830	1.41		Sheet Flow, B-C Smooth surfaces n= 0.011 P2= 2.70"
0.3	125	0.1090	6.70		Shallow Concentrated Flow, C-D Paved Kv= 20.3 fps
0.2	50	0.0370	3.90		Shallow Concentrated Flow, D-E Paved Kv= 20.3 fps
0.6	75	0.0760	1.93		Shallow Concentrated Flow, E-F Short Grass Pasture Kv= 7.0 fps
0.3	45	0.0120	2.22		Shallow Concentrated Flow, F-G Paved Kv= 20.3 fps
5.1	345	Total			

Summary for Subcatchment 5: Subcat 5

Runoff = 6.48 cfs @ 12.07 hrs, Volume= 20,081 cf, Depth> 4.81"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Rainfall=6.20"

Area (sf)	CN	Description
* 31,877	98	Paved parking and Roofs, HSG C
* 8,054	74	Lawn Areas, HSG C
* 10,115	70	Woods, HSG C
50,046	88	Weighted Average
18,169		36.30% Pervious Area
31,877		63.70% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.0	75	0.0240	1.28		Sheet Flow, A-B Smooth surfaces n= 0.011 P2= 2.70"
1.0	180	0.0220	3.01		Shallow Concentrated Flow, B-C Paved Kv= 20.3 fps
2.0	255	Total, Increased to minimum Tc = 5.0 min			

Summary for Subcatchment 6: Subcat 6

Runoff = 6.20 cfs @ 12.07 hrs, Volume= 20,187 cf, Depth> 5.49"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Rainfall=6.20"

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Type III 24-hr 25-Year Rainfall=6.20"

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	Area (sf)	CN	Description
*	36,602	98	Paved parking and Roofs, HSG C
*	7,515	74	Lawn Areas, HSG C
*	0	70	Woods, HSG C
	44,117	94	Weighted Average
	7,515		17.03% Pervious Area
	36,602		82.97% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.3	75	0.0110	0.94		Sheet Flow, A-B Smooth surfaces n= 0.011 P2= 2.70"
1.2	225	0.0240	3.14		Shallow Concentrated Flow, B-C Paved Kv= 20.3 fps
2.5	300	Total, Increased to minimum Tc = 5.0 min			

Summary for Reach 1R:

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 31,923 sf, 29.28% Impervious, Inflow Depth > 3.74" for 25-Year event
 Inflow = 2.20 cfs @ 12.27 hrs, Volume= 9,954 cf
 Outflow = 2.20 cfs @ 12.27 hrs, Volume= 9,954 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 3

Summary for Reach DP1: Point of Analysis

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 48,983 sf, 30.04% Impervious, Inflow Depth > 3.78" for 25-Year event
 Inflow = 3.44 cfs @ 12.21 hrs, Volume= 15,428 cf
 Outflow = 3.44 cfs @ 12.21 hrs, Volume= 15,428 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 3

Summary for Reach DP2: Point of Analysis

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 59,081 sf, 53.86% Impervious, Inflow Depth > 4.60" for 25-Year event
 Inflow = 7.39 cfs @ 12.07 hrs, Volume= 22,628 cf
 Outflow = 7.39 cfs @ 12.07 hrs, Volume= 22,628 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 3

Summary for Reach DP3: Point of Analysis

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 41,667 sf, 49.72% Impervious, Inflow Depth > 4.49" for 25-Year event
Inflow = 5.09 cfs @ 12.07 hrs, Volume= 15,583 cf
Outflow = 5.09 cfs @ 12.07 hrs, Volume= 15,583 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 3

Summary for Reach DP4: Point of Analysis

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 50,046 sf, 63.70% Impervious, Inflow Depth > 4.81" for 25-Year event
Inflow = 6.48 cfs @ 12.07 hrs, Volume= 20,081 cf
Outflow = 6.48 cfs @ 12.07 hrs, Volume= 20,081 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 3

Summary for Reach DP5: Point of Analysis

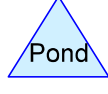
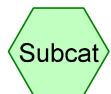
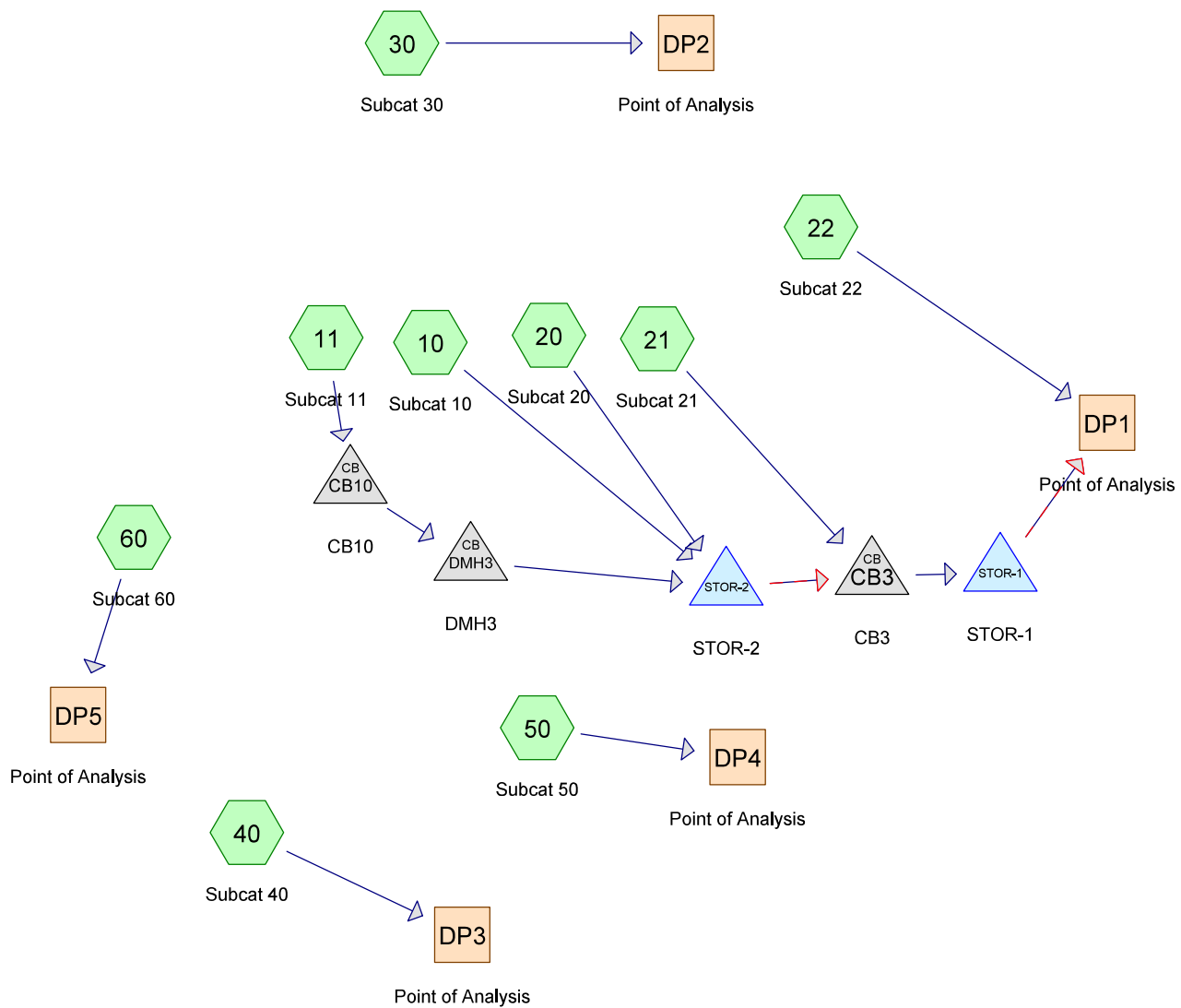
[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 44,117 sf, 82.97% Impervious, Inflow Depth > 5.49" for 25-Year event
Inflow = 6.20 cfs @ 12.07 hrs, Volume= 20,187 cf
Outflow = 6.20 cfs @ 12.07 hrs, Volume= 20,187 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 3

10.Stormwater Narrative and Calculations

b. Pre-Developed Calculations



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Type III 24-hr 2-Year Rainfall=3.30"

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Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points x 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN

Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment10: Subcat 10Runoff Area=32,145 sf 51.27% Impervious Runoff Depth>1.84"
Flow Length=98' Tc=5.0 min CN=85 Runoff=1.65 cfs 4,933 cf**Subcatchment11: Subcat 11**Runoff Area=7,244 sf 9.04% Impervious Runoff Depth>1.22"
Flow Length=100' Slope=0.0250 '/ Tc=14.2 min CN=76 Runoff=0.18 cfs 735 cf**Subcatchment20: Subcat 20**Runoff Area=9,031 sf 100.00% Impervious Runoff Depth>3.07"
Flow Length=32' Slope=0.0100 '/ Tc=5.0 min CN=98 Runoff=0.69 cfs 2,307 cf**Subcatchment21: Subcat 21**Runoff Area=11,110 sf 59.46% Impervious Runoff Depth>2.08"
Flow Length=69' Tc=9.3 min CN=88 Runoff=0.56 cfs 1,929 cf**Subcatchment22: Subcat 22**Runoff Area=6,408 sf 56.41% Impervious Runoff Depth>1.92"
Flow Length=158' Tc=5.0 min CN=86 Runoff=0.34 cfs 1,026 cf**Subcatchment30: Subcat 30**Runoff Area=57,888 sf 54.63% Impervious Runoff Depth>2.00"
Flow Length=330' Tc=5.0 min CN=87 Runoff=3.23 cfs 9,657 cf**Subcatchment40: Subcat 40**Runoff Area=30,666 sf 52.17% Impervious Runoff Depth>1.92"
Flow Length=345' Tc=5.1 min CN=86 Runoff=1.64 cfs 4,908 cf**Subcatchment50: Subcat 50**Runoff Area=45,225 sf 70.49% Impervious Runoff Depth>2.35"
Flow Length=255' Tc=5.0 min CN=91 Runoff=2.91 cfs 8,858 cf**Subcatchment60: Subcat 60**Runoff Area=44,117 sf 80.81% Impervious Runoff Depth>2.54"
Flow Length=300' Tc=5.0 min CN=93 Runoff=3.02 cfs 9,338 cf**Reach DP1: Point of Analysis**Inflow=1.20 cfs 10,848 cf
Outflow=1.20 cfs 10,848 cf**Reach DP2: Point of Analysis**Inflow=3.23 cfs 9,657 cf
Outflow=3.23 cfs 9,657 cf**Reach DP3: Point of Analysis**Inflow=1.64 cfs 4,908 cf
Outflow=1.64 cfs 4,908 cf**Reach DP4: Point of Analysis**Inflow=2.91 cfs 8,858 cf
Outflow=2.91 cfs 8,858 cf**Reach DP5: Point of Analysis**Inflow=3.02 cfs 9,338 cf
Outflow=3.02 cfs 9,338 cf**Pond CB10: CB10**Peak Elev=132.58' Inflow=0.18 cfs 735 cf
12.0" Round Culvert n=0.013 L=42.0' S=0.0079 '/ Outflow=0.18 cfs 735 cf**Pond CB3: CB3**Peak Elev=110.03' Inflow=1.23 cfs 9,840 cf
12.0" Round Culvert n=0.013 L=68.0' S=0.0021 '/ Outflow=1.23 cfs 9,840 cf

22104.04-Post*Type III 24-hr 2-Year Rainfall=3.30"*

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Pond DMH3: DMH3

Peak Elev=124.70' Inflow=0.18 cfs 735 cf
12.0" Round Culvert n=0.013 L=165.0' S=0.0101 '/' Outflow=0.18 cfs 735 cf

Pond STOR-1: STOR-1

Peak Elev=106.92' Storage=544 cf Inflow=1.23 cfs 9,840 cf
Primary=1.06 cfs 9,822 cf Secondary=0.00 cfs 0 cf Outflow=1.06 cfs 9,822 cf

Pond STOR-2: STOR-2

Peak Elev=113.89' Storage=2,009 cf Inflow=2.45 cfs 7,975 cf
Primary=0.77 cfs 7,911 cf Secondary=0.00 cfs 0 cf Outflow=0.77 cfs 7,911 cf

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Type III 24-hr 10-Year Rainfall=4.90"

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Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points x 2
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment10: Subcat 10 Runoff Area=32,145 sf 51.27% Impervious Runoff Depth>3.27"
 Flow Length=98' Tc=5.0 min CN=85 Runoff=2.91 cfs 8,767 cf

Subcatchment11: Subcat 11 Runoff Area=7,244 sf 9.04% Impervious Runoff Depth>2.45"
 Flow Length=100' Slope=0.0250 '/' Tc=14.2 min CN=76 Runoff=0.37 cfs 1,477 cf

Subcatchment20: Subcat 20 Runoff Area=9,031 sf 100.00% Impervious Runoff Depth>4.66"
 Flow Length=32' Slope=0.0100 '/' Tc=5.0 min CN=98 Runoff=1.03 cfs 3,507 cf

Subcatchment21: Subcat 21 Runoff Area=11,110 sf 59.46% Impervious Runoff Depth>3.57"
 Flow Length=69' Tc=9.3 min CN=88 Runoff=0.94 cfs 3,304 cf

Subcatchment22: Subcat 22 Runoff Area=6,408 sf 56.41% Impervious Runoff Depth>3.37"
 Flow Length=158' Tc=5.0 min CN=86 Runoff=0.60 cfs 1,800 cf

Subcatchment30: Subcat 30 Runoff Area=57,888 sf 54.63% Impervious Runoff Depth>3.47"
 Flow Length=330' Tc=5.0 min CN=87 Runoff=5.51 cfs 16,741 cf

Subcatchment40: Subcat 40 Runoff Area=30,666 sf 52.17% Impervious Runoff Depth>3.37"
 Flow Length=345' Tc=5.1 min CN=86 Runoff=2.84 cfs 8,614 cf

Subcatchment50: Subcat 50 Runoff Area=45,225 sf 70.49% Impervious Runoff Depth>3.88"
 Flow Length=255' Tc=5.0 min CN=91 Runoff=4.70 cfs 14,631 cf

Subcatchment60: Subcat 60 Runoff Area=44,117 sf 80.81% Impervious Runoff Depth>4.10"
 Flow Length=300' Tc=5.0 min CN=93 Runoff=4.75 cfs 15,061 cf

Reach DP1: Point of Analysis Inflow=2.11 cfs 18,751 cf
 Outflow=2.11 cfs 18,751 cf

Reach DP2: Point of Analysis Inflow=5.51 cfs 16,741 cf
 Outflow=5.51 cfs 16,741 cf

Reach DP3: Point of Analysis Inflow=2.84 cfs 8,614 cf
 Outflow=2.84 cfs 8,614 cf

Reach DP4: Point of Analysis Inflow=4.70 cfs 14,631 cf
 Outflow=4.70 cfs 14,631 cf

Reach DP5: Point of Analysis Inflow=4.75 cfs 15,061 cf
 Outflow=4.75 cfs 15,061 cf

Pond CB10: CB10 Peak Elev=132.68' Inflow=0.37 cfs 1,477 cf
 12.0" Round Culvert n=0.013 L=42.0' S=0.0079 '/' Outflow=0.37 cfs 1,477 cf

Pond CB3: CB3 Peak Elev=110.32' Inflow=1.99 cfs 16,974 cf
 12.0" Round Culvert n=0.013 L=68.0' S=0.0021 '/' Outflow=1.99 cfs 16,974 cf

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Pond DMH3: DMH3

Peak Elev=124.80' Inflow=0.37 cfs 1,477 cf
12.0" Round Culvert n=0.013 L=165.0' S=0.0101 ' ' Outflow=0.37 cfs 1,477 cf

Pond STOR-1: STOR-1

Peak Elev=109.18' Storage=869 cf Inflow=1.99 cfs 16,974 cf
Primary=1.70 cfs 16,823 cf Secondary=0.19 cfs 128 cf Outflow=1.89 cfs 16,951 cf

Pond STOR-2: STOR-2

Peak Elev=116.76' Storage=3,663 cf Inflow=4.17 cfs 13,751 cf
Primary=1.43 cfs 13,670 cf Secondary=0.00 cfs 0 cf Outflow=1.43 cfs 13,670 cf

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Type III 24-hr 25-Year Rainfall=6.20"

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Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points x 2
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment10: Subcat 10 Runoff Area=32,145 sf 51.27% Impervious Runoff Depth>4.49"
 Flow Length=98' Tc=5.0 min CN=85 Runoff=3.94 cfs 12,022 cf

Subcatchment11: Subcat 11 Runoff Area=7,244 sf 9.04% Impervious Runoff Depth>3.54"
 Flow Length=100' Slope=0.0250 '/' Tc=14.2 min CN=76 Runoff=0.54 cfs 2,139 cf

Subcatchment20: Subcat 20 Runoff Area=9,031 sf 100.00% Impervious Runoff Depth>5.96"
 Flow Length=32' Slope=0.0100 '/' Tc=5.0 min CN=98 Runoff=1.31 cfs 4,484 cf

Subcatchment21: Subcat 21 Runoff Area=11,110 sf 59.46% Impervious Runoff Depth>4.81"
 Flow Length=69' Tc=9.3 min CN=88 Runoff=1.24 cfs 4,455 cf

Subcatchment22: Subcat 22 Runoff Area=6,408 sf 56.41% Impervious Runoff Depth>4.60"
 Flow Length=158' Tc=5.0 min CN=86 Runoff=0.80 cfs 2,454 cf

Subcatchment30: Subcat 30 Runoff Area=57,888 sf 54.63% Impervious Runoff Depth>4.71"
 Flow Length=330' Tc=5.0 min CN=87 Runoff=7.37 cfs 22,698 cf

Subcatchment40: Subcat 40 Runoff Area=30,666 sf 52.17% Impervious Runoff Depth>4.60"
 Flow Length=345' Tc=5.1 min CN=86 Runoff=3.82 cfs 11,745 cf

Subcatchment50: Subcat 50 Runoff Area=45,225 sf 70.49% Impervious Runoff Depth>5.15"
 Flow Length=255' Tc=5.0 min CN=91 Runoff=6.13 cfs 19,407 cf

Subcatchment60: Subcat 60 Runoff Area=44,117 sf 80.81% Impervious Runoff Depth>5.38"
 Flow Length=300' Tc=5.0 min CN=93 Runoff=6.13 cfs 19,765 cf

Reach DP1: Point of Analysis Inflow=3.31 cfs 25,433 cf
 Outflow=3.31 cfs 25,433 cf

Reach DP2: Point of Analysis Inflow=7.37 cfs 22,698 cf
 Outflow=7.37 cfs 22,698 cf

Reach DP3: Point of Analysis Inflow=3.82 cfs 11,745 cf
 Outflow=3.82 cfs 11,745 cf

Reach DP4: Point of Analysis Inflow=6.13 cfs 19,407 cf
 Outflow=6.13 cfs 19,407 cf

Reach DP5: Point of Analysis Inflow=6.13 cfs 19,765 cf
 Outflow=6.13 cfs 19,765 cf

Pond CB10: CB10 Peak Elev=132.76' Inflow=0.54 cfs 2,139 cf
 12.0" Round Culvert n=0.013 L=42.0' S=0.0079 '/' Outflow=0.54 cfs 2,139 cf

Pond CB3: CB3 Peak Elev=110.87' Inflow=2.89 cfs 23,005 cf
 12.0" Round Culvert n=0.013 L=68.0' S=0.0021 '/' Outflow=2.89 cfs 23,005 cf

22104.04-Post*Type III 24-hr 25-Year Rainfall=6.20"*

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Pond DMH3: DMH3

Peak Elev=124.87' Inflow=0.54 cfs 2,139 cf
12.0" Round Culvert n=0.013 L=165.0' S=0.0101 ' ' Outflow=0.54 cfs 2,139 cf

Pond STOR-1: STOR-1

Peak Elev=109.61' Storage=931 cf Inflow=2.89 cfs 23,005 cf
Primary=1.79 cfs 21,551 cf Secondary=1.07 cfs 1,428 cf Outflow=2.86 cfs 22,979 cf

Pond STOR-2: STOR-2

Peak Elev=119.00' Storage=4,954 cf Inflow=5.59 cfs 18,645 cf
Primary=1.95 cfs 18,551 cf Secondary=0.00 cfs 0 cf Outflow=1.95 cfs 18,551 cf

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Summary for Subcatchment 10: Subcat 10

Runoff = 3.94 cfs @ 12.07 hrs, Volume= 12,022 cf, Depth> 4.49"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Rainfall=6.20"

	Area (sf)	CN	Description
*	16,482	98	Paved parking and Roofs, HSG C
*	5,646	74	Lawn Areas, HSG C
*	10,017	70	Woods, HSG C
	32,145	85	Weighted Average
	15,663		48.73% Pervious Area
	16,482		51.27% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.3	36	0.3130	0.26		Sheet Flow, A-B
					Grass: Dense n= 0.240 P2= 2.70"
0.4	62	0.0180	2.72		Shallow Concentrated Flow, B-C
					Paved Kv= 20.3 fps
2.7	98	Total, Increased to minimum Tc = 5.0 min			

Summary for Subcatchment 11: Subcat 11

Runoff = 0.54 cfs @ 12.20 hrs, Volume= 2,139 cf, Depth> 3.54"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Rainfall=6.20"

	Area (sf)	CN	Description
*	655	98	Paved parking and Roofs, HSG C
*	6,589	74	Lawn Areas, HSG C
*	0	70	Woods, HSG C
	7,244	76	Weighted Average
	6,589		90.96% Pervious Area
	655		9.04% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.2	100	0.0250	0.12		Sheet Flow, A-B
					Grass: Dense n= 0.240 P2= 2.70"

Summary for Subcatchment 20: Subcat 20

Runoff = 1.31 cfs @ 12.07 hrs, Volume= 4,484 cf, Depth> 5.96"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Rainfall=6.20"

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	Area (sf)	CN	Description
*	9,031	98	Paved parking and Roofs, HSG C
*	0	74	Lawn Areas, HSG C
*	0	70	Woods, HSG C
	9,031	98	Weighted Average
	9,031		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.7	32	0.0100	0.76		Sheet Flow, A-B
					Smooth surfaces n= 0.011 P2= 2.70"
0.7	32	Total, Increased to minimum Tc = 5.0 min			

Summary for Subcatchment 21: Subcat 21

Runoff = 1.24 cfs @ 12.13 hrs, Volume= 4,455 cf, Depth> 4.81"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Rainfall=6.20"

	Area (sf)	CN	Description
*	6,606	98	Paved parking and Roofs, HSG C
*	4,462	74	Lawn Areas, HSG C
*	42	70	Woods, HSG C
	11,110	88	Weighted Average
	4,504		40.54% Pervious Area
	6,606		59.46% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.3	62	0.0278	0.11		Sheet Flow, A-B
					Grass: Dense n= 0.240 P2= 2.70"
0.0	7	0.0200	2.87		Shallow Concentrated Flow, BC
					Paved Kv= 20.3 fps
9.3	69	Total			

Summary for Subcatchment 22: Subcat 22

Runoff = 0.80 cfs @ 12.07 hrs, Volume= 2,454 cf, Depth> 4.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Rainfall=6.20"

	Area (sf)	CN	Description
*	3,615	98	Paved parking and Roofs, HSG C
*	1,035	74	Lawn Areas, HSG C
*	1,758	70	Woods, HSG C
	6,408	86	Weighted Average
	2,793		43.59% Pervious Area
	3,615		56.41% Impervious Area

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.5	61	0.3030	0.29		Sheet Flow, A-B Grass: Dense n= 0.240 P2= 2.70"
0.4	97	0.0400	4.06		Shallow Concentrated Flow, B-C Paved Kv= 20.3 fps
3.9	158	Total, Increased to minimum Tc = 5.0 min			

Summary for Subcatchment 30: Subcat 30

Runoff = 7.37 cfs @ 12.07 hrs, Volume= 22,698 cf, Depth> 4.71"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Rainfall=6.20"

Area (sf)	CN	Description
* 31,627	98	Paved parking and Roofs, HSG C
* 21,245	74	Lawn Areas, HSG C
* 5,016	70	Woods, HSG C
57,888	87	Weighted Average
26,261		45.37% Pervious Area
31,627		54.63% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	20	0.1640	0.18		Sheet Flow, A-B Grass: Dense n= 0.240 P2= 2.70"
0.3	30	0.0980	1.88		Sheet Flow, B-C Smooth surfaces n= 0.011 P2= 2.70"
0.3	110	0.0890	6.06		Shallow Concentrated Flow, C-D Paved Kv= 20.3 fps
0.2	85	0.0870	5.99		Shallow Concentrated Flow, D-E Paved Kv= 20.3 fps
0.3	85	0.0430	4.21		Shallow Concentrated Flow, E-F Paved Kv= 20.3 fps
2.9	330	Total, Increased to minimum Tc = 5.0 min			

Summary for Subcatchment 40: Subcat 40

Runoff = 3.82 cfs @ 12.07 hrs, Volume= 11,745 cf, Depth> 4.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
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	Area (sf)	CN	Description
*	15,998	98	Paved parking and Roofs, HSG C
*	11,678	74	Lawn Areas, HSG C
*	2,990	70	Woods, HSG C
	30,666	86	Weighted Average
	14,668		47.83% Pervious Area
	15,998		52.17% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.6	40	0.1230	0.18		Sheet Flow, A-B Grass: Dense n= 0.240 P2= 2.70"
0.1	10	0.0830	1.41		Sheet Flow, B-C Smooth surfaces n= 0.011 P2= 2.70"
0.3	125	0.1090	6.70		Shallow Concentrated Flow, C-D Paved Kv= 20.3 fps
0.2	50	0.0370	3.90		Shallow Concentrated Flow, D-E Paved Kv= 20.3 fps
0.6	75	0.0760	1.93		Shallow Concentrated Flow, E-F Short Grass Pasture Kv= 7.0 fps
0.3	45	0.0120	2.22		Shallow Concentrated Flow, F-G Paved Kv= 20.3 fps
5.1	345	Total			

Summary for Subcatchment 50: Subcat 50

Runoff = 6.13 cfs @ 12.07 hrs, Volume= 19,407 cf, Depth> 5.15"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Rainfall=6.20"

	Area (sf)	CN	Description
*	31,877	98	Paved parking and Roofs, HSG C
*	8,748	74	Lawn Areas, HSG C
*	4,600	70	Woods, HSG C
	45,225	91	Weighted Average
	13,348		29.51% Pervious Area
	31,877		70.49% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.0	75	0.0240	1.28		Sheet Flow, A-B Smooth surfaces n= 0.011 P2= 2.70"
1.0	180	0.0220	3.01		Shallow Concentrated Flow, B-C Paved Kv= 20.3 fps
2.0	255	Total, Increased to minimum Tc = 5.0 min			

Summary for Subcatchment 60: Subcat 60

Runoff = 6.13 cfs @ 12.07 hrs, Volume= 19,765 cf, Depth> 5.38"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Rainfall=6.20"

	Area (sf)	CN	Description
*	35,651	98	Paved parking and Roofs, HSG C
*	8,466	74	Lawn Areas, HSG C
*	0	70	Woods, HSG C
	44,117	93	Weighted Average
	8,466		19.19% Pervious Area
	35,651		80.81% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.3	75	0.0110	0.94		Sheet Flow, A-B
					Smooth surfaces n= 0.011 P2= 2.70"
1.2	225	0.0240	3.14		Shallow Concentrated Flow, B-C
					Paved Kv= 20.3 fps
2.5	300	Total, Increased to minimum Tc = 5.0 min			

Summary for Reach DP1: Point of Analysis

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 65,938 sf, 55.19% Impervious, Inflow Depth > 4.63" for 25-Year event
Inflow = 3.31 cfs @ 12.17 hrs, Volume= 25,433 cf
Outflow = 3.31 cfs @ 12.17 hrs, Volume= 25,433 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 2

Summary for Reach DP2: Point of Analysis

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 57,888 sf, 54.63% Impervious, Inflow Depth > 4.71" for 25-Year event
Inflow = 7.37 cfs @ 12.07 hrs, Volume= 22,698 cf
Outflow = 7.37 cfs @ 12.07 hrs, Volume= 22,698 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 2

Summary for Reach DP3: Point of Analysis

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 30,666 sf, 52.17% Impervious, Inflow Depth > 4.60" for 25-Year event
Inflow = 3.82 cfs @ 12.07 hrs, Volume= 11,745 cf
Outflow = 3.82 cfs @ 12.07 hrs, Volume= 11,745 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 2

Summary for Reach DP4: Point of Analysis

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 45,225 sf, 70.49% Impervious, Inflow Depth > 5.15" for 25-Year event
 Inflow = 6.13 cfs @ 12.07 hrs, Volume= 19,407 cf
 Outflow = 6.13 cfs @ 12.07 hrs, Volume= 19,407 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 2

Summary for Reach DP5: Point of Analysis

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 44,117 sf, 80.81% Impervious, Inflow Depth > 5.38" for 25-Year event
 Inflow = 6.13 cfs @ 12.07 hrs, Volume= 19,765 cf
 Outflow = 6.13 cfs @ 12.07 hrs, Volume= 19,765 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 2

Summary for Pond CB10: CB10

Inflow Area = 7,244 sf, 9.04% Impervious, Inflow Depth > 3.54" for 25-Year event
 Inflow = 0.54 cfs @ 12.20 hrs, Volume= 2,139 cf
 Outflow = 0.54 cfs @ 12.20 hrs, Volume= 2,139 cf, Atten= 0%, Lag= 0.0 min
 Primary = 0.54 cfs @ 12.20 hrs, Volume= 2,139 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 2

Peak Elev= 132.76' @ 12.20 hrs

Flood Elev= 137.12'

Device	Routing	Invert	Outlet Devices
#1	Primary	132.36'	12.0" Round Culvert L= 42.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 132.36' / 132.03' S= 0.0079 ' / ' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.54 cfs @ 12.20 hrs HW=132.76' TW=124.87' (Dynamic Tailwater)

↑ **1=Culvert** (Barrel Controls 0.54 cfs @ 2.73 fps)

Summary for Pond CB3: CB3

Inflow Area = 59,530 sf, 55.05% Impervious, Inflow Depth > 4.64" for 25-Year event
 Inflow = 2.89 cfs @ 12.16 hrs, Volume= 23,005 cf
 Outflow = 2.89 cfs @ 12.16 hrs, Volume= 23,005 cf, Atten= 0%, Lag= 0.0 min
 Primary = 2.89 cfs @ 12.16 hrs, Volume= 23,005 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 2

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Peak Elev= 110.87' @ 12.16 hrs

Flood Elev= 112.96'

Device	Routing	Invert	Outlet Devices
#1	Primary	109.24'	12.0" Round Culvert L= 68.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 109.24' / 109.10' S= 0.0021 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=2.89 cfs @ 12.16 hrs HW=110.86' TW=109.57' (Dynamic Tailwater)↑**1=Culvert** (Barrel Controls 2.89 cfs @ 3.68 fps)**Summary for Pond DMH3: DMH3**

Inflow Area = 7,244 sf, 9.04% Impervious, Inflow Depth > 3.54" for 25-Year event
Inflow = 0.54 cfs @ 12.20 hrs, Volume= 2,139 cf
Outflow = 0.54 cfs @ 12.20 hrs, Volume= 2,139 cf, Atten= 0%, Lag= 0.0 min
Primary = 0.54 cfs @ 12.20 hrs, Volume= 2,139 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 2

Peak Elev= 124.87' @ 12.20 hrs

Flood Elev= 137.38'

Device	Routing	Invert	Outlet Devices
#1	Primary	124.50'	12.0" Round Culvert L= 165.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 124.50' / 122.84' S= 0.0101 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.54 cfs @ 12.20 hrs HW=124.87' TW=118.30' (Dynamic Tailwater)↑**1=Culvert** (Inlet Controls 0.54 cfs @ 2.06 fps)**Summary for Pond STOR-1: STOR-1**

Inflow Area = 59,530 sf, 55.05% Impervious, Inflow Depth > 4.64" for 25-Year event
Inflow = 2.89 cfs @ 12.16 hrs, Volume= 23,005 cf
Outflow = 2.86 cfs @ 12.18 hrs, Volume= 22,979 cf, Atten= 1%, Lag= 1.6 min
Primary = 1.79 cfs @ 12.18 hrs, Volume= 21,551 cf
Secondary = 1.07 cfs @ 12.18 hrs, Volume= 1,428 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 2

Peak Elev= 109.61' @ 12.18 hrs Surf.Area= 144 sf Storage= 931 cf

Flood Elev= 112.28' Surf.Area= 144 sf Storage= 1,076 cf

Plug-Flow detention time= 7.2 min calculated for 22,969 cf (100% of inflow)

Center-of-Mass det. time= 6.5 min (821.2 - 814.7)

Volume	Invert	Avail.Storage	Storage Description
#1	103.14'	1,076 cf	9.00'W x 16.00'L x 7.47'H Prismaoid

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Device	Routing	Invert	Outlet Devices
#1	Primary	103.14'	4.0" Vert. Orifice/Grate C= 0.600
#2	Primary	106.36'	4.0" Vert. Orifice/Grate C= 0.600
#3	Secondary	108.90'	12.0" Round Culvert L= 6.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 108.90' / 108.87' S= 0.0050 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=1.79 cfs @ 12.18 hrs HW=109.60' TW=0.00' (Dynamic Tailwater)

└─1=Orifice/Grate (Orifice Controls 1.05 cfs @ 12.08 fps)

└─2=Orifice/Grate (Orifice Controls 0.74 cfs @ 8.45 fps)

Secondary OutFlow Max=1.06 cfs @ 12.18 hrs HW=109.60' TW=0.00' (Dynamic Tailwater)

└─3=Culvert (Barrel Controls 1.06 cfs @ 2.53 fps)

Summary for Pond STOR-2: STOR-2

Inflow Area = 48,420 sf, 54.04% Impervious, Inflow Depth > 4.62" for 25-Year event
 Inflow = 5.59 cfs @ 12.07 hrs, Volume= 18,645 cf
 Outflow = 1.95 cfs @ 12.39 hrs, Volume= 18,551 cf, Atten= 65%, Lag= 18.7 min
 Primary = 1.95 cfs @ 12.39 hrs, Volume= 18,551 cf
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 2

Peak Elev= 119.00' @ 12.38 hrs Surf.Area= 576 sf Storage= 4,954 cf

Flood Elev= 121.10' Surf.Area= 576 sf Storage= 6,048 cf

Plug-Flow detention time= 34.9 min calculated for 18,543 cf (99% of inflow)

Center-of-Mass det. time= 31.7 min (820.0 - 788.3)

Volume	Invert	Avail.Storage	Storage Description
#1	110.40'	6,048 cf	9.00'W x 16.00'L x 10.50'H Prismatic x 4

Device	Routing	Invert	Outlet Devices
#1	Primary	110.40'	4.0" Vert. Orifice/Grate C= 0.600
#2	Primary	115.74'	4.0" Vert. Orifice/Grate C= 0.600
#3	Secondary	119.36'	12.0" Round Culvert L= 6.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 119.36' / 119.33' S= 0.0050 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=1.95 cfs @ 12.39 hrs HW=119.00' TW=110.66' (Dynamic Tailwater)

└─1=Orifice/Grate (Orifice Controls 1.21 cfs @ 13.90 fps)

└─2=Orifice/Grate (Orifice Controls 0.74 cfs @ 8.47 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=110.40' TW=109.24' (Dynamic Tailwater)

└─3=Culvert (Controls 0.00 cfs)

11.Stormwater Maintenance Plan

Stormwater Maintenance / Inspection Plan

This Maintenance Plan has been prepared for this specific site. Regular maintenance of the on-site stormwater facilities is required to ensure they are functioning as intended and to prevent re-suspension and transport of sediment to existing downstream watercourses.

Maintenance of the stormwater management system components will be the responsibility of the Southern Maine Affordable Housing. The person responsible for implementing the maintenance plan and coordinating maintenance procedures with contracted entities is as follows:

Guy Gagnon, Facilities Director
Southern Maine Affordable Housing
22 South Street
Biddeford, ME 04005
Phone: 207-415-2939
Email: ggagnonbha@maine.rr.com

Records of all stormwater facilities inspections and maintenance work accomplished must be kept on file and retained for a minimum period of five years. A sample maintenance log is attached.

During construction of the proposed treatment areas, inspection and maintenance of erosion and sedimentation control practices and stormwater treatment practices will be the responsibility of the contractor. Refer to the attached drawings for inspection and maintenance requirements during construction.

Facilities that will require regular maintenance after the project has been accepted by the owner are listed below along with a description of the required maintenance. The specified maintenance tasks and schedule is intended to identify the minimum requirements. Additional maintenance may be required based on site specific conditions.

Sweeping

Paved surfaces shall be swept or vacuumed at least annually in the spring to remove all winter sand, and periodically during the year on an as-needed basis to minimize transportation of sediment during rainfall events.

Roadways and Parking Surfaces			
	Spring	Fall or Yearly	After a Major Storm
Clear accumulated winter sand in parking lots and along walkways.	X		
Sweep pavement to remove sediment.	X		
Ensure that stormwater is not impeded by accumulations of material.	X		

Catch Basins

Catch basins shall be inspected annually for debris and the accumulation of sediments. Large debris and debris blocking inlet grates shall be removed immediately. Sediment accumulations shall be removed when sediment reaches two thirds of the total volume of the sump. Vacuuming sediments from catch basins must be done by a vacuum truck. The removed material must be disposed of in accordance with Maine's Solid Waste Disposal Rules. Sump skimmers installed in basins located in paved areas to absorb hydrocarbons shall be inspected and replaced when saturated.

<u>Catch Basin</u>				
	<u>Spring</u>	<u>Fall or Yearly</u>	<u>After a Major Storm</u>	<u>As Needed</u>
Inspect sump skimmer (catch basins in paved areas). Replace when saturated		<u>X</u>		
Inspect for accumulation of sediments		<u>X</u>		
Remove and legally dispose of accumulated sediments and debris from the bottom of the basin, inlet grates, inflow channels to the basin, and pipes between basins.				<u>X</u>
Remove floating debris and floating oils (using oil absorptive pads).	<u>X</u>	<u>X</u>		<u>X</u>
Inspect sumps annually and clean with vacuum pump when sediment occupies more than two thirds of the sump capacity. Clean drain lines when sediment occupies more than 20% of pipe diameter.	<u>X</u>	<u>X</u>		<u>X</u>

Storage Tanks

Storage Tanks shall be inspected annually for debris and the accumulation of sediments. Large debris and debris blocking inlet or outlets shall be removed immediately. Sediment accumulations shall be removed when sediment reaches the inverts of the pipes. Vacuuming sediments from Storage Tanks must be done by a vacuum truck. The removed material must be disposed of in accordance with Maine's Solid Waste Disposal Rules.

Storage Tanks				
	<u>Spring</u>	<u>Fall or Yearly</u>	<u>After a Major Storm</u>	<u>As Needed</u>
Inspect for accumulation of sediments		<u>X</u>		
Remove and legally dispose of accumulated sediments and debris from the bottom of the storage tanks, inlet and outlet pipes, and pipes between structures.				<u>X</u>
Remove floating debris and floating oils (using oil absorptive pads).	<u>X</u>	<u>X</u>		<u>X</u>
Inspect tanks annually and clean with vacuum pump when sediment reaches the invert of the pipes.	<u>X</u>	<u>X</u>		<u>X</u>

Vegetated Areas

Areas of maintained lawn are to be inspected regularly for signs of erosion and channelization. Areas where erosion is occurring, or areas of sparse growth shall be replanted and stabilized.

Vegetated Areas			
	Spring	Fall or Yearly	After a Major Storm
Inspect all slopes and embankments.	X		
Replant bare areas or areas with sparse growth.	X		
A armor areas with rill erosions with an appropriate lining or divert the erosive flows to on-site areas able to withstand concentrated flows.	X		

*A major storm event is classified as a rainfall total of 1.0 inches or more in a 24-hour period (a 2-year storm event).

Stormwater Maintenance/Erosion & Sediment Control
Maintenance Log

This sample Maintenance Log is intended to accompany the Stormwater Management Facilities Maintenance Plan. The contractor shall maintain this log (or a similar log) from the start of construction through acceptance of the facilities by the owner. Following acceptance of the facilities, the owner shall be responsible for maintenance and updating the maintenance log.

The following items shall be checked, cleaned, and maintained on a regular basis as specified in the Maintenance Plan and/or as described in the table below.

Item	Maintenance Required & Frequency	Date Completed	Maintenance Personnel	Comments
Roadways and Parking Surfaces	Clear accumulated winter sand in parking lots and along walkways.			
	Sweep pavement to remove sediment.			
	Ensure that stormwater is not impeded by accumulations of material.			
Catch Basins & Drain Lines	Inspect sump skimmers in catch basins in paved areas (annually in spring). Replace when saturated.			
	Inspect sumps (annually in spring). Clean with vacuum pump when sediment occupies more than two thirds of the sump capacity.			
	Inspect drain lines (annually in spring). Clean when sediment occupies more than 20% of pipe diameter.			
	Inspect drain line inlets/outlets (annually in spring). Remove accumulated sediments when needed.			
Storage Tanks	Inspect Bottom and pipe inverts (annually in spring). Clean with vacuum pump when sediment reaches pipe inverts.			
	Inspect drain lines (annually in spring). Clean when sediment occupies more than 20% of pipe diameter.			

Sample (continued...)

Item	Maintenance Required & Frequency	Date Completed	Maintenance Personnel	Comments
Vegetated Areas	Inspect all slopes and embankments (annually in spring).			
	Replant bare areas or areas with sparse growth (annually in spring).			
	Aarmor areas with rill erosions with an appropriate lining or divert the erosive flows to on-site areas able to withstand concentrated flows (annually in spring).			

*A major storm event is classified as a rainfall total of 3.0 inches or more in a 24-hour period (a 2-year storm event).

12.Light Fixture Catalog Cuts



ML660 MILLENIA SERIES

LED

EPA
1.3 (ft²)
WEIGHT
35 LBS

7 YEAR
WARRANTY

LUMEN
RANGE
2,065 to
7,820

LIFE SPAN
L70
MINIMUM
100,000
HOURS

UL
LISTED

CLICK
FOR FAQ's

JOB NAME _____

FIXTURE TYPE _____

MEMO _____

BUILD A PART NUMBER

ORDERING EXAMPLE: **PT-ML660-12L40T3-MDLO18-SV1-FHD-BLOC/4SQ12-.125/UGMT**

Mounting Config.	Fixture	LED	CCT	Distribution Type	Driver	Lens	Option Fuse	Option House Side Shield	Arm See Arm Spec Sheets	Pole See Pole Spec Sheets	Finish

Mounting Configuration

(Click here to link to mounting configuration specification page)

- IW
- PT
- 1A
- 1APT
- 2A
- 2A90
- 2APT
- 3A
- 3A90
- 3APT
- 4A
- 4APT
- 1AM
- 2AM

W = Wall Mount A = Arm Mount AM = Arm Mid-Mount

Fixture

- ML660

LED

- 24L
- 16L
- 12L

CCT - Color Temperature (K)

- 27(00)
- 30(00)
- 35(00)
- 40(00)
- 50(00)

Distribution Type

- T2
- T3
- T4
- T5

Driver

- MDLO18¹ (120V-277V, 180mA)
- MDHO18¹ (347V-480V, 180mA)
- MDLO14² (120V-277V, 140mA)
- MDHO14² (347V-480V, 140mA)
- MDLO08³ (120V-277V, 80mA)
- MDHO08³ (347V-480V, 80mA)

¹ 16L or 12L system only.

² 24L or 12L system only.

³ 12L system only.

Lens

- CA (Clear Acrylic)
- SV1 (Flat Soft Vue Light Diffused Acrylic)
- SV2 (Flat Soft Vue Moderate Diffused Acrylic)

Options (Click here to view accessories sheet)

- FHD⁴ Double Fuse and Holder
- HSS External 120° House Side Shield
- BLOC Back Light Optical Control

⁴ Ships loose for installation in base

Arm (Click here to view arm website page)

See Arms & Wall Brackets specification sheets.

- 480

Pole (Click here to link to pole specification page)

See Pole specification sheets.

Finish

Standard Urban Finishes (Click here to view paint finish sheet)

- UGMT Gun Metal Textured
- UGM Gun Metal Matte
- UBT Urban Bronze Textured
- UB Urban Bronze Matte
- ULBT Urban Light Bronze Textured
- ULB Urban Light Bronze Matte
- USLT Urban Silver Textured
- USL Urban Silver Matte
- UWHT Urban White Textured
- UWH Urban White Matte
- UCHS Urban Champagne Satin Smooth
- BKT Black Textured

Custom Urban Finishes⁵

- CM Custom Match

⁵ Smooth finishes are available upon request.

Specifications

Fixture

The medium scale ML660 Millenia® post top luminaire is a breakthrough in modern area lighting technology. Its new world urban design transcends traditional lighting convention by seamlessly interweaving form and function to yet another level. Our convective AAD™ "Advanced Air-flow Dynamics" maximizes heat sink expulsion to deliver unsurpassed thermal management for long-life LED performance and energy efficiency. Available with a myriad of options, the Millenia is perfect for commercial, institutional and municipal markets. The cast aluminum slipfitter slips a 3" OD x 3" tall tenon. The Luminaire shall be UL listed in US and Canada.

LEDs

The luminaire shall use high output, high brightness LED's. They shall be mounted in arrays, on printed circuit boards designed to maximize heat transfer to the heat sink surface. The arrays shall be roof mounted to minimize up-light. The LED's and printed circuit boards shall be 100% recyclable; they

shall also be protected from moisture and corrosion by a conformal coating. They shall not contain lead, mercury or any other hazardous substances and shall be RoHS compliant. The LED life rating data shall be determined in accordance with IESNA LM-80. The High Performance white LED's will have a life expectancy of approximately 100,000 hours with not less than 70% of original brightness (lumen maintenance), rated at 25°C. The High Brightness, High Output LED's shall be 5000K (4500K, 3000K, 3500K or 2700K option) color temperature with a minimum CRI of 70. Consult factory for custom color CCT. The luminaire shall have a minimum _____ (see table) delivered initial lumen rating when operated at steady state with an average ambient temperature of 25°C (77°F).

Optics

The luminaire shall be provided with refractor type optics applied to each LED array. The luminaire shall provide Type ____ (2, 3, 4 or 5) light distribution per the IESNA classifications. Testing shall be done in accordance with IESNA LM-79.

BLOC Optic: An optional "Back Light Optical Control" shield can be provided at the factory. This is an internal optic level "House Side Shield" offering significantly reduced backlight and glare while maintaining the original design aesthetics of the luminaire.

Electronic Drivers

The LED driver shall be U.L. Recognized. It shall be securely mounted inside the fixture, for optimized performance and longevity. It shall be supplied with a quick-disconnect electrical connector on the power supply, providing easy power connections and fixture installation. It shall have overload, overheat and short circuit protection, and have a DC voltage output, constant current design, 50/60HZ. It shall be supplied with line-ground, line-neutral and neutral-ground electrical surge protection in accordance with IEEE/ANSI C62.41.2 guidelines. It shall be a high efficiency driver with a THD less than 20% and a high power factor greater than .9. It shall be dimming capable

See next page



SternbergLighting

ESTABLISHED 1923

800-621-3376
555 Lawrence Ave., Roselle, IL 60172
contactus@sternberglighting.com
www.sternberglighting.com

using a 0-10V signal, consult factory for more information.

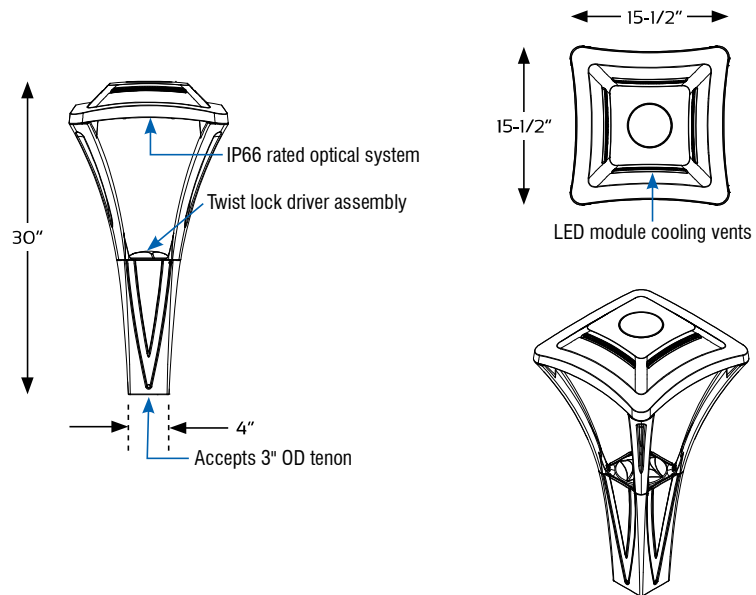
Warranty

Seven-year limited warranty. See product and finish warranty guide for details.

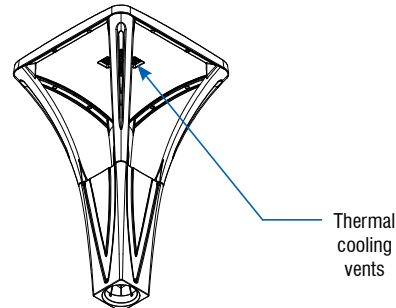
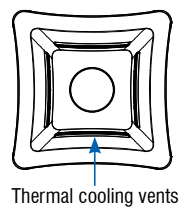
Finish

Refer to website for details.

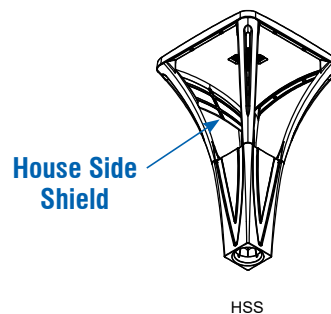
Fixtures



Features



Options



SternbergLighting
ESTABLISHED 1923

800-621-3376
555 Lawrence Ave., Roselle, IL 60172
contactus@sternberglighting.com
www.sternberglighting.com

Performance (Based on CA Lens)

MODEL #	T2 LUMENS	BUG	EFFICACY (LPW)	T3 LUMENS	BUG	EFFICACY (LPW)	T4 LUMENS	BUG	EFFICACY (LPW)	T5 LUMENS	BUG	EFFICACY (LPW)	WATTS
24L40T_-MDL014	8400	B2U0G2	95.5	8410	B2U0G2	95.6	7925	B2U0G2	90.1	8510	B3U0G1	96.7	88
24L30T_-MDL014	8010	B2U0G2	91.0	8020	B2U0G2	91.1	7555	B2U0G2	85.9	8115	B3U0G1	92.2	88
24L27T_-MDL014	7240	B2U0G2	82.3	7250	B1U0G1	82.4	6830	B1U0G1	77.6	7335	B2U0G1	83.4	88
16L40T_-MDL018	6930	B2U0G1	87.7	6880	B1U0G1	87.1	6460	B1U0G1	81.8	6960	B2U0G1	88.1	79
16L30T_-MDL018	6605	B2U0G1	83.6	6560	B1U0G1	83.0	6160	B1U0G1	78.0	6635	B2U0G1	84.0	79
16L27T_-MDL018	5975	B1U0G1	75.6	5930	B1U0G1	75.1	5570	B1U0G1	70.5	6000	B2U0G1	75.9	79
12L40T_-MDL018	5155	B1U0G1	85.9	5140	B1U0G1	85.7	4900	B1U0G1	81.7	5170	B2U0G2	86.2	60
12L30T_-MDL018	4915	B1U0G1	81.9	4900	B1U0G1	81.7	4670	B1U0G1	77.8	4930	B2U0G2	82.2	60
12L27T_-MDL018	4445	B1U0G1	74.1	4430	B1U0G1	73.8	4225	B1U0G1	70.4	4455	B2U0G2	74.3	60
12L40T_-MDL014	4235	B1U0G1	92.1	4270	B1U0G1	92.8	4035	B1U0G1	87.7	4250	B2U0G2	92.4	46
12L30T_-MDL014	4040	B1U0G1	87.8	4070	B1U0G1	88.5	3845	B1U0G1	83.6	4050	B2U0G2	88.0	46
12L27T_-MDL014	3650	B1U0G1	79.3	3680	B1U0G1	80.0	3480	B1U0G1	75.7	3665	B2U0G1	79.7	46
12L40T_-MDL008	2585	B1U0G1	95.7	2635	B1U0G1	97.6	2475	B1U0G1	91.7	2600	B1U0G1	96.3	27
12L30T_-MDL008	2465	B1U0G1	91.3	2510	B1U0G1	93.0	2360	B1U0G1	87.4	2480	B1U0G1	91.9	27
12L27T_-MDL008	2230	B1U0G1	82.6	2270	B1U0G1	84.1	2135	B1U0G1	79.1	2240	B1U0G1	83.0	27





ML630 MILLENIA SERIES

LED

EPA
.83 (ft²)
WEIGHT
27 LBS

7 YEAR
WARRANTY

LUMEN
RANGE
2,605 to
9,965

LIFE SPAN
L70
MINIMUM
100,000
HOURS

UL
LISTED

CLICK
FOR FAQ's

JOB NAME

FIXTURE TYPE

MEMO

BUILD A PART NUMBER

ORDERING EXAMPLE: **1A-ML630-12L40T3-MDL018-SV1-FHD-BLOC/5SQ-16-188/UGMT**

Mounting Config.	Fixture	LED	CCT	Type	Driver	Lens	Option Round Pole Adapter	Option Motion Sensor	Option Fuse	Option House Side Shield	Pole See Pole Spec Sheets	Finish

Mounting Configuration

(Click here to link to mounting configuration specification page)

- 1W • 2A90 • 4A
- 1A • 3A • 1AM
- 2A • 3A90 • 2AM

W = Wall Mount A = Arm Mount AM = Arm Mid-Mount

Fixture

- ML630

LED

- 24L • 16L • 12L

CCT - Color Temperature (K)

- 27(00) • 30(00) • 35(00)
- 40(00) • 50(00)

Distribution Type

- T2 • T3 • T4 • T5

Driver

- MDL018¹ (120V-277V, 180mA)
- MDH018¹ (347V-480V, 180mA)
- MDL014² (120V-277V, 140mA)
- MDH014² (347V-480V, 140mA)
- MDL008³ (120V-277V, 80mA)
- MDH008³ (347V-480V, 80mA)

¹ 16L or 12L system only.

² 24L or 12L system only.

³ 12L system only.

Lens

- CA (Clear Acrylic)
- SV1 (Flat Soft Vue Light Diffused Acrylic)
- SV2 (Flat Soft Vue Moderate Diffused Acrylic)

Options (Click here to view accessories sheet)

- RP34⁴ For 3" to 4" diameter poles
- RP56⁴ For 5" to 6" diameter poles
- MOT1 360° lens, maximum coverage 40' diameter from 20' height
- MOT2 360° lens, maximum coverage 70' diameter from 20' height
- FHD⁵ Double Fuse and Holder
- HSS External 120° House Side Shield
- BLOC Back Light Optical Control

⁴ Required for round poles

⁵ Ships loose for installation in base

Pole (Click here to link to pole specification page)

See Pole specification sheets.

Finish

Standard Urban Finishes (Click here to view paint finish sheet)

- UGMT Gun Metal Textured
- UGM Gun Metal Matte
- UBT Urban Bronze Textured
- UB Urban Bronze Matte
- ULBT Urban Light Bronze Textured
- ULB Urban Light Bronze Matte
- USLT Urban Silver Textured
- USL Urban Silver Matte
- UWHT Urban White Textured
- UWH Urban White Matte
- UCHS Urban Champagne Satin Smooth
- BKT Black Textured

Custom Urban Finishes⁶

- CM Custom Match

⁶ Smooth finishes are available upon request.

Specifications

Fixture

The medium scale ML630 Millenia[®] arm mount luminaire is a breakthrough in modern area lighting technology. Its new world urban design transcends traditional lighting convention by seamlessly interweaving form and function to yet another level. Our convective AAD[™] "Advanced Air-flow Dynamics" maximizes heat sink expulsion to deliver unsurpassed thermal management for long-life LED performance and energy efficiency. Available with a myriad of options, the Millenia is perfect for commercial, institutional and municipal markets. The Luminaire shall be UL listed in US and Canada.

LEDs

The luminaire shall use high output, high brightness LED's. They shall be mounted in arrays, on printed circuit boards designed to maximize heat transfer to the heat sink surface. The arrays shall be roof mounted to minimize up-light. The LED's and printed circuit boards shall be 100% recyclable; they shall also be protected from moisture and corrosion by a conformal coating. They shall not contain lead, mercury or any other hazardous substances and shall be RoHS compliant. The LED life rating data shall be determined in accordance with IESNA LM-80. The High Performance white LED's will have a life expectancy of approximately 100,000 hours with not less than 70% of original brightness (lumen maintenance), rated at 25°C. The High Brightness, High Output LED's shall be 5000K (4500K, 3000K, 3500K or 2700K option) color temperature with a minimum CRI of 70. Consult factory for custom color CCT. The luminaire shall have a minimum _____ (see table) delivered initial lumen rating when operated at steady state with an average ambient temperature of 25°C (77°F).

rosion by a conformal coating. They shall not contain lead, mercury or any other hazardous substances and shall be RoHS compliant. The LED life rating data shall be determined in accordance with IESNA LM-80. The High Performance white LED's will have a life expectancy of approximately 100,000 hours with not less than 70% of original brightness (lumen maintenance), rated at 25°C. The High Brightness, High Output LED's shall be 5000K (4500K, 3000K, 3500K or 2700K option) color temperature with a minimum CRI of 70. Consult factory for custom color CCT. The luminaire shall have a minimum _____ (see table) delivered initial lumen rating when operated at steady state with an average ambient temperature of 25°C (77°F).

Optics

The luminaire shall be provided with refractor type optics applied to each LED array. The luminaire shall provide Type ____ (2, 3, 4 or 5) light distribution per the IESNA classifications. Testing shall be done in accordance with IESNA LM-79.

BLOC Optic: An optional "Back Light Optical Control" shield can be provided at the factory. This is an internal optic level "House Side Shield" offering significantly reduced backlight and glare while maintaining the original design aesthetics of the luminaire.

Electronic Drivers

The LED driver shall be U.L. Recognized. It shall be securely mounted inside the fixture, for optimized performance and longevity. It shall be supplied with a quick-disconnect electrical connector on the power supply, providing easy power connections and fixture installation. It shall have overload, overheat and short circuit protection, and have a DC voltage output, constant current design, 50/60HZ. It shall be supplied with line-ground, line-neutral and neutral-ground electrical surge protection in accordance with IEEE/ANSI C62.41.2 guidelines. It shall be a high efficiency driver with a THD less than 20% and a high power factor greater than .9. It shall be dimming capable using a 0-10v signal, consult factory for more information. *See next page*



SternbergLighting

ESTABLISHED 1923

800-621-3376
555 Lawrence Ave., Roselle, IL 60172
contactus@sternberglighting.com
www.sternberglighting.com

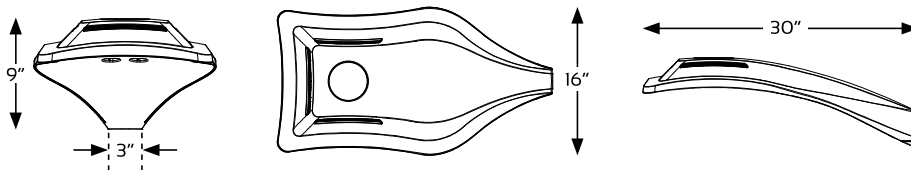
Warranty

Seven-year limited warranty. See product and finish warranty guide for details.

Finish

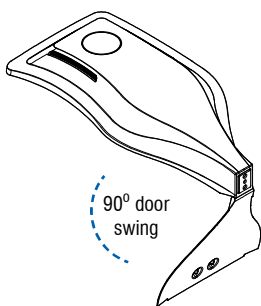
Refer to website for details.

Fixtures

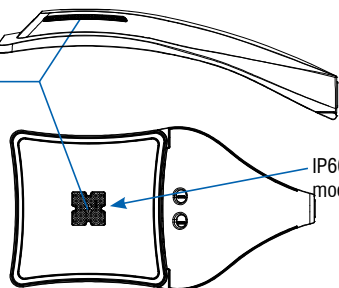


Features

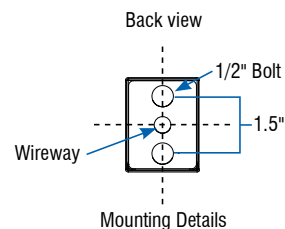
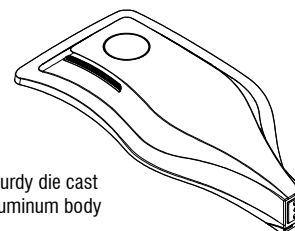
Tool-less latch mechanism to access electrical components and driver



Thermal cooling vents

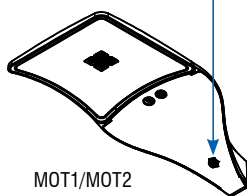


Sturdy die cast aluminum body

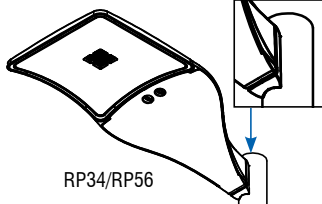


Options

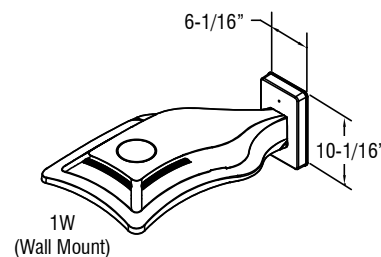
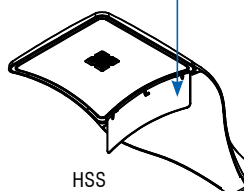
Motion Sensor



Round Pole Adapter



House Side Shield



SternbergLighting

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555 Lawrence Ave., Roselle, IL 60172
contactus@sternberglighting.com
www.sternberglighting.com

Performance (Based on CA Lens)

MODEL #	T2 LUMENS	BUG	EFFICACY (LPW)	T3 LUMENS	BUG	EFFICACY (LPW)	T4 LUMENS	BUG	EFFICACY (LPW)	T5 LUMENS	BUG	EFFICACY (LPW)	WATTS
24L40T_-MDL014	9935	B2U0G2	111.6	9965	B2U0G2	112.0	9420	B2U0G2	105.8	9820	B3U0G1	110.3	89
24L30T_-MDL014	9475	B2U0G2	106.5	9500	B2U0G2	106.7	8980	B2U0G2	100.9	9365	B3U0G1	105.2	89
24L27T_-MDL014	8565	B2U0G2	96.2	8590	B1U0G1	96.5	8120	B1U0G1	91.2	8465	B2U0G1	95.1	89
16L40T_-MDL018	8460	B2U0G2	105.8	8525	B1U0G1	106.6	8130	B1U0G1	101.6	8395	B2U0G1	104.9	80
16L30T_-MDL018	8065	B2U0G2	100.8	8130	B1U0G1	101.6	7750	B1U0G1	96.9	8005	B2U0G1	100.1	80
16L27T_-MDL018	7295	B2U0G2	91.2	7350	B1U0G1	91.9	7010	B1U0G1	87.6	7235	B2U0G1	90.4	80
12L40T_-MDL018	6265	B1U0G1	102.7	6330	B1U0G1	103.8	6025	B1U0G1	98.8	6230	B2U0G2	102.1	61
12L30T_-MDL018	5975	B1U0G1	98.0	6035	B1U0G1	98.9	5745	B1U0G1	94.2	5940	B2U0G2	97.4	61
12L27T_-MDL018	5400	B1U0G1	88.5	5455	B1U0G1	89.4	5195	B1U0G1	85.2	5370	B2U0G2	88.0	61
12L40T_-MDL014	5140	B1U0G1	109.4	5195	B1U0G1	110.5	4980	B1U0G1	106.0	5110	B2U0G2	108.7	47
12L30T_-MDL014	4900	B1U0G1	104.3	4955	B1U0G1	105.4	4750	B1U0G1	101.1	4870	B2U0G2	103.6	47
12L27T_-MDL014	4430	B1U0G1	94.3	4480	B1U0G1	95.3	4295	B1U0G1	91.4	4405	B2U0G1	93.7	47
12L40T_-MDL008	3135	B1U0G1	116.1	3165	B1U0G1	117.2	3020	B1U0G1	111.9	3125	B1U0G1	115.7	27
12L30T_-MDL008	2990	B1U0G1	110.7	3020	B1U0G1	111.9	2880	B1U0G1	106.7	2980	B1U0G1	110.4	27
12L27T_-MDL008	2705	B1U0G1	100.2	2730	B1U0G1	101.1	2605	B1U0G1	96.5	2695	B1U0G1	99.8	27



ADAMS POINT HOUSING

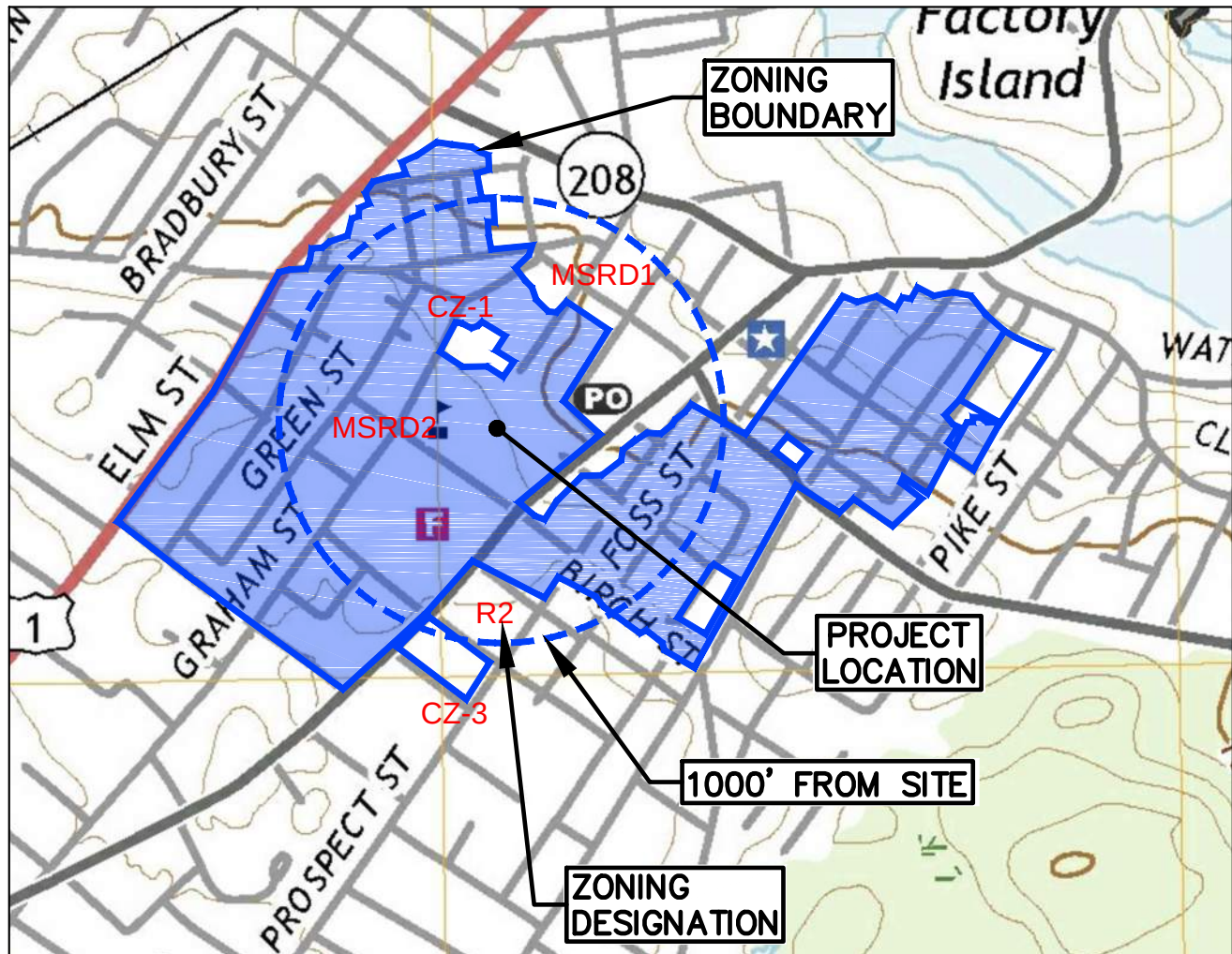
69 ADAMS STREET, BIDDEFORD, MAINE, 04005

LEGEND

	EXISTING EDGE OF ASPHALT CONCRETE PAVEMENT
	SAWCUT (SHEET CD101 ONLY)
	REMOVALS (SHEET CD101 ONLY)
	EDGE OF ASPHALT CONCRETE PAVEMENT
	EXISTING BUILDING LINE
	BUILDING LINE
	EXISTING STORM DRAIN LINE (PIPE SIZE IF KNOWN)
	STORM DRAIN LINE (PIPE SIZE INDICATED)
	EXISTING SANITARY SEWER LINE (PIPE SIZE IF KNOWN)
	SANITARY SEWER LINE (PIPE SIZE INDICATED)
	EXISTING WATER LINE (PIPE SIZE AND IF KNOWN)
	DOMESTIC WATER LINE (PIPE SIZE INDICATED)
	EXISTING OVERHEAD ELECTRIC AND COMMUNICATION LINE
	UNDERGROUND ELECTRIC CONDUIT (SIZE INDICATED).
	UNDERGROUND ELECTRIC CONDUIT (SIZE INDICATED).
	UNDERGROUND COMMUNICATIONS CONDUIT (SIZE INDICATED).
	EXISTING UNDERGROUND NATURAL GAS (PIPE SIZE IF KNOWN).
	UNDERGROUND NATURAL GAS LINE (SIZE INDICATED).
	SILT FENCE
	EXISTING ELEVATION CONTOURS (DECIMAL FEET)
	FINISH ELEVATION CONTOURS (DECIMAL FEET)
	UTILITY POINT OF CONNECTION
	EXISTING PIPE FLOW DIRECTION
	PIPE FLOW DIRECTION
	EXISTING SURFACE FLOW
	EXISTING PAD MOUNTED TRANSFORMER.
	EXISTING LIGHT POLE WITH CONCRETE FOUNDATION
	EXISTING WATER SHUT-OFF VALVE
	WATER SHUT-OFF VALVE
	FOUNDATION DRAIN CLEANOUT
	EXISTING TREELINE
	REMOVAL TREELINE
	TREELINE
	EXISTING SPOT GRADE
	FINISH SPOT GRADE
	EXISTING AND FINISH SPOT GRADES (NO CHANGE IN GRADES)
	FINISH SPOT GRADE
	EXISTING SPOT GRADE
	EXISTING SOIL TEST PIT
	DETAIL NUMBER SHEET WHERE DETAIL IS DRAWN SHEETS WHERE DETAIL IS TAKEN
	DETAIL NUMBER SHEET WHERE DETAIL IS DRAWN
	DEMOLITION KEYNOTE
	NEW WORK KEYNOTE

ABBREVIATIONS

@	AT
&	AND
#,NO	NUMBER
°	DEGREES
±	PLUS/MINUS
ACT	ACOUSTICAL CEILING TILE
ASTM	AMERICAN SOCIETY OF TESTING AND MATERIALS
BD	BOARD
CL	CENTERLINE
CONC	CONCRETE
DIA Ø	DIAMETER
EPDM	ETHYLENE PROPYLENE DIENE TERPOLYMER
ELEV,EL	ELEVATION
EMERG	EMERGENCY
EQ	EQUAL
EXIST,E	EXISTING
F	FINISH
FDN	FOUNDATION
FEC	FIRE EXTINGUISHER CABINET
FFE	FINISH FLOOR ELEVATION
FRT	FIRE RETARDANT TREATED
FT	FOOT, FEET
HDPE	HIGH DENSITY POLYETHYLENE
IN	INCH(ES)
INSUL	INSULATION
INV	INVERT
MAX	MAXIMUM
MIN	MINIMUM
mm	MILLIMETER(S)
MTL	METAL
N	NORTH
OC	ON CENTER
OSHA	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
PLYWD	PLYWOOD
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PVC	POLYVINYL CHLORIDE
PT	PRESSURE TREATED
REINF	REINFORCED
SF	SQUARE FEET
SIM	SIMILAR
SQ	SQUARE
SS	STAINLESS STEEL
STL	STEEL
STRUCT	STRUCTURAL
SYS	SYSTEM
TBM	TEMPORARY BENCH MARK
TOS	TOP OF STEEL
TYP	TYPICAL
VIF	VERIFY IN FIELD
W/	WITH
WD	WOOD



VICINITY MAP

SCALE: 1"=800'



NOTES

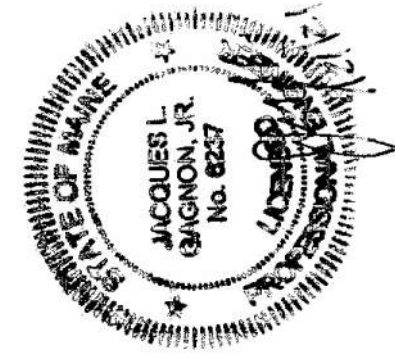
- THESE ARE GENERAL PROJECT NOTES THAT APPLY TO THE ENTIRE PROJECT INCLUDING EACH DISCIPLINE.
- ALL COMPONENTS ARE NEW AND SHALL BE PROVIDED BY THE CONTRACTOR UNLESS NOTED OTHERWISE.
- VERIFY EXISTING CONDITIONS AND DIMENSIONS PRIOR TO COMMENCING WORK. REPORT ANY DISCREPANCIES TO THE ARCHITECT. PROCEED WITH THE WORK AFTER DISCREPANCIES HAVE BEEN RESOLVED.
- CONFORM TO STATE, NATIONAL AND OTHER CODES AND ORDINANCES WHICH ARE APPLICABLE TO THIS PROJECT, KNOWN PERMITS THAT HAVE BEEN OBTAINED BY THE OWNER INCLUDE:
 - CITY OF BIDDEFORD SITE PLAN REVIEW.
 - STATE OF MAINE STORMWATER PERMIT BY RULE.
- WORK FROM GIVEN DIMENSIONS AND LARGE SCALE DETAILS ONLY. DO NOT SCALE DRAWINGS.
- DO NOT PENETRATE NEW BEAMS, GIRDERS, WAFFLE SLABS OR OTHER STRUCTURAL MEMBERS UNLESS SHOWN OTHERWISE ON THE STRUCTURAL DRAWINGS.
- DURING THE ENTIRE CONTRACT PERIOD, MAINTAIN THE CONSTRUCTION SITE IN A SECURE, WEATHER TIGHT, NEAT, CLEAN AND SAFE CONDITION.
- DISPOSE OF AND/OR RECYCLE CONSTRUCTION DEBRIS FROM THE PROJECT AS REQUIRED BY THE CONTRACT AND STATE OF MAINE. OBTAIN DISPOSAL PERMITS WHICH ARE REQUIRED. DISPOSE OF CONSTRUCTION DEBRIS FROM THE PROJECT IN A STATE APPROVED LANDFILL.
- COMPLETE WORK IN COMPLIANCE WITH INDUSTRY STANDARDS AND PERFORM WORK IN A WORKMANLIKE PROFESSIONAL MANNER.
- UNLESS NOTED OTHERWISE, DIMENSIONS ARE TO FACE OF FRAMING.
- ELEVATIONS ARE BASED UPON NAVD 88.
- RESTORE SURFACES, SITE FEATURES AND LANDSCAPING THAT ARE DAMAGED BY CONSTRUCTION TO THEIR ORIGINAL CONDITION, AS ACCEPTABLE TO THE OWNER.
- DO NOT DIRECT VEHICLE OR EQUIPMENT EXHAUST TOWARDS THE BUILDINGS.
- HAND EXCAVATE WITHIN 5' OF EXISTING UNDERGROUND UTILITIES AND EXISTING FOUNDATION WALLS.
- CONTACT "DIGSAFE" AT 1-888-344-7233 AND OBTAIN A "DIGSAFE" PERMIT PRIOR TO COMMENCING EXCAVATION OPERATIONS. ADDITIONALLY CONTACT "OKTODIG" AT 1-866-658-6344 FOR NON-DIG SAFE MEMBERS WITHIN THE CITY OF BIDDEFORD.



LIST OF DRAWINGS

SHEET NUMBER	DISCIPLINE SHEET	TITLE
1 OF 23	G-001	LIST OF DRAWINGS, MAPS, NOTES, LEGEND AND ABBREVIATIONS
2 OF 23	V-101	BOUNDARY, EXISTING CONDITIONS, AND TOPOGRAPHIC SURVEY
3 OF 23	CD101	REMOVALS SITE PLAN
4 OF 23	CS101	SUBDIVISION AND SITE PLAN
5 OF 23	CL101	LAYOUT PLAN
6 OF 23	CU101	UTILITY PLAN
7 OF 23	CG101	GRADING PLAN
8 OF 23	CG102	ENLARGED GRADING PLAN
9 OF 23	C-301	ROAD PROFILE
10 OF 23	C-302	UTILITY PROFILES
11 OF 23	C-501	EROSION CONTROL NOTES AND DETAIL
12 OF 23	C-502	EROSION CONTROL DETAILS
13 OF 23	C-503	SITE DETAILS - 1
14 OF 23	C-504	SITE DETAILS - 2
15 OF 23	C-505	SITE DETAILS - 3
16 OF 23	C-506	SITE DETAILS - 4
17 OF 23	L1.0	LANDSCAPE PLAN
18 OF 23	L2.0	LANDSCAPE DETAILS
19 OF 23	A100	GROUND FLOOR PLAN
20 OF 23	A101	FIRST FLOOR - 4th FLOOR PLAN
21 OF 23	A200	EXTERIOR ELEVATIONS
22 OF 23	E100	EXTERIOR LIGHTING PLAN
23 OF 23	WS101	WATERSHED PLANS

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DESIGNED BY: JLG
DRAWN BY: DEW
CHECKED BY: JLG
PROJECT: 22104.04

OWNER:
SOUTHERN MAINE
AFFORDABLE HOUSING
22 South Street
Biddeford, Maine, 04005

PROJECT TITLE AND LOCATION:
ADAMS POINT HOUSING
69 Adams Street
Biddeford, Maine, 04005

LIST OF
DRAWINGS,
MAPS, NOTES,
LEGEND AND
ABBREVIATIONS

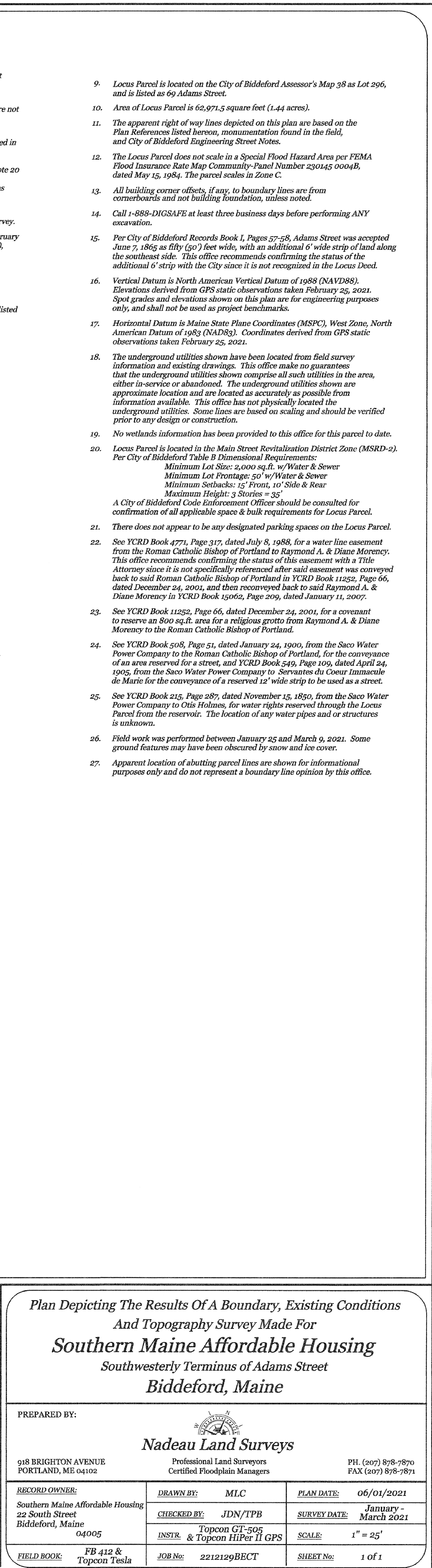
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DATE: 08-02-2021

DWG.: G-001

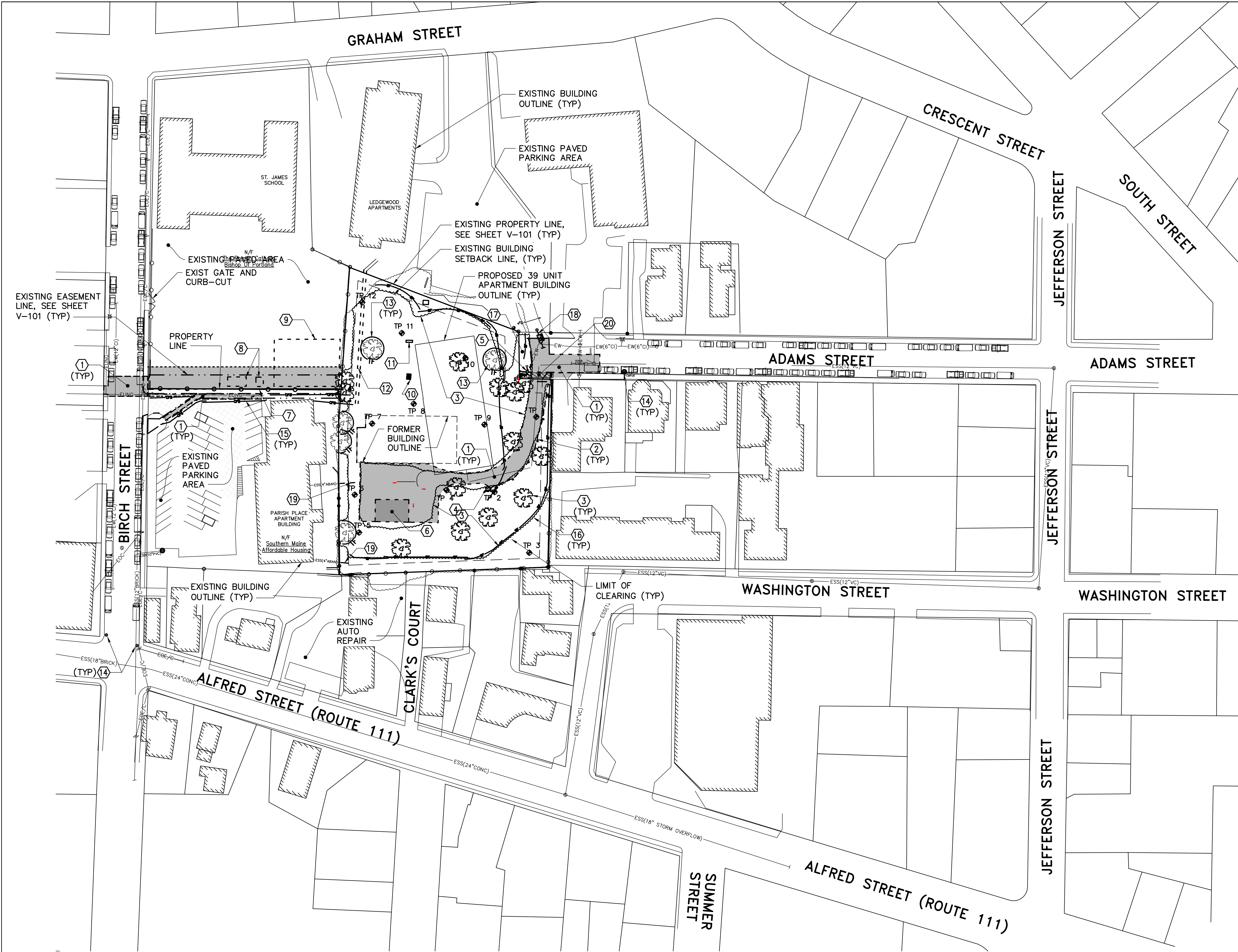
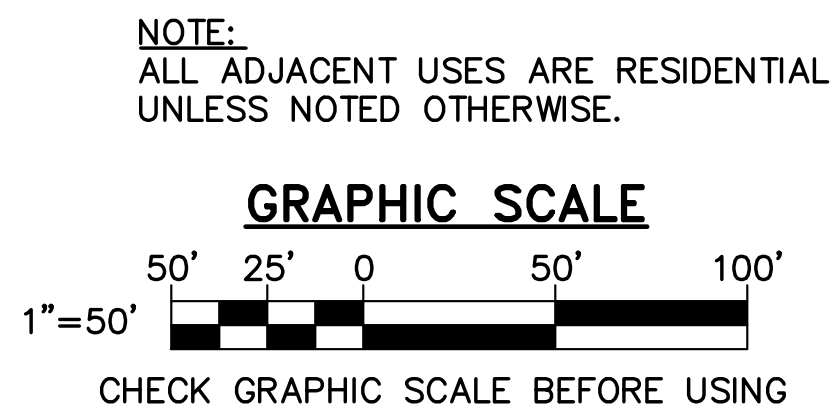
SHEET: 1 OF 23

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1	12/7/21	REVISED FOR CONDITIONS OF APPROVAL	JLG
NO.	DATE	DESCRIPTION	BY
REVISIONS			

1 REMOVALS SITE PLAN
CD101 SCALE: 1"=50'



KEYNOTES:

- 1 REMOVE EXISTING ASPHALT CONCRETE PAVEMENT (SAWCUT WHERE INDICATED).
- 2 REMOVE EXISTING VEHICLE GUARD RAIL AND POSTS.
- 3 REMOVE EXISTING TREE, GRUB STUMP (ONLY TREES OVER 10-INCH DIAMETER IDENTIFIED).
- 4 REMOVE EXISTING UTILITY POLE AND GUY WIRES.
- 5 RELOCATE EXISTING UTILITY POLE AND LIGHT.
- 6 REMOVE EXISTING CONCRETE SLAB-ON-GRADE AND FOUNDATION.
- 7 REMOVE EXISTING FENCE.
- 8 RELOCATE EXISTING STORAGE SHEDS.
- 9 RELOCATE EXISTING PLAYGROUND.
- 10 REMOVE EXISTING CONCRETE STAIRS.
- 11 REMOVE EXISTING REMAINS OF ALTAR.
- 12 REMOVE EXISTING CONCRETE WALK.
- 13 EXISTING TREE TO REMAIN WITH TREE PROTECTION FENCE AT DRIPLINE.
- 14 CATCH BASIN INLET PROTECTION, 2/C-502.
- 15 SEDIMENT CONTROL FILTER SOCK, 1/C-502.
- 16 SILT FENCE, 1/C-501.
- 17 CLEAR EXISTING VEGETATION TO BASE OF HILL FOR SNOW STORAGE (APPROXIMATELY 10 TO 15 FEET FROM EDGE OF PAVEMENT).
- 18 REMOVE EXISTING STORM DRAIN PIPE AND CONNECT TO NEW DRAIN MANHOLE, SEE DRAWING CU101.
- 19 REMOVE EXISTING ABANDONED SEWER LINES.
- 20 CONSTRUCTION ENTRANCE/EXIT, SEE 3/C-501.

SCALE: AS NOTED
DATE: 08-02-2021

DWG.: CD101

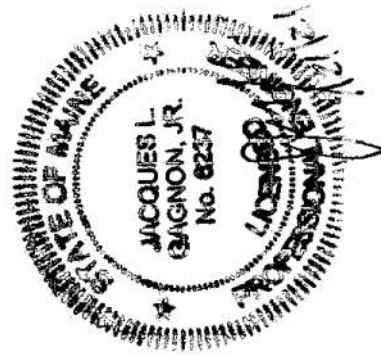
SHEET: 3 OF 23

OWNER:
SOUTHERN MAINE
AFFORDABLE HOUSING
22 South Street
Biddeford, Maine, 04005

PROJECT TITLE AND LOCATION:
ADAMS POINT HOUSING
69 Adams Street
Biddeford, Maine, 04005

REMOVALS
SITE PLAN

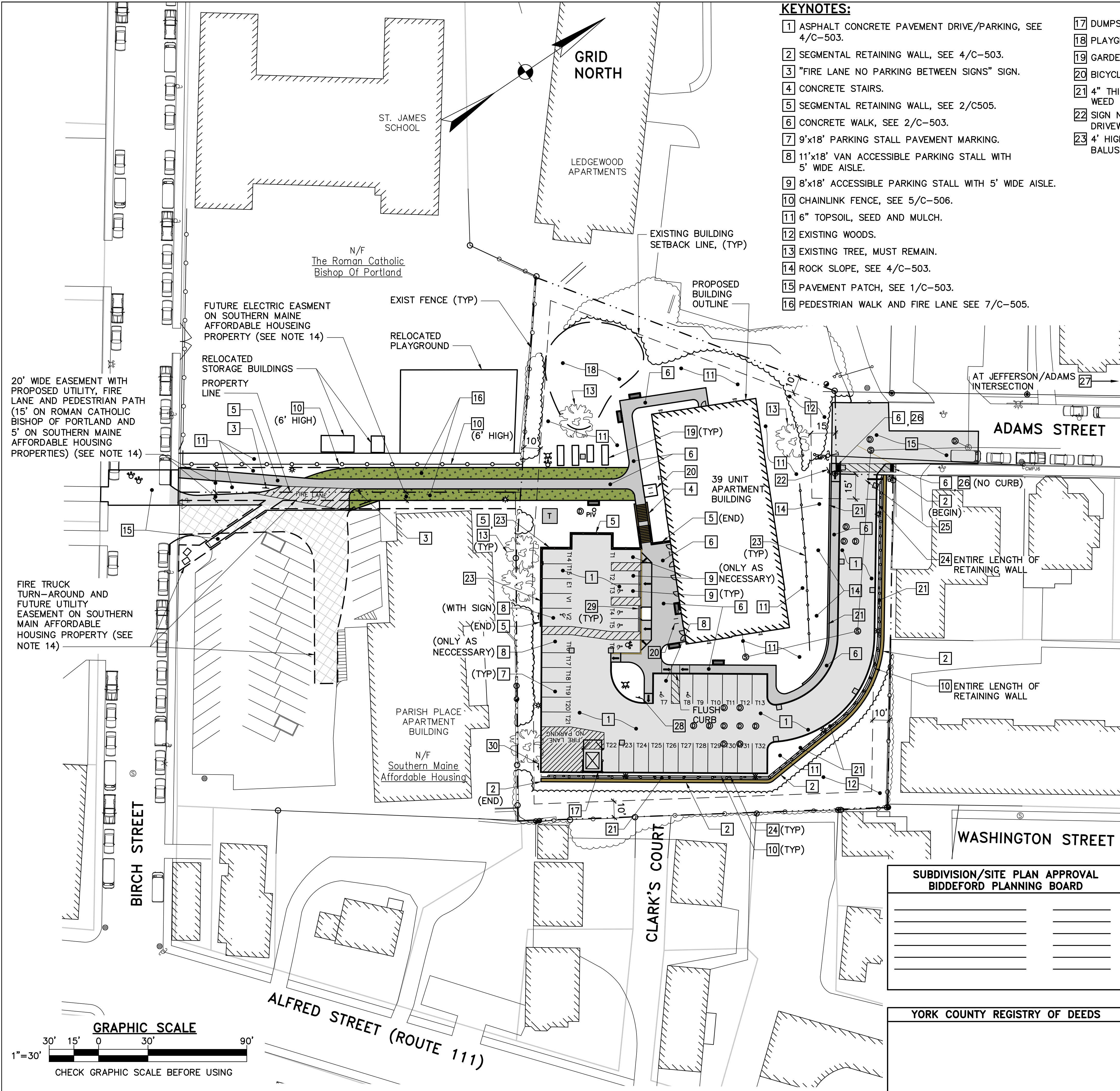
DESIGNED BY: JLG
DRAWN BY: DEW
CHECKED BY: JLG
PROJECT: 22104.04



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GRID
NORTH



KEYNOTES:

- 1 ASPHALT CONCRETE PAVEMENT DRIVE/PARKING, SEE 4/C-503.
- 2 SEGMENTAL RETAINING WALL, SEE 4/C-503.
- 3 "FIRE LANE NO PARKING BETWEEN SIGNS" SIGN.
- 4 CONCRETE STAIRS.
- 5 SEGMENTAL RETAINING WALL, SEE 2/C505.
- 6 CONCRETE WALK, SEE 2/C-503.
- 7 9'x18' PARKING STALL PAVEMENT MARKING.
- 8 11'x18' VAN ACCESSIBLE PARKING STALL WITH 5' WIDE AISLE.
- 9 8'x18' ACCESSIBLE PARKING STALL WITH 5' WIDE AISLE.
- 10 CHAINLINK FENCE, SEE 5/C-506.
- 11 6" TOPSOIL, SEED AND MULCH.
- 12 EXISTING WOODS.
- 13 EXISTING TREE, MUST REMAIN.
- 14 ROCK SLOPE, SEE 4/C-503.
- 15 PAVEMENT PATCH, SEE 1/C-503.
- 16 PEDESTRIAN WALK AND FIRE LANE SEE 7/C-505.

- 17 DUMPSTER PAD AND ENCLOSURE, SEE 1/C-506.
- 18 PLAYGROUND, SEE 7/L2.0.
- 19 GARDENS, SEE DRAWING L1.0.
- 20 BICYCLE RACK, SEE DRAWING L1.0.
- 21 4" THICK, 3/4" CRUSHED STONE WITH WEED CONTROL FABRIC.
- 22 SIGN NEAR 69 ADAMS STREET: "PRIVATE DRIVEWAY FOR 69 ADAMS STREET".
- 23 4' HIGH DECORATIVE FENCE (VERTICAL BALUSTRADES WITH BLACK FINISH).

- 24 VEHICLE GUARD RAIL, SEE 4/C-503.
- 25 1' WIDE WHITE STOP BAR.
- 26 TACTILE WARNING PANEL, SEE 4/C-505.
- 27 PROVIDE STOP SIGNS AND STOP BAR AT JEFFERSON AND ADAMS INTERSECTION, SEE 6-C505.
- 28 "LOADING ZONE NO PARKING" SIGN AND POST.
- 29 PARKING STOP.
- 30 "FIRE LANE NO PARKING" SIGN.

NOTES:

- PROPERTY INFORMATION
1.a. OWNER: SOUTHERN MAINE AFFORDABLE HOUSING
22 SOUTH STREET
BIDDEFORD, MAINE 04005

1.b. LOCUS TAX MAP: MAP 38, LOT 290
1.c. DEED REFERENCE: BOOK 18476, PAGE 90 (EASEMENT: BOOK 15062, PAGE 209)
1.d. TOTAL PARCEL AREA (BASED ON BOUNDARY SURVEY REFERENCED IN NOTE 2, BELOW): 62,971.5 FT² (1.44 ACRES)

2. INFORMATION SHOWN HEREON IS BASED ON THE FOLLOWING:
2.a. A PLAN ENTITLED "A PLAN DEPICTING THE RESULTS OF A BOUNDARY, EXISTING CONDITIONS AND TOPOGRAPHIC SURVEY MADE FOR SOUTHERN MAINE AFFORDABLE HOUSING, SOUTHWESTERLY TERMINUS OF ADAMS STREET, BIDDEFORD, MAINE". PREPARED BY MADEAU LAND SURVEYS, 918 BRIGHTON AVENUE, PORTLAND, ME, 04102, PLAN DATE 06/01/2021.
2.b. TOPOGRAPHIC SURVEY DATA INFORMATION FROM THE PLAN REFERENCE 2.a. ABOVE.
2.c. SUBSURFACE WATER AND GAS MAIN LOCATIONS FROM GEOGRAPHICAL INFORMATION SYSTEM DATABASE INFORMATION OBTAINED FROM MAINE WATER COMPANY AND UNITIL CO.
2.d. SUBSURFACE SEWER AND STORM DRAIN INFORMATION PROVIDED BY THE CITY OF BIDDEFORD, MAINE IN MAY, 2021 CONSISTING OF THE FOLLOWING:
2.e. GEOGRAPHIC INFORMATION SYSTEM INFORMATION.
2.f. A PLAN ENTITLED "GRAHAM STREET TOWERS", BIDDEFORD, MAINE, DRAWING 1 OF 2 BY BOSTON ARCHITECTURAL TEAM REVISED SEPT 19, 1978.
2.f.a. A PLAN ENTITLED "PARISH PLACE", BIRCH STREET, BIDDEFORD, MAINE, SHEET S1 BY SWIFT ENGINEERING AND SALMON FALLS ASSOCIATES DATED 1-5-84.
2.f.b. A PLAN ENTITLED "PLAN OF LAND FOR LOUISE MURPHY", SHEET S-100 BY SYTDESIGN CONSULTANTS DATED SEPT 2002.
2.f.c. PLAN ENTITLED "EXISTING SEWER SYSTEM" INCLUDED IN THE PROJECT ENTITLED "COMPREHENSIVE SEWER STUDY" BY EDWARD C. JORDAN CO, INC, DATED OCTOBER, 1974.

3. ELEVATIONS INDICATED HEREON ARE BASED ON THE NAVD 88 VERTICAL DATUM.

4. UTILITIES INDICATED HEREON ARE BASED ON FIELD RECONNAISSANCE AND INFORMATION PROVIDED BY THE CITY OF BIDDEFORD, MAINE WATER, UNITIL, AND PLAN REFERENCE 2.a.. THEY ARE SHOWN IN THEIR APPROXIMATE LOCATION. AT LEAST THREE (3) BUSINESS DAYS PRIOR TO COMMENCING WORK, DETERMINE THE EXACT LOCATION OF ALL UNDERGROUND UTILITIES IN THE WORK AREA, INCLUDING UTILITIES IN HILL STREET, AND CONTACT THE FOLLOWING:
4.a. "DIGSAFE" AT 1-888-344-7233 TO OBTAIN A "DIGSAFE" PERMIT
4.b. "OK-TO-DIG" AT 1-866-658-6344
4.c. MAINE WATER AT 1-800-287-1643
4.d. CITY OF BIDDEFORD AT 207-282-1579 OR AT 207-282-1350

5. REPORT DISCREPANCIES BETWEEN THE DRAWINGS AND THE FIELD-IDENTIFIED UTILITY LOCATIONS TO THE OWNER PRIOR TO DISTURBING AREAS SURROUNDING THE EXISTING UNDERGROUND UTILITIES.

6. ZONING INFORMATION: PER ORDINANCE: PER CONTRACT ZONE:
6.a. ZONE: MSRD 2 15'
6.b. FRONT YARD SETBACK: 15'
6.c. SIDE AND REAR YARD SETBACKS: 10'
6.d. MINIMUM LOT SIZE PER DWELLING: 2,000 FT²
6.e. MINIMUM LOT FRONTAGE: 50'
6.f. MAXIMUM HEIGHT: 3 STORIES (35')
6.g. PARKING SPACES: 2 PER UNIT (78)
6.h. BICYCLES: -
6.i. PARKING AND PROTECTIVE BUFFERS:
6.i.a. NON-VEGETATED: 75% MAX 75% MAX (53.0% PROVIDED)
6.i.b. PAVED/PARKING AND PEDESTRIAN SURFACE: 30% MAX 30% MAX (38.6%, WITH WAIVER OF ARTICLE XI,5.1.3)
6.i.c. NATURAL AREAS/LANDSCAPED AREAS: 25% MIN 25% MIN (47.0% PROVIDED)

7. TRAFFIC CONTROL NOTE: PREPARE AND SUBMIT A WRITTEN TRAFFIC CONTROL PLAN TO THE CITY OF BIDDEFORD FOR APPROVAL PRIOR TO ANY LANE CLOSURES OR WORK WITHIN THE RIGHT OF WAY.

8. OBTAIN CITY OF BIDDEFORD STREET OPENING PERMIT PRIOR TO PERFORMING WORK IN THE RIGHT OF WAY.

9. PRIOR TO BEGINNING EXCAVATION, PROVIDE PRODUCT INFORMATION SUBMITTALS FOR THE FOLLOWING PRODUCTS TO THE CITY OF BIDDEFORD ENGINEERING DEPARTMENT AND PUBLIC WORKS DEPARTMENT FOR REVIEW AND APPROVAL:
9.a. STORM DRAIN PIPING
9.b. STORM DRAIN LATERAL CONNECTION
9.c. DRAIN MANHOLE
9.d. SEWER LINE PIPING

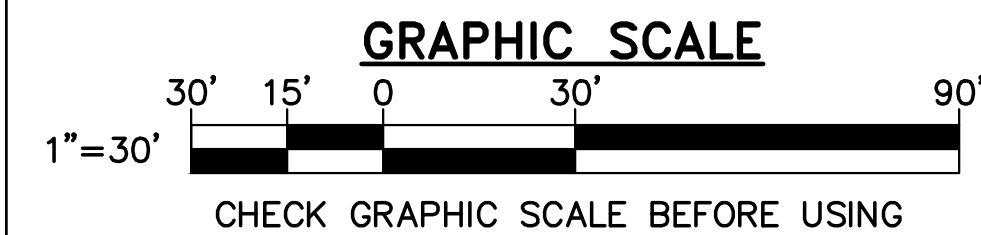
10. PRIOR TO BEGINNING EXCAVATION, COORDINATE WITH THE CITY OF BIDDEFORD PUBLIC WORKS DEPARTMENT FOR INSPECTIONS OF THE FOLLOWING ITEMS:
10.a. LATERAL CONNECTIONS TO THE EXISTING STORM DRAIN SYSTEM
10.b. STORM DRAIN LINE INSTALLATION WITHIN THE ADAMS STREET RIGHT OF WAY
10.c. CONNECTIONS TO THE EXISTING SANITARY SEWER STUB AT THE EDGE OF THE ADAMS STREET RIGHT OF WAY

11. MAIL BOXES WILL BE INSIDE BUILDING LOBBY.

12. PARKING MUST BE AVAILABLE FOR USE BEFORE OCCUPANCY PERMIT IS ISSUED.

13. THE PURPOSE OF THIS PLAN IS APPROVAL OF A 39 AFFORDABLE HOUSING RESIDENTIAL-UNIT DEVELOPMENT THAT IS SUBJECT TO THE CITY OF BIDDEFORD'S SUBDIVISION ORDINANCE (CHAPTER 66), SITE PLAN AND ZONING REGULATIONS (ARTICLE XI OF THE LAND DEVELOPMENT REGULATIONS), AND CONTRACT ZONE AMENDMENT NO. 20.

14. FIRE LANE AND UTILITY EASEMENT FROM BIRCH STREET TO 69 ADAMS STREET CONSISTS OF A 15-FOOT WIDE EASEMENT FROM THE ROMAN CATHOLIC BISHOP OF PORTLAND PROPERTY TO BE EXECUTED AS A CONDITION OF APPROVAL. A 5-FOOT WIDE UTILITY EASEMENT AND FIRE TRUCK TURNING EASEMENT FROM SOUTHERN MAINE AFFORDABLE HOUSING TO A FUTURE OWNER OF 69 ADAMS STREET MUST BE EXECUTED AS PART OF THE PROPERTY TRANSFER.



1	12/7/21	REVISED FOR CONDITIONS OF APPROVAL	JLG
NO.	DATE	DESCRIPTION	BY
REVISIONS			

1 SUBDIVISION AND SITE PLAN

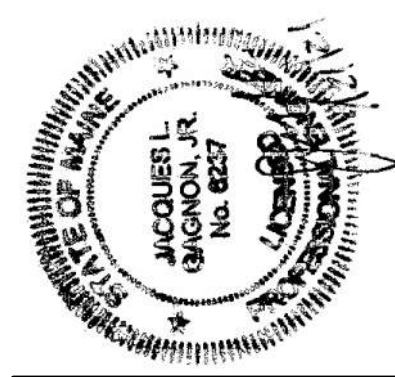
CS101 SCALE: 1"=30'

NOTE:
SEE THE LANDSCAPE SHEET L1.0 FOR PLANTINGS, SITE AMENITIES, AND GROUND COVERS.

SUBDIVISION/SITE PLAN APPROVAL
BIDDEFORD PLANNING BOARD

YORK COUNTY REGISTRY OF DEEDS

FOR PERMITTING PURPOSES ONLY NOT FOR CONSTRUCTION



DESIGNED BY: JLG
DRAWN BY: DEW
CHECKED BY: JLG
PROJECT: 22104.04

OWNER:
SOUTHERN MAINE AFFORDABLE HOUSING

22 South Street
Biddeford, Maine, 04005

PROJECT TITLE AND LOCATION:
ADAMS POINT HOUSING

69 Adams Street
Biddeford, Maine, 04005

SUBDIVISION AND SITE PLAN

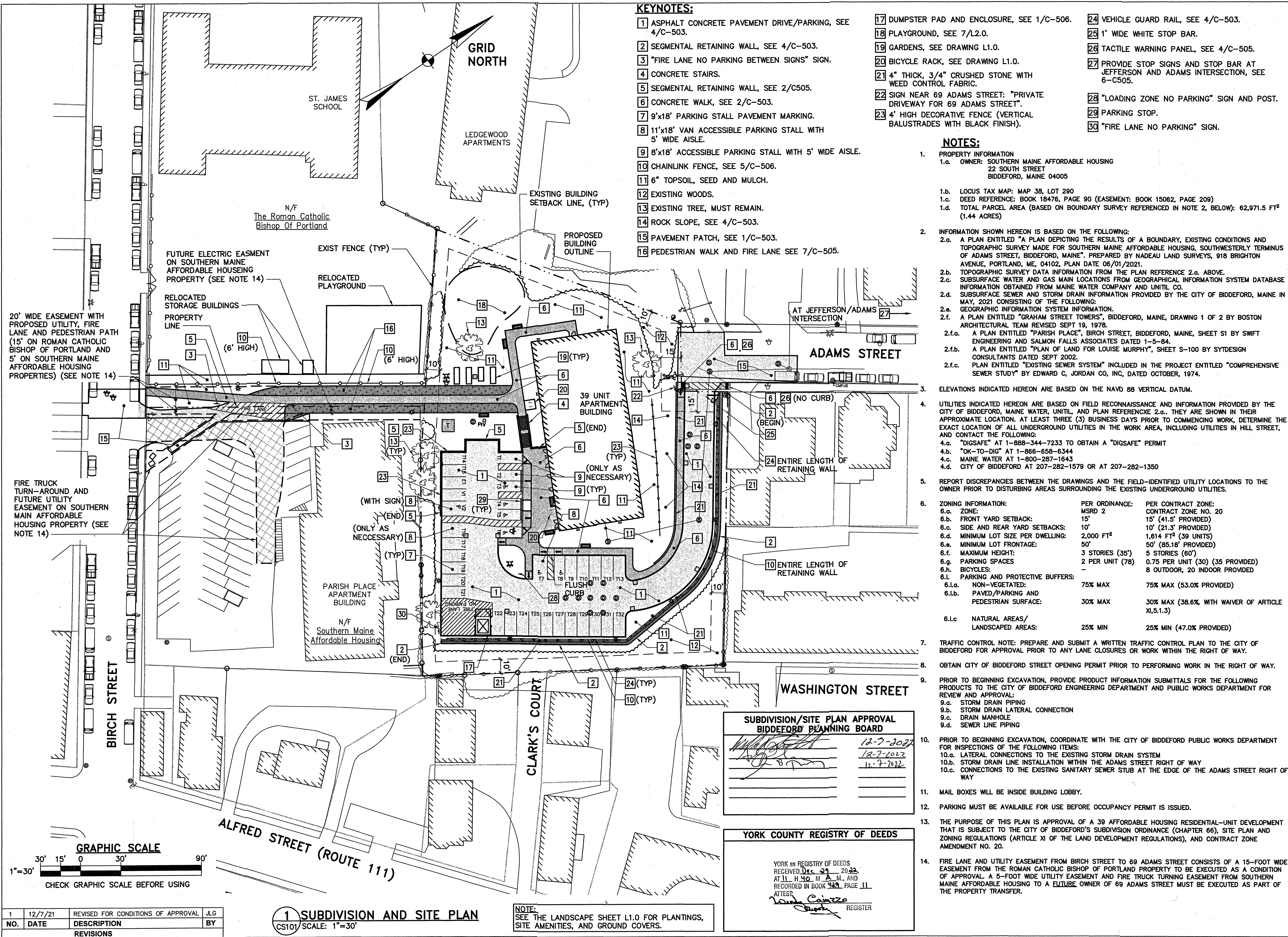
SCALE: AS NOTED

DATE: 08-02-2021

DWG.: CS101

SHEET: 4 OF 23

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DESIGNED BY: JLG
DRAWN BY: JLG
CHECKED BY: JLG
PROJECT: 22104.04

OWNER:
SOUTHERN MAINE AFFORDABLE HOUSING
22 South Street
Biddeford, Maine, 04005

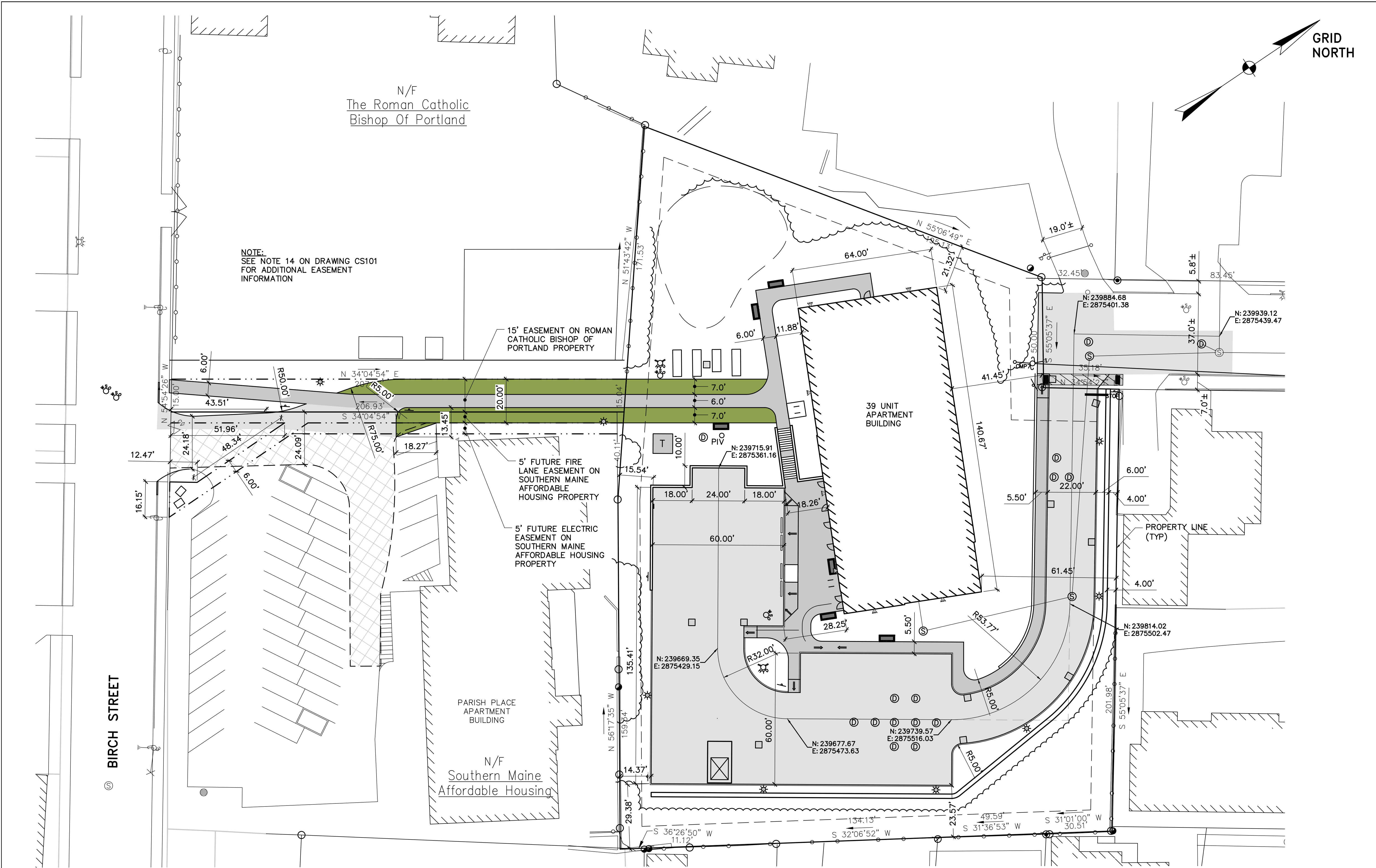
PROJECT TITLE AND LOCATION:
ADAMS POINT HOUSING
69 Adams Street
Biddeford, Maine, 04005

SUBDIVISION AND SITE PLAN

SCALE: AS NOTED
DATE: 08-02-2021
DWG.: CS101
SHEET: 4 OF 23

1	12/7/21	REVISED FOR CONDITIONS OF APPROVAL	JLG
NO.	DATE	DESCRIPTION	BY
REVISIONS			

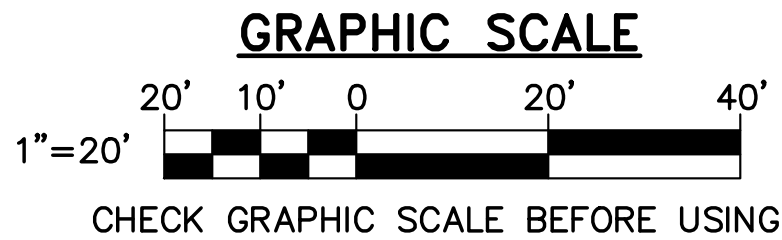
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1 LAYOUT PLAN
CL101 SCALE: 1"=20'

LAYOUT NOTES:

- DIMENSIONS SHOWN TO FACE OF CURB, FACE OF RETAINING WALL, EDGE OF PAVEMENT, EDGE OF STABILIZED TURF, AND FACE OF BUILDING FOUNDATION WALL UNLESS NOTED OTHERWISE.
- DIMENSIONS SHOWN ARE IN DECIMAL FEET.
- COORDINATES ARE BASED ON MAINE STATE PLANE COORDINATES NAD83 WEST ZONE.



SCALE: AS NOTED

DATE: 08-02-2021

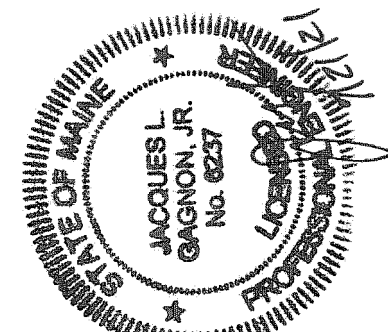
DWG.: CL101

SHEET: 5 OF 23

PROJECT TITLE AND LOCATION:
ADAMS POINT HOUSING
69 Adams Street
Biddeford, Maine, 04005

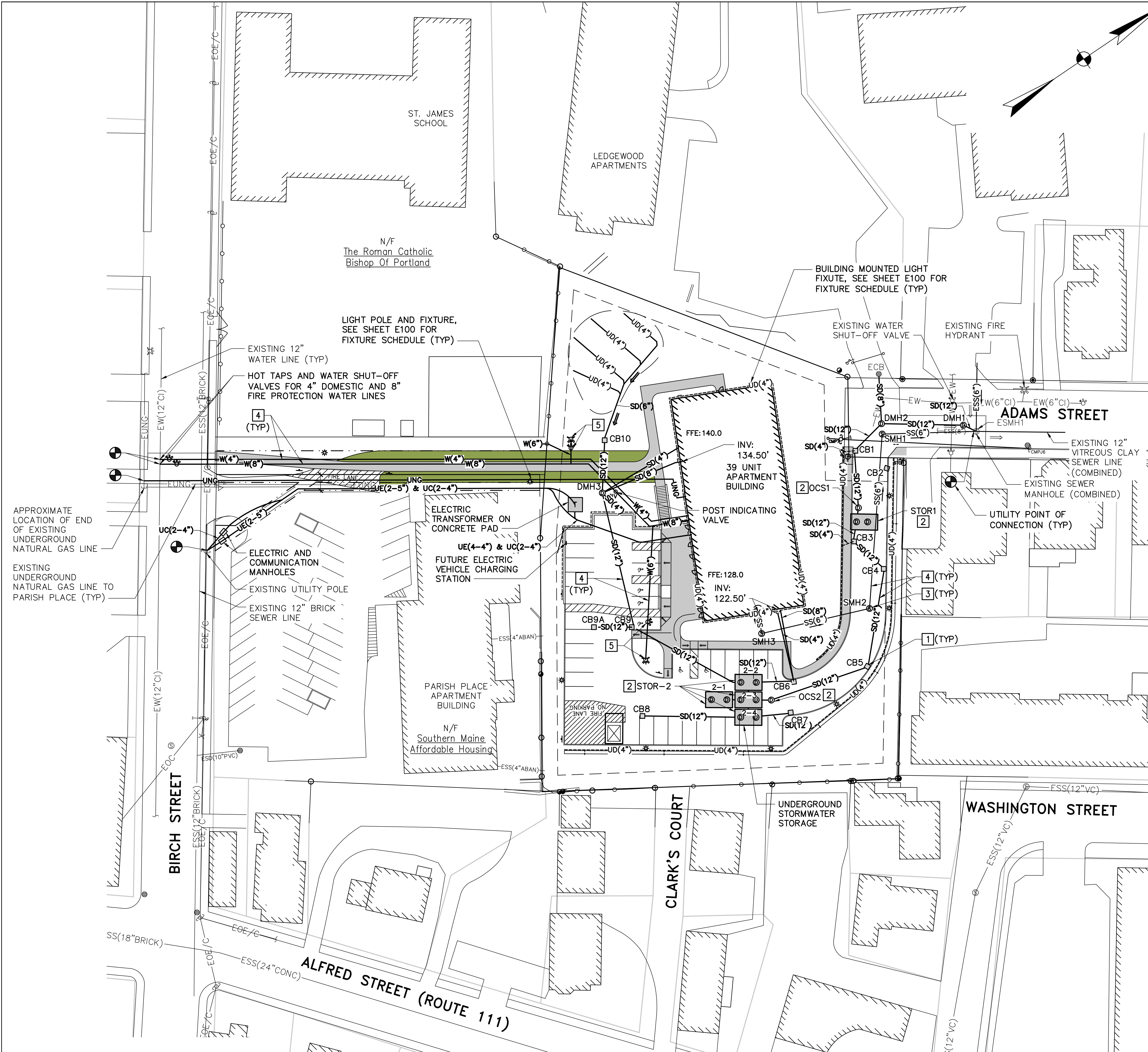
OWNER:
SOUTHERN MAINE
AFFORDABLE HOUSING
22 South Street
Biddeford, Maine, 04005

DESIGNED BY: JLG
DRAWN BY: DEW
CHECKED BY: JLG
PROJECT: 22104.04



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GRID NORTH

KEYNOTES

- 1 CATCH BASIN, SEE 5/C-503.
- 2 STORAGE TANK AND OUTLET CONTROL STRUCTURE, SEE 1/C-504 AND 2-C504.
- 3 SANITARY SEWER MANHOLE, SEE 3/C-505.
- 4 PIPE TRENCH (TYP), SEE 5/C-505.
- 5 FIRE HYDRANT AND SHUT-OFF VALVE

STRUCTURE NAME:	DETAILS:
ESMH1	RIM:108.15 INV IN:102.10, SS(6") INV IN:102.20, ESS(6") INV IN:102.10, SD(12") INV OUT:102.00, ESS(12")
SMH1	RIM:111.76 INV IN:105.76, SS(6") INV OUT:104.93, SS(6")
SMH2	RIM:118.35 INV IN:113.50, SS(6") INV OUT:113.20, SS(6")
SMH3	RIM:126.24 INV IN:121.50, SS(6") INV OUT:118.18, SS(6")

STRUCTURE NAME:	DETAILS:
CB1	RIM:112.03 INV IN:102.82, SD(12") INV IN:107.14, SD(12") INV IN:106.06, SD(4") INV OUT:102.72, SD(12")
CB2	RIM:112.22 INV OUT:106.89, SD(12")
CB3	RIM:114.00 INV IN:109.27, SD(12") INV IN:109.24, SD(4") INV OUT:109.16, SD(12")
CB4	RIM:115.61 INV IN:109.50, SD(12") INV OUT:109.40, SD(12")
CB5	RIM:121.68 INV IN:109.91, SD(12") INV OUT:109.81, SD(12")
CB6	RIM:124.65 INV IN:119.82, SD(8") INV IN:119.82, SD(4") INV OUT:119.72, SD(12")
CB7	RIM:124.81 INV OUT:119.79, SD(12")
CB8	RIM:126.31 INV OUT:119.79, SD(12")
CB9	RIM:126.72 INV IN:122.84, SD(12") INV IN:122.61, SD(12") INV OUT:122.74, SD(12")
CB9A	RIM:126.68 INV OUT:122.49, SD(12")
CB10	RIM:137.16 INV OUT:132.36, SD(12")
DMH1	RIM:108.70 INV IN:102.24, SD(12") INV OUT:102.14, SD(12")
DMH2	RIM:111.82 INV IN:102.60, SD(12") INV IN:102.70, SD(8") INV OUT:102.50, SD(12")
DMH3	RIM:138.08 INV IN:132.03, SD(12") INV IN:132.03, SD(4") INV IN:132.03, SD(8") INV OUT:124.50, SD(12") INV OUT:122.88, SD(4")
ECB	RIM:110.78 INV OUT:107.78, SD(8")

STRUCTURE NAME:	DETAILS:
OCS1	RIM:113.00 INV IN:103.10, SD(4") INV IN:106.32, SD(4") INV IN:108.86, SD(12") INV OUT:103.00, SD(12")
OCS2	RIM:125.36 INV IN:110.33, SD(4") INV IN:115.67, SD(4") INV IN:119.29, SD(12") INV OUT:110.23, SD(12")
STOR1	RIM:113.29 INV IN:109.10, SD(12") INV OUT:108.90, SD(12") INV OUT:106.36, SD(4") INV OUT:103.14, SD(4")
STOR2-1	RIM:126.03 INV OUT:110.50, SD(12")
STOR2-2	RIM:125.60 INV IN:119.09, SD(12") INV IN:120.51, SD(12") INV OUT:110.51, SD(12")
STOR2-3	RIM:125.68 INV IN:110.50, SD(12") INV IN:110.51, SD(12") INV OUT:119.36, SD(12") INV OUT:115.74, SD(4") INV OUT:110.40, SD(4")
STOR2-4	RIM:125.58 INV IN:119.46, SD(12") INV IN:119.94, SD(12") INV OUT:110.51, SD(12")

GRAPHIC SCALE

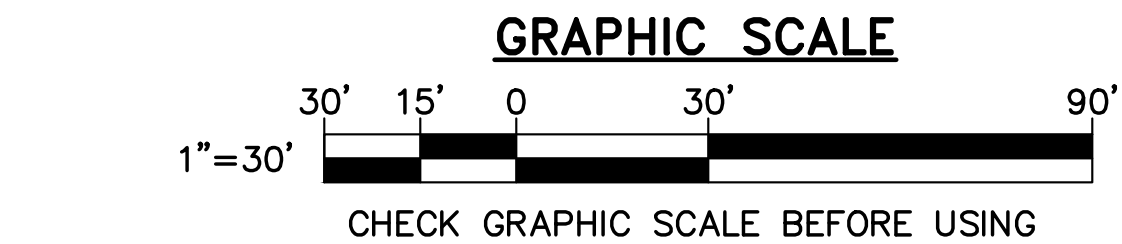
1"=30'

30' 15' 0 30' 90'

CHECK GRAPHIC SCALE BEFORE USING

1	12/7/21	REVISED FOR CONDITIONS OF APPROVAL	JLG
NO.	DATE	DESCRIPTION	BY
REVISIONS			

1 GRADING PLAN
CG101 SCALE: 1"=30'



SHEET: 7 OF 23

DWG.: CG101

DATE: 08-02-2021

SCALE: AS NOTED

GRADING PLAN

PROJECT TITLE AND LOCATION:
ADAMS POINT HOUSING

69 Adams Street
Biddeford, Maine, 04005

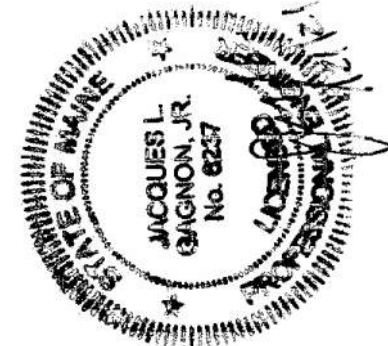
OWNER:
SOUTHERN MAINE
AFFORDABLE HOUSING

22 South Street
Biddeford, Maine, 04005

DESIGNED BY:
DRAWN BY:
CHECKED BY:

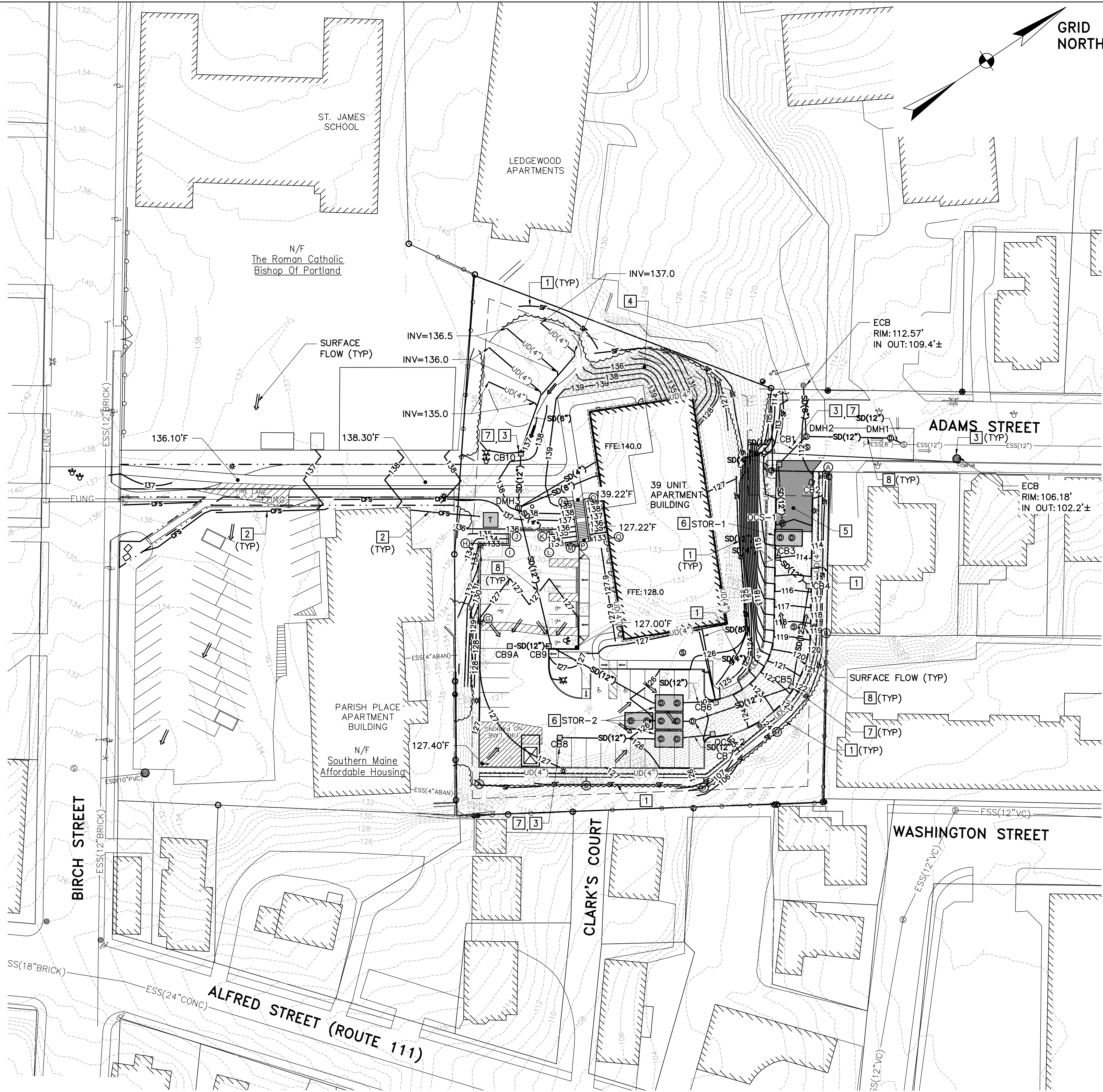
JLG
DEW
JLG

PROJECT:
22104.04



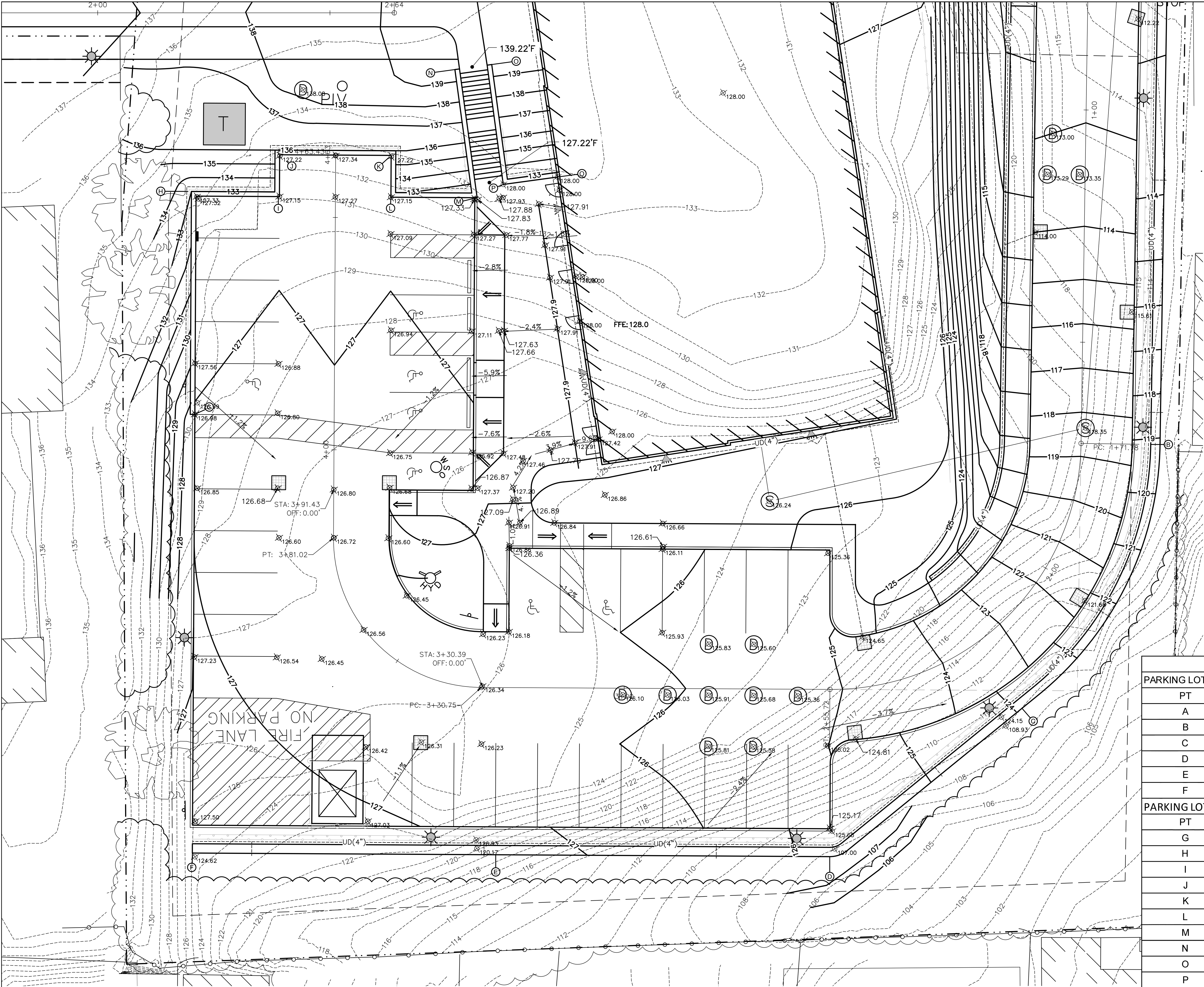
OAK POINT
ASSOCIATES
ARCHITECTURE ■ ENGINEERING ■ PLANNING
231 Main Street, Biddeford, Maine 04005 (T) 207-283-0183 (F) 207-283-0283
www.oakpoint.com

FOR PERMITTING PURPOSES ONLY NOT FOR CONSTRUCTION



RETAINING WALL ELEVATIONS			
PARKING LOT: EAST/NORTH			
PT	BOW	TOW	HEIGHT
A	111.38	112.62	1.24
B	112.36	119.18	6.82
C	109.00	124.07	15.07
D	107.90	125.77	17.87
E	118.70	127.00	8.30
F	125.00	128.00	3.00
PARKING LOT: SOUTH/WEST			
PT	BOW	TOW	HEIGHT
G	127.00	128.00	1.00
H	127.33	133.00	5.67
I	127.15	133.00	5.85
J	127.22	136.00	8.78
K	127.22	136.00	8.78
L	127.15	133.00	5.85
M	127.33	133.00	5.67
N	139.15	140.50	1.35
O	139.25	140.50	1.25
P	128.10	133.00	4.90
Q	128.10	133.00	4.90

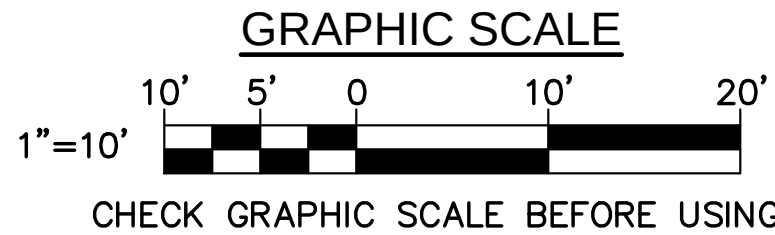
- NOTES:**
- SEE DRAWING C-501 FOR EROSION CONTROL NOTES.
 - SEE DRAWING CU101 FOR RIM AND INVERT INFORMATION.
 - SEE DRAWING CG102 FOR ADDITIONAL GRADING INFORMATION.
- KEYNOTES: (THIS SHEET ONLY)**
- SILT FENCE, SEE 1/C-501.
 - SEDIMENT CONTROL FILTER SOCK, SEE 1/C-502.
 - CATCH BASIN INLET PROTECTION, SEE 2/C-502.
 - EROSION CONTROL BLANKET, SEE 8/C-502.
 - STABILIZED CONSTRUCTION ENTRANCE/EXIT, SEE 3/C-502.
 - OUTLET CONTROL STRUCTURE AND UNDERGROUND STORMWATER STORAGE, SEE 1/C-504 AND 2/C-504.
 - CATCH BASIN, SEE 5/C-503.
 - PIPE TRENCH, SEE 5/C-505.



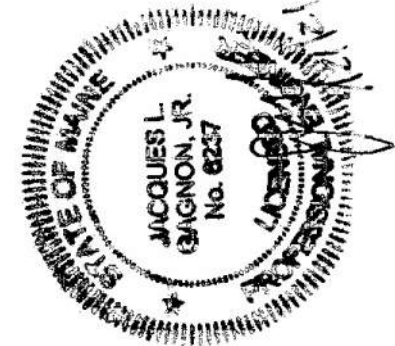
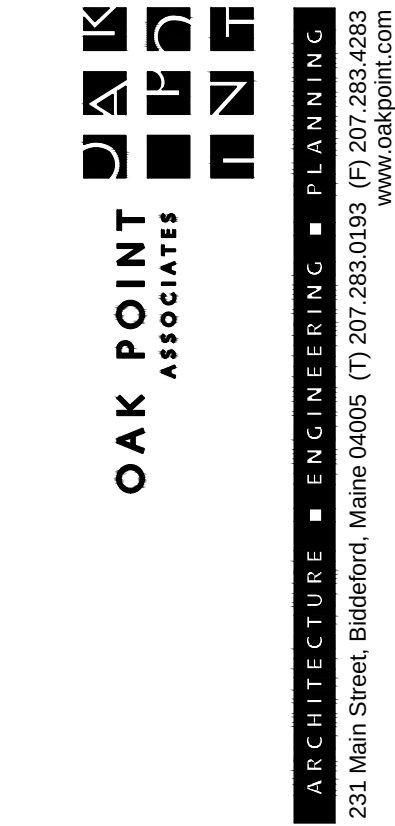
RETAINING WALL ELEVATIONS			
PARKING LOT: EAST/NORTH			
PT	BOW	TOW	HEIGHT
A	111.38	112.62	1.24
B	112.36	119.18	6.82
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D	107.90	125.77	17.87
E	118.70	127.00	8.30
F	125.00	128.00	3.00
PARKING LOT: SOUTH/WEST			
PT	BOW	TOW	HEIGHT
G	127.00	128.00	1.00
H	127.33	133.00	5.67
I	127.15	133.00	5.85
J	127.22	136.00	8.78
K	127.22	136.00	8.78
L	127.15	133.00	5.85
M	127.33	133.00	5.67
N	139.15	140.50	1.35
O	139.25	140.50	1.25
P	128.10	133.00	4.90
Q	128.10	133.00	4.90

1 ENLARGED GRADING PLAN
C-301 SCALE: 1"=10'

NO.	DATE	DESCRIPTION	BY
1	12/7/21	REVISED FOR CONDITIONS OF APPROVAL	JLG
REVISIONS			



FOR PERMITTING PURPOSES ONLY NOT FOR CONSTRUCTION



DESIGNED BY: JLG
DRAWN BY: DEW
CHECKED BY: JLG
PROJECT: 22104.04

OWNER:
SOUTHERN MAINE
AFFORDABLE HOUSING
22 South Street
Biddeford, Maine, 04005

PROJECT TITLE AND LOCATION:
ADAMS POINT HOUSING
69 Adams Street
Biddeford, Maine, 04005

ENLARGED
GRADING
PLAN

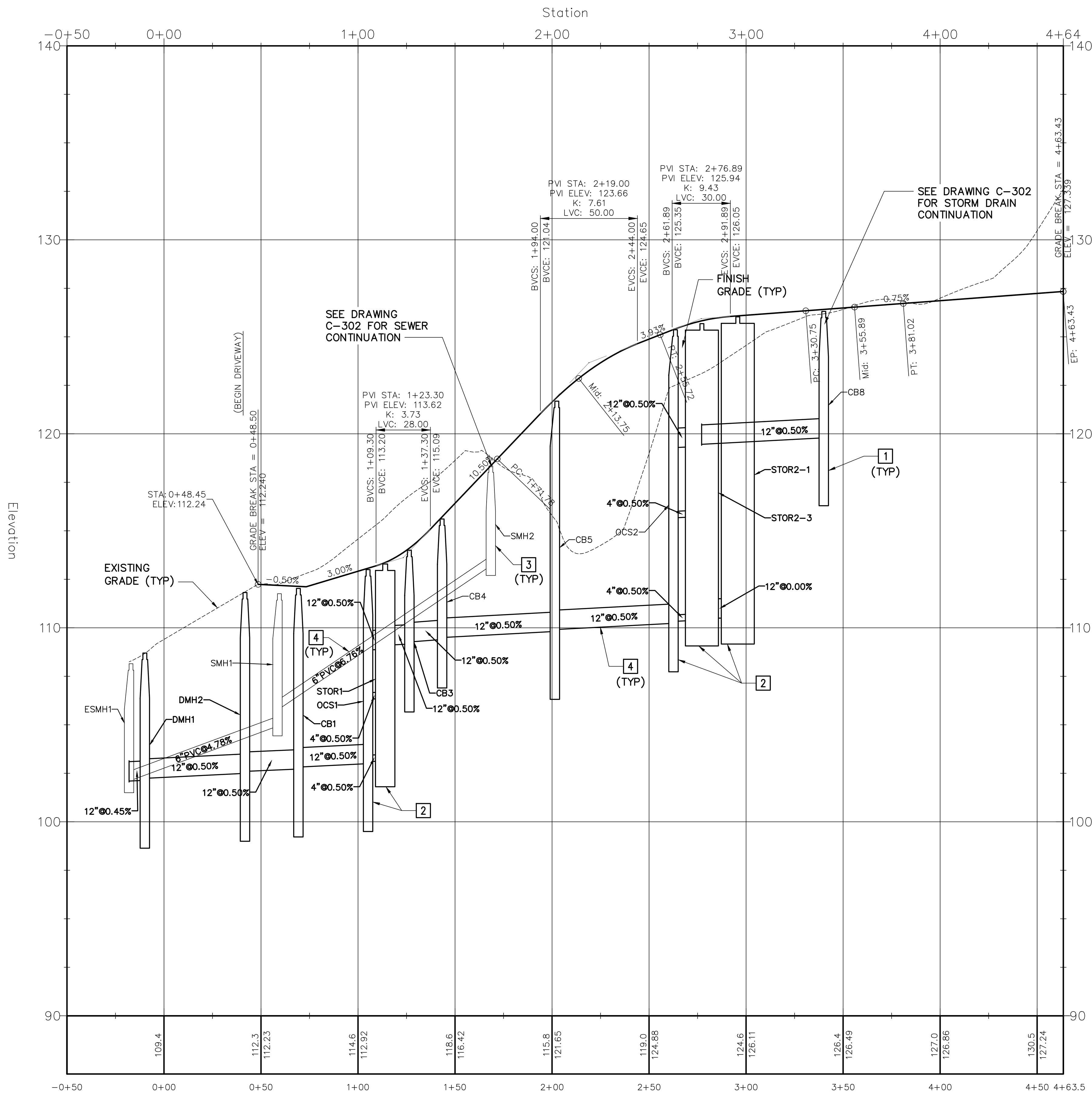
SCALE: AS NOTED

DATE: 08-02-2021

DWG.: CG102

SHEET: 8 OF 23

DRIVEWAY PARKING LOT PROFILE



1 DRIVEWAY/PARKING LOT PROFILE
C-301

NO.	DATE	DESCRIPTION	BY
1	12/7/21	REVISED FOR CONDITIONS OF APPROVAL	JLG

STRUCTURE NAME:	DETAILS:
CB1	RIM: 112.03 INV IN: 102.82, SD(12") INV IN: 107.14, SD(12") INV IN: 106.06, SD(4") INV OUT: 102.72, SD(12")
CB2	RIM: 112.22 INV OUT: 106.89, SD(12")
CB3	RIM: 114.00 INV IN: 109.27, SD(12") INV IN: 109.24, SD(4") INV OUT: 109.16, SD(12")
CB4	RIM: 115.61 INV IN: 109.50, SD(12") INV OUT: 109.40, SD(12")
CB5	RIM: 121.68 INV IN: 109.91, SD(12") INV OUT: 109.81, SD(12")
CB6	RIM: 124.65 INV IN: 119.82, SD(8") INV IN: 119.82, SD(4") INV OUT: 119.72, SD(12")
CB7	RIM: 124.81 INV OUT: 119.89, SD(12")
CB8	RIM: 126.31 INV OUT: 119.79, SD(12")
CB9	RIM: 126.72 INV IN: 122.84, SD(12") INV IN: 122.61, SD(12") INV OUT: 122.74, SD(12")
CB9A	RIM: 126.68 INV OUT: 122.49, SD(12")
CB10	RIM: 137.16 INV OUT: 132.36, SD(12")
DMH1	RIM: 108.70 INV IN: 102.24, SD(12") INV OUT: 102.14, SD(12")
DMH2	RIM: 111.82 INV IN: 102.60, SD(12") INV IN: 102.70, SD(8") INV OUT: 102.50, SD(12")
DMH3	RIM: 138.08 INV IN: 132.03, SD(12") INV IN: 132.03, SD(4") INV IN: 132.03, SD(8") INV OUT: 124.50, SD(12") INV OUT: 122.88, SD(4")
ECB	RIM: 110.78 INV OUT: 107.78, SD(8")

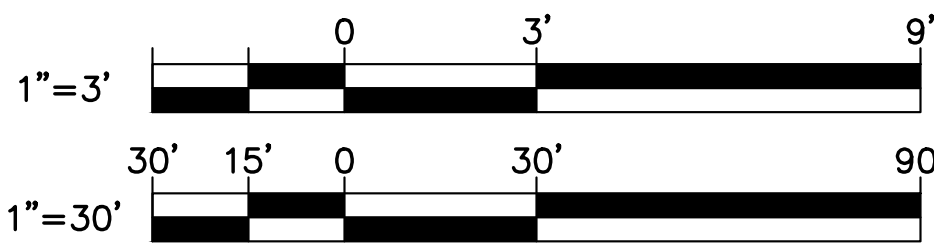
STRUCTURE NAME:	DETAILS:
ESMH1	RIM: 108.15 INV IN: 102.10, SS(6") INV IN: 102.20, ESS(6") INV IN: 102.10, SD(12") INV OUT: 102.00, ESS(12")
SMH1	RIM: 111.76 INV IN: 105.76, SS(6") INV OUT: 104.93, SS(6")
SMH2	RIM: 118.35 INV IN: 113.30, SS(6") INV OUT: 113.20, SS(6")
SMH3	RIM: 126.24 INV IN: 121.50, SS(6") INV OUT: 118.18, SS(6")

STRUCTURE NAME:	DETAILS:
OCS1	RIM: 113.00 INV IN: 103.10, SD(4") INV IN: 106.32, SD(4") INV IN: 108.86, SD(12") INV OUT: 103.00, SD(12")
OCS2	RIM: 125.36 INV IN: 110.33, SD(4") INV IN: 115.67, SD(4") INV IN: 119.29, SD(12") INV OUT: 110.23, SD(12")
STOR1	RIM: 113.29 INV IN: 109.10, SD(12") INV OUT: 108.90, SD(12") INV OUT: 106.36, SD(4") INV OUT: 103.14, SD(4")
STOR2-1	RIM: 126.03 INV OUT: 110.50, SD(12")
STOR2-2	RIM: 125.60 INV IN: 119.09, SD(12") INV IN: 120.51, SD(12") INV OUT: 110.51, SD(12")
STOR2-3	RIM: 125.68 INV IN: 110.50, SD(12") INV IN: 110.51, SD(12") INV OUT: 119.36, SD(12") INV OUT: 115.74, SD(4") INV OUT: 110.40, SD(4")
STOR2-4	RIM: 125.58 INV IN: 119.46, SD(12") INV IN: 119.94, SD(12") INV OUT: 110.51, SD(12")

KEYNOTES

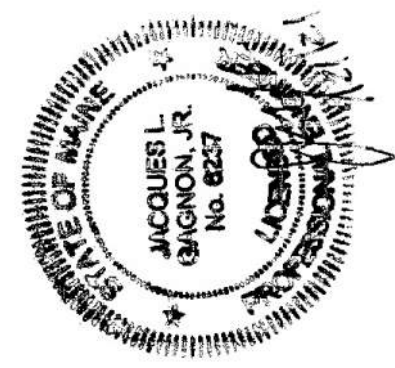
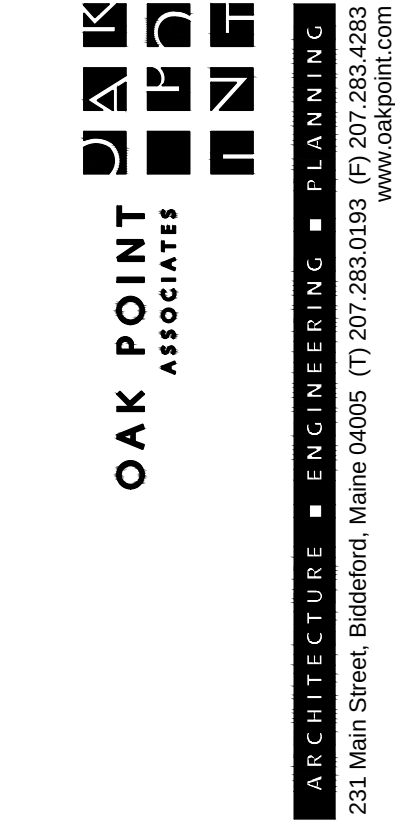
- CATCH BASIN, SEE 5/C-503.
- STORAGE TANK AND OUTLET CONTROL STRUCTURE, SEE 1/C-504 AND 2-C504.
- SANITARY SEWER MANHOLE, SEE 3/C-505.
- PIPE TRENCH (TYP), SEE 5/C-505.

GRAPHIC SCALES



CHECK GRAPHIC SCALES BEFORE USING

FOR PERMITTING PURPOSES ONLY NOT FOR CONSTRUCTION



DESIGNED BY: JLG
DRAWN BY: DEW
CHECKED BY: JLG
PROJECT: 22104.04

OWNER:
SOUTHERN MAINE
AFFORDABLE HOUSING
22 South Street
Biddeford, Maine, 04005

PROJECT TITLE AND LOCATION:
ADAMS POINT HOUSING
69 Adams Street
Biddeford, Maine, 04005

ROAD
PROFILE

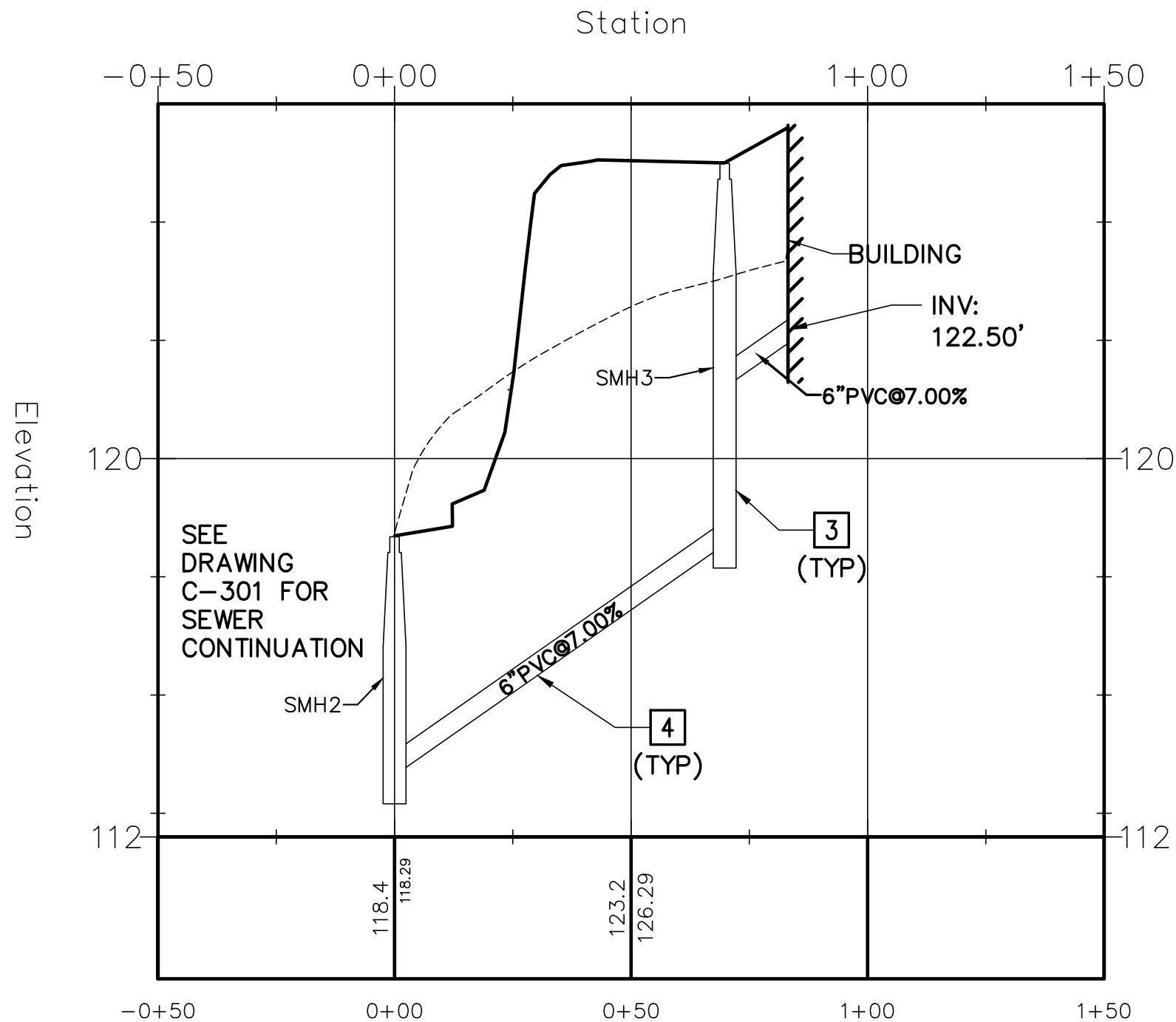
SCALE: AS NOTED

DATE: 08-02-2021

DWG.: C-301

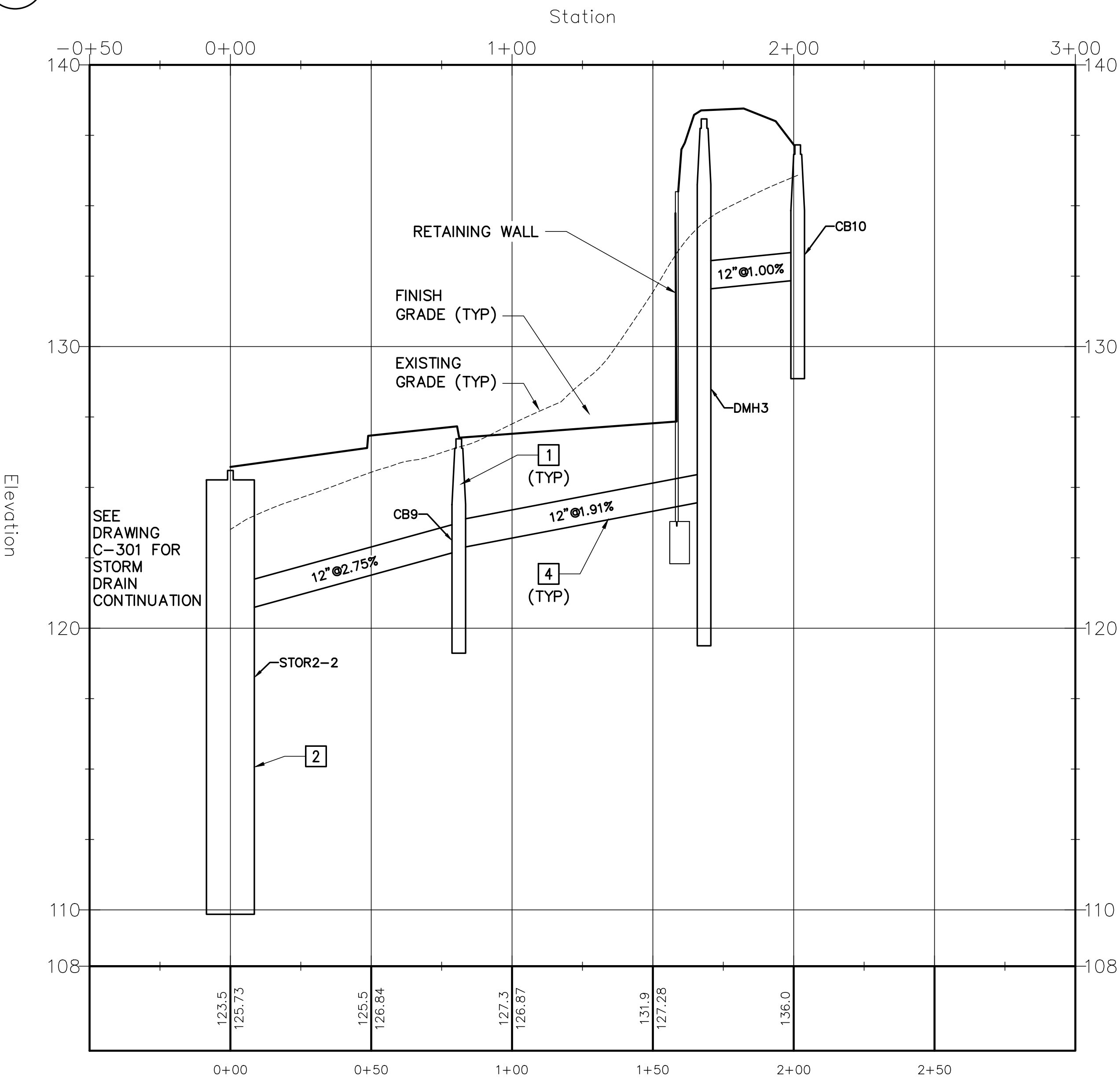
SHEET: 9 OF 23

SANITARY SEWER PROFILE



2 SANITARY SEWER PROFILE
C-302 SCALE: 1"=30' HORIZ, 1"=3' VERT

STORM DRAIN PROFILE



1 STORM DRAIN PROFILE
C-302 SCALE: 1"=30' HORIZ, 1"=3' VERT

STRUCTURE TABLE	
STRUCTURE NAME:	DETAILS:
CB1	RIM: 112.03 INV IN: 102.82, SD(12") INV IN: 107.14, SD(12") INV IN: 106.06, SD(4") INV OUT: 102.72, SD(12")
CB2	RIM: 112.22 INV OUT: 106.89, SD(12")
CB3	RIM: 114.00 INV IN: 109.27, SD(12") INV IN: 109.24, SD(4") INV OUT: 109.16, SD(12")
CB4	RIM: 115.61 INV IN: 109.50, SD(12") INV OUT: 109.40, SD(12")
CB5	RIM: 121.68 INV IN: 109.91, SD(12") INV OUT: 109.81, SD(12")
CB6	RIM: 124.65 INV IN: 119.82, SD(8") INV IN: 119.82, SD(4") INV OUT: 119.72, SD(12")
CB7	RIM: 124.81 INV OUT: 119.89, SD(12")
CB8	RIM: 126.31 INV OUT: 119.79, SD(12")
CB9	RIM: 126.72 INV IN: 122.84, SD(12") INV IN: 122.61, SD(12") INV OUT: 122.74, SD(12")
CB9A	RIM: 126.68 INV OUT: 122.49, SD(12")
CB10	RIM: 137.16 INV OUT: 132.36, SD(12")
DMH1	RIM: 108.70 INV IN: 102.24, SD(12") INV OUT: 102.14, SD(12")
DMH2	RIM: 111.82 INV IN: 102.60, SD(12") INV IN: 102.70, SD(8") INV OUT: 102.50, SD(12")
DMH3	RIM: 138.08 INV IN: 132.03, SD(12") INV IN: 132.03, SD(4") INV IN: 132.03, SD(8") INV OUT: 124.50, SD(12") INV OUT: 122.88, SD(4")
ECB	RIM: 110.78 INV OUT: 107.78, SD(8")

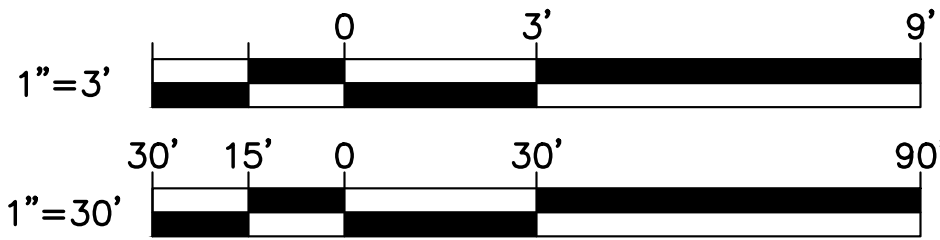
STRUCTURE TABLE	
STRUCTURE NAME:	DETAILS:
ESMH1	RIM: 108.15 INV IN: 102.10, SS(6") INV IN: 102.20, ESS(6") INV IN: 102.10, SD(12") INV OUT: 102.00, ESS(12")
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SMH2	RIM: 118.35 INV IN: 113.30, SS(6") INV OUT: 113.20, SS(6")
SMH3	RIM: 126.24 INV IN: 121.50, SS(6") INV OUT: 118.18, SS(6")

STRUCTURE TABLE	
STRUCTURE NAME:	DETAILS:
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STOR1	RIM: 113.29 INV IN: 109.10, SD(12") INV OUT: 108.90, SD(12") INV OUT: 106.36, SD(4") INV OUT: 103.14, SD(4")
STOR2-1	RIM: 126.03 INV OUT: 110.50, SD(12")
STOR2-2	RIM: 125.60 INV IN: 119.09, SD(12") INV IN: 120.51, SD(12") INV OUT: 110.51, SD(12")
STOR2-3	RIM: 125.68 INV IN: 110.50, SD(12") INV IN: 110.51, SD(12") INV OUT: 119.36, SD(12") INV OUT: 115.74, SD(4") INV OUT: 110.40, SD(4")
STOR2-4	RIM: 125.58 INV IN: 119.46, SD(12") INV IN: 119.94, SD(12") INV OUT: 110.51, SD(12")

KEYNOTES

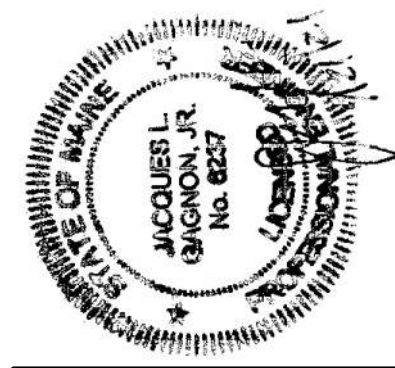
- 1 CATCH BASIN, SEE 5/C-503.
- 2 STORAGE TANK AND OUTLET CONTROL STRUCTURE, SEE 1/C-504 AND 2-C504.
- 3 SANITARY SEWER DROP MANHOLE, SEE 3/C-505.
- 4 PIPE TRENCH (TYP), SEE 5/C-505.

GRAPHIC SCALES



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FOR PERMITTING PURPOSES ONLY NOT FOR CONSTRUCTION



DESIGNED BY: JLG
DRAWN BY: DEW
CHECKED BY: JLG
PROJECT: 22104.04

OWNER:
SOUTHERN MAINE
AFFORDABLE HOUSING
22 South Street
Biddeford, Maine, 04005

PROJECT TITLE AND LOCATION:
ADAMS POINT HOUSING
69 Adams Street
Biddeford, Maine, 04005

UTILITY
PROFILES

SCALE: AS NOTED

DATE: 08-02-2021

DWG.: C-302

SHEET: 10 OF 23

NO.	DATE	DESCRIPTION	BY
1	12/7/21	REVISED FOR CONDITIONS OF APPROVAL	JLG
REVISIONS			

EROSION AND SEDIMENT CONTROL

A. GENERAL NOTES

1. DURING CONSTRUCTION AND THEREAFTER, IMPLEMENT EROSION CONTROL MEASURES AS INDICATED AND SPECIFIED. ALL EROSION CONTROL MEASURES SHALL BE IN ACCORDANCE WITH THE CURRENT EDITION "MAINE EROSION AND SEDIMENT CONTROL PRACTICES FIELD GUIDE FOR CONTRACTORS" BY THE MAINE DEP.
2. IMPLEMENT ALL NECESSARY MEASURES TO CONTROL EROSION AND SEDIMENTATION FROM THE PROJECT SITE AS REQUIRED PURSUANT TO THE MAINE EROSION AND SEDIMENTATION CONTROL LAW.
3. LIMIT AREAS OF EXPOSED SOILS TO THOSE AREAS THAT WILL ACTIVELY BE WORKED. TEMPORARILY STABILIZE ANY AREA OF DISTURBED SOIL THAT REMAINS UNWORKED FOR MORE THAN 14 DAYS USING TEMPORARY MULCHING (IF THE SOIL WILL BE PERMANENTLY STABILIZED WITHIN 30 DAYS) OR TEMPORARY SEEDING AND MULCHING (IF THE SOIL WILL NOT BE PERMANENTLY STABILIZED WITHIN 30 DAYS). PERMANENTLY STABILIZE ANY AREA OF DISTURBED SOIL BROUGHT TO FINAL GRADE WITHIN 7 DAYS. DISTURBED SOILS DO NOT INCLUDE COMPACTED STRUCTURAL FILLS USED FOR ROADS, PARKING LOTS, AND BUILDING FOUNDATIONS.
4. TEMPORARY EROSION CONTROL MEASURES INCLUDE THE USE OF EROSION CONTROL DEVICES, TEMPORARY SEEDING AND MULCHING, CONSTRUCTION PHASING, AND PROVISIONS FOR STABILIZING INACTIVE AREAS. PERMANENT EROSION CONTROL MEASURES INCLUDE THE USE OF EROSION CONTROL BLANKETS, RIPRAP OUTLET PROTECTION, AND PERMANENT SEEDING AND MULCHING.
5. PROVIDE INLET PROTECTION FOR EACH CATCH BASIN ON THE SAME DAY THAT BACKFILL IS PLACED AROUND THE CATCH BASIN.
6. PROVIDE PLANTING SOIL, SEED, FERTILIZER AND MULCH ON ALL DISTURBED AREAS NOT OTHERWISE SPECIFIED. PERMANENT SEEDING SHALL BE ACCOMPLISHED BETWEEN THE DATES OF APRIL 15 AND SEPTEMBER 15. WATER ALL VEGETATED AREAS AS NECESSARY TO ESTABLISH A VIGOROUS GRASS.

B. INSPECTION AND MAINTENANCE

1. INSPECT DISTURBED AND IMPERVIOUS AREAS, EROSION AND STORMWATER CONTROL MEASURES, AREAS USED FOR STORAGE THAT ARE EXPOSED TO PRECIPITATION, AND LOCATIONS WHERE VEHICLES ENTER OR EXIT THE PARCEL AT LEAST ONCE A WEEK AND BEFORE AND AFTER EACH STORM EVENT, GREATER THAN 0.5 INCH, PRIOR TO COMPLETION OF PERMANENT STABILIZATION. MAJOR OBSERVATIONS SHALL INCLUDE: BMPs THAT NEED TO BE MAINTAINED; DISCHARGE OF EROSION AND STORMWATER CONTROL, INCLUDING THE MAINE POLLUTANT DISCHARGE ELIMINATION SYSTEM (MPDES) STANDARDS AND ANY DEPARTMENTAL COMPANION DOCUMENT TO THIS PERMIT, SHALL CONDUCT THE INSPECTION. THIS PERSON SHALL BE IDENTIFIED IN THE INSPECTION LOG. IF BEST MANAGEMENT PRACTICES (BMPs) NEED TO BE MODIFIED OR IF ADDITIONAL BMPs ARE NECESSARY, IMPLEMENTATION SHALL BE COMPLETED WITHIN 7 CALENDAR DAYS AND PRIOR TO ANY STORM EVENT (RAINFALL). ALL MEASURES SHALL BE MAINTAINED IN EFFECTIVE OPERATING CONDITION UNTIL AREAS ARE PERMANENTLY STABILIZED.
2. A LOG (REPORT) SHALL BE KEPT SUMMARIZING THE SCOPE OF THE INSPECTION, NAME(S) AND QUALIFICATIONS OF THE PERSONNEL MAKING THE INSPECTION, THE DATE(S) OF THE INSPECTION, AND MAJOR OBSERVATIONS RELATING TO OPERATION OF EROSION AND SEDIMENTATION CONTROLS AND POLLUTION PREVENTION MEASURES. MAJOR OBSERVATIONS SHALL INCLUDE: BMPs THAT NEED TO BE MAINTAINED; LOCATION(S) OF BMPs THAT FAILED TO OPERATE AS DESIGNED OR PROVED INADEQUATE FOR A PARTICULAR LOCATION; AND LOCATION(S) WHERE ADDITIONAL BMPs ARE NEEDED THAT DID NOT EXIST AT THE TIME OF INSPECTION. FOLLOW-UP TO CORRECT DEFICIENCIES OR ENHANCE CONTROLS SHALL ALSO BE INDICATED IN THE LOG AND DATED, INCLUDING WHAT ACTION WAS TAKEN AND WHEN.
3. MAINTAIN ALL EROSION CONTROL MEASURES FOR THE LIFE OF THE PROJECT AND UNTIL PERMANENT STABILIZATION OF THE ENTIRE SITE IS ESTABLISHED. PERMANENT STABILIZATION SHALL CONSIST OF AT LEAST 90%-PERCENT VEGETATION, PAVEMENT, GRAVEL BASE, OR RIPRAP.
4. SEDIMENT ACCUMULATIONS SHALL BE REMOVED FROM SILT FENCES, HAY BALE BARRIERS, AND STONE CHECK DAMS WHEN THE SEDIMENT DEPTH APPROACHES 6 INCHES, OR AS INDICATED ON DETAILS ON DRAWINGS C-501 AND C-502.
5. THE AREA OF THE DETENTION POND AND EMBANKMENTS SHALL BE INSPECTED WEEKLY AND AFTER EACH STORM EVENT. ALL EROSION AND AREAS OF EXPOSED SOILS SHALL BE PROMPTLY SEEDED AND MULCHED.
6. PROTECT ALL STABILIZED AREAS FROM EROSION AND IMMEDIATELY REPAIR / REVEGETATE ERODED AREAS.
7. REMOVE ALL TEMPORARY EROSION CONTROL MEASURES WITHIN 30 DAYS AFTER THE TRIBUTARY AREA HAS BEEN PERMANENTLY STABILIZED. REMOVE ANY ACCUMULATED SEDIMENTS AND STABILIZE.

C. CONSTRUCTION DEWATERING

1. IF DEWATERING OF EXCAVATIONS ARE NECESSARY, UTILIZE BAG-TYPE DEWATERING SEDIMENT FILTERS. DEWATERING SEDIMENT FILTERS SHALL BE LOCATED A MINIMUM OF 100 FEET FROM ANY WATER BODY OR WETLAND. SEE DETAIL 4/C-502.

D. SEQUENCE OF CONSTRUCTION

1. CONSTRUCTION SHALL BE PHASED TO DISTURB THE LEAST PRACTICAL AREA AT A TIME AND MINIMIZE DISRUPTION. FOR APPROXIMATE CONSTRUCTION PHASE LIMITS, SEQUENCE AND TIMING. CONSTRUCTION IS EXPECTED TO BEGIN IN THE APRIL 2022 AND BE COMPLETED BY JUNE 2023. INITIAL OPERATIONS INCLUDE LAYOUT OF CLEARING LIMITS AND INSTALLATION OF SILT FENCE EROSION CONTROL MIX AND CONSTRUCTION ENTRANCE / EXIT AS INDICATED ON REMOVALS SITE PLAN AND GRADING PLANS.
2. CLEAR TREES, GRUB OUT STUMPS, AND STRIP TOPSOIL. REMOVE ALL WOODY DEBRIS FROM THE PROJECT SITE. STOCKPILE TOPSOIL AS SHOWN ON REMOVALS SITE PLAN AND GRADING PLAN. PROVIDE SILT FENCE DOWNGRADE OF ALL STOCKPILES AND COVER STOCKPILES WITH MULCH.
3. COMMENCE LARGE-SCALE EARTH MOVING OPERATIONS AND INSTALL EROSION CONTROL BLANKETS AND STONE CHECK DAMS AND SWALES AND OTHER AREAS ARE ESTABLISHED. AS AREAS APPROACH FINISH GRADE, AND AFTER ESTABLISHMENT OF GRASS IN THE DETENTION BASIN, CONSTRUCT STORM DRAINAGE SYSTEM BEGINNING AT THE LOW POINT IN THE SYSTEM. PROVIDE CULVERT INLET AND OUTLET PROTECTION AS SOON AS PIPES ARE INSTALLED.
4. PERFORM GRADING AND SHAPING TO FILTER BED SUBGRADE FOR ALL GRASSSED UNDERDRAIN SOIL FILTERS AND SAND FILTERS, AS DEPICTED ON GRADING PLANS. TREATMENT AREAS MAY BE USED AS STORMWATER AND SEDIMENTATION CONTROL TO FACILITATE CONSTRUCTION. AFTER TRIBUTARY AREAS HAVE BEEN PERMANENTLY STABILIZED, REMOVE ANY ACCUMULATED SEDIMENT AND INSTALL UNDERDRAIN TO COMPLETE THE CONSTRUCTION OF THE FILTER BED.
5. CONTINUE WITH OTHER UTILITY (WATER, SEPTIC, ELECTRICAL, ETC.) AND BUILDING CONSTRUCTION. PROVIDE VEGETATION, TEMPORARY SEEDING, MULCHING, OR OTHER SURFACE TREATMENTS AS INDICATED IMMEDIATELY UPON ESTABLISHMENT OF FINISH GRADES.

ITEM	IMPLEMENTATION SCHEDULE
SILT FENCE / EROSION CONTROL MIX / SEDIMENT CONTROL FILTER SOCK	INSTALL AS FIRST ORDER OF WORK AND AS NECESSARY TO CONTROL EROSION FROM THE WORK AREA.
CONSTRUCTION ENTRANCE / EXIT	CONSTRUCT AFTER INSTALLING SILT FENCE AND PRIOR TO EARTHWORK OPERATIONS.
CATCH BASIN INLET PROTECTION	INSTALL SAME DAY THAT BACKFILL IS PLACED AROUND STRUCTURE.
STABILIZATION OF INACTIVE AREAS	MULCH AREAS THAT REMAIN UN-WORKED FOR MORE THAN 14 DAYS AND WILL BE STABILIZED WITHIN 30 DAYS.
SWALES, STEEP SLOPES	INSTALL RIPRAP OR EROSION CONTROL BLANKET/NETTING (AS INDICATED ON DRAWINGS) THE SAME DAY FINAL GRADE IS ESTABLISHED.
GRASS ESTABLISHMENT	SEED AND MULCH DISTURBED AREAS WITHIN 7 DAYS OF BEING BROUGHT TO FINAL GRADE.

F. DITCH AND CULVERT STABILIZATION

1. ANY SECTION OF DITCH, SWALE, OR CHANNEL BROUGHT TO FINAL GRADE SHALL BE STABILIZED WITH A RIPRAP LINING OR PROPERLY-INSTALLED EROSION CONTROL BLANKETS (USED OVER PERMANENT SEEDING) WITHIN 24 HOURS.
2. USE STONE CHECK DAMS AND TEMPORARY MULCHING IN ANY ROUGH-GRADED DITCH THAT WILL NOT BE FINAL GRADED AND PERMANENTLY STABILIZED WITHIN THE NEXT 7 DAYS. THE STONE CHECK DAMS AND MULCHING SHALL BE PUT IN PLACE WITHIN 48 HOURS OR PRIOR TO ANY RAINFALL.

F. SOIL STOCKPILE STABILIZATION

1. SOIL AND FILL STOCKPILES EXPECTED TO REMAIN IN PLACE FOR LESS THAN 30 DAYS SHALL BE COVERED WITH HAY MULCH (AT 90 LBS HAY/1000 SF) OR COVERED WITH A 4 MIL POLYETHYLENE SHEETING, WOVEN OR NON-WOVEN GEOTEXTILE FABRIC WITHIN 7 DAYS OR PRIOR TO ANY RAINFALL.
2. POLYETHYLENE SHEETING OR GEOTEXTILE FABRIC SHALL BE CONTINUOUSLY ANCHORED ON ALL SIDES AND 12" TO 24" OVERLAP AT SEAMS IN THE DIRECTION OF THE RUNOFF. PROVIDE ADDITIONAL ANCHORS ON THE WINDY SIDE OF THE STOCKPILE.
2. SOIL AND FILL STOCKPILES EXPECTED TO REMAIN LONGER THAN 30 DAYS SHALL BE SEEDED WITH A CONSERVATION MIX OF ANNUAL RYE GRASS (AT 0.9 LBS/1000 SF) AND HAY MULCHED (AT 90 LBS HAY/1000 SF) WITHIN 7 DAYS OR PRIOR TO ANY RAINFALL.
3. ALL SOIL AND FILL STOCKPILES SHALL HAVE A SEDIMENT BARRIER (e.g. HAY-BALE BARRIER OR SILT FENCING) INSTALLED AROUND THE DOWNHILL EDGE OF THE STOCKPILE TO TRAP SEDIMENTS.

G. TEMPORARY SEEDING -- (DURING CONSTRUCTION AND PRIOR TO PERMANENT SEEDING) WITHIN 14 DAYS OF INACTIVITY OR 7 DAYS AFTER BEING BROUGHT TO FINISH GRADE.

1. BEDDING -- REMOVE STONES AND TRASH WITHIN SEEDING THE AREA. TILL THE SOIL TO A DEPTH OF ABOUT 3" TO PREPARE SEED BED AND MIX THE FERTILIZER INTO THE SOIL.
2. FERTILIZER -- FERTILIZER SHALL BE UNIFORMLY SPREAD OVER THE AREA PRIOR TO BEING TILLED INTO THE SOIL. A 10-10-10 MIX OF FERTILIZER SHALL BE APPLIED AT A RATE OF 300 POUNDS PER ACRE (OR 7 LBS/1,000 SF).
3. SEED MIXTURE -- USE ANY OF THE FOLLOWING IN UPLAND AREAS:

TEMPORARY SEEDING RATES			
SPECIES	PER ACRE	PER 1,000 SF	SEEDING DATES
WINTER RYE	112 LBS	2.6 LBS	8/15-10/1
OATS	80 LBS	1.8 LBS	4/1-7/1 & 8/15-9/15
ANNUAL RYE GRASS	40 LBS	0.9 LBS	4/1-7/1 WITH MULCH

4. MULCHING FOR TEMPORARY SEEDING -- WHERE IT IS IMPRACTICAL TO INCORPORATE FERTILIZER AND SEED INTO MOIST SOIL, THE SEEDED AREA SHALL BE MULCHED TO FACILITATE GERMINATION. MULCH IN THE FORM OF HAY OR STRAW SHALL BE APPLIED AT A RATE OF 70 TO 90 LBS PER 1,000 SF.
- H. MULCHING
- TEMPORARY MULCHING SHALL BE USED ON SLOPES, CHANNELS, OTHER EROSION PRONE AREAS, AND ALL EXPOSED SOILS THAT CANNOT RECEIVE PERMANENT COVER WITH 14 DAYS OF DISTURBANCE OR WITHIN 7 DAYS IN AREAS WITHIN 100' OF A NATURAL RESOURCE. MULCH SHALL ALSO BE USED FOLLOWING TEMPORARY AND PERMANENT SEEDING AS SPECIFIED. MULCH ANCHORS SHALL BE USED ON SLOPES GREATER THAN 5% IN FALL (PAST SEPTEMBER 15 AND OVER WINTER TO APRIL 15).

MULCHING RATES		
MULCH TYPE	RATE PER 1,000 SF	USE AND COMMENTS
HAY OR STRAW	70 TO 90 LBS *	MOLD FREE AND DRY, MAY BE USED WITH PLANTINGS.
	* DOUBLE THE RATE FOR OVER WINTER STABILIZATION	ANCHOR IN AREAS OF STRONG WIND AND SLOPES GREATER THAN 5%.
WOOD CHIPS OR BARK MULCH	3" THICK OR MORE	USE IN FLAT AREAS AND SHORT 4:1 SLOPES.
EROSION CONTROL BLANKETS / MATS	SEE DETAIL 8/C-502	DITCHES AND STEEP SLOPES.
EROSION CONTROL MIX	2" FOR SLOPES FLATTER THAN 3:1 OR 4" FOR SLOPES GREATER THAN 3:1. ADD AND ADDITIONAL 1/2" PER 20' OF SLOPE UP TO 100' IF SLOPE IS STEEPER THAN 3:1	FOR USE ON SLOPES LESS THAN 45%.

L. TEMPORARY EROSION CONTROL BLANKET SPECIFICATIONS

1. EXCELSIOR EROSION CONTROL BLANKET SHALL CONSIST OF A MACHINE PRODUCED MAT OF CURLED WOOD EXCELSIOR COVERED WITH EITHER A 3 BY 1 INCH WEAVE OF TWISTED CRAFT PAPER OR A 2 BY 1 INCH BIODEGRADABLE EXTRUDED PLASTIC MESH. THE BLANKET SHALL BE OF CONSISTENT THICKNESS WITH FIBERS EVENLY DISTRIBUTED THROUGHOUT. 80 PERCENT OF THE FIBERS SHALL BE OVER 6 INCHES IN LENGTH. MINIMUM WIDTH: 48 INCHES, MINIMUM WEIGHT: 0.8 POUNDS PER SQUARE YARD.
2. STRAW-COCONUT EROSION CONTROL BLANKET SHALL CONSIST OF A MACHINE PRODUCED BLANKET OF 70 PERCENT WHEAT STRAW AND 30 PERCENT COCONUT FIBER WITH PHOTODEGRADABLE NETTING ON BOTH SIDES AND SEWN TOGETHER WITH COTTON THREAD. MINIMUM WIDTH: 48 INCHES, MINIMUM WEIGHT: 0.75 POUNDS PER SQUARE YARD.

J. EXTENDED USE EROSION CONTROL BLANKET SPECIFICATION

1. JUTE EROSION CONTROL BLANKETS SHALL BE OF UNIFORM PLAIN WEAVE SINGLE JUTE YARN AVERAGING APPROXIMATELY 130 POUNDS PER SPINDLE OF 14,400 YARDS. THE YARN SHALL BE LOOSELY TWISTED AND WOVEN INTO 48 INCH WIDE BLANKETS WITH A MINIMUM AVERAGE WEIGHT OF 1.0 POUNDS PER SQUARE YARD.

K. OVER WINTER CONSTRUCTION -- (WINTER CONSTRUCTION PERIOD IS FROM NOVEMBER 1 THROUGH APRIL 15)

ADDITIONAL STABILIZATION MEASURES SHALL BE PROVIDED BY NOVEMBER 1 FOR WINTER AND SPRING SNOW MELT IF THE CONSTRUCTION SITE IS NOT PERMANENTLY STABILIZED WITH PAVEMENT, GRAVEL ROAD BASE, 90% MATURE VEGETATION COVER, EROSION CONTROL MULCH OR RIPRAP. PERMANENT SEEDING SHOULD OCCUR BY AUGUST 15 (45 DAYS BEFORE THE FIRST KILLING FROST), OTHERWISE, OVER WINTER MULCHING IS REQUIRED.

1. DITCHES AND CHANNELS : CONSTRUCT AND STABILIZE ALL GRASS-LINED DITCHES AND CHANNELS BY SEPTEMBER 1. CONSTRUCT AND STABILIZE ALL STONE-LINED DITCHES AND CHANNELS BY NOVEMBER 15.

IF THE CONTRACTOR FAILS TO STABILIZE A DITCH OR CHANNEL TO BE GRASS-LINED (75% COVER) BY NOVEMBER 15, THEN THE CONTRACTOR SHALL TAKE THE FOLLOWING ACTION TO STABILIZE THE DITCH FOR WINTER AND SPRING:

- a. STONE RIPRAP LINING IN THE DITCH OR CHANNEL
- LINE THE DITCH OR CHANNEL WITH STONE RIPRAP BY NOVEMBER 15. USE ANGULAR D50 = 6" STONE FOR STONE RIPRAP OVER FILTER FABRIC. IF NECESSARY, THE CONTRACTOR SHALL REGRADE THE DITCH / CHANNEL PRIOR TO PLACING THE STONE RIPRAP LINING TO PREVENT THE STONE RIPRAP LINING FROM REDUCING THE DITCH'S CROSS-SECTIONAL AREA.

2. VEGETATED AREAS WITH SLOPES OF 15% SLOPE OR LESS: SHOULD HAVE 90% GRASS COVER BY NOVEMBER 1st OR BE SEEDED WITH WINTER RYE AT 3 LBS PER 1,000 SF, MULCHED WITH HAY AT 75 LBS PER 1,000 SF, AND ANCHORED WITH NETTING OR, BY NOVEMBER 15th THE CONTRACTOR SHALL TAKE ONE OF THE THE FOLLOWING ACTIONS TO STABILIZE THE SLOPE FOR WINTER AND SPRING:

- a. EROSION CONTROL BLANKET -- SEE DETAIL 6/C-502.
- b. EROSION CONTROL MIX -- THE MIX MUST BE WELL-GRADED WITH AN ORGANIC COMPONENT THAT IS BETWEEN 50 AND 100% OF DRY WEIGHT, AND THAT IS COMPOSED OF FIBROUS AND ELONGATED FRAGMENTS. THE MINERAL PORTION OF THE MIX SHOULD BE NATURALLY INCLUDED IN THE PRODUCT WITH NO LARGER ROCKS (>3") OR LARGE AMOUNTS OF FINES (SILTS AND CLAYS). IN STUMP GRINDING, THE MINERAL SOIL ORIGINATES FROM THE ROOT BALL AND SHOULD NOT BE REMOVED BEFORE GRINDING. THE MIX SHOULD BE FREE OF REFUSE, MATERIAL TOXIC TO PLANT GROWTH OR UNSUITABLE MATERIAL (BARK CHIPS, GROUND CONSTRUCTION DEBRIS OR REPROCESSED WOOD PRODUCTS). APPLY A THICKNESS OF 2" ON 3:1 SLOPES OR LESS AND ADD AN ADDITIONAL 1/2" PER 20' OF SLOPE OR UP TO 4" FOR A 100' SLOPE.
- c. HAY MULCH -- APPLY AT A RATE OF 150 LBS PER 1,000 SF (3 TONS PER ACRE) AND ANCHORED WITH NETTING (PEG AND TWINE) OR A TRAKIFIER TO PREVENT MULCH DISPLACEMENT BEFORE FREEZING CONDITIONS. NO SOIL SHOULD BE VISIBLE THROUGH THE MULCH AND HAY MULCH CAN NOT BE APPLIED OVER SNOW.

3. VEGETATED SLOPES GREATER THAN 15% : SHOULD BE SEEDED AND MULCHED BY SEPTEMBER 1. IF A SLOPE IS NOT STABILIZED BY OCTOBER 15, THE SOIL MAY BE SEEDED WITH WINTER RYE AT A SEEDING RATE OF 3 LBS PER 1,000 SF AND PROTECTED WITH EROSION CONTROL BLANKETS. IF THE RYE FAILS TO GROW 3" OR FAILS TO COVER AT LEAST 75% OF THE SLOPE BY NOVEMBER 15, THE CONTRACTOR SHALL TAKE ONE OF THE THE FOLLOWING ACTIONS TO STABILIZE THE SLOPE FOR WINTER AND SPRING:

- a. EROSION CONTROL BLANKET -- SEE DETAIL 8/C-502.
- b. EROSION CONTROL MIX -- THE MIX MUST BE WELL-GRADED WITH AN ORGANIC COMPONENT THAT IS BETWEEN 50 AND 100% OF DRY WEIGHT, AND THAT IS COMPOSED OF FIBROUS AND ELONGATED FRAGMENTS. THE MINERAL PORTION OF THE MIX SHOULD BE NATURALLY INCLUDED IN THE PRODUCT WITH NO LARGER ROCKS (>3") OR LARGE AMOUNTS OF FINES (SILTS AND CLAYS). IN STUMP GRINDING, THE MINERAL SOIL ORIGINATES FROM THE ROOT BALL AND SHOULD NOT BE REMOVED BEFORE GRINDING. THE MIX SHOULD BE FREE OF REFUSE, MATERIAL TOXIC TO PLANT GROWTH OR UNSUITABLE MATERIAL (BARK CHIPS, GROUND CONSTRUCTION DEBRIS OR REPROCESSED WOOD PRODUCTS). APPLY A THICKNESS OF 4" ON GREATER THAN 3:1 AND AND IF SLOPES ARE GREATER THAN 60' LONG, 5" IS NEEDED.
- c. RIPRAP -- ANGULAR STONE WITH SIZE AND THICKNESS APPROPRIATE TO STABILIZE THE SLOPE.

4. SOIL STOCKPILES : SHOULD BE MULCHED FOR OVER WINTER PROTECTION WITH HAY AT TWICE THE NORMAL RATE (150 LBS PER 1,000 SF), OR WITH 4" LAYER OF EROSION CONTROL MIX. DO NOT LEAVE STOCKPILES, EVEN OVER WINTER (EVEN MULCHED), WITHIN 100' OF OF A PROTECTED RESOURCE.

L. PERMANENT SEEDING -- (SEEDING DATES APRIL 15 TO AUGUST 15 ONLY)

1. PERMANENT SEEDING SHALL OCCUR BY AUGUST 15 (45 DAYS BEFORE THE FIRST KILLING FROST TO ALLOW FOR 90% STAND OF TURF TO ESTABLISH PRIOR TO NOVEMBER 1.
2. SITE PREPARATION -- INSTALL NEEDED SURFACE WATER CONTROL MEASURES PRIOR TO SEEDING. GRADE TO PERMIT USE OF CONVENTIONAL EQUIPMENT FOR SEED-BED PREPARATION. PROVIDE ADEQUATE DRAINAGE WHERE INTERNAL WATER MOVEMENT MAY CAUSE SEEPS OR SLIPPAGE BEFORE SEEDING IS WELL ESTABLISHED.
3. BEDDING -- STONES, TRASH, ROOTS, AND OTHER DEBRIS THAT WILL INTERFERE WITH SEEDING AND FUTURE MAINTENANCE OF THE AREA SHALL BE REMOVED. WHERE FEASIBLE, THE SOIL SHALL BE TILLED TO A DEPTH OF 4" TO PREPARE A SEEDBED AND MIX FERTILIZER INTO THE SOIL. WHEN PRACTICAL, PERFORM ALL CULTURAL OPERATIONS AT RIGHT ANGLES TO THE SLOPE. PROVIDE THE BEST CONDITIONS POSSIBLE FOR SEEDING.

4. FERTILIZER -- LIME AND FERTILIZER SHALL BE APPLIED EVENLY OVER THE AREA PRIOR TO OR AT THE TIME OF SEEDING AND INCORPORATED INTO THE SOIL. KINDS AND AMOUNTS OF LIME AND FERTILIZER SHALL BE BASED ON AN EVALUATION OF SOIL TESTS. WHEN A SOIL TEST IS NOT AVAILABLE, THE FOLLOWING MINIMUM SHALL BE APPLIED:

- a. GROUND LIMESTONE AT A RATE OF 138 LBS PER 1,000 SF (3 TONS PER ACRE) 10-20-20 FERTILIZER OR EQUIVALENT AT 18.4 LBS PER 1,000 SF (800 LBS PER ACRE) WORK LIME AND FERTILIZER INTO THE SOIL TO A DEPTH OF 4" EITHER BEFORE OR DURING THE FINAL SEEDED PREPARATIONS.

5. SEED MIXTURE: SEE SPECIFICATIONS AND DRAWINGS FOR SEEDING MIXTURES AND LOCATIONS OF SEED MIXTURE TYPES.

M. RIPRAP SPECIFICATION

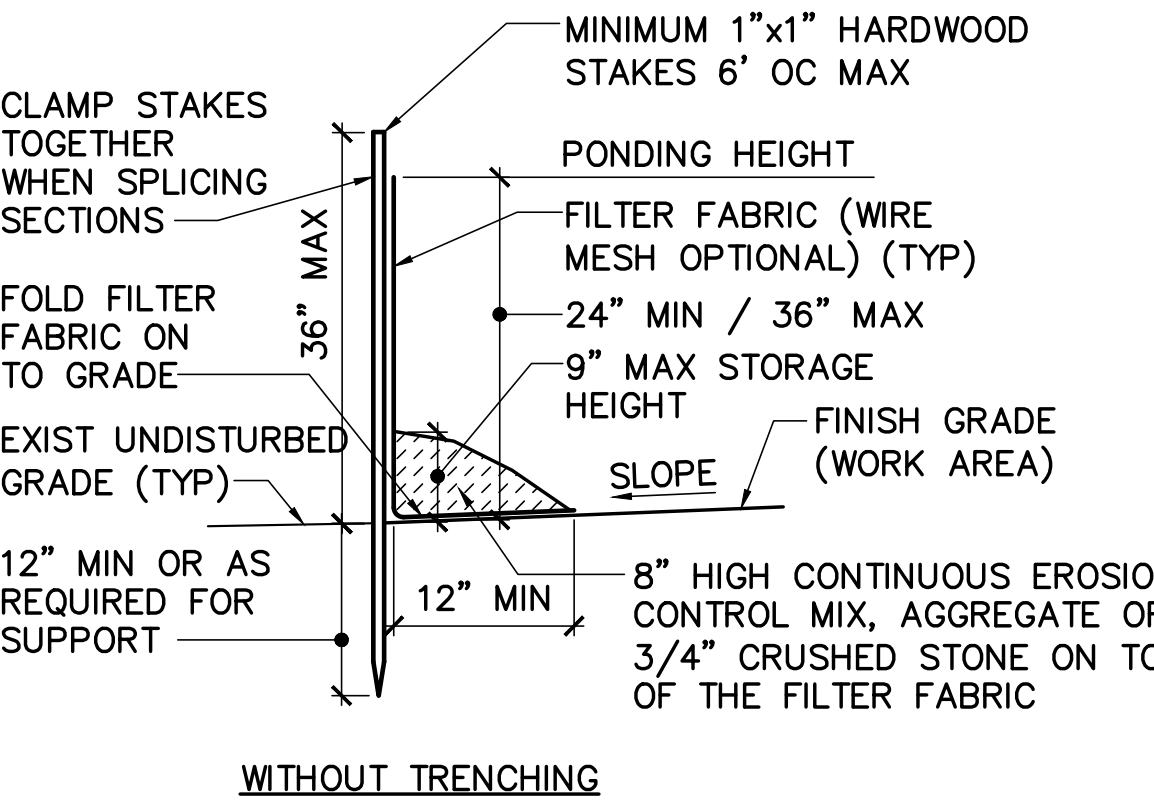
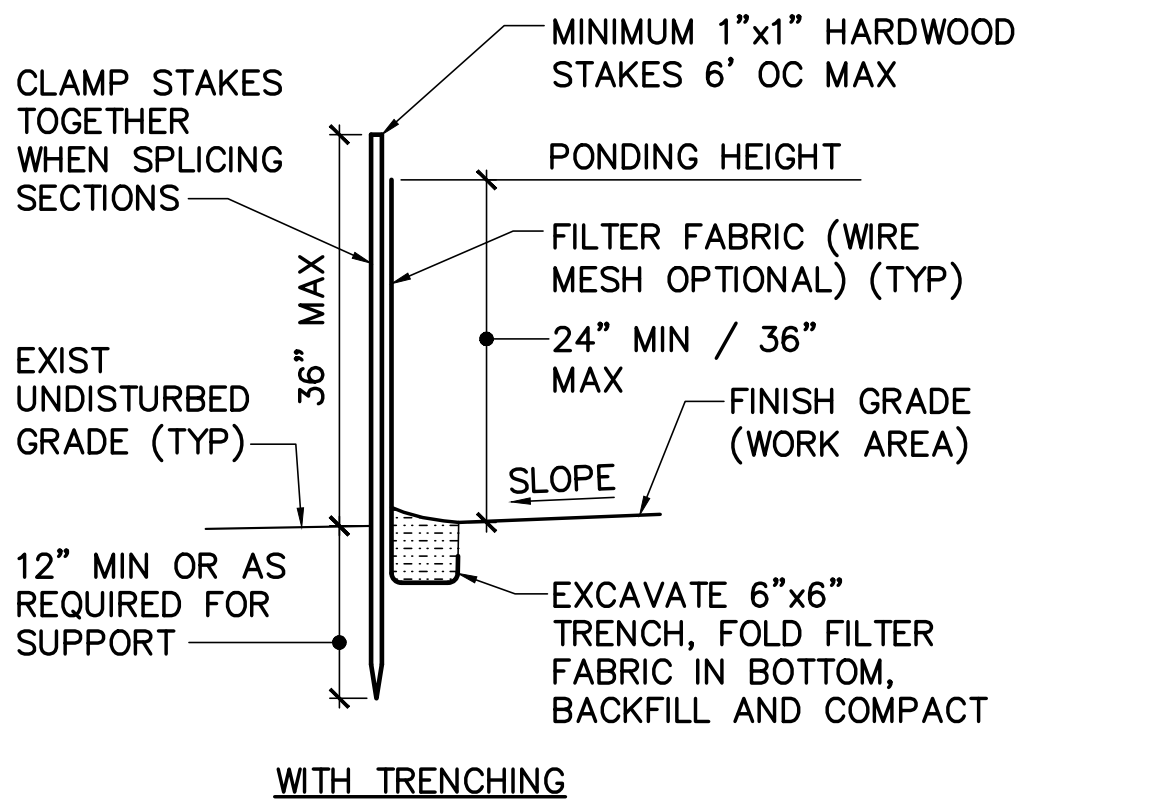
ALL RIPRAP AND STONE FOR CHECK DAMS AND STONE LININGS SHALL CONSIST OF SOUND, DURABLE ROCK WHICH WILL NOT DISINTEGRATE BY EXPOSURE TO WATER OR WEATHER. ANGULAR FIELD STONE, ROUGH QUARRY STONE OR BLASTED LEDGE ROCK MAY BE USED. THE MEDIAN STONE SIZE SHALL BE AS INDICATED. THE MAXIMUM STONE SIZE SHALL BE TWICE THE MEDIAN SIZE. INCLUDE ENOUGH SMALLER STONES TO FILL THE VOIDS IN THE LARGER STONES.

N. OFF-SITE VEHICLE TRACKING

1. VEHICLE ACCESS TO THE CONSTRUCTION AREA SHALL UTILIZE A STABILIZED CONSTRUCTION ENTRANCE, SEE DETAIL 3/C-502.

O. HOUSEKEEPING

1. ALL WASTE MATERIALS SHALL BE COLLECTED AND STORED IN SECURELY LIDDED RECEPTACLES. ALL TRASH AND CONSTRUCTION DEBRIS FROM THE SITE SHALL BE DEPOSITED IN A DUMPSTER. NO CONSTRUCTION WASTE MATERIALS SHALL BE BURIED ON SITE.
2. ALL HAZARDOUS WASTE MATERIALS SHALL BE DISPOSED OF IN THE MANNER SPECIFIED BY LOCAL OR STATE REGULATIONS OR BY THE MANUFACTURER.
3. ALL SANITARY WASTE SHALL BE COLLECTED FROM THE PORTABLE UNITS A MINIMUM OF ONCE PER WEEK BY A LICENSED SANITARY WASTE MANAGEMENT CONTRACTOR.
4. ALL MATERIALS STORED ON SITE SHALL BE STORED IN A NEAT, ORDERLY MANNER IN THEIR PROPER (ORIGINAL IF POSSIBLE) CONTAINER AND IF POSSIBLE UNDER A ROOF OR OTHER ENCLOSURE. STORE ONLY SUFFICIENT AMOUNTS OF MATERIALS TO COMPLETE THE JOB.
5. DISPOSE OF NOT TO BE USED SURPLUS MATERIALS OFF SITE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND STATE AND FEDERAL CODES.
6. ALL CONSTRUCTION RELATED EQUIPMENT AND VEHICLES SHALL BE MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTATIVE MAINTENANCE TO REDUCE LEAKAGE.
7. CONCRETE TRUCKS SHALL DISCHARGE AND WASH OUT SURPLUS CONCRETE OR DRUM WASH WATER IN A CONTAINED AREA ON SITE.
8. ALL SPILLS SHALL BE CLEANED UP IMMEDIATELY AFTER DISCOVERY IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDED METHODS. MATERIALS AND EQUIPMENT NECESSARY FOR SPILL CLEANUP SHALL BE KEPT IN THE MATERIAL STORAGE AREA ON SITE AND SHALL INCLUDE, BUT BE NOT LIMITED TO, BROOMS, DUSTPANS, MOPS, RAGS, GLOVES, GOGGLES, KITTY LITTER, SAND, SAWDUST AND PLASTIC OR METAL TRASH CONTAINERS. SPILLS OF TOXIC OR HAZARDOUS MATERIALS SHALL BE REPORTED TO THE APPROPRIATE STATE OR LOCAL GOVERNMENT AGENCY IMMEDIATELY REGARDLESS OF THE SIZE.



SILT FENCE NOTES

1. SEDIMENT DEPOSITS SHALL BE REMOVED WHEN DEPOSITS EXCEED 6" IN DEPTH.
2. SILT FENCES SHALL BE INSPECTED AFTER EACH RAINFALL AND ALL NECESSARY REPAIRS/REPLACEMENT MADE IMMEDIATELY.
3. SILT FENCES SHALL BE REMOVED AFTER SATISFACTORY VEGETATIVE COVER IS ESTABLISHED. PROVIDE TOPSOIL, FINISH GRADE, SEED AND MULCH DISTURBED AREAS.
4. IN AREAS WHERE SILT FENCE CAN NOT BE TRENCHED SUCH AS FROZEN GROUND, BEDROCK, STONY SOIL, ROOTS OR NEAR A PROTECTED RESOURCE THE SILT FENCE SHALL BE ANCHORED USING THE "WITHOUT TRENCHING" METHOD SHOWN ABOVE.

1 TYP SILT FENCE DETAIL C-501/NOT TO SCALE

CD101, CG101

FOR PERMITTING PURPOSES ONLY NOT FOR CONSTRUCTION



DESIGNED BY: JLG
DRAWN BY: JLG
CHECKED BY: JLG
PROJECT: 22104.04

OWNER:
SOUTHERN MAINE
AFFORDABLE HOUSING

PROJECT TITLE AND LOCATION:
ADAMS POINT HOUSING

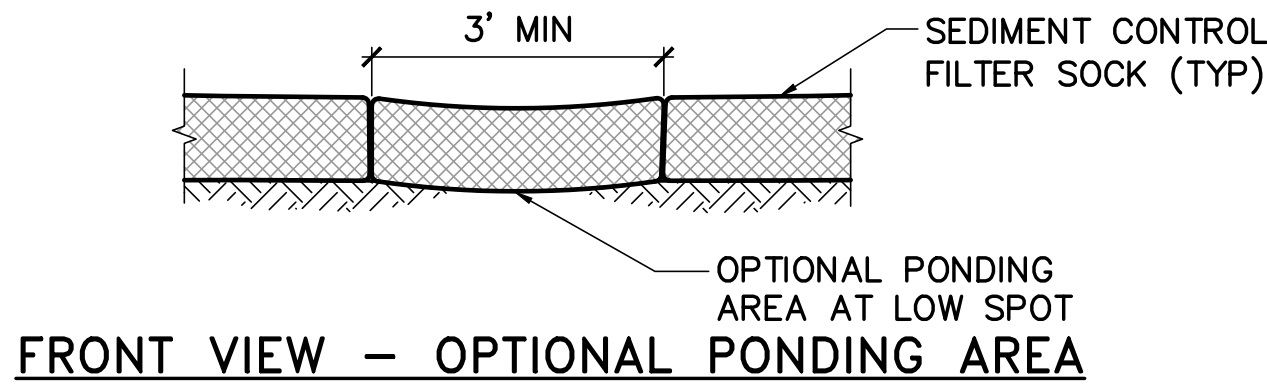
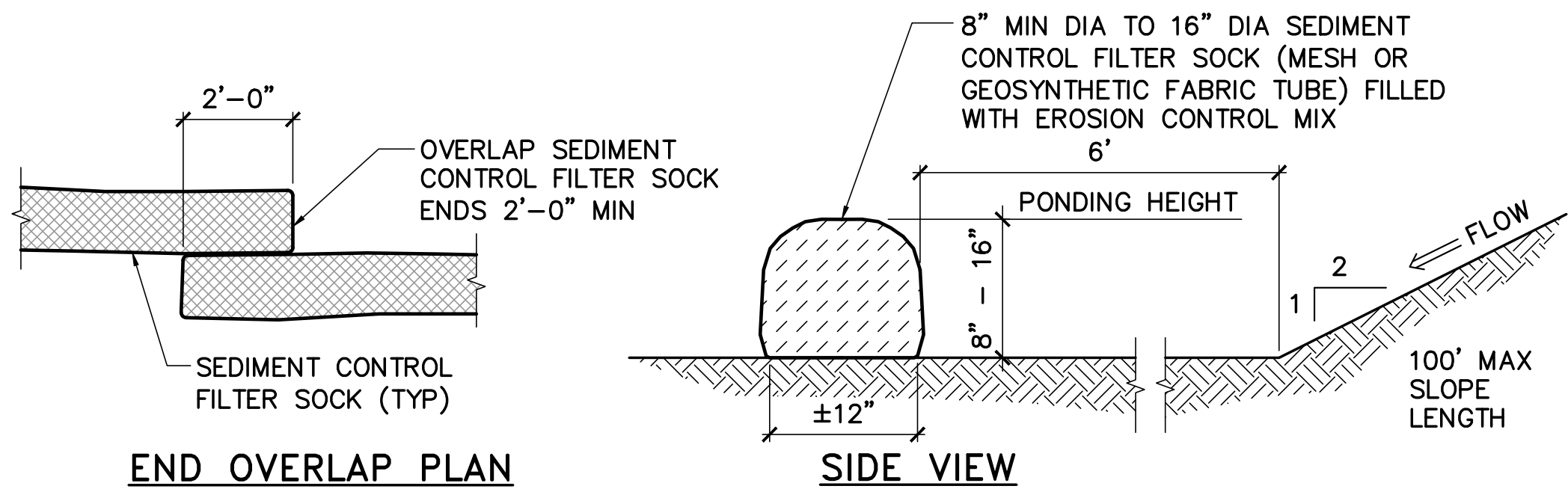
EROSION
CONTROL
NOTES AND
DETAIL

SCALE: AS NOTED

DATE: 08-02-2021

DWG.: C-501

SHEET: 11 OF 23

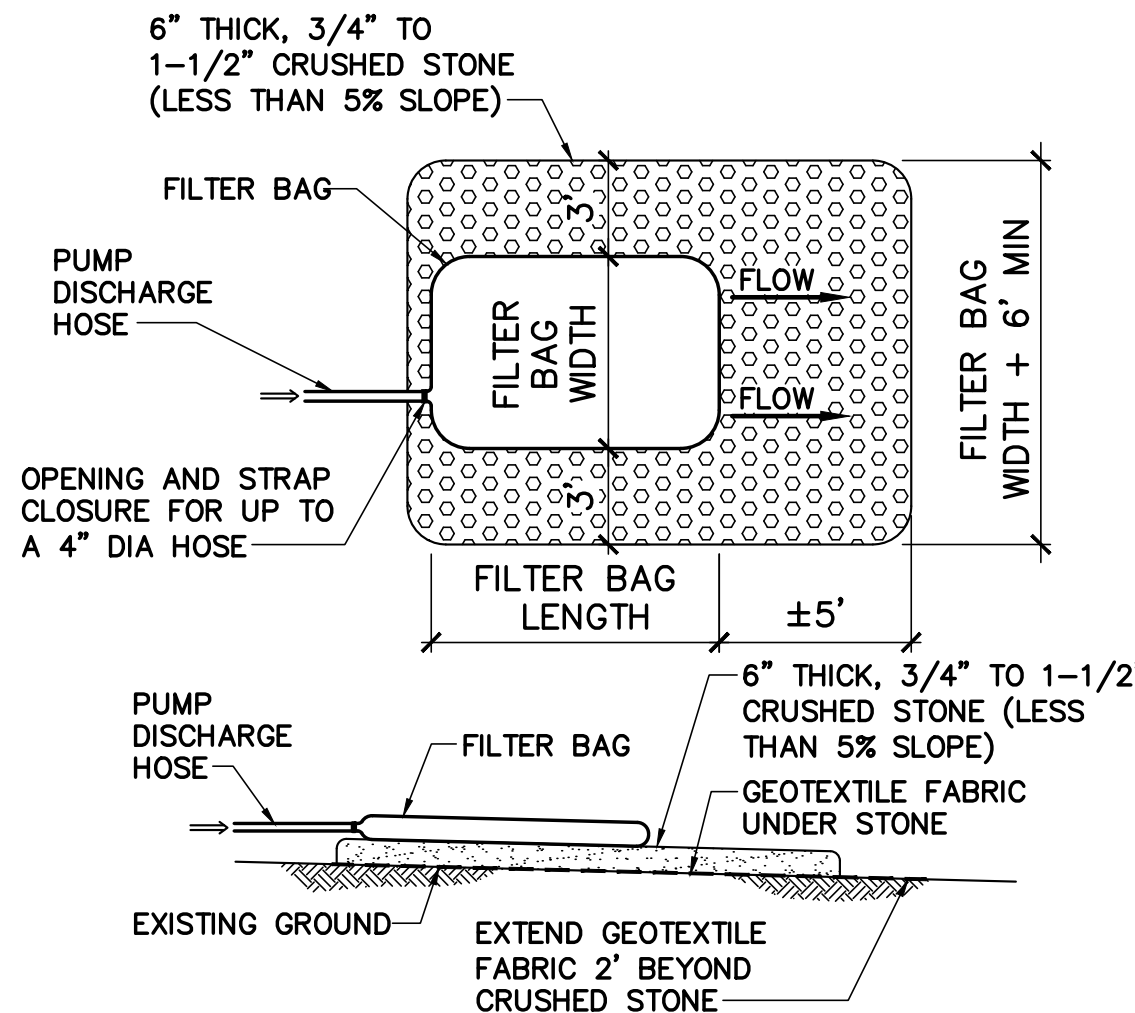


SEDIMENT CONTROL FILTER SOCK NOTES:

- SEDIMENT CONTROL FILTER SOCKS SHALL BE MANUFACTURED FOR THE PURPOSE OF TEMPORARY SEDIMENT CONTROL AND INSTALLED ACCORDING TO THE MANUFACTURERS RECOMMENDATIONS.
- REMOVE ROOTS, ROCKS, MOW OR FLATTEN GRASS TO MAINTAIN FULL CONTACT WITH GROUND AND FILTER SOCK.
- REMOVE ACCUMULATED SEDIMENT WHEN IT REACHES ONE HALF THE FILTER SOCK HEIGHT.
- SEDIMENT CONTROL FILTER SOCKS SHALL REMAIN IN PLACE UNTIL ALL AREAS ARE STABILIZED.
- SECURE SEDIMENT CONTROL FILTER SOCKS WITH CONCRETE BLOCKS AND/OR WOOD STAKES IN LOCATIONS WHERE SOCK FAILS TO REMAIN IN PLACE DUE TO HYDRAULIC FORCE.
- EROSION CONTROL MIX SHALL CONSIST PRIMARILY OF WELL GRADED ORGANIC MATERIAL AND SHALL INCLUDE SHREDDED BARK, STUMP GRINDINGS, COMPOSTED BARK, OR OTHER PRODUCTS BASED ON A SIMILAR RAW SOURCE. SILT, CLAY, OR FINE SAND ARE NOT ACCEPTABLE IN THE FILTER SOCK EROSION CONTROL MIX.

1 TYP SEDIMENT CONTROL FILTER SOCK DETAIL

CD101, CG101, C-502 NOT TO SCALE

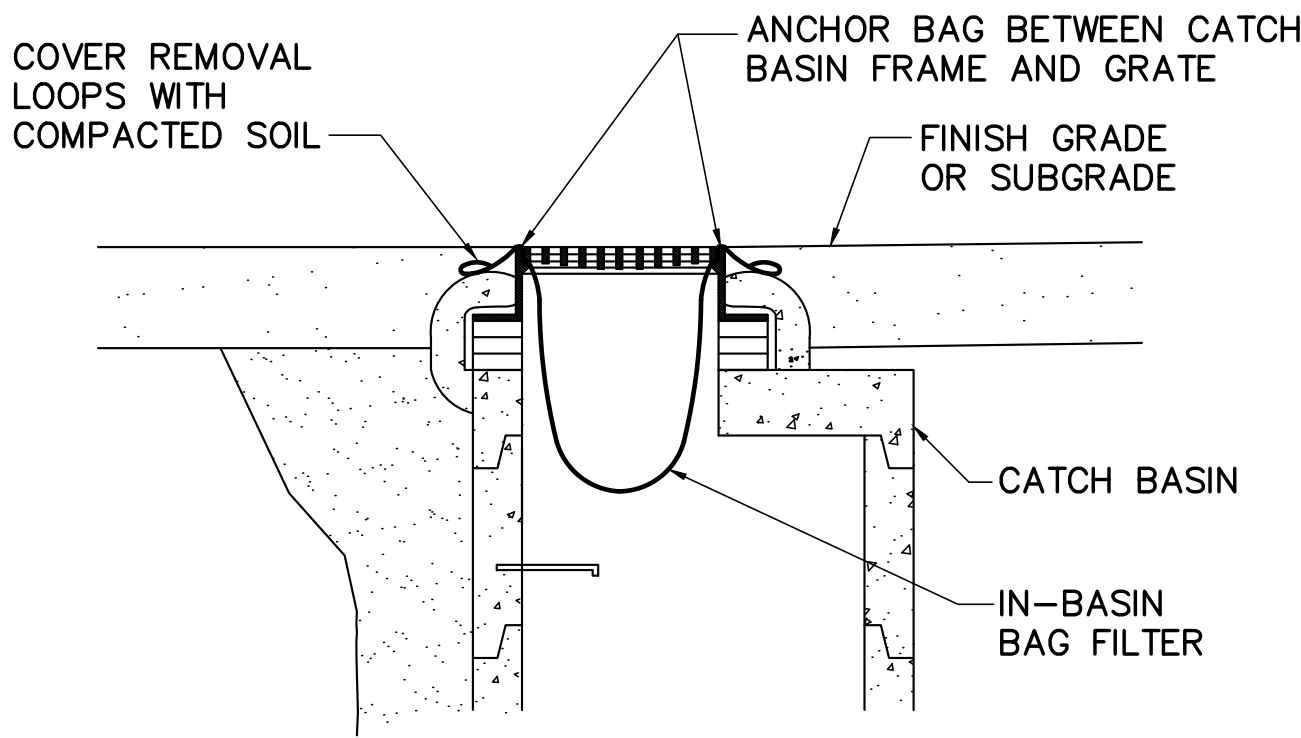


GEOTEXTILE FILTER BAG NOTES:

- DEWATERING SEDIMENT FILTERS SHALL BE LOCATED A MINIMUM OF 100 FEET FROM ANY WATER BODY OR WETLAND. DEWATERING SEDIMENT FILTERS SHALL BE A NON-WOVEN GEOTEXTILE FABRIC WITH THE FOLLOWING MINIMUM PROPERTIES:
 - WEIGHT IN ACCORDANCE WITH ASTM D3776: 8 OZ/YARD MIN
 - GRAB TENSILE STRENGTH IN ACCORDANCE WITH ASTM D4632: 205 LBS MIN
 - PUNCTURE RESISTANCE IN ACCORDANCE WITH ASTM D4833: 110 LBS MIN
 - MULLEN BURST STRENGTH IN ACCORDANCE WITH ASTM D3786: 350 PSI MIN
 - AOS % RETAINED IN ACCORDANCE WITH ASTM D4751: 100 US SIEVE
 - FLOW RATE IN ACCORDANCE WITH ASTM D4491: 60 GAL/MIN/SF
- INSTALL, OPERATE AND REMOVE DEWATERING SEDIMENT FILTERS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND PRINTED INSTRUCTIONS.

4 TYP GEOTEXTILE FILTER BAG DETAIL

C-501, C-502 NOT TO SCALE

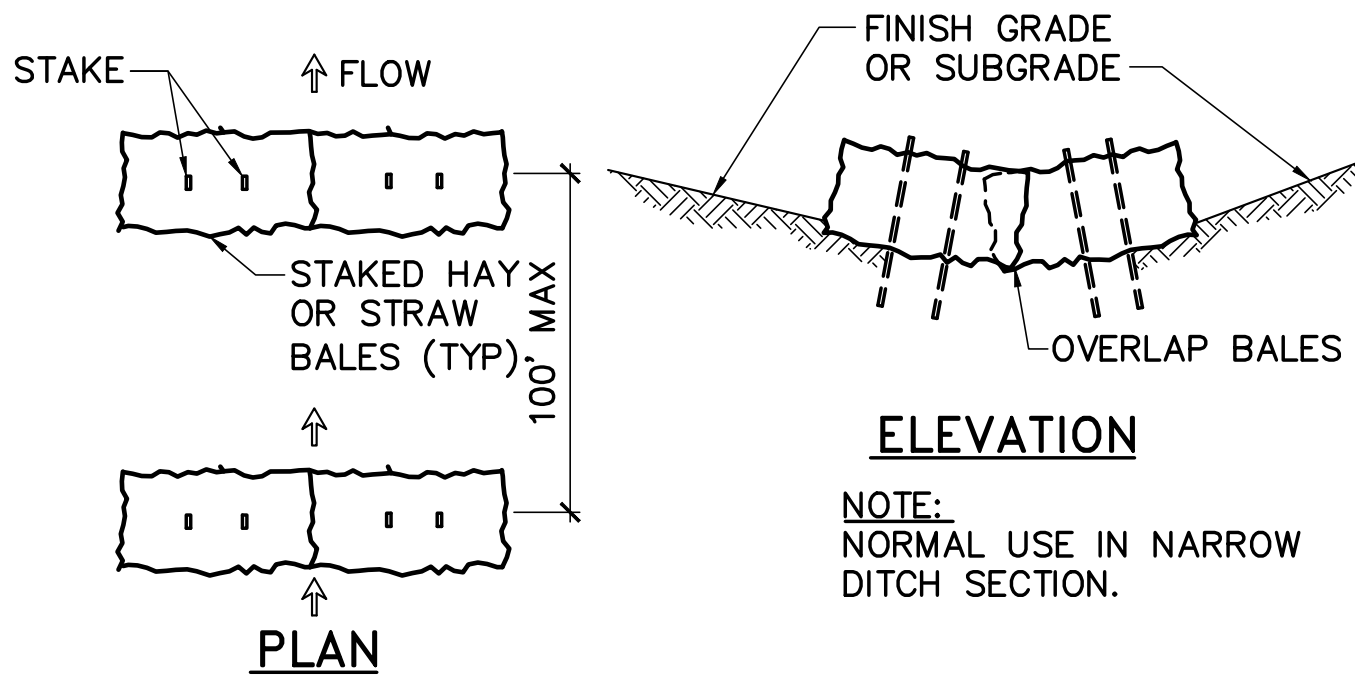


NOTES

- IN-BASIN BAG FILTERS SHALL BE A WOVEN POLYPROPYLENE WITH THE FOLLOWING MINIMUM PROPERTIES:
 - GRAB TENSILE STRENGTH ACCORDING TO ASTM D4632: 300 LBS
 - PUNCTURE RESISTANCE ACCORDING TO ASTM D4833: 120 LBS
 - MULLEN BURST ACCORDING TO ASTM D3786: 800 PSI
 - FLOW RATE ACCORDING TO ASTM D4491: 44 GAL/MIN/SF
- BAG FILTER SEAMS SHALL BE DOUBLE STITCHED WITH HIGH-STRENGTH NYLON THREAD AND SHALL HAVE AN AVERAGE WIDE WIDTH STRENGTH PER ASTM D4884 OF 165 LBS/INCH.
- PROVIDE TYPE A INLET PROTECTION IN EXISTING OR NEWLY PAVED AREAS WITH NON-STABILIZED TRIBUTARY WATERSHEDS.
- REMOVE ACCUMULATED SEDIMENTS IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. DO NOT PUNCTURE BAG FILTER TO CLEAN OUT SEDIMENT.

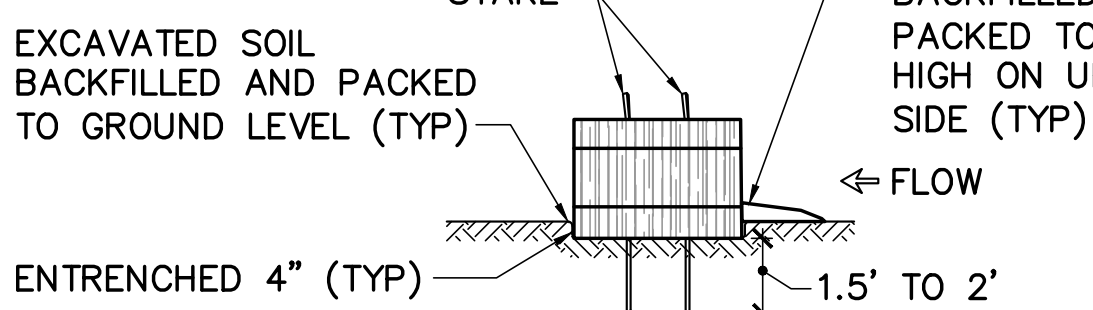
2 TYP CATCH BASIN INLET PROTECTION DETAIL

CD101, CG101, C-502 NOT TO SCALE



ELEVATION

NOTE:
NORMAL USE IN NARROW DITCH SECTION.



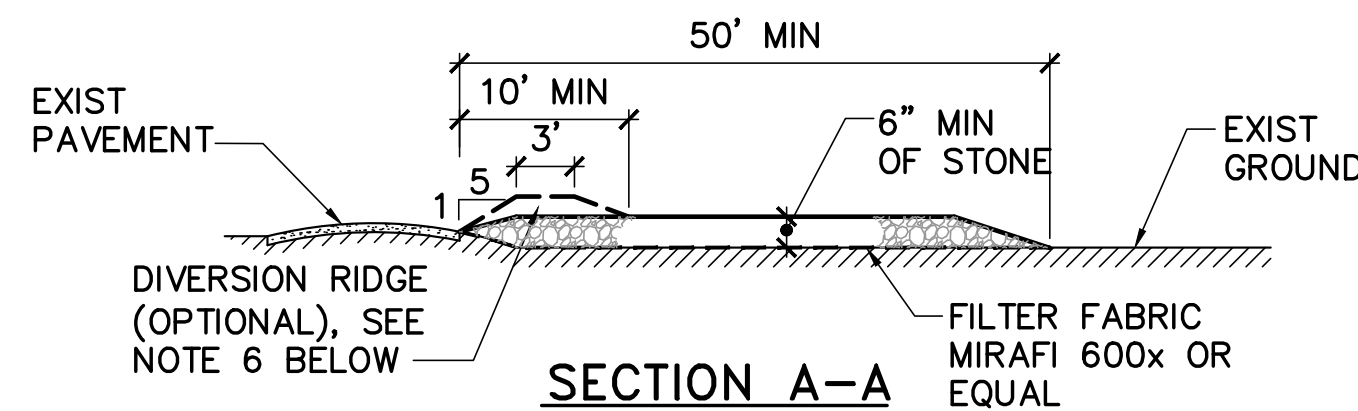
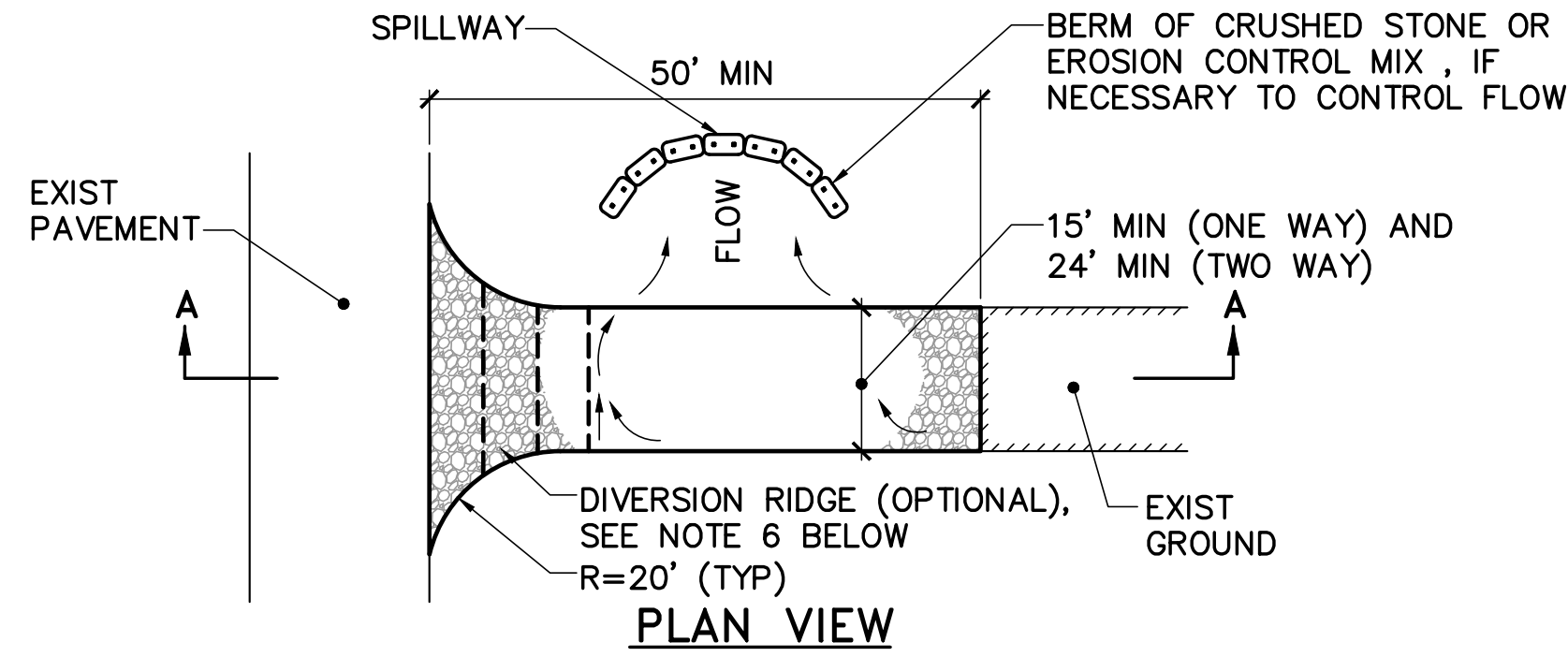
ENTRENCHED DETAIL

HAY BALE EROSION PROTECTION NOTES:

- EACH BALE SHALL BE ENTRENCHED IN THE SOIL A MINIMUM OF 4".
- BALES SHALL BE SECURELY ANCHORED IN PLACE BY A MINIMUM OF 2 STAKES DRIVEN THROUGH THE BALES 1.5' TO 2' INTO THE GROUND. THE FIRST STAKE IN EACH BALE SHALL BE ANGLED TOWARD PREVIOUSLY LAID BALE TO FORCE BALES TOGETHER. THE BINDINGS ON THE BALES SHALL BE PARALLEL WITH THE GROUND.
- FILL GAPS BETWEEN BALES BY CHINKING / WEDGING WITH HAY OR STRAW TO PREVENT WATER FLOW BETWEEN BALES.
- INSPECTION SHALL BE FREQUENT AND REPAIR OR REPLACEMENT SHALL BE MADE IMMEDIATELY AS NEEDED.
- BALES ARE FOR USE AS SEDIMENT BARRIERS FOR SMALL DISTURBANCES WITH A SMALL WATERSHED, AND AS AS EMERGENCY MEASURE FOR CONTROLLING UNEXPECTED SEDIMENTATION.
- BALES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFULNESS SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.
- BALES MAY BE USED AS SILT FENCE REINFORCEMENT AS NECESSARY. PLACE THE BALE IN CONTACT (THE LONG SIDE OF THE BALE) AND PARALLEL TO THE SILT FENCE ON THE DOWN SLOPE SIDE.

5 TYP HAY BALE EROSION PROTECTION DETAIL

C-502 NOT TO SCALE

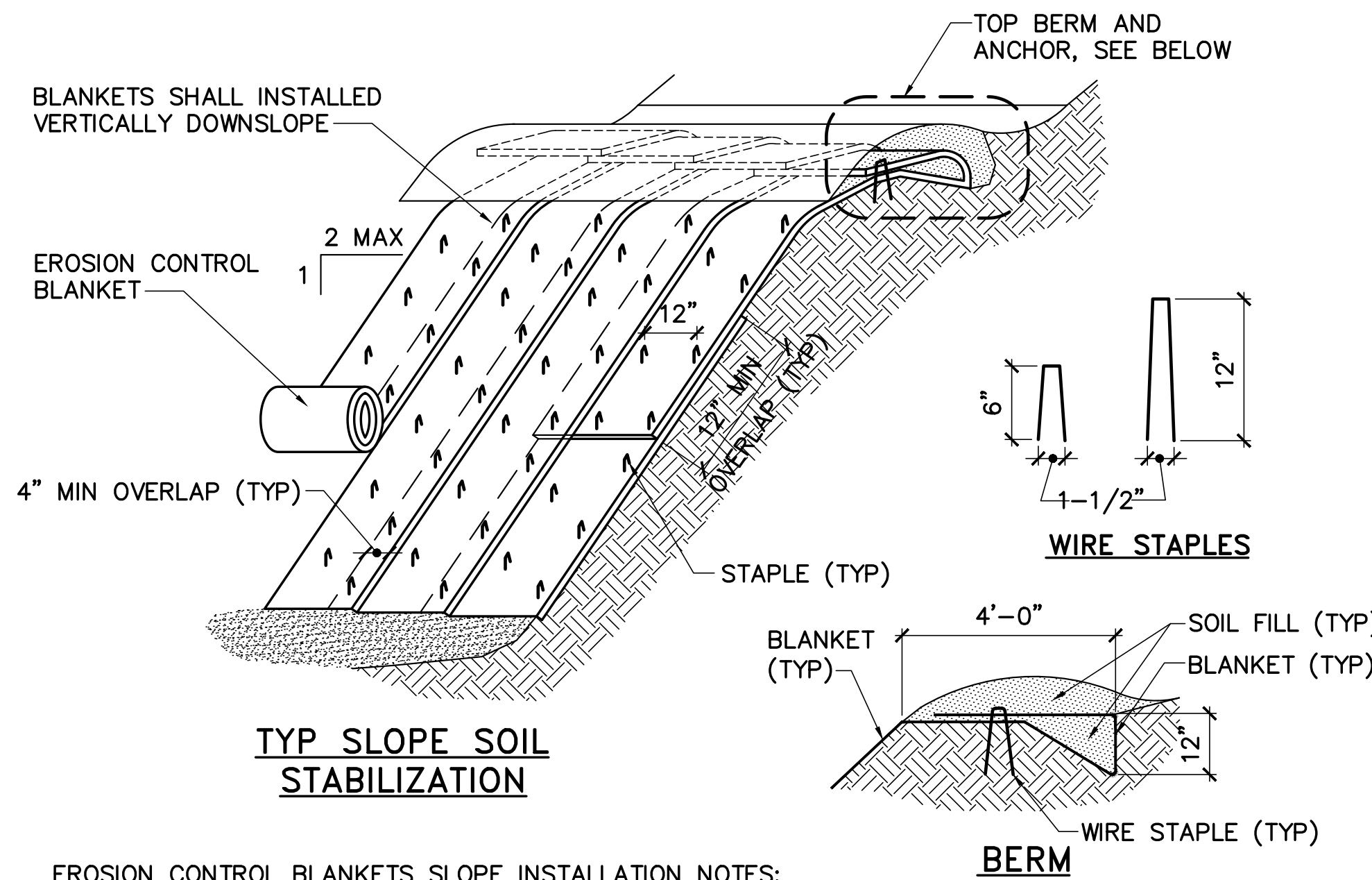


STABILIZED CONSTRUCTION ENTRANCE / EXIT NOTES

- STONE FOR A STABILIZED CONSTRUCTION ENTRANCE / EXIT SHALL BE ANGULAR 2 TO 3 INCH STONE OR APPROPRIATE RECLAIMED CONCRETE MATERIAL.
- THE LENGTH OF THE STABILIZED ENTRANCE / EXIT SHALL NOT BE LESS THAN 50 FEET.
- THE THICKNESS OF THE STONE FOR THE STABILIZED ENTRANCE / EXIT SHALL NOT BE LESS THAN 6 INCHES.
- THE WIDTH OF THE ENTRANCE / EXIT SHALL NOT BE LESS THAN THE FULL WIDTH OF THE ENTRANCE WHERE INGRESS OR EGRESS OCCURS OR 20 FEET, WHICHEVER IS GREATER.
- GEOTEXTILE FILTER FABRIC SHALL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING THE STONE.
- ALL SURFACE WATER THAT IS FLOWING TO OR DIVERTED TOWARD THE CONSTRUCTION ENTRANCE / EXIT SHALL BE PIPED BENEATH THE ENTRANCE. IF PIPING IS IMPRACTICAL, A DIVERSION RIDGE WITH 5:1 SLOPES THAT CAN BE CROSSED BY VEHICLES MAY BE SUBSTITUTED FOR THE PIPE. IF THE ENTRANCE / EXIT SLOPES 5% OR MORE TOWARD THE EXISTING ROAD A DIVERSION RIDGE IS REQUIRED.
- THE ENTRANCE / EXIT SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, WASHED, OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY SHALL BE REMOVED IMMEDIATELY.
- WHEELS SHALL BE CLEANED TO REMOVE MUD PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE PERFORMED ON AN AREA STABILIZED WITH STONE WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.

3 STABILIZED CONSTRUCTION ENTRANCE / EXIT DETAIL

CD101, CG101, C-501, C-502 NOT TO SCALE



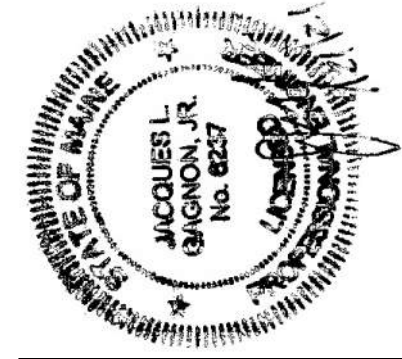
TYP SLOPE SOIL STABILIZATION

EROSION CONTROL BLANKETS SLOPE INSTALLATION NOTES:

- INSTALL BLANKETS AND WIRE STAPLES PER MANUFACTURER'S WRITTEN RECOMMENDATIONS. THE NUMBER OF WIRE STAPLES AND ROWS OF STAPLES PER EROSION CONTROL BLANKET MANUFACTURER'S WRITTEN INSTRUCTIONS.
- SLOPE SURFACE SHALL BE FREE OF ROCKS, CLODS, STICKS AND GRASS. BLANKETS SHALL HAVE GOOD SOIL CONTACT.
- APPLY PERMANENT SEEDING BEFORE PLACING BLANKETS.
- LAY BLANKETS LOOSELY AND WIRE STAPLE TO MAINTAIN DIRECT CONTACT WITH SOIL, DO NOT STRETCH.

8 EROSION CONTROL BLANKETS SLOPE INSTALLATION

CG101, C-501, C-502 NOT TO SCALE



DESIGNED BY: JLG
DRAWN BY: DEW
CHECKED BY: JLG
PROJECT: 22104.04

OWNER:
SOUTHERN MAINE
AFFORDABLE HOUSING
22 South Street
Biddeford, Maine, 04005

PROJECT TITLE AND LOCATION:
ADAMS POINT HOUSING
69 Adams Street
Biddeford, Maine, 04005

EROSION CONTROL
DETAILS

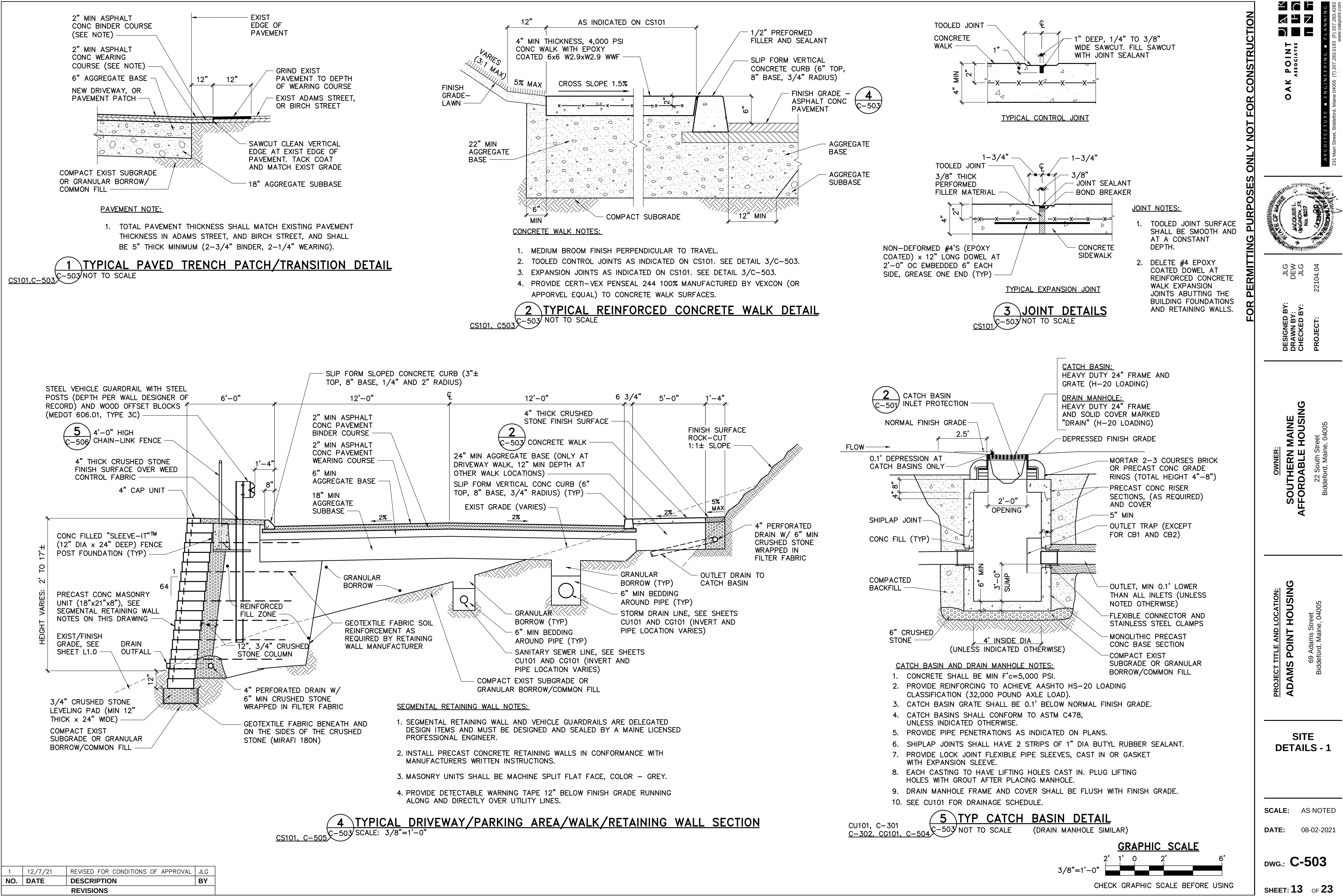
SCALE: AS NOTED

DATE: 08-02-2021

DWG.: C-502

SHEET: 11 OF 23

NO.	DATE	DESCRIPTION	BY
1	12/7/21	REVISED FOR CONDITIONS OF APPROVAL	JLG
REVISIONS			



1	12/7/21	REVISED FOR CONDITIONS OF APPROVAL	JLG
NO.	DATE	DESCRIPTION	BY
REVISIONS			

ARCHITECTURE • ENGINEERING • PLANNING
231 Main Street, Biddeford, Maine 04005 (T) 207-283-0183 (F) 207-283-0283
www.oakpoint.com

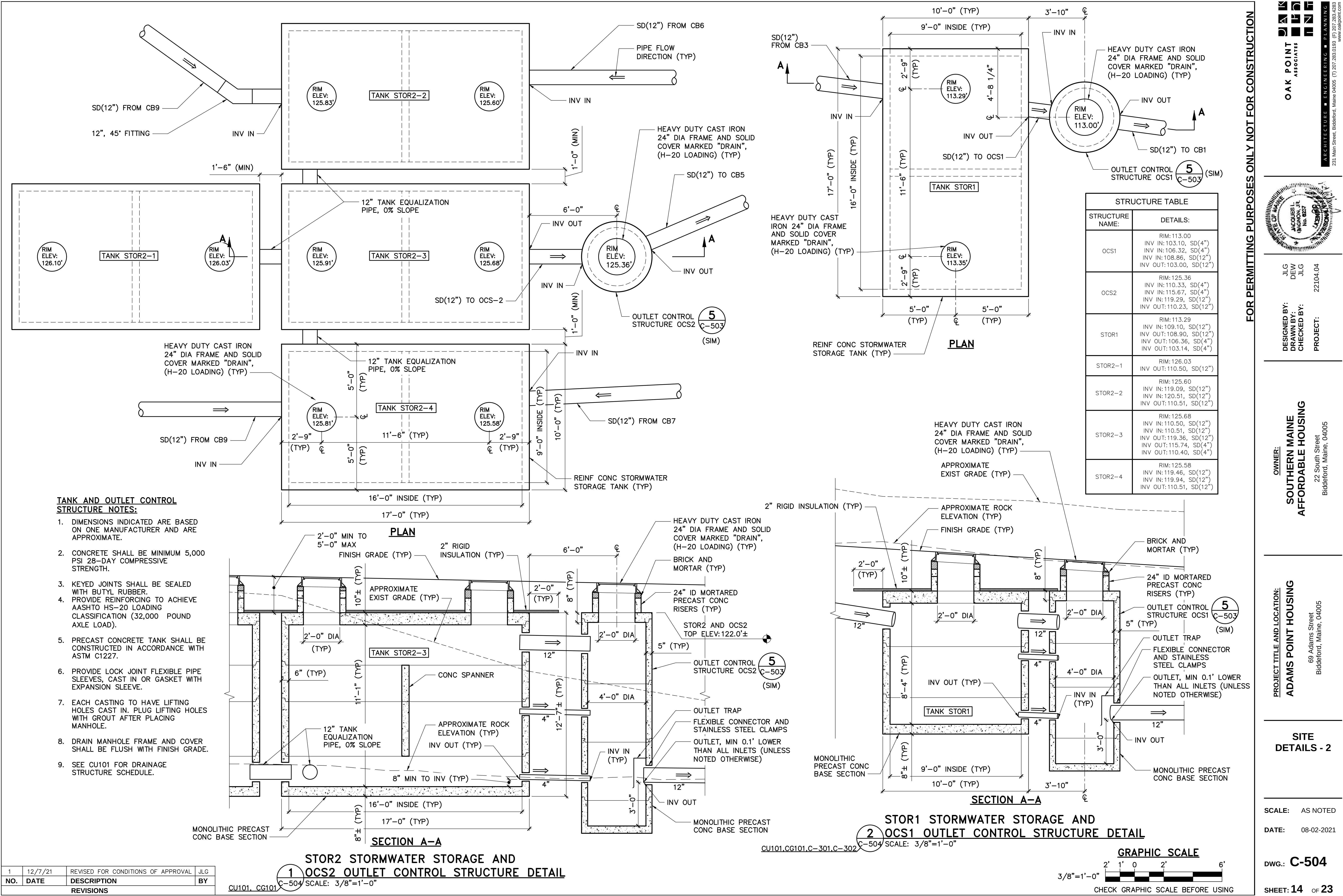
DESIGNED BY: JLG
DRAWN BY: DEW
CHECKED BY: JLG
PROJECT: 22104.04

OWNER:
SOUTHERN MAINE
AFFORDABLE HOUSING
22 South Street
Biddeford, Maine, 04005

PROJECT TITLE AND LOCATION:
ADAMS POINT HOUSING
69 Adams Street
Biddeford, Maine, 04005

SITE
DETAILS - 1

SCALE: AS NOTED
DATE: 08-02-2021
DWG.: C-503
SHEET: 13 OF 23



**TANK AND OUTLET CONTROL
STRUCTURE NOTES:**

- DIMENSIONS INDICATED ARE BASED ON ONE MANUFACTURER AND ARE APPROXIMATE.
- CONCRETE SHALL BE MINIMUM 5,000 PSI 28-DAY COMPRESSIVE STRENGTH.
- KEYED JOINTS SHALL BE SEALED WITH BUTYL RUBBER.
- PROVIDE REINFORCING TO ACHIEVE AASHTO HS-20 LOADING CLASSIFICATION (32,000 POUND AXLE LOAD).
- PRECAST CONCRETE TANK SHALL BE CONSTRUCTED IN ACCORDANCE WITH ASTM C1227.
- PROVIDE LOCK JOINT FLEXIBLE PIPE SLEEVES, CAST IN OR GASKET WITH EXPANSION SLEEVE.
- EACH CASTING TO HAVE LIFTING HOLES CAST IN. PLUG LIFTING HOLES WITH GROUT AFTER PLACING MANHOLE.
- DRAIN MANHOLE FRAME AND COVER SHALL BE FLUSH WITH FINISH GRADE.
- SEE CU101 FOR DRAINAGE STRUCTURE SCHEDULE.

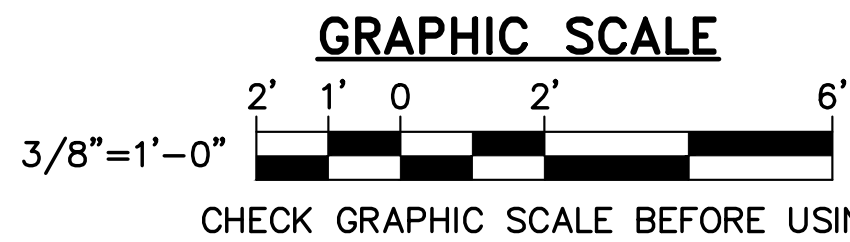
NO.	DATE	DESCRIPTION	BY
1	12/7/21	REVISED FOR CONDITIONS OF APPROVAL	JLG
REVISIONS			

CU101, CG101

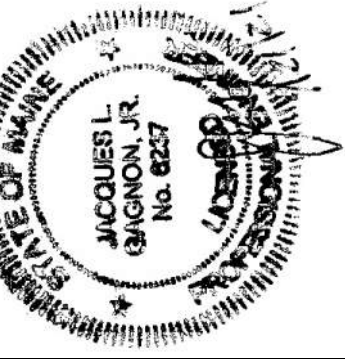
1 **STOR2 STORMWATER STORAGE AND
OCS2 OUTLET CONTROL STRUCTURE DETAIL**
SCALE: 3/8"=1'-0"

CU101,CG101,C-301,C-302

2 **STOR1 STORMWATER STORAGE AND
OCS1 OUTLET CONTROL STRUCTURE DETAIL**
SCALE: 3/8"=1'-0"



FOR PERMITTING PURPOSES ONLY NOT FOR CONSTRUCTION



DESIGNED BY: JLG
DRAWN BY: DEW
CHECKED BY: JLG
PROJECT: 22104.04

OWNER:
**SOUTHERN MAINE
AFFORDABLE HOUSING**

PROJECT TITLE AND LOCATION:
ADAMS POINT HOUSING
69 Adams Street
Biddeford, Maine, 04005

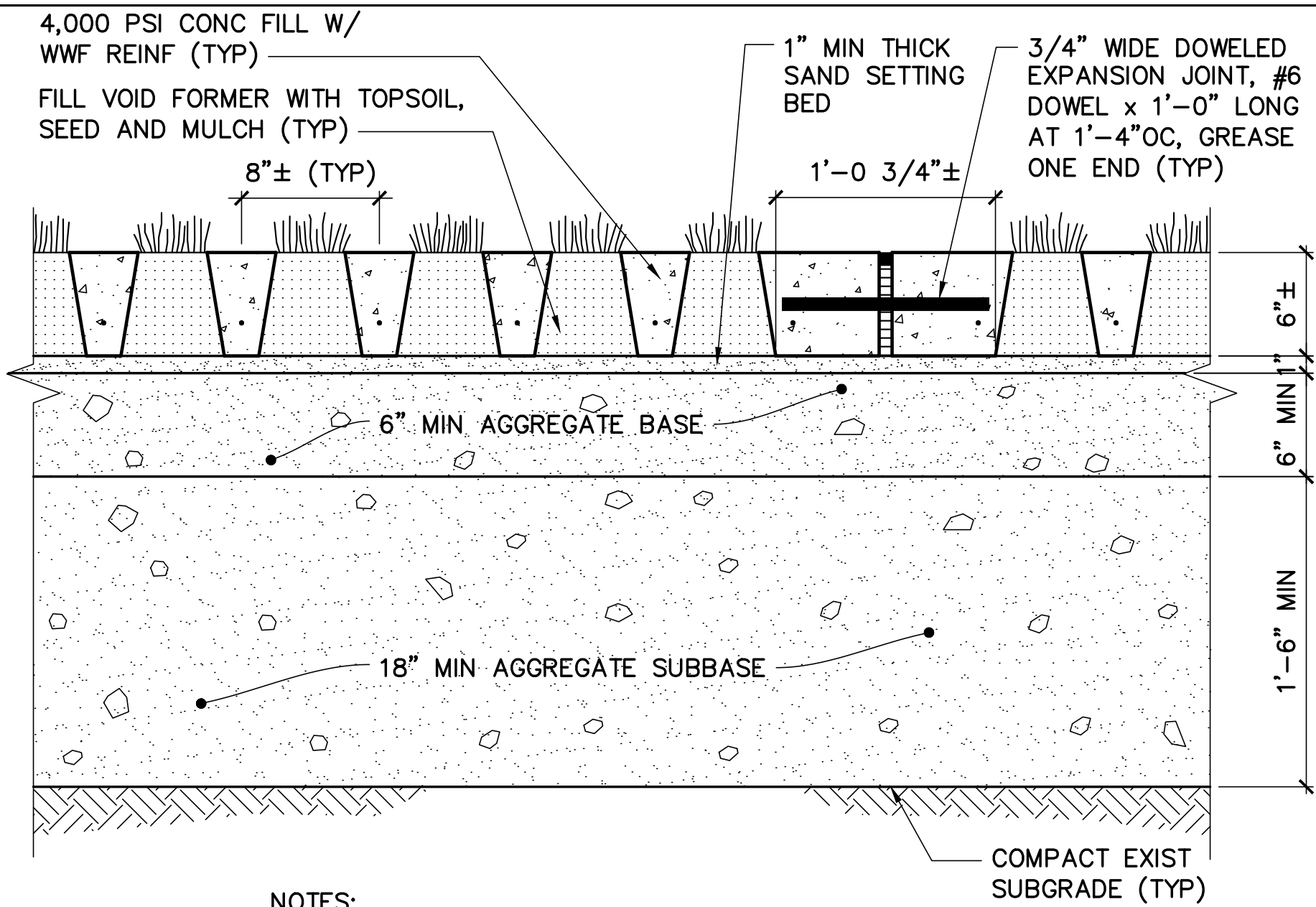
**SITE
DETAILS - 2**

SCALE: AS NOTED

DATE: 08-02-2021

DWG.: **C-504**

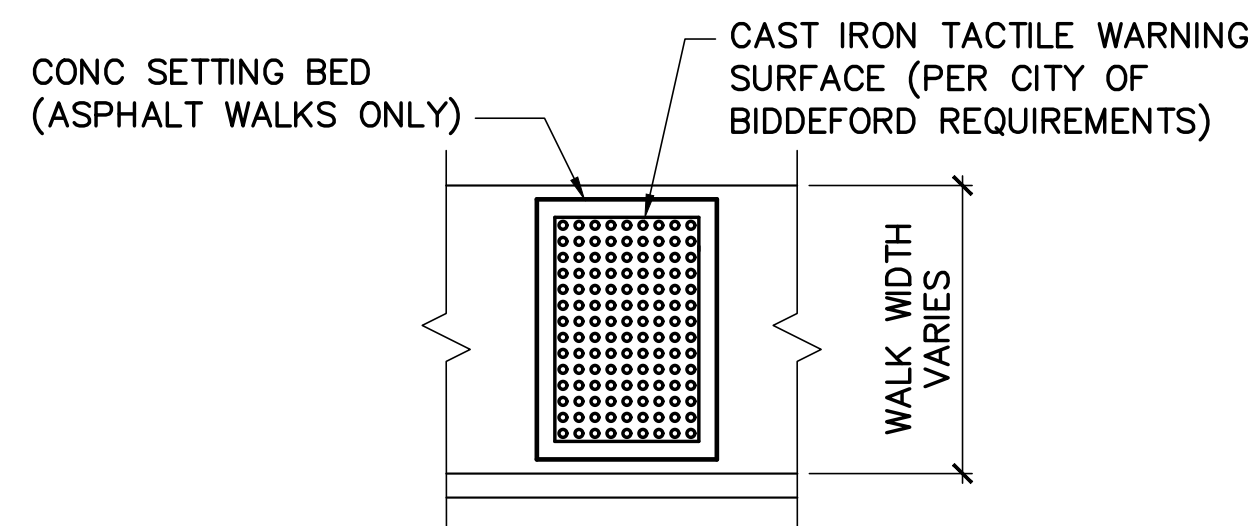
SHEET: **14** OF **23**



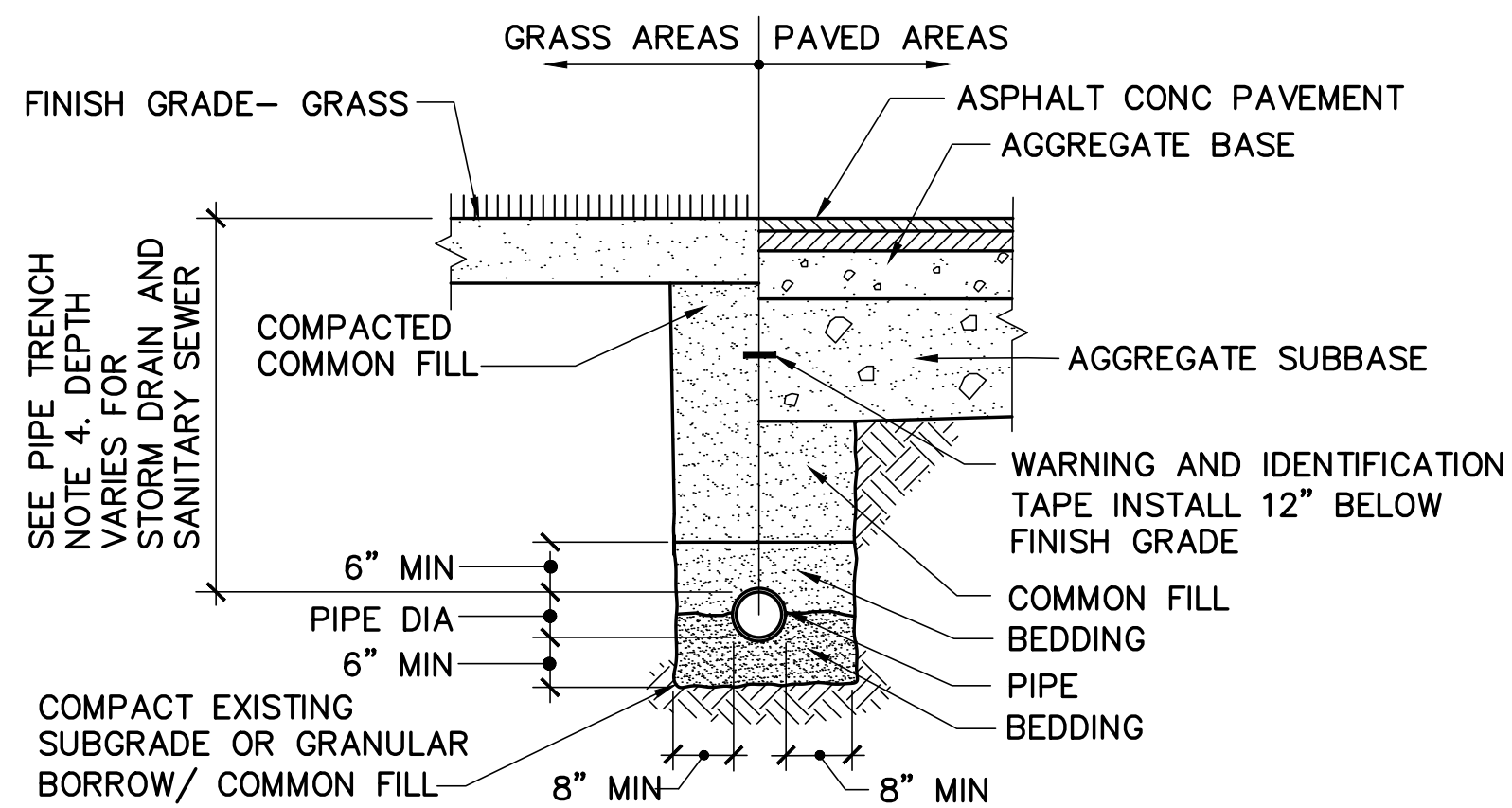
NOTES:

1. STABILIZED TURF SHALL BE CAPABLE OF H-20 LOADING, AND FIRE TRUCK OUTRIGGER LOADING.
2. BASIS OF DESIGN: GRASS CONCRETE LIMITED, MODEL GC2 VOID FORMER, <https://www.grasscrete.com/index.html>.
3. INSTALL PER MANUFACTURERS WRITTEN INSTRUCTIONS.

1 TYP STABILIZED TURF DETAIL
C-505 SCALE: 1-1/2"=1'-0"



4 TYP TACTILE WARNING PANEL DETAIL
C-505 NOT TO SCALE

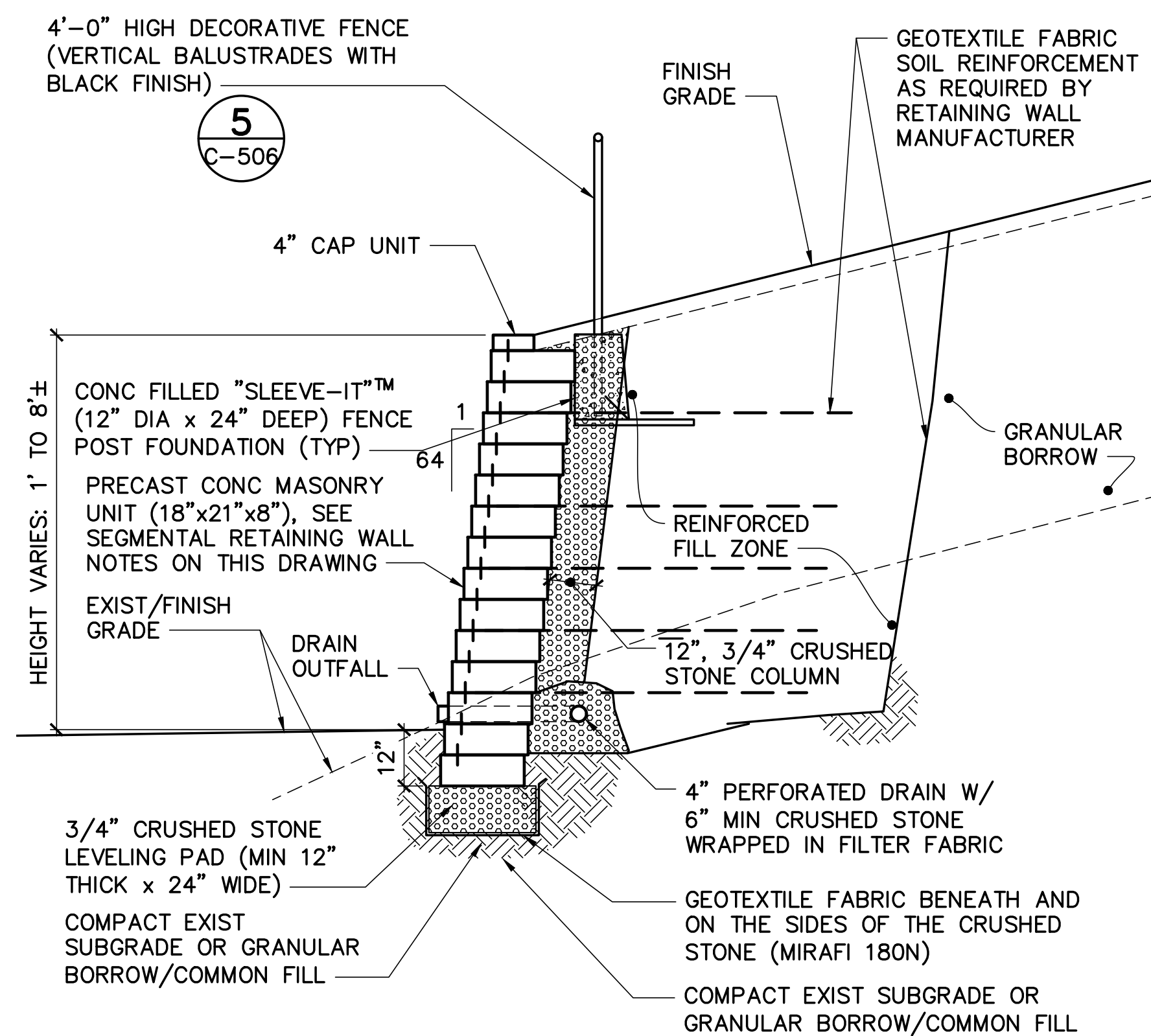


PIPE TRENCH NOTES:

1. INSTALL THERMOPLASTIC (HDPE AND PVC) GRAVITY PIPING IN ACCORDANCE WITH ASTM D 2321 (CLASS II BEDDING/BLANKET UNLESS INDICATED OTHERWISE).
2. ALL EXCAVATION WORK SHALL COMPLY WITH OSHA STANDARDS. TRENCH SIDEWALLS SHALL BE VERTICAL FROM TRENCH BOTTOM TO 12" ABOVE TOP OF PIPE.
3. PROVIDE A MINIMUM OF 6" VERTICAL CLEARANCE BETWEEN CROSSING PIPES.
4. MAINTAIN THE FOLLOWING DEPTH OF COVER FOR EACH SERVICE:

SERVICE	MINIMUM DEPTH OF COVER
WATER (FIRE PROTECTION)	6'-0"
WATER (DOMESTIC)	5'-0" MIN
SANITARY SEWER (GRAVITY)	4'-0"
STORM DRAIN	4'-0"
NATURAL GAS	PER NATURAL GAS PROVIDER'S REQUIREMENTS.

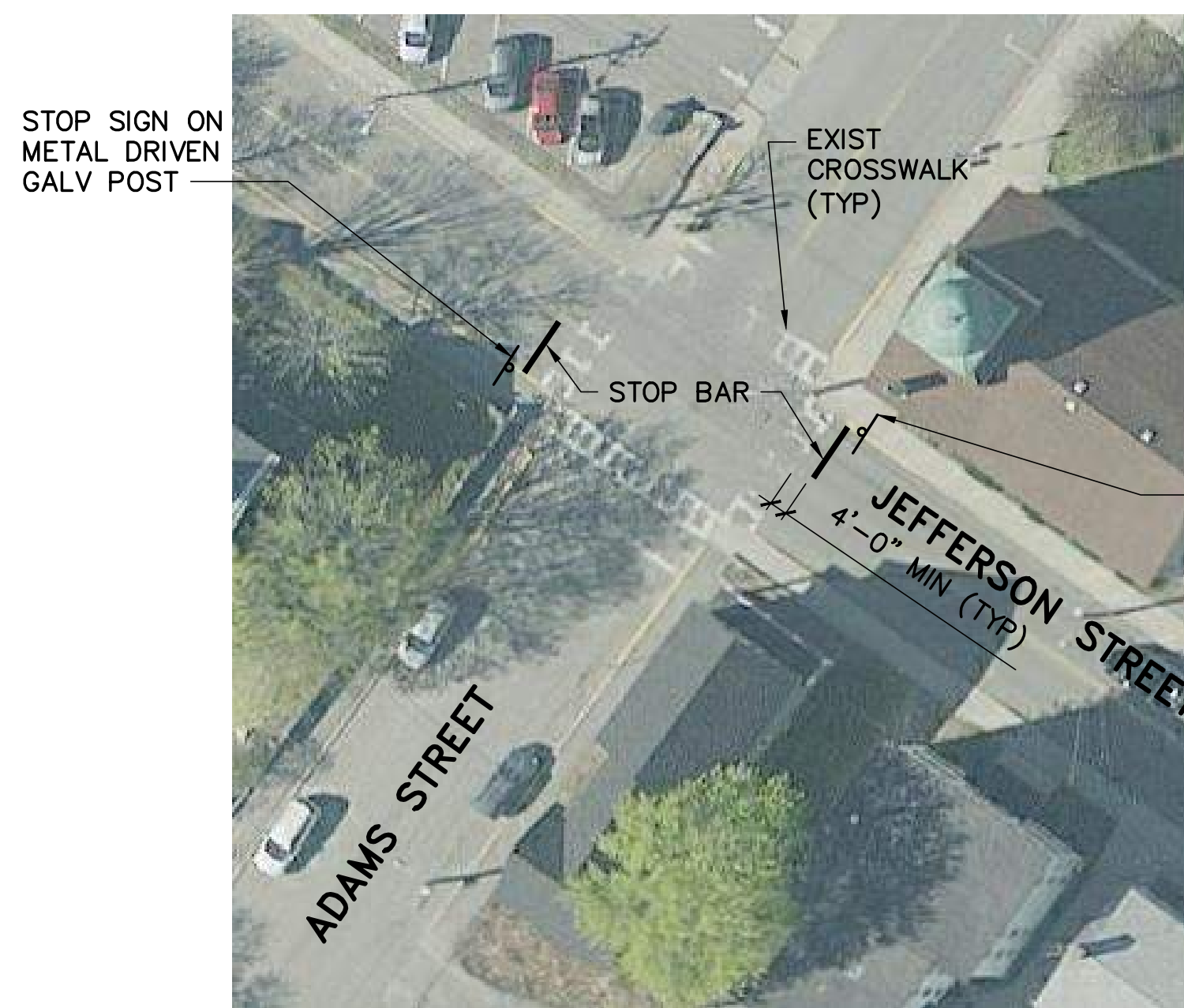
5 TYP UTILITY TRENCH DETAIL
C-505 NOT TO SCALE



SEGMENTAL RETAINING WALL NOTES:

1. SEGMENTAL RETAINING WALL AND VEHICLE GUARDRAILS ARE DELEGATED DESIGN ITEMS AND MUST BE DESIGNED AND SEALED BY A MAINE LICENSED PROFESSIONAL ENGINEER.
2. INSTALL PRECAST CONCRETE RETAINING WALLS IN CONFORMANCE WITH MANUFACTURERS WRITTEN INSTRUCTIONS.
3. MASONRY UNITS SHALL BE MACHINE SPLIT FLAT FACE, COLOR - GREY.

2 TYP RETAINING WALL DETAIL
C-505 SCALE: 3/8"=1'-0"



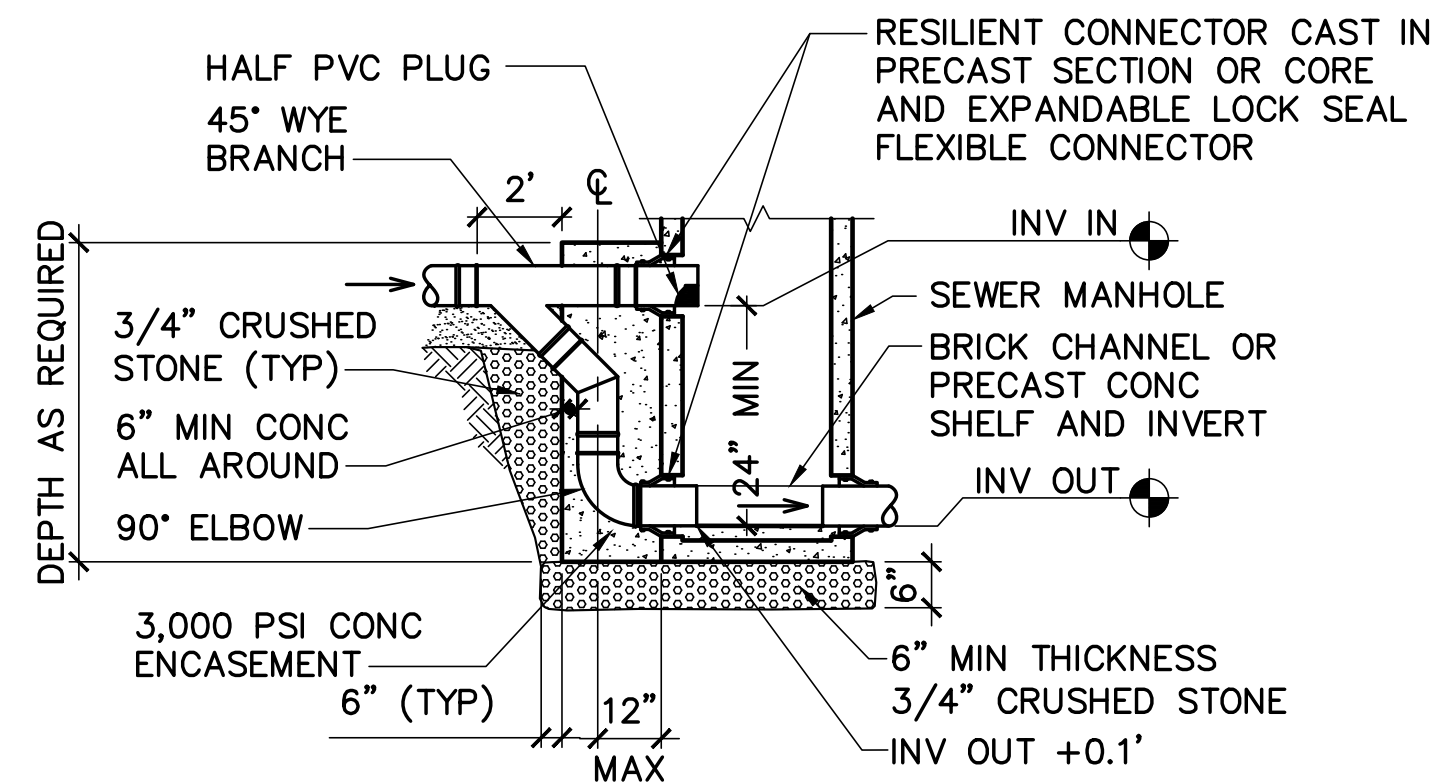
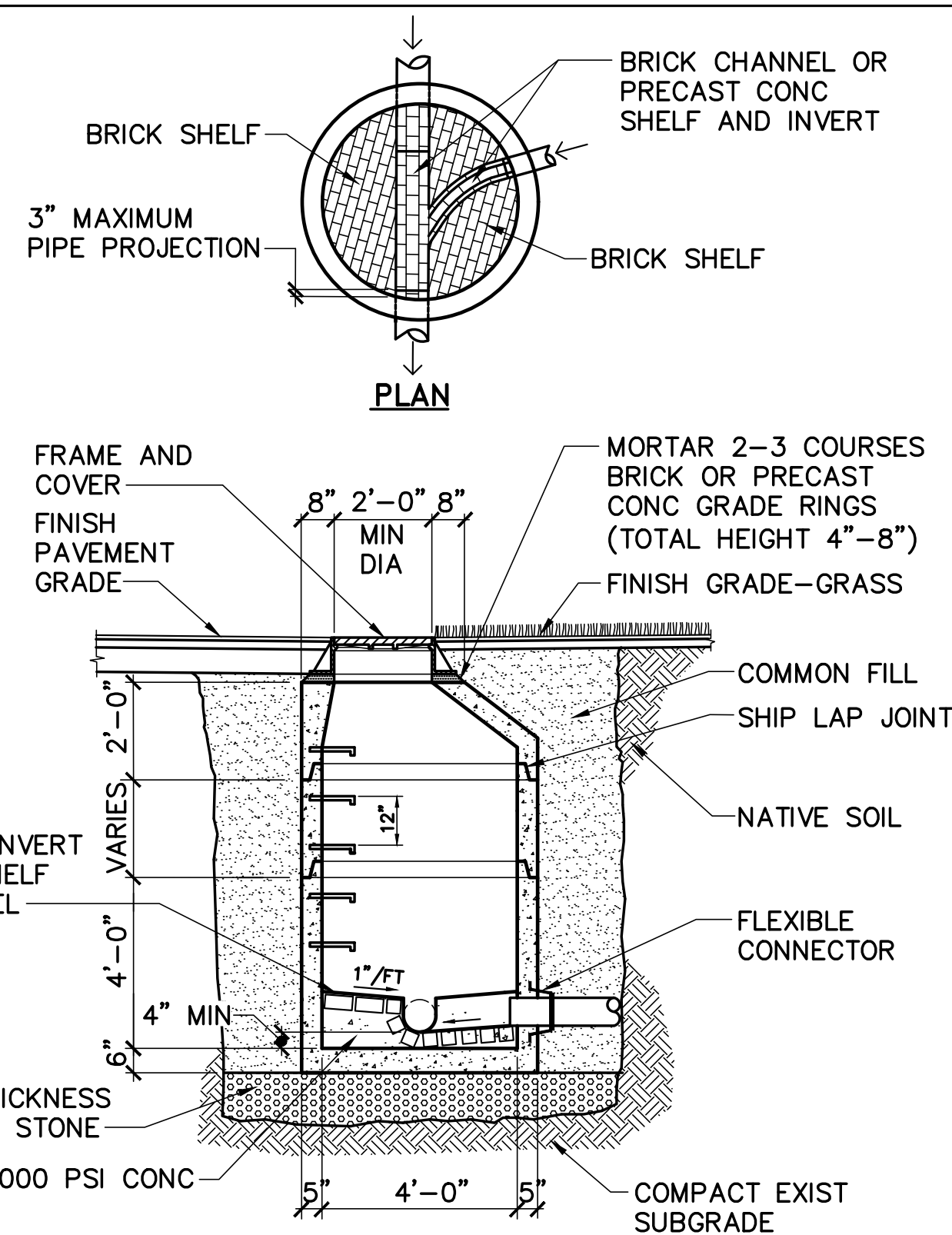
NOTES:

1. STOP BARS: 1'-0" WIDE x TO CENTER OF ROAD, WHITE PAVEMENT MARKING.
2. STOP SIGNS: MUTCD R1-1, SIZE = 30"x30".
3. STOP BAR LAYOUT PER MAINE DOT STANDARD DETAILS DATED MARCH 2020, PAGE 627(03).

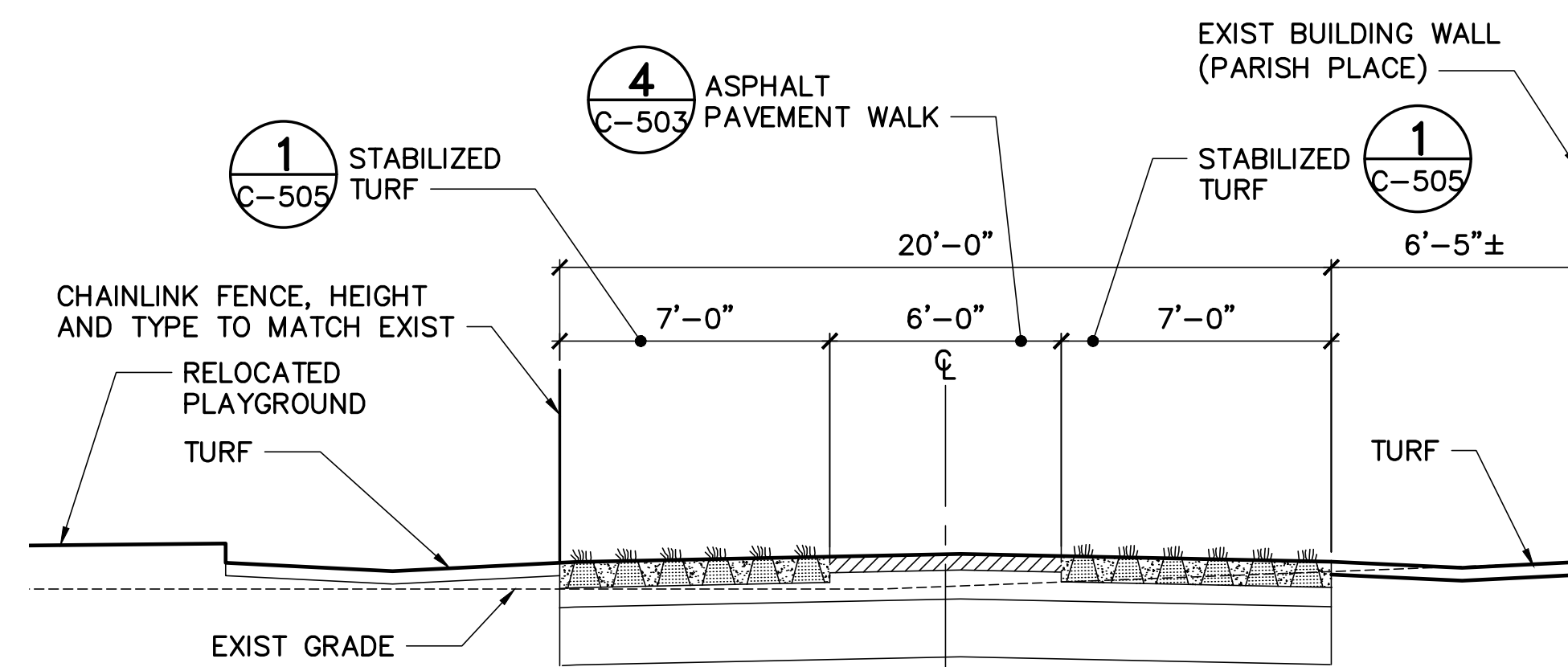
6 ADAMS/JEFFERSON INTERSECTION IMPROVEMENTS PLAN
C-505 SCALE: 1"=30'

MANHOLE NOTES:

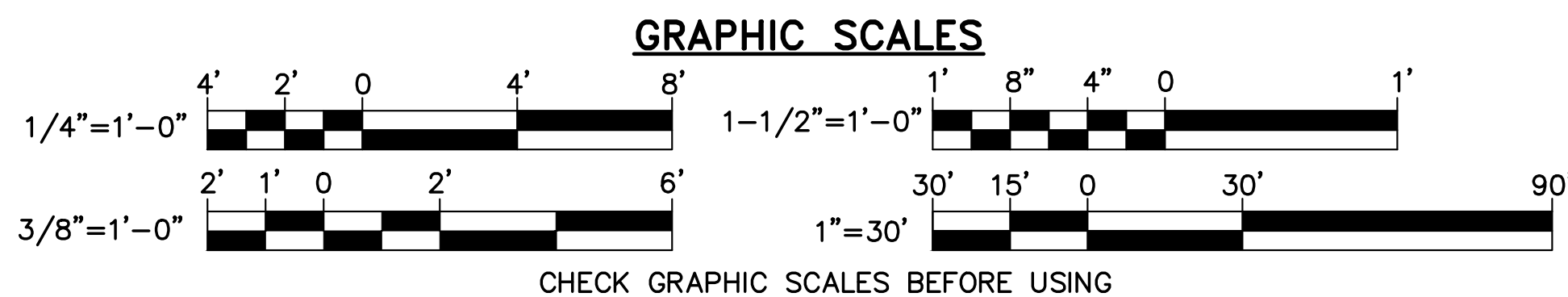
1. CONCRETE: 5,000 PSI AFTER 28 DAYS.
2. PROVIDE REINFORCING TO ACHIEVE AASHTO HS-20 LOADING CLASSIFICATION (32,000 POUND AXLE LOAD).
3. SHIPLAP JOINTS SHALL BE SEALED WITH 2 STRIPS OF 1" DIA BUTYL RUBBER SEALANT.
4. PROVIDE LOCK JOINT FLEXIBLE PIPE SLEEVES, CAST INTO BASE.
5. EACH CASTING TO HAVE LIFTING HOLES CAST IN. PLUG LIFTING HOLES WITH GROUT AFTER PLACING MANHOLE.
6. PROVIDE MANHOLE STEPS @ 12" OC.
7. INVERT SHELF TO BE PLACED AFTER LEAKAGE TEST.
8. INVERT BRICKS SHALL BE LAID ON EDGE.



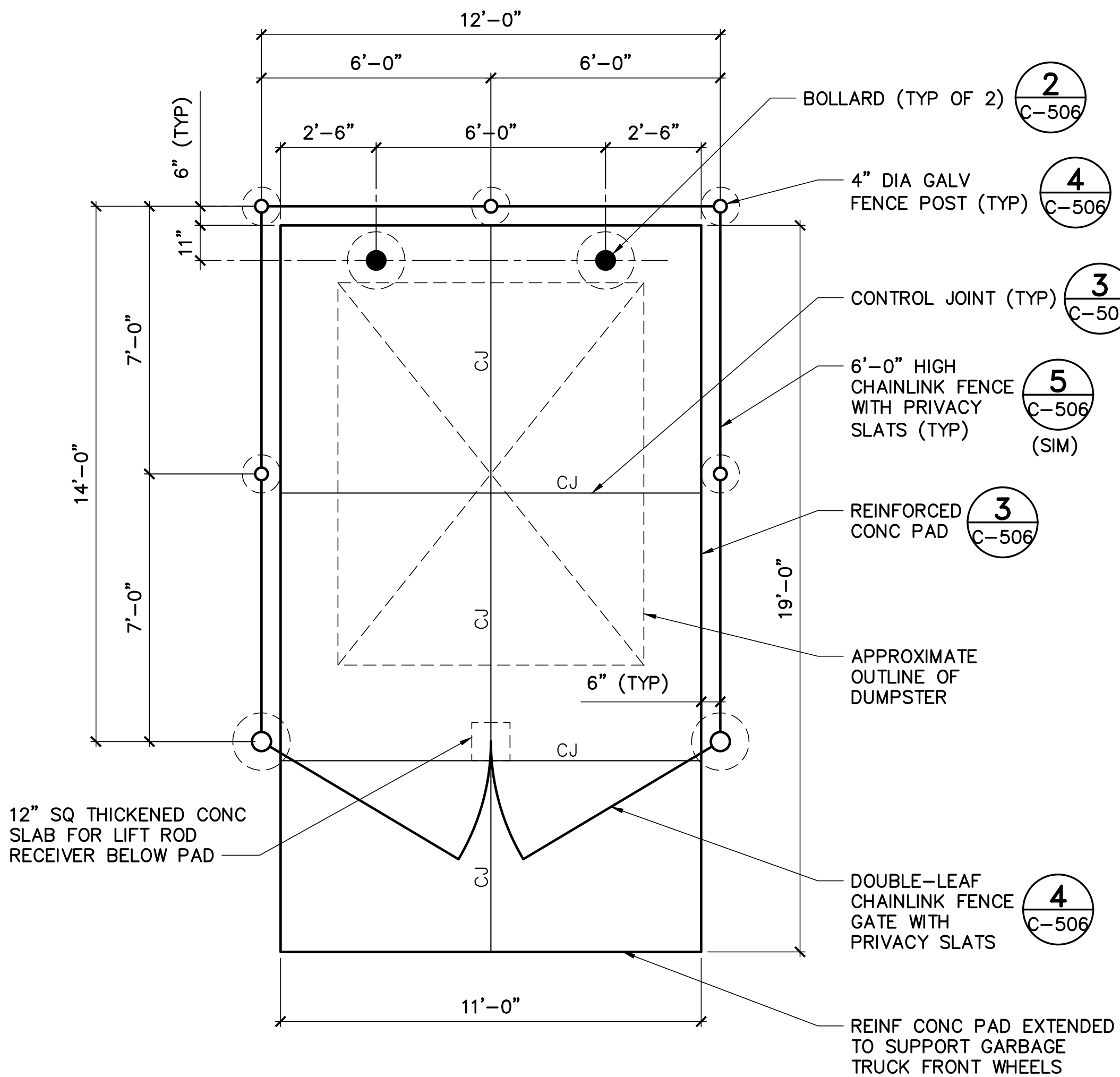
3 TYP SANITARY SEWER MANHOLE DETAIL
C-505 NOT TO SCALE



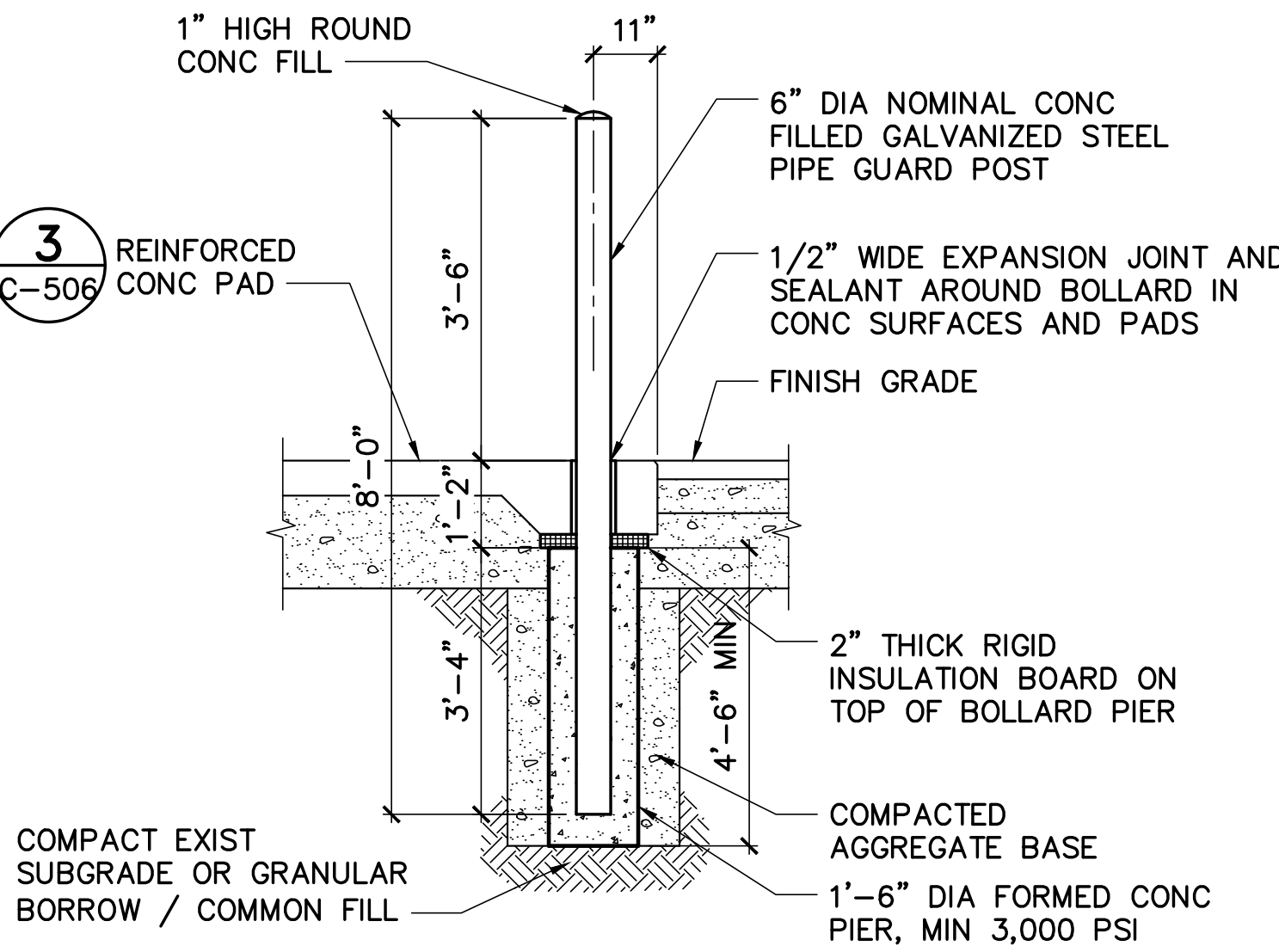
7 TYP STABILIZED TURF FIRE LANE SECTION
C-505 SCALE: 1/4"=1'-0"



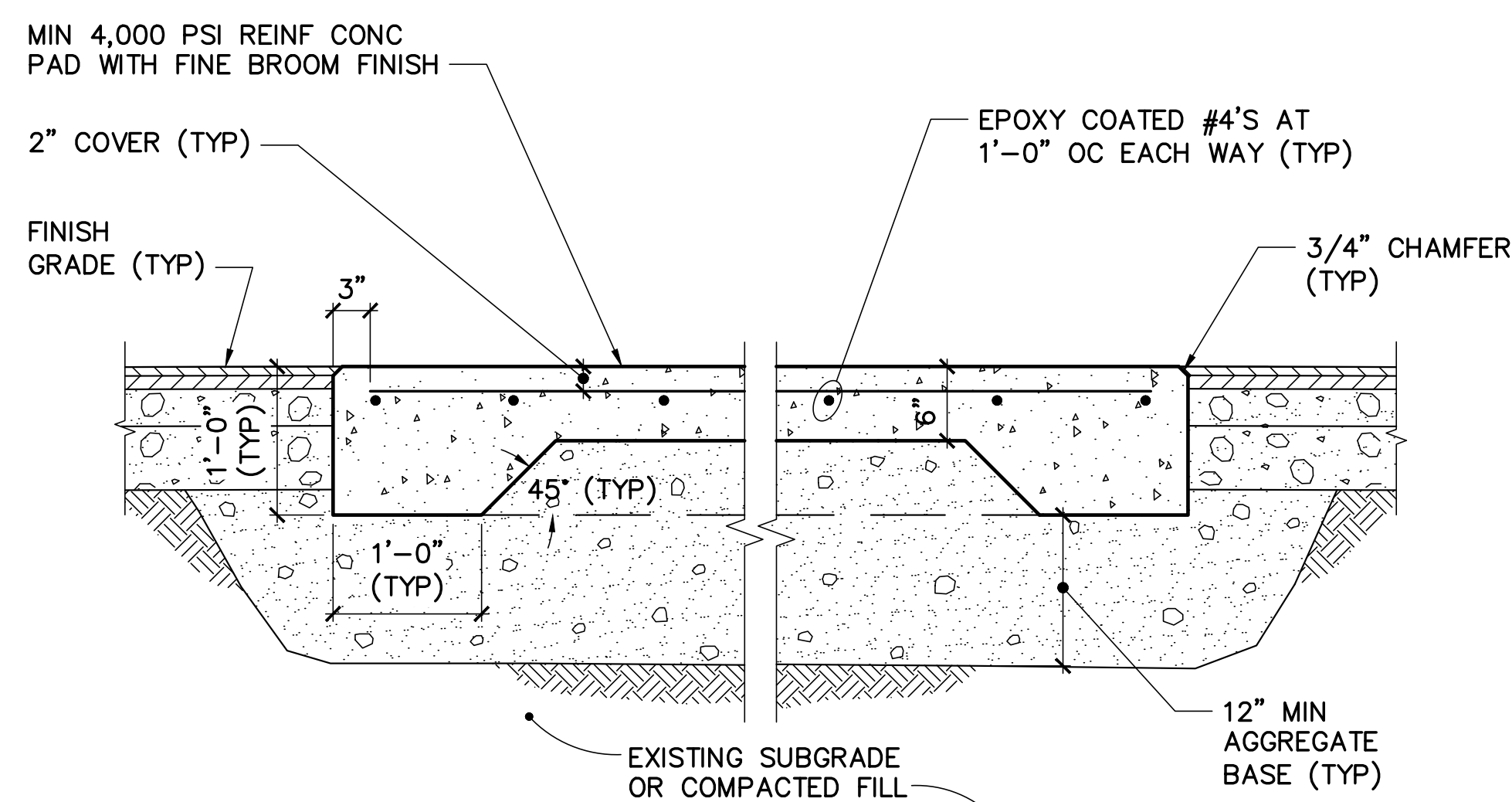
CHECK GRAPHIC SCALES BEFORE USING



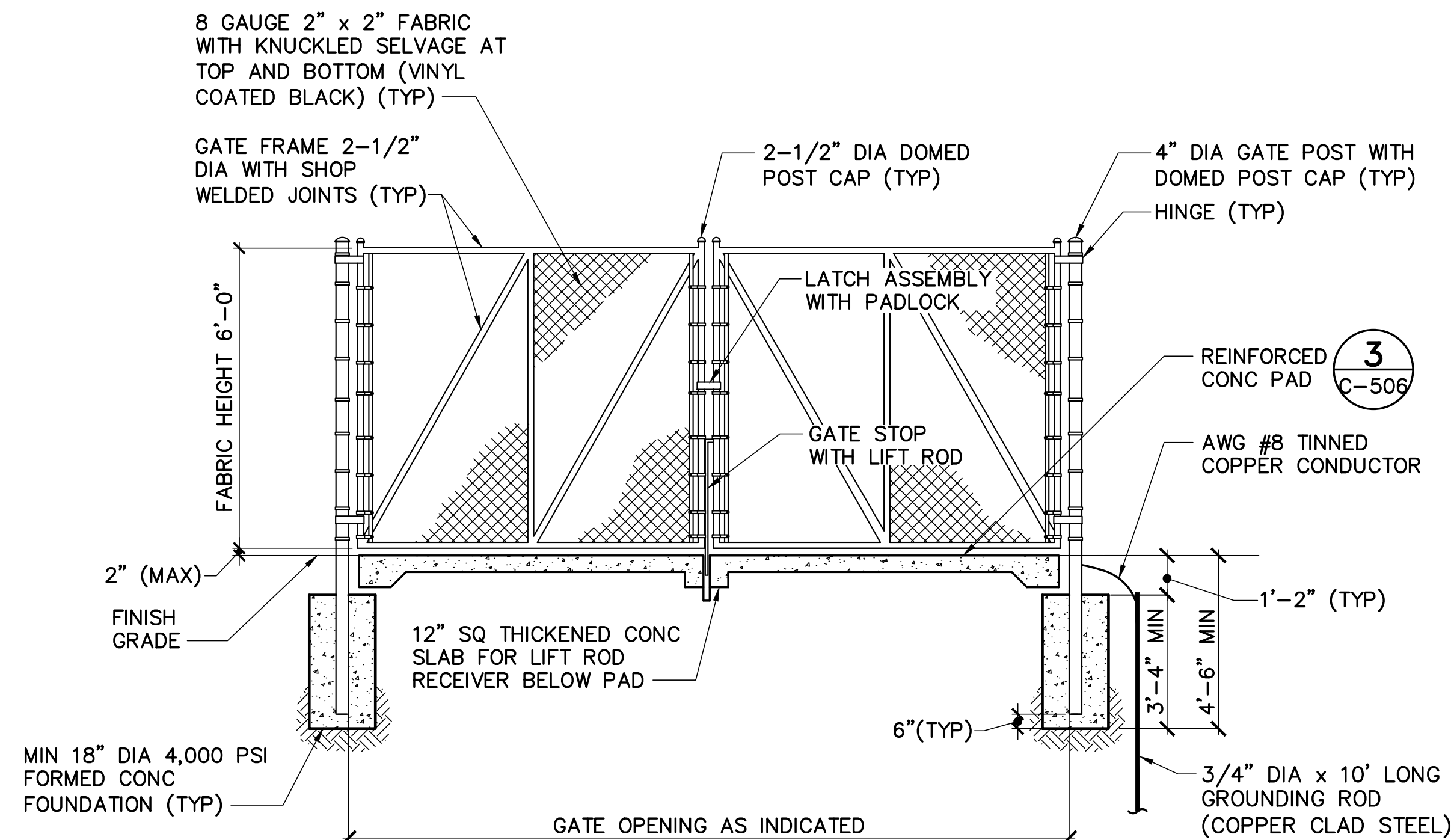
1 DUMPSTER PAD AND ENCLOSURE
C-506 SCALE: 3/8"=1'-0"



2 TYP BOLLARD DETAIL
C-506 NOT TO SCALE



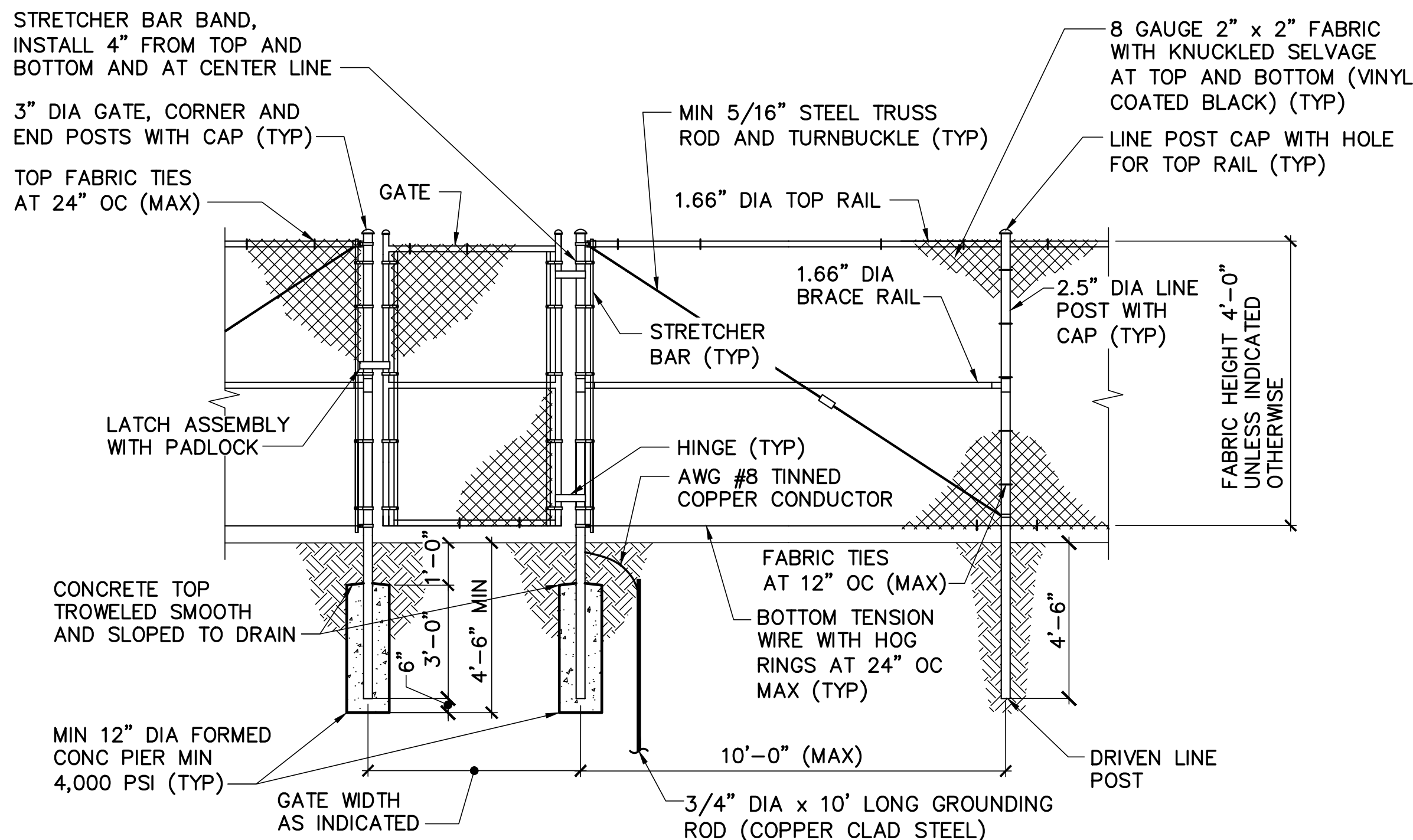
3 REINFORCED CONCRETE PAD DETAIL
C-506 NOT TO SCALE



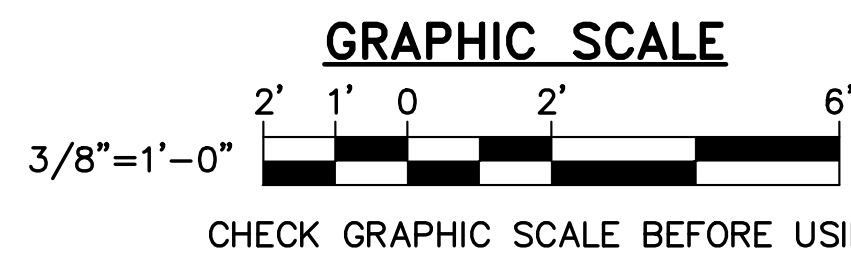
4 CHAIN LINK FENCE DOUBLE-LEAF GATE DETAIL
C-506 NOT TO SCALE

CHAIN LINK FENCE AND GATE NOTES:

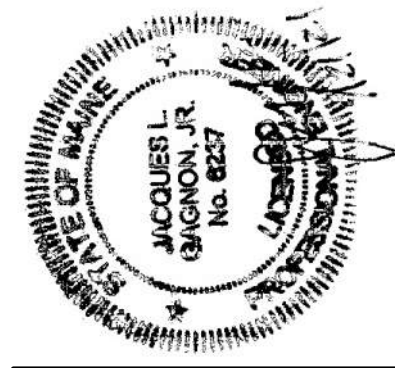
1. POSTS, RAILS, FABRIC, TIES AND APPURTENANCES SHALL BE GALVANIZED STEEL WITH BLACK VINYL COATING.
2. FASTENING AND HINGE HARDWARE SHALL BE SECURED IN PLACE BY PEENING OR WELDING TO PREVENT DISASSEMBLY OF FENCING/GATES.
3. WHEN LEDGE IS ENCOUNTERED, STEEL POSTS SHALL BE SET AND GROUTED 12 INCHES DEEP UNLESS THE POSTS PENETRATE THE GROUND TO THE DEPTH INDICATED ON THE DRAWINGS.
4. CONNECT BONDING JUMPERS BETWEEN GATE POSTS AND FRAMES. BONDING JUMPERS SHALL BE MADE OF ELECTROPLATED OR HOT TIN COATED COPPER TO ENSURE HIGH CONDUCTIVITY. MAKE GROUNDING CONNECTIONS AT BARE METAL POINTS OF CONTACT.
5. PIPE SIZES INDICATED ARE OUTSIDE DIAMETER (FENCE INDUSTRY STANDARD).
6. FOR EACH GATE LEAF, PROVIDE GATE KEEPERS CONSISTING OF 2" DIA x 4'-0" MIN HIGH POST WITH MECHANICAL LATCH SECURING THE FREE END OF THE GATE IN THE FULL OPEN POSITION.
7. PROVIDE PRIVACY SLATS (COLOR: BLACK) WOVEN INTO THE CHAINLINK FABRIC AT THE DUMPSTER ENCLOSURE CHAINLINK FENCE.



5 CHAIN LINK FENCE DOUBLE-LEAF GATE DETAIL
C-506 NOT TO SCALE



FOR PERMITTING PURPOSES ONLY NOT FOR CONSTRUCTION



DESIGNED BY: JLG
DRAWN BY: DEW
CHECKED BY: JLG
PROJECT: 22104.04

OWNER:
SOUTHERN MAINE
AFFORDABLE HOUSING
22 South Street
Biddeford, Maine, 04005

PROJECT TITLE AND LOCATION:
ADAMS POINT HOUSING
69 Adams Street
Biddeford, Maine, 04005

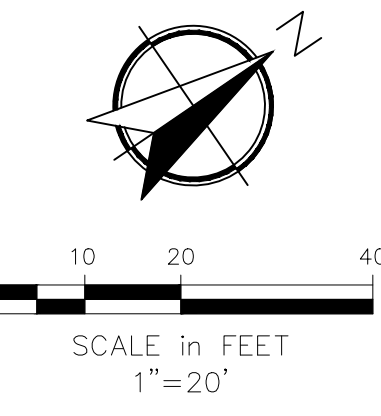
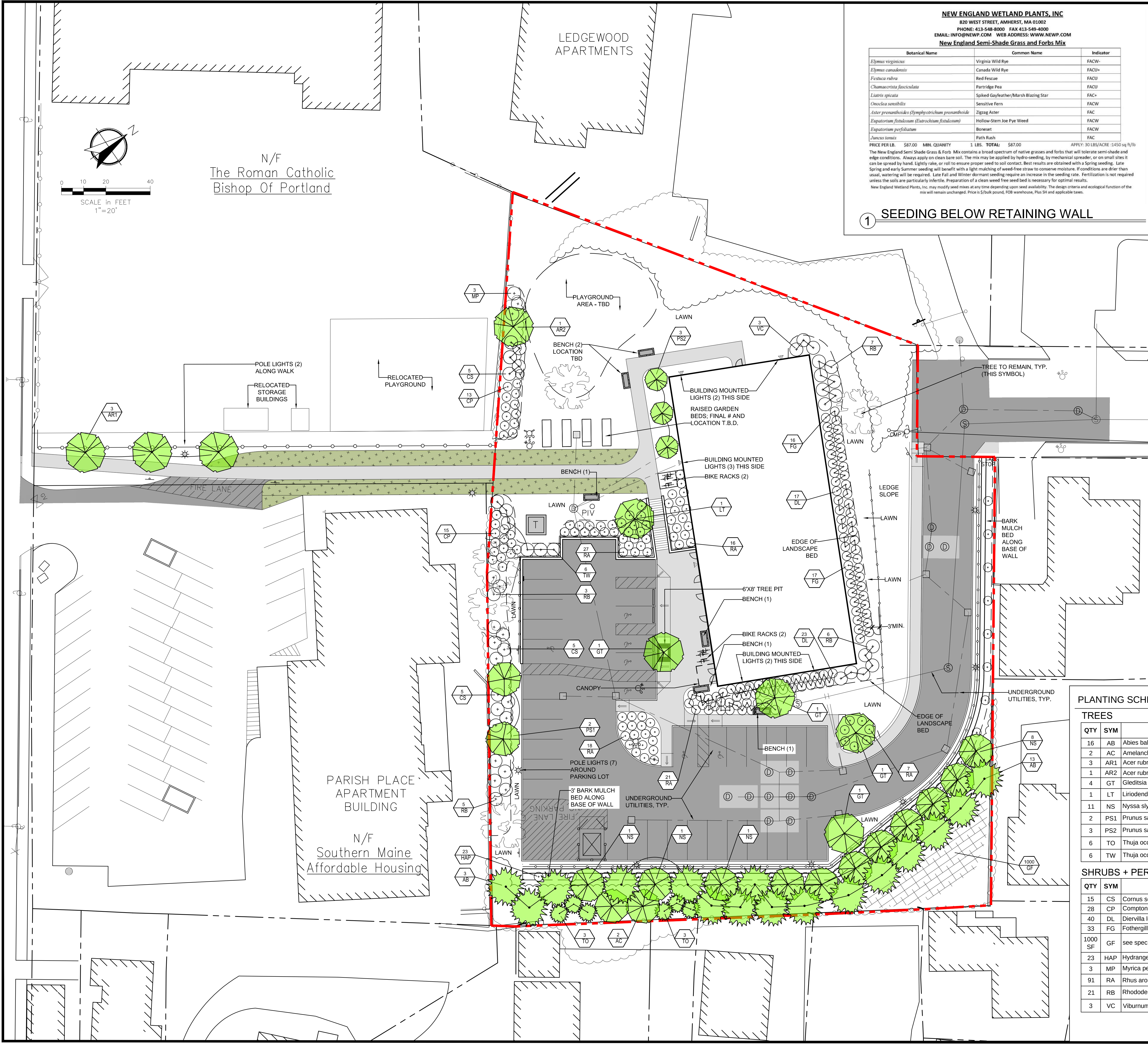
SITE
DETAILS - 4

SCALE: AS NOTED
DATE: 08-02-2021

DWG.: C-506

SHEET: 16 OF 23

1	12/7/21	REVISED FOR CONDITIONS OF APPROVAL	JLG
NO.	DATE	DESCRIPTION	BY
REVISIONS			



NEW ENGLAND WETLAND PLANTS, INC.
820 WEST STREET, AMHERST, MA 01002
PHONE: 413-548-8000 FAX 413-549-4000
EMAIL: INFO@NEWP.COM WEB ADDRESS: WWW.NEWP.COM
New England Semi-Shade Grass and Forbs Mix

Botanical Name	Common Name	Indicator
<i>Elymus virginicus</i>	Virginia Wild Rye	FACW-
<i>Elymus canadensis</i>	Canada Wild Rye	FACU+
<i>Festuca rubra</i>	Red Fescue	FACU
<i>Chamaecrista fasciculata</i>	Partridge Pea	FACU
<i>Liatris spicata</i>	Spiked Gayfeather/Marsh Blazing Star	FAC+
<i>Osmunda cinnamomea</i>	Sensitive Fern	FACW
<i>Aster praeanthoides</i> (<i>Symphoricarpos praeanthoides</i>)	Zigzag Aster	FAC
<i>Eupatorium fistulosum</i> (<i>Eutrochium fistulosum</i>)	Hollow-Stem Joe Pye Weed	FACW
<i>Eupatorium perfoliatum</i>	Boneset	FACW
<i>Juncus tenuis</i>	Path Rush	FAC

PRICE PER LB. \$87.00 MIN. QUANTITY 1 LBS. TOTAL: \$87.00 APPLY: 30 LBS/ACRE (1450 sq ft/lb)

The New England Semi-Shade Grass & Forb Mix contains a broad spectrum of native grasses and forbs that will tolerate semi-shade and edge conditions. Always apply on clean bare soil. The mix may be applied by hydro-seeding, by mechanical spreader, or on small sites it can be spread by hand. Lightly rake, or roll to ensure proper seed to soil contact. Best results are obtained with a Spring seeding. Late Spring and early Summer seeding will benefit with a light mulching of weed-free straw to conserve moisture. If conditions are drier than usual, watering will be required. Late Fall and Winter dormant seeding require an increase in the seeding rate. Fertilization is not required unless the soils are particularly infertile. Preparation of a clean weed free seed bed is necessary for optimal results.

New England Wetland Plants, Inc. may modify seed mixes at any time depending upon seed availability. The design criteria and ecological function of the mix will remain unchanged. Price is \$/bulk pound, FOB warehouse, Plus SH and applicable taxes.

1 SEEDING BELOW RETAINING WALL

- PLANTING NOTES:**
- CONTRACTOR SHALL BEGIN MAINTENANCE IMMEDIATELY AFTER PLANTING AND SHALL CONTINUE UNTIL FINAL ACCEPTANCE. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MEANS AND METHODS OF WATERING AND MAINTENANCE.
 - CONTRACTOR SHALL SUPPLY PLANTS IN QUANTITIES SUFFICIENT TO COMPLETE WORK SHOWN ON THE PLAN. ANY DISCREPANCY BETWEEN THE QUANTITIES SHOWN IN THE PLANT SCHEDULE AND THOSE REQUIRED ON THE PLAN SHALL NOT ENTITLE THE CONTRACTOR TO ADDITIONAL RENUMERATION. ANY DISCREPANCIES SHALL BE CLARIFIED WITH THE LANDSCAPE ARCHITECT PRIOR TO ORDERING PLANT MATERIAL.
 - ALL MATERIALS SHALL CONFORM TO SPECIFICATIONS OF THE AMERICAN STANDARDS FOR NURSERY STOCK (LATEST EDITION) AS SET FORTH BY THE AMERICAN ASSOCIATION OF NURSERYMEN.
 - ALL PLANTS SHALL BEAR THE SAME RELATIONSHIP TO FINISH GRADE AS THE ORIGINAL GRADES BEFORE DIGGING.
 - THE LANDSCAPE CONTRACTOR SHALL GUARANTEE ALL PLANT MATERIALS FOR ONE (1) FULL YEAR FROM DATE OF SUBSTANTIAL COMPLETION.
 - ALL PLANT MATERIALS ARE SUBJECT TO THE APPROVAL OF THE LANDSCAPE ARCHITECT AT THE NURSERY AND AT THE SITE.
 - ALL PLANT BEDS SHALL MEET MINIMUM TOPSOIL REQUIREMENTS (SEE SPECIFICATIONS).
 - NO PLANT MATERIAL SHALL BE INSTALLED UNTIL GRUBBING, BED PREPARATION, AND FINISH GRADING HAS BEEN COMPLETED IN THE IMMEDIATE AREA.
 - ALL PLANTS BEDS AND TREE WELLS SHALL HAVE A MINIMUM OF 3" OF UNIFORMLY DISTRIBUTED, DARK, SHREDDED BARK MULCH.
 - CONTRACTOR SHALL SUBMIT SOIL SAMPLE AND TEST OF TOPSOIL TO LANDSCAPE ARCHITECT PRIOR TO INSTALLATION. SOIL ADMIXTURE SHALL BE ADDED TO EXISTING SOIL (BY CONTRACTOR) IF DEEMED NECESSARY BY SOIL TEST RESULTS.
 - ROUGH GRADING AND BED PREPARATION SHALL BE APPROVED BY LANDSCAPE ARCHITECT PRIOR TO PLANT INSTALLATION. CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT 48 HOURS PRIOR TO REQUIRED SITE VISIT.
 - ALL PLANTS SHALL BE BALLED AND WRAPPED OR CONTAINER GROWN AS SPECIFIED. ALL ROOT WRAPPING AND CONTAINER MATERIAL MADE OF SYNTHETICS OR PLASTICS SHALL BE REMOVED AT THE TIME OF PLANTING.
 - ALL BROAD LEAF EVERGREEN PLANTS SHALL BE SPRAYED WITH AN ANTI-DESSICANT AT THE BEGINNING OF THEIR FIRST WINTER.
 - ALL PLANTS SHALL BE INSTALLED AS PER DETAILS AND THE CONTRACT SPECIFICATIONS. THE LANDSCAPE CONTRACTOR SHALL REFER TO THE CONTRACT SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
 - ALL PLANTS SHALL BE WATERED BY THE CONTRACTOR, AS NECESSARY TO INSURE HEALTH UNTIL FINAL ACCEPTANCE.
 - CONTRACTOR SHALL STAKE TREES IF DEEMED NECESSARY BY THE LANDSCAPE ARCHITECT.
 - THE LANDSCAPE CONTRACTOR SHALL PROVIDE PREPARED SOIL PLANTING MIX AS PER THE CONTRACT SPECIFICATIONS.
 - THE LANDSCAPE CONTRACTOR SHALL REFER TO THE PLANT LIST AND PLANTING SPECIFICATIONS FOR SEASONAL REQUIREMENTS AND OTHER RESTRICTIONS RELATED TO THE TIME AND SEASON OF PLANTING.
 - PLANTING SOIL MIX: 1 PART COMPOST, 8 PARTS TOPSOIL, 3 PARTS HUMUS. TOPSOIL: FERTILE, FRIABLE, NATURAL TOPSOIL OF LOAMY CHARACTER, WITHOUT ADMIXTURE OF SUBSOIL MATERIAL, FREE FROM CLAY, LUMPS, COARSE SANDS, STONES, PLANTS, ROOTS, STICKS, AND OTHER FOREIGN MATERIALS GREATER THAN 1" IN ANY DIMENSION, PH RANGE 5.0-7.0, AND SHALL CONTAIN NOT LESS THAN 6% ORGANIC MATTER BY WEIGHT. SANDY LOAM OR LOAM SOIL AS DEFINED BY THE USDA SOIL CONSERVATION SERVICE, AND HAVE THE FOLLOWING MECHANICAL ANALYSIS:

TEXTURAL CLASS	% OF TOTAL WEIGHT	AVERAGE %
SAND (0.05- 2.0 MM)	45 TO 75%	60%
SILT (0.002- 0.05 MM)	15 TO 35%	25%
CLAY (< 0.002 MM)	5 TO 25%	15%
 - THE APPLICANT HAS FLEXIBILITY ON THE FINAL PLACEMENT OF THE PROPOSED TREES, ALONG THE SOUTH EASTERN PROPERTY LINE, IF THE EXISTING VEGETATION PROVES TO BE INADEQUATE TO PROVIDE AN EFFECTIVE SCREEN.

PLANTING SCHEDULE

TREES						
QTY	SYM	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS	NATIVE
16	AB	Abies balsamea var. phanerolepis	Canaan Balsam Fir	8-10' HT.		
2	AC	Amelanchier canadensis	Native Shadbush	7-8' HT	B+B, CLUMP	X
3	AR1	Acer rubrum 'Karpick'	Red Maple	2-2.5"	B+B	X
1	AR2	Acer rubrum 'Northwood'	Red Maple	2-2.5"	B+B	X
4	GT	Gleditsia triacanthos 'Street Keeper'	Honeylocust	2-2.5"	B+B	
1	LT	Liriodendron tulipifera 'Little Volunteer'	Tulip tree	2-2.5"	B+B	X
11	NS	Nyssa sylvatica 'Green Gable'	Tupelo	2-2.5"	B+B	X
2	PS1	Prunus sargentii	Sargent Cherry	2-2.5"	B+B	
3	PS2	Prunus sargentii 'Rancho' or 'Columaris'	Sargent Cherry	2-2.5"	B+B	
6	TO	Thuja occidentalis 'Techny'	Arborvitae	6-7' HT	B+B	X
6	TW	Thuja occidentalis 'Woodwardii'	Arborvitae	3-3.5' HT	B+B	X

SHRUBS + PERENNIALS + VINES + GROUND COVERS						
QTY	SYM	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS	NATIVE
15	CS	Cornus sericea 'Farrow'	Red Twig Dogwood	4'-5' #7		X
28	CP	Comptonia peregrina	Sweetfern	#7		X
40	DL	Diervilla lonicera	Northern Bush Honeysuckle	#5		X
33	FG	Fothergilla gardenii	Dwarf Bottlebrush Bush	#5		
1000	SF	see spec on L1.0	Grass + Forbs mix (semi-shade blend)	1,450 SF PER LBS		X
23	HAP	Hydrangea anomala petiolaris	Climbing Hydrangea	4'-5' #10	15' O.C.	
3	MP	Myrica pensylvanica 'Bobee'	Northern Bayberry	3'-4' #7		X
91	RA	Rhus aromatica 'Gro-Low'	Fragrant Sumac	2.5'-3' #7		X
21	RB	Rhododendron 'Boule-de-Neige'	Rhododendron	3' HT	B+B	
3	VC	Viburnum cassinoides	Witherod Viburnum	3-3.5' HT	B+B	X

NOT FOR CONSTRUCTION

OWNER:

SOUTHERN MAINE AFFORDABLE HOUSING
22 SOUTH STREET
P.O. BOX 2287
BIDDEFORD, MAINE 04005

APPLICANT:

BIDDEFORD HOUSING AUTHORITY
22 SOUTH STREET
P.O. BOX 2287
BIDDEFORD, MAINE 04005

Project:

Revisions	Date	Description
#1	09.21.2021	Revised per City comments
#2	12.17.2021	Revised per Conditions of Approval

Scale: as shown

Approved By: PC

Drawn By: MAP

Phase: PLANNING BOARD APPLICATION

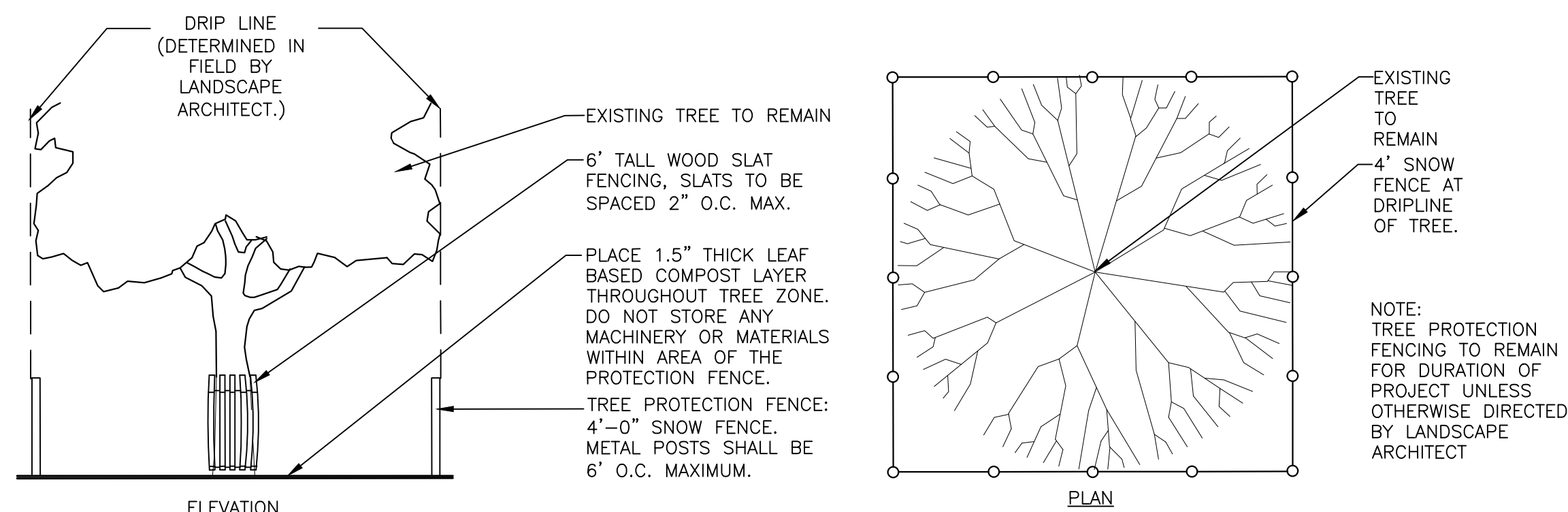
LANDSCAPE PLAN

CARROLL ASSOCIATES
LANDSCAPE ARCHITECTS
217 COMMERCIAL STREET, STE 200
PORTLAND, MAINE 04101
207.772.1552 V. F. 207.772.0712

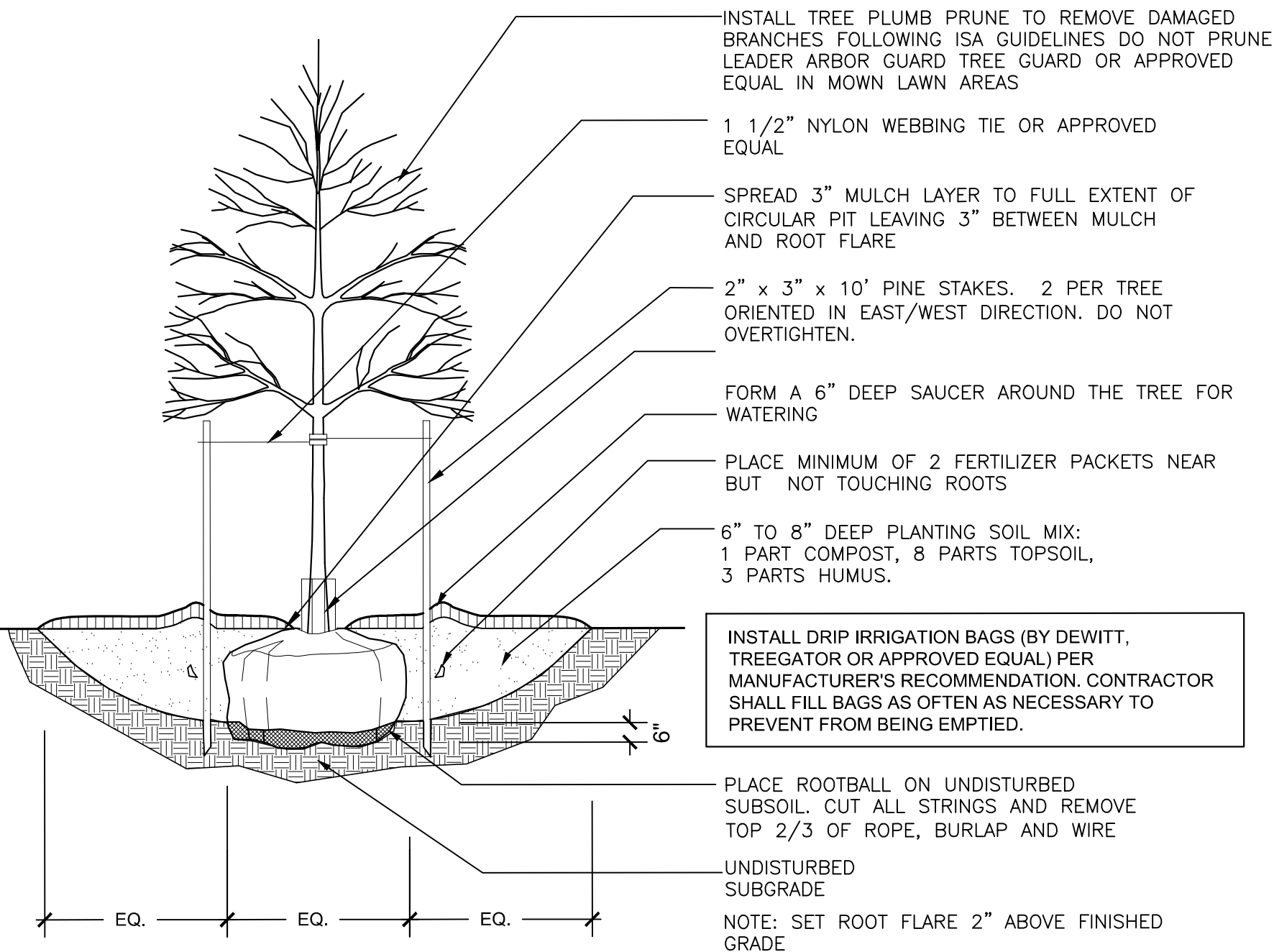
Date: JUNE 14, 2021

Sheet No:

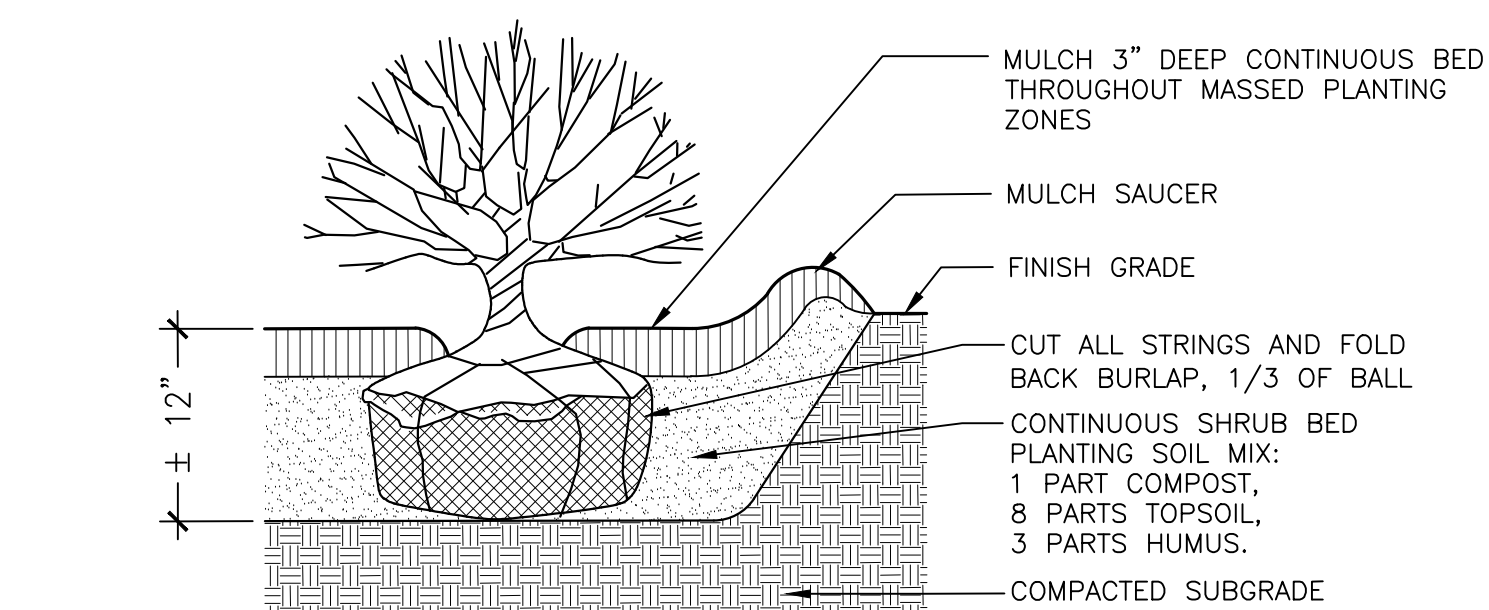
L1.0



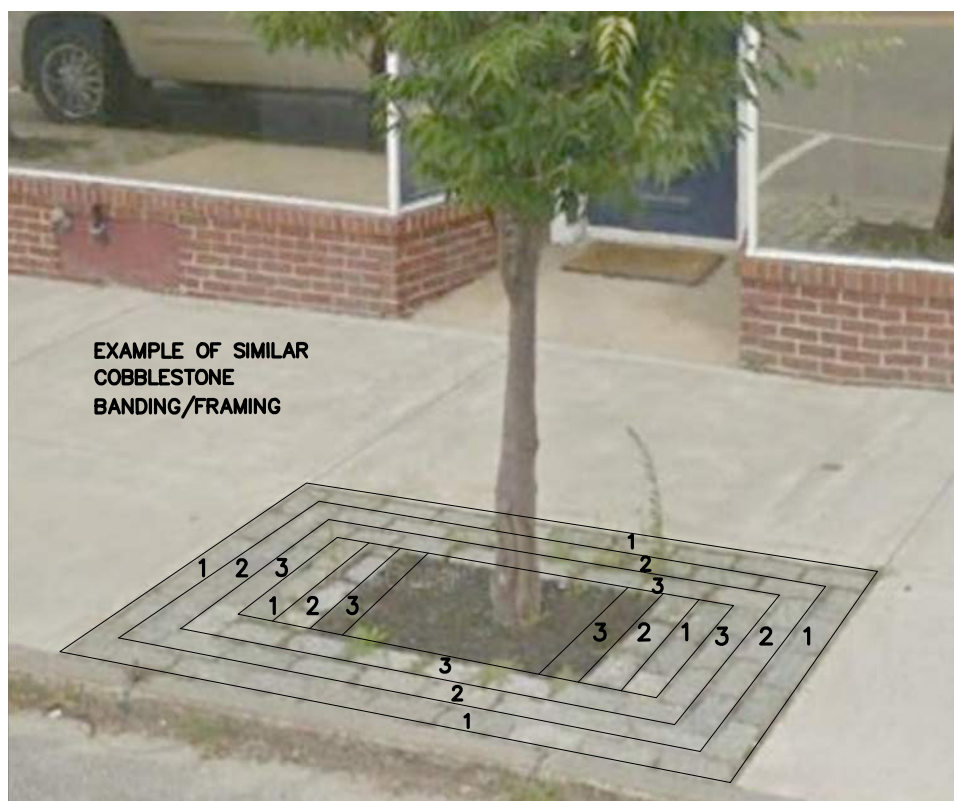
1 TYPICAL TREE PROTECTION



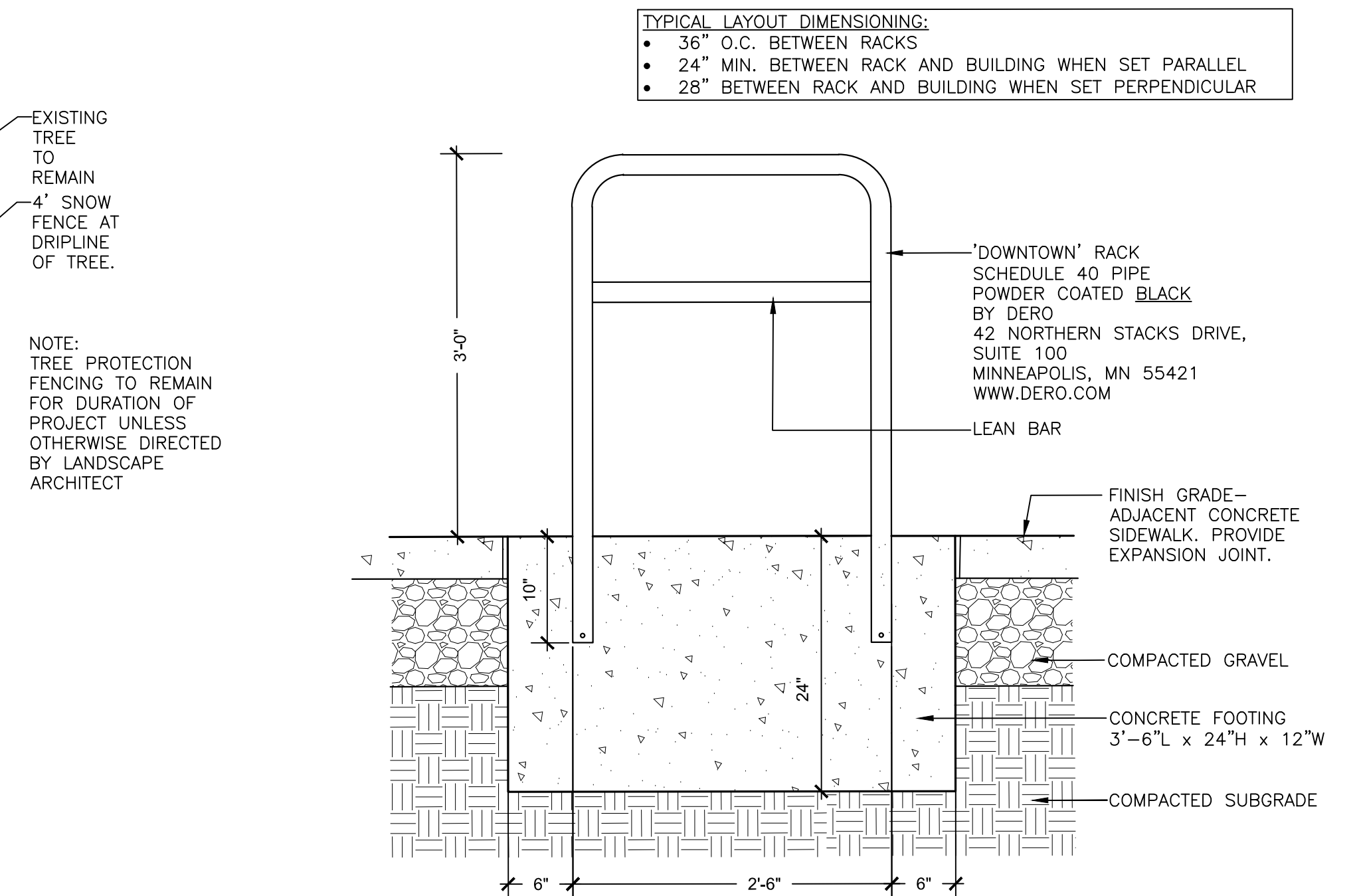
2 TYPICAL TREE PLANTING



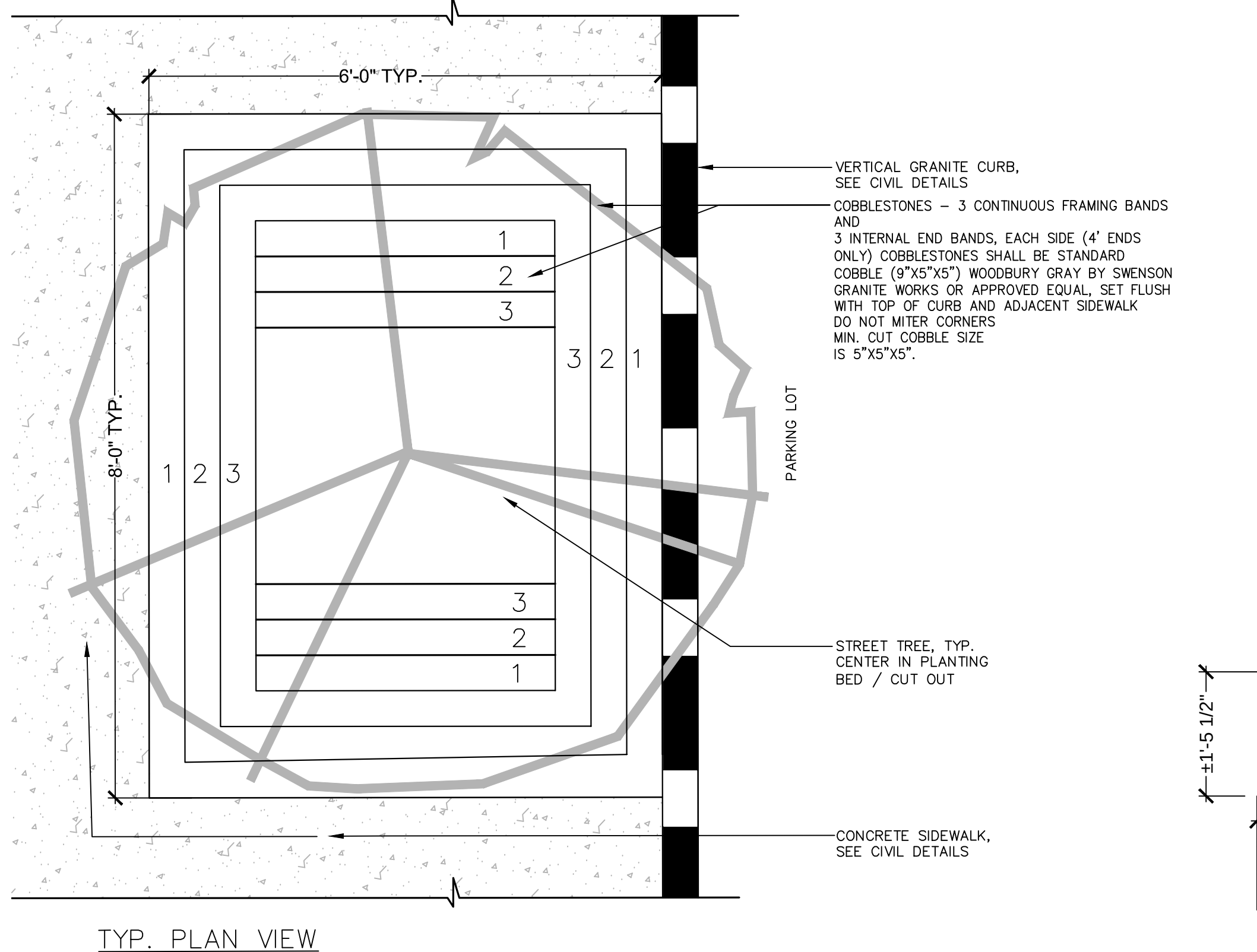
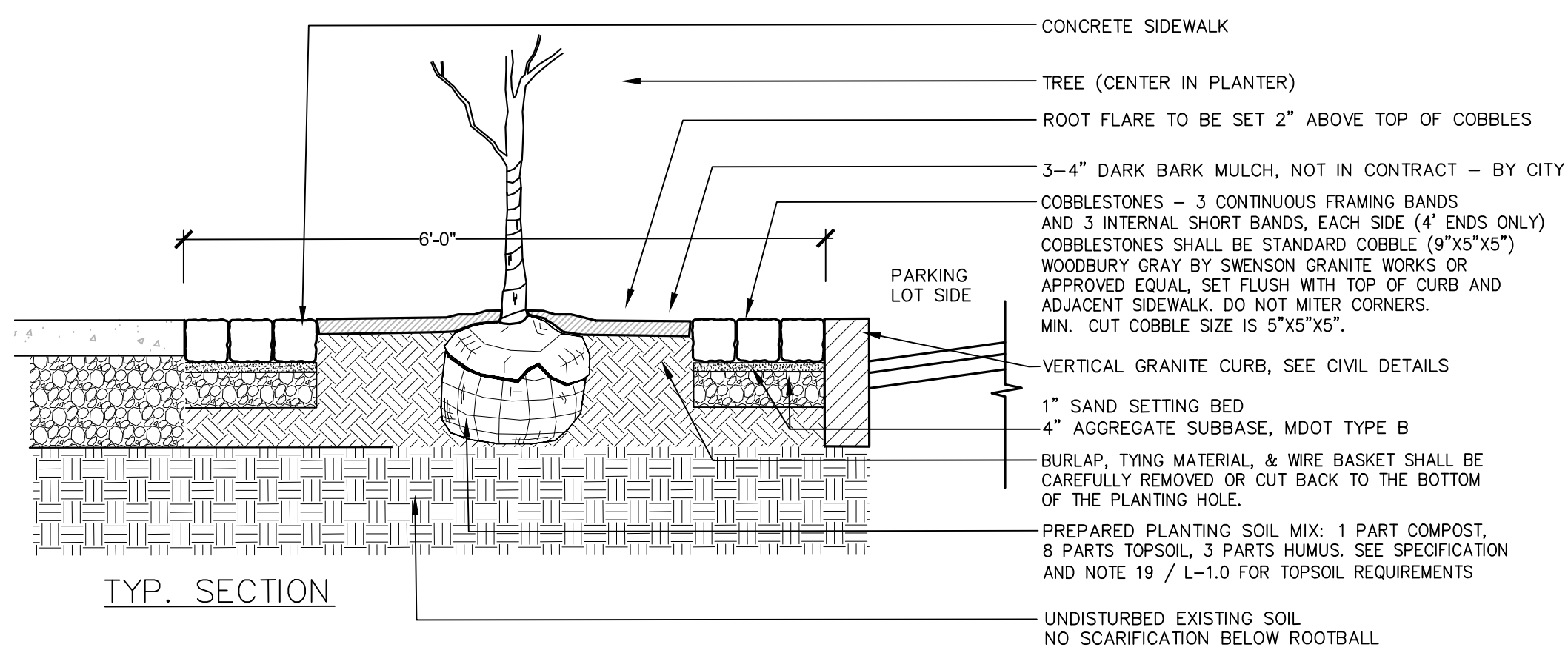
3 TYPICAL SHRUB PLANTING



5 TREE PIT



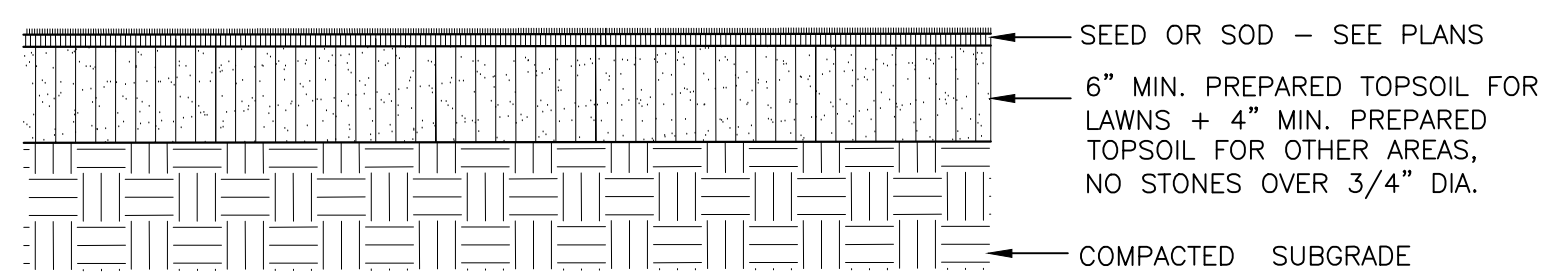
4 BIKE RACK



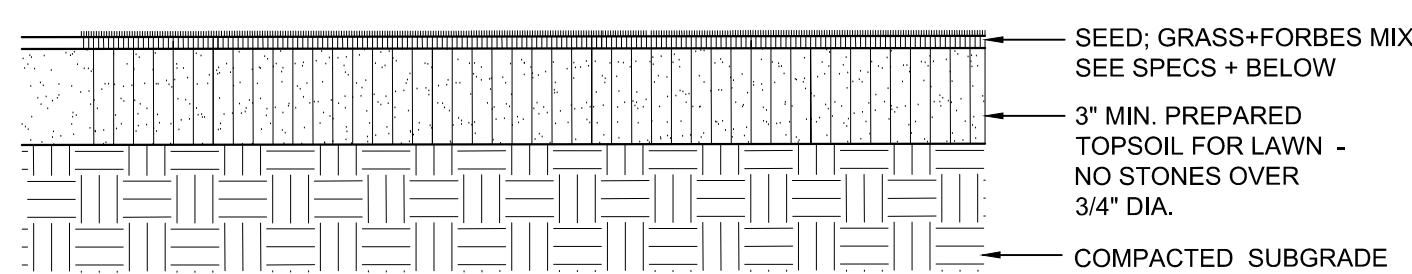
TYP. PLAN VIEW

TOPSOIL: FERTILE, FRIABLE, NATURAL TOPSOIL OF LOAMY CHARACTER, WITHOUT ADMIXTURE OF SUBSOIL MATERIAL, FREE FROM CLAY, LUMPS, COARSE SANDS, STONES, PLANTS, ROOTS, STICKS, AND OTHER FOREIGN MATERIALS GREATER THAN 1" IN ANY DIMENSION, PH RANGE 5.0-7.0, AND SHALL CONTAIN NOT LESS THAN 6% ORGANIC MATTER BY WEIGHT. SANDY LOAM OR LOAM SOIL AS DEFINED BY THE USDA SOIL CONSERVATION SERVICE, AND HAVE THE FOLLOWING MECHANICAL ANALYSIS:

TEXTURAL CLASS	% OF TOTAL WEIGHT AVERAGE	%
SAND (0.05- 2.0 MM)	45 TO 75%	60%
SILT (0.002- 0.05 MM)	15 TO 35%	25%
CLAY (< 0.002 MM)	5 TO 25%	15%

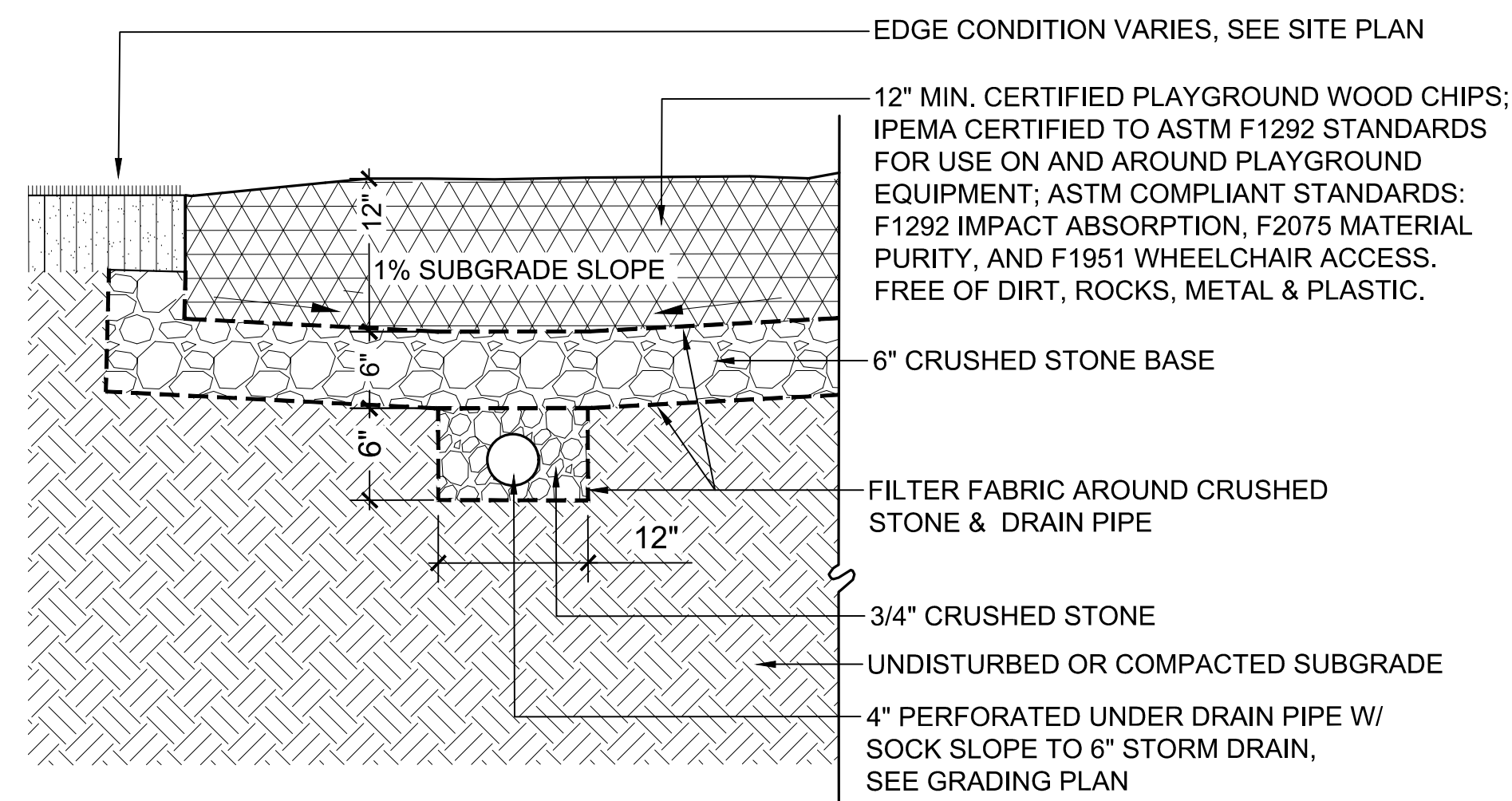


SEED MIX PLANTING (LAWN & OTHER AREAS)

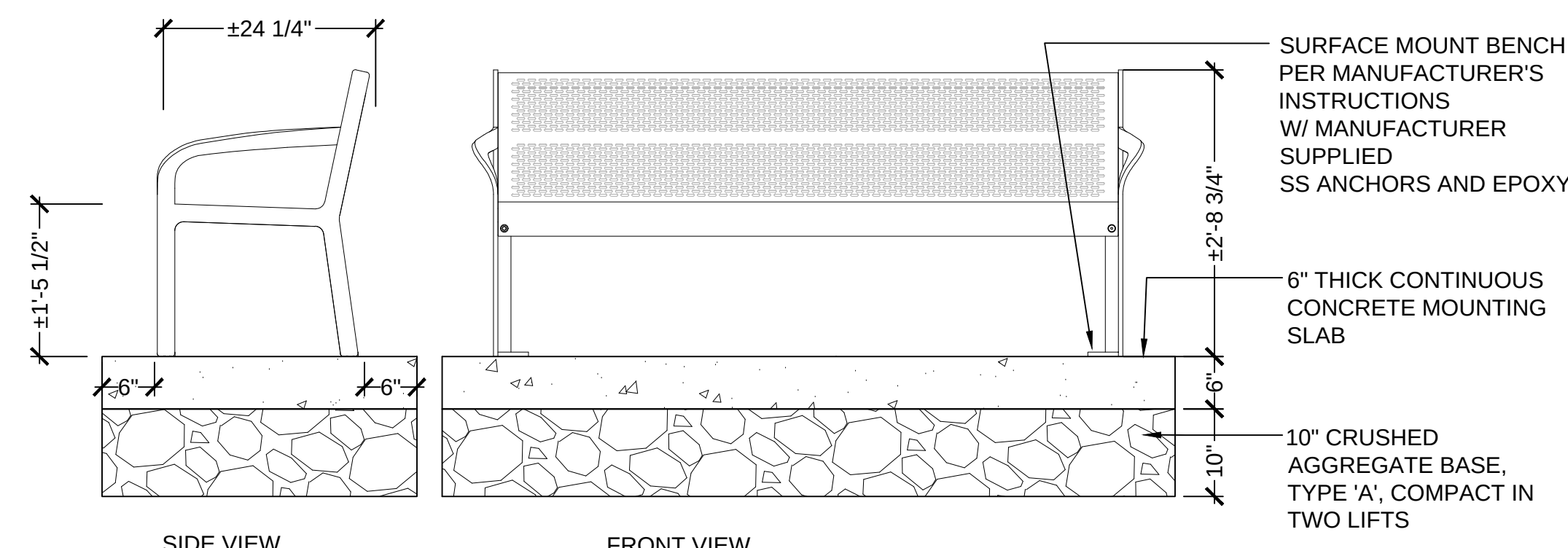
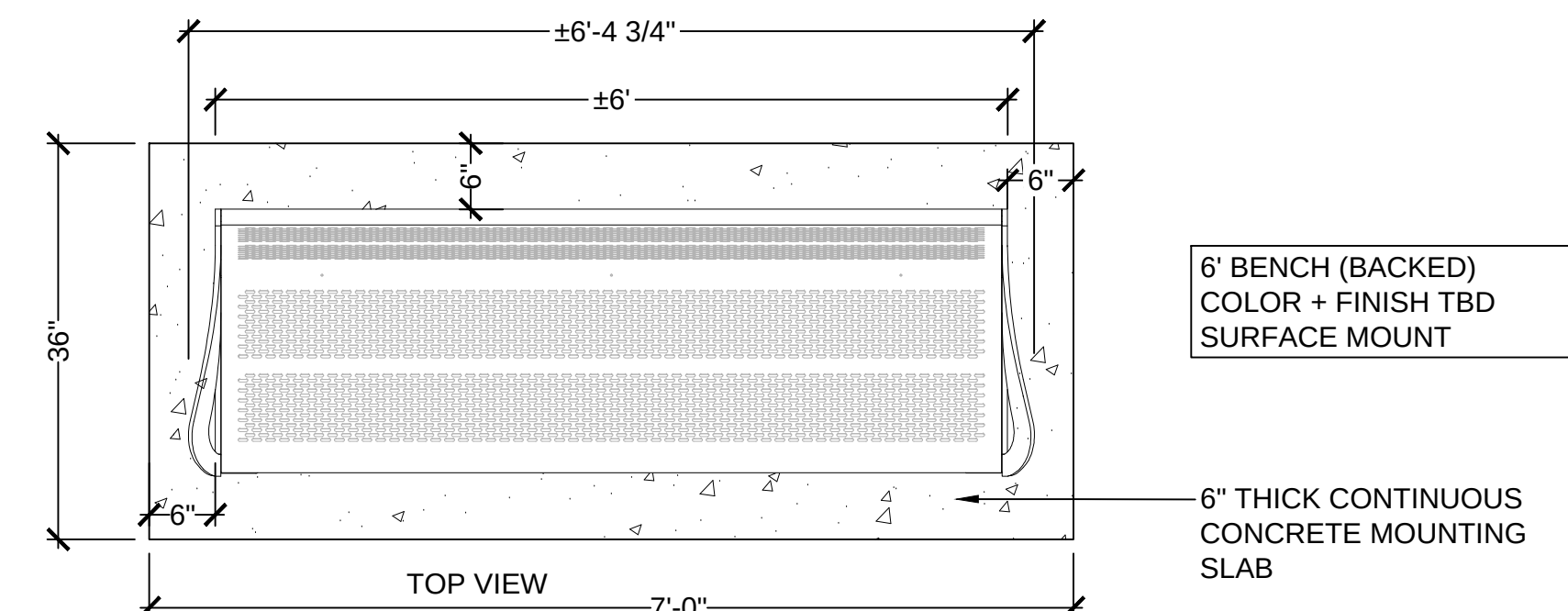


SEED MIX PLANTING (NON-LAWN AREAS)

6 SEEDING



7 PLAYGROUND SURFACING



8 BENCH

NOT FOR CONSTRUCTION

OWNER:

SOUTHERN MAINE AFFORDABLE HOUSING
22 SOUTH STREET
P.O. BOX 2287
BIDDEFORD, MAINE 04005

APPLICANT:

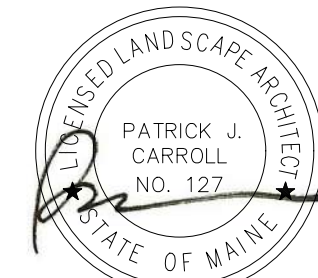
BIDDEFORD HOUSING AUTHORITY
22 SOUTH STREET
P.O. BOX 2287
BIDDEFORD, MAINE 04005



ADAMS POINT

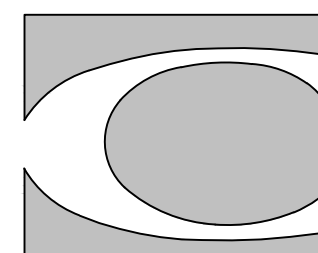
Project:

Description	Date	Revisions
Revised per City comments	09.21.2021	#1
Revised per Conditions of Approval	12.17.2021	#2



LANDSCAPE DETAILS

Phase:
PLANNING BOARD APPLICATION



217 COMMERCIAL STREET, STE 200
PORTLAND, MAINE 04101
207.772.1552 V. F. 207.772.0712

Date:
JUNE 14, 2021

Sheet No:

L2.0

ADAMS POINT MULTI FAMILY HOUSING

69 Adams St. Biddeford, ME 04005

No.	Date	Description
B		Revision Schedule

JOB NO.
Project Number

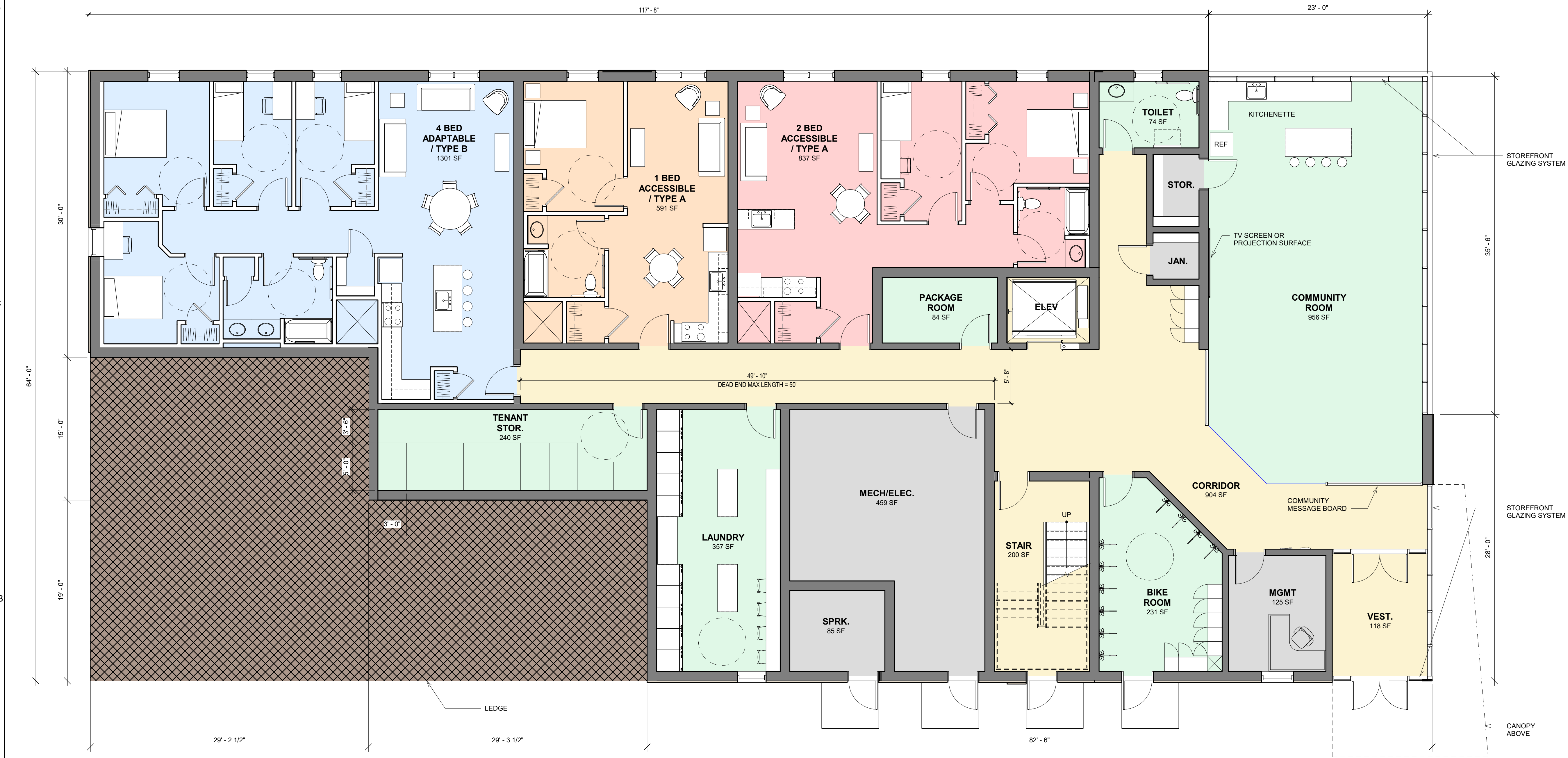
DRWN. CHK
Author Checker

SCALE:
3/16" = 1'-0"

ISSUE:
ISSUED FOR BID
04/02/2021

TITLE
Ground Floor Plan

SHEET
A100



1 GROUND FLOOR - CONCEPT
3/16" = 1'-0"

GROUND FLOOR PLAN SUMMARY

UNITS:
(1) - 4 BED ROOM UNIT
(1) - 2 BED ROOM UNIT
(1) - 1 BED ROOM UNIT

AREA:
FLOOR FOOTPRINT: 7,450sf
FLOOR PLATE (EXCLUDES STAIRS, ELEV.
AND MECHANICAL SHAFTS): 7,360sf

BUILDING INTERIOR FINISHES SUMMARY

FLOORING
CARPET
• CORRIDORS
• MANAGEMENT OFFICE
VINYL SHEET FLOORING W/ BACKING:
• LAUNDRY, BATHROOMS
SOLID VINYL FLOOR TILE
• THROUGHOUT LIVING UNITS
(EXCLUDING BATHROOMS)
LUXURY VINYL FLOORING:
• COMMUNITY ROOM
• MAIL ROOM
WALK-OFF MATT
• VESTIBULE
RUBBER
• STAIRS AND LANDINGS
SEALED CONC.
• MECH/ELEC.
• SPRINKLER ROOM
• JANITOR
• STORAGE SPACES

WALLS
PAINT
• ASSUME SINGLE COLOR (ZERO-
VOC) THROUGHOUT LIVING UNITS
• ASSUME (2) COLORS FOR SHARED
SPACES
FIBERGLASS REINFORCED PLASTIC:
• JANITOR
• GRND FLR. TOIL.
• PACKAGE ROOM
COUNTERTOPS
LAMINATE
• LIVING UNIT KITCHENS
QUARTZ
• BATHROOMS

BUILDING PROGRAM LEGEND

- 1 BED UNIT
- 2 BED UNIT
- 4 BED UNIT
- BUILDING STORAGE
- BUILDING SUPPORT
- CIRCULATION
- MANAGEMENT
- SHARED SPACE

ADAMS POINT MULTI FAMILY HOUSING
69 Adams St. Biddeford, ME 04005

No.	Date	Description
B		Revision Schedule

JOB NO.
Project Number

DRWN. CHK
Author Checker

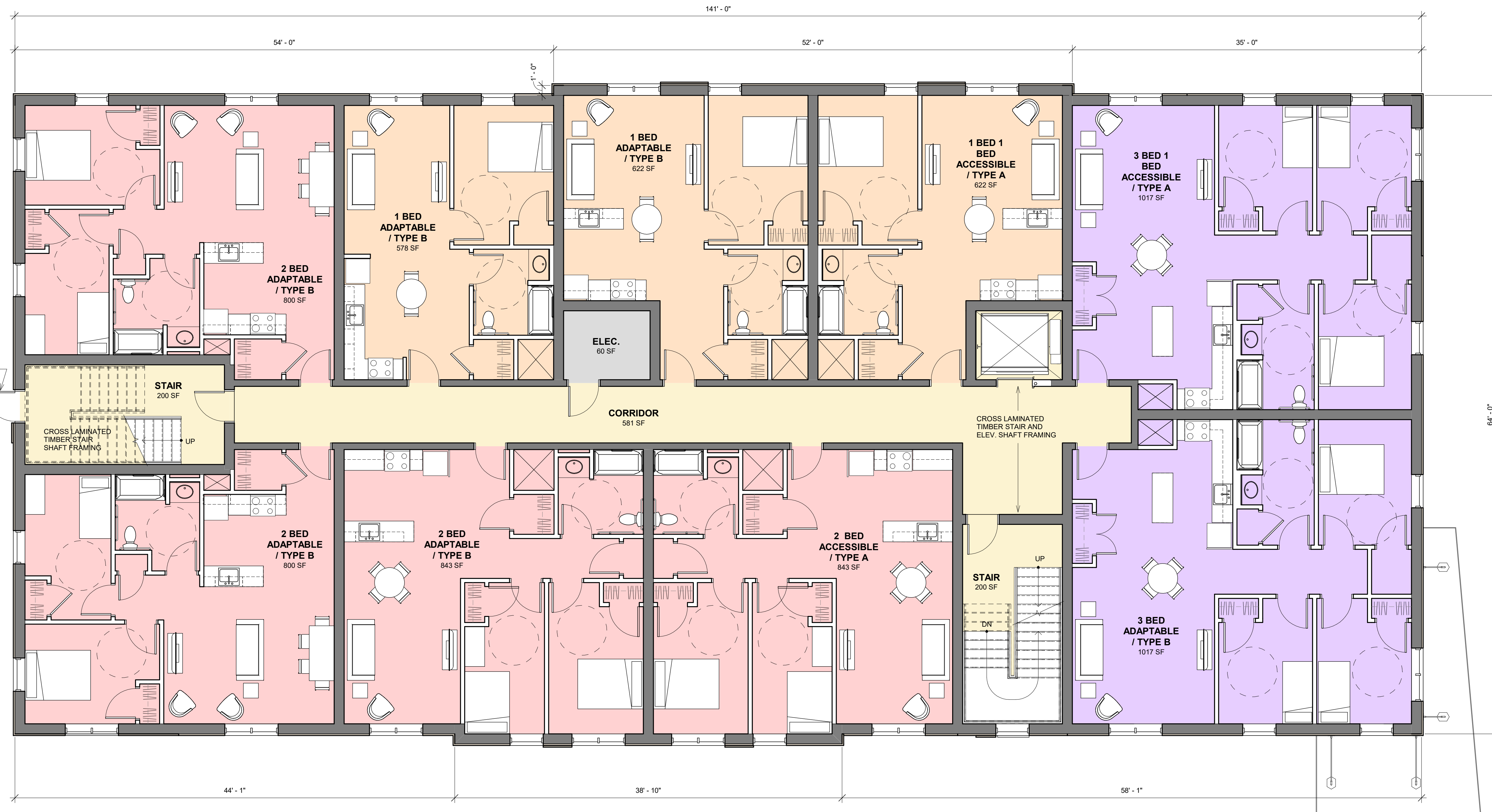
SCALE:
3/16" = 1'-0"

ISSUE:
ISSUED FOR BID
04/02/2021

TITLE
First Floor - 4th Floor
Plan

SHEET

A101



TYPICAL FLOOR PLAN 1ST THRU 4TH FLOORS

UNITS:
(2) - 3 BED ROOM UNITS
(4) - 2 BED ROOM UNITS
(3) - 1 BED ROOM UNITS
AREA:
FLOOR FOOTPRINT: 9,115sf
FLOOR PLATE (EXCLUDES STAIRS, ELEV.
AND MECHANICAL SHAFTS): 8,392sf

BUILDING PROGRAM LEGEND

- 1 BED UNIT
- 2 BED UNIT
- 3 BED UNIT
- BUILDING SUPPORT
- CIRCULATION

1 TYPICAL FLOOR PLAN - CONCEPT
3/16" = 1'-0"



1 EXTERIOR ELEVATION - SOUTH
1/8" = 1'-0"



2 EXTERIOR ELEVATION - EAST
1/8" = 1'-0"



3 EXTERIOR ELEVATION - WEST
1/8" = 1'-0"



4 EXTERIOR ELEVATION - NORTH
1/8" = 1'-0"

Revision Schedule		
No.	Date	Description

JOB NO.
Project Number

DRWN. CHK
Checker

SCALE:

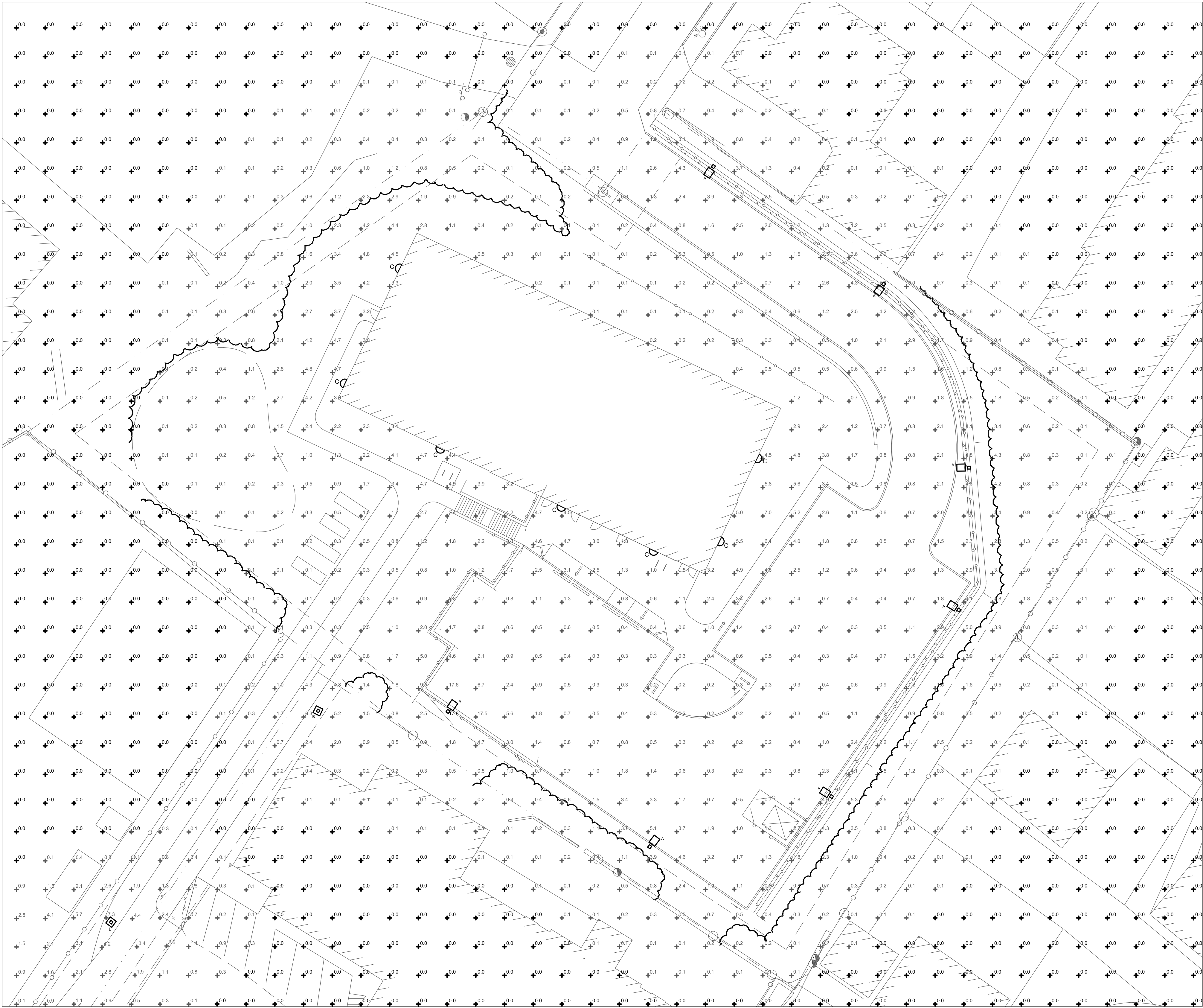
ISSUE
06/08/2021

TITLE
Exterior Elevations

SHEET
A200

File: V:\PROJECTS\ANY\45\068944\00\09_DESIGN\DRAWINGS\01_SHEETS\ES-100-068944.DWG
Saved: 1/14/2022 4:26:37 PM Plotted: 1/17/2022 9:55:03 AM Current User: Anderson, Mark LayoutBy: 1192

LIGHTING FIXTURE SCHEDULE						
Label	Manufacturer	Catalog Number	Description	Lumens Per Lamp	Wattage	Symbol
A	Sternberg Lighting	ML630-24L40T3-MDL014-SV1-HSS-BLOC	Medium size Millenia Arm Mount fixture, LEDII T3revB optic, Soft Vue 1 Flat, With House Side Shield	6583	87.3	
B	Sternberg Lighting	ML660-12L40T5-MDL018-SV1	ML660 Medium size Millenia, Post Top, Soft Vue 1 Flat, T5	4791	59.3	
C	Sternberg Lighting	ML630-16L40T4-MDL018-SV1	ML630 Medium Millenia Fixture, Luxeon 50-50 LED, T4, Soft Vue 1	8411	75.1	



IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT OR LAND SURVEYOR TO ALTER AN ITEM IN ANY WAY IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED. THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

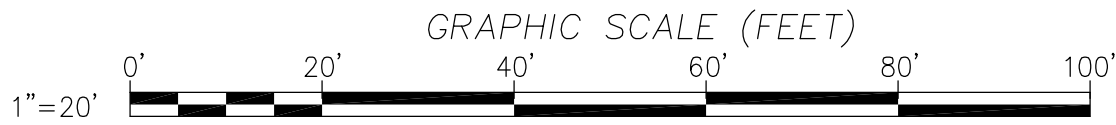
ADAMS POINT HOUSING
69 ADAMS STREET,
BIDDEFORD, MAINE, 04005

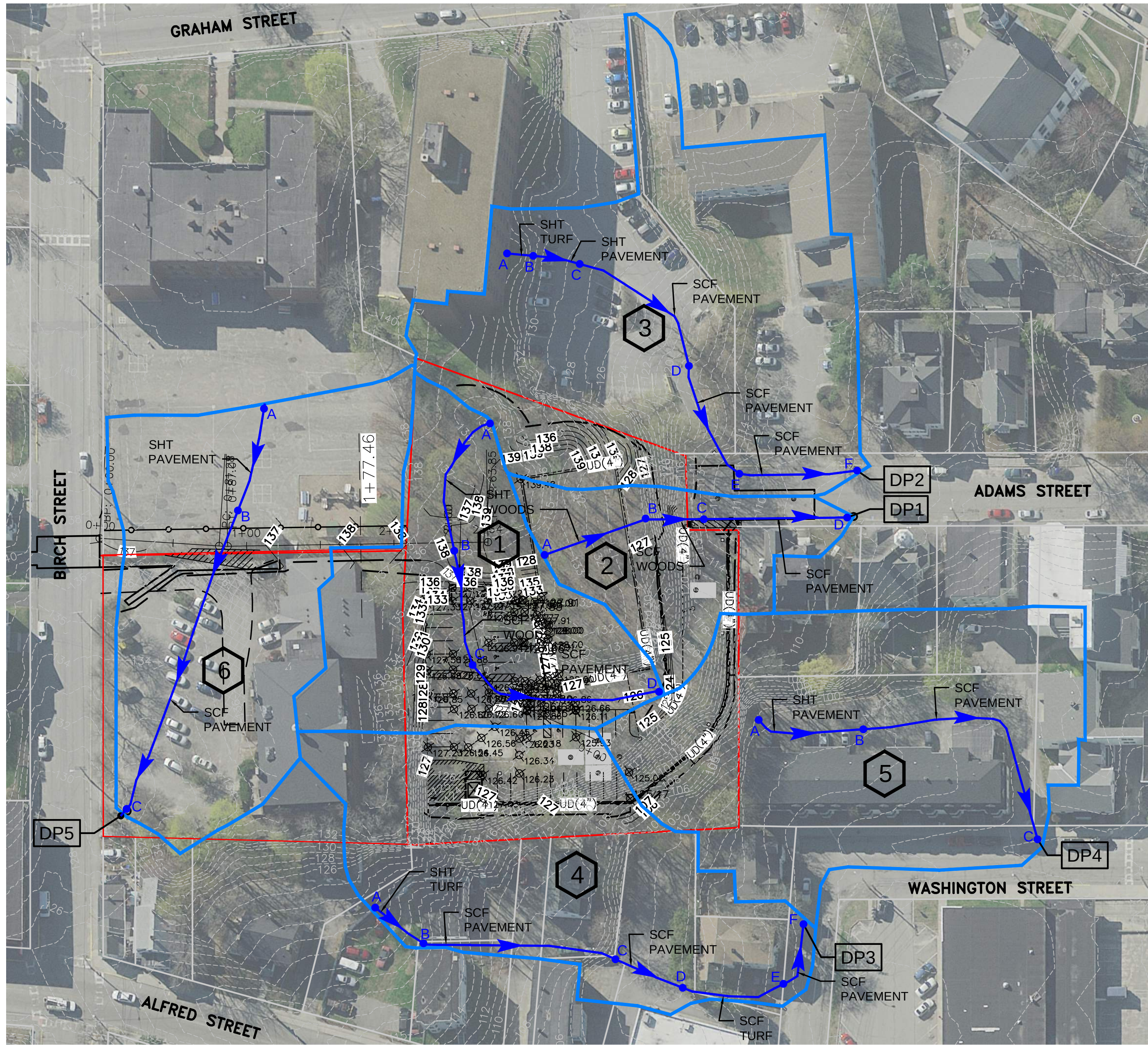
No.	Submittal / Revision	App'd.	By	Date

EXTERIOR LIGHTING PLAN

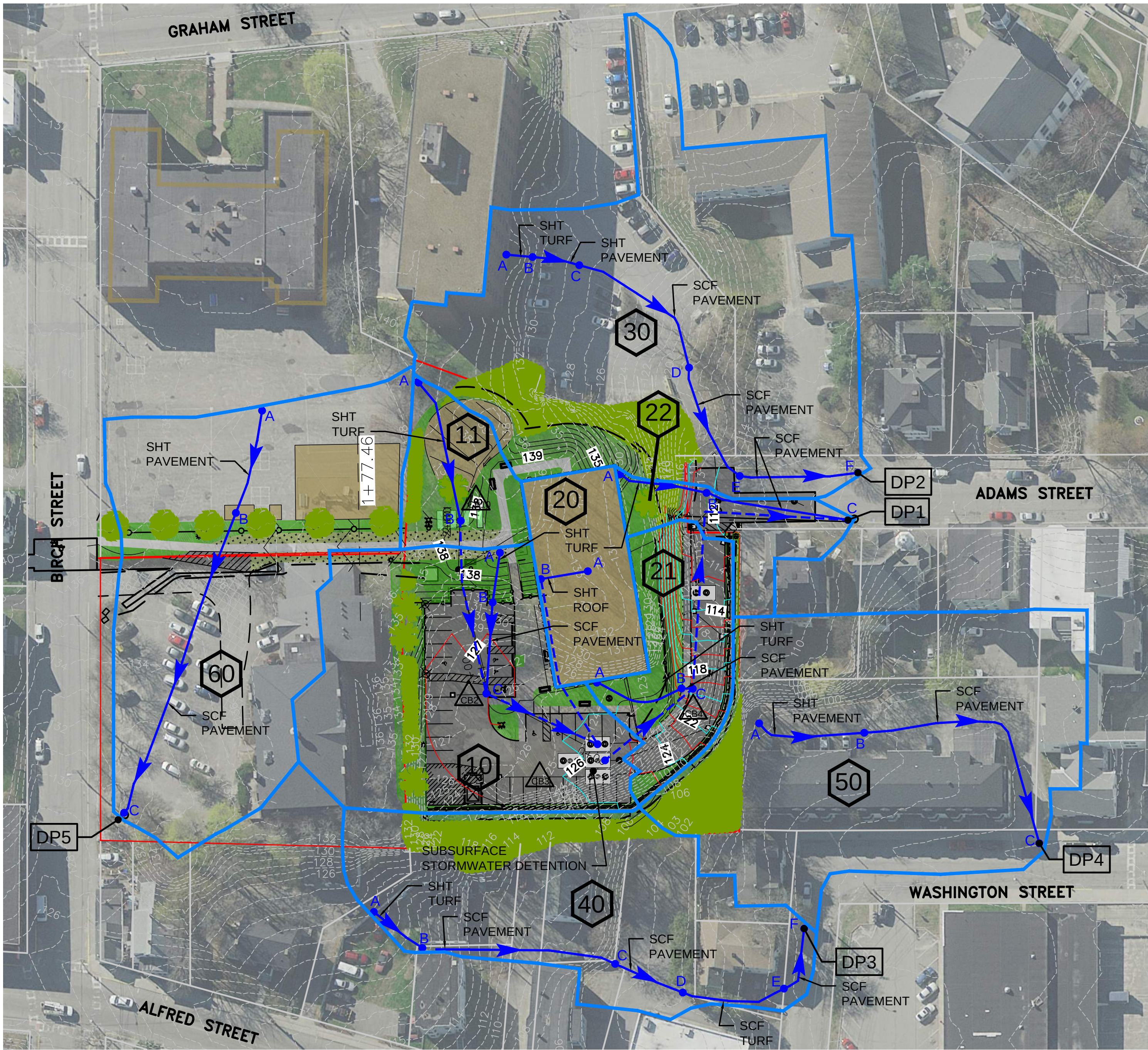
Designed By: MA	Drawn By: DN	Checked By:
Issue Date: 01/14/2022	Project No: 068944	Scale:

Drawing No.:
E-100





1 PRE-DEVELOPMENT WATERSHED PLAN
WS101 1"=50'



2 POST-DEVELOPMENT WATERSHED PLAN
WS101 1"=50'

LEGEND

- 1 WATERSHED NUMBER
- A B TIME OF CONCENTRATION FLOW PATH
- CATCH BASIN/REACH FLOW PATH
- WATERSHED BOUNDARY
- EXISTING CONTOUR LINE
- DP1 DISCHARGE POINT (POINT OF ANALYSIS)
- CATCH BASIN/POND ROUTING
- REACH ROUTING
- SHT SHEET FLOW
- SCF SHALLOW CONCENTRATED FLOW
- CHAN CHANNEL FLOW
- PIPE PIPE FLOW

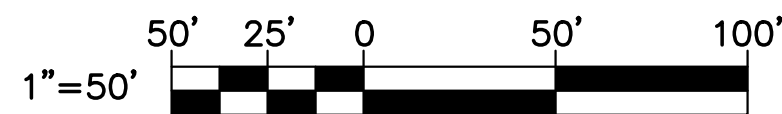
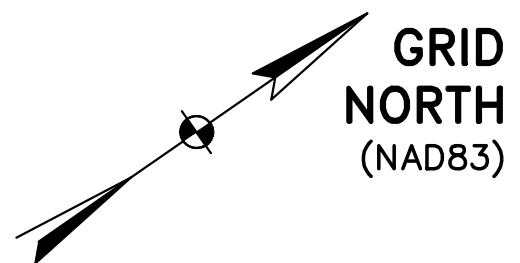
Pre-Development Areas					Post-Development Areas				
Total	Imp	Woods	Land		Total	Imp	Woods	Land	
1	31923	9348	21811	764	10	32145	16482	10017	5646
2	17060	5366	10277	1417	11	7244	655	0	6589
					20	9031	9031	0	0
					21	11110	6606	42	2386
					22	6408	3615	1758	1035
3	59081	31821	10196	17064	30	57888	31627	5016	21245
4	41667	20716	11331	9620	40	30666	15998	2290	11678
5	50046	31877	10115	8054	50	45225	31877	4600	8748
6	44117	36602	0	7515	60	44117	35651	0	8466

Pre- and Post-Development Peak Runoff Rates (ft ³ /s)						
Discharge Point	2-Year Storm		10-Year Storm		25-Year Storm	
	Pre	Post	Pre	Post	Pre	Post
DP1	1.2	1.2	2.4	2.1	3.4	3.3
DP2	3.2	3.2	5.5	5.5	7.4	7.4
DP3	2.1	1.6	3.8	2.8	5.1	3.8
DP4	2.9	2.9	4.9	4.7	6.5	6.1
DP5	3.1	3	4.8	4.8	6.2	6.1
Sum	12.5	11.9	21.4	19.9	28.6	26.7

Time to Concentration:											
Flow Path Data - Pre						Flow Path Data - Post					
Subcatchment 1						Subcatchment 10					
item	length	start elev	end elev	slope	surface	item	length	start elev	end elev	slope	surface
sheet	100	139.4	135.17	0.042	woods	sheet	36	139.25	128	0.313	turf
scf	115	135.17	127.37	0.068	woods	scf	62	128	126.87	0.018	pavement
scf	134	127.37	122.5	0.036	pavement						
Subcatchment 2						Subcatchment 11					
item	length	start elev	end elev	slope	surface	item	length	start elev	end elev	slope	surface
sheet	74	134.2	129	0.07	woods	sheet	100	139.1	136.6	0.025	turf
scf	39	129	113	0.41	woods						
scf	100	113	107.5	0.055	pavement						
Subcatchment 20						Subcatchment 21					
item	length	start elev	end elev	slope	surface	item	length	start elev	end elev	slope	surface
sheet	32	-	-	0.01	Roof	sheet	62	126.5	124.7	0.028	turf
scf	7	119	118.86	0.02	pavement	scf	7	119	118.86	0.02	pavement
Subcatchment 22						Subcatchment 30					
item	length	start elev	end elev	slope	surface	item	length	start elev	end elev	slope	surface
sheet	61	130.5	112	0.303	turf	sheet	97	112	104.1	0.08	pavement
scf	97	112	104.1	0.08	pavement						
Subcatchment 3						Subcatchment 31					
item	length	start elev	end elev	slope	surface	item	length	start elev	end elev	slope	surface
sheet	20	134.75	131.47	0.164	turf	sheet	20	134.75	131.47	0.164	turf
sheet	30	131.47	128.52	0.098	pavement	sheet	30	131.47	128.52	0.098	pavement
scf	110	128.52	118.7	0.080	pavement	scf	110	128.52	118.7	0.080	pavement
scf	85	118.7	111.33	0.087	pavement	scf	85	118.7	111.33	0.087	pavement
scf	85	111.33	107.71	0.043	pavement	scf	85	111.33	107.71	0.043	pavement
Subcatchment 4						Subcatchment 40					
item	length	start elev	end elev	slope	surface	item	length	start elev	end elev	slope	surface
sheet	40	122.46	117.53	0.123	turf	sheet	40	122.46	117.53	0.123	turf
sheet	10	117.53	116.7	0.083	pavement	sheet	10	117.53	116.7	0.083	pavement
scf	125	117.53	103.88	0.109	pavement	scf	125	117.53	103.88	0.109	pavement
scf	50	103.88	102.04	0.037	pavement	scf	50	103.88	102.04	0.037	pavement
scf	75	102.04	96.31	0.076	turf	scf	75	102.04	96.31	0.076	turf
scf	45	96.31	95.77	0.012	pavement	scf	45	96.31	95.77	0.012	pavement
Subcatchment 5						Subcatchment 50					
item	length	start elev	end elev	slope	surface	item	length	start elev	end elev	slope	surface
sheet	75	98.94	97.15	0.024	pavement	sheet	75	98.94	97.15	0.024	pavement
scf	180	97.15	93.11	0.022	pavement	scf	180	97.15	93.11	0.022	pavement
Subcatchment 6						Subcatchment 60					
item	length	start elev	end elev	slope	surface	item	length	start elev	end elev	slope	surface
sheet	75	137.36	136.57	0.011	pavement	sheet	75	137.36	136.57	0.011	pavement
scf	225	136.57	131.12	0.024	pavement	scf	225	136.57	131.12	0.024	pavement

NOTES:

1. THE SOILS FOR THE ENTIRE SITE ARE CLASSIFIED AS "URBAN" BASED ON A CLASS D MEDIUM INTENSITY SOIL SURVEY PERFORMED IN SPRING, 2021. FOR THE PURPOSES OF STORMWATER ANALYSIS, THE HYDROLOGIC SOIL GROUP IS ASSUMED TO BE "C."
2. ELEVATION INFORMATION SHOWN IS BASED ON GPS STATIC OBSERVATIONS TAKEN FEBRUARY 25, 2021. THE VERTICAL DATUM IS THE NORTH AMERICAN VERTICAL DATUM OF 1988.



FOR PERMITTING PURPOSES ONLY NOT FOR CONSTRUCTION

DESIGNED BY: JSD
DRAWN BY: JSD
CHECKED BY: JLG
PROJECT: 22104.04

OWNER:
SOUTHERN MAINE
AFFORDABLE HOUSING
22 South Street
Biddeford, Maine, 04005

PROJECT TITLE AND LOCATION:
ADAMS POINT HOUSING
69 Adams Street
Biddeford, Maine, 04005

WATERSHED
PLANS

SCALE: AS NOTED

DATE: 08-02-2021

DWG.: WS101

SHEET: 23 OF 23



CITY OF BIDDEFORD

Planning and Development Department

David C.M. Galbraith
Deputy Director/City Planner
205 Main Street
P.O. Box 586
Biddeford, ME 04005
(207) 284-9115

David.Galbraith@biddefordmaine.org

PLANNING BOARD MEMORANDUM

TO: Chair Patoine and Members of the Biddeford Planning Board

EC: Bryce Avallone: bryce.avallone@gmail.com
Peter Valcourt: peter.valcourt@yahoo.com

FROM: David C.M. Galbraith, Deputy Director/City Planner

DATE: February 14, 2024

RE: **2023.36 Homestead By The River Campground / Bryce Avallone and Peter Valcourt / 608 New County Road (PID# Map 6, Lot 35-2) / Storage Building / SKETCH PLAN REVIEW**

MEETING DATE: February 21, 2024 at 6:00 PM

1. Project Overview / History:

The subject property is 29.47-acres in area is located at 608-610 New County Road (Property ID# Map 6, Lot 35, Sub-lot 2). The property is further located within the Rural Farm (RF) zoning district and shoreland zoning overlay district. The subject property is currently being utilized as a campground and the applicants are seeking approval to erect a 150 foot by 40 foot (6,000 square feet) utility building for the expressed storage of recreational camping vehicles (RV's).

As the Board may recall, in late April 2023 the City's Code Office and Planning Department were contacted by business partners Bryce Avallone and Peter Valcourt (project applicants) who were in negotiations to purchase the "Homestead By The River" family campground. Upon purchase of the campground they had proposed the construction of a new 44' x 72' (3,168 sq. ft.) event barn for the use of the camping clients but also to be opened to the public for weddings, parties and similar "event center" type uses, during the summer and fall months. During the property's off-season the applicants would also be seeking approval for winter storage of recreational vehicles (RVs) within the proposed barn. Article V, Establishment of Zones of the City's Land Use Ordinance (Zoning Ordinance), Table A - Table of Land Uses, does not include Event Centers, Wedding Barns, or similar uses as Permitted or Conditional Uses. Therefore, the proposed event center Use, is not allowed within any of the City's zoning districts nor have any specific performance standards for this type of Use been adopted. The Applicant's applied for a Contract Zone, to permit the event center but following Planning Board review and recommendation for approval the City Council ultimately denied the proposed Contract Zone.

Following the denial of the contract zone the Applicants sought approval of a restaurant use, within the same proposed event center building. This application was under Staff review and the Applicant's requested a postponement of the hearing and ultimately withdrew their application.

2. PROJECT DATA:

**2023.36 Homestead By The River Campground / Bryce Avallone and Peter Valcourt / 608 New County Road (PID# Map 6, Lot 35-2) / Storage Building / SKETCH PLAN REVIEW
February 21, 2024**

1.	Applicant:	Riverbend Reserve, LLC 608 New County Road Peter.valcourt@yahoo.com
2.	Owner of Property:	Avallone Holdings, LLC/Parekh Holdings, LLC
3.	Agent:	Craig Burgess Acorn Engineering 500 Washington Avenue, Suite 202 Portland, ME 04101
4.	Surveyor:	Same as above
5.	Project Location:	608-610 New County Road
6.	Project Tax Map #/Lot #:	Tax Map 6, Lot 35-2
7.	Lot Size:	29.5 Acres
8.	Base Zoning:	RF
9.	Overlay Zoning:	LR (partial)
10.	Existing Use:	Campground
11.	Proposed Use:	Campground with Vehicle Garage
12.	Approvals Required:	Sketch Plan Review
13.	Uses in the Vicinity:	Farm Land
14.	Waivers Needed:	a. Full Site Plan Review
15.	Waivers Granted:	a. None
16.	Other Non-City Permits Required:	N/A
17.	LDR Attachment A: Fees Paid:	Yes
18.	Planning Board / City Council: Event Center - Contract Zone Request: Denied Planning Board Review: Restaurant: Application Withdrawn Planning Board Review: 6,000 square Foot storage building - PENDING	

3. REVIEW PROCESS:

The proposal for the 6,000 storage RV building is subject to the standards of the City of Biddeford – Code of Ordinances, Part III: Land Development Regulations, Article XI Site Plan Review, Section 4 – Applicability, which states:

B. Development review classification and thresholds.

I. Activities subject to minor development review. The following activities shall be subject to minor development review by the Staff Review Committee:

A. Any development activity or combination of activities that, within any five year period results in the construction of the following:

1. In all zoning districts except for B-1, B-2 and all industrial zones.

a. Between 1,000 and 4,999 square feet of new floor area;

b. Between 1,000 and 4,999 square feet of new impervious surface; or

- c. A cumulative total of between 1,500 and 7,499 square feet of floor area and impervious surface.

As the 6,000 square foot storage barn exceeds the 4,999 square foot limit the project requires Planning Board review and approval and was not allowed to be reviewed by the Staff Review Committee (SRC). As proposed, there are no planned improvements within the portion of the property which is subject to the review and approval of the Saco River Corridor Commission (SRCC) the Site Plan should be review by the Commission who may provide recommendations to the Board.

The “sketch plan application” states that the Applicants “*plan to install approximately 200 solar panels to offset the electricity used at the campground. One of the reasons for constructing the barn is to provide a surface area to support those solar panels. A ground mounted array is less expensive than a barn, but looks commercial and would not be in line with the rural nature of the property. A barn, on the other hand, fits right in*”.

It should be noted that the City does not currently allow commercial solar farms and ground mounted solar panels are not being proposed. The proposed roof-top solar panels may be allowed with permitting through the Code Enforcement Office.

A. WAIVERS REQUESTED: Article XI, Full Site Plan Review.

The only site modification being proposed is the construction of the proposed 6,000 square foot building, which is outside of the Saco River Corridor Commission (SRCC) review area. Due to the size of the property, the proposed location of the proposed storage building and the relatively small size of the proposed building Staff has determined that a full stormwater report is not required. However, Staff will include a Condition of Approval (COA) requiring a perforated foundation drain and crushed stone be installed around the building foundation.

Request to waive second hearing. The applicants are seeking the Planning Board review their application and make the determination that the plans meet the rules and intent of the City’s Code of Ordinances, and forgo further Planning Board review.

4. NEXT STEPS/SUGGESTED ACTIONS:

Recommend the Planning Board grant the waiver request for a full site plan review submittal given the size of the property, the proposed location of the proposed storage building, the distance from the Saco River, and the relatively small size of the proposed building, Staff has determined that a full stormwater report and full site plan review is warranted.

Recommend that if the Planning Board approves the proposed storage barn / site plan it be approved with the following minimum conditions of approval:

1. Standard Conditions of Approval apply.
2. All previous Conditions of Approval (COA) not specifically modified with this approval are hereby reaffirmed and remain in full force and effect.
3. A perforated foundation drain and crushed stone be installed around the building foundation.
4. Building permits for the structure may not be issued until a preconstruction meeting has been scheduled.

- 5. Construction of the proposed storage building may not continue until a building permit, meeting the Conditions of Approval, has been reviewed and issued by the Code Enforcement Department.
- 6. The proposed storage building may only be utilized for the storage of RV's and for storage of equipment, such as picnic tables, associated with the campground d operations.
- 7. Any change of use of the storage building shall be reviewed and approved by the Planning Board prior to the commencement of said use.
- 8. This approval does NOT include approval of any ground mounted solar panels. Roof-top solar panels may be allowed following review and approval by the Code Enforcement Office and issuance of required building and electrical permits.

5. **STAFF RECOMMENDATION:**

Staff has reviewed the proposed application to erect a 150 foot by 40 foot (6,000 square feet) utility building for the expressed storage of recreational camping vehicles (RV's) to be constructed on the Homestead By the River Campground property, located at 608-610 New County Road (Property ID# Map 6, Lot 35, Sub-lot 2), and recommends the Planning Board approve the Applicants request.

6. **SAMPLE MOTIONS:**

- 1. *I motion to waive Article XI, Full Site Plan Review. I motion to waive Article XI, full site plan review, as no site improvements are being made.*
- 2. *MOTION TO APPROVE, the site plan approval for the construction of a 6,000 square foot storage building for the storage of RV's used at the facility at 608-610 New County Road (Property ID# Map 6, Lot 35, Sub-lot 2).*
- 3. *MOTION TO DENY, the site plan approval for the construction of a 6,000 square foot storage building for the storage of RV's used at the facility at 608-610 New County Road (Property ID# Map 6, Lot 35, Sub-lot 2), based upon the following reasons:*

- a) _____
- b) _____
- c) _____

- 4. *MOTION TO TABLE the site plan approval for the construction of a 6,000 square foot storage building for the storage of RV's used at the facility at 608-610 New County Road (Property ID# Map 6, Lot 35, Sub-lot 2), based upon the following reasons:.*

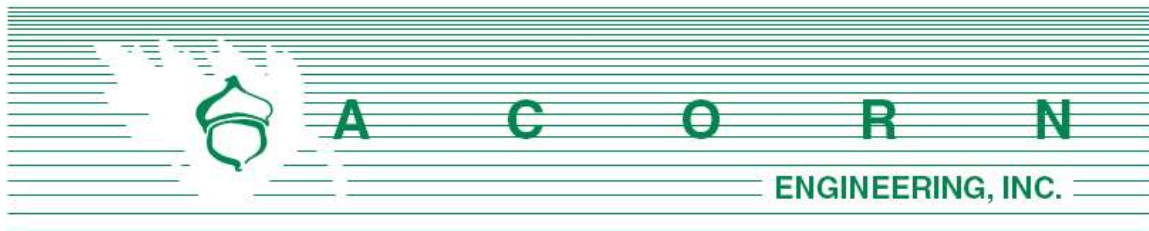
- a) _____
- b) _____
- c) _____

**2023.36 Homestead By The River Campground / Bryce Avallone and Peter Valcourt / 608 New
County Road (PID# Map 6, Lot 35-2) / Storage Building / SKETCH PLAN REVIEW
February 21, 2024**

Respectfully submitted,

David C.M. Galbraith

David C.M. Galbraith
Deputy Director/City Planner



Sketch Plan Review Application

To:
City of Biddeford

For:
Homestead by the River
Biddeford, Maine

Prepared For:
Riverbend Reserve, LLC.
608 New County Road
Biddeford, ME 04005

Prepared By:
Acorn Engineering, Inc.
500 Washington Avenue
Portland, Maine 04103

January 2024

TABLE OF CONTENTS

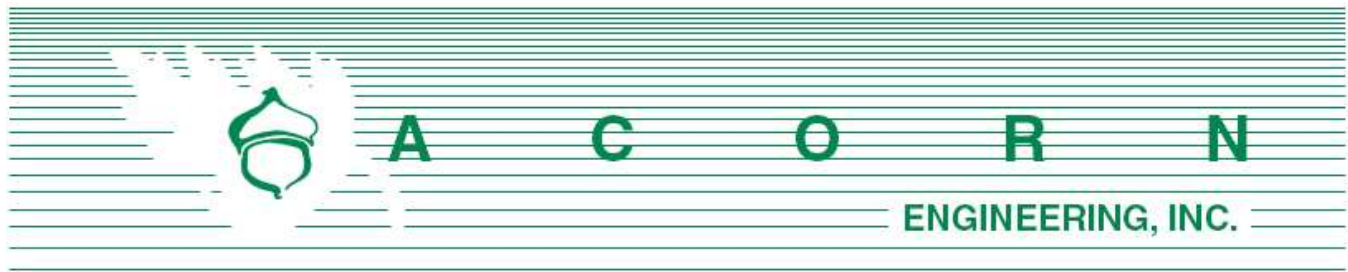
<u>EXHIBIT #</u>	<u>TITLE</u>
A.	COVER LETTER
B.	APPLICATION FORM
C.	RIGHT, TITLE, & INTEREST
D.	SITE LOCATION MAP
E.	PROJECT DESCRIPTION - BY APPLICANT

LIST OF DRAWINGS

C-10.1	OVERALL SITE PLAN
C-10.2	SITE PLAN

Exhibit A

Cover Letter



City of Biddeford, Planning Department
RE: David Galbraith, City Planner
205 Main Street
Biddeford, Maine 04005

January 4, 2023

Subject: Sketch Plan Review
New Pole Barn Structure – Homestead by the River Campground

Dear Mr. Galbraith:

On behalf of Bryce Avallone and Peter Valcourt at Riverbend Reserve, LLC, Acorn Engineering (Acorn) is pleased to submit the enclosed Sketch Plan Application for a proposed 6,000 square foot pole barn, 1,950 square foot lean, and a 2,504 square foot 16-foot-wide gravel drive at Homestead by the River Campground (608 – 610 New County Road). The approximate 29.5 parcel is identified as Lot 35-2 on Tax Map 6 and is located within the Rural Farm (RF) District and Shoreland Overlay Zoning District along Saco River. A Site Plan Review application is being submitted for the creation of more than 5,000 square foot of impervious surface.

The parcel is currently developed as Homestead by the River Campground, which is a small family friendly, seasonal campground consisting of tent and pull through camp sites, gravel parking area for visitors, bathhouse, barn, and recreational areas. There is also a single-family residential home on the property. The campground is served by an existing wastewater disposal system and public well. The intent of the new pole barn structure is to complement the existing site by providing covered storage for equipment. The pole barn will be constructed outside the limits of the Shoreland Overlay Zoning District and Saco River Corridor District (includes land areas 500 feet along Saco River).

The pole barn will be constructed at the southerly side of the campground. Details for the pole barn include:

- Pre-engineering metal building with a slab on grade foundation.
- Eight (8) overhead doors facing away from New County Road (State Route Route 5)
- The color will be “barn red”.
- Solar panels on roof.

An existing mix of mature deciduous and evergreen trees will provide visual buffering from New County Road. Underground electrical will be extended to the barn, but lighting is not proposed as part of the project. Existing on-site water and sewer will not be extended to the pole barn. The parcel is outside the high-value agricultural soils area as depicted in the comprehensive plan. We do not believe the project will result in a negative impact on agricultural production.

To assist the Planning Board and City staff, Acorn has prepared two site plans: one showing the entire parcel and a second that includes detailed site layout information of the immediate project

area. We are hopeful that we have provided sufficient information for the committee to review before the meeting. Upon your review of the submitted information, please do not hesitate to contact us if you have any questions or comments. Thank you for your consideration.

Sincerely,

A handwritten signature in blue ink that reads "Craig Burgess".

Craig A. Burgess, P.E.
Project Manager
Acorn Engineering, Inc.



Exhibit B

Site Plan Preapplication Form

**City of Biddeford – Planning Department****Planning Board Application**

P.O. Box 586, 205 Main Street Biddeford, Maine 04005
207-284-9115

Type of Application:☐ Shoreland Zoning Permit☒ Site Plan Review☐ Extraction☐ Conditional Use Permit☐ Subdivision☐ Private Way☒ Other: Sketch Plan Application**Applicant Information:**Name: Riverbend Reserve, LLC, attn: Bryce Avallone and Peter ValcourtMailing Address: 608 New County Road, Biddeford, ME 04005Telephone: (207) 469-8494Email: peter.valcourt@yahoo.com

What is your legal interest in the property?

☐ Owner☒ Potential Buyer with Contract☐ Lease/Rental Agreement**Owner's Information:**Name: Avallone Holdings, LLC\ Parekh Holdings, LLC - (See enclosed warranty deed)Mailing Address: 610 New County Road, Biddeford, ME 04005Telephone: (207) 469-8494Email: peter.valcourt@yahoo.com**Agent's Information:**Name: Acorn Engineering, attn: Craig Burgess PE,Mailing Address: 500 Washington Avenue, Suite 202, Portland, ME 04101Telephone: (207) 837-1092Email: cburgess@acorn-engineering.com**Engineer/Surveyor's Information:**Name: Acorn Engineering, attn: Craig Burgess PE,Mailing Address: 500 Washington Avenue, Suite 202, Portland, ME 04101Telephone: (207) 837-1092Email: cburgess@acorn-engineering.com**Project Location and Lot Information:**Street Address: 608 - 610 New County Road Drainage Watershed: Saco RiverTax Map: 6Lot: 35-2Current Zoning: RF (Rural Farm)Shoreland Zoning: YesSize of Lot: 29.5 ☒ acres ☐ s.f. Lot Frontage: 2,536 feetExisting Use of Property: Existing campground and single-family residential home**Property currently serviced by:**☐ City Road☐ Public Sewer☐ Public Water☒ Public Trash☐ Private Road ☒ Septic System☒ Private Well☐ Private Hauler

Slope Conditions in Area of Construction (if applicable):

☒ Flat (0-3% slope) ☐ Rolling (3-8% slope) ☐ Hilly (8-15% slope) ☐ Steep (15%+ Slope)Are there any wetlands or waterbodies on the site? ☒ (Yes) ☐ (No) if yes attach informationIs the project within the 100-year floodplain? ☒ (Yes) ☐ (No) if yes attach informationDo you plan to bring fill onto the lot? ☐ (Yes) ☒ (No) If yes attach information

Description of proposed use of property:**Project/Proposed Use:**

The project involves the construction of 6,000 square foot pole barn and 1,950 square foot lean-to. The pole barn will be utilized for covered storage of equipment. A 16-foot gravel drive (2,504 square feet) will be constructed along side of the pole barn for access.

Property to be Serviced by:

☐ City Road ☐ Public Sewer ☐ Public Water ☐ Public Trash
☐ Private Road ☒ Septic System ☒ Private Well ☐ Private Hauler

Limits of Disturbance: ~ 0.30 ☒ acres ☐ s.f.

Net change in impervious cover: ~ 10,454 ☐ acres ☒ s.f.

Is this project part of a larger project? ☐ (Yes) ☒ (No)

Is the project proposing a new Private or Public Road? ☐ (Yes, Private) ☐ (Yes, Public) ☒ (No)

Is this project within the Urbanized Area/MS4 (see [City Drainage Map](#)) ☐ (Yes) ☒ (No)

Is the project proposing any Stormwater facilities/BMPs? ☐ (Yes) ☒ (No)

Will a Traffic Movement Permit (TMP) be required?: ☐ (Yes) ☒ (No)

☒ If in a Shoreland Zone:

Percent of residential lot coverage (Max 20%): 0

Percent of structure expansion (Max 30%): 0

☐ If Subdivision Review, number of lots proposed: N/A

☐ If a Private Way is proposed, number of lots served: N/A

If Site Plan Review, you must provide the following information:

Total new square feet footprint of structure: 6,000 SF structure + 1,950 SF lean-to

Total new square feet paving/parking: N/A - utilize existing parking footprint

Waiver Requests (attach details):

1. None at this time
- 2.
- 3.
- 4.
- 5.

Required Submittal Attachments:

- A. Letters of Approval
 - ☐ Fire Department – Contact Chief or Deputy Chief – 282-9986
 - ☐ Ability to Serve for Water Service – Maine Water – 282-1543
 - ☐ Ability to Serve for Sewer Service – Engineering Department – Tom Milligan 284-9118
 - ☐ Police Department – e-911 Road Name Designation – Contact Joanne Fisk 282-5127
- B. Letter to Planning Board describing project, Waiver requests, proposed improvements, addressing permit requirements, etc.
- C. Photographs of Site.
- D. Architectural renderings/drawings of proposed buildings, as required.
- E. Engineering Plans, as required.
- F. Stormwater Management Report, as required.

Fees (Due at time of Submission):

- \$75 Nonrefundable Administration Fee is required for every application.
- Refer to “Attachment A Fees and Charges” of the Land Development Regulations for more information. Consult with Planning Staff if you have questions.

Required Signatures:

By signing this application, as the foresaid applicant or authorized agent:

- I certify that I have read and completely understand the application;
- I certify that the information contained in this application and its attachments are true and correct;
- I understand that all information provided on this form and all other documents submitted as part of my proposal is a matter of public record;
- I understand that copies of this information may be supplied upon request to an interested party.
- I understand that additional funds may be required through the course of the review for special studies, legal review costs, and/or engineering review.
- I understand that by submitting an application I am not guaranteed a place on any particular agenda. I further understand that the City Planner will place me on an agenda for review when the application is deemed substantially complete.

Will the proposed project cause 1 acre or more of site disturbance?: __ (Yes) __ (No)

- **If Yes, applicant is responsible for any required Maine Construction General Permits and shall comply with the requirements of DEP Chapter 500 Stormwater Regulations, as they apply.**

Signature of Applicant:  Date 01/16/24

Signature of Property Owner: _____ Date _____

DIGITAL SUBMITTAL REQUIREMENTS FOR ALL SUBMITTALS:

- A) PDF OF SIGNED APPLICATION
- B) PDFs OF ALL DRAWING SETS AND OTHER REQUIRED SUBMITTAL ATTACHMENTS NOTED ABOVE

HARD-COPY SUBMITTAL REQUIREMENTS FOR PLANNING BOARD APPLICATIONS:

- A) SEVEN (7) FULL-SIZE PAPER COPIES OF DRAWING SETS

DIGITAL SUBMITTAL REQUIREMENTS FOR FINAL APPROVAL:

- A) INDIVIDUALLY NAMED PDFs OF EACH DRAWING (NOT A COMBINED PDF SET)
 - *Individual Drawing PDF Naming Format: 'PROJECT/SHEETSET NAME_INDIVIDUAL DRAWING NAME.pdf'*
- B) PDF COPIES OF ALL PERMIT APPROVALS, APPLICATIONS, REPORTS, NARRATIVES, LETTERS, ETC.
- C) FINAL CAD REFERENCE FILES IN DWG FORMAT (SURVEY & PROPOSED DESIGN LINEWORK)
 - *All drawings & CAD reference files must be to-scale and within the following coordinate systems:*
 - MAINE STATE PLANE WEST NAD83 (Horizontal Datum) & NAVD88 (Vertical Datum)

HARD-COPY SUBMITTAL REQUIREMENTS FOR FINAL APPROVAL:

- A) THREE (3) FULL-SIZE PAPER COPIES OF INDIVIDUAL DRAWINGS REQUIRING BOARD SIGNATURE
- B) ONE (1) FULL-SIZE PAPER COPY OF ENTIRE DRAWING SET FOR ENGINEERING RECORDS

PLEASE CONFIRM WITH PLANNING STAFF FOR CLARIFICATION

Exhibit C

Right, Title, & Interest

WARRANTY DEED
Statutory Short Form

DLN: 1002340253146

KNOW ALL BY THESE PRESENTS, That **We, Ruth P. King and George H. King**, whose mailing address is **610 New County Road, Biddeford, ME 04005**, for consideration paid, grant to **Avallone Holdings, LLC**, a Maine Limited Liability Company, a **fifty percent (50%) interest** and **Parekh Holdings, LLC**, a Maine Limited Liability Company a **fifty percent (50%) interest** both whose mailing address is 147 Pleasant Avenue #1, Portland, ME 04103, as **TENANTS IN COMMON**, with Warranty Covenants, the real property in the City of **Biddeford**, County of **York** and State of **Maine**, more particularly described as follows:

A certain lot or parcel of land situated in the City of Biddeford, County of York, State of Maine, lying on the northeasterly side of, but not adjoining Route 5, bounded and described as follows:

Beginning at an iron rod with survey cap on the northeasterly sideline of Route #5 as described in a Notice of Layout and Taking by the State of Maine as recorded in the York County Registry of Deeds in Book 7882, Page 255. Said iron rod being opposite centerline Station 226 + 47.72 as shown on a plan entitled "State of Maine Dept. of Transportation, Right of Way Map, State Highway 114, Biddeford, York County", dated March 1996, Dept. of Transportation File 16 358, Sheet 2 of 4;

Thence, North 12° 43' 30" East a distance of 46.80 feet to an iron rod with survey cap;

Thence, North 49° 39' 30" West a distance of 125.00 feet to an iron rod with survey cap;

Thence, North 12° 43' 30" East a distance of 568.16 feet to an iron rod with survey cap;

Thence, South 62° 15' 00" East by the second parcel conveyed hereby a distance of 380.03 feet;

Thence, by said second parcel conveyed hereby the following seven (7) courses and distances:

- 1) North 60° 30' 20" East a distance of 263.20 feet;
- 2) North 47° 45' 30" West a distance of 441.93 feet;
- 3) North 20° 59' 45" East a distance of 190.00 feet;
- 4) South 88° 15' 05" East a distance of 356.12 feet;
- 5) South 65° 39' 35" East a distance of 374.13 feet;
- 6) North 44° 24' 30" East a distance of 50 feet, more or less, to the Saco River;
- 7) North 44° 24' 30" East to the thread of the Saco River;

Thence, southeasterly, southerly, and southwesterly by the thread of the Saco River a distance of 1,500 feet, more or less, to Route #5 as described in said Notice of Layout and Taking said recorded in Book 7882, Page 255;

Thence, northwesterly by said Route #5 and land of the State of Maine along a curve deflecting to the left, have a radius of 3324.045 feet, an arc distance of 144 feet, more or less, to an iron rod with survey cap near the top of the bank of the Saco River opposite Maine State Highway Dept. of Transportation centerline Station 233 + 29.83;

Maine R.E. Transfer Tax Paid

Thence, continuing northwesterly by said Route #5 along a curve to the left, having a radius of 3324.045 feet, an arc distance of 692.53 feet to the point of beginning. The chord distance between the last two described iron rods bears North 46° 43' 35" West a distance of 691.28 feet.

Containing 24.4 acres to the edge of the Saco River.

All bearings used in the description are based on Grid North.

Another certain lot or parcel of land with buildings and improvements thereon, situated in said City of Biddeford, lying on the northeasterly side of, but not adjoining Route 5, bounded and described as follows:

Commencing at an iron rod with survey cap on the northeasterly sideline of Route #5 as described in a Notice of Layout and Taking by the State of Maine as recorded in the York County Registry of Deeds in Book 7882, Page 255. Said iron rod being opposite centerline Station 226 + 47.72 as shown on a plan entitled "State of Maine Dept. of Transportation, Right of Way Map, State Highway 114, Biddeford, York County", dated March 1996, Dept. of Transportation File 16358, Sheet 2 of 4;

Thence, North 12° 43' 30" East a distance of 46.80 feet to an iron rod with survey cap;

Thence, North 49° 39' 30" West a distance of 125.00 feet to an iron rod with survey cap;

Thence, North 12° 43' 30" East a distance of 568.16 feet to an iron rod with survey cap and point of beginning.

Thence, by the first parcel conveyed hereby for the following eight (8) courses and distances:

- 1) South 62° 15' 00" East a distance of 380.03 feet;
- 2) North 60° 30' 20" East a distance of 263.20 feet;
- 3) North 47° 45' 30" West a distance of 441.93 feet;
- 4) North 20° 59' 45" East a distance of 190.00 feet;
- 5) South 88° 15' 05" East a distance of 356.12 feet;
- 6) South 65° 39' 35" East a distance of 374.13 feet;

Thence, North 44° 24' 30" East by land now or formerly of Braley a distance of 50 feet, more or less, to the Saco River;

Thence, continuing North 44° 24' 30" East by said land of Braley to the thread of the Saco River;

Thence, northwesterly and westerly by the thread of the Saco River a distance of 1000 feet, more or less, to a point being North 20° 59' 45" East from an iron rod with survey cap found on the bank of the Saco River at said land of Braley.

Thence, South 20° 59' 45" West by said land of Braley to the southerly edge of the Saco River;

Thence, continuing South 20° 59' 45" West by said land of said Braley a distance of 12 feet, more or less, to an iron rod with survey cap;

Thence, continuing South 20° 59' 45" West by said land of Braley a distance of 287.71 feet to an iron rod with survey cap;

Thence, continuing South 20° 59' 45" West by said land of Braley a distance of 240.77 feet to the point of beginning.

Containing 5.07 acres, more or less, to and along the southerly edge of the Saco River.

All bearings used in this description are based on Grid North.

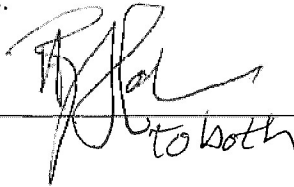
The parcels conveyed hereby are subject to two easements given to Central Maine Power Company and New England Telephone and Telegraph Company as recorded in the York County Registry of Deeds in Book 1318, Page 68, and Book 1822, Page 332.

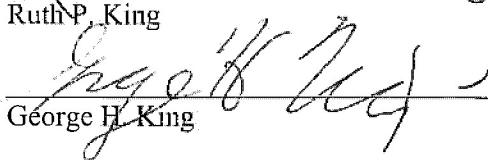
Reference is made to a "Plan Showing a Standard Boundary Survey Made for Berton K. and Maryalice Braley", dated December 5, 1990, revised June 5, 1995, by Dow and Coulombe, Inc.

Meaning and intending to convey and conveying the real property described in a deed to **Ruth P. King and George H. King** dated February 3, 2011 and recorded with the York County Registry of Deeds in Book 16055, Page 739.

Witness our hands and seals this 19th day of October, 2023.

Witness:


to both


Ruth P. King

George H. King

STATE OF MAINE
COUNTY OF CUMBERLAND, ss.

October 19, 2023

Personally appeared on the above date, the above-named **Ruth P. King and George H. King** and acknowledged the foregoing instrument to be their free act and deed.

Kerry E. Kimball
State of Maine
Attorney At Law
Bar #8577

Before me,

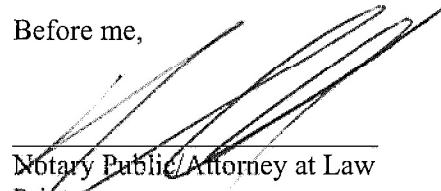
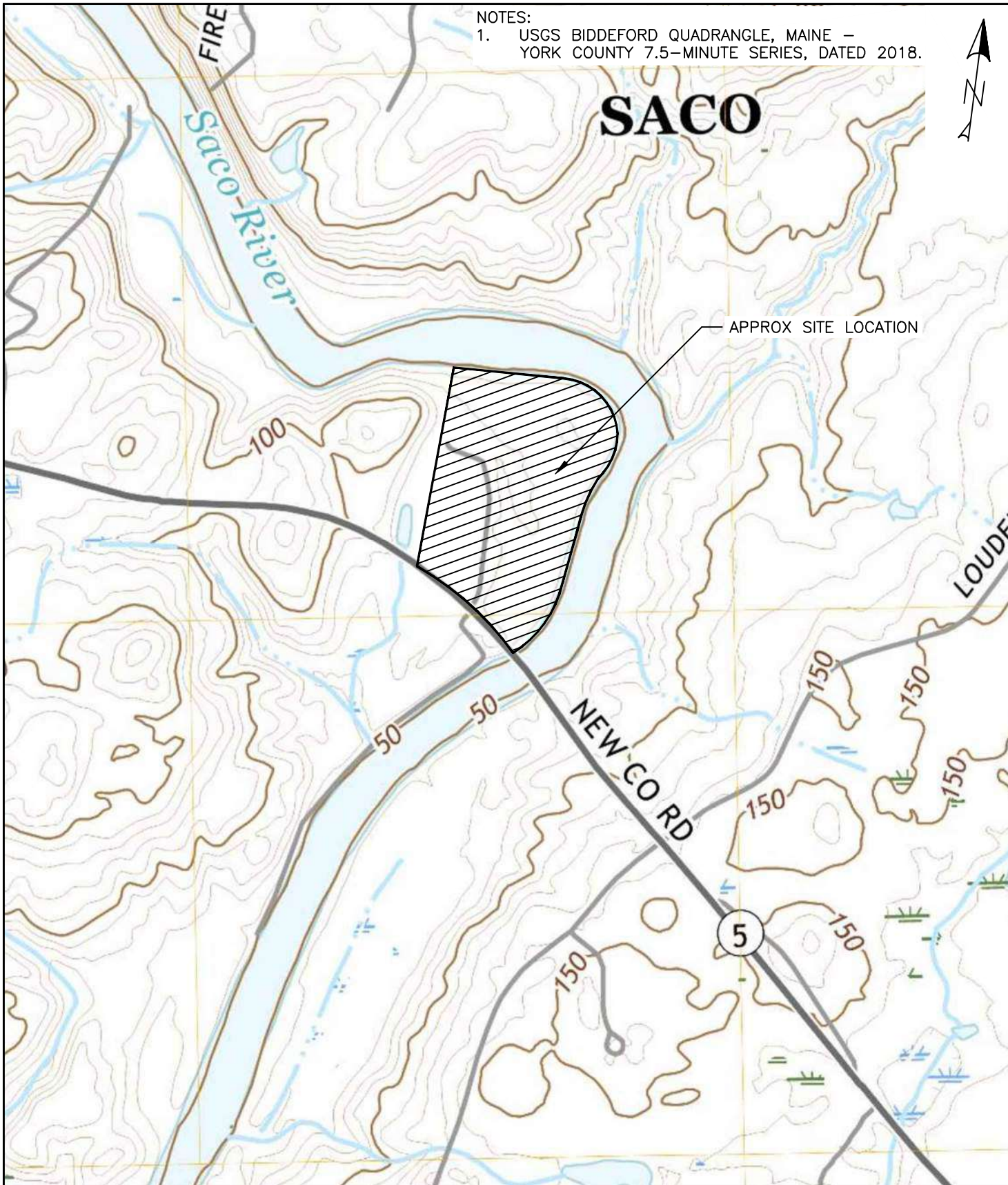

Notary Public/Attorney at Law
Print name: _____
Exp: _____

Exhibit D

Site Location Map



THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. ANY ALTERATIONS, AUTHORIZED OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.	FILE: 1206_VICINITY	 ACORN ENGINEERING, INC. ACORN ENGINEERING, INC. P.O. BOX 3372 PORTLAND, MAINE 04104 (207) 775-2655	DRAWING NAME:	VICINITY MAP	ISSUED FOR	BY
	JN: 1206				SKETCH PLAN	DATE
DRAWING NO.	SCALE: 1"=800'		PROJECT NAME:	HOMESTEAD BY THE RIVER		10/27/23
	DESIGN BY: CAB		CLIENT:	BRYCE AVALLONE & PETER VALCOURT		
VICINITY	DRAWN BY: BJK					
	CHECKED BY: WHS					

Exhibit E

Project Description- By Applicant

Bryce Avallone
Riverbend Reserve LLC
147 Pleasant Avenue
Portland ME 04103

Planning and Development City of Biddeford
205 Main Street
Biddeford, ME 04005

01/11/2024

Mr. Galbraith,

There have been a series of piecemeal emails regarding the proposal for the storage barn at 608-610 New County Road, but no consolidated vision of the barn and how it fits with the property. This letter will provide a narrative of that vision.

The western boundary of the campground is already used as the utility area. It is currently used for outdoor storage of campers, boats, tractors, a cherry picker lift, picnic tables, etc. It is also where activities like building and maintaining picnic tables, splitting campfire wood, etc. occur. The new barn will not change the existing use or increase traffic – it will actually be an improvement because it will move storage and activities inside the barn. Also, the RV storage is winter storage, which means that RVs will be moved out once in the spring and once in the fall – again no increase in traffic.



The proposed barn location is completely screened from the road by a row of mature trees. It will not be seen from the road:



There has been a suggestion to move the location of the barn further east. That portion of the field is the low spot – the entire field drains to that corner. As you can see from recent rains, water collects here, and it would not make a good barn location:



Also, as part of Biddeford's Comprehensive Plan, there is an emphasis on increasing sustainability and renewable energy. Based on the towns own survey of Biddeford residents, the number one action requested to fight climate change is to support renewable energy. We agree. We plan to install approximately 200 solar panels to offset the electricity used at the campground. One of the reasons for constructing the barn is to

provide a surface area to support those solar panels. A ground mounted array is less expensive than a barn, but looks commercial and would not be in line with the rural nature of the property. A barn, on the other hand, fits right in. We would prefer this:



Over this:



C-10.1

Overall Site Plan

C-10.2

Site Plan

GENERAL NOTES:

1. SUBJECT PARCELS INCLUDE:
A. 608 NEW COUNTY ROAD, BIDDEFORD, ME, 04005, PARCEL MAP 6, LOT 35, SUB--LOT 2, AREA: 29.5 AC.±
2. THE PARCEL IS LOCATED WITHIN THE RF (RURAL FARM) DISTRICT. A PORTION OF THE PARCEL ALONG THE RIVER IS WITHIN THE LIMITED RESIDENTIAL DISTRICT.
3. PROPERTY BOUNDARY AND TOPOGRAPHIC DATA ARE FROM PLAN REFERENCE A. THE VERTICAL DATUM IS NAD83.
4. A PORTION OF THE PARCEL ALONG THE RIVER IS LOCATED INSIDE THE 100-YEAR FEMA FLOODPLAIN AS DEPICTED ON FIRM PANEL #2301450002B DATED 5/15/1984.
5. PLAN REFERENCES:
A. PROPERTY TOPOGRAPHICAL SURVEY MAP OF BIDDEFORD -- DAYTON, MAINE FOR BEDTON K. BRALEY & MAYALICE BRALEY BY DOW & COULBOUME, INC. LAND SURVEYORS & PLANNERS SACO, MAINE, DATED 7/29,1996

SPACE AND BULK STANDARDS		
ZONING DISTRICT: RF, ALL OTHER (RURAL FARM)	REQUIRED	PROPOSED
MINIMUM LOT SIZE WITH NEITHER WATER/ SEWER	40,000 SF	1,290,322 SF
MINIMUM FRONTAGE WITH NEITHER WATER/SEWER	200 FT	2,546 FT
MINIMUM SETBACK FROM MAJOR R.O.W.	40 FT	40 FT+
MINIMUM SETBACK FROM OTHER R.O.W.	25 FT	N/A
MINIMUM SIDE SETBACK	25 FT	25 FT+
MINIMUM REAR SETBACK	25 FT	25 FT+
MAXIMUM STRUCTURE STORIES	3	1.5
MAXIMUM STRUCTURE HEIGHT	35 FT	24.6 FT

[illegible]

DRAWING NAME:	SITE PLAN
PROJECT NAME:	HOMESTEAD BY THE RIVER
CLIENT:	BRYCE AVALLONE & PETER VALCOURT 608 NEW COUNTY ROAD BIDDEFORD, MAINE 04005

ACORN ENGINEERING, INC.
 PO BOX 3372, PORTLAND MAINE 04104
 (207) 775-2685

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. ANY ALTERATIONS, AUTHORIZED BY ACORN ENGINEERING, INC. SHALL BE MADE BY THE SALE AGENT WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

A C O R N
ENGINEERING, INC.

FILE:	1206_CIVIL_
JN:	1206
SCALE:	AS NOTED
DESIGNED BY:	CAB
DRAWN BY:	BJK
CHECKED BY:	WHS

DRAWING NO.

C-10.2

Part III: Land Development Regulations, Article XI – Site Plan Review, Section 4 – Applicability, Subsection C – Delegation of Planning Board review authority.

Planning Board Second Reading February 21, 2024

NOTE: Text deletions shown as ~~red strikethrough~~, text additions in blue underline.

C. Delegation of Planning Board review authority.

The authority of the Planning Board to review certain minor development projects is hereby delegated to the Staff Review Committee (SRC) in accordance with the provisions of this section. Whenever such delegation occurs, the term "Planning Board" shall also refer to the Staff Review Committee.

1. Planning Board responsibilities. The Planning Board is responsible for the review of all major projects and of any minor project for which Planning Board review is requested by the applicant. The Planning Board may conduct minor development review if recommended by either the City Planner or the Staff Review Committee.

2. Staff ~~R~~Review ~~e~~Committee (SRC) responsibilities.

a. The Staff Review Committee shall consist of the City Planner, City Engineer, Public Works Director, Code Enforcement Officer, Economic Development Director, Recreation Director, Fire Chief, Police Chief, Assessor, the Planning Board Chair, Superintendent of the Biddeford Water District, and the Wastewater Department head of the Biddeford Sewer District, or their official designees.

1) The City Planner shall precede as the Staff Review Committee's Chairperson and the Director of Code Enforcement shall act as the Vice Chair.

2) The Committee members shall meet informally on a regular basis, as determined by the City Planner, to discuss any project / issue impacting the City.

3) Any member of the Committee may request a group meeting and all participants may bring topics for discussion.

4) Hearings: All Staff Review Committee hearings shall be:

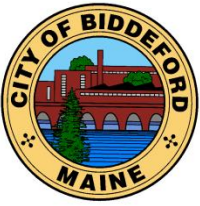
a) Conducted following Robert's Rules of Order

b) Open to the public in person or remotely

c) Publicly posted on the City's web-site and include abutter notification

d) Publicly noticed and abutting property owners notified

- b. The Staff Review Committee, in its development review capacity, shall exercise all of the powers exercised by the Planning Board and the power to approve, approve with conditions, or deny applications for site plan approval.
 - c. Actions by the Staff Review Committee to approve an application, with or without conditions, shall require the approval of a majority of those members present and voting. A quorum shall consist of three members.
 - d. The Staff Review Committee shall set forth the reason for its decisions and make findings of fact, in writing, within seven days of the meeting. Such findings of fact shall be sufficient to apprise the applicant and any interested member of the public of the basis for the decision.
 - e. All appeals to a Staff Review Committee decision shall be heard by the Planning Board.
 - f. The Staff Review Committee shall provide recommendations to the Planning Board for any project undergoing major development review. Individual members of the committee may in addition submit letters of recommendations to the Planning Board.
3. These regulations shall apply, as necessary, to alterations and/or additions to structures existing on the effective date of these regulations.
4. Upon request by the applicant, all or specific standards and considerations that are part of this site review process may be waived or amended by the Planning Board.
5. No building permit shall be issued for any building or structure within the purview of these regulations until such approval has been secured and presented to the Building Inspector.
6. No eCertificate of eOccupancy (CO) shall be issued for any building or structure or use of land within the purview of these regulations unless or until the building, structure, development, land or use is constructed, developed, altered, installed or used in conformity with an approved site development plan or an amendment to any such plan.



CITY OF BIDDEFORD

Planning and Development Department

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Planning Board – Staff Report

TO: Chair Patoine and Members of the Biddeford Planning Board

FROM: David C.M. Galbraith, Deputy Director / City Planner

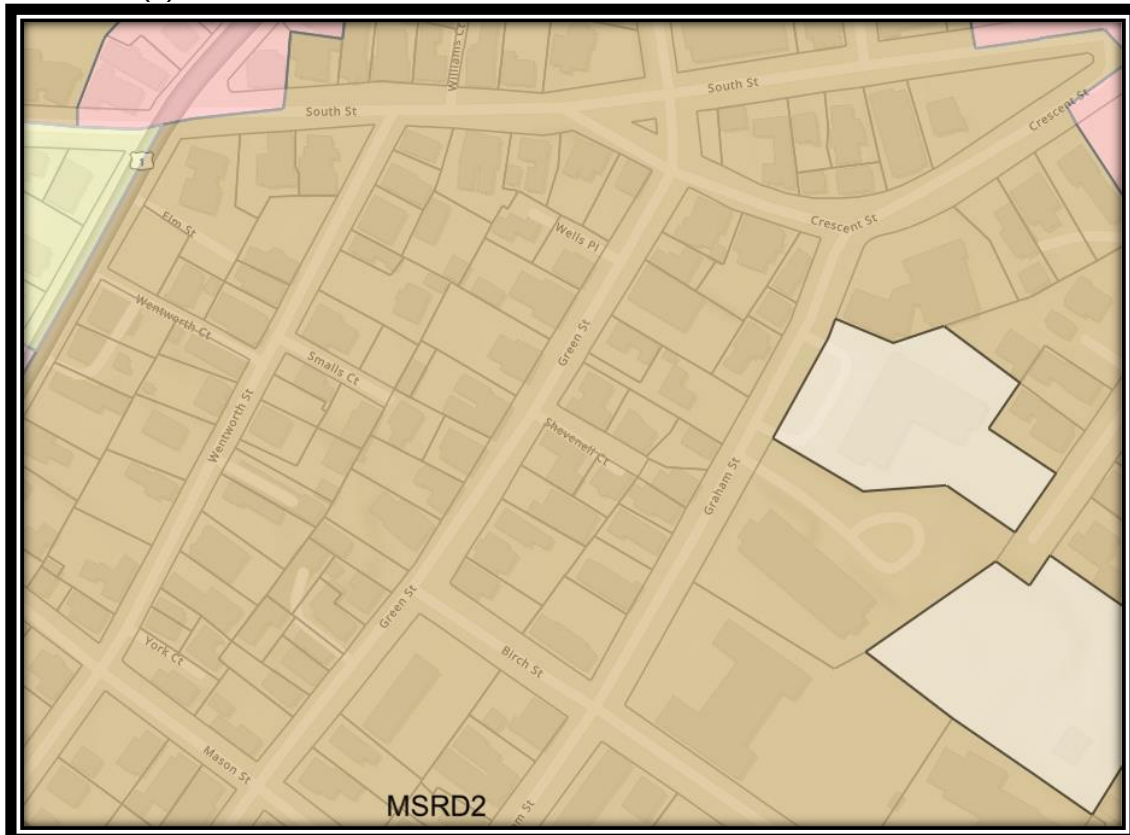
DATE: February 15, 2024

RE: Zoning Ordinance Amendment: Code of Ordinances, Part III: Land Development Regulations, Article V – Establishment of Zones, Amendment to Table B “Dimensional Requirements” to reduce the side and rear yard setback requirements in the City’s MSRD-2 zoning district from ten (10) feet to zero (0) feet – SECOND READING

MEETING DATE: February 21, 2024

Overview:

This item was first introduced and discussed with the Planning Board at the 1-17-2024 regular Board meeting under “Planner’s Business”. The proposed zoning text amendment is to Table B “Dimensional Requirements” to reduce the side and rear yard setback requirements in the MSRD-2 zoning district from ten (10) feet to five (5) feet.



Zoning Ordinance Amendment: Code of Ordinances, Part III: Land Development Regulations, Article V – Establishment of Zones, Amendment to Table B “Dimensional Requirements” to reduce the side and rear yard setback requirements in the City’s MSRD-2 zoning district from ten (10) feet to zero (0) feet – SECOND READING

Planning Board Meeting: February 21, 2024

As the Board is aware, Staff continues to review the City’s Ordinances related to the housing demands the City has been experiencing. When reviewing the MSRD-2 zoning district Staff realized that a large number of existing residential buildings within the MSRD-2 district didn’t meet the required ten (10) foot side and rear setbacks. Staff had suggested reducing these setbacks to five (5) feet to allow additional room / flexibility when working with clients on housing rehabilitation projects. In addition, the reduction would bring properties with non-conforming setbacks into closer conformity. When discussing this matter with Roby Fecteau, Director of Code Enforcement he informed me that this Ordinance amendment had previously been discussed with prior City Planners but they never brought the amendment forward for consideration.

When evaluating the dimensional requirements of the MSRD-2 zoning district compared to the MSRD-1 & MSRD-3 (see below excerpt) you will notice that the MSRD-1 & 3 districts require no dimensional setback requirements.

Zoning District	Minimum Lot Size, Square Feet Per Unit A				Frontage			Minimum Setback, Feet**				Maximum Heights+	
	Water and Sewer	Water, No Sewer	Sewer, No Water	Neither Water Nor Sewer	Water and Sewer	Water or Sewer	Neither Water Nor Sewer	From Major R.O.W.	From Other R.O.W.	Side	Rear	Stories	Feet
MSRD-1	None	N/A	N/A	N/A	None	None	None	None	None	None	None	Min. 2 stories or 26 feet; Max. 60 feet	
MSRD-2	2,000 B	N/A	N/A	N/A	50	N/A	N/A	15 R	15 R	10	10	3	35
MSRD-3	None	N/A	N/A	N/A	None	None	None	None	None	None	None	Min. 2 stories or 26 feet	

At the Board’s February 7, 2024 meeting the Board, after discussion determined that the side and rear setbacks within the MSRD-2 should be reduced to zero. Since that meeting, the Board’s proposed change has been discussed with Mr. Fecteau who agrees that the reduction will provide additional flexibility. However, he noted that the majority of the buildings within the MSRD-1 and MSRD-3 zoning districts are “mostly brick and mortar”, the buildings within the MSRD-2 zoning district are wood / stick construction. As such, “enhanced building technics” may be required, such as additional fire separation measures or in some cases sprinkler systems installed. The reduced setbacks certainly offer property owner’s additional flexibility, however they may need to evaluate the costs associated with utilizing them.

Staff Recommendation:

Staff is supportive of this amendment and requests that the Planning Board forward a positive recommendation for adoption of the proposed amendments to the City Council to formally adopt:

SAMPLE MOTION #1 – Table A:

- A. Motion to Approve: I motion to APPROVE a positive recommendation to the City Council to adopt the proposed Amendments to Code of Ordinances, Part III: Land Development Regulations, Article V – Establishment of Zones, Amendment to Table B “Dimensional Requirements” to reduce the side and rear yard setback requirements in the City’s MSRD-2 zoning district from ten (10) feet to zero (0) feet.
- B. Motion to Deny I motion to DENY the proposed Amendment to Code of Ordinances, Part III: Land Development Regulations, Article V – Establishment of Zones, Amendment to Table B “Dimensional Requirements” to reduce the side and rear yard setback requirements in the City’s MSRD-2 zoning district from ten (10) feet to zero (0) feet, for the following reasons:
 - 1) _____.

Zoning Ordinance Amendment: Code of Ordinances, Part III: Land Development Regulations, Article V – Establishment of Zones, Amendment to Table B “Dimensional Requirements” to reduce the side and rear yard setback requirements in the City’s MSRD-2 zoning district from ten (10) feet to zero (0) feet – SECOND READING

Planning Board Meeting: February 21, 2024

- 2) _____.
- 3) _____.

C. Motion to Table: I motion to TABLE the proposed Amendments to Code of Ordinances, Part III: Land Development Regulations, Article V – Establishment of Zones, Amendment to Table B “Dimensional Requirements” to reduce the side and rear yard setback requirements in the City’s MSRD-2 zoning district from ten (10) feet to zero (0) feet, for the following reasons:

- 1) _____.
- 2) _____.
- 3) _____.