

SITE PLAN

for
TOOMERFS, LLC
19 MAIN STREET & 21 MAIN STREET
DURHAM, NH
REVISED 2 FEBRUARY, 2022

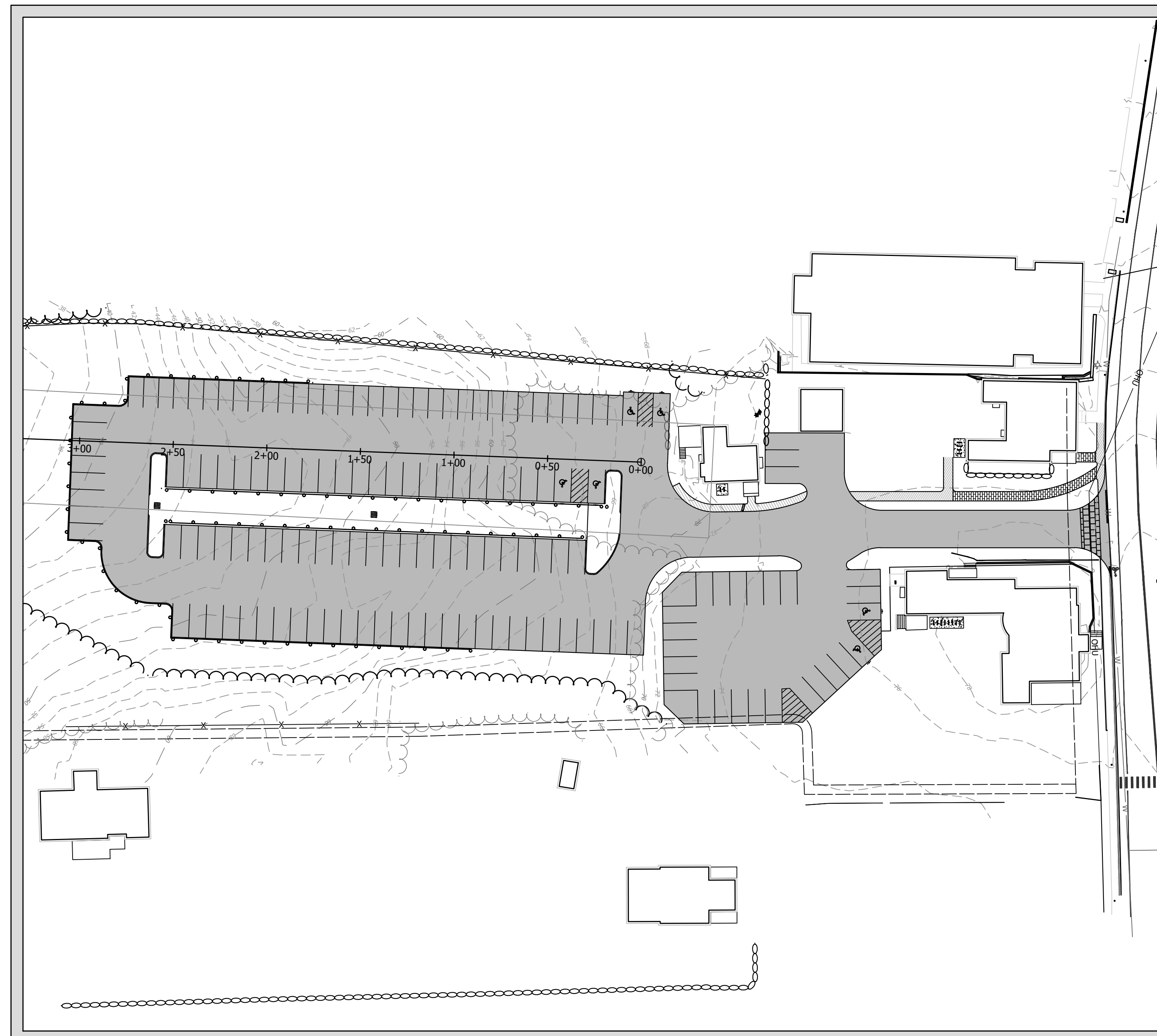
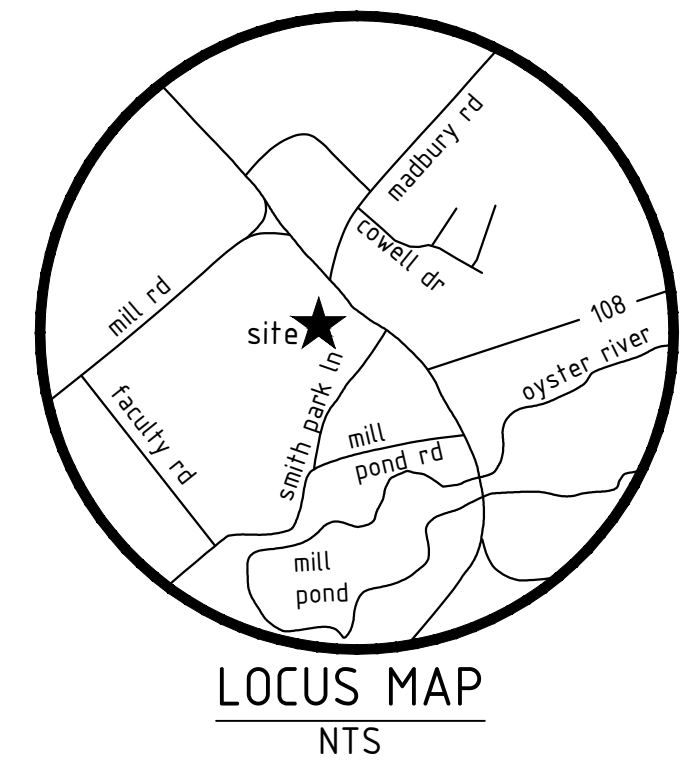


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OWNER

TOOMERFS, LLC
37 MAIN STREET
UNIT 0
DURHAM, NH 03824

CIVIL ENGINEER

horizons
Engineering

5 RAILROAD STREET
NEWMARKET, NEW HAMPSHIRE
(603) 659-4979

LANDSCAPE ARCHITECT

WOODBURN & COMPANY
103 KENT PLACE
NEWMARKET, NEW HAMPSHIRE
(603) 659-5949

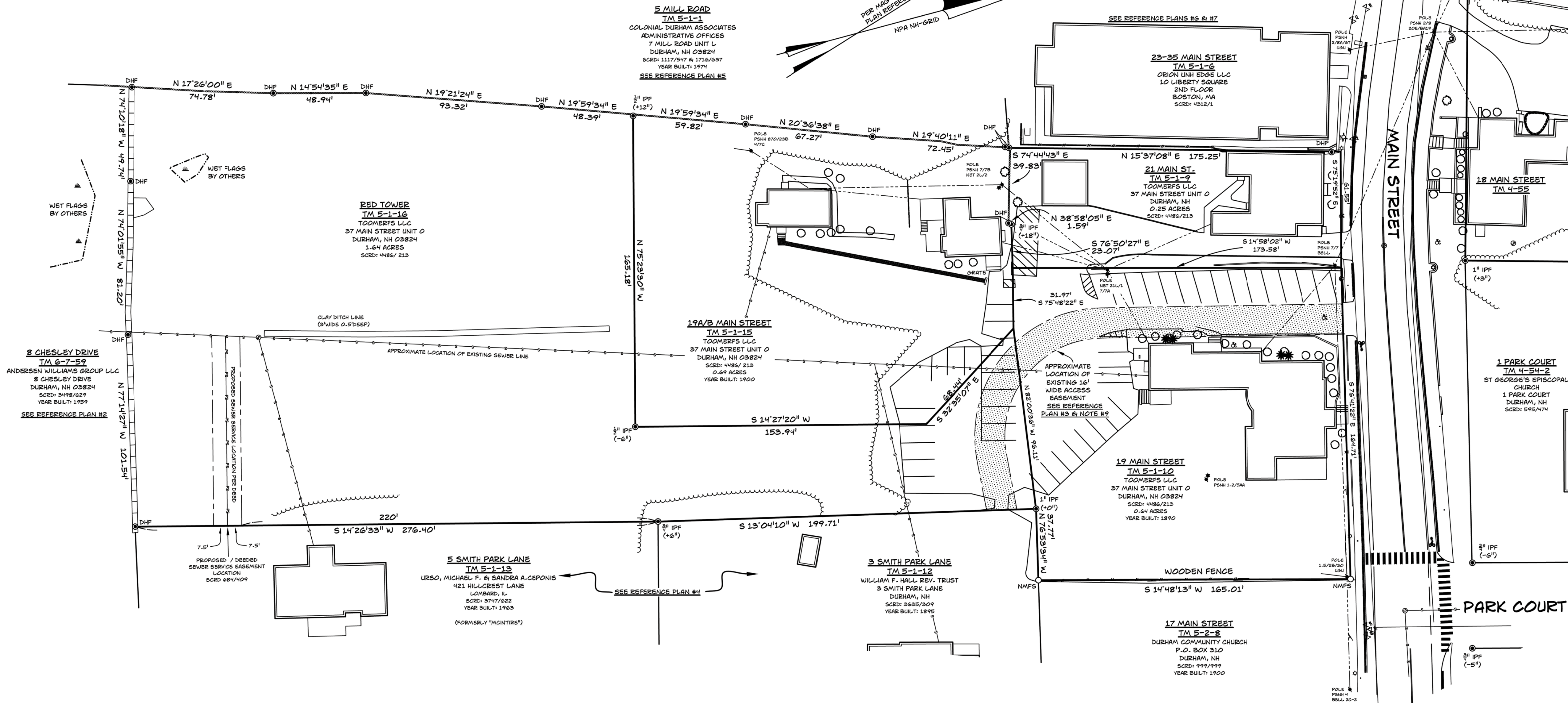
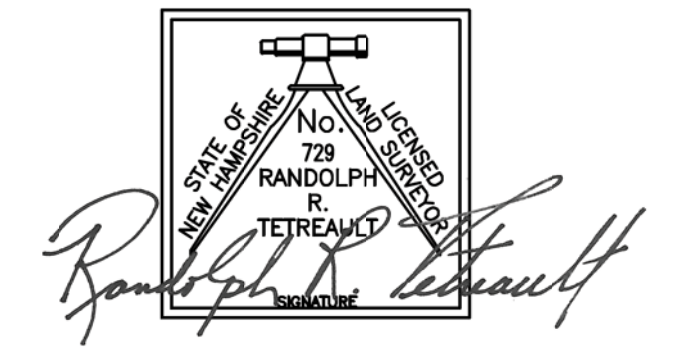
SURVEYOR

NORWAY PLAINS ASSOCIATES, INC.
2 CONTINENTAL BOULEVARD
ROCHESTER, NEW HAMPSHIRE
03867 (603) 335-3948

NO.	REVISIONS	DATE	INT.
1	REVISED SUBMISSION PER TRC COMMENTS	02/02/22	MCS
0	INITIAL SUBMISSION FOR 2 ROW PARKING LAYOUT	11/30/21	AWS



ABBREVIATION LEGEND:
DHF - DRILL HOLE FOUND
IPF - IRON PIPE FOUND
RBF - REBAR FOUND
SBF - STEEL STAKE FOUND
BND FND - BOUND FOUND
GBF - GRANITE BOUND FOUND
IRF - IRON ROD FOUND
NMFS - NO MONUMENT FOUND OR SET
(+6") - DENOTES HEIGHT OF MONUMENT

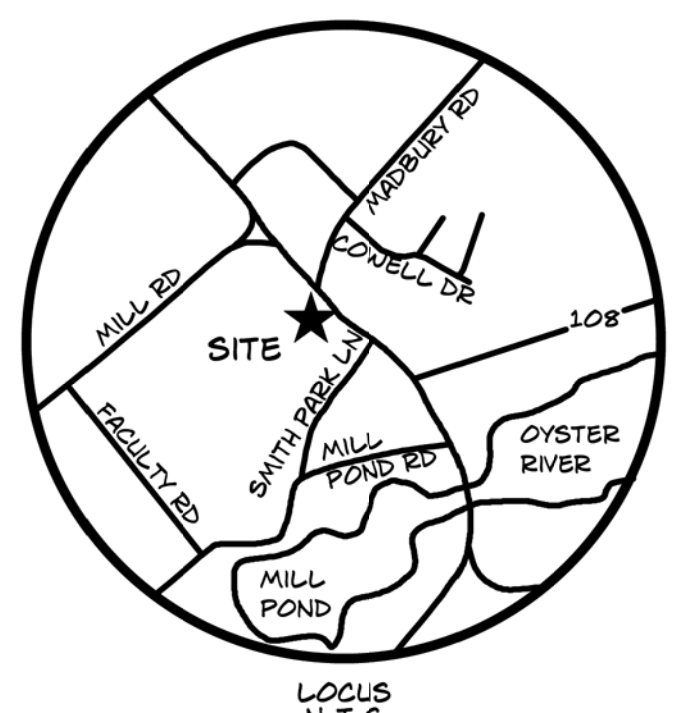
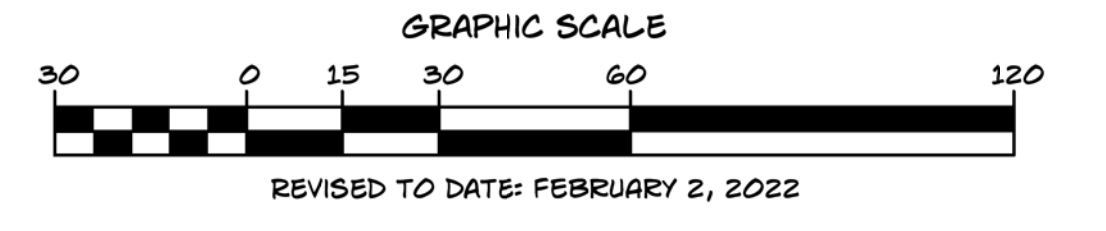


- NOTES:
1. TOTAL PARCEL AREA: MAP 5, LOTS 1-9, 1-10, 1-15 & 1-16 3.26 ACRES
2. THE PARCELS ARE ZONED "CHURCH HILL DISTRICT". MAP 5, LOTS 1-9 & 1-10 ARE WITHIN THE HISTORIC OVERLAY DISTRICT.
3. MINIMUM LOT REQUIREMENTS: LOT SIZE = 5,000 S.F.
4. BUILDING SETBACKS: FRONT = 15' FROM ALL STREETS
REAR = 15'
MAXIMUM BUILDING HEIGHT = 30'
MAXIMUM IMPERVIOUS SURFACE PERCENTAGE = 80%
5. THE LOTS ARE SERVICED BY THE MUNICIPAL WATER AND SEWER SYSTEM.
6. THE PROPOSED LOT IS/NOT LOCATED WITHIN THE 100 YEAR FLOOD ZONE AS SHOWN ON THE FLOOD INSURANCE RATE MAP DATED 9/30/2015 COMMUNITY PANEL 33017C03185.
7. THE PARCEL IS SUBJECT TO A SEWER SERVICE LINE CONNECTION EASEMENT BENEFITING TAX MAP 5-3-13 AS DESCRIBED IN SCRD BOOK 684, PAGE 409.
8. SEE SEWER ACCESS EASEMENT / CONNECTION (19A) SCRD BOOK 655, PAGE 189.
9. THE PARCEL IS SUBJECT TO A 16' WIDE ACCESS EASEMENT BENEFITING TAX MAP 5-1-12 & TAX MAP 5-1-13. SEE SCRD BOOK 541, PAGE 345 (MILL) & SCRD BOOK 592, PAGE 433 (MCINTIRE). THE LOCATION OF THE RIGHT OF WAY TO LOT 5-1-12 AS DETERMINED BY REFERENCE PLAN #3, THE LOCATION OF THE RIGHT OF WAY TO LOT 5-1-13 HAS NOT BEEN DETERMINED.

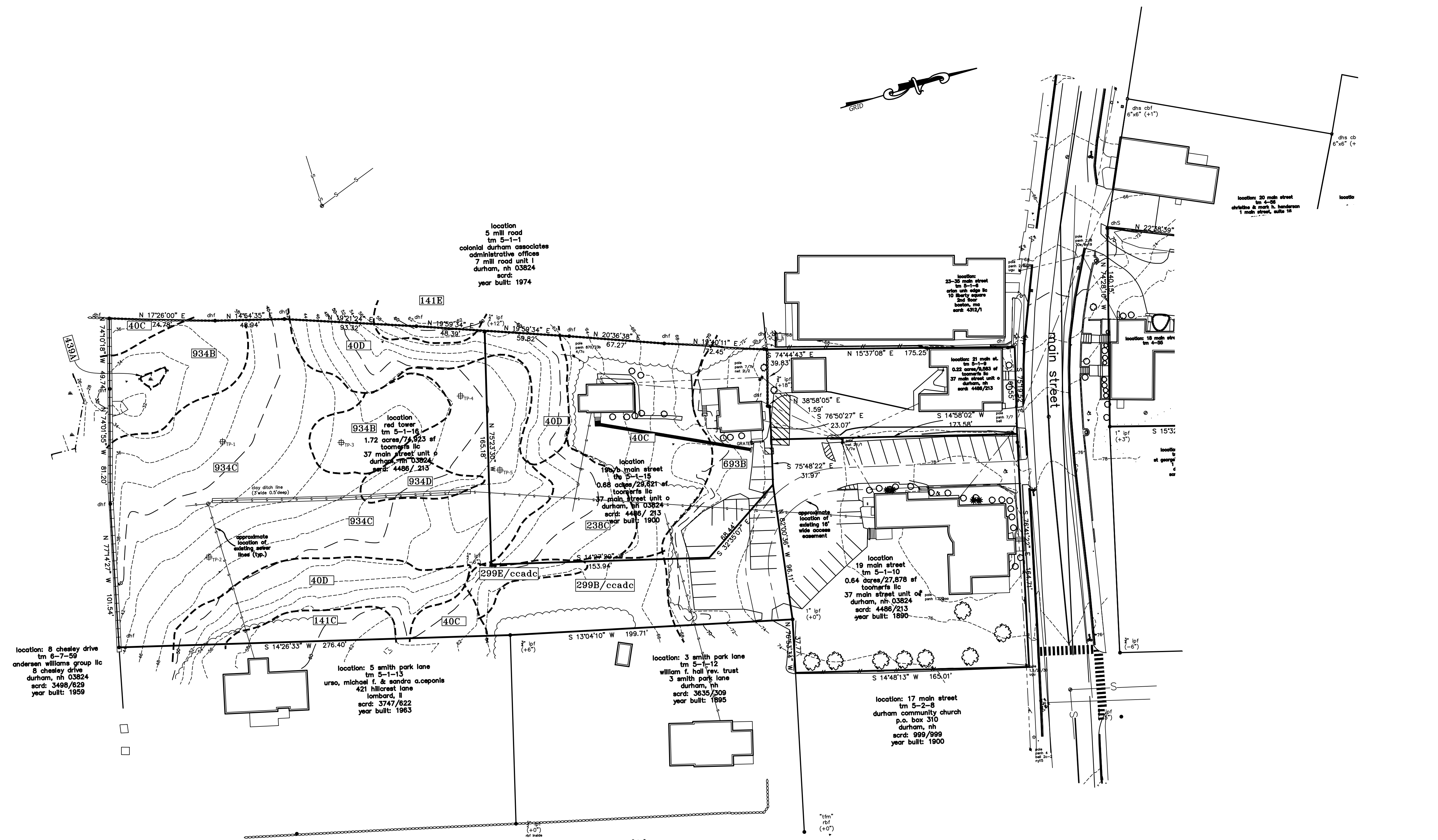
- REFERENCE PLANS:
1. "PLAN OF PART OF RED TOWER ESTATE - DURHAM, NH" DATED: JUNE 1944 BY JOHN W. DURGIN, RLS #1 - CIVIL ENGINEER. SCRD PLAN 7, POCKET 4, FOLDER 3. SEE ALSO: SCRD PLAN 3, POCKET 4, FOLDER 2
2. "FINAL PLAN - RED TOWER DEVELOPMENT - DURHAM, NH" DATED: DECEMBER 1958 BY GRANT L. DAVIS, RLS #60 - CIVIL ENGINEER. SCRD PLAN 29, POCKET 3, FOLDER 3
3. "EXISTING PARKING & POTENTIAL PARKING PLAN - PLAN OF LOTS - FOR KYRAGES INC. IN DURHAM, NH" DATED: MAY 19, 1980, REVISED APRIL 23, 1982. BY BRUCE L. PAPHOPK, LLS #538, DOVER, NH. NOT RECORDED - ON FILE AT THE TOWN OF DURHAM ASSESSORS OFFICE.
4. "BOUNDARY PLAN - PREPARED FOR DURHAM COMMUNITY CHURCH, DURHAM, NH" DATED: MARCH 17, 1992 BY T.F. MORAN, INC. SCRD PLAN 51-56
5. "EXISTING CONDITIONS PLAN OF MILL ROAD PLAZA - FOR COLONIAL DURHAM ASSOCIATES, MILL ROAD, DURHAM, NH" DATED: MAY 8, 2008 BY DOUCET SURVEY, INC. NOT FOUND RECORDED
6. "TAX MAP 5, LOTS 1-6, 1-7, & 1-8 - PROPERTY OF VARSITY DURHAM, LLC - 35, 29, & 25-27 MAIN STREET, DURHAM, COUNTY OF STRAFFORD, NH" DATED: JANUARY 2012 BY MSC - COREY COLWELL - LLS #844 APPROVED BY THE DURHAM PLANNING BOARD. NOT FOUND RECORDED.
7. "ORION STUDENT HOUSING 23-35 MAIN STREET, DURHAM, NH" DATED: 10-17-2017 BY ALLEN & MAJOR ASSOCIATES, INC. JAMES P. SMITH, LLS #928 NOT FOUND RECORDED.

TAX MAP 5, LOTS 1-9, 1-10, 1-15, & 1-16
OWNER OF RECORD: TOOMERFS, LLC
37 MAIN STREET, UNIT 0
DURHAM, N.H.
BK. 4486, PG. 213

EXISTING FEATURES PLAN
19, 20, & 21 MAIN STREET
DURHAM
STRAFFORD COUNTY, NH
FOR:
TOOMERFS, LLC
1" = 30' AUGUST 2019

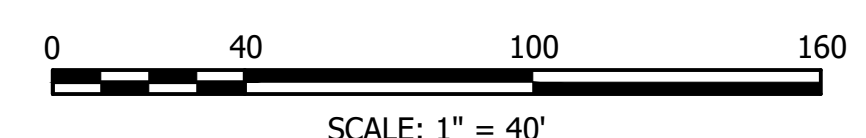


FILE NO. 329
PLAN NO. C-2925-EF-2
DWG. NO. 18031-LDD/EF-2
F.B. NO. "FERG"



SOIL LEGEND		
NUMERICAL SYMBOL	SOIL MAP UNIT NAME	HSG
40	CHATFIELD (WELL DRAINED) - HOLLIS (WELL DRAINED) COMPLEX	B
141	HOLLIS (WELL DRAINED) - ROCK OUTCROP - CHATFIELD (WELL DRAINED) COMPLEX	D
238	ELWRIDGE	C
299	UDORNTENTS, SMOOTHED	C ESTIMATED
439	SHAKER (POORLY DRAINED)	C
693	HOLLIS (WELL DRAINED) - CHARLTON - URBAN LAND COMPLEX	D
934	SHAKER VARIANT (SOMEWHAT POORLY DRAINED)	C
ALPHA SLOPE SYMBOL	RANGE	
A	0-3%	
B	3-8%	
C	8-15%	
D	15-25%	
E	>25%	

TEST PIT LOGS	
TEST PIT 1:	<p>1-0 INCHES PARTIALLY DECOMPOSED ORGANIC MATTER</p> <p>0-8 INCHES BROWN (10YR 4/3) VERY FINE SANDY LOAM, FRIABLE, GRANULAR</p> <p>8-11 INCHES LIGHT OLIVE BROWN (2.5YR 5/3) VERY FINE SANDY LOAM, FRIABLE, BLOCKY</p> <p>11-40 INCHES LIGHT YELLOWISH BROWN (2.5YR 6/3) SILT TO SILT LOAM, FIRM, MASSIVE, COMMON PROMINENT REDOX FEATURES</p> <p>SEASONAL HIGH WATER TABLE @ 11" (PERCHED)</p> <p>OBSERVED WATER TABLE NONE TO 40"</p> <p>RESTRICTIVE HORIZON @ 11"</p> <p>BEDROCK NONE TO 40"</p>
TEST PIT 2:	<p>1-0 INCHES PARTIALLY DECOMPOSED ORGANIC MATTER</p> <p>0-9 INCHES BROWN (10YR 4/3) VERY FINE SANDY LOAM, FRIABLE, GRANULAR</p> <p>9-12 INCHES DARK YELLOWISH BROWN (10YR 4/4) VERY FINE SANDY LOAM, FRIABLE, BLOCKY</p> <p>12-22 INCHES LIGHT OLIVE BROWN (2.5Y 5/3) SILT LOAM, FIRM, BLOCKY, COMMON DISTINCT REDOX FEATURES</p> <p>22-48 INCHES OLIVE GRAY (5Y 4/2) SILT LOAM, VERY FIRM, BLOCKY, COMMON DISTINCT REDOX FEATURES AND MANGANESE STAINS ON PED FACES.</p> <p>SEASONAL HIGH WATER TABLE @ 12" (PERCHED)</p> <p>OBSERVED WATER TABLE NONE TO 48"</p> <p>RESTRICTIVE HORIZON @ 12"</p> <p>BEDROCK NONE TO 48"</p>
TEST PIT 3:	<p>1-0 INCHES PARTIALLY DECOMPOSED ORGANIC MATTER</p> <p>0-8 INCHES BROWN (10YR 4/3) VERY FINE SANDY LOAM, FRIABLE, GRANULAR</p> <p>8-13 INCHES DARK YELLOWISH BROWN (10YR 4/4) VERY FINE SANDY LOAM, FRIABLE, BLOCKY</p> <p>13-43 INCHES LIGHT OLIVE BROWN (2.5Y 5/3) SILT LOAM, FIRM TO VERY FIRM, MASSIVE, COMMON PROMINENT REDOX FEATURES</p> <p>SEASONAL HIGH WATER TABLE @ 13" (PERCHED)</p> <p>OBSERVED WATER TABLE NONE TO 43"</p> <p>RESTRICTIVE HORIZON @ 13"</p> <p>BEDROCK NONE TO 43"</p>
TEST PIT 4:	<p>1-0 INCHES PARTIALLY DECOMPOSED ORGANIC MATTER</p> <p>0-6 INCHES VERY DARK BROWN (10YR 3/3) VERY FINE SANDY LOAM, FRIABLE, GRANULAR</p> <p>6-11 INCHES DARK YELLOWISH BROWN (10YR 4/4) VERY FINE SANDY LOAM, FRIABLE, BLOCKY</p> <p>11-40 INCHES LIGHT OLIVE BROWN (2.5Y 5/3) SILT LOAM, FIRM TO VERY FIRM, MASSIVE, COMMON PROMINENT REDOX FEATURES</p> <p>SEASONAL HIGH WATER TABLE @ 11" (PERCHED)</p> <p>OBSERVED WATER TABLE NONE TO 40"</p> <p>RESTRICTIVE HORIZON @ 11"</p> <p>BEDROCK NONE TO 40"</p>
TEST PIT 5:	<p>1-0 INCHES PARTIALLY DECOMPOSED ORGANIC MATTER</p> <p>0-8 INCHES VERY DARK GRAYISH BROWN (10YR 3/2) VERY FINE SANDY LOAM, FRIABLE, GRANULAR</p> <p>8-13 INCHES DARK YELLOWISH BROWN (10YR 4/4) VERY FINE SANDY LOAM, FRIABLE, BLOCKY</p> <p>13-40 INCHES LIGHT OLIVE BROWN (2.5Y 5/3) SILT LOAM, FIRM TO VERY FIRM, MASSIVE, COMMON PROMINENT REDOX FEATURES</p> <p>SEASONAL HIGH WATER TABLE @ 13" (PERCHED)</p> <p>OBSERVED WATER TABLE NONE TO 40"</p> <p>RESTRICTIVE HORIZON @ 13"</p> <p>BEDROCK NONE TO 40"</p>

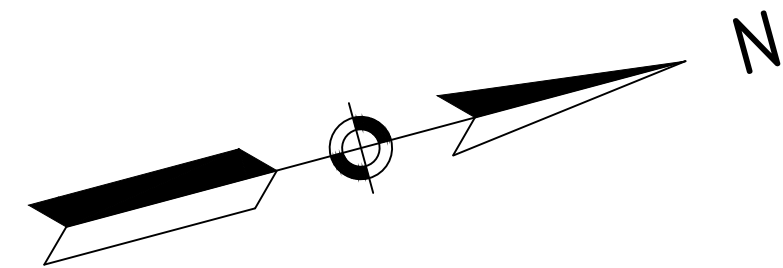
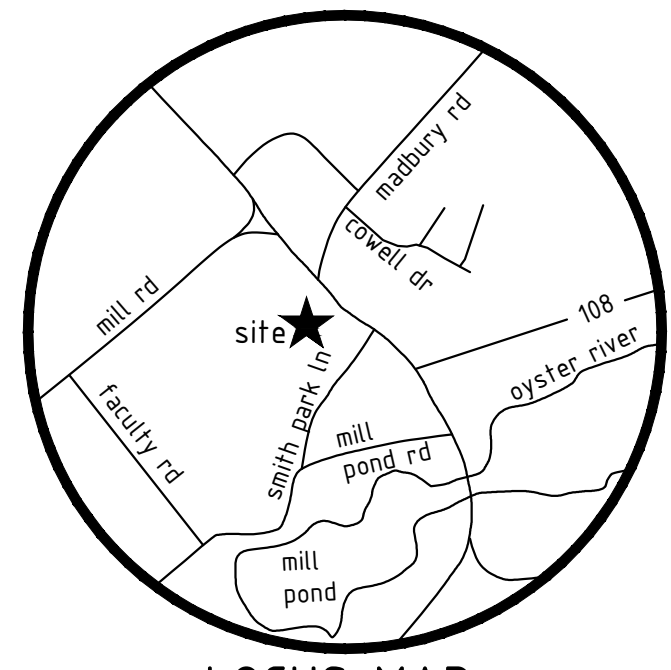


PROJECT #:	18-041	NO.		REVISION DESCRIPTION
DATE:	11/30/2021	DATE		
SCALE:	1" = 40'	NO.		
ENGINEERED BY:	AWIS	NO.		
DRAWN BY:	AWIS	NO.		
CHECKED BY:	MUS	NO.		

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PREPARED FOR
TOOMERS, LLC
TAX MAP 5, LOTS 1-9 AND 1-10
19 MAIN ST AND 21 MAIN ST, DURHAM, NH 03824

SHEET E2



LOCATION: 5 MILL ROAD
TM 5-1-1
COLONIAL DURHAM ASSOCIATES
7 MILL ROAD, UNIT 1
DURHAM, NH
SCRD:
YEAR BUILT: 1974

LOCATION: 23-35 MAIN STREET
TM 5-1-6
TORRINGTON MALDEN ONE LLC
UEP LIVING LLC
60 K STREET SUITE 302
BOSTON, MA 02127
SCRD: 4720/158

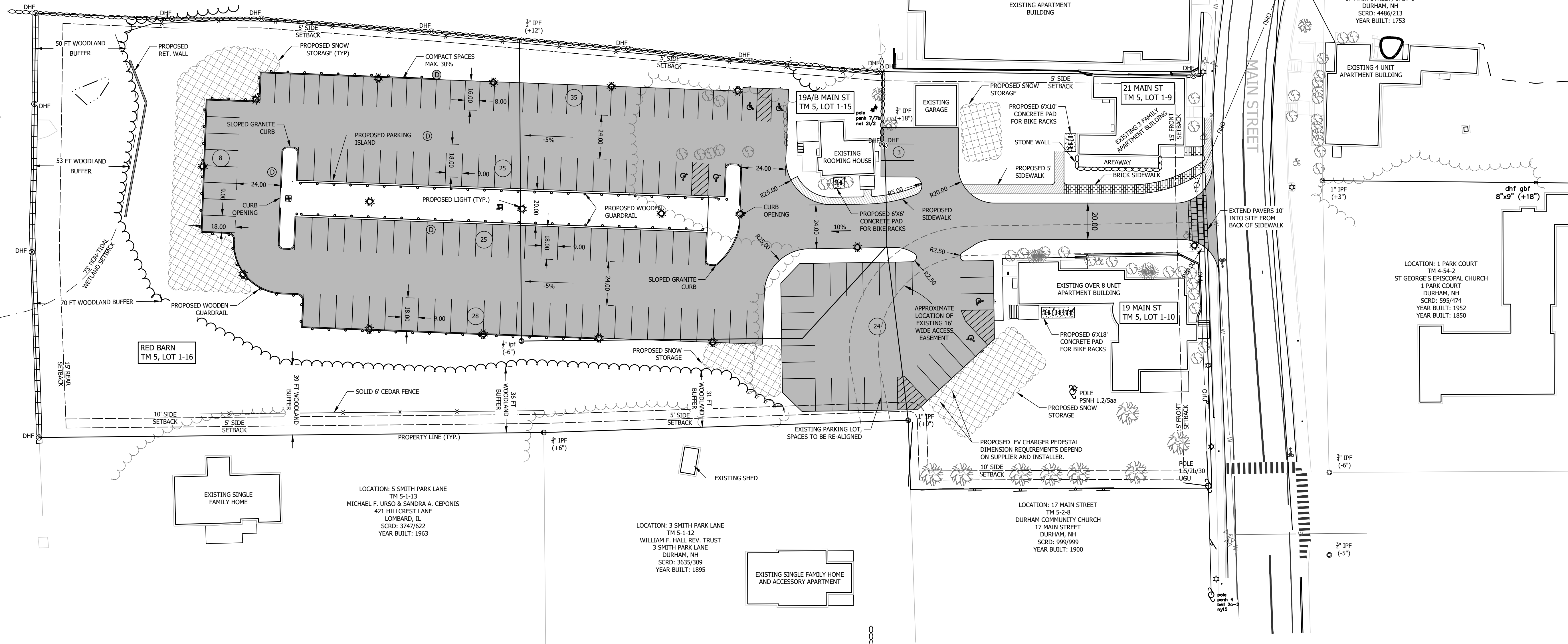
LOCATION: 18 MAIN STREET
TM 4-55
TOOMERS, LLC
37 MAIN STREET, UNIT 0
DURHAM, NH
SCRD: 4486/213
YEAR BUILT: 1753

LOCATION: 1 PARK COURT
TM 4-54-2
ST GEORGE'S EPISCOPAL CHURCH
1 PARK COURT
DURHAM, NH
SCRD: 595/474
YEAR BUILT: 1952
YEAR BUILT: 1850

LOCATION: 5 SMITH PARK LANE
TM 5-1-13
MICHAEL F. URSO & SANDRA A. CEPONIS
421 HILLCREST LANE
LOMBARD, IL
SCRD: 3747/822
YEAR BUILT: 1963

LOCATION: 3 SMITH PARK LANE
TM 5-1-12
WILLIAM F. HALL REV. TRUST
3 SMITH PARK LANE
DURHAM, NH
SCRD: 3635/309
YEAR BUILT: 1895

LOCATION: 17 MAIN STREET
TM 5-2-8
DURHAM COMMUNITY CHURCH
17 MAIN STREET
DURHAM, NH
SCRD: 999/999
YEAR BUILT: 1900



GENERAL NOTES:

- SUBJECT PROPERTY
21 MAIN STREET
DURHAM, NH 03824
TAX MAP 5, LOT 1-9
 - SUBJECT PROPERTY
19A/B MAIN STREET
DURHAM, NH 03824
TAX MAP 5, LOT 1-10
 - SUBJECT PROPERTY
19A/B MAIN STREET
DURHAM, NH 03824
TAX MAP 5, LOT 1-15
 - SUBJECT PROPERTY
RED TOWER
DURHAM, NH 03824
TAX MAP 5, LOT 1-16
- OWNER OF RECORD
TOOMERS, LLC
37 MAIN STREET UNIT 0
DURHAM, NH 03824
SCRD BK 4486, PG 213
- OWNER OF RECORD
TOOMERS, LLC
37 MAIN STREET UNIT 0
DURHAM, NH 03824
SCRD BK 4486, PG 213
- OWNER OF RECORD
TOOMERS, LLC
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DURHAM, NH 03824
SCRD BK 4486, PG 213
- OWNER OF RECORD
TOOMERS, LLC
37 MAIN STREET UNIT 0
DURHAM, NH 03824
SCRD BK 4486, PG 213

- REFERENCE PLANS:
- EXISTING FEATURES PLAN 19, 20, & 21 MAIN STREET, DURHAM STRAFFORD COUNTY, NH PREPARED FOR TOOMERS, LLC, PREPARED BY NORWAY PLAINS ASSOCIATES, INC. DATED AUGUST, 2019.
 - VERTICAL DATUM IS ASSUMED.
 - IMPERVIOUS SURFACE RATIO:
EXISTING = 19.3% (27,398 S.F.)
PROPOSED = 43.1% (61,141 S.F.)
 - ALL OUTSIDE CONSTRUCTION RELATED ACTIVITY RELATED TO THE DEVELOPMENT OF THIS SITE IS RESTRICTED TO THE HOURS OF 7:00 A.M. TO 6:00 P.M. MONDAY THROUGH FRIDAY AND 8:00 A.M. TO 3:00 P.M. SATURDAY.
 - FOR MORE INFORMATION ABOUT THIS SITE PLAN, OR TO SEE THE COMPLETE PLAN SET, CONTACT THE TOWN OF DURHAM PLANNING DEPARTMENT, 8 NEWMARKET ROAD, DURHAM, NH 03824. (603) 868-8064.

- ALL EXTERIOR LIGHTING MUST BE FULLY SHIELDED AND NOT PROJECT GLARE TOWARD ANY ADJACENT PROPERTIES.
- ACCESS INTO THE SITE FOR FIRE APPARATUS SHALL BE MAINTAINED AT ALL TIMES DURING THE CONSTRUCTION PROCESS. PLEASE CONTACT THE FIRE DEPARTMENT AT 868-5531 WITH ANY QUESTIONS ABOUT ACCESS REQUIREMENTS.
- SNOW STORAGE LOCATIONS ARE SHOWN ON SITE. SNOW WILL BE REMOVED FROM THE SITE IF REQUIRED.
- THE GENERAL CONTRACTOR IS RESPONSIBLE TO VERIFY ALL DIMENSIONS, ELEVATIONS AND CONDITIONS AT THE SITE. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER OF RECORD BEFORE PROCEEDING WITH THE AFFECTED PART OF THE WORK. THIS INCLUDES DISCREPANCIES BETWEEN THESE PLANS AND ANY OTHER PLANS OR CONTRACT DOCUMENTS.
- PLAN INTENT: THE PROPOSAL IS TO CONSTRUCT A NEW PAVED PARKING LOT AND NEW ACCESS DRIVEWAY ON THE SUBJECT PARCELS. ONE (1) EXISTING RESIDENTIAL UNIT WILL BE REMOVED FROM PARCEL 5-1-15

SITE DATA BLOCK

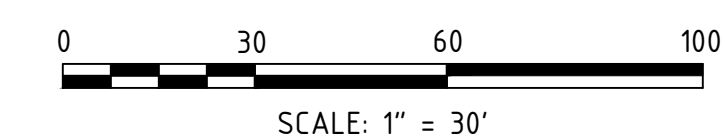
ZONE: CH - CHURCH HILL
OVERLAY DISTRICTS: HISTORIC DISTRICT
USE: COMMERCIAL

DIMENSIONAL REQUIREMENTS	REQUIRED IN CH DISTRICT
MINIMUM LOT SIZE (SQUARE FEET)	5,000 SF
MINIMUM FRONTAGE (FEET)	50
MINIMUM LOT SETBACKS	
FRONT (FEET)	15'
SIDE (FEET)	5'
REAR (FEET)	15'
MAXIMUM ROAD SETBACK (FEET)	NA
MAXIMUM HEIGHT (FEET)	30'
MAXIMUM HEIGHT W/ P.B. APPROVAL (FEET)	35'
IMPERVIOUS SURFACES RATIO	80%

USE	STANDARD	REQUIRED	PROVIDED
DWELLING UNITS AND BOARDING HOUSES	1 SPACE/RESIDENT	38 RESIDENTS	148 SPACES

NOTE: ADDITIONAL PARKING SPACES FOR RENT BY OTHER PROPERTIES.

FRONT (NORTH) PARKING SPACES = 27
REAR (SOUTH) PARKING SPACES = 121



FINAL APPROVAL BY DURHAM PLANNING BOARD.

CERTIFIED BY MICHAEL BEHRENDT, TOWN PLANNER

CERTIFIED _____

DATE _____

NO.	DATE	REVISION DESCRIPTION
1.	02/02/22	REVISED SUBMISSION PER TRC COMMENTS
0.	11/30/21	INITIAL SUBMISSION FOR 2 ROW PARKING LAYOUT

PROJECT #: 18-041
DATE: 11/30/2021
SCALE: 1" = 30'
ENGINEERED BY: AWS
DRAWN BY: AWS
CHECKED BY: MJS

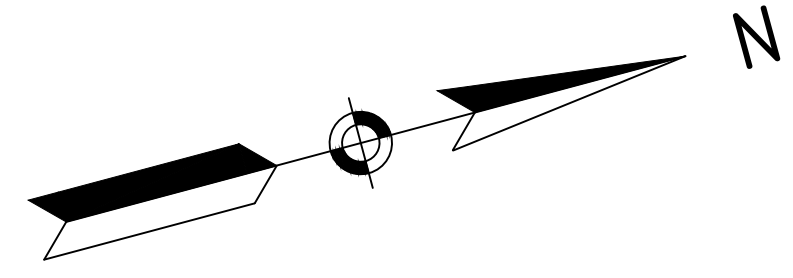
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SITE PLAN
PREPARED FOR
TOOMERS, LLC
TAX MAP 5, LOTS 1-9, 1-10, 1-15, 1-16
19 MAIN ST AND 21 MAIN ST, DURHAM, NH 03824

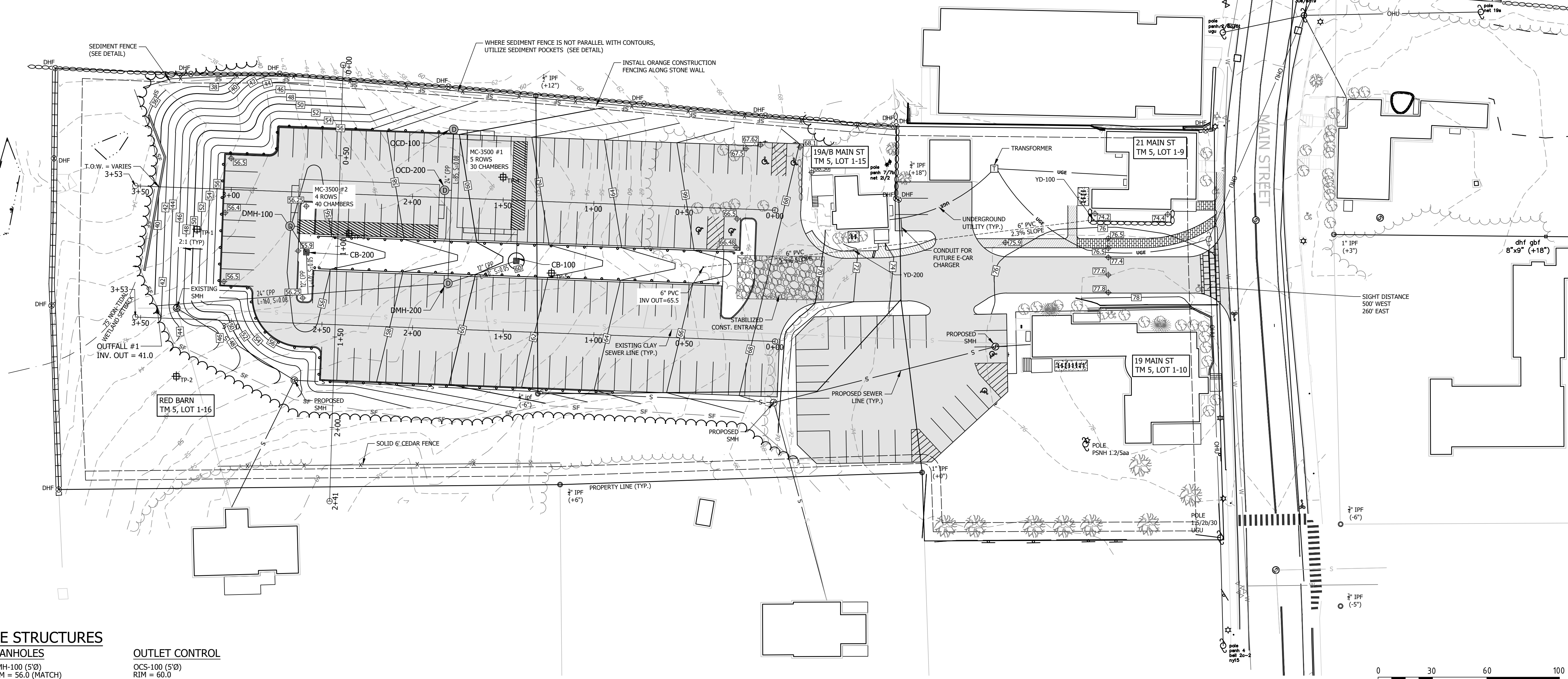
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C101

FINAL APPROVAL BY DURHAM PLANNING BOARD.
CERTIFIED BY MICHAEL BEHRENDT, TOWN PLANNER
CERTIFIED _____
DATE _____



NOTES
1. SIGHT DISTANCE AT MAIN STREET EXIT IS GREATER THAN 500 FT TO THE WEST AND 260 FT TO THE EAST



STORM DRAINAGE STRUCTURES

CATCH BASINS

CB-100 (5'Ø)
RIM = 59.5
12" INV. = 55.7
18" INV. = 56.7
SUMP = 4'

CB-200 (5'Ø)
RIM = 55.5
12" INV. = 50.6
18" INV. = 52.6
SUMP = 4'

YD-100 (8"Ø PVC)
RIM = 74.0
INV. = 71.5

YD-200 (8"Ø PVC)
RIM = 71.8
INV. = 68.9
INV. = 65.6

MANHOLES

DMH-100 (5'Ø)
RIM = 56.0 (MATCH)
18" INV. 50.0 (FROM CB-200)
18" INV. = 48.5 (TO MANIFOLD)
24" INV. = 48.5 (TO INFILTRATOR ROW)

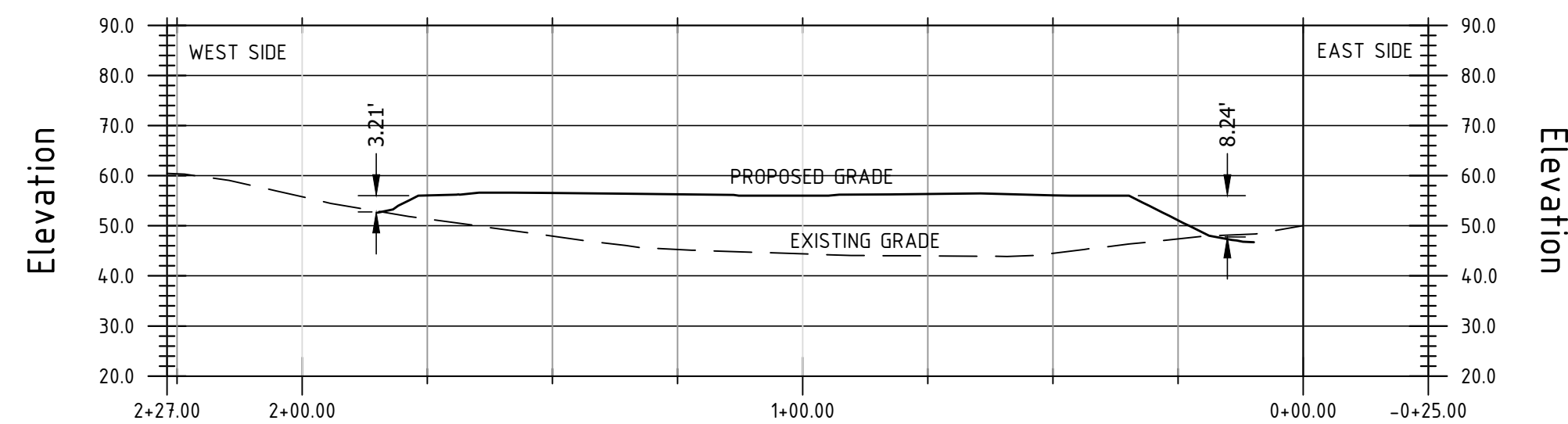
DMH-200 (4'Ø)
RIM = 59.5 (MATCH)
12" INV. = 54.7 (FROM CB-100)
24" INV. = 44.9 (FROM SC3500)
24" INV. = 44.8 (TO OUTFALL)

OUTLET CONTROL

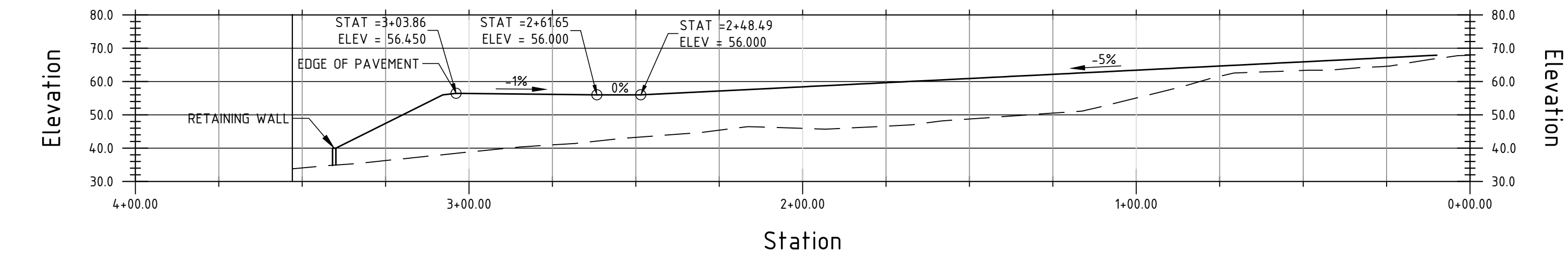
OCS-100 (5'Ø)
RIM = 60.0
12" INV. = 52.9
18" INV. = 52.9
6" INV. = 51.7 (UNDERDRAIN)
CONCRETE WEIR TOP = 57.20
ORIFACE 24"W, 4"H = 53.75
ORIFACE 12"W, 2"H = 55.65
24" INV. = 51.7

OCS-200 (5'Ø)
RIM = 59.2 (MATCH)
18" INV. = 49.5
18" INV. = 49.5
6" INV. = 48.3 (UNDERDRAIN)
CONCRETE WEIR TOP = 52.80
ORIFACE 24"W, 4"H = 49.35
ORIFACE 12"W, 2"H = 51.25
18" INV. = 48.3

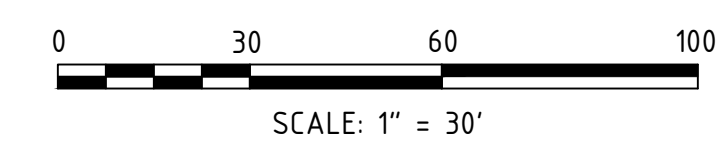
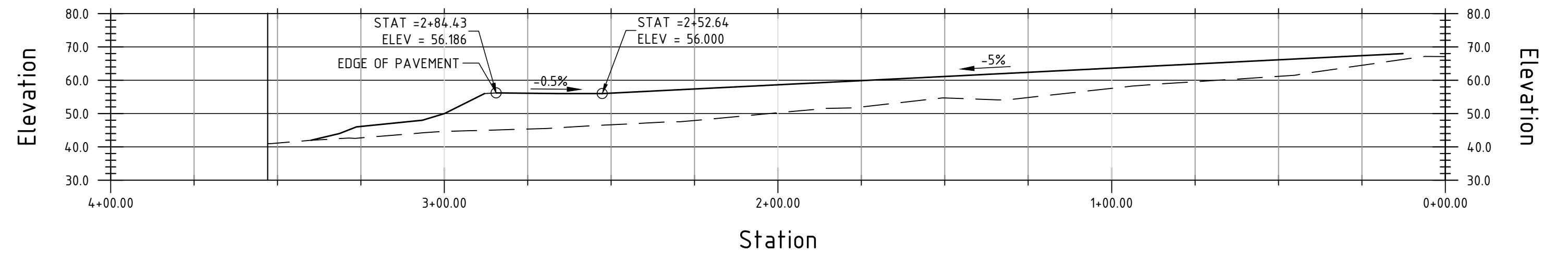
Profile View of W-E Section



Profile View of West Side of Lot



Profile View of East Side of Lot

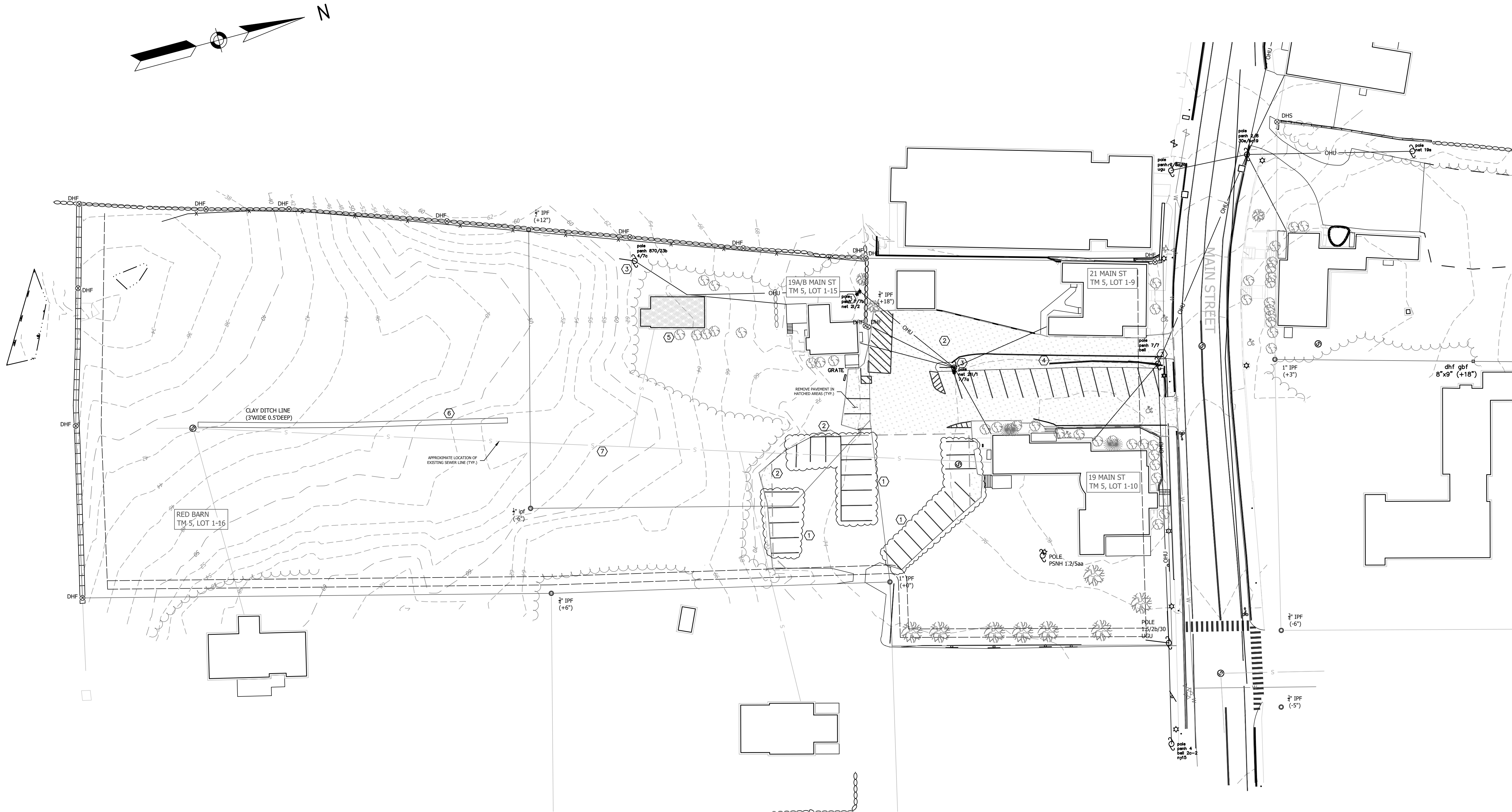


NO.	DATE	REVISION DESCRIPTION
1.	02/02/22	REVISED SUBMISSION PER TRC COMMENTS
0.	11/30/21	INITIAL SUBMISSION FOR 2 ROW PARKING LAYOUT

PROJECT #:	18-041
DATE:	11/30/2021
SCALE:	1" = 30'
ENGINEERED BY:	AWM
DRAWN BY:	AWM
CHECKED BY:	MJS

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GRADING, DRAINAGE, AND UTILITY PLAN
PREPARED FOR
TOOMERES, LLC
TAX MAP 5, LOTS 1-9, 1-10, 1-15, 1-16
19 MAIN ST AND 21 MAIN ST, DURHAM, NH 03824



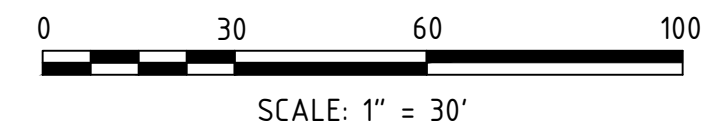
DEMOLITION ITEMS
(REFER TO DEMOLITION NOTE 5)

- ① SAWCUT AND REMOVE PAVEMENT AND ALL MARKINGS OR REMOVE OR GRIND PAVEMENT AS REQUIRED TO RECONSTRUCT AS SHOWN ON SITE PLAN.
- ② SAWCUT AND REMOVE EXISTING PAVEMENT TO THE LIMITS SHOWN.
- ③ REMOVE UTILITY POLE AND CONNECTED CABLES. COORDINATION WITH EVERSOURCE AND INTERNET/TV/PHONE PROVIDER MAY BE REQUIRED.
- ④ REMOVE EXISTING CURBING.
- ⑤ DEMOLISH EXISTING BUILDING, FOUNDATION, AND ALL ASSOCIATED UTILITIES AND STRUCTURES.
- ⑥ EXCAVATE EXISTING CLAY DITCH LINE TO PROJECT EXTENTS.
- ⑦ REMOVE EXISTING SEWER LINE WHERE NECESSARY TO AVOID INTERFERENCE WITH CONSTRUCTION.

DEMOLITION NOTES

1. LOCATIONS OF UTILITIES ARE APPROXIMATE. IT IS THE RESPONSIBILITY OF THE SITE CONTRACTOR TO VERIFY THE LOCATION OF ALL UTILITIES. CONTRACTOR SHALL CALL DISSAFE AT 1-888-DIG-SAFE (1-888-344-7253) PRIOR TO COMMENCING WITH ANY DEMOLITION WORK. ALL UTILITY WORK AND MATERIALS SHALL BE IN CONFORMANCE WITH THE SPECIFIC UTILITY COMPANY. CONSULT WITH THE SPECIFIC UTILITY COMPANY.
2. CONSTRUCTION SEQUENCING SHALL MEET THE REQUIREMENTS OF THE CONSTRUCTION SEQUENCING AND EROSION CONTROL NOTES FOUND ON SHEET D1. TEMPORARY EROSION CONTROL STRUCTURES AND TEMPORARY CHAINLINK FENCE SHALL BE INSTALLED PRIOR TO CONDUCTING EARTHWORK ACTIVITIES.
3. ALL SALVAGED MATERIALS FROM WITHIN THE CITY RIGHT OF WAY SHALL BE TAKEN TO THE DPW FACILITY. ALL DEMOLITION MATERIALS FROM WITHIN THE LOTS SHALL BECOME THE PROPERTY OF THE CONTRACTOR UNLESS SPECIFICALLY INDICATED OTHERWISE ON THIS PLAN. MATERIALS SHALL BE REMOVED FROM THE SITE AS SOON AS POSSIBLE TO PREVENT UNDUE BURDEN ON THE BUILDING CONTRACTOR OF WORKING AROUND STOCKPILED MATERIALS.
4. ALL DEMOLITION MATERIALS SHALL BE PROPERLY DISPOSED OF OFF SITE PER CURRENT LOCAL, STATE, AND FEDERAL REGULATIONS.
5. THE INTENT OF THIS PLAN IS TO SHOW THE DEMOLITION REQUIREMENTS. THE DEMOLITION OR REMOVAL OF ADDITIONAL ITEMS MAY BE REQUIRED AND IT IS THE CONTRACTOR'S RESPONSIBILITY TO PERFORM A SITE VISIT TO VERIFY ALL DEMOLITION REQUIREMENTS FOR THE PROJECT.
6. EXISTING MONUMENTATION THAT IS DISTURBED DURING CONSTRUCTION SHALL BE RESET BY A NH LICENSED LAND SURVEYOR OR PERSONS UNDER THE DIRECT SUPERVISION OF A NH LLS. NORWAY PLAINS & ASSOCIATES INC. (335-3948) IS THE SURVEYOR OF RECORD FOR THIS PROPERTY. COSTS FOR THIS WORK SHALL BE PAID FOR BY THE SITE CONTRACTOR.
7. THE SITE CONTRACTOR SHALL PROVIDE DAILY MAINTENANCE AS NECESSARY, INCLUDING SWEEPING AS NECESSARY, TO REMOVE DEPOSITED MATERIALS, SPILLS, ETC. ASSOCIATED WITH THE SITE CONSTRUCTION ACTIVITIES.
8. ALL WORK SHALL BE CONDUCTED IN A MANNER TO PROTECT EXISTING FEATURES TO REMAIN AS SHOWN. THIS INCLUDES ONSITE FEATURES AND THOSE FEATURES WITHIN THE PUBLIC R.O.W. DAMAGE TO THESE FEATURES SHALL BE REPAIRED/REPLACED IN KIND BY THE SITE CONTRACTOR.
9. IN ANY LOCATION WHERE AN EXISTING PEDESTRIAN TRAVEL WAY LEADS TO THE CONSTRUCTION SITE (CROSSWALK, SIDEWALK, ETC.), ACCESS TO THE CONSTRUCTION SITE SHALL BE BLOCKED AND SIGNAGE SHALL BE PROVIDED AS SHOWN BELOW:

NO ACCESS
CONSTRUCTION SITE
10. UTILITIES: THE SITE CONTRACTOR SHALL COORDINATE WITH EVERSOURCE TO REMOVE AND RELOCATE THE EXISTING TRANSFORMER.
11. CONSTRUCTION FENCING SHALL BE PLACED ALONG THE WESTERLY STONE WALL TO PROTECT THIS PROPERTY BOUNDARY DURING CONSTRUCTION.



FINAL APPROVAL BY DURHAM PLANNING BOARD.
CERTIFIED BY MICHAEL BEHRENDT, TOWN PLANNER

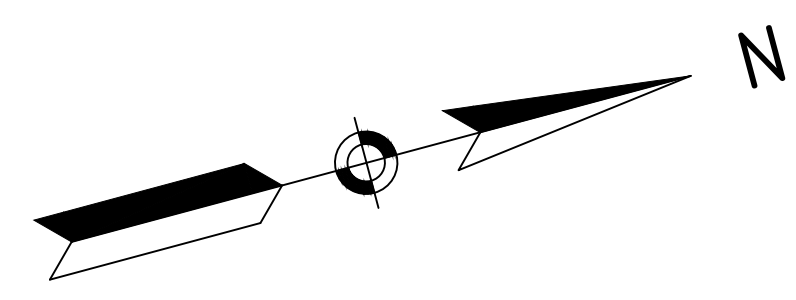
CERTIFIED _____
DATE _____

	PROJECT #:	18-041	NO.	DATE	REVISION DESCRIPTION	ENG	DWG
	DATE:	11/30/2021					
	SCALE:	1" = 30'					
	ENGINEERED BY:	AWM					
	DRAWN BY:	AWM					
	CHECKED BY:	MJS					
			1.	02/02/22	REVISED SUBMISSION PER TRC COMMENTS		MCS
			0.	11/30/21	INITIAL SUBMISSION FOR 2 ROW PARKING LAYOUT		AWM

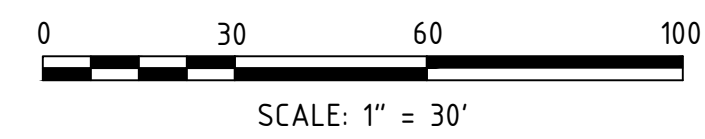
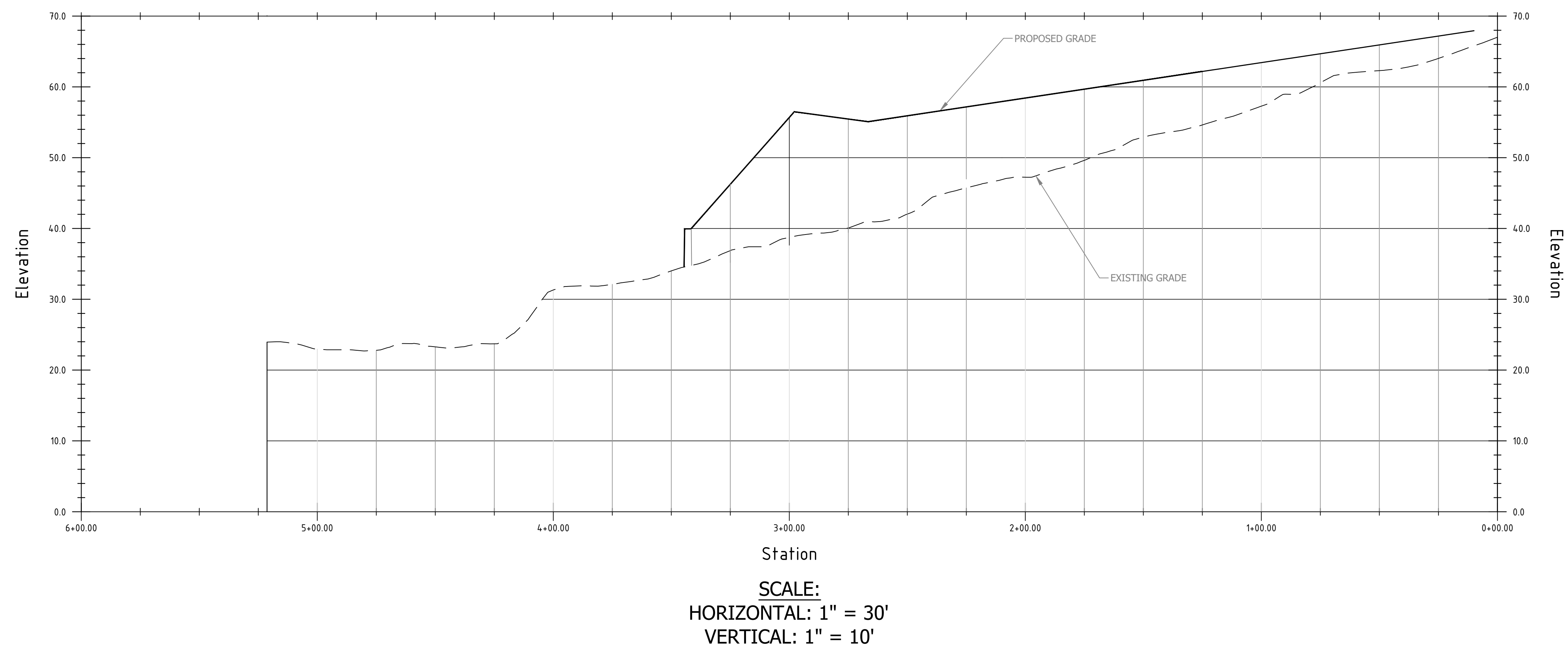
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Civil and Structural Engineering
Land Surveying and Environmental Consulting
MAINE • NEW HAMPSHIRE • VERMONT
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DEMOLITION PLAN
PREPARED FOR
TOOMERES, LLC
TAX MAP 5, LOTS 1-9, 1-10, 1-11, 1-12, 1-13, 1-14, 1-15, 1-16
19 MAIN ST AND 21 MAIN ST, DURHAM, NH 03824



Profile View of Overall site to Chesley Dr



FINAL APPROVAL BY DURHAM PLANNING BOARD.
CERTIFIED BY MICHAEL BEHRENDT, TOWN PLANNER
CERTIFIED _____
DATE _____

NO.	DATE	REVISION DESCRIPTION	ENG	DWG
1.	02/02/22	REVISED SUBMISSION PER TRC COMMENTS	MCS	
0.	11/30/21	INITIAL SUBMISSION FOR 2 ROW PARKING LAYOUT	AWS	

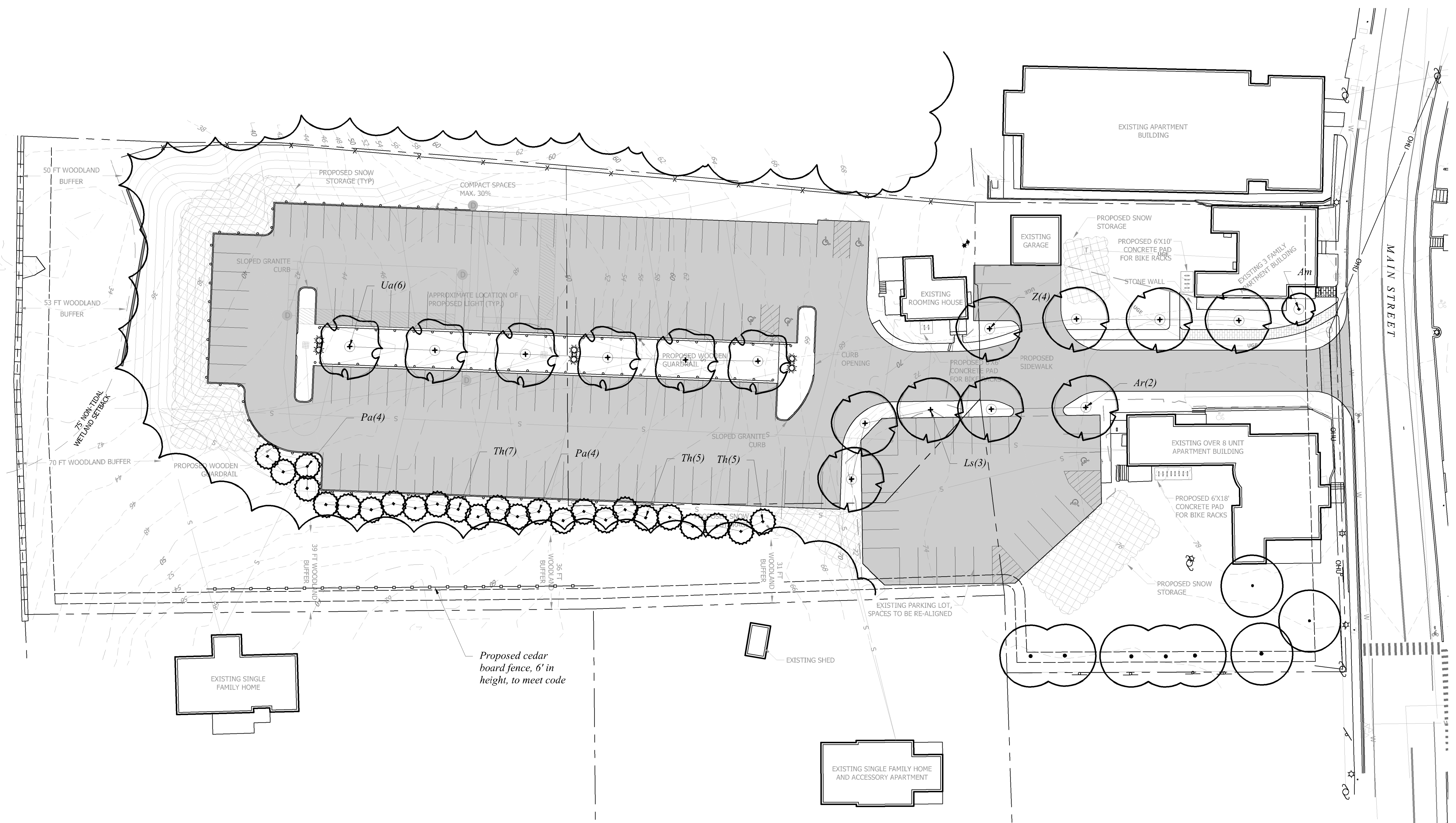
PROJECT #:	18-041
DATE:	11/30/2021
SCALE:	1" = 30'
ENGINEERED BY:	AWS
DRAWN BY:	AWS
CHECKED BY:	MJS

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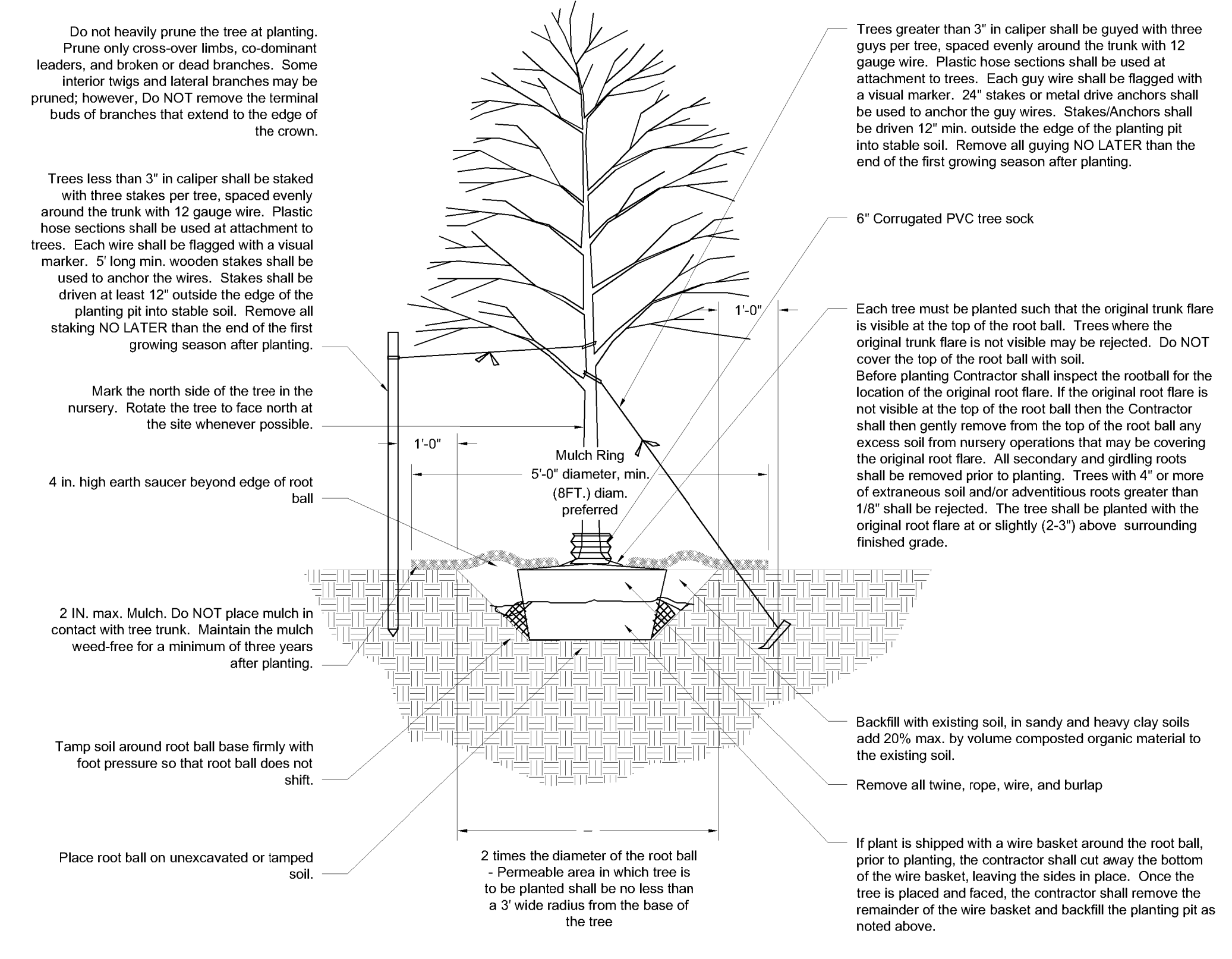
SITE PROFILE PLAN
PREPARED FOR
TOOMERES, LLC
TAX MAP 5, LOTS 1-9 AND 1-10
19 MAIN ST AND 21 MAIN ST, DURHAM, NH 03824

LANDSCAPE NOTES:

- Design is based on drawings by MJS Engineering, P.C. dated November 22, 2021, and may require adjustment due to actual field conditions.
- The contractor shall follow best management practices during construction and shall take all means necessary to stabilize and protect the site from erosion.
- Erosion Control shall be in place prior to construction.
- Erosion Control to consist of Hay Bales and Erosion Control Fabric shall be staked in place between the work and Water bodies. Wetlands and/or drainage ways prior to any construction.
- The Contractor shall verify layout and grades and inform the Landscape Architect or Client's Representative of any discrepancies or changes in layout and/or grade relationships prior to construction.
- It is the contractor's responsibility to verify drawings provided are to the correct scale prior to any bid, estimate or installation. A graphic scale bar has been provided on each sheet for this purpose. If it is determined that the scale of the drawing is incorrect, the landscape architect will provide a set of drawings at the correct scale, at the request of the contractor.
- Trees to Remain within the construction zone shall be protected from damage for the duration of the project by snow fence or other suitable means of protection to be approved by Landscape Architect or Client's Representative. Snow fence shall be located at the drip line at a minimum and shall include any and all surface roots. Do not fill or mulch on the trunk flare. Do not disturb roots. In order to protect the integrity of the roots, branches, trunk and bark of the tree(s) no vehicles or construction equipment shall drive or park in or on the area within the drip line(s) of the tree(s). Do not store any refuse or construction materials or portables within the tree protection area.
- This plan is for review purposes only, NOT for Construction. Construction Documents will be provided upon request.
- Location, support, protection, and restoration of all existing utilities and appurtenances shall be the responsibility of the Contractor.
- The Contractor shall verify exact location and elevation of all utilities with the respective utility owners prior to construction. Call DIGSAFE at 1-888-344-7233.
- The Contractor shall procure any required permits prior to construction.
- Prior to any landscape construction activities Contractor shall test all existing loam and loam from off-site intended to be used for lawns and plant beds using a thorough sampling throughout the supply. Soil testing shall indicate levels of pH, nitrates, macro and micro nutrients, texture, soluble salts, and organic matter. Contractor shall provide Landscape Architect with test results and recommendations from the testing facility along with soil amendment plans as necessary for the proposed plantings to thrive. All loam to be used on site shall be amended as approved by the Landscape Architect prior to placement.
- Contractor shall notify landscape architect or owner's representative immediately if at any point during demolition or construction a site condition is discovered which may negatively impact the completed project. This includes, but is not limited to, unforeseen drainage problems, unknown subsurface conditions, and discrepancies between the plan and the site. If a contractor is aware of a potential issue and does not bring it to the attention of the landscape architect or owner's representative immediately, they may be responsible for the labor and materials associated with correcting the problem.
- The Contractor shall furnish and plant all plants shown on the drawings and listed thereon. All plants shall be nursery-grown under climatic conditions similar to those in the locality of the project. Plants shall conform to the botanical names and standards of size, culture, and quality for the highest grades and standards as adopted by the American Association of Nurserymen, Inc. in ANSI Z60.1 of the American Standard of Nursery Stock, American Standards Institute, Inc. 230 Southern Building, Washington, D.C. 20005.
- A complete list of plants, including a schedule of sizes, quantities, and other requirements is shown on the drawings. In the event that quantity discrepancies or material omissions occur in the plant materials list, the planting plans shall govern.
- All plants shall be legibly tagged with proper botanical name.
- The Contractor shall guarantee all plants for not less than one year from time of acceptance.
- Owner or Owner's Representative will inspect plants upon delivery for conformity to Specification requirements. Such approval shall not affect the right of inspection and rejection during or after the progress of the work. The Owner reserves the right to inspect and/or select all trees at the place of growth and reserves the right to approve a representative sample of each type of shrub, herbaceous perennial, annual, and ground cover at the place of growth. Such sample will serve as a minimum standard for all plants of the same species used in this work.
- No substitutions of plants may be made without prior approval of the Owner or the Owner's Representative for any reason.
- All landscaping shall be provided with either of the following:
 - An underground sprinkling system
 - An outside hose attachment within 150 feet
- If an automatic irrigation system is installed, all irrigation valve boxes shall be located within planting bed areas.
- The contractor is responsible for all plant material from the time their work commences until final acceptance. This includes but is not limited to maintaining all plants in good condition, the security of the plant material once delivered to the site, and watering of plants. Plants shall be appropriately watered prior to, during and after planting. It is the contractor's responsibility to provide water from off site, should it not be available on site.
- All disturbed areas will be dressed with 6" of topsoil and planted as noted on the plans or seeded except plant beds. Plant beds shall be prepared to a depth of 12" with 75% loam and 25% compost.
- Trees, ground cover, and shrub beds shall be mulched to a depth of 2" with one-year-old, well-composted, shredded native bark not longer than 4" in length and 1/2" in width, free of woodchips and sawdust. Mulch for ferns and herbaceous perennials shall be no longer than 1" in length. Trees in lawn areas shall be mulched in a 5' diameter min. saucer. Color of mulch shall be black.
- In no case shall mulch touch the stem of a plant nor shall mulch ever be more than 3" thick total (including previously applied mulch) over the root ball of any plant.
- Secondary lateral branches of deciduous trees overhanging vehicular and pedestrian travel ways shall be pruned up to a height of 5' to allow clear and safe passage of vehicles and pedestrians under tree canopy.
- Snow shall be stored a minimum of 5' from shrubs and trunks of trees.
- Landscape Architect is not responsible for the means and methods of the contractor.

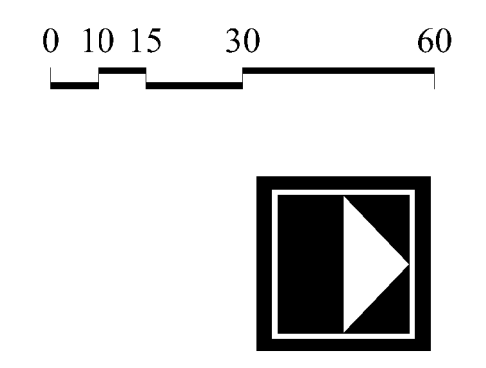


TREE PLANTING DETAIL



Symbol	Botanical Name	Common Name	Quantity	Size	Comments
Am	<i>Amelanchier canadensis</i>	Shadblow Senceberry	1	2.5-3" cal	B&B
Ar	<i>Acer rubrum</i> 'October Glory'	October Glory Red Maple	2	2.5-3" cal	B&B
Ls	<i>Liquidambar styraciflua</i>	American Sweetgum	3	2.5-3" cal	B&B
Pa	<i>Picea abies</i>	Norway Spruce	8	7-8' ht.	B&B
Th	<i>Thuja plicata</i> 'Green Giant'	Green Giant Arborvitae	17	10' ht.	B&B
Ua	<i>Ulmus americana</i> 'Princeton'	Princeton American Elm	6	2.5-3" cal	B&B
Z	<i>Zelkova serrata</i> 'Green Vase'	Green Vase Zelkova	4	2.5-3" cal	B&B

woodburn & company
LANDSCAPE ARCHITECTURE
103 Kent Place, Newmarket, New Hampshire Phone: 603.659.5949



FINAL APPROVAL BY JURHAM PLANNING BOARD.
CERTIFIED BY MICHAEL BEHRENDT, TOWN PLANNER
DATE _____

PROJECT #:	18-041	DATE:	10/19/2020	DESIGNED BY:	RW/vm	DRAWN BY:	vm	CHECKED BY:	RW
	SCALE:		1" = 30'						
NO.		DATE		REVISION DESCRIPTION					
3.		02/01/22		FENCING ADDED AT EASTERN PL					vm
2.		12/01/21		PER REVISED SITE PLAN					vm
1.		07/27/21		PER REVISED SITE PLAN					vm
0.		10/28/20		INITIAL SUBMISSION FOR SITE PLAN REVIEW					vm

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LANDSCAPE PLAN
PREPARED FOR
TOOMERES, LLC
TAX MAP 5, LOTS 1-9 AND 1-10
19 MAIN ST AND 21 MAIN ST, DURHAM, NH 03824

SHEET L-100

NOTES:

November 22, 2021, and may require adjustment due to actual construction and shall take all means necessary to stabilize and protect the site.

Material shall be staked in place between the work and Water.

The Architect or Client's Representative of any construction shall be responsible for the correct scale prior to any bid, estimate or installation. If it is determined that the scale of the drawing is not correct, at the request of the contractor.

From the date of the project by snow fence or other means. Snow fence shall be placed on all surface roots. Do not fill or mulch on the trunk flare. Do not cut, trim, or remove any trees or shrubs. Do not store any refuse or construction materials on the site.

Construction Documents will be provided upon request. The contractor shall be responsible for the location of all utilities with the respective utility owners prior to construction.

Soil testing shall indicate levels of pH, nitrates, phosphorus, and other nutrients. The contractor shall provide Landscape Architect with test results immediately if at any point during demolition or construction. This includes, but is not limited to, discrepancies between the plan and the site. If a discrepancy is found, the contractor shall immediately notify the Landscape Architect or owner's representative. All plants shall be nursery-grown and listed thereon. All plants shall be nursery-grown and listed thereon. All plants shall be nursery-grown and listed thereon. All plants shall be nursery-grown and listed thereon.

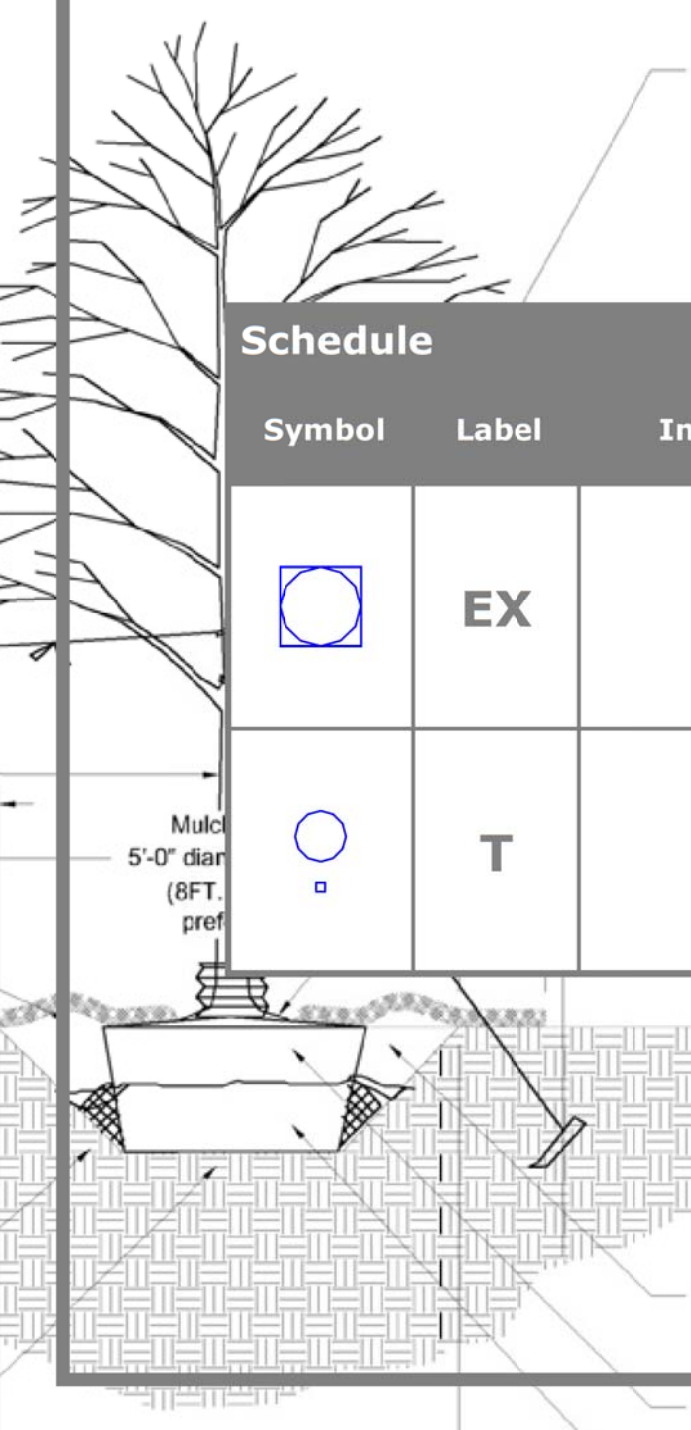
Plants shall conform to the botanical names and standards as adopted by the American Association of Nurserymen, Stock American Standards Institute, Inc. 230 Southern Boulevard, New York, NY 10001.

Other requirements are shown on the drawings. In the absence of other requirements, the planting plans shall govern.

From time of acceptance, the contractor shall be responsible for the progress of the work. The Owner reserves the right to request a representative sample of each type of plant material. Such sample will serve as a minimum standard for the work. The Owner or the Owner's Representative for any reason.

Plants shall be located within planting bed areas. The contractor shall not commence work until final acceptance. This includes but is not limited to, the quality of the plant material once delivered to the site, and the quality of the work. It is the contractor's responsibility to ensure that the plants are of the quality specified on the plans or seeded except plant beds. Plant material shall be one-year-old, well-composted, shredded native mulch and sawdust. Mulch for ferns and herbaceous perennials shall be mulched in a 5' diameter min. saucer. Color of mulch shall be green or brown. Mulch shall be more than 3" thick total (including previously applied mulch). Mulch shall be applied to a depth of 3" under tree canopy. The contractor shall be responsible for the quality of the work.

DETAIL



Trees greater than 3" in caliper shall be guyed with three guys per tree, spaced evenly around the trunk with 12 gauge wire. Plastic hose sections shall be used at attachment to trees. Each guy wire shall be flagged with a visual marker. 24" stakes or metal drive anchors shall be used to anchor the guy wires. Stakes/anchors shall be driven 12" min. outside the edge of the planting pit into stable soil. Remove all guying NO LATER than the end of the project.

Schedule

Symbol	Label	Image	QTY	Manufacturer	Catalog Number	Description	Lamp	Filename	Lumens per Lamp	LLF	Efficiency	Distribution	Polar Plot
EX			1	Unknown	XXXXXXXXXX	Existing Lantern-style Fixture; mounted at 14ft	LED	962TC-XRLED-9L45T5-MDL14-SV1.IES	3715	0.9	100%		
T			16	Baselite Corp	W5174 E6 LWTM 3K LDMO-10V XXX	Arbor Shade with white reflector, and frosted lens; mounted at 14ft on a wood pole (provided by others)	LED	LED25W-3K-1260984.ies	1820	0.9	100%		

Plant List

Symbol	Label	Image	QTY	Manufacturer	Catalog Number	Description	Lamp	Filename	Lumens per Lamp	LLF	Efficiency	Distribution	Polar Plot
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Statistics

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Outside of Parking Lot	+	0.2 fc	2.8 fc	0.0 fc	N/A	N/A
Parking Lot	+	0.4 fc	2.9 fc	0.0 fc	N/A	N/A



NO.	REVISIONS	DATE
2	PER REVISED SITE PLAN	12/01/21
1	PER REVISED SITE PLAN	07/27/21
0	INITIAL SUBMISSION FOR SITE PLAN REVIEW	10/28/20

DATE ISSUED: 10/19/20
SCALE: 1"=30'
DESIGNED BY: RW
DRAWN BY: VM
APPROVED BY: RW
DWG FILE:

LANDSCAPE PLAN
prepared for
TOOMERS, LLC
TAX MAP 5, LOTS 1-9 AND 1-10
19 MAIN ST AND 21 MAIN ST, DURHAM, NH 03824

NJS ENGINEERING, P.C.
CIVIL • STRUCTURAL • ENVIRONMENTAL
5 FIVE STAR BLVD., SUITE 209
NORWOOD, NH 03857
PHONE: (603) 659-4979, FAX: (603) 659-4627
E-MAIL: NJS@NJSENGINEERING.COM



**19 MAIN ST - DURHAM
Site Lighting Layout**

Designer
Heidi G. Connors
Visible Light, Inc.
24 Stickney Terrace
Suite 6
Hampton, NH 03842
Date
01/18/2022
Scale
1"=30'
Drawing No.
Summary

CONSTRUCTION SEQUENCING AND EROSION CONTROL NOTES:

AREA OF DISTURBANCE/STABILIZATION

- A. THE SMALLEST PRACTICAL AREA SHALL BE DISTURBED DURING CONSTRUCTION, BUT IN NO CASE SHALL THE AREA OF UNSTABILIZED SOIL EXCEED 5 ACRES AT ANY ONE TIME BEFORE THE AREA IS STABILIZED.
- B. AN AREA SHALL BE CONSIDERED STABLE IF ONE OF THE FOLLOWING HAS OCCURRED:
 - IN AREAS TO BE PAVED, BASE COURSE GRAVELS MEETING THE GRADATION REQUIREMENTS OF NHDOT STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION, 2016, ITEM NO. 304.1 OR 304.2 HAVE BEEN INSTALLED;
 - IN AREAS NOT TO BE PAVED
 - A MINIMUM OF 85% VEGETATED MATERIAL HAS BEEN ESTABLISHED;
 - A MINIMUM OF 3" OF NON-EROSIVE MATERIAL SUCH AS STONE OR RIPRAP HAS BEEN INSTALLED;
 - EROSION CONTROL BLANKETS HAVE BEEN INSTALLED IN ACCORDANCE WITH ENV-WQ 1506.03.
- C. DISTURBED AREAS SHALL BE TEMPORARILY STABILIZED WITHIN 45 DAYS AND PERMANENTLY STABILIZED NO LATER THAN 3 DAYS AFTER FINAL GRADING.

EROSION CONTROL PRACTICES:

- A. INSTALLATION:
 - INSTALL ALL EROSION CONTROLS AS SHOWN ON THE GRADING PLAN, TYPICAL DETAILS, AND IN CONFORMANCE WITH THE EROSION AND SEDIMENT CONTROL NOTES ON THIS PAGE. MANUFACTURER'S SPECIFICATIONS SHALL BE FOLLOWED.
- B. INSPECTION:
 - INSPECT ALL EROSION CONTROLS WEEKLY AND AFTER EVERY RAIN EVENT OF 0.5 INCHES OR GREATER UNLESS OTHERWISE NOTED.
 - TEMPORARY STABILIZATION PRACTICES SHALL BE INSPECTED ONCE PER WEEK DURING CONSTRUCTION UNTIL EXPOSED SURFACES ARE STABILIZED.
 - ANY SIGNS OF RILL OR GULLY EROSION SHALL BE IMMEDIATELY REPAIRED.
- C. MAINTENANCE:
 - MAINTAIN EROSION CONTROLS PER THE TYPICAL DETAILS AND IN CONFORMANCE WITH THE EROSION AND SEDIMENT CONTROL NOTES ON THIS PAGE.
- D. REMOVAL:
 - ALL TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED ONCE 85% VEGETATIVE COVER HAS BEEN ESTABLISHED.
 - AFTER REMOVAL, ALL DISTURBED AREAS SHALL BE REGRADED, FERTILIZED, AND RESEEDED. MONITOR TO ENSURE VEGETATIVE GROWTH IS ESTABLISHED AND REPAIR AS NEEDED UNTIL MINIMUM OF 85% VEGETATIVE COVER IS ESTABLISHED.

COLD WEATHER SITE STABILIZATION

- A. TO ADEQUATELY PROTECT WATER QUALITY DURING COLD WEATHER AND DURING SPRING RUNOFF, THE ADDITIONAL STABILIZATION TECHNIQUES SPECIFIED IN THIS SECTION SHALL BE EMPLOYED DURING THE PERIOD FROM OCTOBER 15 THROUGH MAY 1.
- B. SUBJECT TO (C), BELOW, THE AREA OF EXPOSED, UNSTABILIZED SOIL SHALL BE:
 - LIMITED TO ONE ACRE; AND
 - PROTECTED AGAINST EROSION BY THE METHODS DESCRIBED IN THIS SECTION PRIOR TO ANY THAW OR SPRING MELT EVENT.
- C. THE ALLOWABLE AREA OF EXPOSED SOIL MAY BE INCREASED IF A WINTER CONSTRUCTION PLAN IS DEVELOPED BY A LICENSED ENGINEER OR A GEOSPECIALIST AND SUBMITTED TO THE DEPARTMENT FOR APPROVAL AS A REQUEST TO WAIVE THE ONE-ACRE LIMIT.
- D. SUBJECT TO (F) AND (G), BELOW, ALL PROPOSED VEGETATED AREAS HAVING A SLOPE OF LESS THAN 15% THAT DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15, OR THAT ARE DISTURBED AFTER OCTOBER 15, SHALL BE SEEDING AND COVERED WITH 3 TO 4 TONS OF HAY OR STRAW MULCH PER ACRE SECURED WITH ANCHORED NETTING OR TACKIFIER OR WITH AT LEAST 2 INCHES OF EROSION CONTROL MIX MEETING THE CRITERIA OF ENV-WQ 1506.05(B).
- E. SUBJECT TO (F) AND (G), BELOW, ALL PROPOSED VEGETATED AREAS HAVING A SLOPE OF 15% OR GREATER THAT DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15, OR THAT ARE DISTURBED AFTER OCTOBER 15, SHALL BE SEEDING AND COVERED WITH A PROPERLY INSTALLED AND ANCHORED EROSION CONTROL BLANKET OR WITH AT LEAST 4 INCHES OF EROSION CONTROL MIX MEETING THE CRITERIA OF ENV-WQ 1506.05(B).
- F. ANCHORED HAY MULCH OR EROSION CONTROL MIX THAT MEETS THE CRITERIA OF ENV-WQ 1506.05(B) SHALL NOT BE INSTALLED OVER SNOW GREATER THAN ONE INCH IN DEPTH.
- G. EROSION CONTROL BLANKETS SHALL NOT BE INSTALLED OVER SNOW GREATER THAN ONE INCH IN DEPTH OR ON FROZEN GROUND.
- H. ALL PROPOSED STABILIZATION IN ACCORDANCE WITH (D) OR (E), ABOVE, SHALL BE COMPLETED WITHIN A DAY OF ESTABLISHING THE GRADE THAT IS FINAL OR THAT OTHERWISE WILL EXIST FOR MORE THAN 5 DAYS.
- I. ALL DITCHES OR SWALES THAT DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15, OR THAT ARE DISTURBED AFTER OCTOBER 15, SHALL BE STABILIZED TEMPORARILY WITH STONE OR EROSION CONTROL BLANKETS APPROPRIATE FOR THE DESIGN FLOW CONDITION AS DETERMINED BY THE OWNER'S ENGINEERING CONSULTANT.
- J. AFTER OCTOBER 15, INCOMPLETE ROAD OR PARKING AREAS WHERE ACTIVE CONSTRUCTION OF THE ROAD OR PARKING AREA HAS STOPPED FOR THE WINTER SEASON SHALL BE PROTECTED WITH A MINIMUM 3-INCH LAYER OF BASE COURSE GRAVELS MEETING THE GRADATION REQUIREMENTS OF NHDOT STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION, 2016, TABLE 304-1, ITEM NO. 304.1, 304.2, OR 304.3, AVAILABLE AS NOTED IN APPENDIX B.

TEMPORARY VEGETATION

- A. SITE PREPARATION
 - INSTALL EROSION AND SEDIMENT CONTROL MEASURES AS SPECIFIED ABOVE.
 - ENSURE RUNOFF IS DIVERTED FROM SEEDING AREA.
 - ON SLOPES OF 4:1 OR STEEPER, CREATE HORIZONTAL GROOVES PERPENDICULAR TO THE DIRECTION OF THE SLOPE TO CATCH SEED AND REDUCE RUNOFF.
- B. SEED BED PREPARATION
 - REMOVE STONES AND TRASH FROM AREA TO BE SEEDING.
 - COMPACTED SOIL SHALL BE LOOSENED TO A DEPTH OF 2 INCHES BEFORE APPLYING FERTILIZER, LIME, AND SEED.
 - APPLY FERTILIZER AT A RATE OF 600 LBS PER ACRE OF 10-10-10. APPLY LIME (EQUIVALENT TO 50 PERCENT CALCIUM PLUS MAGNESIUM OXIDE) AT A RATE OF 3 TONS PER ACRE.
- C. SEEDING
 - SEED PER THE FOLLOWING RECOMMENDATIONS

SEASON	APPLICATION DATE	MIXTURE TYPE	QUANTITY (lb./Ac.)
EARLY SPRING	NO LATER THAN 5/15	OATS	80
LATE SPRING/ FALL	4/1 TO 6/1 & 8/15 TO 9/15	PERENNIAL RYE	30
EARLY SPRING/ FALL	4/1 TO 5/15 & 8/15 TO 9/15	ANNUAL RYE	40
FALL	8/15 TO 9/15	WINTER RYE	112

- 2. APPLY SEED UNIFORMLY BY HAND, CYCLONE SEEDER, DRILL, CULTIPACKER TYPE SEEDER OR HYDROSEEDER (SLURRY INCLUDING SEED AND FERTILIZER). NORMAL SEEDING DEPTH IS FROM 1/4 TO 1/2 INCH. HYDROSEEDING THAT INCLUDES MULCH MAY BE LEFT ON SOIL SURFACE. SEEDING RATES MUST BE INCREASED 10% WHEN HYDROSEEDING.
- 3. TEMPORARY SEEDING SHALL OCCUR PRIOR TO SEPTEMBER 15TH IN THE YEAR IN WHICH THE AREA BEING SEEDING WAS DISTURBED.
- 4. AREAS SEEDING BETWEEN MAY 15TH AND AUGUST 15TH SHALL BE COVERED WITH HAY OR STRAW MULCH MEETING THE FOLLOWING CRITERIA:
 - HAY AND STRAW MULCHES SHALL BE ANCHORED WITH MULCH NETTING OR TACKIFIER SO THAT THEY ARE NOT BLOWN AWAY BY WIND OR WASHED AWAY BY FLOWING WATER;
 - MULCH MATERIALS SHALL BE SELECTED BASED UPON SOILS, SLOPE, FLOW CONDITIONS, AND TIME OF YEAR;
 - HAY OR STRAW MULCH SHALL BE APPLIED AT A RATE OF 1.5 TO 2 TONS PER ACRE, EQUIVALENT TO 70 TO 90 POUNDS PER 1,000 SQUARE FEET;
 - IF VEGETATED GROWTH COVERING AT LEAST 85% OF THE DISTURBED AREA IS NOT ACHIEVED PRIOR TO OCTOBER 15TH, ONE OR MORE ADDITIONAL EROSION CONTROL METHODS SHALL BE IMPLEMENTED.
- D. MAINTENANCE
 - TEMPORARY SEEDING SHOULD BE INSPECTED WEEKLY AND AFTER ANY RAINFALL EXCEEDING 1/2 INCH IN 24 HOURS ON ACTIVE CONSTRUCTION SITES. TEMPORARY SEEDING SHOULD ALSO BE INSPECTED JUST PRIOR TO SEPTEMBER 15, TO ASCERTAIN WHETHER ADDITIONAL SEEDING IS REQUIRED TO PROVIDE STABILIZATION OVER THE WINTER PERIOD.
 - BASED ON INSPECTION, AREAS SHOULD BE RESEEDED TO ACHIEVE FULL STABILIZATION OF EXPOSED SOILS. IF IT IS TOO LATE IN THE PLANTING SEASON TO APPLY ADDITIONAL SEED, THEN OTHER TEMPORARY STABILIZATION MEASURES SHOULD BE IMPLEMENTED.
 - AT A MINIMUM, 85% OF THE SOIL SURFACE SHOULD BE COVERED BY VEGETATION.
 - IF ANY EVIDENCE OF EROSION OR SEDIMENTATION IS APPARENT, REPAIRS SHOULD BE MADE AND AREAS SHOULD BE RESEEDED, WITH OTHER TEMPORARY MEASURES (E.G., MULCH) USED TO PROVIDE EROSION PROTECTION DURING THE PERIOD OF VEGETATION ESTABLISHMENT.

PERMANENT VEGETATION

- A. SITE PREPARATION
 - REFER TO SITE PREPARATION FOR TEMPORARY SEEDING.
- B. SEED BED PREPARATION
 - REFER TO SEED BED PREPARATION FOR TEMPORARY SEEDING IN CONJUNCTION WITH THESE NOTES.
 - LIME AND FERTILIZER INTO THE SOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES WITH A DISC, SPRING TOOTH HARROW OR OTHER SUITABLE EQUIPMENT, THE FINAL HARROWING OPERATION SHOULD BE ON THE GENERAL CONTOUR. CONTINUE TILLAGE UNTIL A REASONABLY UNIFORM, FINE SEEDBED IS PREPARED, ALL BUT CLAY OR SILTY SOILS AND COARSE SANDS SHOULD BE ROLLED TO FIRM THE SEEDBED WHEREVER FEASIBLE.
 - REMOVE FROM THE SURFACE ALL STONES 2 INCHES OR LARGER IN ANY DIMENSION, REMOVE ALL OTHER DEBRIS, SUCH AS WIRE, CABLE, TREE ROOTS, CONCRETE, CLODS, LUMPS, TRASH OR OTHER UNSUITABLE MATERIAL.
 - INSPECT SEEDBED JUST BEFORE SEEDING. IF TRAFFIC HAS LEFT THE SOIL COMPACTED; THE AREA MUST BE TILLED AND FIRMED AS ABOVE.
 - WHERE THE SOIL HAS BEEN COMPACTED BY CONSTRUCTION OPERATIONS, LOOSEN SOIL TO A DEPTH OF 2 INCHES BEFORE APPLYING FERTILIZER, LIME AND SEED.
 - APPLY FERTILIZER AT A RATE OF 600 LBS PER ACRE OF 10-10-10. APPLY LIME (EQUIVALENT TO 50 PERCENT CALCIUM PLUS MAGNESIUM OXIDE) AT A RATE OF 3 TONS PER ACRE.
- C. SEEDING
 - UNLESS OTHERWISE NOTED, GRASS SEED MIXTURE 'C' SHALL BE APPLIED AT THE SPECIFIED RATE AS NOTED IN THE 'SEED MIXTURES FOR PERMANENT VEGETATION' TABLE.
 - APPLY SEED UNIFORMLY BY HAND, CYCLONE SEEDER, DRILL, CULTIPACKER TYPE SEEDER OR HYDROSEEDER (SLURRY INCLUDING SEED AND FERTILIZER). NORMAL SEEDING DEPTH IS FROM 1/4 TO 1/2 INCH. HYDROSEEDING THAT INCLUDES MULCH MAY BE LEFT ON SOIL SURFACE. SEEDING OPERATIONS SHOULD BE ON THE CONTOUR.
 - WHERE FEASIBLE, EXCEPT WHERE EITHER A CULTIPACKER TYPE SEEDER OR HYDROSEEDER IS USED, THE SEEDBED SHOULD BE FIRMED FOLLOWING SEEDING OPERATIONS WITH A ROLLER, OR LIGHT DRAG.
 - WHEN HYDROSEEDING (HYDRAULIC APPLICATION), PREPARE THE SEEDBED AS SPECIFIED ABOVE OR BY HANDING TO LOOSEN AND SMOOTH THE SOIL AND TO REMOVE SURFACE STONES LARGER THAN 2 INCHES IN DIAMETER.
 - SLOPES MUST BE NO STEEPER THAN 2 TO 1.
 - LIME AND FERTILIZER MAY BE APPLIED SIMULTANEOUSLY WITH THE SEED. THE USE OF FIBER MULCH ON CRITICAL AREAS IS NOT RECOMMENDED (UNLESS IT IS USED TO HOLD STRAW OR HAY). BETTER PROTECTION IS GAINED BY USING STRAW MULCH AND HOLDING IT WITH ADHESIVE MATERIALS OR 500 POUNDS PER ACRE OF WOOD FIBER MULCH.
 - SEEDING RATES MUST BE INCREASED 10% WHEN HYDROSEEDING.
 - TEMPORARY SEEDING SHALL OCCUR PRIOR TO SEPTEMBER 15TH IN THE YEAR IN WHICH THE AREA BEING SEEDING WAS DISTURBED.
 - AREAS SEEDING BETWEEN MAY 15TH AND AUGUST 15TH SHALL BE COVERED WITH HAY OR STRAW MULCH MEETING THE FOLLOWING CRITERIA:
 - HAY AND STRAW MULCHES SHALL BE ANCHORED WITH MULCH NETTING OR TACKIFIER SO THAT THEY ARE NOT BLOWN AWAY BY WIND OR WASHED AWAY BY FLOWING WATER;
 - MULCH MATERIALS SHALL BE SELECTED BASED UPON SOILS, SLOPE, FLOW CONDITIONS, AND TIME OF YEAR;
 - HAY OR STRAW MULCH SHALL BE APPLIED AT A RATE OF 1.5 TO 2 TONS PER ACRE, EQUIVALENT TO 70 TO 90 POUNDS PER 1,000 SQUARE FEET;
 - IF VEGETATED GROWTH COVERING AT LEAST 85% OF THE DISTURBED AREA IS NOT ACHIEVED PRIOR TO OCTOBER 15TH, ONE OR MORE ADDITIONAL EROSION CONTROL METHODS SHALL BE IMPLEMENTED.
 - D. MAINTENANCE
 - PERMANENTLY SEEDING AREAS SHOULD BE INSPECTED MONTHLY.
 - MOW SEEDING AREAS AS NECESSARY.
 - BASED ON INSPECTION, AREAS SHOULD BE REPAIRED AND/OR RESEEDED TO ENSURE 85% OF THE SOIL SURFACE IS COVERED BY VEGETATION.

MULCHING & EROSION CONTROL MATTING

- A. GENERAL
 - APPLY PRIOR TO A STORM EVENT. CLOSELY MONITOR THE WEATHER TO HAVE ADEQUATE WARNING OF SIGNIFICANT STORMS.
 - MULCHING WITHIN A SPECIFIED TIME PERIOD FROM ORIGINAL SOIL EXPOSURE
 - WITHIN 100 FEET OF WETLANDS THE TIME PERIOD SHOULD BE NO GREATER THAN 7 DAYS.
 - IN OTHER AREAS IT SHALL BE NO GREATER THAN 14 DAYS.
 - MULCH MATERIALS SHALL BE SELECTED BASED UPON SOILS, FLOW CONDITIONS, AND TIME OF YEAR.
- B. TEMPORARY MULCHING
 - HAY OR STRAW MULCHES
 - ORGANIC MULCHES INCLUDING HAY AND STRAW SHALL BE AIR-DRIED, FREE OF UNDESIRABLE SEEDS AND COARSE MATERIALS.
 - APPLICATION RATE SHALL BE 2 BALES/1,000 SF (70-90 POUNDS) OR 1.5-2.0 TONS/ACRE TO COVER 75-90% OF THE GROUND.
 - ANCHORING SHALL BE ONE OF THE FOLLOWING
 - NETTING SHALL BE JUTE, WOOD FIBER, OR BIODEGRADABLE PLASTIC NETTING INSTALLED PER MANUFACTURER'S SPECIFICATIONS.
 - TACKIFIER: APPLY POLYMER OR ORGANIC TACKIFIER TO ANCHOR HAY OR STRAW MULCH. APPLY PER MANUFACTURER'S SPECIFICATIONS. TYPICAL APPLICATION RATES ARE 40-60 LBS/ACRE FOR POLYMER MATERIAL AND 80-120 LBS/ACRE FOR ORGANIC LIQUID.
 - WINTER APPLICATION: APPLY TO A DEPTH OF 4 INCHES OR DOUBLE THE ABOVE LISTED APPLICATION RATE. NOTE THAT IF SEEDING IS NECESSARY, MULCH WILL NEED TO BE REMOVED AND THE AREA SEEDING AND MULCHED IN THE SPRING.
 - MAINTENANCE
 - INSPECT PERIODICALLY AND AFTER RAIN STORMS FOR RILLS OR DISPLACEMENT OF MULCH. REPAIR AS NECESSARY. CONTINUE INSPECTIONS UNTIL 85% VEGETATIVE COVER IS ESTABLISHED.
- EROSION CONTROL BLANKET OR MATTING
 - REFER TO PLANS FOR TYPICAL EROSION CONTROL MATTING DETAIL. INSTALL PER MANUFACTURER'S SPECIFICATIONS.
 - APPLICATION AND TIMING
 - DURING THE GROWING SEASON (APRIL 15 - SEPTEMBER 15) USE ON THE BASE OF GRASSED WATERWAYS, STEEP SLOPES (15% OR GREATER), ANY DISTURBED SOIL WITHIN 100 FEET OF LAKES, STREAMS, AND WETLANDS.
 - DURING THE LATE FALL AND WINTER (SEPTEMBER 15 - APRIL 15) IN ADDITION TO THOSE LISTED ABOVE USE ON SIDE SLOPES OF GRASSED WATERWAYS AND MODERATE SLOPES (GREATER THAN 8%).
- MAINTENANCE
 - INSPECT PERIODICALLY AND BEFORE AND AFTER STORM EVENTS TO ENSURE CONTACT WITH THE SOIL UNTIL 85% VEGETATIVE COVER IS ESTABLISHED. REPAIR AND RESTAPLE AS NECESSARY.
- C. PERMANENT MULCHING
 - WOOD CHIPS OR GROUND BARK
 - APPLY TO A THICKNESS OF 2 TO 6 INCHES. APPLICATION RATES ARE 10-20 TONS/ACRE OR 460-920 POUNDS/1,000 SF.
 - MAINTENANCE: INSPECT ANNUALLY AND AFTER RAIN EVENTS OF 2.5 INCHES OR MORE IN A 24 HOUR PERIOD. REPAIR/REPLACE AS NECESSARY.
 - EROSION CONTROL MIX
 - SHALL BE PLACED AT A THICKNESS OF 2 INCHES OR MORE FOR MULCHING.
 - COMPOSITION OF THE MIX SHALL BE AS FOLLOWS:
 - ORGANIC MATTER CONTENT SHALL BE BETWEEN 25-65% DRY WEIGHT BASIS.
 - PARTICLE SIZE BY WEIGHT SHOULD BE 100% PASSING THE 3" SCREEN, 90-100% PASSING THE 1" SCREEN, 70-100% PASSING THE 0.75 INCH SCREEN, AND 30-75% PASSING THE 0.25 INCH SCREEN.
 - THE ORGANIC PORTION SHALL BE ELONGATED AND FIBROUS SUCH AS FROM SHREDDED BARK, STUMP GRINDINGS, COMPOSTED BARK, OR EQUIVALENT MANUFACTURED PRODUCTS. IT SHALL NOT CONTAIN WOOD AND BARK CHIPS, GROUND CONSTRUCTION DEBRIS, OR REPROCESSED WOOD PRODUCTS.
 - THE MIX SHALL NOT CONTAIN SILTS, CLAYS, OR FINE SANDS.
 - SOLUBLE SALT CONTENT SHALL BE < 4.0MMHOS/CM AND A PH OF 5.0-8.0.
 - PLACEMENT OF MIX
 - PLACE BERM ALONG A LEVEL CONTOUR. BERM MUST HAVE A MINIMUM OF 12" HIGH ON THE UPHILL SIDE AND 2 FEET WIDE. UPSLOPE AREA MUST HAVE A SLOPE OF LESS THAN 5%.
 - MAINTENANCE: INSPECT PERIODICALLY AND AUGMENT AS NEEDED TO MAINTAIN INITIAL THICKNESS. REPLACE IF NO LONGER FUNCTIONING AS INTENDED.

SOIL STOCKPILES

- GENERAL
 - STOCKPILES MUST BE LOCATED 50 FEET FROM DITCHES AND CULVERT INLETS.
 - PROTECTION OF STOCKPILES
 - PROTECT SOIL AND AGGREGATE STOCKPILES WITH TEMPORARY PERIMETER SEDIMENT BARRIER SUCH AS SILT FENCE OR SILT SOCK.
 - COVER ACTIVE STOCKPILES WITH ANCHORED PROTECTIVE COVERING PRIOR TO EXPECTED STORM EVENTS.
 - INACTIVE STOCKPILES SHALL BE COVERED WITH ANCHORED TARPS OR TEMPORARILY SEEDING AND MULCHED PER THE TEMPORARY VEGETATION AND MULCHING NOTES ON THIS PAGE.
 - STOCKPILES THAT ARE A SOURCE OF DUST SHALL BE COVERED.

DUST CONTROL

- DUST SHALL BE CONTROLLED ON SITE DURING CONSTRUCTION BY IMPLEMENTING THE FOLLOWING DUST CONTROL MEASURES:
 - MULCHING AND VEGETATIVE COVER TO REDUCE DUST.
 - MECHANICAL SWEEPERS AND FINE WATER SPRAY.
 - COVER SURFACES WITH CRUSHED STONE OR COARSE GRAVEL.

SEED MIXTURE SELECTION BASED ON SOIL TYPE

USE	SEEDING MIXTURE	SOIL DRAINAGE		
		DROUGHTY	WELL DRAINED	MODERATELY WELL DRAINED
STEEP CUTS AND FILLS, BORROW AND DISPOSAL AREAS	A	FAIR	GOOD	GOOD
	B	POOR	GOOD	FAIR
	C	POOR	GOOD	EXCELLENT
	D	FAIR	EXCELLENT	EXCELLENT
WATERWAYS, EMERGENCY SPILLWAYS, AND OTHER CHANNELS WITH FLOWING WATER.	A	GOOD	GOOD	GOOD
	B	GOOD	EXCELLENT	EXCELLENT
	C	GOOD	EXCELLENT	EXCELLENT
LIGHTLY USED PARKING LOTS, ODD AREAS, UNUSED LANDS, AND LOW INTENSITY USE RECREATION SITES.	A	GOOD	GOOD	GOOD
	B	GOOD	GOOD	EXCELLENT
	C	GOOD	EXCELLENT	EXCELLENT
PLAY AREAS AND ATHLETIC FIELDS. (TOPSOIL IS ESSENTIAL FOR GOOD TURF.)	E	FAIR	EXCELLENT	EXCELLENT
	F	FAIR	EXCELLENT	EXCELLENT

NOTE: POORLY DRAINED SOILS ARE NOT DESIRABLE FOR USE AS PLAYING AREAS AND ATHLETIC FIELDS.

SEED MIXTURES FOR PERMANENT VEGETATION

MIXTURE	SPECIES	POUNDS PER ACRE	POUNDS PER 1,000 SF
A	TALL FESCUE	20	0.45
	CREeping RED FESCUE	20	0.45
	REDTOP	2	0.05
	TOTAL	42	0.95
B	TALL FESCUE	15	0.35
	CREeping RED FESCUE	10	0.25
	CROWN VETCH	15	0.35
	OR ELATIPSEA	-	-
	TOTAL	40 OR 55	0.95 OR 1.35
C	TALL FESCUE	20	0.45
	CREeping RED FESCUE	20	0.45
	BIRDFOOT TREFOLI	8	0.20
	TOTAL	48	1.10
D	TALL FESCUE	20	0.45
	ELATIPSEA	30	0.75
	TOTAL	50	1.20
E	CREeping RED FESCUE	50	1.15
	KENTUCKY BLUEGRASS	50	1.15
	TOTAL	100	2.30
F	TALL FESCUE	150	3.60

CONSTRUCTION SEQUENCING:

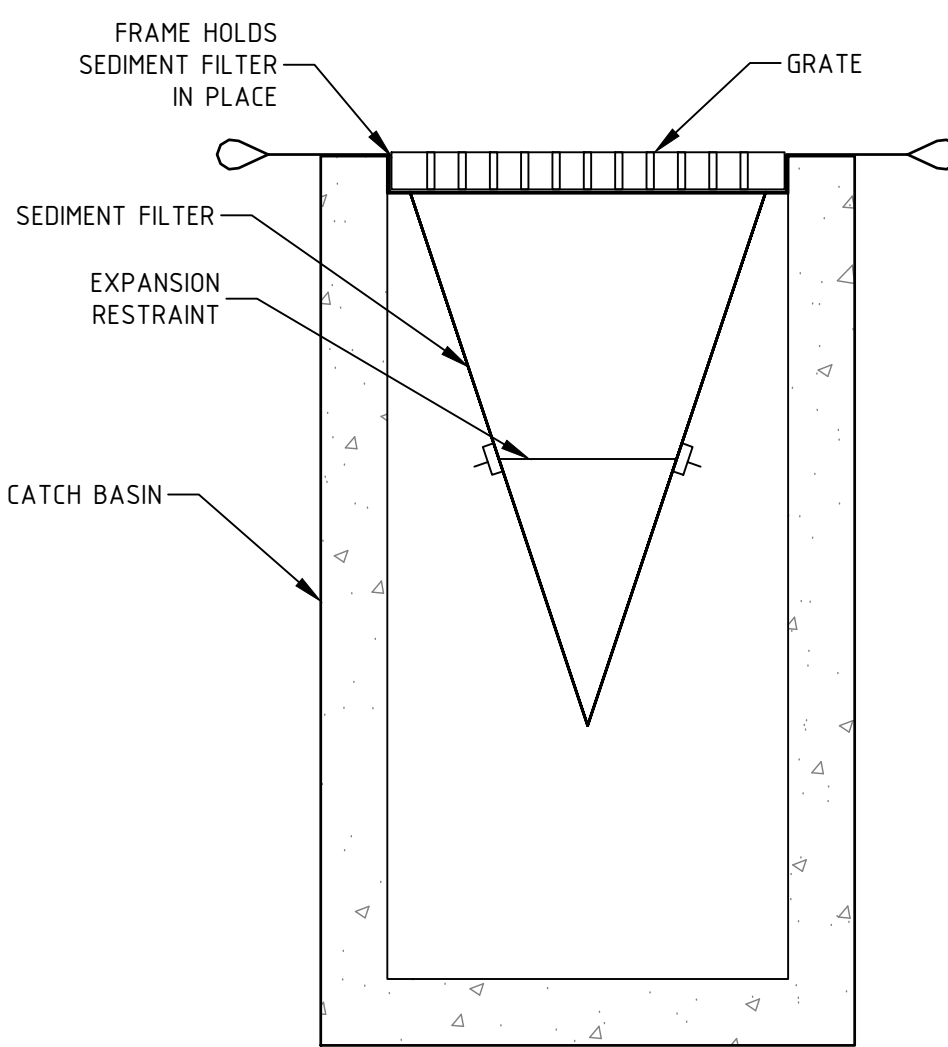
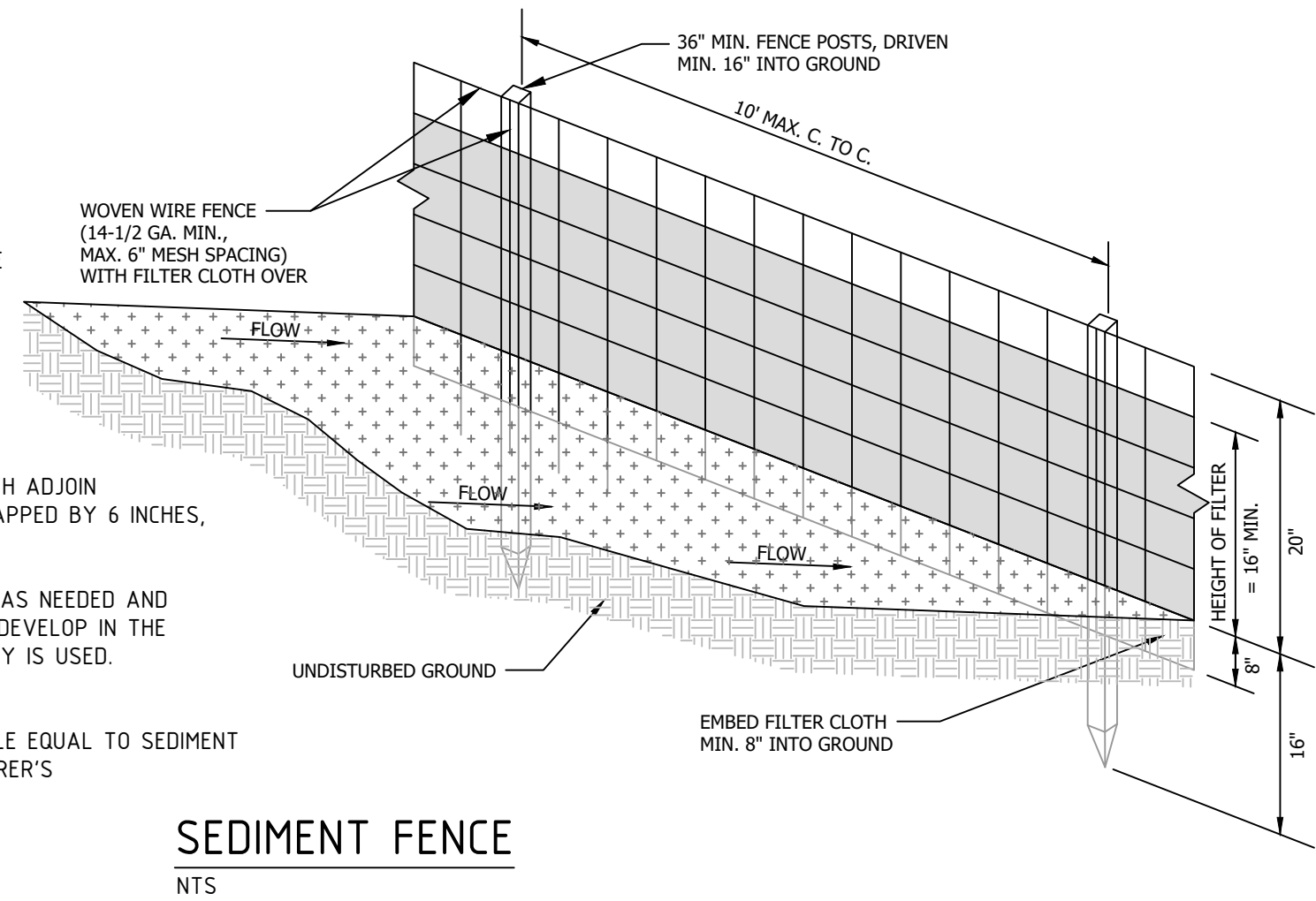
- SCHEDULE A PRE-CONSTRUCTION MEETING WITH TOWN OFFICIALS, OWNER, AND CONTRACTORS IF REQUIRED BY THE CONDITIONS OF APPROVAL PRIOR TO BEGINNING CONSTRUCTION.
- CONTACT DIG-SAFE, INDIVIDUAL UTILITIES, AND CITY DEPARTMENTS TO GET ALL UTILITIES MARKED PRIOR TO START OF CONSTRUCTION.
- INSTALL PERIMETER CONTROLS PRIOR TO ALL EARTHMOVING WORK.
- CLEAR/GRUB ONLY WITHIN THE LIMITS OF GRADING AS SHOWN ON THE PLANS. REMOVE ORGANICS ONLY FROM THOSE AREAS THAT CAN BE WORKED AND STABILIZED WITHIN 45 DAYS OF REMOVAL.
- THE PROJECT IS TO BE MANAGED IN A MANNER THAT MEETS THE REQUIREMENTS AND INTENT OF RSA 430:53 AND CHAPTER AGR 3800 RELATIVE TO INVASIVE SPECIES.
- CLEAR/GRUB
 - STUMPS MAY BE DISPOSED ON-SITE IN ACCORDANCE WITH LOCAL AND STATE REGULATIONS.
 - TEMPORARILY STABILIZE LOAM STOCKPILES WITH:
 - WINTER RYE GRASS - PRIOR TO SEPTEMBER 15TH
 - MULCH - FROM SEPTEMBER 15TH TO MAY 1ST
- CONSTRUCT AND STABILIZE ALL TEMPORARY AND PERMANENT SEDIMENT, EROSION, AND STORMWATER CONTROL FACILITIES AS LISTED ABOVE.
 - THESE SHALL BE INSTALLED BEFORE ANY MAJOR EARTH MOVING OPERATIONS.
 - RUNOFF MUST BE DIRECTED TO TEMPORARY PRACTICES UNTIL STORMWATER BMPs ARE STABILIZED. REFER TO SEDIMENT TRAP DETAIL.
 - STORMWATER PONDS, INFILTRATION BASINS, AND SWALES MUST BE STABILIZED PRIOR TO DIRECTING RUNOFF TO THEM.
 - REFER TO INDIVIDUAL DETAILS FOR CONSTRUCTION REQUIREMENTS.
- PARKING LOT CONSTRUCTION
 - CUTS AND FILLS:
 - CONSTRUCT IN LOCATIONS AND TO GRADES AS SHOWN ON THE PLANS.
 - FILLS:
 - PLACE MAXIMUM 12" LIFTS AND COMPACT TO 95% MAXIMUM DRY DENSITY.
 - ALL MATERIAL BASED ON PROCTOR TEST SHALL BE FREE OF DELETERIOUS MATERIALS SUCH AS LOAM, STUMPS, BRUSH, AND ROCKS LARGER THAN 3/4" THE DEPTH OF THE LIFT BEING PLACED.
 - LOAM AND SEED SLOPES WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
 - DRAINAGE AND UTILITY STRUCTURES
 - INSTALL AS SHOWN IN ACCORDANCE WITH DETAILS AND DRY STABILIZE.
 - BASE MATERIALS: BANK RUN AND CRUSHED GRAVEL SHALL BE PLACED IN 6" LIFTS AND COMPACTED TO 95% MAXIMUM DRY DENSITY TO THE DEPTHS SPECIFIED IN THE PARKING LOTS CROSS-SECTION DETAILS.
 - STABILIZE ALL PARKING AREAS WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
 - INSPECT, MAINTAIN, AND IF NECESSARY, REPAIR ALL EROSION AND SEDIMENT CONTROL MEASURES AS STATED IN EROSION CONTROL NOTES ON THIS SHEET.
 - REMOVE ALL TEMPORARY EROSION CONTROL MEASURES ONCE INITIAL GROWTH IS ESTABLISHED.

ADDITIONAL NOTES:

- NO FUEL SHALL BE STORED ON SITE DURING CONSTRUCTION.
- DURING CONSTRUCTION DUST SHALL BE PREVENTED FROM BECOMING A SAFETY OR HEALTH HAZARD BY THE IMPLEMENTATION OF ACCEPTED CONTROL METHODS SUCH AS WATERING.
- ALL CONSTRUCTION MATERIALS THAT ARE SPILLED OR DEPOSITED ON THE PUBLIC ROADWAYS SHALL BE REMOVED BY THE CONTRACTOR.
- DO NOT BEGIN CONSTRUCTION UNTIL ALL LOCAL, STATE, AND FEDERAL PERMITS HAVE BEEN APPLIED FOR AND RECEIVED.
- THE GENERAL CONTRACTOR IS RESPONSIBLE TO VERIFY ALL DIMENSIONS, ELEVATIONS AND CONDITIONS AT THE SITE. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE DESIGN ENGINEER BEFORE PROCEEDING WITH THE AFFECTED PART OF THE WORK.

CONSTRUCTION NOTES FOR SEDIMENT FENCE

- WOVEN WIRE FENCE, IF REQUIRED, TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES.
- WOVEN WIRE FENCE SHALL BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP, MID SECTION, AND BOTTOM.
- WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED BY 6 INCHES, FOLDED AND STAPLED.
- MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SEDIMENT FENCE, OR 50% OF CAPACITY IS USED.
- 12" DIAMETER FILTERXX SILTSOXX SHALL BE CONSIDERED AN ACCEPTABLE EQUAL TO SEDIMENT FENCE IF INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.



- NOTES:
- SEDIMENT FILTER TRAP SHALL BE ACF REGULAR FLOW SILTSACK OR APPROVED EQUAL.
 - FILTERS SHALL BE INSPECTED AFTER EVERY RAIN EVENT OF 0.25" OR GREATER AND SEDIMENTS SHALL BE REMOVED FROM TRAP WHEN SEDIMENT HAS REACHED TWO THIRDS OF THE DEPTH OF THE TRAP, OR IF PONDING OF WATER AT SURFACE BEGINS TO OCCUR. DO NOT PUNCTURE FILTER TRAP TO MITIGATE PONDING.

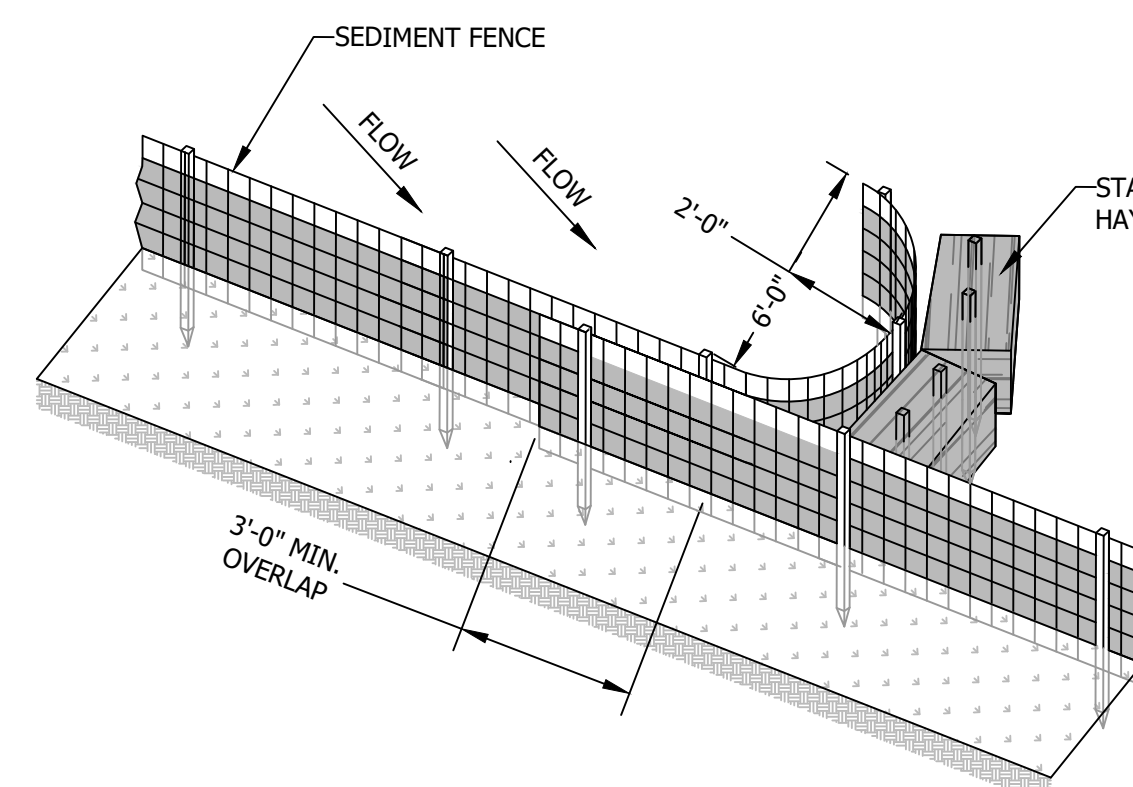
CATCH BASIN SEDIMENT FILTER DETAIL

NTS

FINAL APPROVAL BY _____
 CERTIFIED BY MICHAEL BEHRENDT, TOWN PLANNER
 CERTIFIED _____
 DATE _____

SEDIMENT FENCE

NTS



SEDIMENT FENCE POCKET

NTS

PROJECT #: 18-041
 DATE: 11/30/2021
 SCALE: AS SHOWN
 ENGINEERED BY: AWS
 DRAWN BY: AWS
 CHECKED BY: MJS

REVISION DESCRIPTION

NO.	DATE	REVISION DESCRIPTION
1.	02/02/22	REVISED SUBMISSION PER TRC COMMENTS
0.	11/30/21	INITIAL SUBMISSION FOR 2 ROW PARKING LAYOUT

ENG DWG

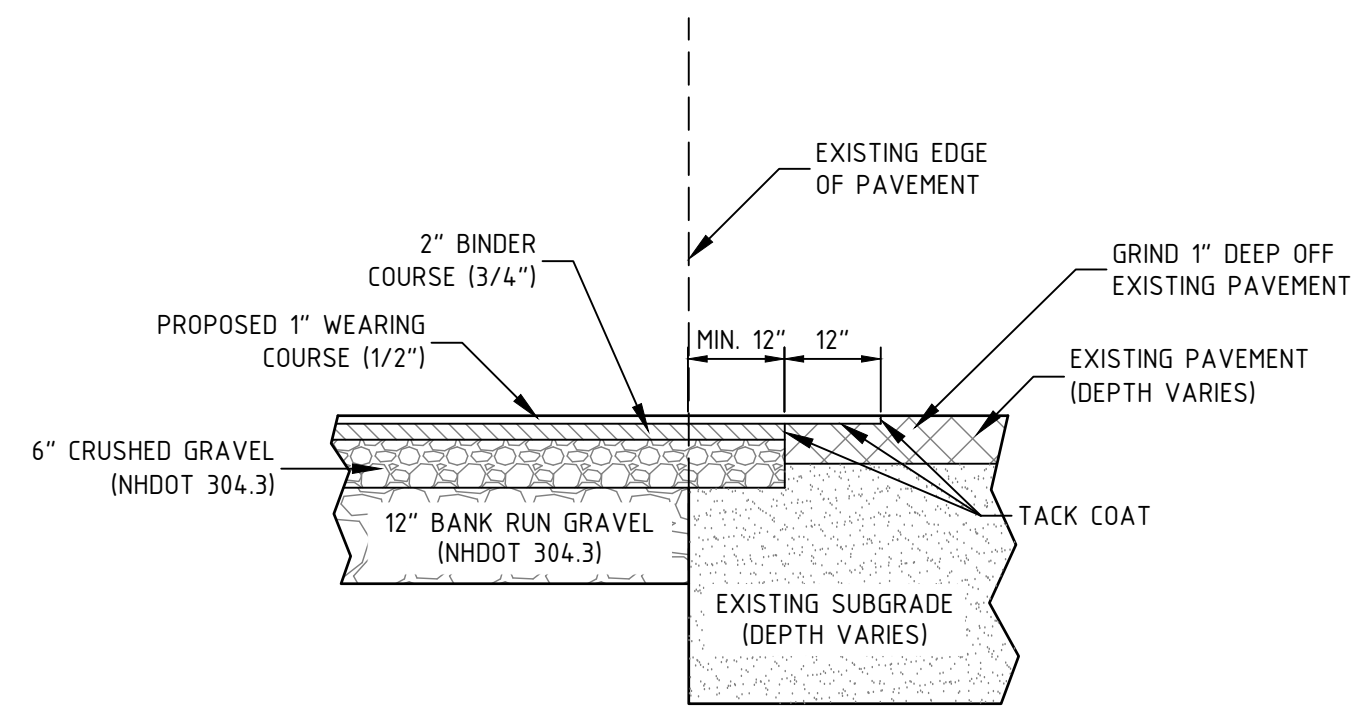
CONSTRUCTION DETAILS

PREPARED FOR
 TOOMERES, LLC
 TAX MAP 5, LOTS 1-9, 1-10, 1-11, 1-15, 1-16
 19 MAIN ST AND 21 MAIN ST, DURHAM, NH 03824

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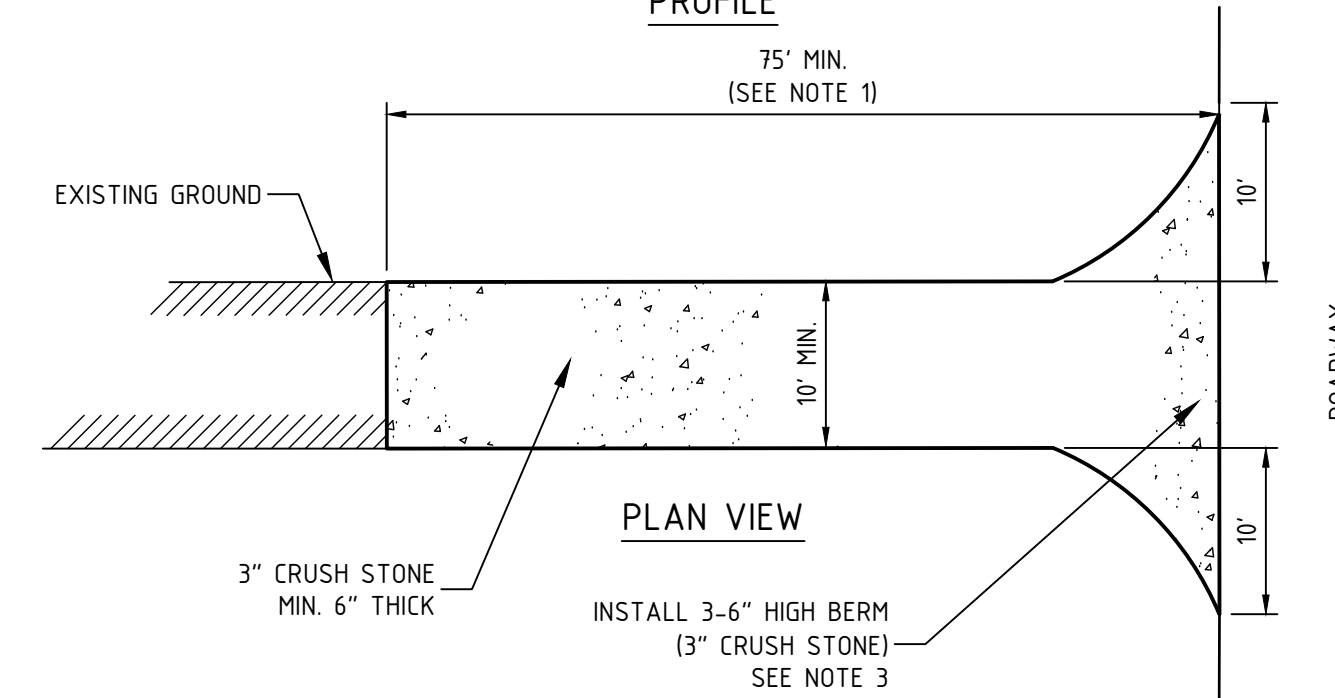
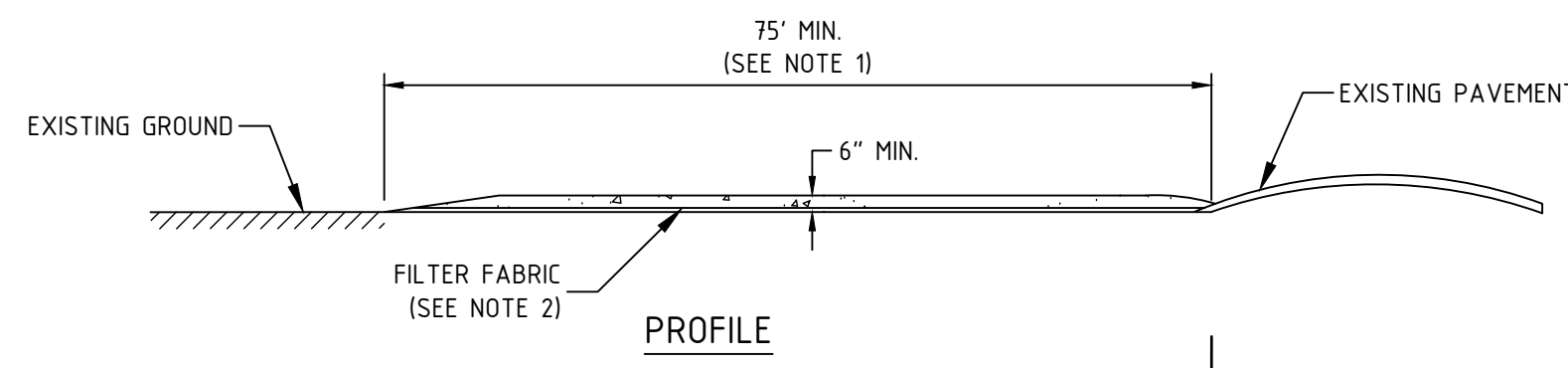
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- NOTES:
1. SAWCUT THROUGH DEPTH OF PAVEMENT AT LEAST 1 FT. FROM EDGE OR GREATER IF REQUIRED BY NHDOT.
 2. INSTALL AND COMPACT CRUSHED GRAVEL TO GRADE.
 3. PLACE BINDER COURSE.
 4. GRIND EXISTING PAVEMENT 1 FT. WIDE TO A DEPTH NECESSARY TO PROPERLY MATCH NEW WEARING COURSE PAVEMENT.
 5. TACK COAT ALL EXISTING PAVEMENT SURFACES WITH EMULSIFIED ASPHALT (MS-1) PRIOR TO PLACING NEW PAVEMENT.

TYPICAL PAVEMENT SAWCUT DETAIL

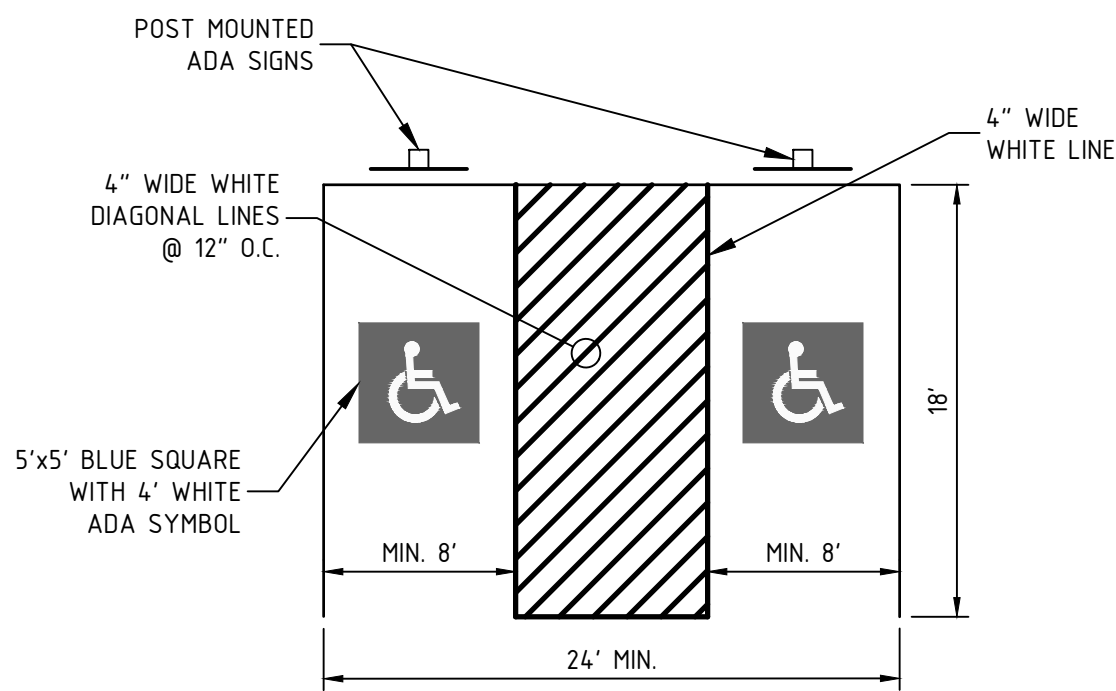
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- NOTES:
1. LENGTH OF ENTRANCE MAY BE 50' WHERE DIVERSION RIDGE IS PROVIDED.
 2. GRADE AND COMPACT ACCESS ROAD ENTRANCE AS NECESSARY. PLACE FILTER FABRIC AND 6" OF 3" CRUSHED STONE TO MATCH SLOPE OF EXISTING ROAD.
 3. PROVIDE NECESSARY SWALES OR DIVERSIONS TO MINIMIZE DIRECT FLOW OF WATER ONTO STONE AREA.
 4. CONSTRUCTION ENTRANCE SHALL BE MAINTAINED AS NECESSARY TO REMOVE SILT FROM TIRES PRIOR TO ENTERING PUBLIC ROADS. A SMALL SWALE SHALL BE CONSTRUCTED ON THE DOWN GRADIENT SIDE TO TRAP ANY SILT WASHED FROM THE STONE ENTRANCE.

STABILIZED CONSTRUCTION ENTRANCE DETAIL

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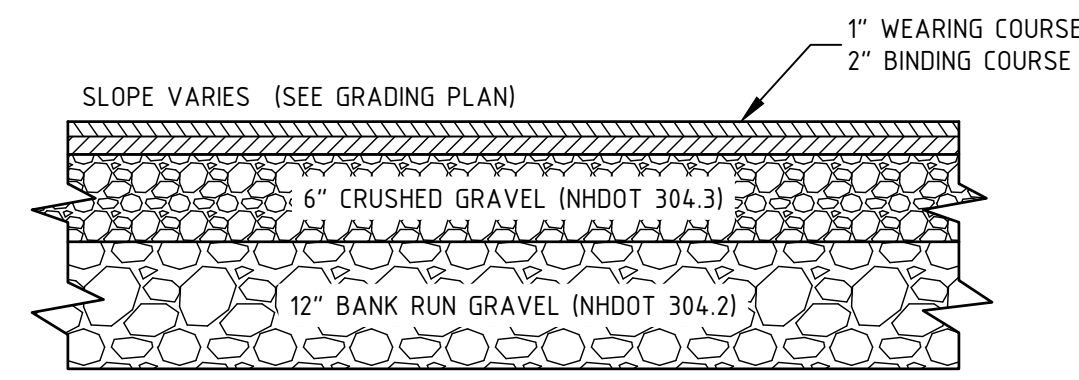
- NOTES:
1. SEE SITE PLAN FOR STRIPING LAYOUT

PAVEMENT MARKINGS:

1. STRIPE PARKING AREAS AND DRIVES AS SHOWN, INCLUDING PARKING SPACES, HANDICAP SYMBOLS, AND PAINTED ISLANDS. ALL TRAFFIC PAINT SHALL MEET THE REQUIREMENTS OF THE NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION (NHDOT) AND AASHTO M248 TYPE "F". MEDIAN ISLANDS AND CENTERLINES TO BE CONSTRUCTED USING YELLOW TRAFFIC PAINT.
2. ALL PAVEMENT MARKINGS AND SIGNS SHALL CONFORM TO THE LATEST EDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", THE "STANDARD ALPHABETS FOR HIGHWAY SIGN AND PAVEMENT MARKINGS", AND THE AMERICANS WITH DISABILITIES ACT REQUIREMENTS.
3. PAINTED ISLANDS SHALL BE 4 INCH WIDE DIAGONAL LINES SPACED AT 3 FT. O.C. BORDERED BY 4 INCH WIDE LINES.
4. MAXIMUM SLOPE OF ADA PARKING IS 2%

ADA STRIPING AND SIGN DETAIL

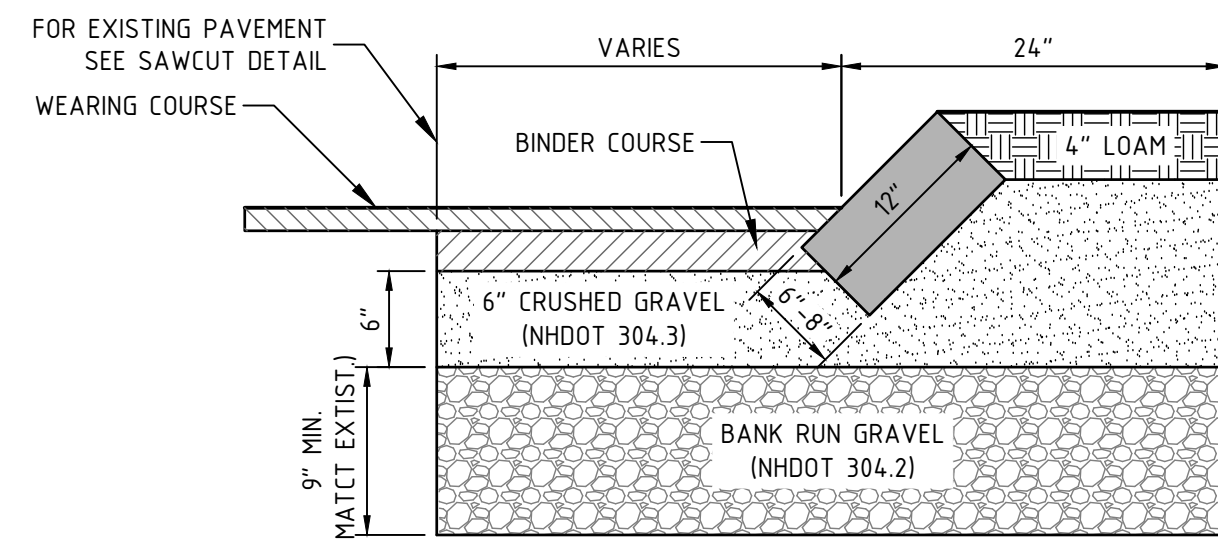
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- NOTES:
1. DELETERIOUS MATERIALS ENCOUNTERED BELOW PARKING AREA SHALL BE COMPLETELY REMOVED.
 2. COMPACT SUBGRADE TO 95% OF STANDARD PROCTOR.

PAVED PARKING LOT CROSS-SECTION

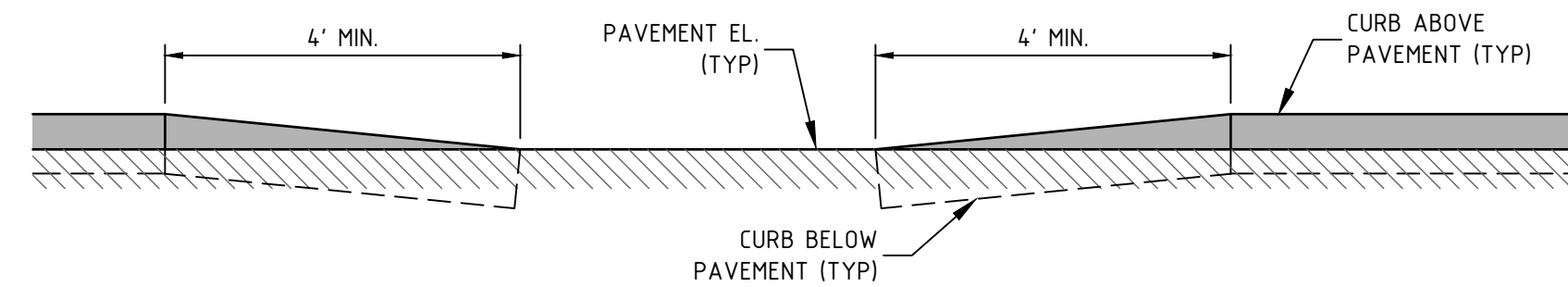
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- NOTES:
1. REMOVE LOAM TO A MINIMUM DEPTH OF 8" BELOW SELECT MATERIALS.
 2. COMPACT BASE, SUBBASE, AND SUBGRADE TO 95% OF STANDARD PROCTOR.
 3. SEE PLAN FOR LOCATION

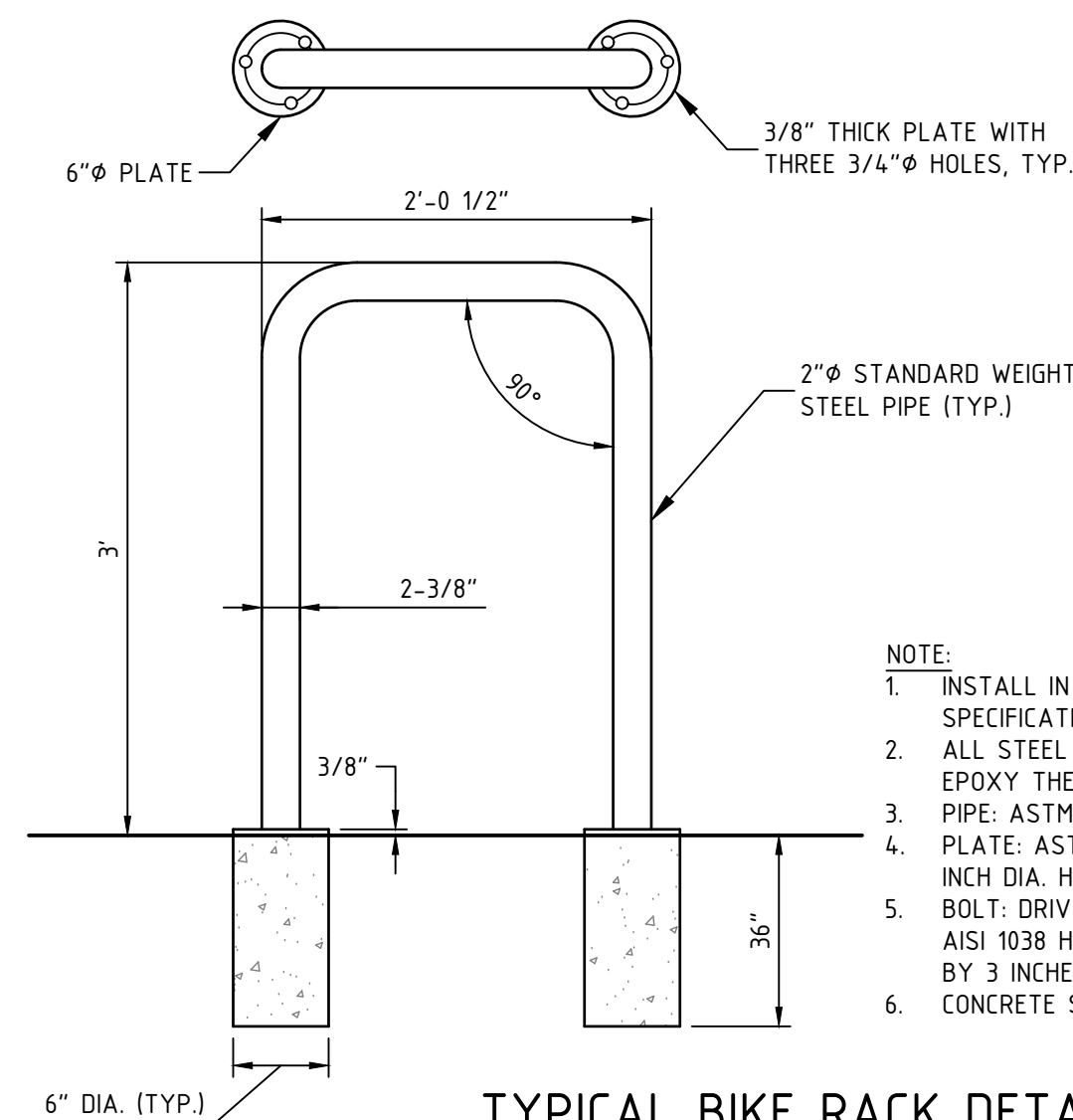
TYPICAL SLOPED GRANITE CURB

NTS



TYPICAL GRANITE CURB TIP DOWN

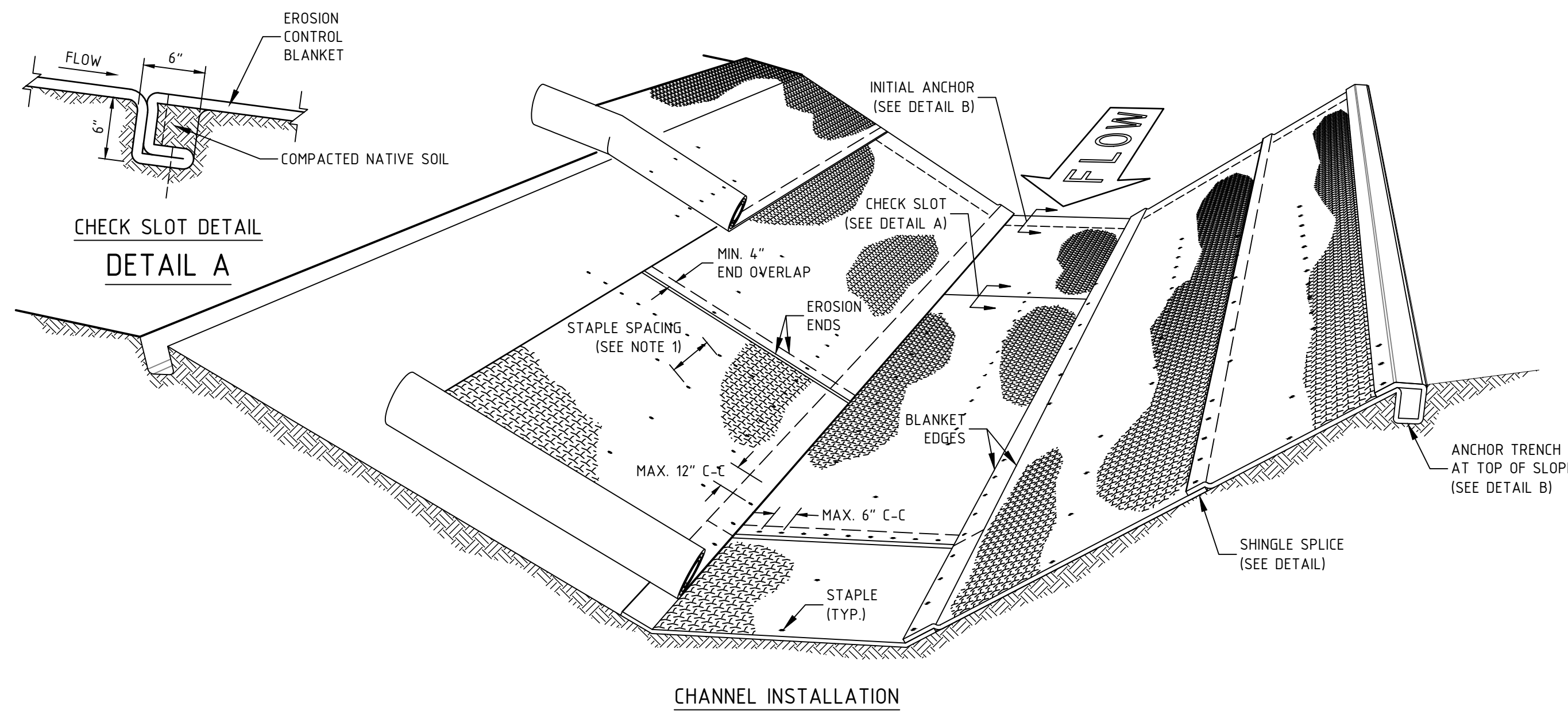
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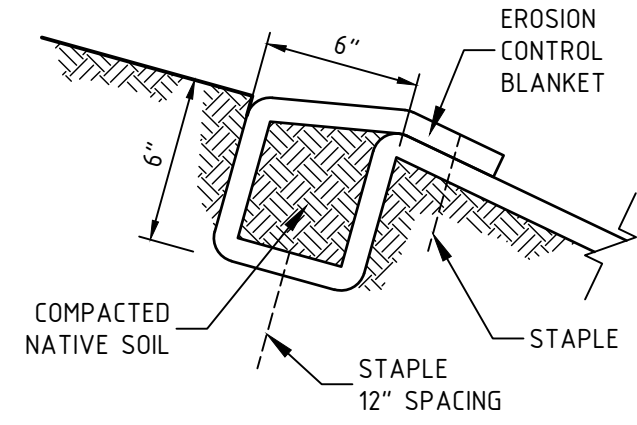
- NOTE:
1. INSTALL IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS
 2. ALL STEEL MEMBERS SHALL BE COATED W/ ZINC RICH EPOXY THEN FINISHED W/ POLYESTER POWDER COATING.
 3. PIPE: ASTM A53 GRADE B STANDARD WEIGHT STEEL PIPE
 4. PLATE: ASTM 136 3/8 INCH THICK PLATE WITH THREE 3/4 INCH DIA. HOLES AT 120 DEGREE SPACING.
 5. BOLT: DRIVE TYPE ANCHOR BOLT MADE OF ZINC PLATED AISI 1038 HEAT TREATED CARBON STEEL, 1/2 INCH DIA. BY 3 INCHES LONG.
 6. CONCRETE STRENGTH TO BE 3,000 PSI AT 28 DAYS.

TYPICAL BIKE RACK DETAIL

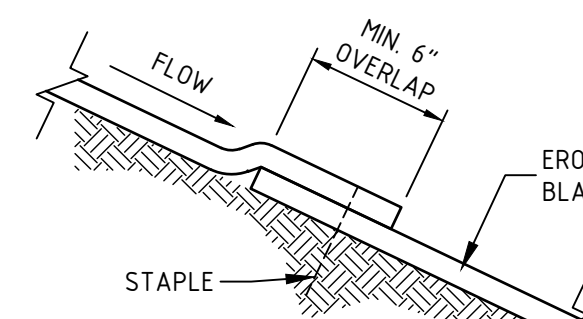
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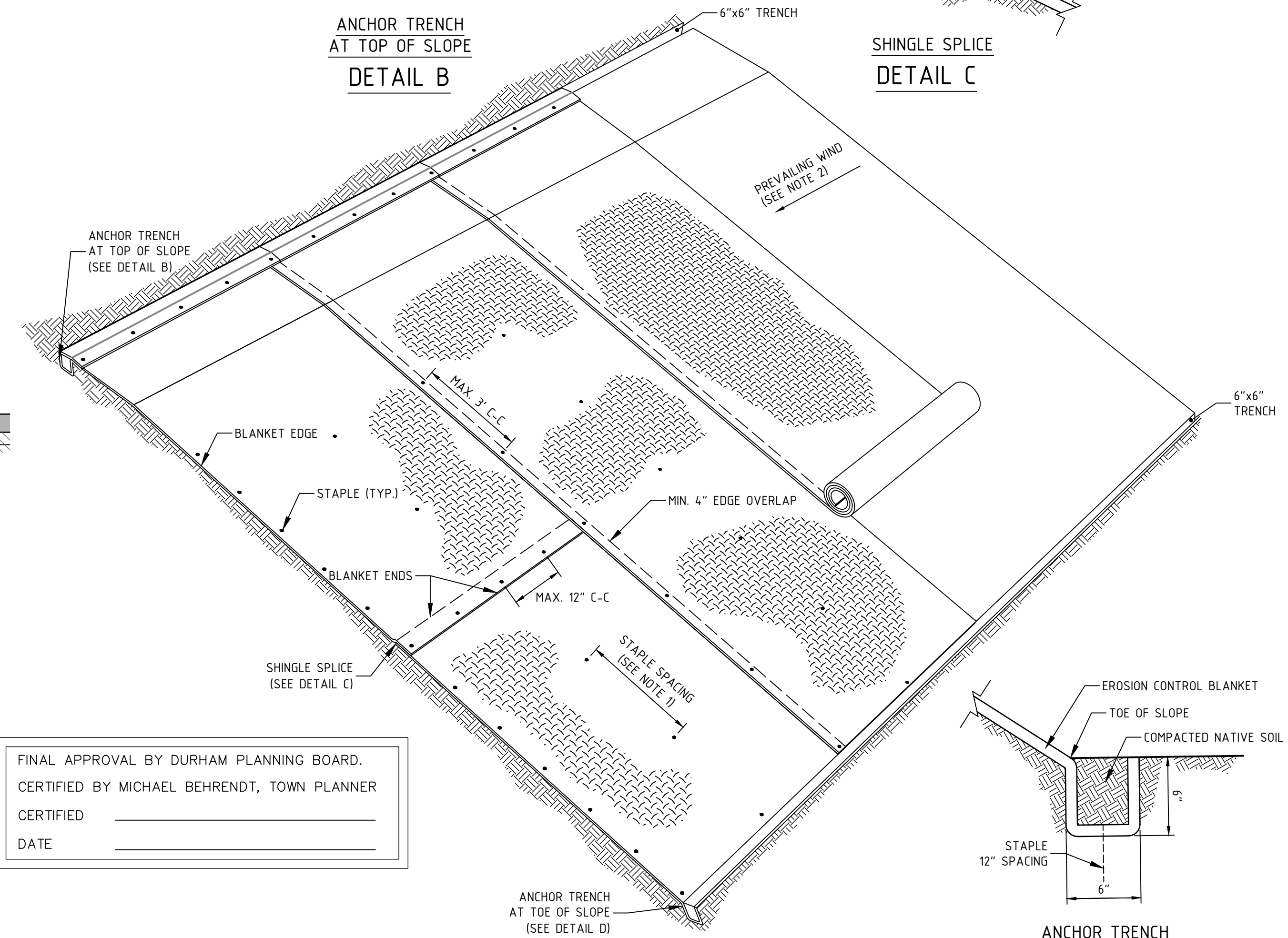
CHANNEL INSTALLATION



ANCHOR TRENCH AT TOP OF SLOPE DETAIL B

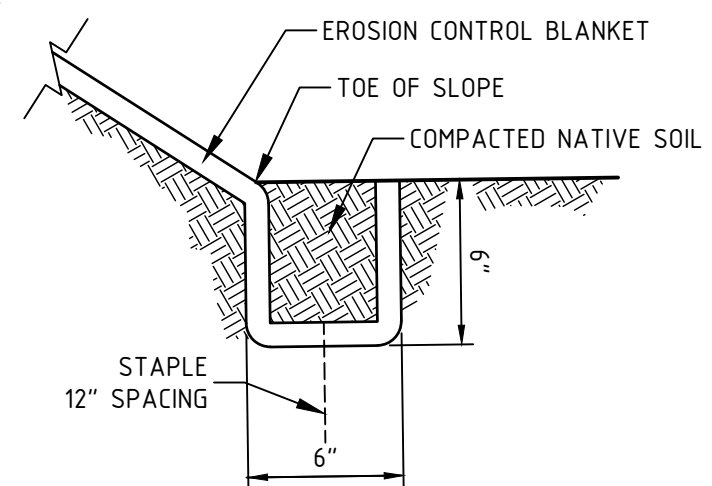


SHINGLE SPICE DETAIL C



ROLLED EROSION CONTROL DETAIL

NTS



ANCHOR TRENCH AT TOE OF SLOPE DETAIL D

- NOTES:
1. INSTALL STAPLES ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.
 2. OVERLAP IN THE DIRECTION OF THE PREVAILING WIND.
 3. INSTALL STAPLES ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.
 4. PROVIDE CHECK SLOTS ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.
 5. ROLL ENDS MAY BE SPLICED IN A CHECK SLOT.
 6. TRAPEZOIDAL DITCH SHOWN. SIMILAR DETAILS FOR A V-DITCH.

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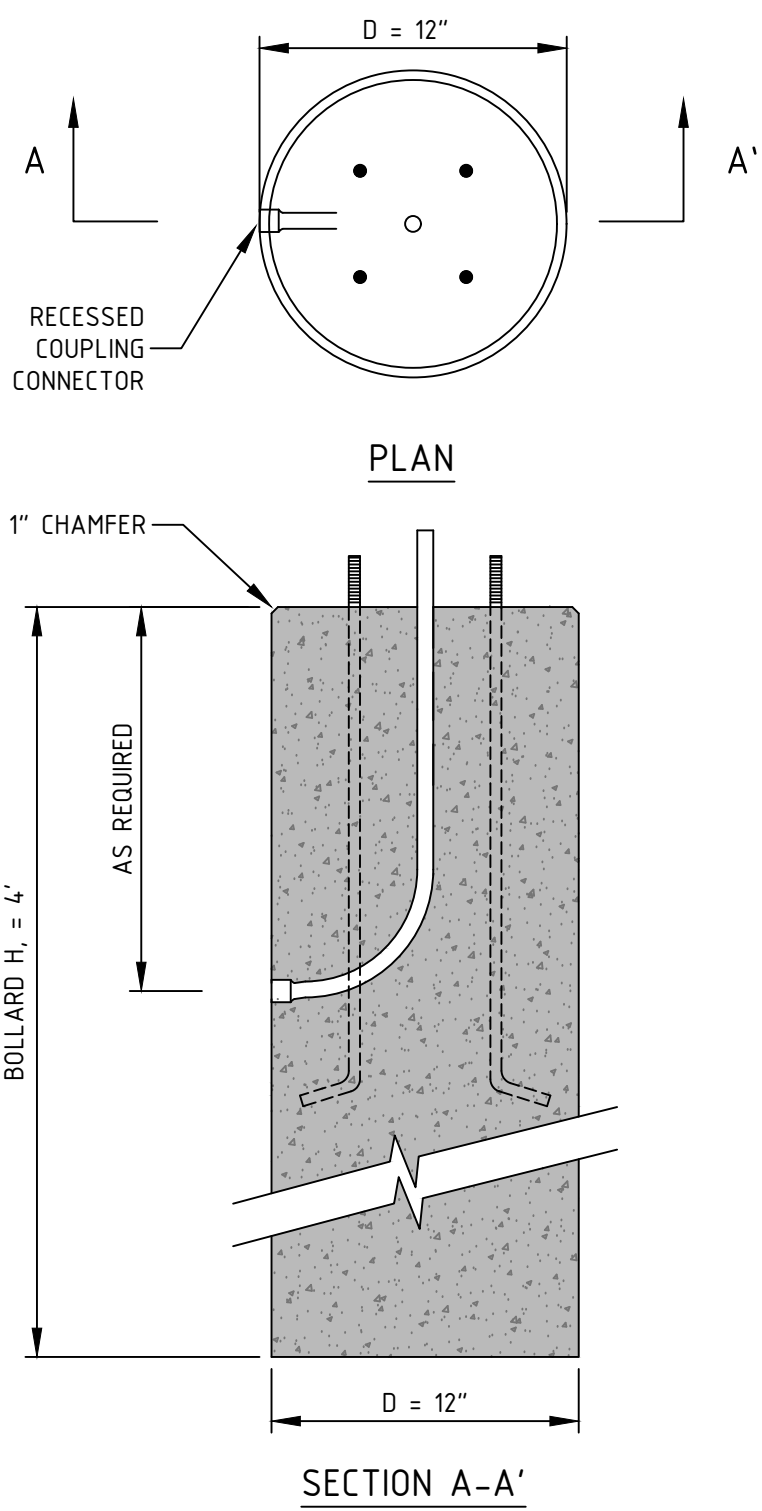
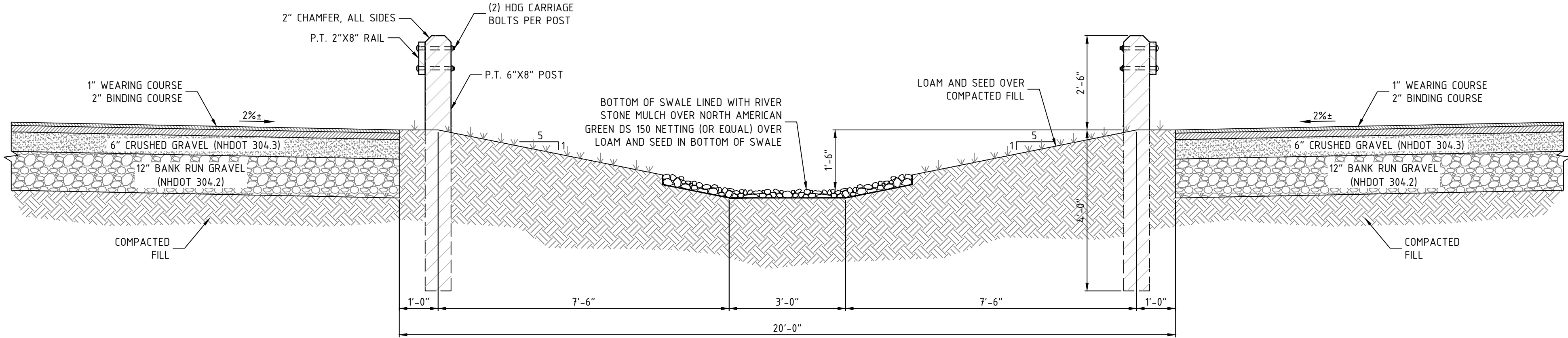
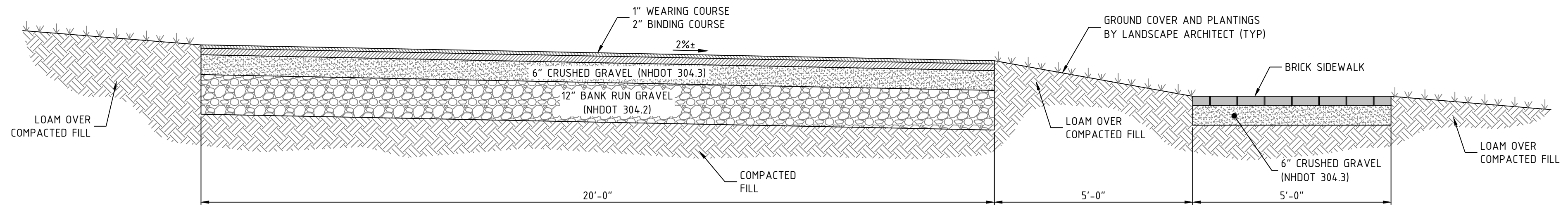
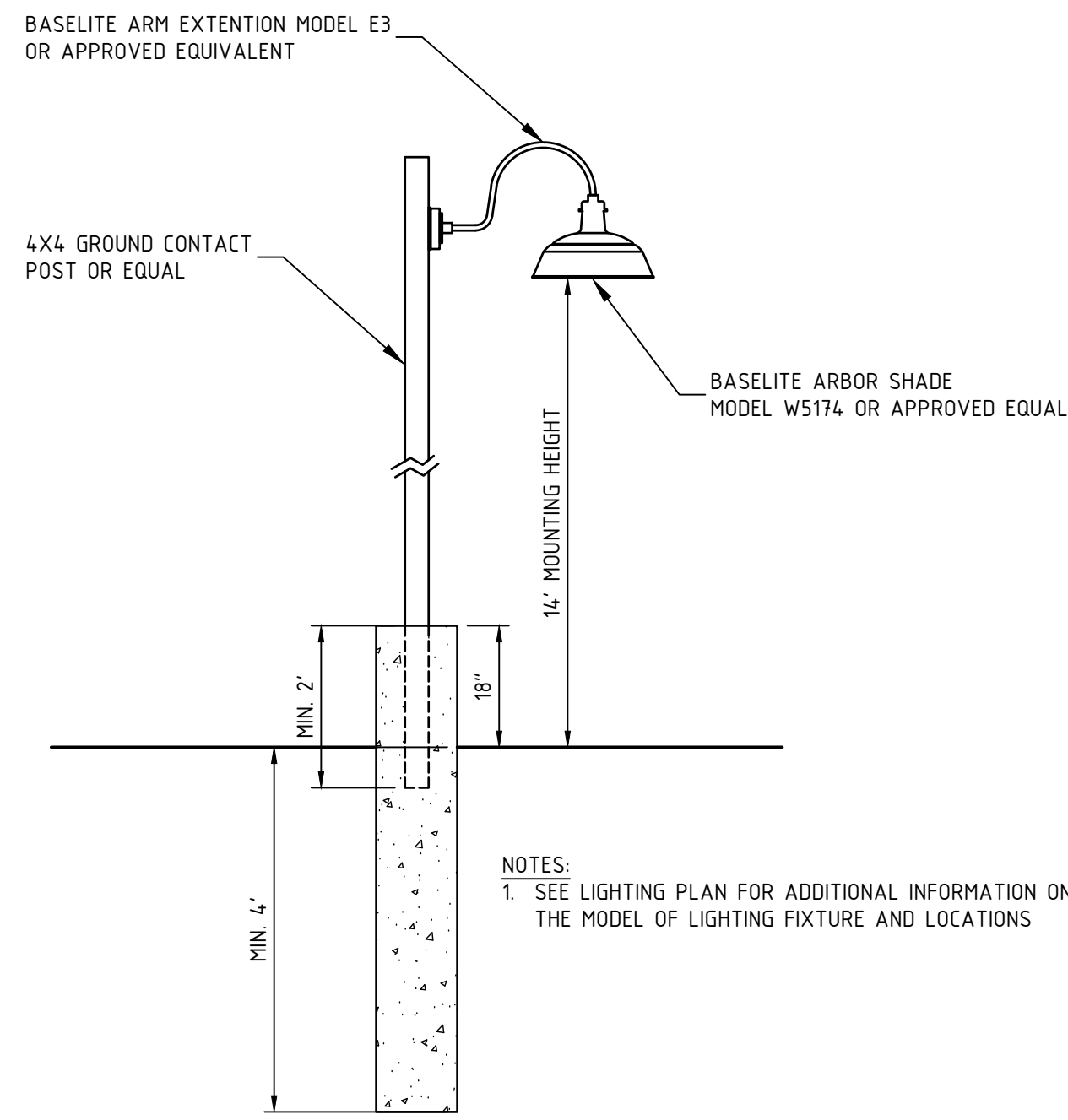
NO.	DATE	REVISION DESCRIPTION	ENG	DWG
1.	02/02/22	REVISED SUBMISSION PER TRC COMMENTS	MCS	
0.	11/30/21	INITIAL SUBMISSION FOR 2 ROW PARKING LAYOUT	AMS	

PROJECT #:	18-041
DATE:	11/30/2021
SCALE:	AS SHOWN
ENGINEERED BY:	AMS
DRAWN BY:	AMS
CHECKED BY:	MJS

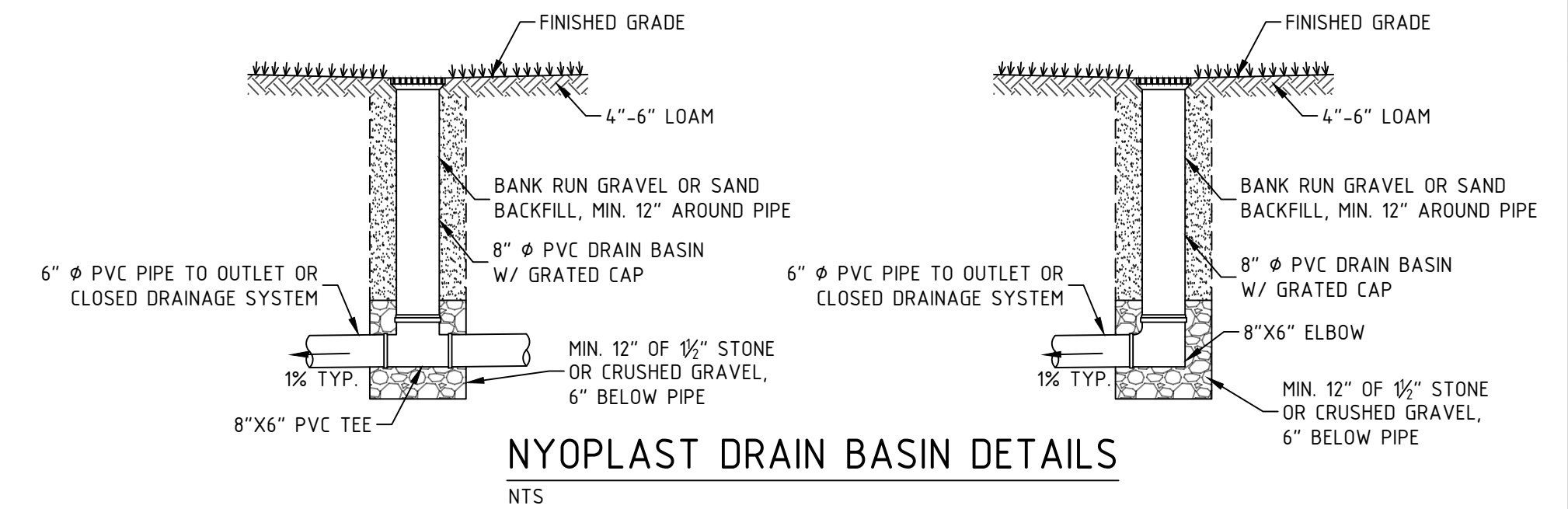
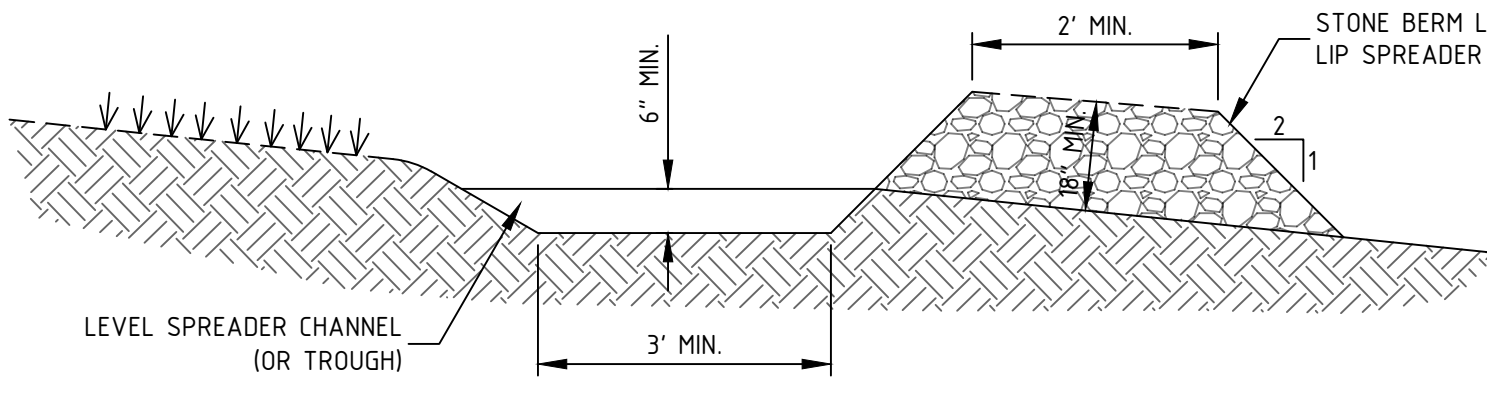
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CONSTRUCTION DETAILS
PREPARED FOR
TOOMERES, LLC
TAX MAP 5, LOTS 1-9, 1-10, 1-15, 1-16
19 MAIN ST AND 21 MAIN ST, DURHAM, NH 03824

C502

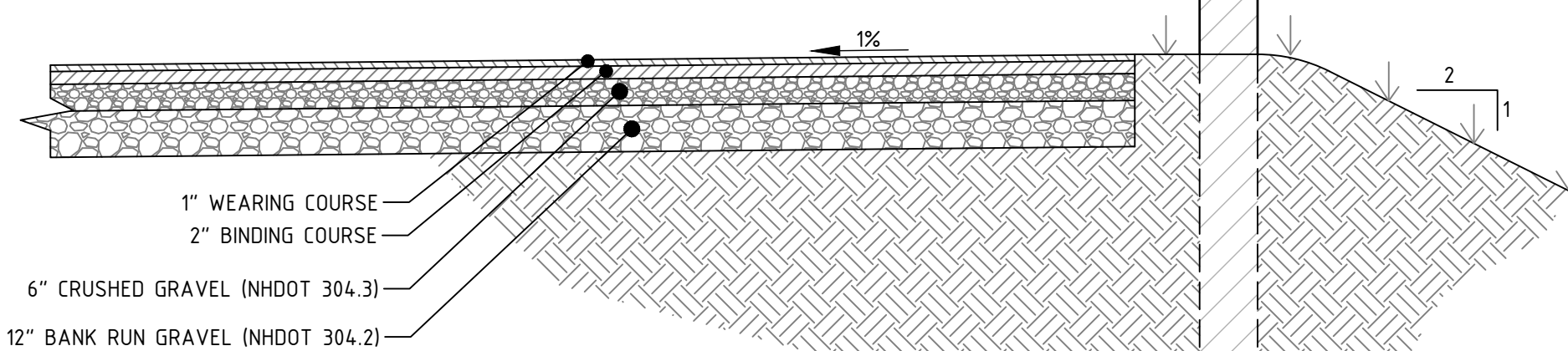


PARKING LOT LIGHT, H = 5'
 BOLLARD H = 4'

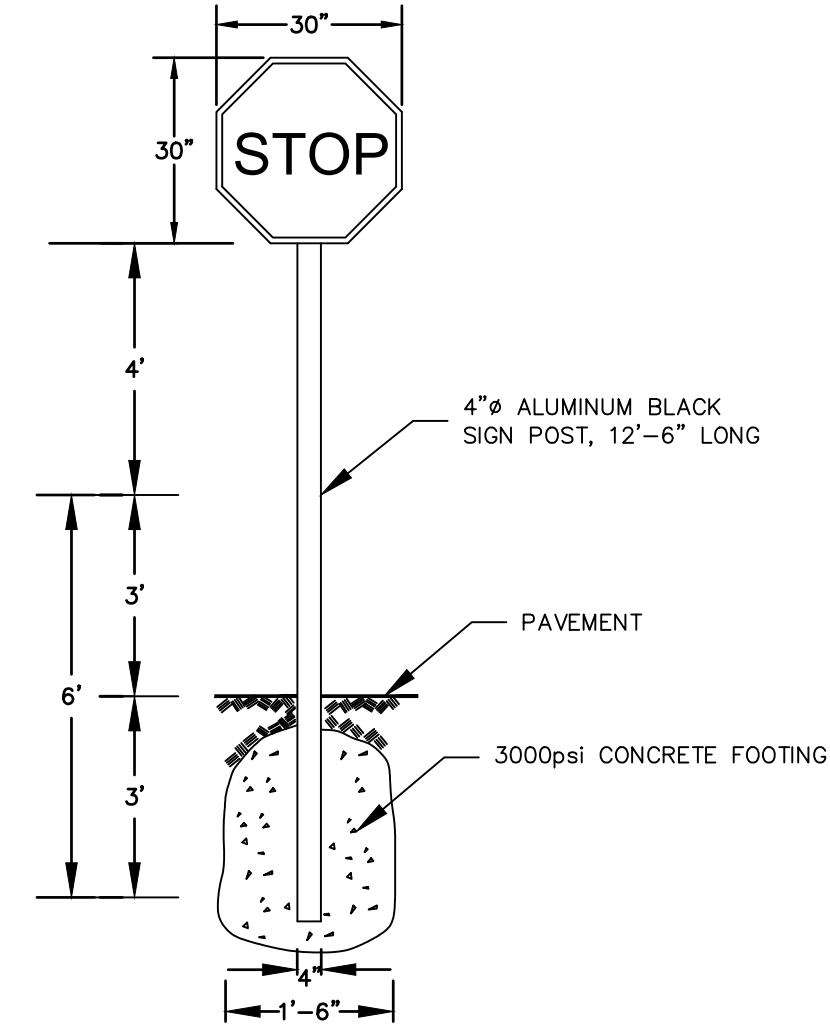


- NOTES:
 1. CONCRETE MINIMUM 5,000 PSI AFTER 28 DAYS.
 2. CONDUIT, ANCHOR BOLTS AND TEMPLATE SUPPLIED BY OTHERS.
 3. LIGHT POLE BASE SIZE IS TO BE SPECIFIED BY A QUALIFIED ENGINEER.
 4. TYPICAL BASE DIAMETERS 'D' INCLUDE: 12", 18", 24", AND 30".
 5. TYPICAL BASE HEIGHTS 'H' RANGE FROM 4' TO 7'.
 6. OTHER BASE SIZES AVAILABLE UPON REQUEST.
 7. BASE SHALL EXTEND 18"-24" ABOVE GRADE.

LIGHT POLE BASE DETAIL
NTS

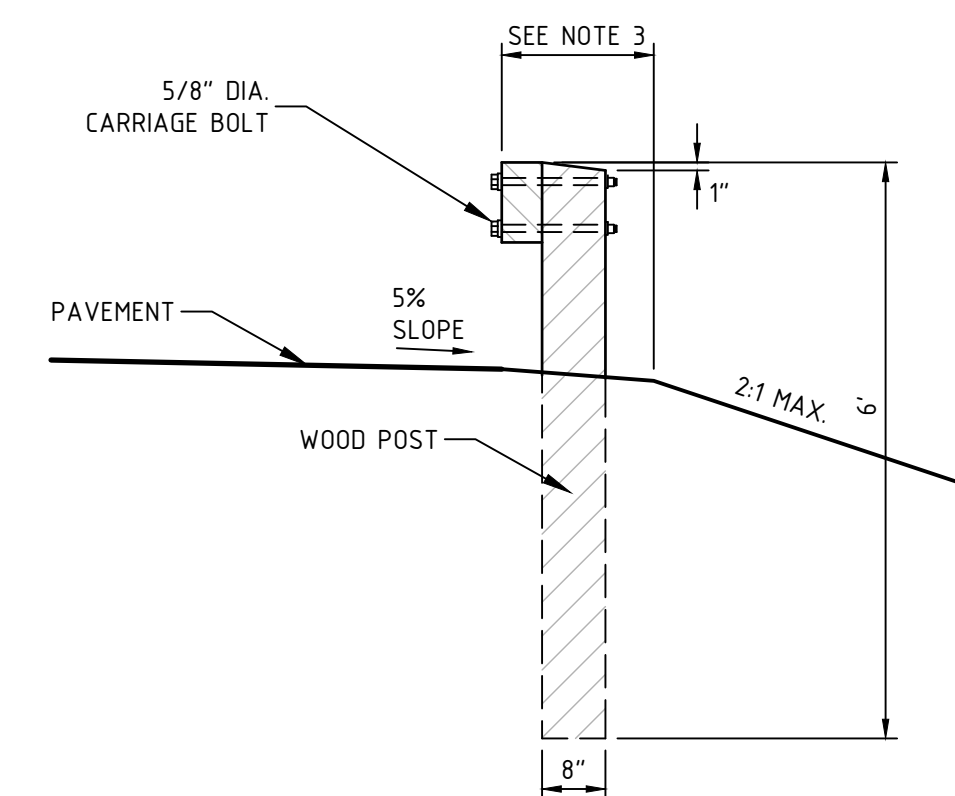
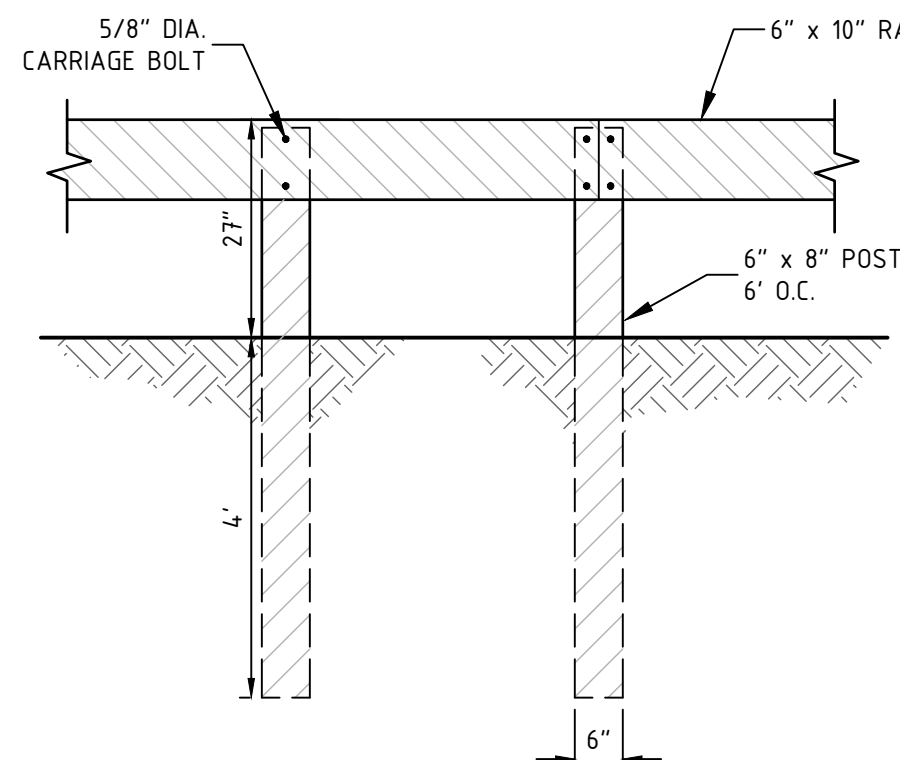


PARKING LOT END DETAIL
NTS

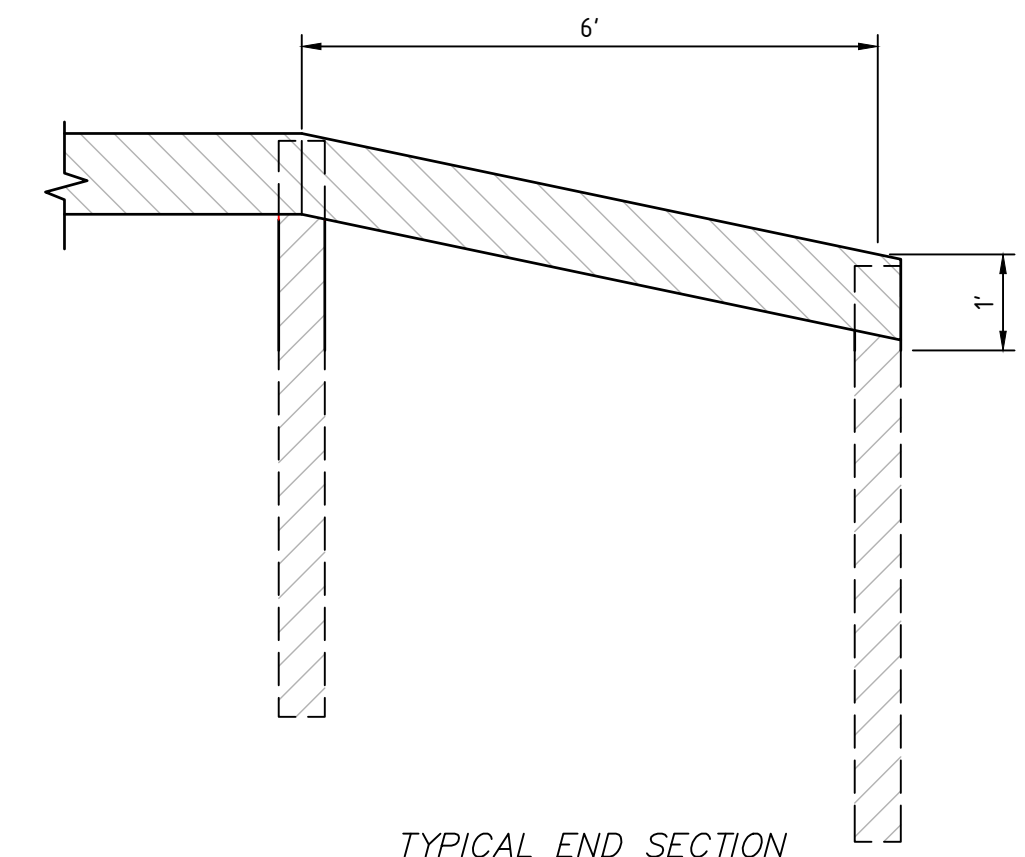


TYPICAL SIGN DETAIL
N.T.S.

- NOTES:
 1. SEE PLANS FOR SIGN PLACEMENT.



- REFERENCE:
 TIMBER BRIDGE DESIGN, CONSTRUCTION, INSPECTION, AND MAINTENANCE PUBLISHED BY THE UNITED STATES DEPARTMENT OF AGRICULTURE FOREST SERVICE.

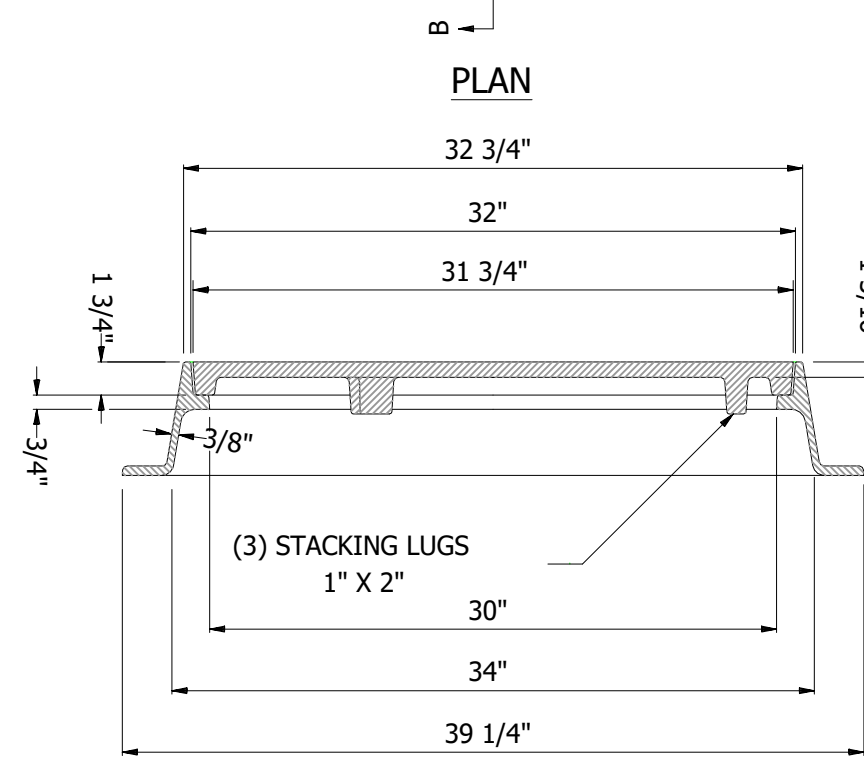
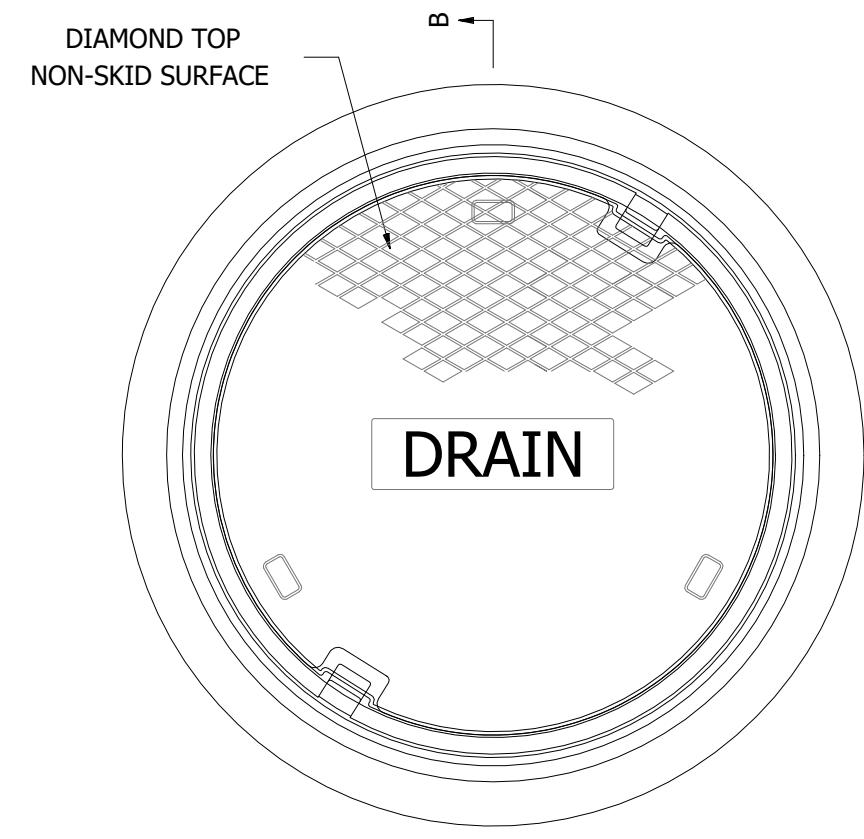


CONSTRUCTION DETAILS

PREPARED FOR
 TOOMERES, LLC
 TAX MAP 5, LOTS 1-9, 1-10, 1-15, 1-16
 19 MAIN ST AND 21 MAIN ST, DURHAM, NH 03824

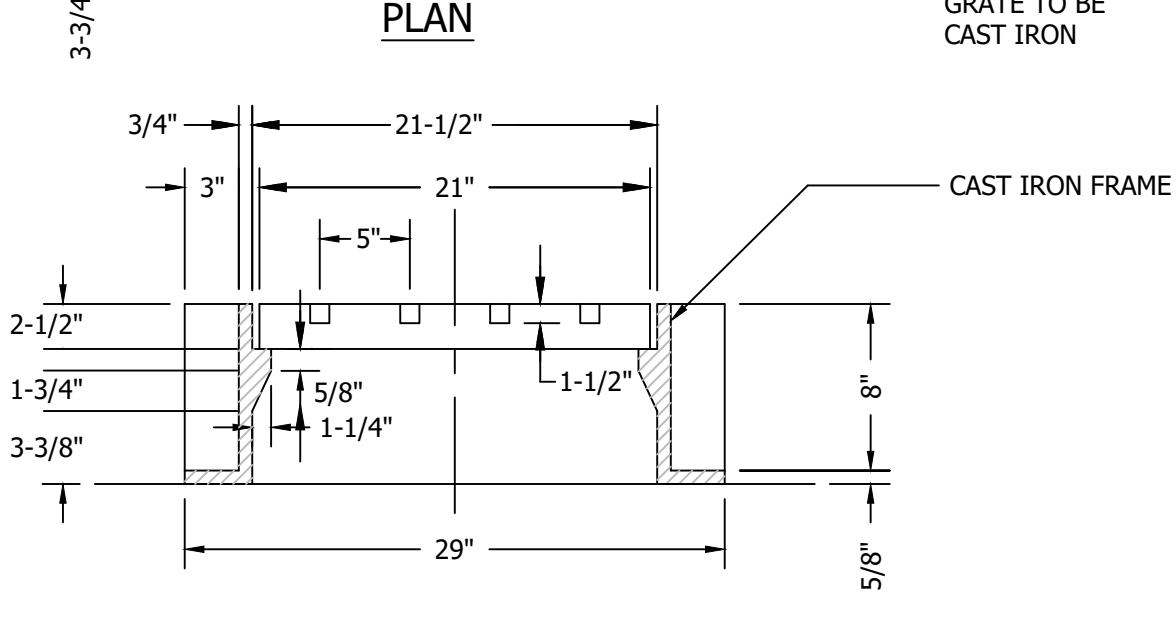
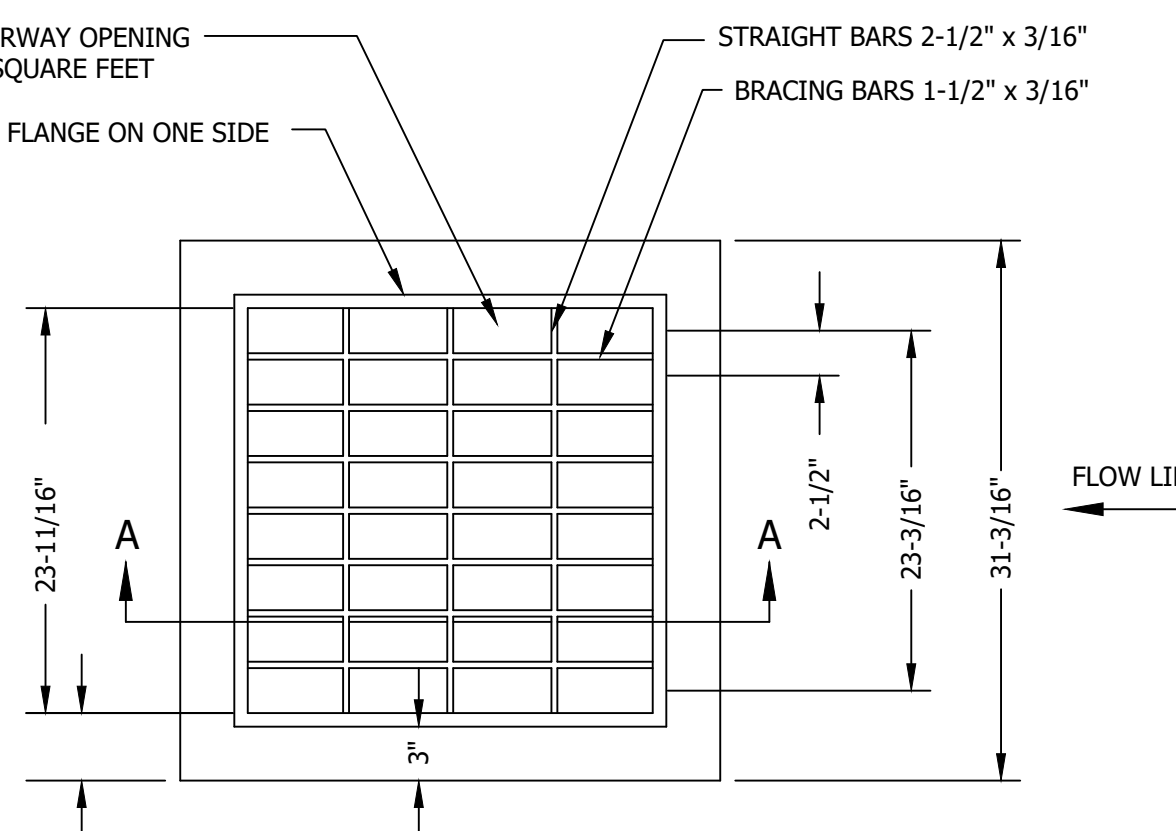
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PROJECT #:	18-041	DATE	11/30/2021	SCALE:	AS SHOWN	ENGINEERED BY:	AWS	DRAWN BY:	AWS	CHECKED BY:	MJS
NO.											
REVISION DESCRIPTION											
1.	02/02/22	REVISED SUBMISSION PER TRC COMMENTS									
0.	11/30/21	INITIAL SUBMISSION FOR 2 ROW PARKING LAYOUT									
MCS											
AWS											
ENG DWG											



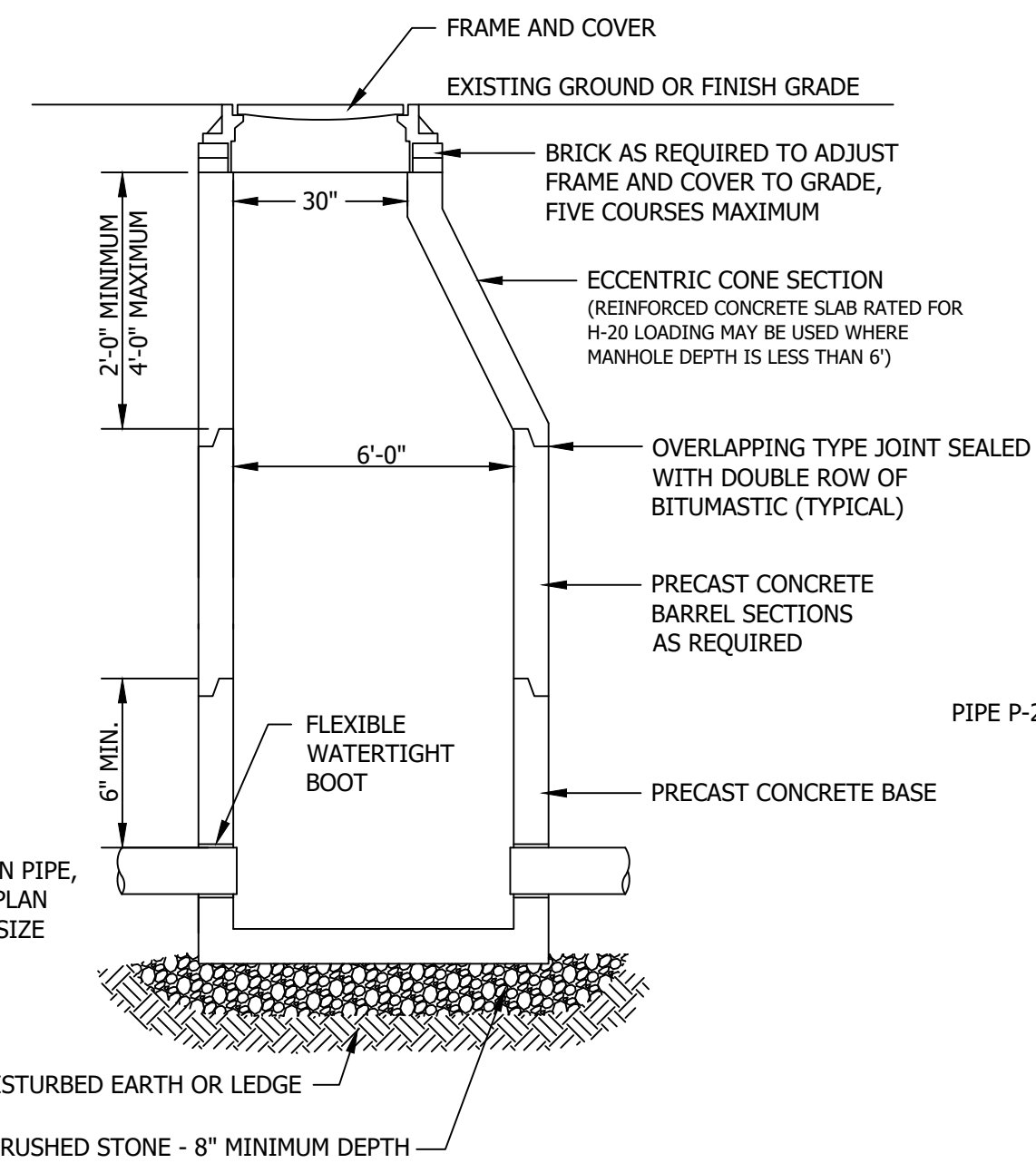
- NOTES**
- ALL DIMENSIONS ARE NOMINAL
 - LABEL TYPE OF MANHOLE WITH 3" HIGH LETTERS IN THE CENTER OF THE COVER

DRAIN MANHOLE FRAME AND GRATE
NOT TO SCALE



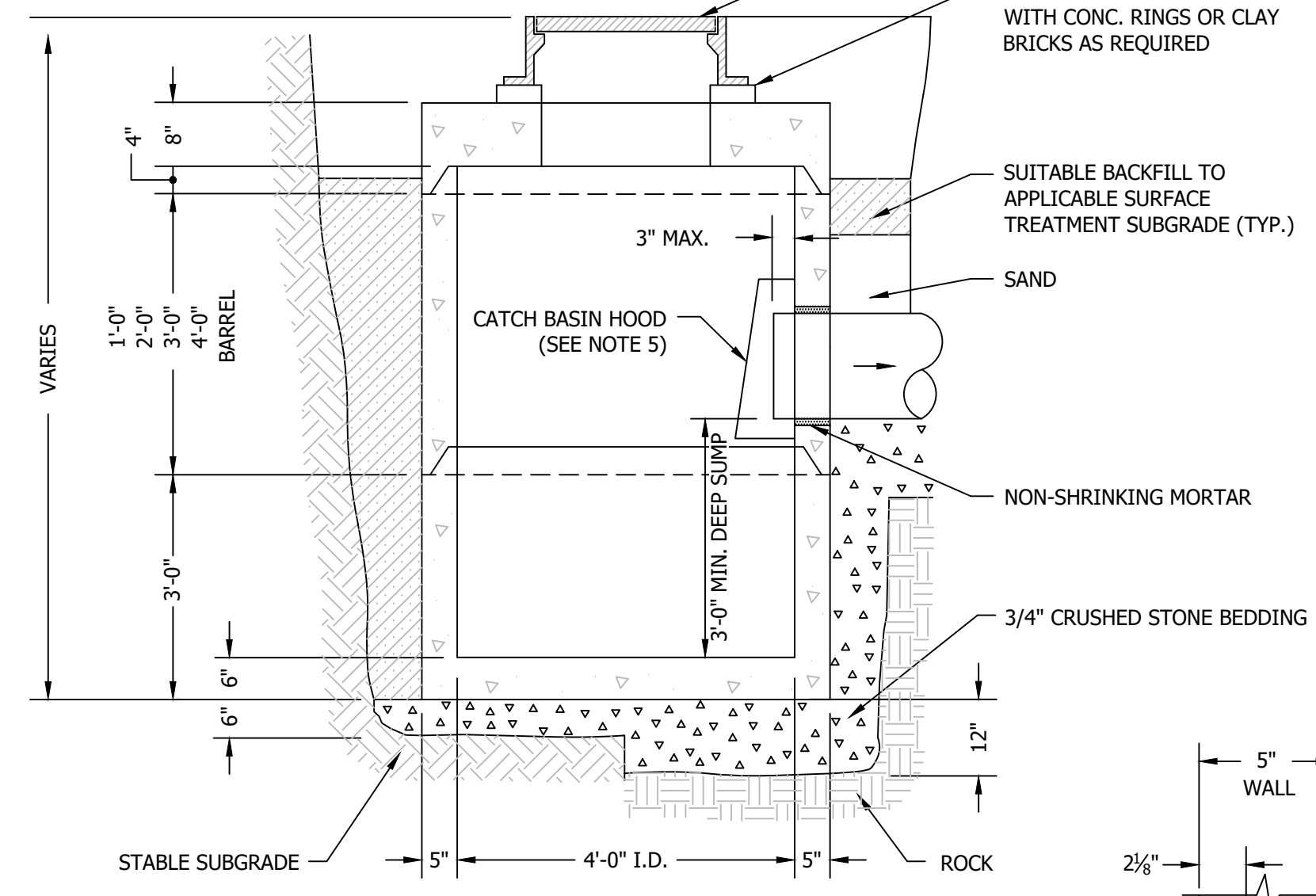
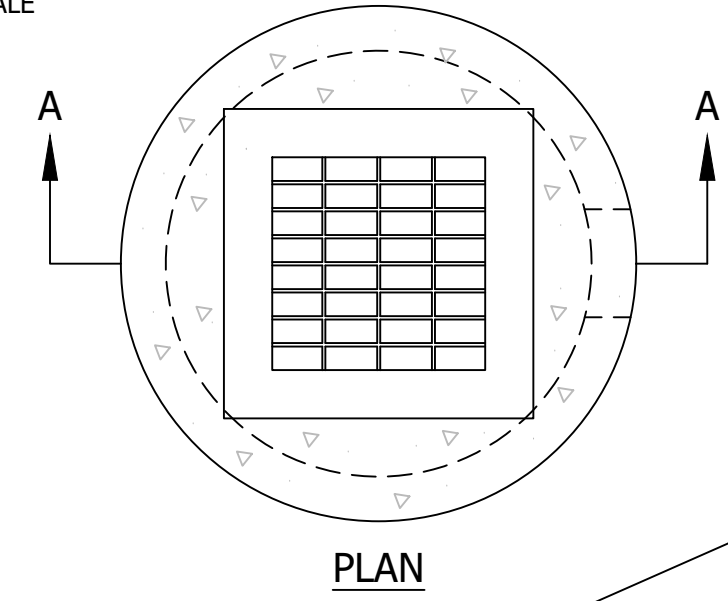
REFERENCE:
NH DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
PLATE 2 OF STANDARD NO. 3

NHDOT TYPE "B" GRATE DETAIL
NOT TO SCALE



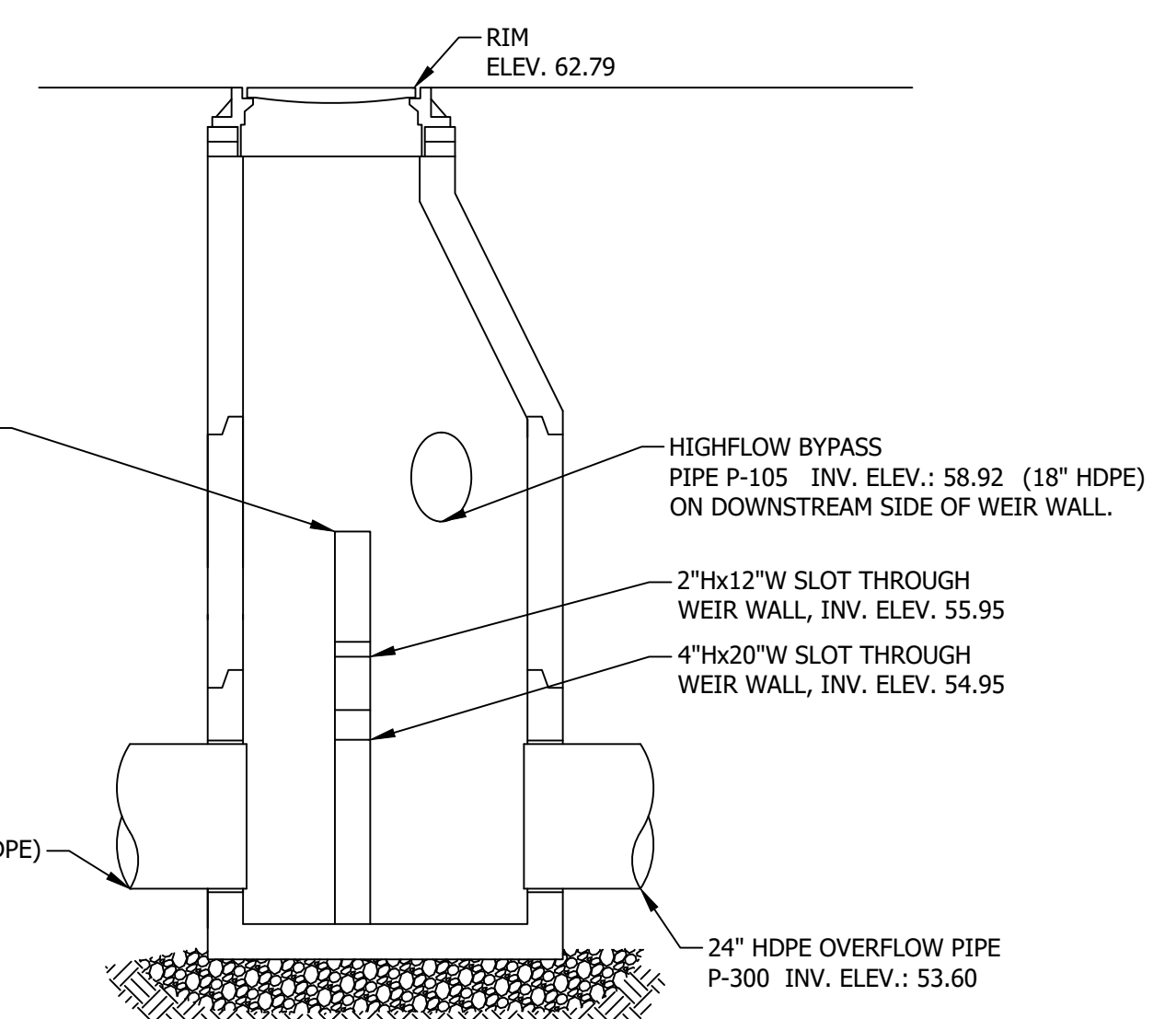
NOTE:
CONTRACTOR SHALL PROVIDE SHOP DRAWINGS TO CONFIRM ADEQUATE DIAMETER AND INVERTS.

DRAIN MANHOLE DETAIL
NOT TO SCALE



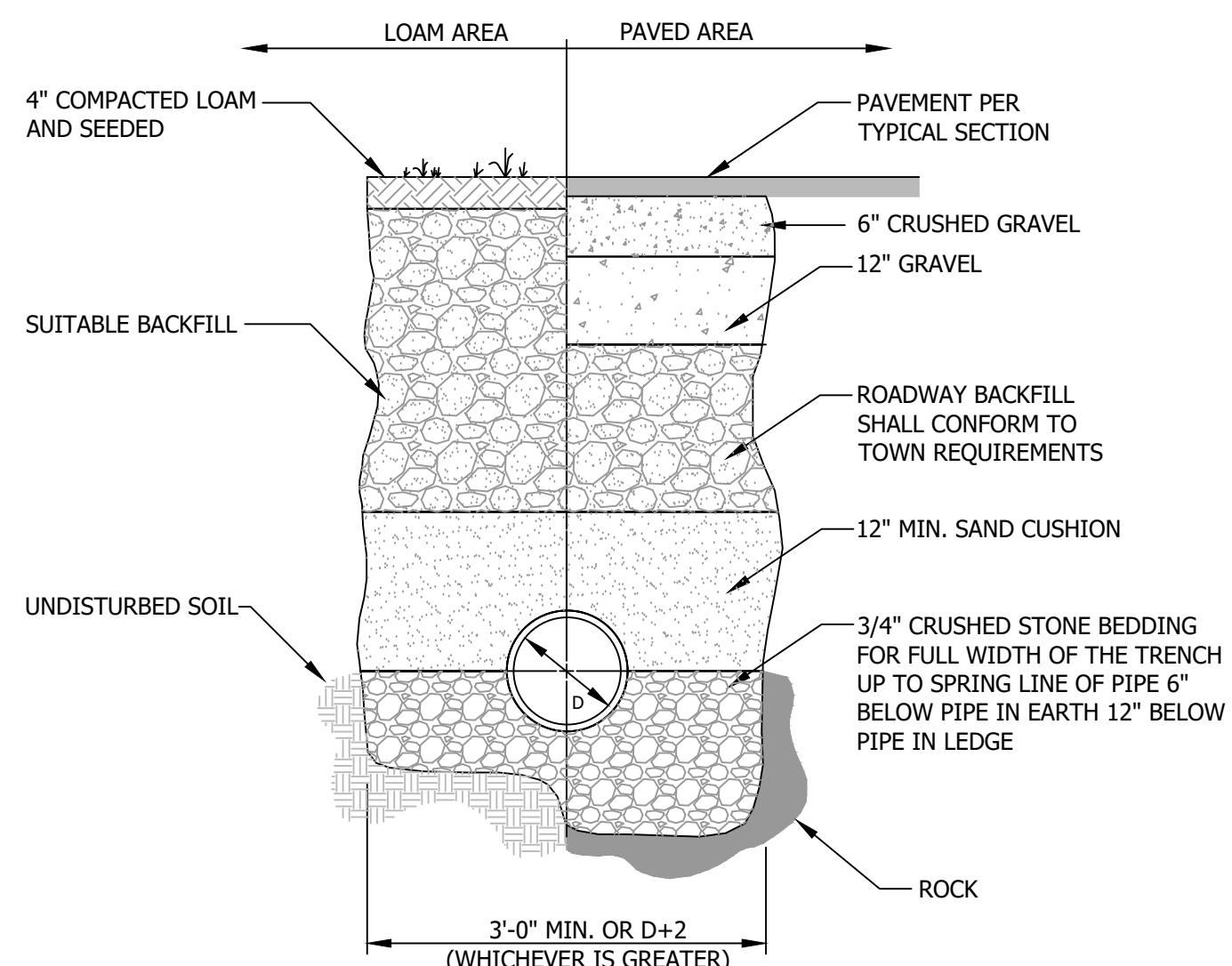
- NOTES:**
- CONCRETE SHALL BE 4,000 P.S.I. AFTER 28 DAYS.
 - REINFORCING H-20 LOADING 4 x 4/4 x 4 W.W.M.
 - SHIP LAP JOINT SHALL CONTAIN ONE LINE OF CIRCUMFERENTIAL REINFORCEMENT EQUAL TO 0.12 SQ. IN. PER LINEAR FT. AND SHALL BE SEALED WITH 1 STRIP OF 1" DIA. BUTYL RUBBER SEALANT.
 - EACH CASTING TO HAVE LIFTING HOLES CAST IN.
 - THE CATCH BASIN HOOD SHALL BE CONSTRUCTED FROM SOLID WALL HDPE PIPE GRADE PLATE. THE HOOD SHALL BE CONSTRUCTED SO THAT IT FORMS A Baffle AGAINST FLOATABLE LITTER AND OIL. THE HOOD SHALL PROTRUDE AT LEAST SIX INCHES OR 1/3 OF THE PIPE'S INSIDE DIAMETER, WHICHEVER IS GREATER, BELOW THE INVERT. THE CATCH BASIN HOOD SHALL BE SEALED TO THE CATCH BASIN STRUCTURE WITH AN OIL RESISTANT FOAM GASKET. VENT HOLES SHALL BE INSTALLED ON THE TOP OF THE HOOD TO ALLOW AIR FLOW INTO PIPE. THE CATCH BASIN HOOD SHALL BE ATTACHED TO THE STRUCTURE WITH STAINLESS STEEL ANCHOR STUDS AND NUTS, ALLOWING THE HOOD TO BE REMOVED AND INSTALLED WITH MINIMUM EFFORT. THE CATCH BASIN HOOD IS TO BE AS MANUFACTURED BY PLASTIC PIPE FABRICATION OR ENGINEER APPROVED EQUAL.

HOODED CATCH BASIN DETAIL
NOT TO SCALE

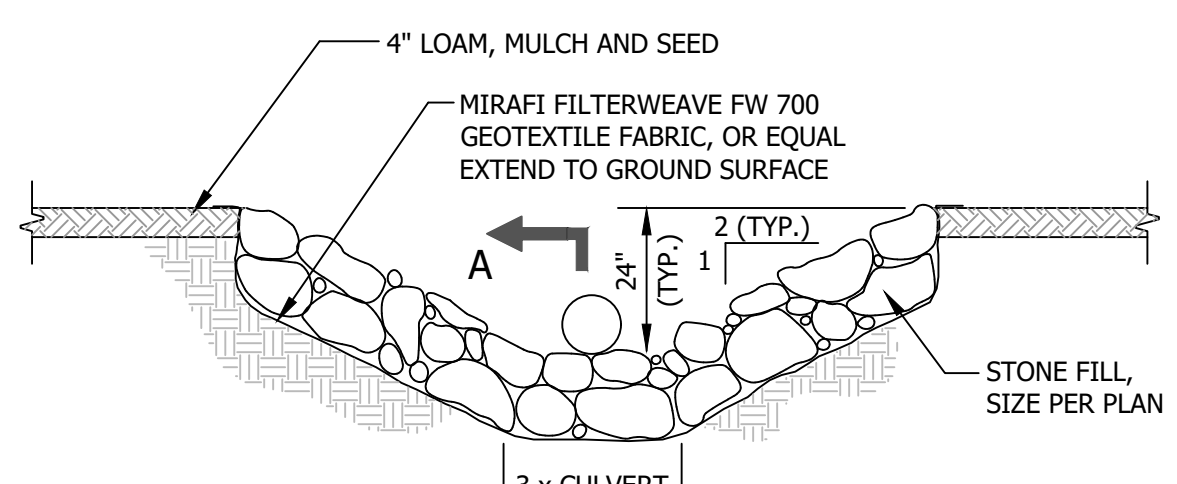


- NOTES:**
- SEE DRAIN MANHOLE DETAIL FOR STANDARD DMH CONSTRUCTION REQUIREMENTS. **DMH-100 SHALL BE A 6 FT DIAMETER STRUCTURE.**
 - CONTRACTOR SHALL PROVIDE SHOP DRAWINGS TO VERIFY DIAMETER, INVERTS, AND WEIR.

DRAIN MANHOLE DMH-100 DETAIL
NOT TO SCALE

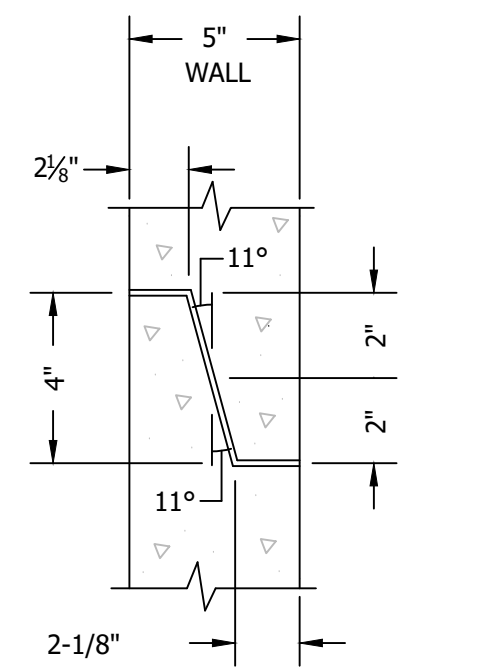


TYPICAL DRAINAGE TRENCH DETAIL
NOT TO SCALE



* STONE SIZE	MIN. D
EROSION STONE	12"
NHDOT CLASS C	12"
NHDOT CLASS B	18"
NHDOT CLASS A	30"

DETAIL OF SHIP LAP JOINT



STONE LINED OUTLET DETAIL
NOT TO SCALE

STORMTECH CHAMBER SPECIFICATIONS

- CHAMBERS SHALL BE STORMTECH MC-4500.
- CHAMBERS SHALL BE MANUFACTURED FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE COPOLYMERS.
- CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORT PANELS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION.
- THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL, AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.
- CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418-16, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- CHAMBERS SHALL BE DESIGNED AND ALLOWABLE LOADS DETERMINED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED. THE CHAMBER MANUFACTURER SHALL SUBMIT THE FOLLOWING UPON REQUEST TO THE SITE DESIGN ENGINEER FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE:
 - A STRUCTURAL EVALUATION SEALED BY A REGISTERED PROFESSIONAL ENGINEER THAT DEMONSTRATES THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.95 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD, THE MINIMUM REQUIRED BY ASTM F2787 AND BY AASHTO FOR THERMOPLASTIC PIPE.
 - A STRUCTURAL EVALUATION SEALED BY A REGISTERED PROFESSIONAL ENGINEER THAT DEMONSTRATES THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET. THE 50 YEAR CREEP MODULUS DATA SPECIFIED IN ASTM F2418 MUST BE USED AS PART OF THE AASHTO STRUCTURAL EVALUATION TO VERIFY LONG-TERM PERFORMANCE.
 - STRUCTURAL CROSS SECTION DETAIL ON WHICH THE STRUCTURAL EVALUATION IS BASED.
- CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.

IMPORTANT - NOTES FOR THE BIDDING AND INSTALLATION OF MC-4500 CHAMBER SYSTEM

- STORMTECH MC-4500 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.
- STORMTECH MC-4500 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
- CHAMBERS ARE NOT TO BE BACKFILLED WITH A DOZER OR EXCAVATOR SITUATED OVER THE CHAMBERS. STORMTECH RECOMMENDS 3 BACKFILL METHODS:
 - STONESHOOTER LOCATED OFF THE CHAMBER BED.
 - BACKFILL AS ROWS ARE BUILT USING AN EXCAVATOR ON THE FOUNDATION STONE OR SUBGRADE.
 - BACKFILL FROM OUTSIDE THE EXCAVATION USING A LONG BOOM HOE OR EXCAVATOR.
- THE FOUNDATION STONE SHALL BE LEVELED AND COMPACTED PRIOR TO PLACING CHAMBERS.
- JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE.
- MAINTAIN MINIMUM 9" (230 mm) SPACING BETWEEN THE CHAMBER ROWS.
- INLET AND OUTLET MANIFOLDS MUST BE INSERTED A MINIMUM OF 12" (300 mm) INTO CHAMBER END CAPS.
- EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE MEETING THE AASHTO M43 DESIGNATION OF #3 OR #4.
- STONE SHALL BE BROUGHT UP EVENLY AROUND CHAMBERS SO AS NOT TO DISTORT THE CHAMBER SHAPE. STONE DEPTHS SHOULD NEVER DIFFER BY MORE THAN 12" (300 mm) BETWEEN ADJACENT CHAMBER ROWS.
- STONE MUST BE PLACED ON THE TOP CENTER OF THE CHAMBER TO ANCHOR THE CHAMBERS IN PLACE AND PRESERVE ROW SPACING.
- THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIAL BEARING CAPACITIES TO THE SITE DESIGN ENGINEER.
- ADS RECOMMENDS THE USE OF "FLEXSTORM CATCH IT" INSERTS DURING CONSTRUCTION FOR ALL INLETS TO PROTECT THE SUBSURFACE STORMWATER MANAGEMENT SYSTEM FROM CONSTRUCTION SITE RUNOFF.

NOTES FOR CONSTRUCTION EQUIPMENT

- STORMTECH MC-4500 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
- THE USE OF EQUIPMENT OVER MC-4500 CHAMBERS IS LIMITED:
 - NO EQUIPMENT IS ALLOWED ON BARE CHAMBERS.
 - NO RUBBER TIRED LOADER, DUMP TRUCK, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
 - WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
- FULL 36" (900 mm) OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING.

USE OF A DOZER TO PUSH EMBEDMENT STONE BETWEEN THE ROWS OF CHAMBERS MAY CAUSE DAMAGE TO CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ANY CHAMBERS DAMAGED BY USING THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER THE STORMTECH STANDARD WARRANTY.

CONTACT STORMTECH AT 1-888-892-2694 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.

FINAL APPROVAL BY DURHAM PLANNING BOARD.
CERTIFIED BY MICHAEL BEHRENDT, TOWN PLANNER
CERTIFIED _____
DATE _____

NO.	DATE	REVISION DESCRIPTION	ENG	DWG
1.	02/02/22	REVISED SUBMISSION PER TRC COMMENTS		MCS
0.	11/20/21	INITIAL SUBMISSION FOR 2 ROW PARKING LAYOUT		AMS

PROJECT #:	18-041
DATE:	11/30/2021
SCALE:	AS SHOWN
ENGINEERED BY:	AMS
DRAWN BY:	AMS
CHECKED BY:	MJS

CONSTRUCTION DETAILS

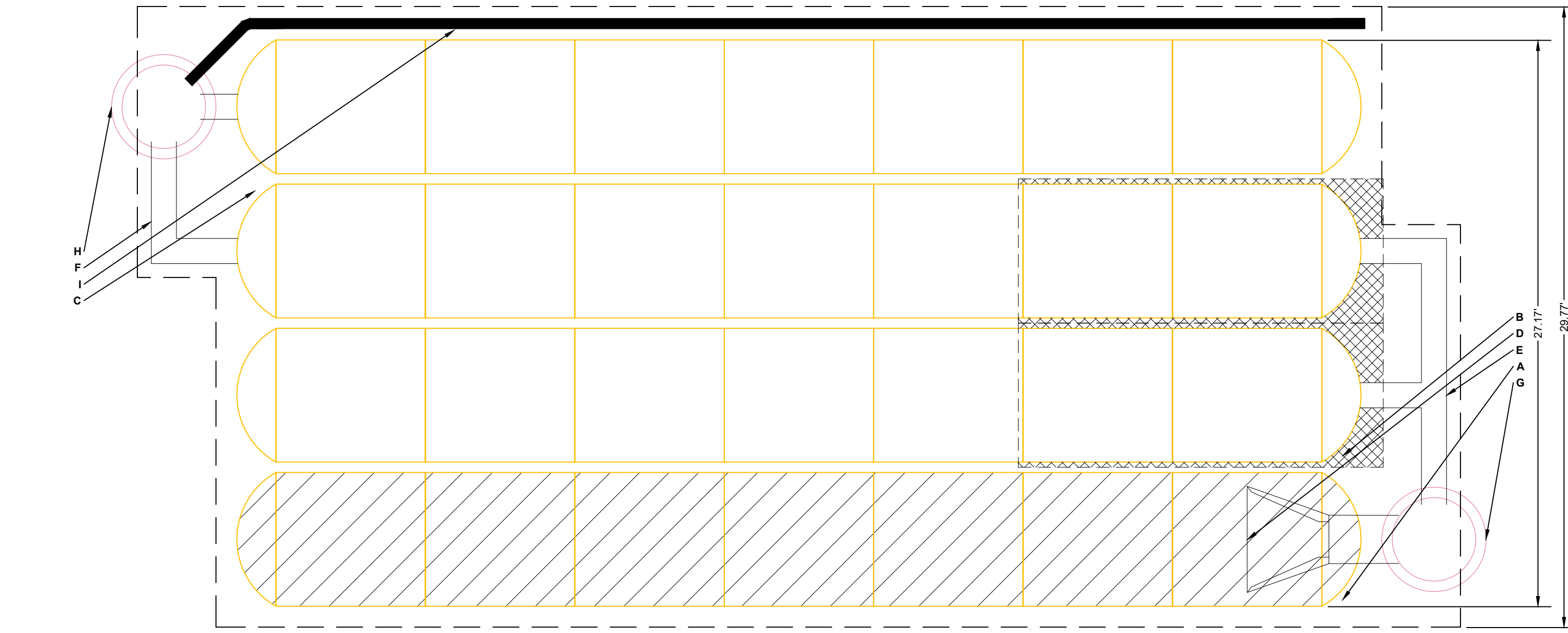
PREPARED FOR
TOOMERES, LLC
TAX MAP 5, LOTS 1-9, 1-10, 1-11, 1-15, 1-16
19 MAIN ST AND 21 MAIN ST, DURHAM, NH 03824

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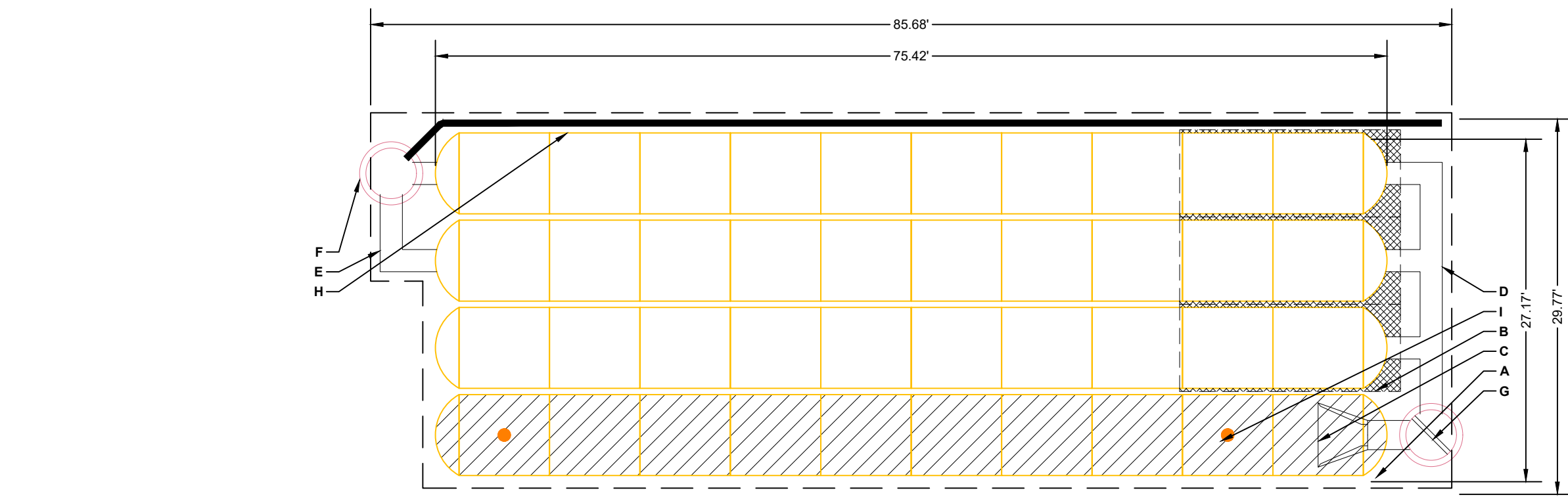
PROPOSED LAYOUT		PROPOSED ELEVATIONS		PART TYPE		ITEM ON LAYOUT		DESCRIPTION		INVERT	MAX FLOW
28	STORMTECH MC-3500 CHAMBERS	MAXIMUM ALLOWABLE GRADE (TOP OF PAVEMENT UNPAVED):	64.50					24" BOTTOM CORED END CAP, PART# MC3500EPP24BC / TYP OF ALL 24" BOTTOM CONNECTIONS AND ISOLATOR PLUS ROWS		2.06'	
8	STORMTECH MC-3500 END CAPS	MINIMUM ALLOWABLE GRADE (UNPAVED WITH TRAFFIC):	58.00					12" TOP CORED END CAP, PART# MC3500EPP12T / TYP OF ALL 12" TOP CONNECTIONS	26.36'	1.35'	
12	STONE ABOVE (in)	MINIMUM ALLOWABLE GRADE (UNPAVED NO TRAFFIC):	58.00					12" BOTTOM CORED END CAP, PART# MC3500EPP12B / TYP OF ALL 12" BOTTOM CONNECTIONS	26.36'	1.35'	
12	STONE BELOW (in)	MINIMUM ALLOWABLE GRADE (TOP OF RIGID CONCRETE PAVEMENT):	58.00					12" BOTTOM CORED END CAP, PART# MC3500EPP12B / TYP OF ALL 12" BOTTOM CONNECTIONS	26.36'	1.35'	
40	STONE VOID	MINIMUM ALLOWABLE GRADE (BASE OF FLEXIBLE PAVEMENT):	52.50					12" BOTTOM CORED END CAP, PART# MC3500EPP12B / TYP OF ALL 12" BOTTOM CONNECTIONS	26.36'	1.35'	
6027	INSTALLED SYSTEM VOLUME (CF) (PERIMETER STONE INCLUDED) (COVER STONE INCLUDED) (BASE STONE INCLUDED)	TOP OF STONE:	56.50					12" x 12" TOP MANIFOLD INVERT:			
1766	SYSTEM AREA (SF)	TOP OF MC-3500 CHAMBER:	54.95					24" ISOLATOR ROW PLUS INVERT:			
186.4	SYSTEM PERIMETER (ft)	12" x 12" BOTTOM MANIFOLD INVERT:	52.86					12" BOTTOM CONNECTION INVERT:			5.0 CFS IN
		BOTTOM OF MC-3500 CHAMBER:	51.75					UNDERDRAIN INVERT:			4.0 CFS OUT
		BOTTOM OF STONE:	51.75					6" ADS N-12 DUAL WALL PERFORATED HDPE UNDERDRAIN			

- ISOLATOR ROW PLUS (SEE DETAIL)
- PLACE MINIMUM 17.50' OF ADS PLUS 175 WOVEN GEOTEXTILE OVER BEDDING STONE AND UNDERNEATH CHAMBER FEET FOR SCOUR PROTECTION AT ALL CHAMBER INLET ROWS
- BED LIMITS

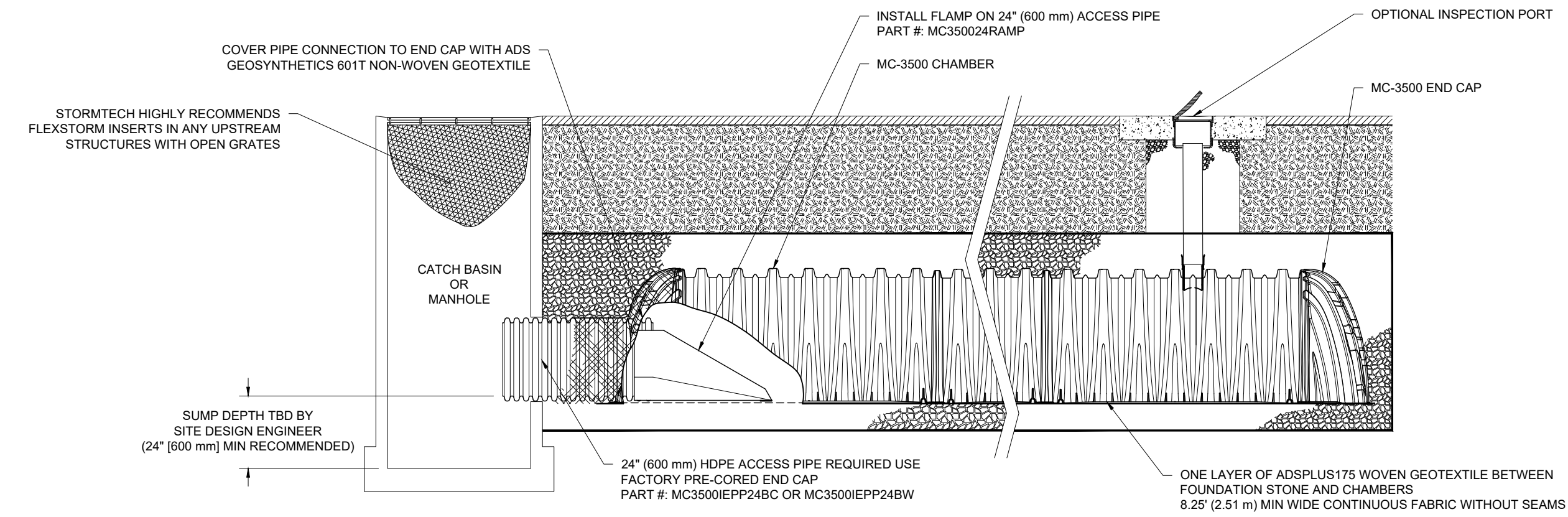


TOP STORMTECH SYSTEM

PROPOSED LAYOUT		PROPOSED ELEVATIONS		PART TYPE		ITEM ON LAYOUT		DESCRIPTION		INVERT	MAX FLOW
40	STORMTECH MC-3500 CHAMBERS	MAXIMUM ALLOWABLE GRADE (TOP OF PAVEMENT UNPAVED):	61.10					24" BOTTOM CORED END CAP, PART# MC3500EPP24BC / TYP OF ALL 24" BOTTOM CONNECTIONS AND ISOLATOR PLUS ROWS		2.06'	
8	STORMTECH MC-3500 END CAPS	MINIMUM ALLOWABLE GRADE (UNPAVED WITH TRAFFIC):	55.10					18" BOTTOM CORED END CAP, PART# MC3500EPP18BC / TYP OF ALL 18" BOTTOM CONNECTIONS	1.77'		
12	STONE ABOVE (in)	MINIMUM ALLOWABLE GRADE (UNPAVED NO TRAFFIC):	54.60					18" BOTTOM CORED END CAP, PART# MC3500EPP18BC / TYP OF ALL 18" BOTTOM CONNECTIONS	1.77'		
12	STONE BELOW (in)	MINIMUM ALLOWABLE GRADE (TOP OF RIGID CONCRETE PAVEMENT):	54.60					18" BOTTOM CORED END CAP, PART# MC3500EPP18BC / TYP OF ALL 18" BOTTOM CONNECTIONS	1.77'		
40	STONE VOID	MINIMUM ALLOWABLE GRADE (BASE OF FLEXIBLE PAVEMENT):	54.10					18" BOTTOM CORED END CAP, PART# MC3500EPP18BC / TYP OF ALL 18" BOTTOM CONNECTIONS	1.77'		
8421	INSTALLED SYSTEM VOLUME (CF) (PERIMETER STONE INCLUDED) (COVER STONE INCLUDED)	TOP OF STONE:	53.10					18" x 18" BOTTOM MANIFOLD INVERT:			8.0 CFS OUT
2483	SYSTEM AREA (SF)	TOP OF MC-3500 CHAMBER:	49.50					18" x 18" BOTTOM MANIFOLD INVERT:			16.5 CFS IN
230.9	SYSTEM PERIMETER (ft)	18" x 18" BOTTOM MANIFOLD INVERT:	49.50					18" BOTTOM CONNECTION INVERT:			
		BOTTOM OF MC-3500 CHAMBER:	48.35					UNDERDRAIN INVERT:			
		BOTTOM OF STONE:	48.35					4" SE DETAIL (TYP 2 PLACES)			



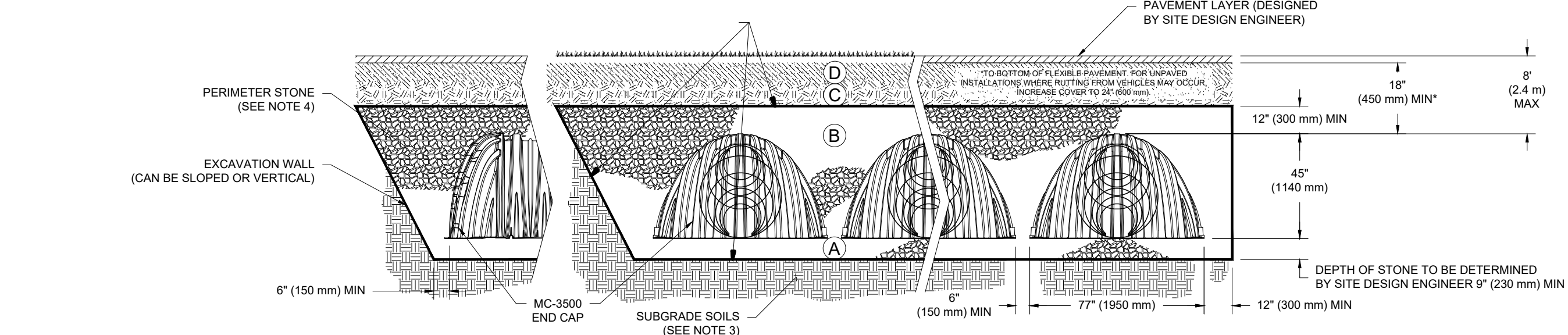
BOTTOM STORMTECH SYSTEM



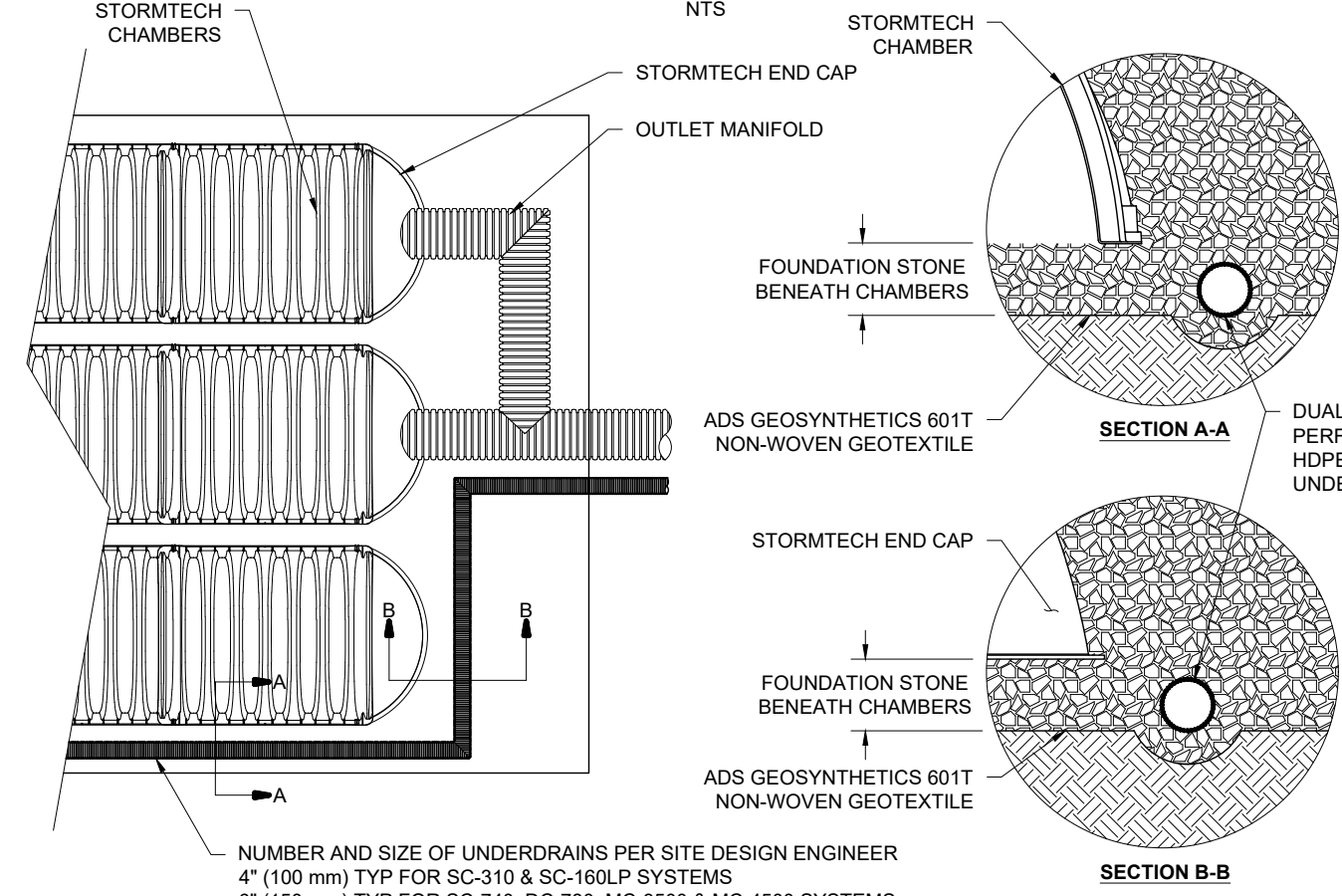
MC-3500 ISOLATOR ROW PLUS DETAIL

MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	FINAL FILL: FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	INITIAL FILL: FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 24" (600 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	AASHTO M145 ¹ A-1, A-2.4, A-3 OR AASHTO M43 ¹ 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 24" (600 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 12" (300 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS.
B	EMBEDMENT STONE: FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	AASHTO M43 ¹ 3, 4	
A	FOUNDATION STONE: FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	AASHTO M43 ¹ 3, 4	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE ^{2,3}

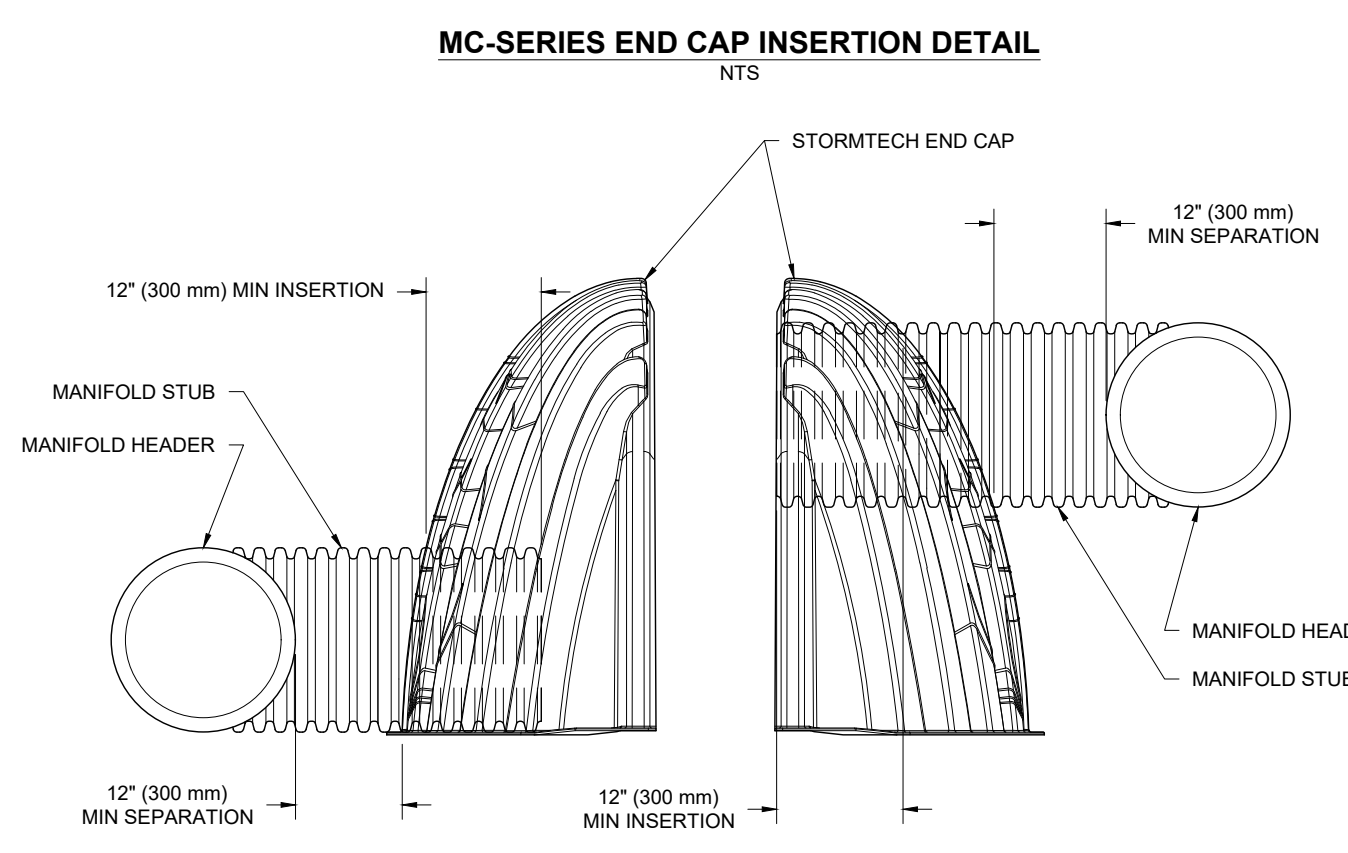
- PLEASE NOTE:
 1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
 2. STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 9" (230 mm) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
 3. WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.
 4. ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.



UNDERDRAIN DETAIL



MC-3500 TECHNICAL SPECIFICATION



MC-SERIES END CAP INSERTION DETAIL

PART #	STUB	B	C
MC3500EPP06T	6" (150 mm)	33.21" (844 mm)	---
MC3500EPP06B	---	---	0.66" (17 mm)
MC3500EPP08T	8" (200 mm)	31.16" (791 mm)	---
MC3500EPP08B	---	---	0.81" (21 mm)
MC3500EPP10T	10" (250 mm)	29.04" (738 mm)	---
MC3500EPP10B	---	---	0.93" (24 mm)
MC3500EPP12T	12" (300 mm)	26.36" (670 mm)	---
MC3500EPP12B	---	---	1.35" (34 mm)
MC3500EPP12T	---	23.39" (594 mm)	---
MC3500EPP15B	---	---	1.50" (38 mm)
MC3500EPP18TC	---	20.03" (509 mm)	---
MC3500EPP18TW	---	---	---
MC3500EPP18BC	---	---	1.77" (45 mm)
MC3500EPP18BW	---	---	---
MC3500EPP24TC	---	14.48" (368 mm)	---
MC3500EPP24TW	---	---	---
MC3500EPP24BC	---	---	2.06" (52 mm)
MC3500EPP24BW	---	---	---
MC3500EPP30BC	---	---	2.75" (70 mm)

PROJECT #: 18-041
 DATE: 11/30/2021
 SCALE: AS SHOWN
 ENGINEERED BY: AWS
 DRAWN BY: AWS
 CHECKED BY: MJS

REVISION DESCRIPTION

NO.	DATE	DESCRIPTION
1.	02/02/22	REVISED SUBMISSION PER TRC COMMENTS
0.	11/30/21	INITIAL SUBMISSION FOR 2 ROW PARKING LAYOUT

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 Land Surveying and Environmental Consulting
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 www.horizonsengineering.com

CONSTRUCTION DETAILS PREPARED FOR TOOMERES, LLC
 TAX MAP 5, LOTS 1-9, 1-10, 1-11, 1-15, 1-16
 19 MAIN ST AND 21 MAIN ST, DURHAM, NH 03824

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