## **GENERAL INFORMATION**

## **OWNER**

TAX MAP 312Z LOT 6
BULL MEADOW RE HOLDINGS, LLC
38 OLD MANCHESTER ROAD
AMHERST, NH 03031-1722

## APPLICANT/PREPARED FOR

STEPHENS BROTHERS PROPERTIES, LLC c/o JUSTIN STEPHENS
38 OLD MANCHESTER RD
AMHERST, NH 03031

## RESOURCE LIST

(ZONING ADMINISTRATOR)

PLANNING & COMMUNITY
DEVELOPMENT DEPARTMENT
41 GREEN STREET, 3RD FLOOR
CONCORD, NH 03301
PHONE: (603) 225-8515
CONTACT: CARLOS BAIA (DEPUTY CITY
MANAGER - DEVELOPMENT) & HEATHER
SHANK (CITY PLANNER)

ZONING DEPARTMENT
37 GREEN STREET, CONCORD, NH 03301
PHONE: (603) 225-8580
CONTACT: CHRIS CARLEY (CHAIR) &
ERNEST CARTIER-CREVELING

CODE ADMINISTRATION
37 GREEN STREET, CONCORD, NH 03301
PHONE: (603) 225-8580
CONTACT: DAVID HALL

CONTACT: DAVID HALL
(CODE ADMINISTRATOR)

CITY MANAGER

41 GREEN STREET, CONCORD, NH 03301
PHONE: (603) 225-8570
CONTACT: THOMAS J. ASPELL JR.
(CITY MANAGER)

GENERAL SERVICES
(PUBLIC WORKS)
311 NORTH STREET, CONCORD, NH 03301
PHONE: (603) 228-2737
CONTACT: CHIP CHESLEY (DIRECTOR)

POLICE DEPARTMENT
35 GREEN STREET, CONCORD, NH 03301
PHONE: (603) 225-8600
CONTACT: BRADLEY C. OSGOOD (CHIEF
OF POLICE)

FIRE DEPARTMENT

24 HORSESHOE POND LAMD, CONCORD, NH 03301 PHONE: (603) 225-8570

CONTACT: SEAN BROWN (FIRE CHIEF)

**ABUTTERS** 

TAX MAP 31Z LOT 3 MICHAEL & CATHY L WHITE 124 BOG RD CONCORD, NH 03303-1008

TAX MAP 31Z LOT 4
JOCELYN JERRY-WOLCOTT
48 FERRIN ROAD
CONCORD, NH 03301-4139

TAX MAP 31Z LOT 6
ROBERT W. SPOFFORD TRUSTEE
RW SPOFFORD 03 TR & D SPOFFORD
36 FERRIN RD
CONCORD, NH 03303-4139

TAX MAP 38Z LOT 20
MICHELE M & MAUREEN T RICHARDS
78 HUTCHINS ST
CONCORD, NH 03303-4126

TAX MAP 304Z LOT 2
FREEDOM VILLAGE COOPERATIVE INC.
24 BOANZA DR
CONCORD, NH 03303-4109

TAX MAP 304Z LOT 4
DISTER L DEOSS REVOCABLE TRUST
DISTER L DEOSS JR TRUSTEE
PO BOX 658

CONCORD, NH 03302-0658

TAX MAP 304Z LOT 6 & 7

HUGH & GEORGE JR. MCGOVERN TRUST

OF H&G REALTY TRUST

383 MAIN ST DUNSTABLE, MA 01827-1804 TAX MAP 301Z LOT 27

CONCORD TERRACE LLC 73 FISHERVILLE RD CONCORD, NH 03303-4107

TAX MAP 301Z LOT 37/53 & 37/55
JOHNS TRUST
ALAN C JOHNS TRUSTEE
14 LORI LN
CONCORD, NH 03303-4009

TAX MAP 312Z LOT 4
VINEYARDS OF CONCORD CONDOMINIUM
CABERNET DR
CONCORD, NH 03301-1036

TAX MAP 312Z LOT 5
DAVID E & KATHRYN G TOBINE
KRISTY A & JEFFREY D TOBINE
57 BOG RD
CONCORD, NH 03303-2002

TAX MAP 312Z LOT 7
TERRAGNI-LEBLANC FAMILY REVOCABLE
TRUST
ANDREW E TERRAGNI & ROSE S
LEBLANC TRUSTEES

PO BOX 8509 PENACOOK, NH 03303-8509

DIANE L PLANTE 71 BOG RD CONCORD, NH 03303-2002

TAX MAP 312Z LOT 8

TAX MAP 312Z LOT 9
JACLYN M & DEREK J CONNELLY
75 BOG RD
CONCORD, NH 03303-2002

TAX MAP 312Z LOT 10
RAYMOND MERCIER & DONNA K WHITE
81 BOG RD
CONCORD, NH 03303-2002

TAX MAP 312Z LOT 11 RANDY K & IMELDA R DRAGON 87 BOG RD

CONCORD, NH 03303-2002

TAX MAP 312Z LOT 12 Bradley S & Kelly e Jewett 93 bog rd

CONCORD, NH 03303-2002

TAX MAP 312Z LOT 13

LISA & KYLE BROTHERTON

95 BOG RD

CONCORD, NH 03303-2002

TAX MAP 312Z LOT 14

CITY OF CONCORD

ABUTTS OLD R&R ROW

41 GREEN ST

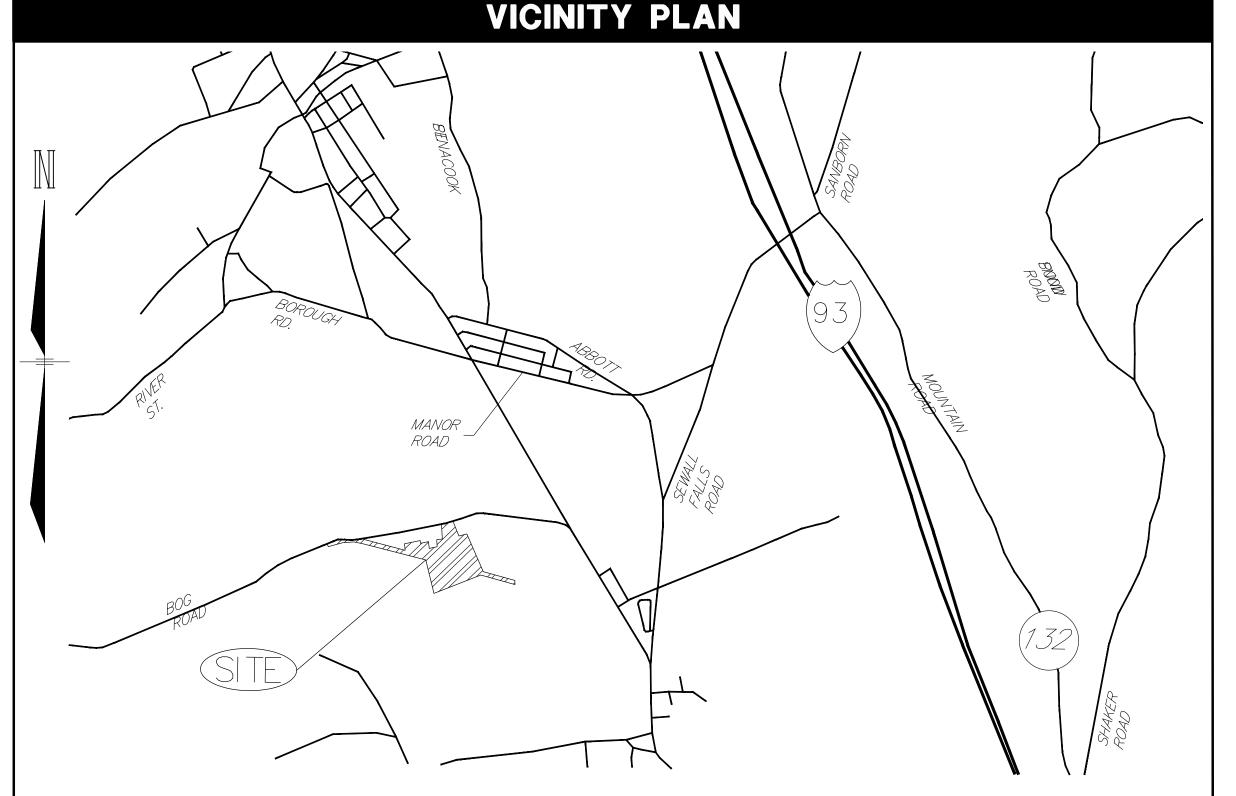
CONCORD, NH 03301-4255

CONCORD, NH 03303-2001

TAX MAP 312Z LOT 3/1
BROOKE W HUTCHINSON
MACKENZIE LEE ARMENT
86 BOG RD

# THE BARN AT BULL MEADOW

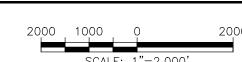
63 BOG ROAD CONCORD, NEW HAMPSHIRE





Civil Engineers
Structural Engineers
Traffic Engineers
Land Surveyors
Landscape Architects

REV. DATE





### SHEET SHEET TITLE C - 01COVER SHEET C - 02NOTES & LEGEND C - 03NOTES S - 01PARTIAL EXISTING CONDITIONS PLAN C - 04LOCATION PLAN C - 05SITE PREPARATION & LAYOUT PLAN C - 06GRADING, DRAINAGE, & UTILITY PLAN C - 07STORMWATER MANAGEMENT PLAN D-01 TO D-03DETAILS

INDEX OF SHEETS

## PERMITS/APPROVALS

	NUMBER	<b>APPROVED</b>	<b>EXPIRES</b>
CITE SITE PLAN AMENDMENT			
CITY UTILITY CONNECTION PERMIT			
CITY CUP (WETLAND BUFFER)			
NHDES ALT. OF TERRAIN DEVIATION			
NHDES SEWER CONNECTION PERMIT			
EPA NOI			
NHDES ALT. OF TERRAIN	AoT-1611	6/3/19	6/3/2024
NHDES WETLANDS	2019-00310	3/22/19	3/22/2024
NHDES SEWER CONNECTION PERMIT			
CITY SITE PLAN	2019-05	3/20/19	
CITY DRIVEWAY PERMIT			
CUP (WETLAND BUFFER)	2019-05	3/20/19	
CUP (CUPOLA HEIGHT)	2019-05	3/20/19	

## **VARIANCES**

THE FOLLOWING VARIANCE (CASE #46-18) WAS GRANTED BY THE ZONING BOARD OF ADJUSTMENT ON AUGUST 1, 2018:

ARTICLE 28-2-4(j): TO PERMIT A COMMERCIAL INDOOR RECREATIONAL FACILITY (USE C-3) IN AN RO-RESIDENTIAL OPEN SPACE DISTRICT.

THE FOLLOWING VARIANCES (CASE #11-19) WERE GRANTED BY THE ZONING BOARD OF ADJUSTMENT ON

ARTICLE 28-7-7(f): TO PERMIT A 20-FT WIDE DRIVEWAY WHERE A 24-FT WIDE DRIVEWAY IS REQUIRED.

ARTICLE 28-7-7(h): TO PERMIT A GRAVEL DRIVEWAY SURFACE WHERE A PAVED DRIVEWAY SURFACE IS

ARTICLE 28-7-2(e): TO PERMIT 69 PARKING SPACES.

THE FOLLOWING VARIANCES (CASE #14-21) WERE <u>GRANTED</u> BY THE ZONING BOARD OF ADJUSTMENT ON APRIL 7, 2021:

ARTICLE 28-2-4(j): TO PERMIT EXPANSION OF COMMERCIAL INDOOR RECREATIONAL FACILITY

ARTICLE 28-2-4(h): TO PERMIT MULTIPLE PRINCIPAL USES ON THE SAME LOT

## **WAIVERS**

THE FOLLOWING WAIVERS WERE GRANTED BY THE PLANNING BOARD ON MARCH 20, 2019:

SECTION 12.03(6): SOILS

SECTION 15.03(1): EXISTING PROPERTY LINES
SECTION 15.03(3): EXISTING TOPOGRAPHY

SECTION 15.03(5): EXISTING NATURAL FEATURES

SECTION 16.03(11): SIGNAGE
SECTION 21.03: CONNECTION TO PUBLIC SIDEWALKS

SECTION 22.07(2): STORMWATER RECHARGE

TAX MAP 312Z LOT 6

## **COVER SHEET**

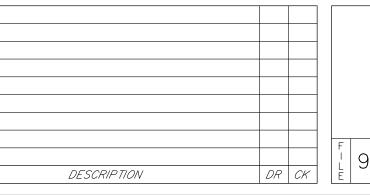
THE BARN AT BULL MEADOW 63 BOG ROAD, CONCORD, NEW HAMPSHIRE

OWNED BY

BULL MEADOW RE HOLDINGS, LLC
PREPARED FOR

STEPHENS BROTHERS PROPERTIES, LLC

SCALE: AS NOTED





Civil Engineers 48 Constitution Drive
Structural Engineers Bedford, NH 03110
Traffic Engineers
Land Surveyors
Landscape Architects
Scientists 48 Constitution Drive
Bedford, NH 03110
Phone (603) 472-4488
Fax (603) 472-9747
www.tfmoran.com

OCTOBER 20, 2021

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	This plan is not effective unless signed by a duly authorized office Thomas F. Moran, Inc.

APPROVED

UNDER THE PROVISIONS OF R.S.A. 674:35 & R.S.A. 674:36

CITY PLANNING BOARD

CITY OF CONCORD, NEW HAMPSHIRE in accordance with vote of the board dated:

Approval of this plan is limited to the lots as shown

## LEGEND

EDGE OF GRAVEL CHAIN LINK FENCE UTILITY POLE SPOT GRADE INDEX CONTOUR INTERMEDIATE CONTOUR EDGE OF WETLAND

STONEWALL (BOUNDARY) EXISTING TREELINE OVERHEAD UTILITIES PROPOSED TREELINE PROPOSED WATERLINE PROPOSED SEWER LINE PROPOSED FORCEMAIN PROPOSED UNDERGROUND ELEC. ——UGE/T/C—— PROPOSED OVERHEAD ELEC. PROPOSED GAS LINE

PROPOSED SILT SOCK

PROPOSED TREELINE

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——OHE/T/C——

## **GENERAL NOTES**

- 1. THESE PLANS WERE PREPARED UNDER THE SUPERVISION OF A LICENSED PROFESSIONAL ENGINEER. TFMORAN, INC. ASSUMES NO LIABILITY AS A RESULT OF ANY CHANGES OR NON-CONFORMANCE WITH THESE PLANS EXCEPT UPON THE WRITTEN APPROVAL OF THE ENGINEER OF RECORD.
- 2. ALL IMPROVEMENTS SHOWN ON THE SITE PLAN SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE PLAN BY THE PROPERTY OWNER AND ALL FUTURE PROPERTY OWNERS. NO CHANGES SHALL BE MADE TO THIS SITE PLAN WITHOUT THE EXPRESS APPROVAL OF THE CITY OF CONCORD PLANNING BOARD.
- 3. ALL WORK SHALL CONFORM TO THE APPLICABLE REGULATIONS AND STANDARDS OF THE CITY OF CONCORD. AND SHALL BE BUILT IN A WORKMANLIKE MANNER IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. ALL WORK TO CONFORM TO THE CITY OF CONCORD DEPARTMENT OF PUBLIC WORKS STANDARD SPECIFICATIONS. ALL WORK WITHIN THE RIGHT-OF-WAY OF THE CITY OF CONCORD AND/OR STATE SHALL COMPLY WITH APPLICABLE STANDARDS. COORDINATE ALL WORK WITHIN THE RIGHT-OF-WAY WITH APPROPRIATE CITY OF CONCORD, COUNTY, AND/OR STATE AGENCY.
- 4. SEE EXISTING CONDITIONS PLAN FOR BENCHMARK INFORMATION. VERIFY TBM ELEVATIONS PRIOR TO CONSTRUCTION.
- 5. CONTACT EASEMENT OWNERS PRIOR TO COMMENCING ANY WORK WITHIN THE EASEMENTS.
- 6. PRIOR TO COMMENCING ANY SITE WORK ALL LIMITS OF WORK SHALL BE CLEARLY MARKED IN THE FIELD.
- 7. SITE WORK SHALL BE CONSTRUCTED FROM A COMPLETE SET OF PLANS, NOT ALL FEATURES ARE DETAILED ON EVERY PLAN. THE ENGINEER IS TO BE NOTIFIED OF ANY CONFLICT WITHIN
- 8. TFMORAN, INC. ASSUMES NO LIABILITY FOR WORK PERFORMED WITHOUT AN ACCEPTABLE PROGRAM OF TESTING AND INSPECTION AS APPROVED BY THE ENGINEER OF RECORD.
- 9. ALL DEMOLITION SHALL INSURE MINIMUM INTERFERENCE WITH ROADS, STREETS, WALKWAYS, AND ANY OTHER ADJACENT OPERATING FACILITIES. PRIOR WRITTEN PERMISSION FROM THE OWNER/DEVELOPER AND LOCAL PERMITTING AUTHORITY IS REQUIRED IF CLOSURE/OBSTRUCTIONS TO ROADS, STREET, WALKWAYS, AND OTHERS IS DEEMED NECESSARY. CONTRACTOR TO PROVIDE ALTERNATE ROUTES AROUND CLOSURES/OBSTRUCTIONS PER LOCAL/STATE/FEDERAL REGULATIONS.
- 10. REFER TO ARCHITECTURAL PLANS FOR LAYOUT OF BUILDING FOUNDATIONS AND CONCRETE ELEMENTS WHICH ABUT THE BUILDING SUCH AS STAIRS, SIDEWALKS, LOADING DOCK RAMPS, PADS, AND COMPACTOR PADS. DO NOT USE SITE PLANS FOR LAYOUT OF FOUNDATIONS.
- 11. IN THE EVENT OF A CONFLICT BETWEEN PLANS, SPECIFICATIONS, AND DETAILS, THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY FOR CLARIFICATION.
- 12. IF CONDITIONS AT THE SITE ARE DIFFERENT THAN SHOWN ON THE PLANS, THE ENGINEER SHALL BE NOTIFIED PRIOR TO PROCEEDING WITH THE AFFECTED WORK.
- 13. CONTRACTOR'S GENERAL RESPONSIBILITIES:
- A. BID AND PERFORM THE WORK IN ACCORDANCE WITH ALL LOCAL, STATE, AND NATIONAL CODES, SPECIFICATIONS, REGULATIONS, AND STANDARDS.
- B. NOTIFY ENGINEER IN WRITING OF ANY DISCREPANCIES OF PROPOSED LAYOUT AND/OR EXISTING FEATURES.
- C. EMPLOY A LICENSED SURVEYOR TO DETERMINE ALL LINES AND GRADES AND LAYOUT OF SITE ELEMENTS AND BUILDINGS.
- D. THE CONTRACTOR SHALL BE RESPONSIBLE TO BECOME FAMILIAR WITH THE SITE AND ALL SURROUNDING CONDITIONS. THE CONTRACTOR SHALL ADVISE THE APPROPRIATE AUTHORITY OF INTENTIONS AT LEAST 48 HOURS IN ADVANCE.
- E. TAKE APPROPRIATE MEASURES TO REDUCE, TO THE FULLEST EXTENT POSSIBLE, NOISE, DUST AND UNSIGHTLY DEBRIS.
- F. MAINTAIN EMERGENCY ACCESS TO ALL AREAS AFFECTED BY WORK AT ALL TIMES.
- G. IN ACCORDANCE WITH RSA 430:53 AND AGR 3800, THE CONTRACTOR SHALL NOT TRANSPORT INVASIVE SPECIES OFF THE PROPERTY, AND SHALL DISPOSE OF INVASIVE SPECIES ON-SITE IN A LEGAL MANNER.
- H. COORDINATE WITH ALL UTILITY COMPANIES AND CONTACT DIGSAFE (811 OR 888-344-7233) AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION.
- I. PROTECT NEW AND EXISTING BURIED UTILITIES DURING INSTALLATION OF ALL SITE ELEMENTS. DAMAGED UTILITIES SHALL BE REPAIRED OR REPLACED AT NO ADDITIONAL COST TO THE OWNER.
- J. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MEANS AND METHODS OF CONSTRUCTION AND FOR CONDITIONS AT THE SITE. THESE PLANS, PREPARED BY TFMORAN, INC., DO NOT EXTEND TO OR INCLUDE SYSTEMS PERTAINING TO THE SAFETY OF THE CONSTRUCTION CONTRACTOR OR THEIR EMPLOYEES, AGENTS, OR REPRESENTATIVES IN THE PERFORMANCE OF THE WORK. THE SEAL OF THE SURVEYOR OR ENGINEER HEREON DOES NOT EXTEND TO ANY SUCH SAFETY SYSTEMS THAT MAY NOW OR HEREAFTER BE INCORPORATED INTO THESE PLANS. THE CONSTRUCTION CONTRACTOR SHALL PREPARE OR OBTAIN THE APPROPRIATE SAFETY SYSTEMS WHICH MAY BE REQUIRED BY THE US OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) AND/OR LOCAL REGULATIONS.
- K. WRITTEN DIMENSIONS HAVE PRECEDENCE OVER SCALED DIMENSIONS. THE CONTRACTOR SHALL USE CAUTION WHEN SCALING REPRODUCED PLANS. IN CASE OF CONFLICT BETWEEN THIS PLAN SET AND ANY OTHER DRAWING AND/OR SPECIFICATION, THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY FOR CLARIFICATIONS.
- L. VERIFY LAYOUT OF PROPOSED BUILDING FOUNDATIONS WITH ARCHITECT AND THAT PROPOSED FOUNDATION MEETS PROPERTY LINE SETBACKS PRIOR TO COMMENCING ANY
- M. IF ANY DEVIATIONS FROM THE APPROVED PLANS AND SPECIFICATIONS HAVE BEEN MADE, THE SITE CONTRACTOR SHALL PROVIDE AS-BUILT DRAWINGS STAMPED BY A LICENSED SURVEYOR OR QUALIFIED ENGINEER ALONG WITH A LETTER STAMPED BY A QUALIFIED ENGINEER DESCRIBING ALL SUCH DEVIATIONS, AND BEAR ALL COSTS FOR PREPARING AND FILING ANY NEW PERMITS OR PERMIT AMENDMENTS THAT MAY BE
- N. AT COMPLETION OF CONSTRUCTION, THE SITE CONTRACTOR SHALL PROVIDE A LETTER CERTIFYING THAT THE PROJECT WAS COMPLETED IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS, AND A LETTER STAMPED BY A QUALIFIED ENGINEER THAT THEY HAVE OBSERVED ALL UNDERGROUND DETENTION SYSTEMS, INFILTRATION SYSTEMS, OR FILTERING SYSTEMS PRIOR TO BACKFILL, AND THAT SUCH SYSTEMS CONFORM TO THE APPROVED PLANS AND SPECIFICATIONS.

## SITE PREPARATION NOTES

- 1. THE CONTRACTOR SHALL MAINTAIN EMERGENCY ACCESS TO ALL AREAS AFFECTED BY HIS WORK AT
- 2. THE CONTRACTOR SHALL VERIFY ALL SURVEY INFORMATION IN THE FIELD AND REPORT ANY DISCREPANCIES TO THE ENGINEER.
- 3. EXISTING UTILITY SERVICES TO BE DISCONTINUED ARE TO BE CAPPED AS REQUIRED BY THE
- 4. ALL DEMOLITION AND CONSTRUCTION DEBRIS SHALL BE REMOVED FROM SITE AND DISPOSED OF IN ACCORDANCE WITH LOCAL AND STATE REGULATIONS.
- 5. CONTRACTOR TO LIMIT AREA OF DISTURBANCE DURING CONSTRUCTION.

RESPECTIVE UTILITY COMPANIES.

- 6. CONTRACTOR TO INSTALL EROSION AND SEDIMENT CONTROL MEASURES PRIOR TO SITE WORK.
- 7. ALL WORK PERFORMED ON BEHALF OF THIS PROJECT, SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF CONCORD CONSTRUCTION STANDARDS AND DETAILS, LATEST ADDITION.
- 8. THE CONTRACTOR SHALL REQUEST A PRECONSTRUCTION MEETING WITH ENGINEERING SERVICES TO DISCUSS SITE INSPECTIONS, SCHEDULES, SPECIAL CONDITIONS, ETC.
- 9. CONTRACTOR SHALL DISCONTINUE THE EXISTING 1" WATER STUB FOR THE PROPERTY.
- 10. CONTRACTOR TO FILL POST HOLE(S) WITHIN EXISTING BOG ROAD SIDEWALK.
- 11. THE PROPERTY LINE ALONG THE WEST SIDE OF THE AREA OF IMPROVEMENTS MUST BE STAKED/LOCATED PRIOR TO CONSTRUCTION.

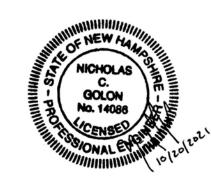
## **GRADING NOTES**

- 1. ALL WORK SHALL CONFORM TO THE APPLICABLE REGULATIONS AND STANDARDS OF THE CITY OF CONCORD, AND SHALL BE BUILT IN A WORKMANLIKE MANNER IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.
- 2. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FAMILIARIZE HIMSELF WITH THE SITE AND ALL
- 3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING AND DETERMINING THE LOCATION, SIZE AND ELEVATION OF ALL EXISTING UTILITIES, SHOWN OR NOT SHOWN ON THESE PLANS, PRIOR TO THE START OF ANY CONSTRUCTION. THE ENGINEER SHALL BE NOTIFIED IN WRITING OF ANY UTILITIES FOUND INTERFERING WITH THE PROPOSED CONSTRUCTION AND APPROPRIATE REMEDIAL ACTION BE AGREED TO BY THE ENGINEER BEFORE PROCEEDING WITH THE WORK. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONTACT "DIGSAFE" (811) AT LEAST 72 HOURS BEFORE DIGGING.
- 4. THE CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES OWNING UTILITIES, EITHER OVERHEAD OR UNDERGROUND, WITHIN THE CONSTRUCTION AREA AND SHALL COORDINATE AS NECESSARY WITH THE UTILITY COMPANIES OF SAID UTILITIES. THE PROTECTION OR RELOCATION OF UTILITIES IS ULTIMATELY THE RESPONSIBILITY OF THE CONTRACTOR.
- 5. THE CONTRACTOR SHALL COORDINATE MATERIALS AND INSTALLATION SPECIFICATIONS WITH THE INDIVIDUAL UTILITY AGENCIES/COMPANIES, AND ARRANGE FOR ALL INSPECTIONS.
- 6. ROAD AND DRAINAGE CONSTRUCTION SHALL CONFORM TO THE TYPICAL SECTIONS AND DETAILS SHOWN ON THE PLANS, AND SHALL MEET LOCAL STANDARDS AND THE REQUIREMENTS OF THE LATEST NHDOT STANDARD SPECIFICATIONS FOR ROADS AND BRIDGE CONSTRUCTION AND THE NHDOT STANDARD STRUCTURE DRAWINGS
- 7. STORM DRAINAGE SYSTEM SHALL BE CONSTRUCTED TO LINE AND GRADE AS SHOWN ON THE PLANS. CONSTRUCTION METHODS SHALL CONFORM TO NHDOT STANDARD SPECIFICATIONS, SECTION 603. CATCH BASINS AND DRAIN MANHOLES SHALL CONFORM TO SECTION 604. ALL CATCH BASIN GRATES SHALL BE TYPE B AND CONFORM TO NHDOT STANDARDS AND SPECIFICATIONS UNLESS OTHERWISE NOTED.
- 8. ALL MANHOLES IN PAVEMENT SHALL HAVE RIMS SET TO FINISH GRADE REGARDLESS OF ANY ELEVATIONS OTHERWISE SHOWN.
- 9. ALL ELEVATIONS SHOWN AT CURB ARE TO THE BOTTOM OF CURB UNLESS OTHERWISE NOTED. CURBS HAVE A 6" REVEAL UNLESS OTHERWISE NOTED.
- 10. ALL EXCAVATIONS SHALL BE THOROUGHLY SECURED ON A DAILY BASIS BY THE CONTRACTOR AT THE COMPLETION OF CONSTRUCTION OPERATIONS IN THE IMMEDIATE AREA.
- 11. IN ACCORDANCE WITH RSA 430:53 AND Agr 3800, THE CONTRACTOR SHALL NOT TRANSPORT INVASIVE SPECIES OFF THE PROPERTY, AND SHALL DISPOSE OF INVASIVE SPECIES ON-SITE IN A LEGAL MANNER.
- 12. THE SITE CONTRACTOR SHALL PREPARE, MAINTAIN, AND EXECUTE A S.W.P.P.P. IN ACCORDANCE WITH EPA REGULATIONS AND THE CONSTRUCTION GENERAL PERMIT.
- 13. THE SITE CONTRACTOR SHALL COORDINATE WITH THE OWNER TO SUBMIT AN eNOI AT LEAST 14 DAYS IN ADVANCE OF ANY EARTHWORK ACTIVITIES AT THE SITE.
- 14. THE EROSION CONTROL PRACTICES SHOWN ON THESE PLANS ARE ILLUSTRATIVE ONLY AND SHALL BE SUPPLEMENTED BY THE SITE CONTRACTOR AS NEEDED.
- 15. COORDINATE WITH ARCHITECTURAL PLANS FOR DETAILED GRADING AT BUILDING, AND SIZE AND LOCATION OF
- ALL BUILDING SERVICES.
- 16. COORDINATE WITH GEOTECHNICAL/STRUCTURAL PLANS FOR SITE PREPARATION AND OTHER BUILDING
- 17. COORDINATE WITH MECHANICAL AND PLUMBING PLANS FOR ROOF DRAIN INFORMATION.
- 18. LIMITS OF WORK ARE SHOWN AS APPROXIMATE. THE CONTRACTOR SHALL COORDINATE ALL WORK TO PROVIDE SMOOTH TRANSITIONS. THIS INCLUDES GRADING, PAVEMENT, CURBING, SIDEWALKS AND
- 19. THE CONTRACTOR SHALL REFER TO THE GEOTECHNICAL REPORT FOR INFORMATION ABOUT GROUNDWATER CONDITIONS. THE CONTRACTOR SHALL FOLLOW THE GEOTECHNICAL ENGINEERS RECOMMENDED METHODS TO ADDRESS ANY GROUNDWATER ISSUES THAT ARE FOUND ON SITE.
- 20. THE CONTRACTOR IS RESPONSIBLE FOR THE MEANS AND METHODS OF CONSTRUCTION AND FOR THE CONDITIONS AT THE SITE. WRITTEN DIMENSIONS HAVE PRECEDENCE OVER SCALED DIMENSIONS. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND REPORT DISCREPANCIES TO THE ENGINEER.
- 21. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CHECK THE ACCURACY OF THE TOPOGRAPHY AND REPORT ANY DISCREPANCIES TO THE ENGINEER PRIOR TO ANY EARTHWORK BEING PERFORMED ON THE SITE. NO CLAIM FOR EXTRA WORK WILL BE CONSIDERED FOR PAYMENT AFTER EARTHWORK HAS
- 22. VERIFY TBM ELEVATIONS PRIOR TO CONSTRUCTION.
- 23. IN THE EVENT OF A CONFLICT BETWEEN PLANS, SPECIFICATIONS, AND DETAILS, THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY FOR CLARIFICATION.
- 24. IF CONDITIONS AT THE SITE ARE DIFFERENT THAN SHOWN THE ENGINEER SHALL BE NOTIFIED PRIOR TO PROCEEDING WITH THE AFFECTED WORK.
- 25. THESE PLANS WERE PREPARED UNDER THE SUPERVISION OF A LICENSED PROFESSIONAL ENGINEER. TFMORAN INC. ASSUMES NO LIABILITY AS A RESULT OF ANY CHANGES OR NON-CONFORMANCE WITH THESE PLANS EXCEPT UPON THE WRITTEN APPROVAL OF THE ENGINEER OF RECORD.
- 26. TFMORAN INC. ASSUMES NO LIABILITY FOR WORK PERFORMED WITHOUT AN ACCEPTABLE PROGRAM OF TESTING AND INSPECTION AS APPROVED BY THE ENGINEER OF RECORD.
- 27. THE SITE CONTRACTOR SHALL ENSURE THAT ALL WORK IS PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF NHDES ENV-WQ 1500 AS APPLICABLE.
- 28. AT COMPLETION OF CONSTRUCTION, THE SITE CONTRACTOR SHALL PROVIDE A LETTER CERTIFYING THAT THE PROJECT WAS COMPLETED IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS. AND A LETTER STAMPED BY A QUALIFIED ENGINEER THAT THEY HAVE OBSERVED ALL UNDERGROUND DETENTION SYSTEMS. INFILTRATION SYSTEMS, OR FILTERING SYSTEMS PRIOR TO BACKFILL, AND THAT SUCH SYSTEMS CONFORM TO THE APPROVED PLANS AND SPECIFICATIONS.
- 29. IF ANY DEVIATIONS FROM THE APPROVED PLANS AND SPECIFICATIONS HAVE BEEN MADE, THE SITE CONTRACTOR SHALL PROVIDE AS-BUILT DRAWINGS STAMPED BY A LICENSED SURVEYOR OR QUALIFIED ENGINEER ALONG WITH A LETTER STAMPED BY A QUALIFIED ENGINEER DESCRIBING ALL SUCH DEVIATIONS, AND BEAR ALL COSTS FOR PREPARING AND FILING ANY NEW PERMITS OR PERMIT AMENDMENTS THAT MAY

## **UTILITY NOTES**

ALIGNMENTS.

- 1. ALL WORK SHALL CONFORM TO THE APPLICABLE REGULATIONS AND STANDARDS OF THE CITY OF CONCORD, AND SHALL BE BUILT IN A WORKMANLIKE MANNER IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.
- 2. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FAMILIARIZE HIMSELF WITH THE SITE AND ALL
- 3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING AND DETERMINING THE LOCATION, SIZE AND ELEVATION OF ALL EXISTING UTILITIES, SHOWN OR NOT SHOWN ON THESE PLANS, PRIOR TO THE START OF ANY CONSTRUCTION. THE ENGINEER SHALL BE NOTIFIED IN WRITING OF ANY UTILITIES FOUND INTERFERING WITH THE PROPOSED CONSTRUCTION AND APPROPRIATE REMEDIAL ACTION BE AGREED TO BY THE ENGINEER BEFORE PROCEEDING WITH THE WORK. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONTACT "DIGSAFE" (811) AT LEAST 72 HOURS BEFORE DIGGING.
- 4. THE CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES OWNING UTILITIES, EITHER OVERHEAD OR UNDERGROUND, WITHIN THE CONSTRUCTION AREA AND SHALL COORDINATE AS NECESSARY WITH THE UTILITY COMPANIES OF SAID UTILITIES. THE PROTECTION OR RELOCATION OF UTILITIES IS ULTIMATELY THE RESPONSIBILITY OF THE CONTRACTOR.
- 5. THE CONTRACTOR SHALL COORDINATE MATERIALS AND INSTALLATION SPECIFICATIONS WITH THE INDIVIDUAL UTILITY AGENCIES/COMPANIES, AND ARRANGE FOR ALL INSPECTIONS.
- 6. ALL MANHOLES IN PAVEMENT SHALL HAVE RIMS SET TO FINISH GRADE REGARDLESS OF ANY ELEVATIONS OTHERWISE SHOWN.
- 7. SANITARY SEWER SHALL BE CONSTRUCTED TO THE STANDARDS AND SPECIFICATIONS AS SHOWN ON THESE PLANS. ALL SEWER MAINS AND FITTINGS SHALL BE PVC AND SHALL CONFORM TO ASTM F 679 (SDR 35 MINIMUM). SANITARY MANHOLES SHALL CONFORM TO NHDES WATER DIVISION WASTEWATER ENGINEERING BUREAU STANDARDS AND SPECIFICATIONS SHOWN HEREON.
- 8. ON-SITE WATER DISTRIBUTION SHALL BE TO CITY OF CONCORD STANDARDS AND SPECIFICATIONS. WATER MAINS SHALL HAVE A MINIMUM OF 5.5 FEET COVER. WHERE WATER PIPES CROSS SEWER LINES A MINIMUM OF 18" VERTICAL SEPARATION BETWEEN THE TWO OUTSIDE PIPE WALLS SHALL BE OBSERVED. HORIZONTAL SEPARATION BETWEEN WATER AND SEWER SHALL BE 10 FEET MINIMUM.
- 9. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR CONDUIT AND WIRING TO ALL SIGNS AND LIGHTS. CONDUIT TO BE A MINIMUM OF 24" BELOW FINISH GRADE.
- 10. VERIFY UTILITY CONNECTIONS TO BUILDING WITH ARCHITECTURAL DRAWINGS.
- 11. ALL EXCAVATIONS SHALL BE THOROUGHLY SECURED ON A DAILY BASIS BY THE CONTRACTOR AT THE COMPLETION OF CONSTRUCTION OPERATIONS IN THE IMMEDIATE AREA.
- 13. LIMITS OF WORK ARE SHOWN AS APPROXIMATE. THE CONTRACTOR SHALL COORDINATE ALL WORK TO PROVIDE SMOOTH TRANSITIONS. THIS INCLUDES GRADING, PAVEMENT, CURBING, SIDEWALKS AND
- 14. THE CONTRACTOR IS RESPONSIBLE FOR THE MEANS AND METHODS OF CONSTRUCTION AND FOR THE CONDITIONS AT THE SITE. WRITTEN DIMENSIONS HAVE PRECEDENCE OVER SCALED DIMENSIONS. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND REPORT DISCREPANCIES TO THE ENGINEER.
- 15. UNLESS OTHERWISE SPECIFIED, ALL UNDERGROUND STRUCTURES, PIPES, CHAMBERS, ETC. SHALL BE COVERED WITH A MINIMUM OF 18" OF COMPACTED SOIL BEFORE EXPOSURE TO VEHICLE LOADS.



TAX MAP 312Z LOT 6

NOTES & LEGEND THE BARN AT BULL MEADOW 63 BOG ROAD, CONCORD, NEW HAMPSHIRE

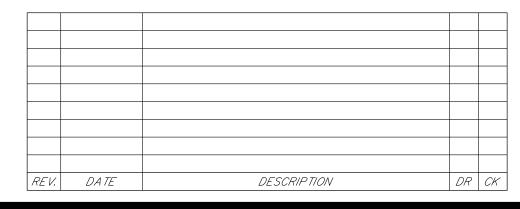
> **BULL MEADOW RE HOLDINGS, LLC** PREPARED FOR

OWNED BY

STEPHENS BROTHERS PROPERTIES, LLC

SCALE: NOT TO SCALE

OCTOBER 20, 2021





Civil Engineers Structural Engineers raffic Engineers and Surveyors andscape Architects cientists

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## **GENERAL NOTES**

- 1. ALL IN PAVEMENT MANHOLES SHALL HAVE RIMS SET TO FINISH GRADE REGARDLESS OF ANY ELEVATIONS OTHERWISE SHOWN.
- 2. WHERE DEPTH OF COVER IS LESS THAN 3 FEET CLASS V REINFORCED CONCRETE PIPE SHALL BE
- 3. THE CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES OWNING UTILITIES, EITHER OVERHEAD OR UNDERGROUND, WITHIN THE CONSTRUCTION AREA AND SHALL COORDINATE AS NECESSARY WITH THE UTILITY COMPANIES OF SAID UTILITIES. THE PROTECTION OR RELOCATION OF UTILITIES IS ULTIMATELY THE RESPONSIBILITY OF THE CONTRACTOR.
- 4. THE CONTRACTOR SHALL MAINTAIN EMERGENCY ACCESS TO ALL AREAS AFFECTED BY HIS WORK AT
- COMPLETION OF CONSTRUCTION OPERATIONS IN THE IMMEDIATE AREA.
- 6. EROSION CONTROL SYSTEMS SHALL BE INSTALLED AND MAINTAINED FOR THE DURATION OF THE PROJECT IN ACCORDANCE WITH APPLICABLE NHDES STANDARDS. THESE DETAILS SERVE AS A GUIDE
- 7. REFER TO THE TOWN STANDARD DETAILS, LATEST REVISION, FOR ADDITIONAL INFORMATION AND
- 8. THE CONTRACTOR SHALL STABILIZE ALL DITCHES, SWALES, AND PONDS PRIOR TO DIRECTING FLOW TO
- 9. THE SMALLEST PRACTICAL AREA SHALL BE DISTURBED DURING CONSTRUCTION, BUT IN NO CASE SHALL EXCEED 5 ACRES AT ANY ONE TIME BEFORE DISTURBED AREAS ARE STABILIZED.

## **CONSTRUCTION SEQUENCE NOTES**

- 1. INSTALL STABILIZED CONSTRUCTION ENTRANCE.
- 2. CUT AND CLEAR TREES WITHIN AREA OF DISTURBANCE UNLESS OTHERWISE NOTED.
- 3. CONSTRUCT TEMPORARY AND PERMANENT EROSION CONTROL FACILITIES PRIOR TO ANY EARTH
- 4. ROUGH GRADE SITE OR PHASED WORK AREA. ALL SLOPES SHALL BE STABILIZED IMMEDIATELY AFTER GRADING. ALL DISTURBED AREAS SHALL BE STABILIZED NO LATER THAN 72 HOURS AFTER CONSTRUCTION ACTIVITY CEASES. IF EARTHWORK TEMPORARILY CEASES ON A PORTION OF OR THE ENTIRE SITE, AND WILL NOT RESUME WITHIN 21 DAYS, THE AREA SHALL BE STABILIZED.
- AN AREA SHALL BE CONSIDERED STABILIZED IF:
- A) BASE COURSE GRAVELS HAVE BEEN INSTALLED IN AREAS TO BE PAVED;
- B) A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED; C) A MINIMUM OF 3" OF NON-EROSIVE MATERIAL SUCH STONE OR RIPRAP HAS BEEN INSTALLED. OR
- D) EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.
- 5. CONSTRUCT CULVERTS, BIO-RETENTION AREAS AND SWALES. PLACE HEADWALLS, RIP-RAP AND OTHER DRAINAGE FACILITIES ACCORDING TO PLAN. THE CONTRACTOR SHALL STABILIZE ALL DITCHES, SWALES, AND BIO-RETENTION AREAS PRIOR TO DIRECTING FLOW TO THEM.
- 6. INSTALL ALL UNDERGROUND UTILITIES.
- 7. CONSTRUCT BUILDING.
- 8. CONSTRUCT PARKING AND FINISH GRADE SITE ACCORDING TO PLAN. ALL SLOPES SHALL BE STABILIZED IMMEDIATELY AFTER GRADING.
- 9. INSPECT AND MAINTAIN ALL EROSION AND SEDIMENTATION CONTROL MEASURES EVERY 7 DAYS AND WITHIN 24 HOURS OF A STORM EVENT OF 0.5 INCHES OR GREATER.
- 10. COMPLETE PERMANENT SEEDING AND LANDSCAPING.
- 11. REMOVE TEMPORARY EROSION CONTROL MEASURES ONCE ALL AREAS ARE STABILIZED WITH A SUITABLE STAND OF GRASS, PAVEMENT OR COMPACTED GRAVELS.
- \*REFER TO THE STORMWATER MANAGEMENT PLAN FOR EROSION CONTROL MEASURES AND SPECIFIC INFORMATION.

## OVERWINTER STABILIZATION

- 1. PERMANENT STABILIZATION CONSISTS OF AT LEAST 85% VEGETATION, PAVEMENT/GRAVEL BASE OR RIPRAP.
- 2. DO NOT EXPOSE SLOPES OR LEAVE SLOPES EXPOSED OVER THE WINTER OR FOR ANY OTHER EXTENDED TIME OF WORK SUSPENSION UNLESS FULLY PROTECTED WITH MULCH.
- 3. APPLY HAY MULCH AT TWICE THE STANDARD RATE (150 LBS. PER 1,000 SF). THE MULCH MUST BE THICK ENOUGH SUCH THAT THE GROUND SURFACE WILL NOT BE VISIBLE AND MUST BE ANCHORED.
- 4. USE MULCH AND MULCH NETTING OR AN EROSION CONTROL MULCH BLANKET OR MIX FOR ALL SLOPES GREATER THAN 8% OR OTHER AREAS EXPOSED TO DIRECT WIND.
- 5. INSTALL AN EROSION CONTROL BLANKET IN ALL DRAINAGE WAYS (BOTTOM AND SIDES) WITH A SLOPE
- 6. SEE THE VEGETATION MEASURES FOR MORE INFORMATION ON SEEDING DATES AND TYPES.

## WINTER CONSTRUCTION

OF THE SITE IS WITHOUT STABILIZATION AT ANY ONE TIME.

- IN ADDITION TO THE OTHER NOTES CONTAINED ON THIS PLAN, THE FOLLOWING MUST BE IMPLEMENTED: 1. WINTER EXCAVATION AND EARTHWORK SHALL BE COMPLETED AS SUCH THAT NO MORE THAN 1 ACRE
- 2. AN AREA WITHIN 100 FEET OF A PROTECTED NATURAL RESOURCE MUST BE PROTECTED WITH A DOUBLE ROW OF SEDIMENT BARRIER.
- 3. TEMPORARY MULCH MUST BE APPLIED WITHIN 7 DAYS OF SOIL EXPOSURE OR PRIOR TO ANY STORM EVENT, BUT AFTER EVERY WORKDAY IN AREAS WITHIN 100 FEET FROM A PROTECTED NATURAL
- 4. AREAS THAT HAVE BEEN BROUGHT TO FINAL GRADE MUST BE PERMANENTLY MULCHED THE SAME
- 5. ALL EXCAVATIONS SHALL BE THOROUGHLY SECURED ON A DAILY BASIS BY THE CONTRACTOR AT THE 5. IN THE EVENT OF A SNOWFALL GREATER THAN 1 INCH (FRESH OR CUMULATIVE), THE SNOW SHALL BE REMOVED FROM THE AREAS DUE TO BE SEEDED AND MULCHED.
  - 6. LOAM SHALL BE FREE OF FROZEN CLUMPS BEFORE IT IS APPLIED.
  - 7. A DITCH THAT WILL BE CONSTRUCTED DURING THE WINTER MUST BE STABILIZED WITH RIPRAP.
  - 8. ALL PROPOSED VEGETATIVE AREAS THAT DO NOT EXHIBIT A MINIMUM OF 85% VEGETATION GROWTH BY OCTOBER 15, OR WHICH ARE DISTURBED AFTER OCTOBER 15, SHALL BE STABILIZED BY SEEDING AND INSTALLING EROSION CONTROL BLANKETS ON SLOPES GREATER THAN 3:1, AND SEEDING AND PLACING 3 TO 4 TONS OF MULCH PER ACRE, SECURED WITH ANCHORED NETTING. ELSEWHERE, THE INSTALLATION OF EROSION CONTROL BLANKETS OR MULCH AND NETTING SHALL NOT OCCUR OVER ACCUMULATED SNOW OR ON FROZEN GROUND AND SHALL BE COMPLETED IN ADVANCE OF THAW OR SPRING MELT EVENTS.
  - 9. ALL DITCHES OR SWALES WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15, OR WHICH ARE DISTURBED AFTER OCTOBER 15, SHALL BE STABILIZED TEMPORARILY WITH STONE OR EROSION CONTROL BLANKETS APPROPRIATE FOR THE DESIGN FLOW CONDITIONS.
  - 10. AFTER OCTOBER 15, INCOMPLETE ROAD OR PARKING SURFACES, WHERE WORK HAS STOPPED FOR THE WINTER SEASON, SHALL BE PROTECTED WITH A MINIMUM OF 3 INCHES OF GRAVEL PER NHDOT

## **EROSION CONTROL NOTES**

DURING CONSTRUCTION AND THEREAFTER, EROSION CONTROL MEASURES ARE TO BE IMPLEMENTED AS

- 1. INSTALLATION OF SILTATION FENCES AND OTHER FROSION CONTROL MEASURES SHALL BE COMPLETED PRIOR TO THE START OF SITE WORK IN ANY GIVEN AREA. PREFABRICATED SILTATION FENCES SHALL BE INSTALLED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.
- 2. SILTATION FENCES AND OTHER EROSION CONTROL MEASURES SHALL BE KEPT CLEAN DURING CONSTRUCTION AND REMOVED WHEN ALL SLOPES HAVE A VEGETATIVE COVER OF GREATER THAN 85%. EROSION CONTROL MEASURES SHALL BE INSPECTED ON A WEEKLY BASIS AND AFTER EVERY
- 3. EXISTING VEGETATION IS TO REMAIN UNDISTURBED WHEREVER POSSIBLE.
- 4. THE AREA OF LAND EXPOSED AND THE TIME OF EXPOSURE SHALL BE MINIMIZED. ALL DISTURBED AREAS SHALL BE STABILIZED WITHIN 72 HOURS AFTER FINAL GRADING.
- 5. ALL DISTURBED AREAS SHALL HAVE A MINIMUM OF 4" OF LOAM. ACCEPTABLE SEED MIXES ARE AS

## PARK SEED MIX (NHDOT TYPE 44) MIN. 135 LBS/ACRE:

33% CREEPING RED FESCUE (MIN. 45 LBS/ACRE) 42% PERENNIAL RYEGRASS (MIN. 55 LBS/ACRE) 21% KENTUCKY BLUEGRASS (MIN. 30 LBS/ACRE) 4% REDTOP (MIN. 5 LBS/ACRE)

TEMPORARY LAWN MIX: (MIN. 47 LBS/ACRE)

SLOPE SEED (WF) (NHDOT TYPE 45) MIX 3:1 OR GREATER SLOPES (MIN. 105 LBS/ACRE): 38% CREEPING RED FESCUE (MIN. 40 LBS/ACRE)

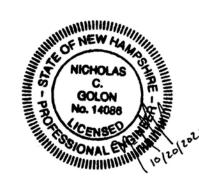
32% PERENNIAL RYEGRASS (MIN. 35 LBS/ACRE) 5% REDTOP (MIN. 5 LBS/ACRE) 5% ALSIKE CLOVER (MIN. 5 LBS/ACRE) 5% BIRDSFOOT TREFOIL (MIN. 5 LBS/ACRE) 3% LANCE-LEAF COREOPSIS (MIN. 3 LBS/ACRE) 3% OXEYE DAISY (MIN. 3 LBS/ACRE) 3% BUTTERFLY WEED (MIN. 3 LBS/ACRE) 3% BLACKEYED SUSAN (MIN. 3 LBS/ACRE)

(MIN. 3 LBS/ACRE) SLOPE SEED (NHDOT TYPE 44) MIX 3:1 OR GREATER SLOPES (MIN. 90 LBS/ACRE):

44% CREEPING RED FESCUE (MIN. 40 LBS/ACRE) 38% PERENNIAL RYEGRASS (MIN. 35 LBS/ACRE) (MIN. 5 LBS/ACRE) 6% ALSIKE CLOVER (MIN. 5 LBS/ACRE) 6% BIRDSFOOT TREFOIL (MIN. 5 LBS/ACRE)

3% WILD LUPINE

- A. PLACING LOAM ON SITE a. ALL SUBGRADE ELEVATIONS SHOULD BE UNIFORMLY GRADED TO RECEIVE LOAM AND SHALL BE INSPECTED AND APPROVED BY THE GENERAL CONTRACTOR PRIOR TO PLACEMENT OF LOAM. b. PLACE LOAM TO FORM A MINIMUM DEPTH OF 4" WHEN ROLLED, UNLESS OTHERWISE
- c. ALL DEPRESSIONS EXPOSED DURING THE ROLLING SHALL BE FILLED WITH ADDITIONAL LOAM.
- B. SEED BED PREPARATION AFTER FINISH GRADING AND JUST BEFORE SEEDING, THE AREAS TO BE SEEDED SHALL BE LOOSENED TO PROVIDE A ROUGH, FIRM BUT FINELY PULVERIZED SEEDBED. THE INTENT IS A TEXTURE CAPABLE OF RETAINING WATER, SEED AND FERTILIZER WHILE REMAINING STABLE AND ALLOWING SEED TIME TO GERMINATE. SEED SHALL BE APPLIED TO THE CONDITIONED SEEDBED NOT MORE THAN 48 HOURS AFTER THE SEEDBED HAS BEEN PREPARED.
- 6. LIME AND FERTILIZER SHALL BE INCORPORATED INTO THE SOIL PRIOR TO OR AT THE TIME OF AT THE TIME OF SEEDING. A MINIMUM OF 2 TONS PER ACRE OF AGRICULTURAL LIMESTONE AND 500 LBS. PER ACRE OF 10-20-20 FERTILIZER SHALL BE APPLIED. SEEDING PRACTICES SHALL COMPLY WITH LOCAL USDA SOIL CONSERVATION SERVICES RECOMMENDATIONS.
- 7. HAY MULCH OR JUTE MATTING SHALL BE USED WHERE INDICATED ON THE PLANS. A MINIMUM OF 1.5 TONS OF MULCH PER ACRE SHALL BE APPLIED. MULCH SHALL BE ANCHORED IN PLACE WHERE NECESSARY. JUTE MATTING SHALL BE LAID IN THE DIRECTION OF RUNOFF FLOW AND APPLIED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
- 8. PERMANENT OR TEMPORARY COVER MUST BE IN PLACE BEFORE THE GROWING SEASON ENDS. WHEN SEEDED AREAS ARE MULCHED, PLANTINGS MAY BE MADE FROM EARLY SPRING TO EARLY OCTOBER. WHEN SEEDED AREAS ARE NOT MULCHED, PLANTINGS SHOULD BE MADE FROM EARLY SPRING TO MAY 20 OR FROM AUGUST 15 TO SEPTEMBER 15. NO DISTURBED AREA SHALL BE LEFT EXPOSED DURING WINTER MONTHS.
- 9. WATER SHALL BE USED FOR DUST CONTROL IN APPROPRIATE AREAS.
- 10. RUNOFF MUST BE DIRECTED TO TEMPORARY PRACTICES UNTIL STORMWATER BMPS ARE STABILIZED.
- 11. ROADWAYS AND PARKING AREAS MUST BE STABILIZED WITHIN 72 HOURS OF ACHIEVING FINISHED



TAX MAP 312Z LOT 6

## **NOTES**

THE BARN AT BULL MEADOW 63 BOG ROAD, CONCORD, NEW HAMPSHIRE

OWNED BY

**BULL MEADOW RE HOLDINGS, LLC** PREPARED FOR

STEPHENS BROTHERS PROPERTIES, LLC

SCALE: NOT TO SCALE

OCTOBER 20, 2021

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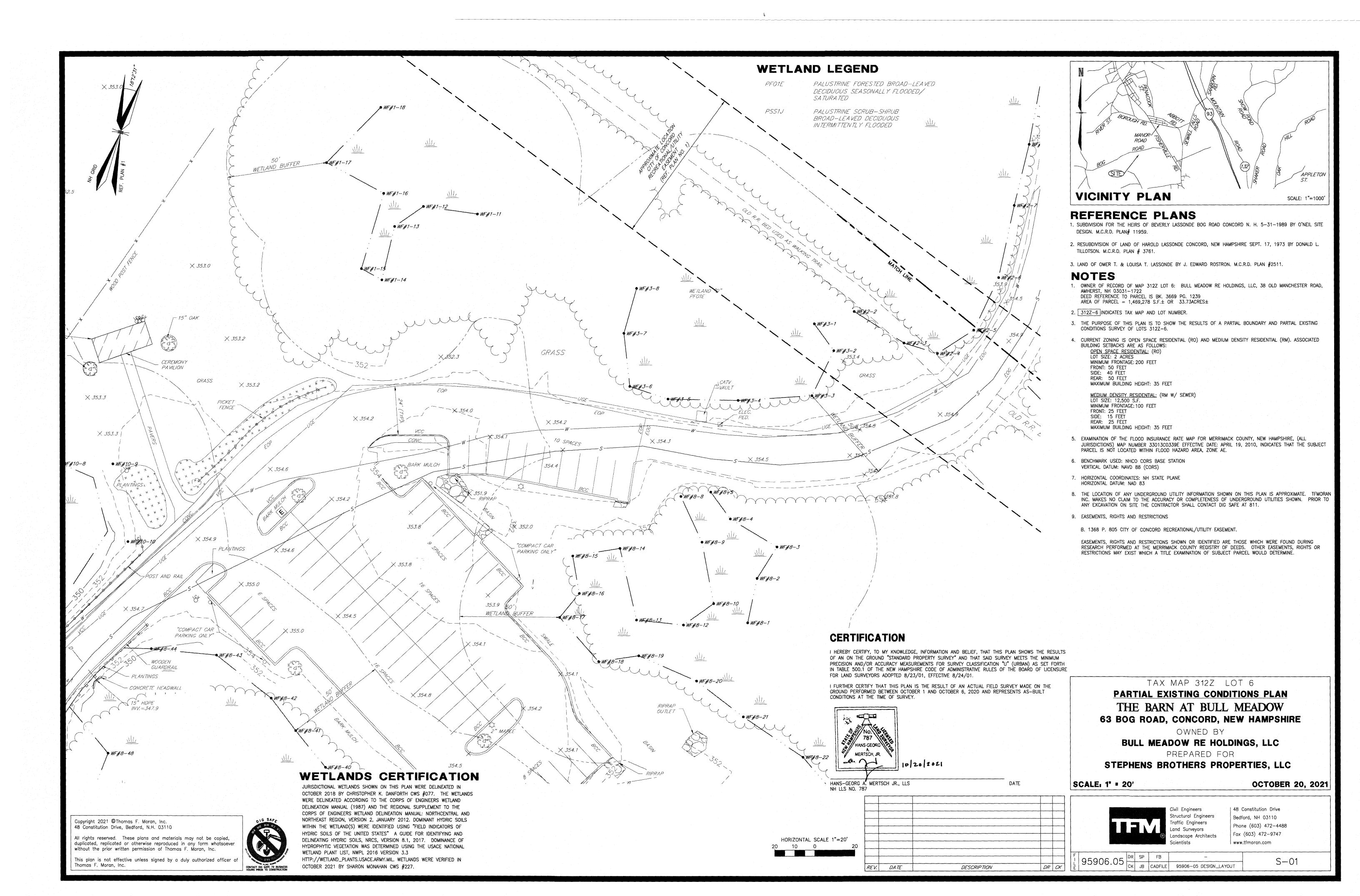
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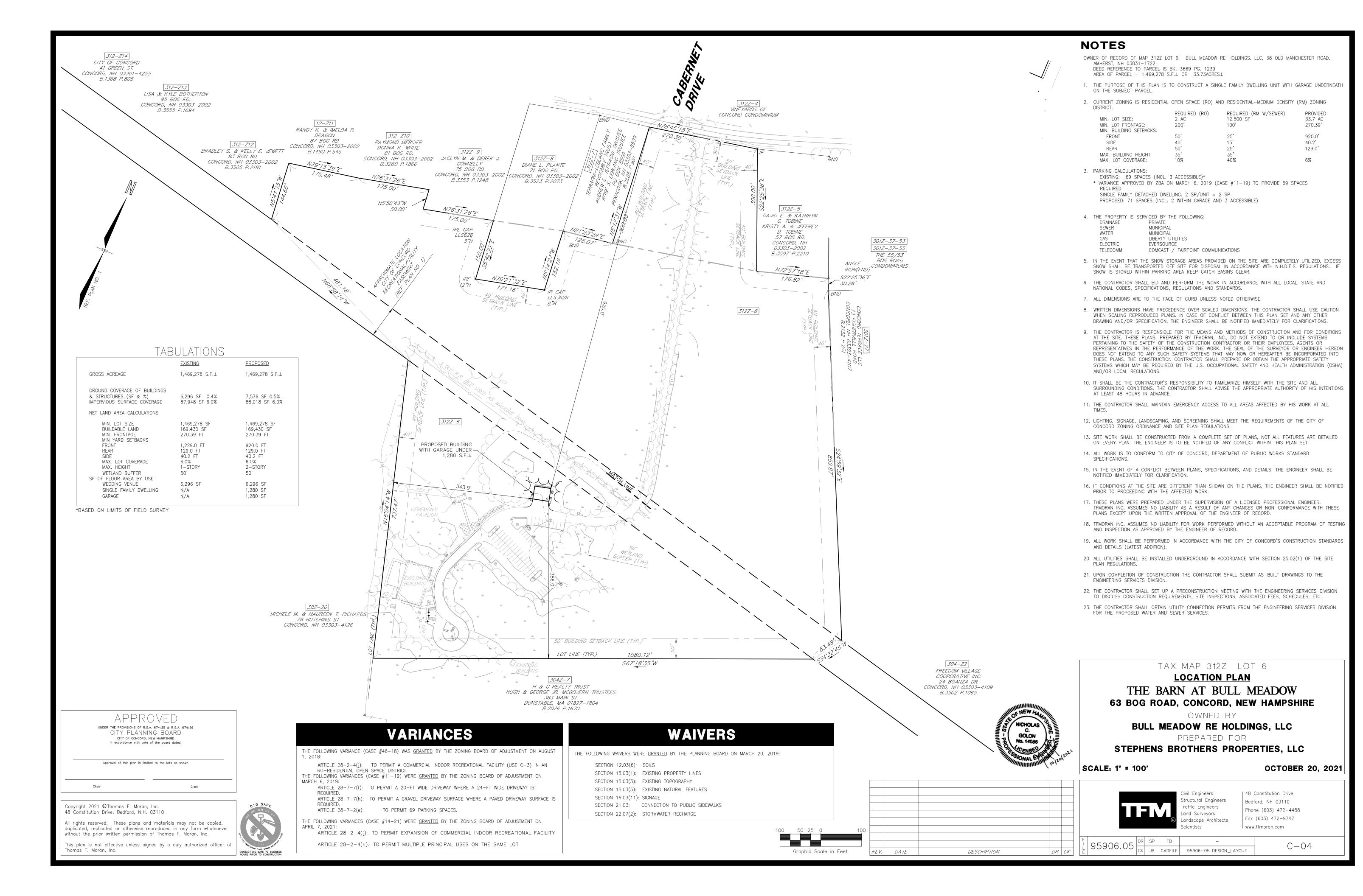
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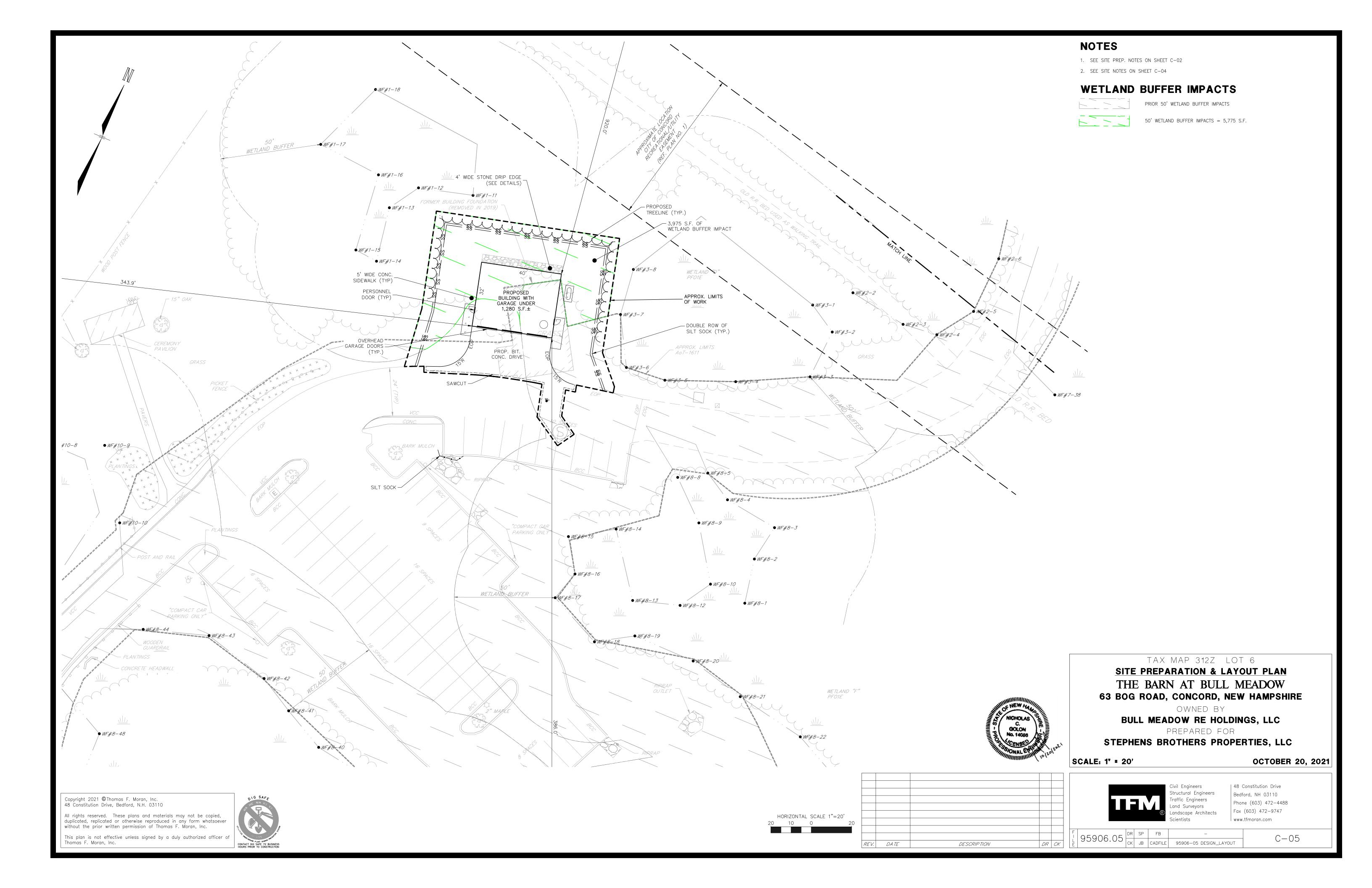
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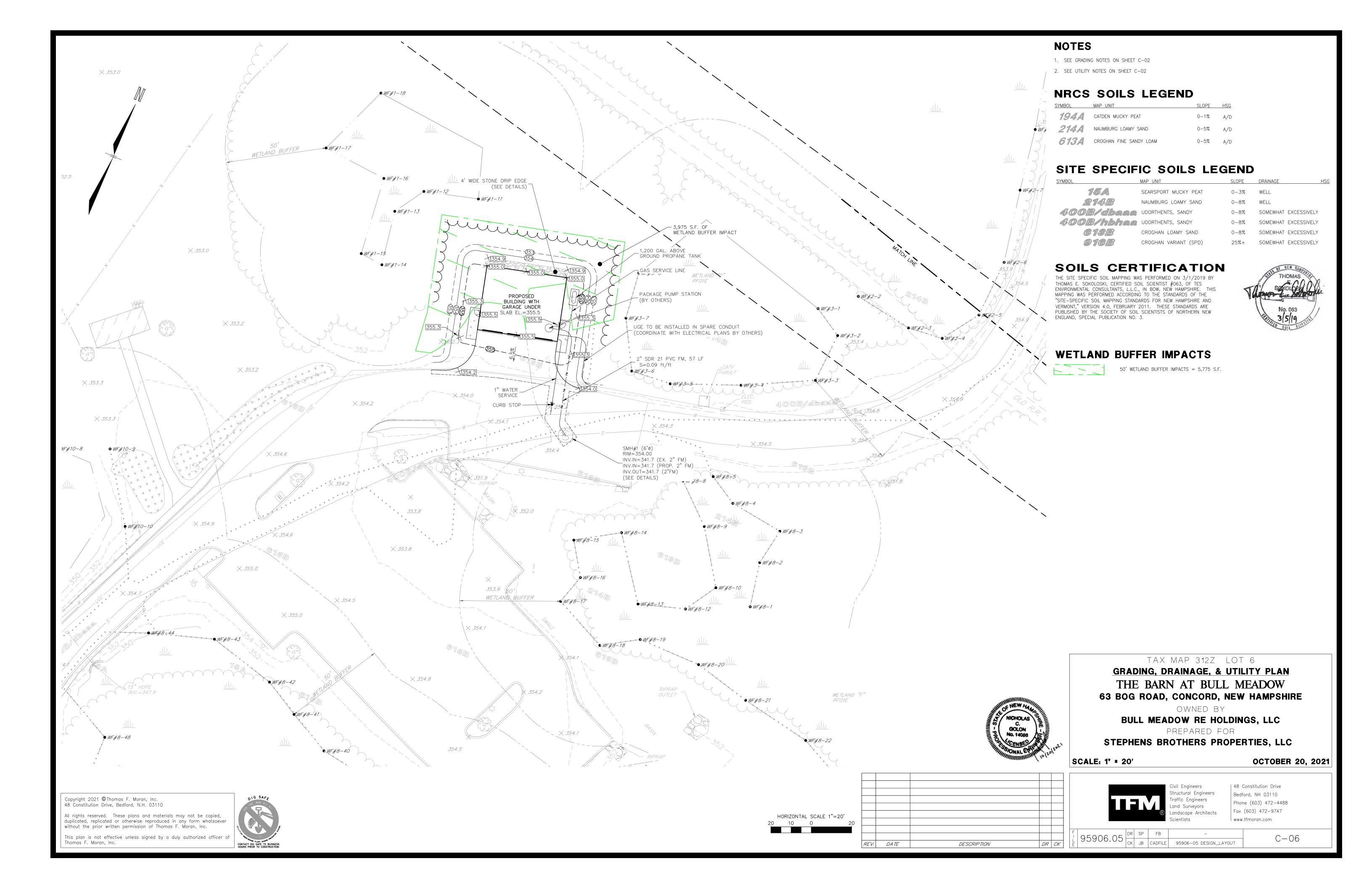
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# **●** WF#1-18 ●WF#1-17 • WF#1-16 4' WIDE STONE DRIP EDGE (SEE DETAILS) PROPOSED ● WF#1-13 TREELINE (TYP.) **♦** WF#1−15 • WF#1-14 PACKAGE PUMP STATION PROPOSED ● WF#2-2 (BY OTHERS) OX. LIMITS BUILDING WITH OF WORK GARAGE UNDER SLAB EL.=355.5 ₩F#3-7 - DOUBLE ROW OF SILT SOCK (TYP.) ● WF#3-2 \_\_\_\_\_ APPROX. LIMITS 2" SDR 21 PVC FM, 57 LF S=0.09 ft/ft**●** WF#3−6 / - W #3-3----• WF#3-5----• WF#3-4 WF#8+5 ● WF#8-8 SILT SOCK ● WF#8-9 ● WF#8-3 **●** WF#8-2 WF#8-16 **●** WF#8-43 WETLAND "F" OUTLET PF01E Copyright 2021 © Thomas F. Moran, Inc. 48 Constitution Drive, Bedford, N.H. 03110 All rights reserved. These plans and materials may not be copied, HORIZONTAL SCALE 1"=20' duplicated, replicated or otherwise reproduced in any form whatsoever without the prior written permission of Thomas F. Moran, Inc. This plan is not effective unless signed by a duly authorized officer of

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## **NOTES**

- 1. IT IS BEING PROPOSED TO CONSTRUCT A SINGLE FAMILY RESIDENTIAL DWELLING UNIT WITH GARAGE UNDERNEATH.
- 2. TOTAL SITE AREA: TOTAL AREA OF DISTURBANCE: 0.2 AC
- 3. SOILS SHOWN ARE FROM THE SOIL SURVEY OF HILLSBOROUGH COUNTY, NH, EASTERN PART, PREPARED BY USDA-SOIL CONSERVATION SERVICES. 194A - CATDEN MUCKY PEAT, 0 TO 1% SLOPES, PONDED
- 4. STORM WATER DRAINAGE SYSTEM IS SHOWN ON THE PLAN. SEE GRADING & DRAINAGE PLAN FOR RIM, INVERT, PIPE LENGTH, AND SLOPE INFORMATION. POST-CONSTRUCTION RUNOFF COEFFICIENT: C=0.34 IMPERVIOUS SURFACE AREA: 2.3± AC
- 5. <u>STABILIZATION PRACTICES</u> FOR EROSION AND SEDIMENTATION CONTROLS:

214A - NAUMBURG LOAMY SAND, 0 TO 5%

TEMPORARY STABILIZATION - TOPSOIL STOCKPILES AND DISTURBED AREAS OF THE CONSTRUCTION SITE THAT WILL NOT BE REDISTURBED FOR 14 DAYS OR MORE MUST BE STABILIZED BY THE 14TH DAY AFTER THE LAST DISTURBANCE. THE TEMPORARY SEED SHALL BE ANNUAL RYE APPLIED AT THE RATE OF 1.1 LBS PER 1,000 SF. PRIOR TO SEEDING, A MINIMUM OF 2 TONS PER ACRE OF AGRICULTURAL LIMESTONE AND 500 LBS PER ACRE OF 10-20-20 FERTILIZER SHALL BE APPLIED. AFTER SEEDING, EACH AREA SHALL BE MULCHED WITH 1.5 TONS PER ACRE OF HAY MULCH. MULCH TO BE ANCHORED IN PLACE WHERE NECESSARY. AREAS OF THE SITE THAT WILL BE PAVED WILL BE TEMPORARILY STABILIZED BY APPLYING GEOTEXTILES AND A STONE SUB-BASE UNTIL BITUMINOUS PAVEMENT CAN BE APPLIED. CALCIUM CHLORIDE SHALL BE USED FOR DUST CONTROL IF NEEDED.

PERMANENT STABILIZATION - DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES PERMANENTLY CEASES SHALL BE STABILIZED WITH PERMANENT SEED NO LATER THAN 3 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY. THE PERMANENT SEED MIX SHALL CONSIST OF 0.45 LBS/1,000 SF TALL FESCUE, 0.20 LBS/1,000 SF CREEPING RED FESCUE, AND 0.20 LBS/1,000 SF BIRDSFOOT TREFOIL. PRIOR TO SEEDING, A MINIMUM OF 2 TONS PER ACRE OF AGRICULTURAL LIMESTONE AND 500 LBS PER ACRE IF 10-20-20 FERTILIZER SHALL BE APPLIED. AFTER SEEDING, EACH AREA SHALL BE MULCHED WITH 1.5 TONS PER ACRE OF HAY MULCH. MULCH TO BE ANCHORED IN PLACE WHERE NECESSARY.

STRUCTURAL PRACTICES FOR EROSION AND SEDIMENTATION CONTROL

SILT SOCK - WILL BE CONSTRUCTED AROUND THE PERIMETER OF THE DISTURBED AREAS AND WILL DELINEATE THE LIMITS OF WORK FOR THE PROPOSED CONSTRUCTION. THE SILT SOCK WILL BE INSTALLED BY OTHERS. POSTS SHALL BE USED WITH AT LEAST 6" OF THE POST BURIED BELOW THE GROUND SURFACE TO PREVENT THE SILT SOCK FROM FORMING GAPS NEAR THE GROUND SURFACE. RUNOFF WILL FLOW THROUGH THE OPENINGS IN THE SILT SOCK WHILE RETAINING THE SEDIMENT WITHIN THE CONSTRUCTION AREA.

## 7. <u>STORM WATER MANAGEMENT</u>

STORM WATER DRAINAGE FOR DEVELOPED AREAS WILL BE COLLECTED BY THE EXISTING OPEN AND CLOSED DRAINAGE SYSTEMS. APPROXIMATELY 33.5 ACRES OF THE 33.7 ACRE SITE WILL REMAIN UNTOUCHED AND IN ITS NATURAL STATE.

- 8. ALL CONSTRUCTION DEBRIS AND WASTE MATERIALS SHALL BE COLLECTED AND STORED IN SECURE DUMPSTERS OR APPROVED ENCLOSURE AND REMOVED FROM THE SITE ON A WEEKLY BASIS. NO CONSTRUCTION WASTE SHALL BE BURIED ON SITE. PORTABLE TOILET SANITARY WASTE FACILITIES WILL BE PROVIDED DURING CONSTRUCTION AND MAINTAINED/DISPOSED OF ON A REGULAR BASIS IN ACCORDANCE WITH TOWN AND STATE REGULATIONS.
- 9. THRUST BLOCK SHALL BE PROVIDED WHERE WATER LINE CHANGES DIRECTION OR TAPS INTO EXISTING
- 10. A LIST OF CONSTRUCTION ITEMS AND OTHER PRODUCTS USED ON THIS PROJECT SHALL BE KEPT ON RECORD WITH THIS PLAN ONSITE. ALL CHEMICALS, PETROLEUM PRODUCTS AND OTHER MATERIALS USED DURING CONSTRUCTION SHALL BE STORED IN A SECURE AREA, AND PRECAUTIONS USED TO PREVENT POTENTIAL SOURCES OF CONTAMINATION OR POLLUTION. ANY SPILL OF THESE TYPES OF SUBSTANCES SHALL BE CLEANED UP AND DISPOSED OF IN A LEGAL MANNER AS SPECIFIED BY STATE REGULATIONS AND THE MANUFACTURER. ANY SPILL IN AMOUNTS EQUAL TO OR EXCEEDING REPORTABLE QUANTITY AS DEFINED BY THE EPA SHALL TAKE THE FOLLOWING STEPS:
- NOTIFY THE NATIONAL RESPONSE CENTER IMMEDIATELY AT (888) 424-8802; IN WASHINGTON, D.C.,
- WITHIN`14 DAYS, SUBMIT A WRITTEN DESCRIPTION OF THE RELEASE TO THE EPA REGIONAL OFFICE PROVIDING THE DATE AND CIRCUMSTANCES OF THE RELEASE AND THE STEPS TO BE TAKEN TO
- PREVENT ANOTHER RELEASE - MODIFY THE POLLUTION PREVENTION PLAN TO INCLUDE THE INFORMATION LISTED ABOVE.

- THE FOLLOWING GOOD HOUSEKEEPING PRACTICES WILL BE FOLLOWED ONSITE DURING THE CONSTRUCTION PROJECT.
- AN EFFORT WILL BE MADE TO STORE ONLY ENOUGH PRODUCT REQUIRED TO DO THE JOB; - ALL MATERIALS STORED ONSITE WILL BE STORED IN A NEAT, ORDERLY MANNER IN THEIR APPROPRIATE CONTAINERS AND, IF POSSIBLE, UNDER A ROOF OR OTHER ENCLOSURE;
- PRODUCTS WILL BE KEPT IN THEIR ORIGINAL CONTAINERS WITH THE ORIGINAL MANUFACTURER'S
- SUBSTANCES WILL NOT BE MIXED WITH ONE ANOTHER UNLESS RECOMMENDED BY THE MANUFACTURER:
- WHENEVER POSSIBLE, ALL OF A PRODUCT WILL BE USED UP BEFORE DISPOSING OF THE CONTAINER; - MANUFACTURERS' RECOMMENDATIONS FOR PROPER USE AND DISPOSAL WILL BE FOLLOWED; - TRASH DUMPSTERS SHALL BE GASKETED OR HAVE A SECURE WATERTIGHT LID AND BE PLACED AWAY FROM STORMWATER CONVEYANCES AND DRAINS. - THE SITE SUPERINTENDENT WILL INSPECT DAILY TO ENSURE PROPER USE AND DISPOSAL OF

- HAZARDOUS PRODUCTS:
  THESE PRACTICES ARE USED TO REDUCE THE RISKS ASSOCIATED WITH HAZARDOUS MATERIALS:

  ONLY A DEPOSIT OF THE PRODUCT OF THE P - PRODUCTS WILL BE KEPT IN ORIGINAL CONTAINERS UNLESS THEY ARE NOT RESEALABLE; - ORIGINAL LABELS AND MATERIAL SAFETY DATA WILL BE RETAINED; THEY CONTAIN IMPORTANT
- PRODUCT INFORMATION; - IF SURPLUS PRODUCT MUST BE DISPOSED OF, MANUFACTURER'S OR LOCAL AND STATE RECOMMENDED METHODS FOR PROPER DISPOSAL WILL BE FOLLOWED.

# PRODUCT SPECIFIC PRACTICES: THE FOLLOWING PRODUCT SPECIFIC PRACTICES WILL BE FOLLOWED ON SITE:

REV. DATE

PETROLEUM PRODUCTS:
ALL ONSITE VEHICLES WILL BE MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTATIVE MAINTENANCE TO REDUCE THE CHANCE OF LEAKAGE, PETROLEUM PRODUCTS WILL BE STORED IN TIGHTLY SEALED CONTAINERS WHICH ARE CLEARLY LABELED. ANY ASPHALT SUBSTANCES USED ONSITE WILL BE APPLIED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.

FERTILIZERS:
FERTILIZERS USED WILL BE APPLIED ONLY IN THE MINIMUM AMOUNTS RECOMMENDED BY THE MANUFACTURER. ONCE APPLIED, FERTILIZER WILL BE WORKED INTO THE SOIL TO LIMIT EXPOSURE TO STORM WATER, STORAGE WILL BE IN A COVERED SHED. THE CONTENTS OF ANY PARTIALLY USED BAGS OF FERTILIZER WILL BE TRANSFERRED TO A SEALABLE PLASTIC BIN TO AVOID SPILLS.

**DESCRIPTION** 



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TAX MAP 312Z LOT 6

ALL CONTAINERS WILL BE TIGHTLY SEALED AND STORED WHEN NOT REQUIRED FOR USE. EXCESS PAINT WILL NOT BE DISCHARGED TO THE STORM SEWER BUT WILL BE PROPERLY DISPOSED OF

CONCRETE TRUCKS: EXCESS CONCRETE SHALL BE USED IN AREAS DESIGNATED BY THE SITE CONTRACTOR. WASH WATER

ACCORDING TO MANUFACTURER'S INSTRUCTIONS OR STATE AND LOCAL REGULATIONS.

AREA FOR DRUM WASH WATER.

AND CLEANUP SUPPLIES.

SHALL BE DISPOSED OF USING BEST MANAGEMENT PRACTICES. BUILDING CONTRACTOR IS

PREVIOUS SECTIONS OF THIS PLAN, THE FOLLOWING PRACTICES WILL BE FOLLOWED FOR SPILL

PLASTIC AND METAL TRASH CONTAINERS SPECIFICALLY FOR THIS PURPOSE.

- ALL SPILLS WILL BE CLEANED UP IMMEDIATELY AFTER DISCOVERY.

LOCAL GOVERNMENT AGENCY, REGARDLESS OF SIZE.

STORAGE AREA AND IN THE OFFICE TRAILER ONSITE.

AND DATES WHEN STABILIZATION MEASURES ARE INITIATED ONSITE.

RESPONSIBLE FOR REMOVAL OF ALL DRUM WASH WATER ASSOCIATED WITH CONCRETE FOR THE

BUILDING PAD. SITE CONTRACTOR TO COORDINATE AND PROVIDE BUILDING CONTRACTOR WITH AN

N ADDITION TO THE GOOD HOUSEKEEPING AND MATERIAL MANAGEMENT PRACTICES DISCUSSED IN THE

- MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEANUP WILL BE CLEARLY POSTED AND SITE PERSONNEL WILL BE MADE AWARE OF THE PROCEDURES AND THE LOCATION OF THE INFORMATION

- MATERIALS AND EQUIPMENT NECESSARY FOR SPILL CLEANUP WILL BE KEPT IN THE MATERIAL STORAGE AREA ONSITE. EQUIPMENT AND MATERIALS WILL INCLUDE BUT NOT BE LIMITED TO

BROOMS, DUST PANS, MOPS, RAGS, GLOVES, GOGGLES, KITTY LITTER, SAND, SAWDUST, AND

- THE SPILL AREA WILL BE KEPT WELL VENTILATED AND PERSONNEL WILL WEAR APPROPRIATE

PROTECTIVE CLOTHING TO PREVENT INJURY FROM CONTACT WITH A HAZARDOUS SUBSTANCE.

- SPILLS OF TOXIC OR HAZARDOUS MATERIAL WILL BE REPORTED TO THE APPROPRIATE STATE OR

SPILL FROM REOCCURRING AND HOW TO CLEAN UP THE SPILL IF THERE IS ANOTHER ONE. A

- THE SITE SUPERINTENDENT RESPONSIBLE FOR THE DAY-TO-DAY SITE OPERATIONS, WILL BE THE

INDIVIDUALS WILL EACH BECOME RESPONSIBLE FOR A PARTICULAR PHASE OF PREVENTION AND

CLEANUP. THE NAMES OF RESPONSIBLE SPILL PERSONNEL WILL BE POSTED IN THE MATERIAL

11. THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN RECORDS OF CONSTRUCTION ACTIVITIES, INCLUDING

12. THE CONTRACTOR SHALL PERFORM INSPECTIONS OR HAVE A CONSULTING ENGINEER PERFORM

DATES OF MAJOR GRADING ACTIVITIES, DATES WHEN CONSTRUCTION ACTIVITIES HAVE TEMPORARILY

INSPECTIONS EVERY SEVEN (7) DAYS AND WITHIN 24 HOURS AFTER A STORM OF 0.5" OR GREATER.

MODIFICATION SHALL BE IMPLEMENTED AND ADDED TO THE PLAN AS RECOMMENDED BY THE QUALIFIED

INSPECTIONS REPORTS ARE TO BE KEPT ON FILE AT THE SITE WITH THIS PLAN. MAINTENANCE OR

CEASED ON A PORTION OF THE SITE, DATES WHEN WORK IS COMPLETED ON A PORTION OF THE SITE,

SPILL PREVENTION AND CLEANUP COORDINATOR. THEY WILL DESIGNATE AT LEAST THREE OTHER SITE PERSONNEL WHO WILL EACH RECEIVE SPILL PREVENTION AND CLEANUP TRAINING. THESE

DESCRIPTION OF THE SPILL, WHAT CAUSED IT, AND THE CLEANUP MEASURES WILL ALSO BE

- THE SPILL PREVENTION PLAN WILL BE ADJUSTED TO INCLUDE MEASURES TO PREVENT THIS TYPE OF

STEPHENS BROTHERS PROPERTIES, LLC

SCALE: 1" = 20'

48 Constitution Drive



Structural Engineers and Surveyors andscape Architects

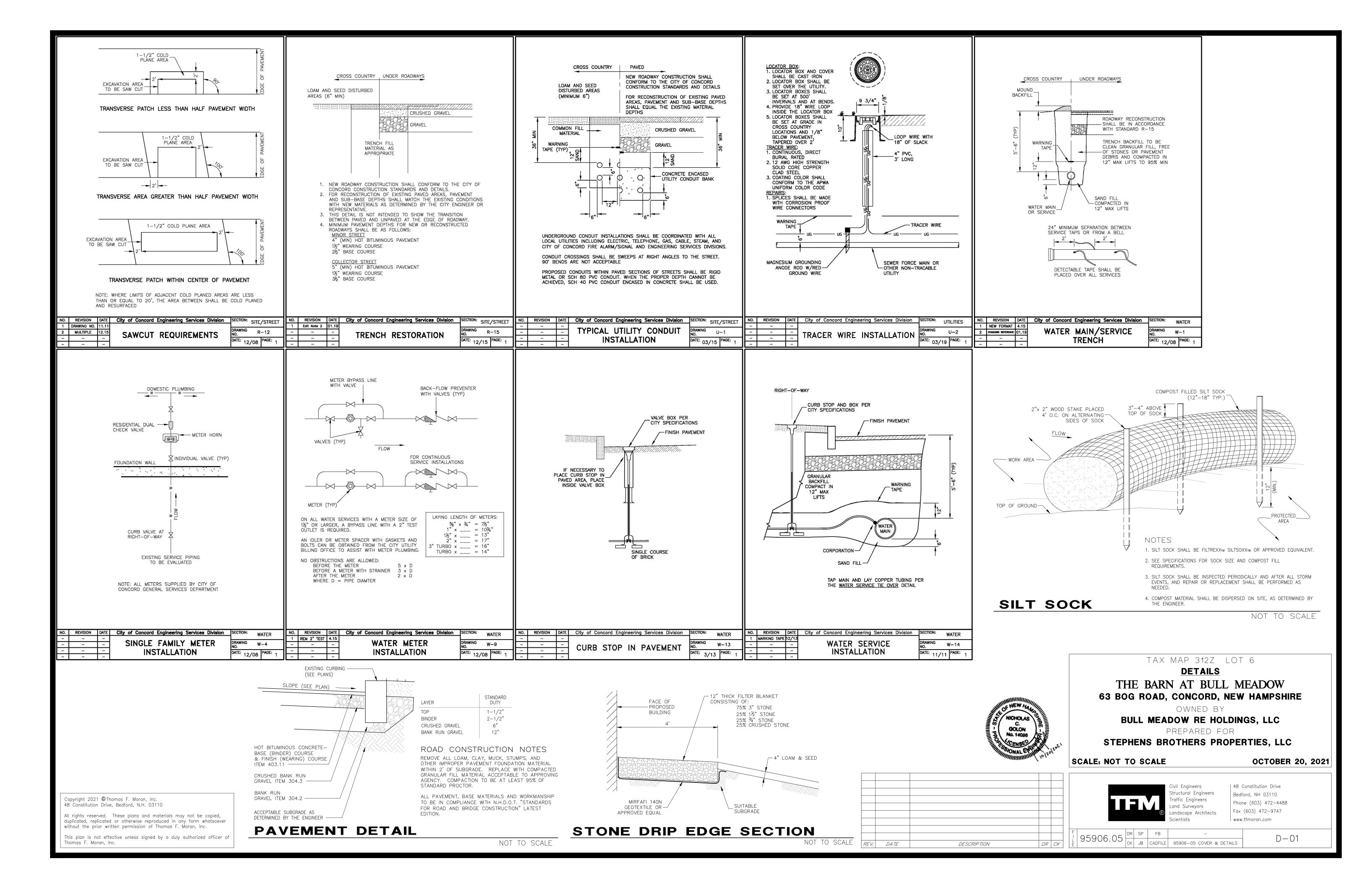
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OCTOBER 20, 2021

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DR CK



## **GENERAL SEWER NOTES**

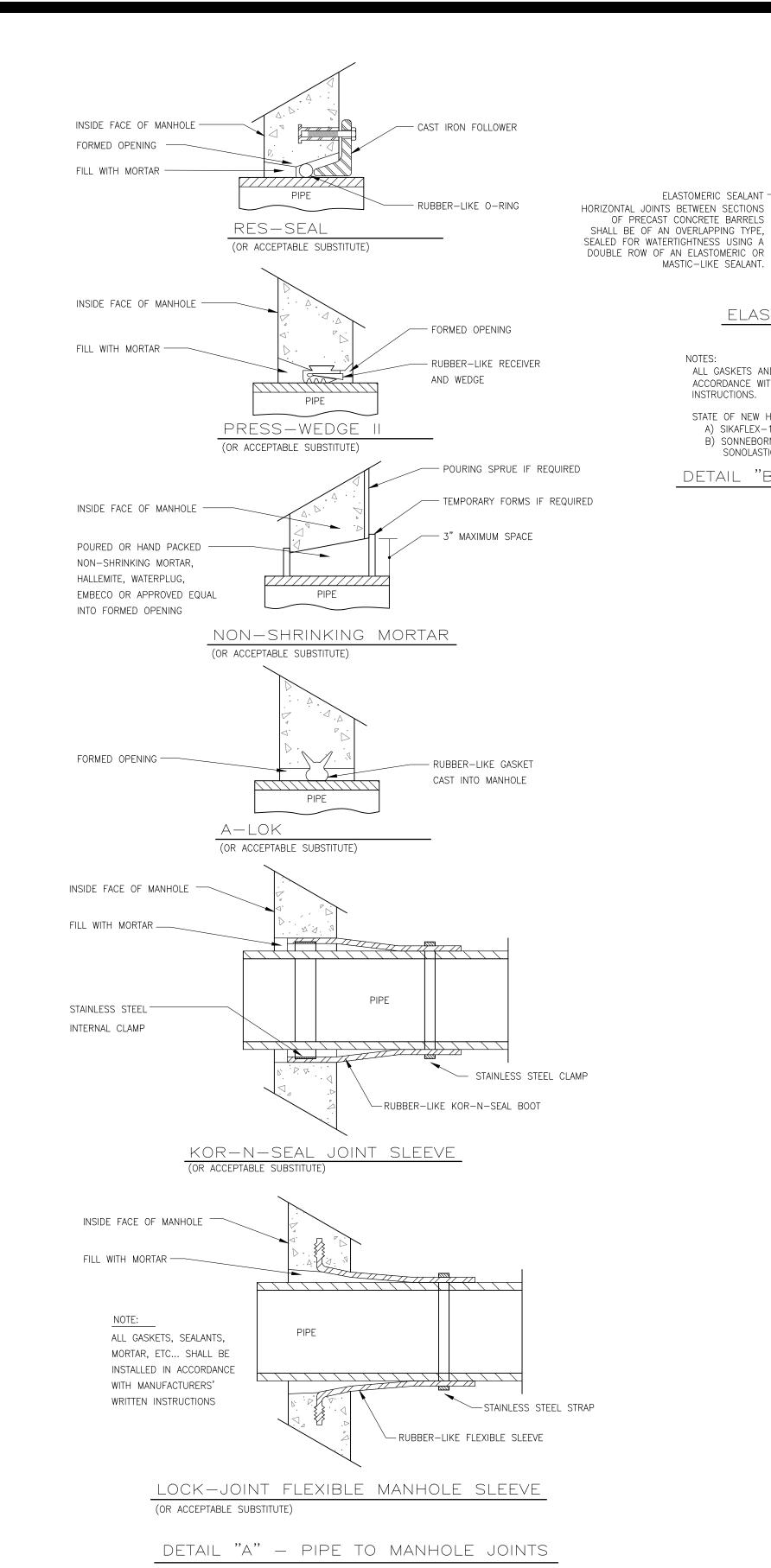
- IT IS THE INTENTION THAT THE MANHOLE, INCLUDING ALL COMPONENT PARTS, HAVE ADEQUATE SPACE, STRENGTH AND LEAKPROOF QUALITIES CONSIDERED NECESSARY FOR THE INTENDED SERVICE. SPACE REQUIREMENTS AND CONFIGURATIONS, SHALL BE AS SHOWN ON THE DRAWING MANHOLES SHALL BE AN ASSEMBLY OF PRECAST SECTIONS, WITH STEEL REINFORCEMENT, WITH ADEQUATE JOINTING, OR CONCRETE CAST MONOLITHICALLY IN PLACE WITH REINFORCEMENT. IN ANY APPROVED MANHOLE, THE COMPLETE STRUCTURE SHALL BE OF SUCH MATERIAL AND QUALITY AS TO WITHSTAND LOADS OF 8 TONS (H-20 LOADING) WITHOUT FAILURE AND PREVENT LEAKAGE IN EXCESS OF ONE GALLON PER DAY PER VERTICAL FOOT OF MANHOLE, CONTINUOUSLY FOR THE LIFE OF THE STRUCTURE. A PERIOD GENERALLY IN EXCESS OF 25 YEARS IS TO BE UNDERSTOOD IN BOTH CASES.
- BARRELS, CONE SECTIONS AND CONCRETE GRADE RINGS SHALL BE PRECAST REINFORCED CONCRETE AND SHALL CONFORM ENV-WQ 704.12 & 704.13.
- 3. PRECAST CONCRETE BARREL SECTIONS, CONES AND BASES SHALL CONFORM TO ASTM C478-06.
- 4. BASE SECTIONS SHALL BE OF MONOLITHIC CONSTRUCTION TO A POINT AT LEAST 6 INCHES ABOVE THE CROWN OF THE INCOMING PIPE.
- MANHOLE CONE SECTIONS SHALL BE ECCENTRIC IN SHAPE.
- ALL PRECAST SECTIONS AND BASES SHALL HAVE THE DATE OF MANUFACTURE AND THE NAME OR TRADEMARK OF THE MANUFACTURER IMPRESSED OR INDELIBLY MARKED ON THE INSIDE WALL.
- . ALL PRECAST SECTIONS AND BASES SHALL BE COATED ON THE EXTERIOR WITH A BITUMINOUS DAMP-PROOFING COATING.
- 8. SHALLOW MANHOLE: IN LIEU OF A CONE SECTION, WHEN MANHOLE DEPTH IS LESS THAN 6 FEET, A REINFORCED CONCRETE SLAB COVER MAY BE USED HAVING AN ECCENTRIC ENTRANCE OPENING AND CAPABLE OF SUPPORTING H-20 LOADS.
- HORIZONTAL JOINTS BETWEEN SECTIONS OF PRECAST CONCRETE BARRELS SHALL BE OF AN OVERLAPPING TYPE, SEALED FOR WATERTIGHTNESS USING A DOUBLE ROW OF AN ELASTOMERIC OR MASTIC-LIKE SEALANT. APPROVED ELASTOMERIC SEALANTS ARE:

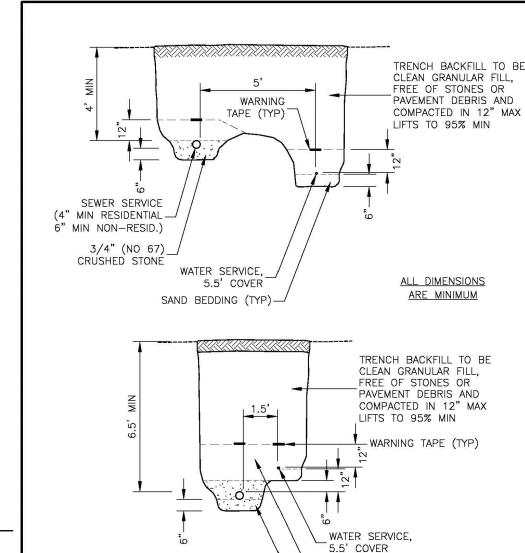
SONNEBORN BUILING PRODUCTS-SONOLASTIC SL-1

- 10. THE MINIMUM INTERNAL DIAMETER OF MANHOLES SHALL BE 48 INCHES. FOR SEWERS LARGER THAN 24-INCH DIAMETER. MANHOLE DIAMETERS SHALL BE INCREASED SO AS TO PROVIDE AT LEAST 12-INCHES OF SHELF ON EACH SIDE OF THE SEWER.
- 11. LEAKAGE TEST SHALL BE PERFORMED IN ACCORDANCE TO ENV-WQ 704.17.
- (a) ALL MANHOLES SHALL BE TESTED FOR LEAKAGE USING A VACUUM TEST IN ACCORDANCE WITH THE ASTM C1244 STARNDARD IN EFFECT WHEN THE TESTING IS PERFORMED.
- (b) THE MANHOLE VACUUM TEST SHALL CONFORM TO THE FOLLOWING:
- 1. THE INITIAL VACUUM GUAGE TEST PRESSURE SHALL BE 10 INCHES Hg.
- 2. THE MINIMUM ACCEPTABLE TEST HOLD TIME FOR 1-INCH Hg PRESSURE DROP TO 9 INCHES SHALL BE:
- A. NOT LESS THAN 2 MINUTES FOR MANHOLES LESS THAN 10 FEET DEEP.
- B. NOT LESS THAN 2.5 MINUTES FOR MANHOLES 10 TO 15 FEET DEEP.
- C. NOT LESS THAN 3 MINUTES FOR MANHOLES MORE THAN 15 FEET DEEP.
- (c) THE MANHOLE SHALL BE REPAIRED AND RETESTED IF THE TEST HOLD TIMES FAIL TO ACHIEVE THE ACCEPTANCE LIMITS SPECIFIED IN (b) ABOVE.
- (d) INVERTS AND SHELVES SHALL NOT BE INSTALLED UNTIL AFTER SUCCESSFUL TESTING IS COMPLETE.
- (e) FOLLOWING COMPLETION OF THE LEAKAGE TEST, THE FRAME AND COVER SHALL BE PLACED ON TOP OF THE MANHOLE OR SOME OTHER MEANS USED TO PREVENT ACCIDENTAL ENTRY BY UNAUTHORIZED PERSONS, CHILDREN OR ANIMALS, UNTIL THE CONTRACTOR IS READY TO MAKE FINAL ADJUSTMENT TO GRADE.
- 12. BRICK MASONRY FOR SHELF, INVERT AND GRADE ADJUSTMENT SHALL COMPLY WITH ASTM C32-05, CLAY OR SHALE, FOR GRADE SS HARD
- 13. MORTAR SHALL BE COMPOSED OF PORTLAND CEMENT AND SAND WITH OR WITHOUT HYDRATED LIME ADDITION. PROPORTIONS IN MORTAR OF PARTS BY VOLUMES SHALL BE:
- (a) 4.5 PARTS SAND AND 1.5 PARTS CEMENT; OR (b) 4.5 PARTS SAND, 1 PART CEMENT AND 0.5 PART HYDRATED LIME
- CEMENT SHALL BE TYPE II PORTLAND CEMENT CONFORMING TO ASTM C150-05. HYDRATED LIME SHALL BE TYPE S CONFORMING TO ASTM C207-06 "STANDARD SPECIFICATIONS FOR HYDRATED LIME FOR MASONRY PURPOSES". SAND SHALL CONSIST OF INERT NATURAL SAND CONFORMING TO ASTM C33-03 "STANDARD SPECIFICATIONS FOR CONCRETE, FINE AGGREGATES".
- 14. INVERTS AND SHELVES: MANHOLES SHALL HAVE A BRICK PAVED OR PRECAST CONCRETE SHELF AND INVERT, CONSTRUCTED TO CONFORM TO THE SIZE OF THE PIPE AND FLOW. AT CHANGES IN DIRECTIONS, THE INVERTS SHALL BE LAID OUT IN CURVES OF THE LONGEST RADIUS POSSIBLE TANGENT TO THE CENTER LINE OF THE SEWER PIPES. SHELVES SHALL BE CONSTRUCTED TO THE ELEVATION OF THE HIGHEST PIPE CROWN AND SLOPE TO DRAIN TOWARD THE FLOWING THROUGH CHANNEL. UNDERLAYMENT OF INVERT AND SHELF SHALL CONSIST OF
- 15. FRAMES AND COVERS: MANHOLES FRAMES AND COVERS SHALL BE OF HEAVY DUTY DESIGN, CLASS 30, CONFORMING TO ASTM A48/48M AND PROVIDE A 30-INCH CLEAR OPENING. 3-INCH WORD (MINIMUM HEIGHT) LETTERS. SEWER. SHALL BE PLAINLY CAST INTO THE TO SURFACE. THE CASTING SHALL BE OF EVEN GRAINED CAST IRON, SMOOTH, AND FREE FROM SCALE, LUMPS, BLISTERS, SAND HOLES AND DEFECTS. CONTACT SURFACES OF COVERS AND FRAMES SHALL BE MACHINED AT THE FOUNDRY TO PREVENT ROCKING OF COVERS IN ANY
- 16. BEDDING: PRECAST BASES SHALL BE PLACED ON A 6-INCH LAYER OF COMPACTED BEDDING MATERIAL THAT CONFORMS TO ASTM C33-03 NO. 67 STONE AND FREE FROM CLAY, LOAM AND ORGANNIC MATTER. THE EXCAVATION SHALL BE PROPERLY DEWATERED WHILE PLACING BEDDING MATERIAL AND SETTING OF THE BASE OR POURING CONCRETE. WATER-STOPS SHALL BE USED AT THE HORIZONTAL JOINT OF THE CAST-IN-PLACE MANHOLES.

100% PASSING 1" SCREEN 90-100% PASSING 3/4" SCREEN 20-55% PASSING 3/8" SCREEN 0-10% PASSING #4 SIEVE 0-5% PASSING #8 SIEVE

- 17. FLEXIBLE JOINT: A FLEXIBLE JOINT SHALL BE PROVIDED WIGHIN THE FOLLOWING DISTANCES FROM ANY MANHOLE CONNECTION: (a) WITHIN 48 INCHES FOR REINFORCED CONCRETE PIPE (RCP). (b) WITHIN 60 INCHES FOR PVC PIPE LARGER THAN 15" DIAMETER.
- 18. NO FLEXIBLE JOINT SHALL BE REQUIRED FOR DUCTILE IRON PIPE OR PVC PIPE UP THROUGH 15-INCH DIAMETER.
- 19. PIPE TO MANHOLE JOINTS SHALL BE ONLY AS FOLLOWS:
- A. ELASTOMERIC, RUBBER SLEEVE WITH WATERTIGHT JOINTS AT THE MANHOLE OPENING AND PIPE SURFACES.
- B. CAST INTO WALL OR SECUREED WITH STAINLESS STEEL CLAMPS.
- C. ELASTOMERIC SEALING RING CAST IN THE MANHOLE OPENING WITH THE SEAL FORMED ON THE SURFACE OF THE PIPE BY COMPRESSION
- D. NON-SHRINK GROUTED JOINTS WHERE WATERTIGHT BONDING TO THE MANHOLE AND PIPE CAN BE OBTAINED.





ELASTOMERIC SEALANT

DETAIL "B" - HORIZONTAL JOINTS

ALL GASKETS AND SEALANTS SHALL BE INSTALLED IN

ACCORDANCE WITH MANUFACTURERS' WRITTEN

B) SONNEBORN BUILDING PRODUCTS

STATE OF NEW HAMPSHIRE APPROVED PRODUCTS

INSTRUCTIONS.

A) SIKAFLEX-12-SL

SONOLASTIC SI – 1

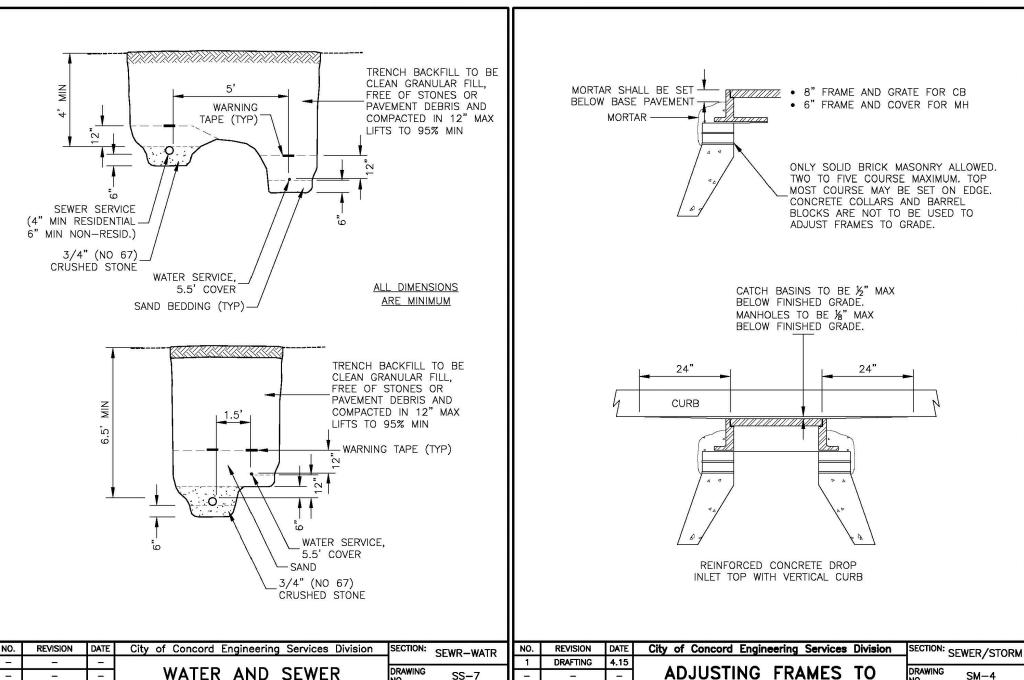
ALL DIMENSIONS ARE MINIMUM TRENCH BACKFILL TO BE CLEAN GRANULAR FILL, FREE OF STONES OR PAVEMENT DEBRIS AND COMPACTED IN 12" MAX LIFTS TO 95% MIN - WARNING TAPE (TYP) 5.5' COVER 3/4" (NO 67) CRUSHED STÓNE

WATER AND SEWER

SERVICE TRENCH

SS-7

: 03/15 PAGE:



**GRADE** 

SM-4

E: 12/08 PAGE: 1

TAX MAP 312Z LOT 6

## **DETAILS**

THE BARN AT BULL MEADOW 63 BOG ROAD, CONCORD, NEW HAMPSHIRE

OWNED BY

**BULL MEADOW RE HOLDINGS, LLC** PREPARED FOR

STEPHENS BROTHERS PROPERTIES, LLC

SCALE: NOT TO SCALE

| 48 Constitution Drive





Structural Engineers Traffic Engineers and Surveyors Landscape Architects

Bedford, NH 03110 Phone (603) 472-4488 Fax (603) 472-9747 www.tfmoran.com

OCTOBER 20, 2021

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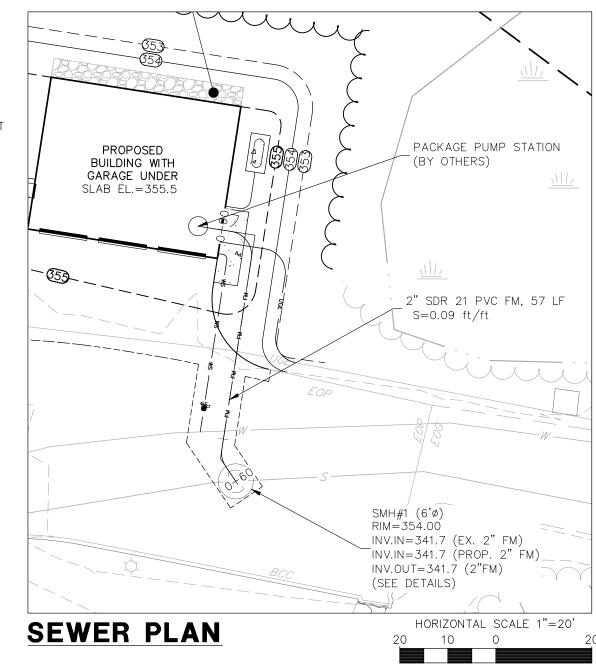
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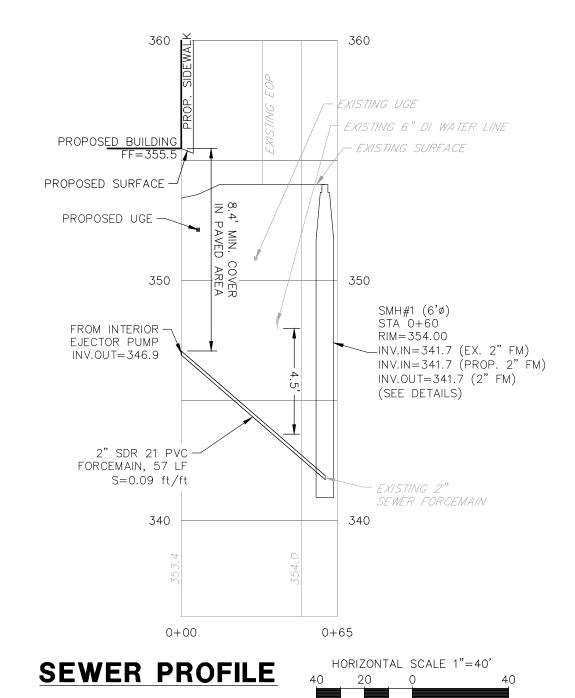
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## FORCEMAIN DESIGN NOTES

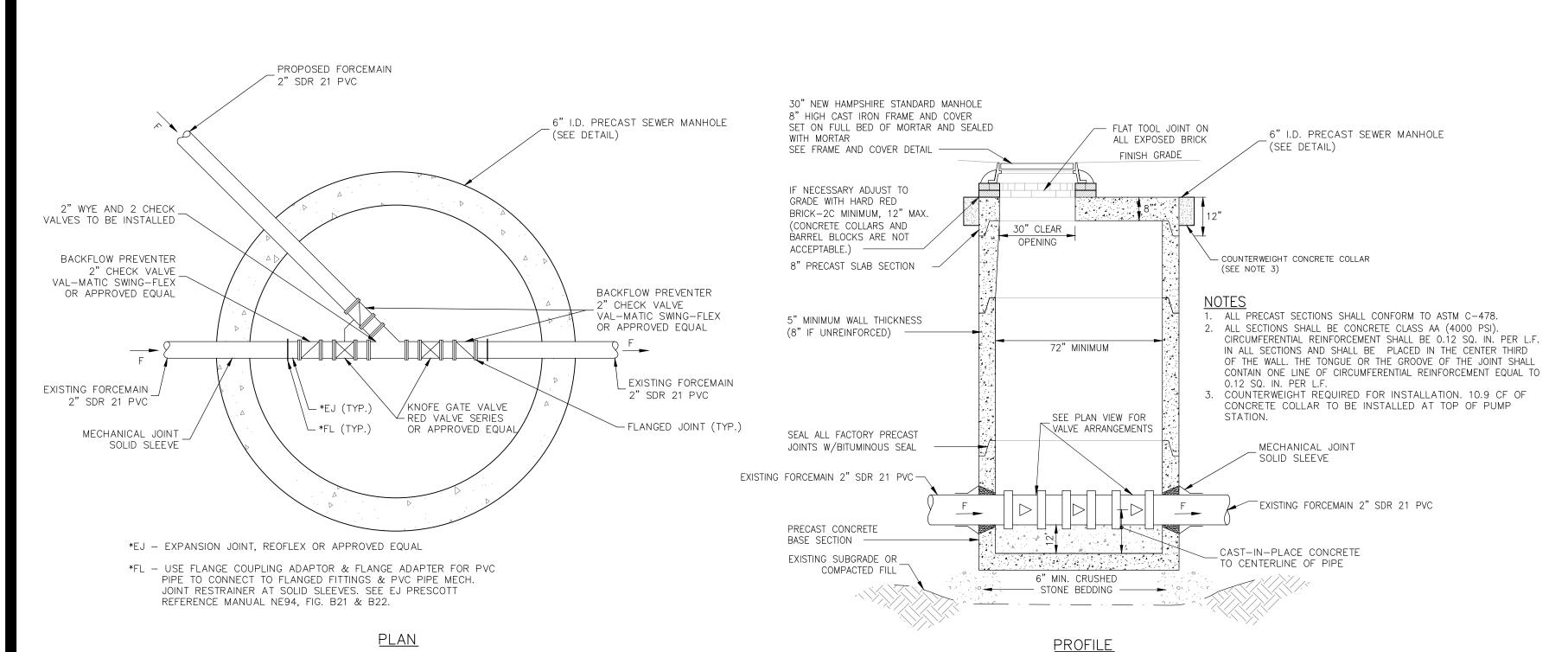
## Env-Wq 704.07 FORCE MAINS:

- . FORCE MAINS FOR CONSTANT SPEED PUMPS SHALL BE SIZED TO YIELD A CLEANSING VELOCITY OF 3 FEET PER SECOND OR GREATER AT DESIGN PUMP CAPACITY.
- 2. FORCE MAINS FOR VARIABLE SPEED PUMPS SHALL BE SIZED TO YIELD A VELOCITY OF 2 FEET PER SECOND OR GREATER AT AVERAGE DAILY DESIGN FLOW.
- 3. FORCE MAIN SHALL BE 3 INCHES IN NOMINAL DIAMETER
- 4. FORCE MAINS SHALL BE PROVIDED WITH AUTOMATIC AIR RELIEF VALVE(S) AT HIGH POINTS TO PREVENT AIR LOCKING.
- 5. FORCE MAINS SHALL ENTER THE GRAVITY SEWER SYSTEM AT THE FLOW LINE OF THE RECEIVING
- FORCE MAINS SHALL BE PROVIDED WITH DRAINAGE BLOW-OFFS, PROPERLY VALVED, AT LOW POINTS.
   SPACE SHALL BE AVAILABLE AT SUCH LOCATIONS FOR HANDLING THE DISPLACED WASTE WITHOUT
   DANGER OF POLLUTION OR HEALTH HAZARD.
- 7. FORCE MAINS SHALL BE DESIGNED IN ACCORDANCE WITH Env-Wq 704.07, CONSTRUCTED WITH MATERIALS AS SPECIFIED IN Env-Wq 704.08, AND TESTED AS SPECIFIED IN Env-Wq 704.09.
- 8. THRUST BLOCKS MADE FROM INORGANIC, CORROSION—RESISTANT MATERIAL SHALL BE PLACED AT ALL BENDS, ELBOWS, TEES AND JUNCTIONS.
- 9. FORCE MAINS SHALL BE DESIGNED TO WITHSTAND HYDROSTATIC PRESSURES OF AT LEAST 2.5 TIMES THE DESIGN TOTAL DYNAMIC HEAD.





VERTICAL SCALE 1"=4"



## SEWER MANHOLE FORCEMAIN TO FORCEMAIN CONNECTION DETAIL

NOT TO SCALE

## **EXISTING PUMP CHAMBER**

 PUMP INFORMATION
 1
 2

 ELEV. HEAD:
 8.32
 8.32

 FRICTION HEAD:
 47.7
 47.7

 TOTAL HEAD:
 56
 56

## WASTEWATER FLOW INFORMATION

VOLUME OF WET WELL: 211 GAL/FT PUMPING TIME: 55 MIN

## WASTEWATER FLOW CALCULATION

180-SEAT WEDDING VENUE 180 SEATS x 8GPD/PERSON = 1,440 GPD

PEAK FLOW = 1,440 GPD X 6 (PEAKING FACTOR) = 8,640 GPD

## PROPOSED PUMP CALCULATIONS

# PUMP INFORMATION PUMP ELEV. HEAD (PROPOSED): 0.0'

FRICTION HEAD (PROPOSED): 1.0'
TOTAL HEAD (PROPOSED): 1.0'
TOTAL HEAD (EXISTING + PROPOSED): 57.0'

## **WASTEWATER FLOW INFORMATION**

DESIGN FLOW (PROPOSED): 1 GPM
VOLUME OF WET WELL: 211 GAL/FT
PUMPING TIME: 45 MIN

## WASTEWATER FLOW CALCULATION

SINGLE-FAMILY DWELLING UNIT
2 BEDROOMS x 150 GPD/BEDROOM = 300 GPD

PEAK FLOW (PROPOSED) = 300 GPD X 6 (PEAKING FACTOR)

 $= 18,00 \text{ GPD } (\underline{1 \text{ GPM}})$ PEAK FLOW (PROPOSED + EXISTING) =  $\underline{10,440 \text{ GPD } (7.25 \text{ GPM})}$ 

## PROPOSED PUMP SELECTION

- 1. SUBMERSIBLE GRINDER PUMP SHALL BE ABLE TO PUMP 30 GPM AGAINST 57 FEET OF TOTAL DYNAMIC HEAD.
- 2. PUMP SHALL HAVE DISCHARGE OUTLET OF 2"Ø.
- 3. PACKAGE PUMP STATION SHALL BE BY OTHERS. COORDINATE WITH MECHANICAL, ELECTRICAL AND PLUMBING ENGINEER(S) FOR INTERIOR LOCATION.



TAX MAP 312Z LOT 6

## **DETAILS**

THE BARN AT BULL MEADOW 63 BOG ROAD, CONCORD, NEW HAMPSHIRE

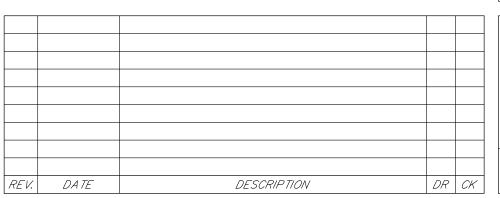
OWNED BY

BULL MEADOW RE HOLDINGS, LLC
PREPARED FOR

STEPHENS BROTHERS PROPERTIES, LLC

SCALE: NOT TO SCALE

OCTOBER 20, 2021





Civil Engineers
Structural Engineers
Traffic Engineers
Land Surveyors
Landscape Architects
Scientists

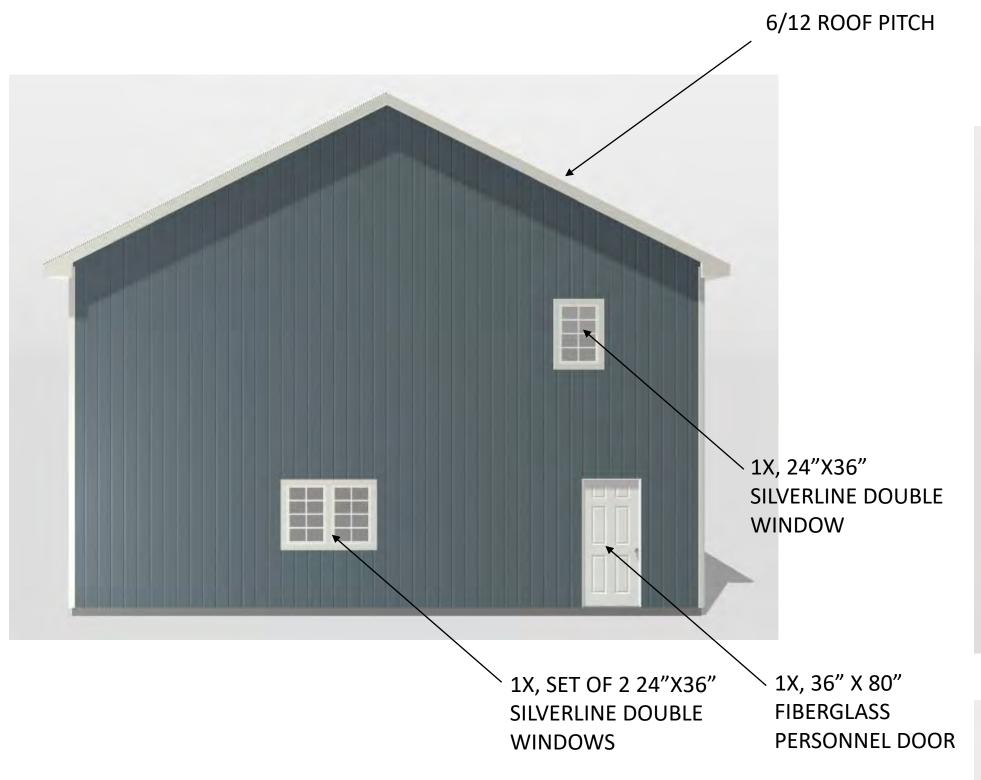
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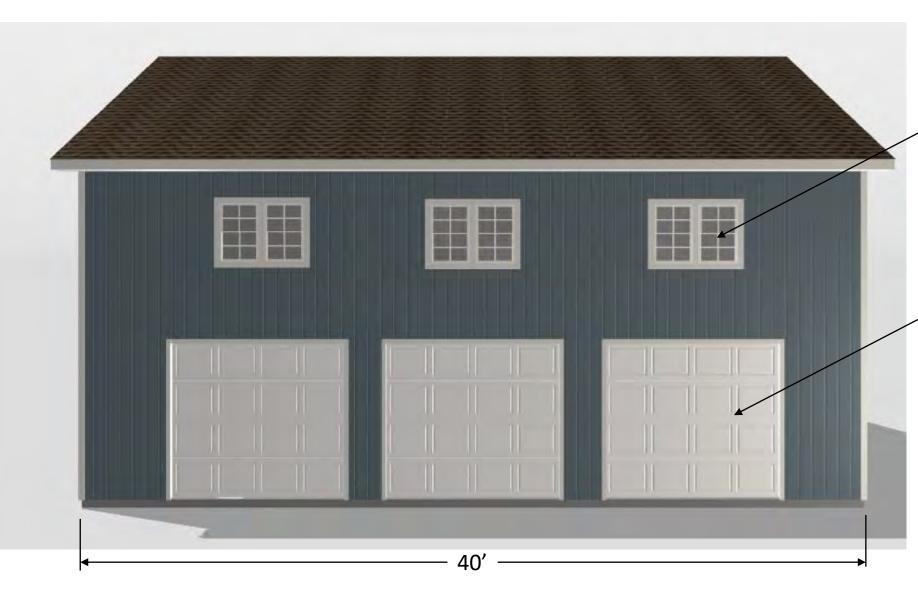
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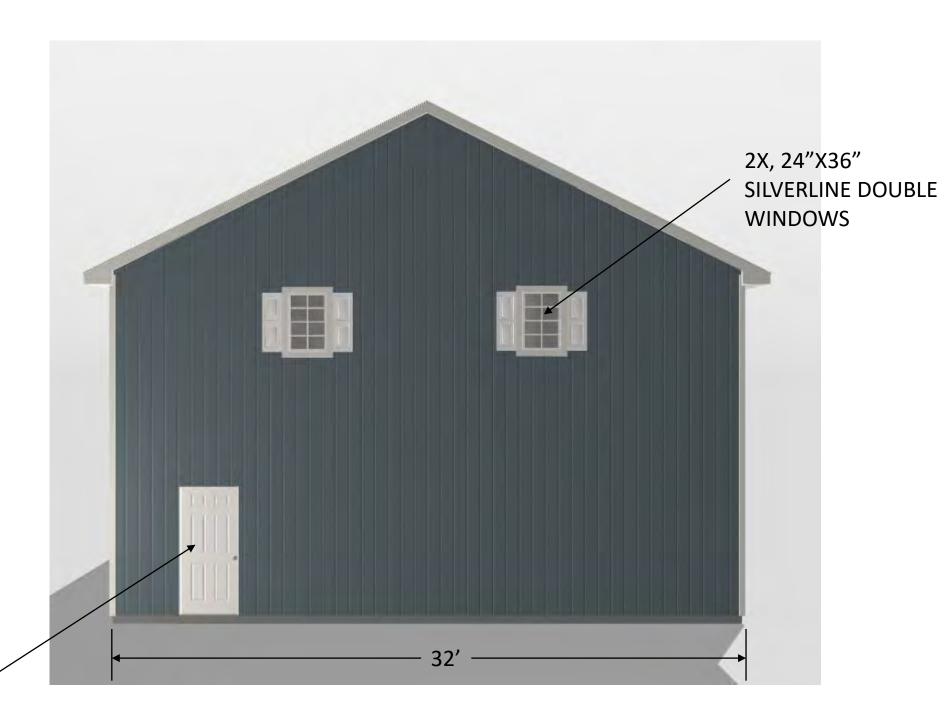
3X, SETS OF 2 24"X36" SILVERLINE DOUBLE WINDOWS

3X, 9' x 8' RAISED PANEL GARAGE DOORS (CENTERED)

> 1X, 36" X 80" **FIBERGLASS** PERSONNEL DOOR

SILVERLINE DOUBLE

WINDOW



# 2X, SETS OF 2 24"X36" SILVERLINE DOUBLE WINDOWS `1X, 24"X36"

**BULL MEADOW RE** HOLDINGS, LLC.

DESIGNED JMS 10-18-21 DRAWN CHECKED EHS 10-18-21 APPROVED EHS 10-18-21 Drawing NO.

**63BogGarage-RevA**SHEET 1 OF 1

TITLE

63 Bog Rd. Garage

# 3. NO POST IN CENTER.

**NOTES:** 

- 4. 2X6 WALLS
- 5. TRUSSES 24" ON CENTER.
- 6. 12" OVERHANG ON ALL SIDES.

1. 9'3" FIRST FLOOR CEILING HEIGHT.

2. 8' SECOND FLOOR CEILING HEIGHT